

The London School of Economics and Political Science

Why Are We Running?

**Political Economy of Bank Runs and an Analysis on the 2007-09
Banking Crisis in the United Kingdom**

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Declaration

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Abstract

Of the massive amount of failures experienced in corporate history, not every failure or banking distress has triggered a panic among market actors, which were just deemed as 'bad apples'. On the other hand, there have been numerous instances where the weaknesses in economic fundamentals led to the breakdown of cooperation among market actors in the shape of bank runs. This research proposes an alternative reading of bank runs by its emphasis on ideas, not to replace but rather to supplement the explanations put forward by the banking panics literature. It analyses bank runs from a political economy perspective and highlights the role played by ideas. While not discounting the significance of the material and institutional settings, it suggests the use of cognitive heuristics by depositors during decision-making under uncertainty. Accordingly, depositor awareness towards the safety nets in place and collective memory of the past institutional failures are suggested as the two reference points (in addition to fundamentals) for depositor expectations to converge towards. This theoretical argument is tested with the banking crisis of 2007-09 in the United Kingdom with the aim of uncovering the following research puzzle: Within the period under examination, out of the four bank failures, namely Northern Rock, Bradford and Bingley, Alliance and Leicester, HBOS, only the first two experienced bank runs (although different in type) which resulted in their failures. The research objective of this thesis is, therefore, to explain and understand the motivations behind these depositor runs. With regards to research methods, empirical chapters apply a fully qualitative analysis –process tracing, within-case and cross-case analyses- and also utilise from counterfactuals in explaining depositor behaviour.

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Introduction

“Indeed the likelihood of a bank run occurring in this country was not then perceived as a realistic possibility”
(Goodhart 2009, 158)

Northern Rock depositor: “You don’t know what’s going to happen and that’s the top and bottom of it. You don’t [know] whether this is just the beginning”
(Roberts and Burton 2007, 5)

Northern Rock depositor: “Well, you worry don’t you? [...] If you think other people are worried, you think: shouldn’t I be worried too?”
 (““They tell you not to panic ...” 2007)

A ‘nineteenth century-style bank run’ by anxious depositors queuing to withdraw their money was inconceivable for an advanced market economy before September 2007. Between September 14th and 17th, one fifth of Northern Rock’s total deposits, amounting to approximately £4.6bn, were withdrawn from the bank (HM Treasury 2009a, 5, 15). An estimated £1bn was withdrawn on the first day of the *off-line* run (£250m through branches and an even larger amount via the Internet) (Larsen 2007a, 1). Despite various efforts to stabilize depositor expectations, the run on Northern Rock branches continued also on Saturday to the point where the bank was forced to extend its opening hours and order additional cash to meet the withdrawal demands from depositors (Smith 2007, 14). On top of the £1bn withdrawn on Friday, an additional withdrawal of £500m was assumed the following day (Boniface and Kelly 2007, 9).

What were the underlying motivations for the depositor run on Northern Rock? In addressing this question, this research puts forward the following argument: Depositor behaviour is not only an outcome of external shocks and/or observed institutional shortcomings. There are deep-seated vulnerabilities as a result of the way past crises affect depositor expectations and behavior. Arrival of the negative news is a necessary, but not a sufficient condition itself to trigger a change in depositor behaviour. Depositors’ collective memories of past crises (especially the role played by the Government in managing those) provide recollections of previous losses and update *reference points* through which the following crises are interpreted. In a similar way, awareness towards the institutional safety nets (guarantees on deposits) also affects depositors’ assessment of the crisis at hand. The fact that there are certain guarantees on deposits within the banking system does not suffice to prevent a bank run, unless an initial depositor awareness exists towards those guarantees.

An emphasis on collective memory suggests that a bank run takes place not only as a reaction to the damaged reputation of an individual institution, but also because of the loss of credibility of Government policies in the eyes of depositors. With respect to this, there remains a difference between retail and wholesale bank runs. Given that institutional investors possess a higher amount of ‘market information’ compared to retail depositors, wholesale depositors are more likely to react to news regarding the credibility of individual financial institutions. In other words, it is more likely that the business model of an individual institution and its viability in the long-term will be factored in by institutional investors. Retail depositors, on the other hand, process a different set of information in their decision-making. Given their limited access to market information and their lack of literacy in technical aspects of financial markets, current or previous institutional performance (as well as the performance of the industry as a whole) remains less relevant during bank runs by retail depositors. Instead, government’s role in handling previous crises and the level of awareness towards institutional safety nets become crucial in shaping expectations to the crisis at hand. This is where this research departs from traditional explanations in the banking panics literature.

The economics literature on banking panics is mainly divided between sunspots (random withdrawals) and fundamentalist explanations. In a nutshell, the literature argues that either changes in the bank-specific fundamentals (which exceed a certain threshold in combination with a general macroeconomic downturn or a recession) or simply random events trigger an update in depositor expectations. The latter line of explanations emphasises random variables as triggers for changes in depositor behaviour. According to random withdrawals theory, sunspots¹ are the underlying reasons for bank runs to become self-fulfilling. As opposed to sunspots theories that promote random variables, the second line of explanations emphasises information asymmetries and suggests deterioration in fundamentals as triggers for bank runs. These theories of bank runs put forward the threshold assumption to explain the ‘onset of an attack’. This assumes a rational update of expectations to a Bayesian equilibrium of a bank run upon the arrival of adverse news either on the bank itself, on the general economy, or on a combination of both. Following this logic, for two cases operating under similar economic vulnerabilities, an explanation based solely on immediate stimulus (to exceed a certain threshold condition) would require both of them to be (or not to be) exposed to bank run(s).

¹ Cass and Shell (1983, 194, footnote 1) define sunspots as follows: “[...] [E]xtrinsic uncertainty, that is, random phenomena that do not affect tastes, endowments, or production possibilities”. Accordingly, “[...] if consumers do not share the same beliefs about sunspot activity, then sunspots are bound to matter – even with perfect markets” (Cass and Shell 1983, 208). Extrinsic uncertainty, according to Shell and Smith (1992; referred in Ennis 2003, 55) is defined as uncertainty in economic outcomes, which is not based on the changes in economic fundamentals. Similarly, Kindleberger and Aliber (2005, 268, note 14) defines sunspots as “[...] cover general uncertainty as opposed to the ‘fundamentals’ that feature in rational expectations”.

This research rejects the sunspots arguments and embraces a fundamentals-view towards bank runs. Nonetheless, it argues that deterioration of fundamentals is a necessary, but not a sufficient condition itself for a change in depositor behaviour. In other words, not all changes in threshold conditions would lead to bank runs, as observed with numerous banking crises without any change in depositor behaviour. A rationalist political economy approach to bank runs would also put forward similar assumptions to those of the asymmetric information theory of bank runs.

There have been attempts in the literature to explain the aforementioned lack of depositor runs with reference to the success of institutional settings. A historical analysis of the nineteenth-century banking crises in the United Kingdom reveals the significance of the lender of last resort function ('LoLR', hereafter) by the Bank of England in preventing banking panics. The banking history of the United States, on the other hand, illustrates the success of deposit insurance as an institutionalised guarantee on deposits. Referring to these historical episodes, institutionalist explanations put forward an understanding of institutions as reference points to constrain depositor behaviour. As formal and established institutions, they are expected to stabilise depositor expectations in the event of a banking crisis. However, as exemplified with the Northern Rock episode, neither of them had been sufficient enough to fulfil their roles in halting depositor panic.

To illustrate, the LoLR commitment by the Bank of England had been available to financial institutions since the second half of the nineteenth century. As to be discussed in the following section, this commitment had successfully prevented individual bank failures from spreading to other banks in the system. However, while the Bank of England's commitment had been perceived as credible enough to stop nineteenth-century banking panics, a century later it was interpreted as a signal strong enough to provoke a depositor run on Northern Rock. This points to an obvious change in the credibility of this specific institution in the eyes of depositors across centuries. As for the deposit insurance scheme, the Northern Rock crisis has revealed that there had been limited awareness towards its existence preceding the bank run episode. Therefore, the mere existence of this institutional safety net had not guaranteed to stabilise depositor expectations during the crisis.

To summarise, banking panics literature suggests that depositor expectations converge either towards a random variable (which cannot be examined systematically across cases), towards the deterioration of fundamentals below of a certain threshold or, alternatively, towards deposit insurance as an institutional safety net to guarantee *business as usual*. Therefore, the way in which the current literature explains bank runs tends to prioritise material and institutional variables over ideational ones. Expectation-formation, placed at the centre of the analysis, is understood to be a function of changes in the material economic

and/or the institutional environment. Departing from traditional rationalist and institutionalist approaches, this research argues that there are certain *reference points* for depositors in order to interpret the current situation and act accordingly. It specifically highlights the role played by the Government's handling of previous crises and awareness towards institutional safety nets in shaping expectations to the crisis at hand.

This research argues that the reasons for a change in depositor behaviour may *not only* lie in the directly relevant material circumstances or in the shortcomings of the institutional settings, as suggested by the current literature. The current literature tends to overlook the influence of the past crises on expectation formation and expects deposit insurance to be efficient even without taking the state (level) of depositor awareness into consideration. In other words, the assumptions put forward by the banking panics literature fall short in paying adequate attention to the role played by *ideas*. Fundamentals explanations based on threshold conditions rest their analysis on the ongoing circumstances yet without incorporating the influence of the past experiences into their explanations. Although references are abundant on how deteriorating fundamentals might influence expectations, not enough attention is paid to how those are perceived and filtered by depositors. Studying bank runs, therefore, provides an opportunity to once more emphasise the significance of ideas in the functioning of the economy. With this aim, a constructivist political economy approach, taking both economic fundamentals and the role of politics into account, serves best to understand the nature of bank runs.

The constructivist tradition in International Political Economy (IPE) literature has long emphasised the relevance and significance of ideas in analysing economic outcomes.² As Abdelal (2009, 71) states in his review of constructivist approaches to IPE, “[b]y drawing attention to the powerful constitutive effects of collectively held ideas [...] constructivism offers a way to describe patterns of political economy that are simply not amenable to rationalism”. An emphasis on explaining change rather than the status quo urged the re-discovery of ideas, identity, culture, and norm as new causal factors (Blyth 2003, 695). Rather than rendering power or economic incentives insignificant in economic explanations, this

² As an example, analysing the role of wars and crises as mechanisms for international change, Widmaier, Blyth, and Seabrooke (2007, 748) argue that “[n]either state nor societal agents can react to material changes until they have interpreted them through diverse frameworks of understanding”. In an article on monetary cooperation Widmaier (2004, 449) argues “[...] that monetary understandings determine whether states will cooperate in the maintenance of wage, price, or currency guidelines or resort to austerity to stabilize monetary trends”. Similarly, in an attempt to understand why some international monetary regimes fail and the others succeed, McNamara (1998, 3-4) argues that “[b]oth changes in the structure of the international economy and the ideational factors [a ‘neoliberal policy consensus’] that shaped policymakers’ response to structural changes are crucial to the story of European monetary integration”. Analysing institutional change as an *endogenous process*, Blyth (2002, 7, 8) also treats “[...] ideas and interests together as essentially embedded elements of institutional change”. Similarly and with an attempt to understand the IMF’s (changing) approach to capital controls across time, Chwioroth (2010, 3) also argues that the “[n]ormative and behavioral changes in [international organisations] [...] are driven not just by new rules or the influence of member states but also by the evolving personnel configurations, beliefs, debates, and strategic agency of their staffs”.

emphasis on ideas, “[...] give[s] meaning to material facts so that governments and other actors in the IPE can interpret and react to them” (Abdelal 2009, 73). As Widmaier, Blyth, and Seabrooke (2007, 750) discuss, constructivist tradition values intersubjective understandings because of agents’ bounded rationality in employing ‘all available information’ in forming their expectatins. Therefore, the use of certain set of ideas in the diagnosis of a situation as a ‘crisis’ helps actors manage uncertainty (Blyth 2002, 10).

This research analyses bank runs from a constructivist political economy perspective and with a special emphasis on the banking crisis of 2007-2009 in the United Kingdom. It argues that, while it is imperative to take political variables into account in analysing banks runs, the role played by the Government in managing previous crises has mostly been overlooked in the literature. It opposes to a pure Bayesian rationality and argues that depositor behaviour is also shaped through the use of cognitive heuristics in order to make sense of the ongoing uncertainty in times of crises. While deterioration in fundamentals cannot explain the occurrence of all bank runs; neither can the existence of deposit insurance scheme account for their infrequency. This research, therefore, emphasises the role played by the Government in managing previous crises and its implications for depositor expectations and awareness towards institutionalised guarantees in the banking sector.

In addition to studying Northern Rock as the most recent example of a modern retail run, this research also examines the following bank failures within the period of a year, namely Alliance and Leicester, HBOS, and Bradford and Bingley (in order of failure). It addresses the following research puzzle: While all the four cases examined had been exposed to negative publicity either because of their falling share prices, unsuccessful right issues or the emergency funding received from the Bank of England, only two of them faced depositor runs leading to their failures, namely Northern Rock and Bradford and Bingley. During the initial months of the crisis and in spite of the wide publicity that the Northern Rock’s problems had received, it was *business as usual* for the other banks without any generalised collapse of depositor confidence in the banking system. As a matter of fact, there had been a ‘flight-to-quality (safety)’ from Northern Rock to other deposit providers, including the demutualised building societies (shortly ‘ex-mutuals’) that this research analyses.³ Following the first quarter of 2008, however, all ex-mutuals were understood to be in financial difficulty and on the verge of collapse. At the end of the year, they were either nationalised (Northern Rock and Bradford and Bingley) or taken over by their bigger rivals (Alliance and Leicester, HBOS, Bradford and Bingley). A detailed process tracing of the period (to the best of available data), reveals that while Alliance and Leicester and HBOS had not been subject to any significant depositor run, there had been a silent (electronic) run on Bradford and

³ Mayes and Wood (2008, 16, footnote 15) also make a similar point: “It is noticeable that the run on Northern Rock was not primarily a flight from bank deposits into cash but a transfer of deposits from a bank thought to be in trouble to other major banks thought to be “safe” ”.

Bingley only days before and resulting to its nationalisation.⁴ Explaining the motives behind these depositor runs is the research objective of this thesis.

Historical comparisons in the literature have mainly concentrated on the 19th century National Banking Era panics in the United States or on the ones during early Great Depression (Bougheas 1999, 132; Calomiris and Gorton 1991, 112). Therefore, the *first* empirical contribution of this research to the banking panics literature is a detailed analysis on the most recent retail bank run in an advanced market economy. *Secondly*, the emerging literature on Northern Rock places special emphasis on the role played by the regulatory framework then in place and how this has changed as a response to the crisis. This research, on the other hand, specifically focuses on the retail depositor run and investigates the underlying motivations for depositor behaviour. *Finally*, this research is also an attempt to present a comparative analysis on the four bank failures within the banking crisis of 2007-2009 in order to understand the reasons and the causal mechanisms for the variance on depositor behaviour across cases. Although Northern Rock has captured increasing scholarly attention from several academic disciplines, the comparison of September 2007 with the following cases has not been adequately addressed in the literature. This research believes that September 2007 (bank run on Northern Rock) and February 2008 (nationalisation of the bank), as the two significant turning points during the recent crisis in the United Kingdom, might provide a semi-controlled before-after comparison for analysing bank runs.

Against the background of empirical evidence collected and also theoretically informed by the banking panics and cognitive heuristics literatures, the argument put forward with this research is as follows: While not discounting the significance, as well as the relevance, of the material and institutional settings, this research highlights the role played by *ideas* as an under-analysed variable in explaining bank runs. It depicts depositors with bounded rationality and suggests the use of cognitive heuristics under uncertainty for a meaningful interpretation of the current situation. It argues that a bank run is not only a function of the prevailing economic circumstances (fundamentals) and/or the institutional settings, but also a function of the depositor awareness towards the safety nets in place and collective memory of past institutional failures. While the banking panics literature focuses mainly on the first two, this research highlights the significance of the last two as potential *reference points* towards which depositor expectations converge.

The rest of this introductory chapter is structured as follows: The following first section will provide a brief background and conceptual clarification for banking crises. A detailed presentation of this research's argument is the subject of the second section, where it will also discuss the hypotheses tested and the main empirical findings. The third section has two

⁴ Anecdotal evidence suggests that HBOS had also been subject to an outflow of deposit during September 2008. However, this is not as well documented as the run on Bradford and Bingley and is only mentioned in a few newspaper articles. This point is further discussed in *Chapter VII*.

aims: While illustrating this research's methodology and justifying why it serves best to this research's objectives, it will also present an overall discussion on case-study and process-tracing methods in qualitative research. To conclude, the chapter will finally provide the reader with the thesis structure, which will guide her through the chapters.

1.1 A Short Historical Background on Banking Crises

This short background section will start with reviewing the banking panics in the United Kingdom in the second half of the nineteenth-century. Following this, it will discuss the role assigned to 'clearing houses' during the National Banking Era (1863-1913) in the United States. Examining these two periods, this section will highlight how the nineteenth-century banking panics in the United Kingdom had been alleviated (1) thanks to the LoLR commitment by the Bank of England and (2) even without an official deposit insurance scheme being in place. As suggested by Gorton and Huang (2002, 32), "[t]he lender-of-last-resort function, including money creation, monitoring, and deposit insurance arose from private arrangements among banks", functions which are currently associated with public bodies.⁵ While the LoLR function is mostly performed by central banks, government guarantees on bank deposits (in the shape of a deposit insurance) is a recent phenomenon as early as the twentieth century. Through providing a number of definitions of banking crises and banking panics (also bank runs), this section will also highlight the difference and the relationship between these concepts.

Preceding the most recent crisis in 2007-2009, the history of banking crises shall be divided, in broad terms, into the following four main periods: 19th century crises (including also the first decades of the 20th century), the banking crises during the Great Depression, the Bretton Woods Era (until late 1970s), and the (post-Bretton Woods) fiat money era banking crises. There have been several banking panics throughout the nineteenth-century not only in the United States, but also in the United Kingdom during when the LoLR function of the Bank of England gradually evolved (Wood 1999; Wood 2000, 203). As Capie and Wood (1995, 215, 218) state, "[...] the lender of last resort function is a nineteenth-century construct [...] Before 1870 there had been no consistency in the behaviour of the Bank. Sometimes it came to the rescue of the market and sometimes it did not. Sometimes it bailed out insolvent institutions and at other times it did not". Calomiris (2011, 109) defines this as

⁵ Another research by Donaldson (1992) investigates how banks experiencing depositor runs receive cash during panics and explores the role of interbank trade and liquidation costs. The model specifies that "[...] it is the endogenous cost of liquidation, along with a random productivity shock, which determines the number of banks that are run and whether or not there is a general panic" (Donaldson 1992, 61). The study concludes that, despite deposit insurance schemes, the lender of last resort function of central banks is still required to provide the necessary funds into the banking system during panics.

“one of the most fascinating historical examples of a change from banking instability to stability”.

The three biggest crises of the late nineteenth-century in the United Kingdom are the failure of Overend, Gurney and Co. in 1866⁶, the City of Glasgow Bank failure in 1878⁷, and the 1890 Baring crisis. During the failure of Overend, Gurney and Co., the Bank of England was initially reluctant to act to save the institution. The Bank’s decisive intervention to the City of Glasgow Bank, however, resulted in no observed bank runs during the episode (Wood 1999, 103). Similarly, there were none major depositor panics during the failure of Baring, which involved private initiatives orchestrated by the Bank of England (Wood 1999, 104; see also Wood 2000, 216). Wood (1999, 104) argues that the difference between these three episodes rests in the fact that “[...] if a ‘panic’ turned into a ‘real’ crisis, the crisis could be stopped by prompt LoLR action”. Although it may not be necessary within an appropriate banking system structure (Wood 1999, 105), Wood concludes that prompt LoLR action should suffice to stop a banking crisis (Wood 2000, 208; Wood 1999, 105)

In the United States, on the other hand, “[d]epositor behavior changed after 1914 (the founding of the Federal Reserve) and again after 1934 (the start of deposit insurance), but despite that, crises remained systematic, linked to the business cycle” (Wood 1999, 101). Before the establishment of the Federal Reserve System (the ‘Fed’, hereafter) and during the National Banking Era, the banking industry in the United States was supervised by a network of commercial bank clearing houses as private banking associations during the.⁸ Gorton and Mullineaux (1987, 457, 458) argue that the establishment of the clearing houses (in order to set reserve requirements, deposit-rate ceilings and perform bank examinations) had been an ‘endogenous’ regulatory response to the information asymmetries embedded in the banking system. The certificates issued by those houses, which would substitute deposits if needed and clear mutual inter-bank transactions, were commonly used to alleviate banking panics (Calomiris and Gorton 1991, 119; Andrew 1908, 497, 507; Kindleberger and Aliber 2005, 185-6).⁹ Clearing house certificates were secured against collaterals deposited in those houses and were guaranteed by all participating banks (Andrew 1908, 508). In this sense, these certificates would help banks to demonstrate their asset positions to their depositors in the case of a banking panic (Park 1991, 277). Therefore,

[...] since these securities were the liability of the association of banks rather than of any individual bank, depositors were insured against the failure of their individual

⁶ For a detailed account of the case see Batchelor 1995.

⁷ For a detailed account of the case see Rosenblum 1933.

⁸ As mentioned previously, the banking panics literature puts special emphasis on this period, which was abundant in examples of depositor panics and lacked an established deposit insurance scheme. For examples see Calomiris and Gorton 1991; Gorton 2007; Gorton 2009; Chari 1989.

⁹ During the panics of 1893 and 1907, loan certificates were also issued by banks in small denominations to their depositors (Chari 1989, 5).

bank [...] [Also monitoring member banks,] [t]hese institutions not only cleared interbank liabilities but, in response to banking panics, they acted as lenders of last resort, issuing private money and providing deposit insurance (Calomiris and Gorton 1991, 119).

After the Second World War until the end of the Bretton Woods system (approximately for 30 years), only three countries experienced banking crises: Brazil in 1963, Uruguay in 1971, and India in 1947-48. Although the frequency of banking crises for the advanced and the larger emerging market economies had decreased significantly after the Second World War (Reinhart and Rogoff 2009, 150-151), the post-Bretton Woods era experienced a surge in the number of banking crises across countries, not only for the developing and transition, but also for advanced market economies.¹⁰ Accompanied by non-systemic ones, there had been ‘Big Five’ banking crises in advanced market economies prior to the most recent banking crisis of 2007-2009. Those were in Spain (1977), Norway (1987), Finland and Sweden (1991), and Japan (1992), in addition to the Savings and Loan (S&L) crisis in 1980s in the United States.¹¹ Despite growing episodes of banking crises in the post-Bretton Woods era, however, these countries had been successful in containing individual bank runs and preventing them from turning into banking panics. This success, as a matter of fact, has mostly been attributed to the efficiency of the deposit insurance scheme.

Despite varying across different periods, what were the determinants of banking crises? Even though there is not an agreed-on definition, the one provided by Demirguc-Kunt and Detragiache (1997) has mostly been referred to in the literature. Accordingly, for an episode of distress to be classified as a full-fledged banking crisis, at least one of the following four conditions should hold:

1. The ratio of non-performing assets to total assets in the banking system exceeded 10%,
2. The cost of the rescue operation was at least 2% of GDP,
3. Banking sector problems resulted in a large scale nationalization of banks,
4. Extensive bank runs took place or emergency measures such as deposit freezes, prolonged bank holidays, or generalized deposit guarantees were enacted by the government in response to the crisis (Demirguc-Kunt and Detragiache 1997, 12)

¹⁰ Schumacher (2000) investigates the Argentinian banking panic after the ‘tequila shock’ following Mexico’s devaluation in 1994. Opposing to the sunspots view of bank runs, the study concludes that “[...] the Argentine bank runs were not due to any self-fulfillment of depositor behavior but to depositor concerns about the ability of individual banks to survive the currency run [...] in addition to the fall in deposits explained by the currency run, depositors reallocated deposits from banks that were not likely to survive the currency run (‘bad’ banks) to banks that were likely to survive the currency run (‘good’ banks)” (Schumacher 2000, 259). See also Blejer, Feldman, and Feltenstein 1997. Other studies on the Argentinian banking crisis of 2001 investigates the causes of bank runs during this period (McCandless, Gabrielli, and Rouillet 2003) and the impact of deposit freezes in the aftermath of bank runs (See Ennis and Keister 2007; Ennis and Keister 2009).

¹¹ For a detailed discussion see also Reinhart and Rogoff 2008.

Eichengreen and Bordo (2002, 15-16) also present a definition for banking crises for whom

[...] an episode to qualify as a banking crisis, we must observe either bank runs, widespread bank failures, and the suspension of convertibility of deposits into currency such that the latter circulates at a premium relative to deposits (a banking panic), or significant banking sector problems (including but not limited to bank failures) resulting in the erosion of most or all of banking system collateral that are reserved by a fiscally-underwritten bank restructuring.

Finally, Reinhart and Rogoff (2009, 11) mark a banking crisis by the following two types of events:

1. Bank runs that lead to the closure, merging, or takeover by the public sector of one or more financial institutions,
2. If there are no runs, the closure, merging, takeover, or large-scale government assistance if an important financial institution (or group of institutions) that marks the start of string of similar outcomes for other financial institutions.

All these aforementioned definitions suggest that banks' solvency may be endangered either by an asset side distress or as a result of a depositor run, which might put them on the edge of the cliff if not contained at an early stage. To this research's understanding and also in line with the asymmetric information theory of bank runs (to be explain shortly), a bank run occurs when a considerable amount of deposit holders expect *Bank A* to be not in an economically healthy condition to provide the depositors' money back on demand. In these cases of limited bank runs, deposits withdrawn from *Bank A* are transferred to *Bank B*, which is regarded to be solvent in the eyes of depositors. Thus, the rest of the banking system in general enjoys a significant level of confidence. On the other hand, banking panics are defined as instances when most of the, if not the whole, banking system gets into a wavelike trap of bank runs, as experienced during the nineteenth century banking panics.¹² In such circumstances, the following three outcomes emerge: (1) simultaneous withdrawals of deposits (funds either placed 'under the mattresses' or saved/invested in alternative segments of the financial system)¹³; (2) no 'flight-to-quality'¹⁴; and (3) no 'newcomers' as potential depositors to the banking system. From the bank's point of view, "[i]f the run is on a single bank, that bank *may* be able to borrow from a pool of other private banks that effectively provide deposit insurance to one another. However, if the run affects a broad enough range of institutions, private insurance pooling will not work" (Reinhart and Rogoff 2009, 144-145; emphasis added).

¹² This research defines a banking panic with regards to the level of contagion and as a situation during when several banks become subject to a depositor run. Alternatively, a banking panic can also be defined through the amount of funds withdrawn from the system.

¹³ Blejer, Feldman, and Feltenstein (1997, 4, footnote 2) mention a further type of flight to quality during when deposits are transferred to banks which are perceived to operate under implicit or explicit guarantees.

¹⁴ In instances where no 'flight to quality' is observed, depositors do not place their money in any of the banks, regardless of how sound they may seem.

Several scholars define a banking panic as a simultaneous run on all (or many) banks, while defining a bank run as an individual run on a single institution (as examples see Gorton 1988, 753, footnote 1; Bhattacharya and Thakor 1993, 26).¹⁵ According to Calomiris and Gorton (1991, 112), on the other hand, it is not common to observe banking panics when all the banks operating in the banking system are exposed to depositor runs. Demirguc-Kunt and Detragiache (1997, 8) refer to the signalling effect of an individual bank run, which might turn itself into a banking panic and become contagious. In a recent study, Gorton (2009, 5) argues that a banking panic takes place when ‘informationally-insensitive’ debt becomes ‘informationally-sensitive’ as a result of a shock that creates uncertainty. In their systematic analysis of banking crises Laeven and Valencia (2008a, 5) treat any “monthly percentage decline in deposits in excess of 5%” as a bank run. They argue that 62 per cent of the banking crises analysed in their study experienced bank runs, defined as ‘momentary sharp reductions in total deposits’ (Laeven and Valencia 2008a, 19, 5). In addition to the conceptual differentiation between a bank run and a banking panic, the terminology applied to describe a bank run also differentiates between the type of depositors withdrawing (whole-sale (institutional investors) versus retail depositors) and the nature of the run taking place (on-line (electronic/silent) versus off-line (nineteenth-century style)¹⁶). While electronic runs do not require depositors to be physically present at the branch, off-line runs are manifested in depositor queues in front of the branches with signalling effects on uninformed depositors.

From a policy-perspective, a better understanding of depositor behaviour is of significance for the future stability of the banking system. The worst scenario including a bank run may have serious consequences not only for the banking sector, but also for the financial system and the real economy in general, such as the following:¹⁷ Debt contracts with short-term maturities require lenders’ decision on whether or not to roll over their debt (Kaminsky, Reinhart, and Vegh 2003, 13). A bank run might be regarded as depositors’ refusal to roll over their short-term loans (Reinhart and Rogoff 2009, xli), either in the form of deposit withdrawals or through their refusal to renew their maturing deposit contracts (Caprio and Honohan 2008, 1). It might generate a “[...] liquidity shock that will, in turn, reduce the quality of the bank portfolios, possibly by enough to validate the initially exaggerated fears that motivated the bank run” (Gavin and Hausmann 1998, 5). En masse withdrawals of deposits might force banks to liquidate their portfolios at fire-sale prices.¹⁸

¹⁵ “A bank panic occurs when depositors demand such a large-scale transformation of deposits into currency that, at the contracted for exchange rate [...], the banking system can only respond by suspending convertibility of deposits into currency, issuing clearinghouse loan certificates, or both” (Gorton 1988, 752-3).

¹⁶ Kaufman (2000, 16) also defines them as ‘noisy paper’ bank runs.

¹⁷ For further discussion see also Blejer, Feldman, Feltenstein (1997, 4-5) and Capie and Wood 1995, 210-1).

¹⁸ This whole sale of assets by numerous banks may cause normally liquid assets to become illiquid and the complete dry-up of the whole market (Reinhart and Rogoff 2009, 144).

This large net resource transfer to depositors on time and at par value, therefore, destabilises banks' balance sheets, the fire-sale of assets may lead to a downward spiral in asset prices and convert a liquidity shortage into an insolvency problem (Gavin and Hausmann 1998, 7, 5).¹⁹ At the end, the damage on the banks' balance sheet caused by the depositor run results in the run itself to become self-fulfilling (Reinhart and Rogoff 2009, 144).

While, by definition, all banking crises are caused by deteriorating fundamentals, not all bank runs can be explained with reference to those. The banking panics literature has been occupied with the following questions in order to understand the underlying motivations for changes in depositor behaviour: Do bank runs originate from a deterioration in bank's fundamentals or are they just a panic-based phenomenon with little, if any, basis on the bank's financial circumstances? In other words, can self-fulfilling expectations alone account for the variance in depositor behaviour or should they be grounded in fundamentals? There are two mainstream theories in the banking panics literature, namely sunspots and asymmetric information theories of bank runs, for explaining depositor behaviour. The following section will discuss those theories shortly, as well as the cognitive heuristics literature, and will illustrate this research's hypotheses to be tested with the case studies. It will also present the main empirical findings of this research.

1.2 Hypotheses Tested and Empirical Findings

“[...] [F]inancial crises must result from the combination of weak fundamentals and adverse self-fulfilling agents' expectations, as opposed to expectational shifts alone”
(Vaugirard 2007, 405)

The previous section has mentioned the two mainstream theories in the banking panics literature to explain the underlying reasons for bank runs. This current section will shortly present those theories, while saving a detailed discussion for the following second chapter, and will unpack this research's argument against this theoretical background. This will help the reader to better understand where the hypotheses tested with this research are derived from. In doing so, it will also expand the argument as to cover the cognitive heuristics

¹⁹ Faced with a liquidity shocks, banks may also call back the loans on their asset portfolio to meet depositor demands. However, bank loans are long-term illiquid assets which cannot be easily converted into cash on short notice (Reinhart and Rogoff 2009, xl). Therefore, the extreme case is that, “[...] the inability of bank borrowers to make transfers that banks need to pay their depositors would generate bank insolvencies, runs, and a breakdown of the financial system” (Gavin and Hausmann 1996, 11). Not directly relevant but an interesting study by Garber and Grilli (1989, 165) analyse to bank runs in open economies where “[...] a foreign banking system, by raising deposit rates in the presence of a domestic banking panic, may generate sufficient liquid resources to acquire assets sold by the domestic banking system at bargain prices” .

literature, from which this research utilises in explaining depositor behaviour. Finally, this section will present a full list of the hypotheses, as well as the working assumptions, and the main empirical findings at the end of this section.

The literature on banking panics is mainly divided between sunspots (random withdrawals) and fundamentalist explanations. The first line of explanations emphasises random variables as triggers for changes in depositor behaviour. According to random withdrawals theory, sunspots are the underlying reasons for bank runs to become self-fulfilling. Given this research's interest in explaining bank runs through identifiable causal mechanisms, the main hypothesis put forward by the random withdrawal theory, that bank runs are triggered by random variables, is the *null hypothesis* of this research.

As opposed to sunspots theories that promote random variables, the second line of explanations emphasises information asymmetries and suggests deterioration in fundamentals as triggers for bank runs. Information asymmetry theory of bank runs, which falls under the fundamentalist approaches, focuses on the dissemination of information and its effect on depositor behaviour. Several authors working on the asymmetric theory of bank runs prioritise different aspects of fundamentals when explaining depositor behaviour.²⁰ Despite prominent nuances across those various studies, however, the common denominator within this tradition is their objection to sunspots as random triggers for bank runs. The following *Chapter II* will present those, as well as the random withdrawal theories, in detail and will highlight the strengths and the weaknesses of both theories. However, a short overview of their testable assumptions is of significance in order to better illustrate how this research's hypotheses are derived from the literature.

According to the asymmetric information theory, the signal extraction to fill information asymmetries across depositors might be through observing either other depositors (in the queues), the state of the bank itself (bank-idiosyncratic fundamentals), or the state of the economy in general. To start with, Calomiris and Gorton (1991) argue that failed businesses possess signalling effects to point to the upcoming recession. With an attempt to understand the impact of macroeconomic environment on depositor behaviour, Schotter and Yorulmazer (2009, 219) discover that “[...] the dynamics and the severity of bank runs depend on the state of the economy when a crisis occurs”. Bougheas (1999) also presents a ‘common shock’ argument. Accordingly, “[...] bank runs become contagious only during periods of economic downturns” (Bougheas 1999, 143). Al-Zein (2008, 5) links bank runs to the liquidity position of the bank. For him a bank run is never a possibility for a liquid bank even after a bad dream. Relatedly, Park (1991) highlights that the banking panics may be prevented with the provision of bank-specific information. Dupont (2007) makes a similar point to argue that the provision of bank specific information on a regular basis help to

²⁰ References to relevant studies are presented in *Chapter II*.

stabilise depositor expectations.

Chari and Jagannathan (1988) differentiate between different groups of depositors with regards to their level of knowledge of the ongoing problems in the banking system. There are some individuals who wish to withdraw since they think the current return of consumption is higher than the future returns of their deposits. Others may withdraw without any ‘informationally based reason’. According to these scholars, there might also be cases where the random combination of these different types of depositors is large enough to have signalling effects on uninformed depositors and start a run on a bank (Chari and Jagannathan 1988, 749). Caprio and Klingebiel (1996, 4) also emphasise the signalling effect of ‘off-line runs’ since they suggest that the “[...] depositors’ first indication of trouble can be a line of other depositors waiting to collect their funds”.²¹

The modern form of bank runs (as in the shape of electronic (silent) runs), however, cannot be explained with reference to the aforementioned signalling effect of the initial ‘line length’. Even for instances of off-line depositor runs, there should be, at least, a focal point among these *first runners*, on which a common interpretation of bank’s insolvency can be based. Where does this focal point come from? As stated above, random withdrawal theories promote sunspots as random variables that cause changes in depositor expectations. Nonetheless, this approach has been criticised for failing to provide testable assumptions for empirical scrutiny. On the other hand, the asymmetric information theories of bank runs put forward *threshold* conditions in order to explain bank runs as a *unique equilibrium phenomenon*. As an example and contrary to sunspots explanations, Goldstein and Pauzner (2005, 1294) model bank runs where the threshold levels of fundamentals of the economy determine the occurrence of a unique Bayesian equilibrium “[...] in which a bank run occurs if and only if the fundamentals are below some critical value”. This emphasis on threshold levels of fundamentals, however, points to another question: how can we explain depositor reactions that are not always proportionate to the ongoing situation?

In order to tackle this, one explanation put forward by the literature has been ‘self-fulfilling prophecies’.²² According to Merton (1948, 195), a self-fulfilling prophecy allows a false conception come true by evoking a new behaviour. As suggested by the Thomas theorem, once a considerable amount of people believe that the bank is insolvent, consequences becomes irrelevant of whether the insolvency was real or not. It suggests that actors do not only react to the objective characteristics of the situation, but to the ‘meaning this situation has for them’ (Merton 1948, 194). Accordingly, once this meaning becomes attached to the objective situation, behaviours become determined by this subjective meaning

²¹ See again Chari and Jagannathan 1988.

²² Self-fulfilling prophecies are mostly promoted by the second generation of financial crises. Ennis and Keister (2010a) present a summary of a number of studies on bank runs which stress self-fulfilling prophecies. This point will be discussed further in *Chapter II*.

more than the objective situation (Merton 1948, 194). Both theories of bank runs refer to self-fulfilling prophecies in explaining how individual expectations converge to lead to a collective outcome. Although they depart from each other on their interpretation of the initial triggers for bank runs (sunspots versus information asymmetries), they share some common interpretation on the *process* of how expectations cascade. In other words and as an example, for several studies within the information asymmetries theories a strong link between fundamentals and crises does not necessarily rule out the possibility of a panic with a self-fulfilling element.²³ However, self-fulfilling prophecies, which suggest a multiple equilibria approach, have mostly been criticised for “[...] not explain[ing] the shift in beliefs, which incites the economy to move from one equilibrium to the next” (Metz 2002, 66; see also Metz and Michaelis 2003). As Morris and Shin (1998, 587) also argue, pointing to self-fulfilling prophecies falls short in explaining the *onset of an attack when it occurs*.

Against the background of this criticism, several authors have acknowledged the interplay between fundamentals and expectations as the two aspects of self-fulfilling crises. Obstfeld (1996, 1039) argues that the underlying macro/microeconomic fundamentals are significant in shaping depositor expectations as they determine the range of possible equilibria.²⁴ However, despite making a collapse possible they do not render it an economic necessity (Obstfeld 1996, 1041). Conversely, Jeanne (2000, 33) states that even though the occurrence and timing of crises are dependent on multiple equilibria, which may suggest self-fulfilling prophecies, “[...] these equilibria can grow only on the fertile ground of deteriorated fundamentals”. Are fundamentals, be it bank-specific or system-wide, the only source to influence depositor expectations?

While the two theories of bank runs analyse the triggers for changes in depositor behaviour, a third line of explanations discusses the *business as usual* with reference to deposit insurance as an institutionalised guarantee to stabilise depositor expectations. While, according to the asymmetric information theories of bank runs, the deterioration of the economic fundamentals (below a certain threshold) is a sufficient condition to *prompt* a change in depositor behaviour, deposit insurance should ideally be sufficient to *prevent* this in the first place. Therefore, the way in which the banking panics literature analyses bank runs prioritises fundamentals and/or institution-based explanations over ideational ones.

With regards to the institutional dimensions of a bank run, this research argues that in

²³ “It should be clarified that finding correlation (even if it is very strong) between fundamentals and crises is not a proof against the “panic” hypothesis. It is possible that the self-fulfilling expectations are triggered by fundamentals, in which case fundamentals are associated with crises, but crises would not have occurred without the coordination failure” (Goldstein 2010, 10). This point has also been emphasised by Starr and Yilmaz 2007. Accordingly, asymmetric information theories of bank runs “[...] do not rule out the possibility that runs have self-fulfilling aspects; they only establish that runs are not ‘sunspots’ unrelated to fundamental factors” (Starr and Yilmaz 2007, 1113). For another example for bank runs modeled along those lines see Goldstein and Pauzner 2005.

²⁴ In an earlier paper, however, Obstfeld (1984) argues that “[...] given certain expectations about policy, balance-of-payments crises can also be purely self-fulfilling events”.

order for expectations to stabilise, first there needs to be a certain level of *depositor awareness* towards deposit insurance in place. This, as a matter of fact, presents an additional information asymmetry between the bank and its depositors during a banking crisis. This ‘perception lag’ has commonly been ignored by the banking panics literature. This research acknowledges the growing number of studies that criticise the efficiency of the deposit insurance scheme in preventing bank runs and thus failing to provide stability into the banking sector. The institutional shortcomings of the scheme (such as its limited coverage limit, co-insurance principle attached and the previous compensation delays to depositors, to name a few) might provide depositors with negative incentives to withdraw their funds despite the guarantee being in place. In the absence of a deposit insurance scheme or as a result of its inefficiencies, the severity of the situation may also require authorities to introduce blanket (mostly unlimited) guarantees on deposits to restore depositor confidence. However, as Laeven and Valencia (2008a, 10) argue, the success of the blanket guarantee in stabilising depositor expectations also rests in the credibility of the authorities in the eyes of depositors.

This research argues that the self-fulfilling nature of bank runs and the threshold models in the literature with a Bayesian emphasis require a better understanding of the role ideas play during bank runs. A well-established body of literature argues that complexity and uncertainty requires people to refer to cognitive heuristics during decision-making. Given the Bayesian bias in the fundamentals view of bank runs, the literature models a ‘rational depositor’ who rationally updates her expectations with the arrival of new piece of information. This research instead depicts depositors with bounded rationality and suggests the use of cognitive heuristics under complex and uncertain situations for a meaningful interpretation of the circumstances. This reference to cognitive shortcuts, especially to the use of reference points, might help understand why under similar conditions depositors react differently. Contrary to the threshold models, news introduces ‘the new situation’ to the perceptions of many; however, information processing does rarely take place in a perfect Bayesian sense. Cognitive shortcuts are most of the time referred to for the definition and the assessment of this new situation. A detailed critique of the current literature and an analysis of the mainstream cognitive heuristics literature, mainly by Kahneman and Tversky, will be presented in the following *Chapter II*.

Against this background, the building blocks of this research’s argument are the deterioration of economic fundamentals (as a necessary but not a sufficient condition), awareness towards the institutionalised safety nets for deposit accounts and the collective memory of the past institutional failures to serve as potential reference points. To this research’s understanding and similar to the asymmetric information theory, bank runs are not instances where depositor motivations are completely detached from the unfolding situation.

As opposed to sunspots explanations referring to random variables, this research's argument is closer to the information asymmetries theories, which necessitates a deterioration in fundamentals. It argues that the variables put forward by the literature are crucial in shaping depositor expectations. Nevertheless, they should not be taken into the analysis on their *face value*. Depositor responses are also shaped through references to past failures and awareness towards the institutional arrangements in place, which provides them with focal points to converge their expectations towards certain outcomes.

Informed by the literature both on banking panics and cognitive heuristics, a set of hypotheses and working assumptions can be listed in three main categories. Since this research is an attempt to systematically analyse the reasons for depositor runs, sunspot explanation that promote random variables serves as this research's null hypothesis (H_0). The following second hypothesis (H_1) is founded on the fundamentals view of banking panics and suggests the deterioration of economic fundamentals as the triggers for a change in depositor behaviour. Four different working assumptions are derived from the asymmetric information theories, which are based on the numerous studies conducted within this tradition. The first ($WA1$) and the third ($WA3$) of those are related how bank runs might turn into banking panics and thus are not directly related to this thesis research question. While the second working assumption ($WA2$) tests the signalling effects of off-line bank runs, the final fourth assumption deals with the phenomenon of 'flight-to-quality' ($WA4$).

A third hypothesis and a set of related working assumptions follow those, which deal with the institutional dimensions of bank runs. The third hypothesis (H_2) argues that deposit insurance scheme, as an institutionalised guarantee on deposits, should ideally be sufficient enough to prevent changes in depositor behaviour. It should, in other words, provide enough guarantees for depositors not to panic upon adverse news. Nonetheless, the nineteenth-century banking panics in the United Kingdom and the aforementioned LoLR function by the Bank of England suggests that the deposit insurance scheme is not a necessary condition to prevent bank runs. In the example of City of Glasgow Bank's failure, the actions by the Bank of England had been sufficient to prevent a spillover in the banking system. However, the banking history of the United States, especially after the Great Depression, highlights the significance of deposit insurance to stabilise depositor expectations. There is a growing body of literature, discussed in *Chapter II*, which emphasises the effect of deposit insurance as an institutionalised guarantee on the formation of bank runs. As suggested in the literature; however, the efficiency of the deposit insurance is conditioned on several aspects of the scheme, which are described in the following working assumptions. The upper limit of deposits covered, co-insurance principle attached and the compensation delays in repayments are among the most important specifications of the scheme to determine its efficiency ($WA5$). Although not tested with this research, the lack of commitment by the Authorities on

deposit freezes or payment re-schedulings is another motivation for bank runs (W46). It is further argued in the literature that *de facto* (such as the implicit ‘too-big (interconnected)-to-fail’ understanding) or *ex post* (blanket) guarantees should stabilise depositor expectations in the case of an inefficient deposit insurance scheme (W47). Finally, the coherence and the consistency in the policies to address the ongoing crisis in the banking system also affect depositor expectations, and thus depositor behaviour (W48).

While the aforementioned *H0*, *H1* and *H2* are derived mainly from the banking panics literature, *H3* is an addition to those by this research’s emphasis on depositor awareness towards the safety nets in place. It argues that the lack of depositor awareness of the institutionalised guarantees might further contribute to change depositor behaviour. In other words, the inefficiency of a deposit insurance scheme in preventing a bank run might also originate from the lack of depositor awareness towards its existence, in addition to the aforementioned shortcomings documented in the literature. As a note of caution, in cases where there exists no awareness towards deposit insurance, it seems counter-intuitive to be able to test the efficiency of the scheme (*H2*). In other words, *H2* cannot be tested for cases where there is *no* depositor awareness towards existing deposit insurance schemes. As in the example of Northern Rock, this research suggests that there had been a lack of depositor awareness towards the safety nets in place to protect their money in case of failure. For this case, any attempt to test the efficiency of the scheme would prove fruitless. On the other hand, however, Bradford and Bingley case allows for testing *H2*, i.e. the efficiency of deposit insurance scheme, since there had been increased depositor awareness towards the scheme’s existence (see *Chapter VI Section 2* for evidence and a detailed discussion).

Finally, *H4* is derived from the mainstream cognitive heuristics literature and is promoted for filling the gap in the banking panics literature’s understanding of decision-making under uncertainty. Three working assumptions are argued, namely availability, representativeness, and anchoring heuristics, which are tested with the empirical cases, where relevant. To emphasise once more, the novelty with this research is, its application of basic cognitive heuristics assumptions into the analysis of bank runs, as well as its emphasis on an additional information asymmetry in the shape of depositor *unawareness*. More specifically, the role of *collective memory* is tested throughout cases where fundamentals fall short in explaining the variance on the outcome. As illustrated above, this research argues that, the credibility of past Government actions is of significance for the cases of depositor runs. A depositor run on a bank, in other words, does not only illustrate a breakdown of trust towards a certain bank, but also a lack of credibility of Government policies in the eyes of depositors.

As mentioned above, the collective memory, as an additional variable to explain bank runs, refers to the re-collections about the Government’s handling of previous crises. In the case of Northern Rock, the following *Chapter IV* will illustrate how collective memory of past

institutional failures and the Government's handling of those had affected depositor behaviour. As aforementioned, a comparison between the failure of City of Glasgow Bank in the nineteenth-century and the Northern Rock case in 2007 illustrates the changing sentiment towards the Government's efficiency in crisis management. While the LoLR action of the Bank of England had been successful in preventing City of Glasgow Bank's failure from spreading, the announcement by the Bank of England's support for Northern Rock was mostly blamed for precipitating the run on the bank. Against the background of this comparison, this research argues that the lack of credibility of the Government's handling of previous crises in the eyes of depositors (captured by the collective memory variable) had been significant in shaping depositor behaviour.

The collective memory variable, however, does not always affect depositor expectations negatively. *Chapter III* and *Chapter V* of this research will illustrate the numerous efforts by the Tripartite Authorities in addressing the crisis situation following Northern Rock's failure. There had been several announcements and policy changes (including an update on FSCS' coverage limit) following the run on Northern Rock to indicate a 'blanket guarantee' on the whole banking system (as opposed to only on Northern Rock). Given these policy reactions to contain the crisis, this research argues that the negative sentiments preceding the Northern Rock crisis must have been altered throughout the period under examination. By the time of the failures of Bradford and Bingley and HBOS, depositors should have been assured of the Government's willingness to save them in the cases of future bank failures.

Against the background of the empirical evidence collected through within and across-case analyses, this research draws several conclusions on the underlying reasons for bank runs. To start with the first set of hypotheses, the empirical analysis of this research rejects sunspot explanations. Random variables as the underlying reasons for the depositor runs are not found to hold for the cases of Northern Rock and Bradford and Bingley. Yet, the empirical evidence collected for those cases seems to support the asymmetric information theories (*H1*). In both cases, there had been a 'flight-to-quality' from insolvent to solvent banks, which is in line with the working assumptions put forward by the asymmetric information theories of bank runs. Using the terminology of 'necessary and/or sufficient conditions' (to be explained shortly in the following section), this research argues that the arrival of negative news is a necessary but not a sufficient condition itself to trigger panic among depositors. Pointing to this research's empirical puzzle, while all the four cases examined had been exposed to negative publicity because of either their falling share prices, unsuccessful right issues or emergency funding received from the Bank of England, only two of them faced depositor runs leading to their failures, namely Northern Rock and Bradford and Bingley. This suggests that depositors should have factored in additional variables to their decision-making under uncertainty.

With regards to the institutional dimensions of bank runs, this research remains critical towards the efficiency of deposit insurance in preventing bank runs (*H2*). Northern Rock case supports the hypothesis (*H3*) that there had been a lack of depositor awareness towards the FSCS, which might have contributed to the bank run. Given the increase in the depositor awareness following the Northern Rock crisis, (along with an implicit ‘too-big-to-fail’ understanding), this cannot account for the run on Bradford and Bingley. Finally, neither does *de facto* nor *ex post* guarantees seem to be efficient in stabilising depositor expectations in both of the cases. While the silent run on Northern Rock continued despite the introduction of the blanket guarantee, the run on Bradford and Bingley also points to the failure of the assurances from the Authorities, who had promised to undertake all necessary actions should the circumstances require.

As the third and the final set of hypotheses, depositor comments collected during the Northern Rock crisis suggests to the use of collective memory when assessing the solvency of the bank. A lack of trust towards the Authorities prevailed within the depositor comments, which suggests that past institutional failures had been used as reference points to assess the ongoing situation with the bank. A comparative analysis between HBOS and Bradford and Bingley also suggests that HBOS’s failure might have served as a reference point to assess the perceived solvency of Bradford and Bingley. Both these cases support this research’s argument that motivations for depositor runs might not necessarily be grounded on the immediate circumstances related to the bank itself.

HO: Bank runs are triggered by sunspots as random variables
(Null Hypothesis)

H1: Bank runs are related to the deterioration in economic fundamentals

WA1: For a bank run to become contagious, the dual observation of a bank failure and a recession is required.

WA2: Once a run is in progress, (lines of) informed depositors have signaling effects on uninformed ones.

WA3: Banking panics should not develop in information-rich environments.

WA3a: A banking panic might be prevented through the provision of bank-specific information on the bank's solvency.

WA4: If the bank run originates from information asymmetries and fundamentals, there should be a 'flight-to-quality' from insolvent to solvent institutions.

H2: Triggered by either fundamentals or sunspots, *ex ante* guarantees on deposits such as the deposit insurance scheme is promoted for preventing an inefficient outcome such as a bank run*

WA5: The efficiency in stabilising depositor expectations depends on the specifications of the scheme, such as the upper limit of deposits covered, co-insurance principle and compensation delays.

WA6: The lack of commitment by the authorities on deposit freezes and payment re-scheduling and the anticipation of this by depositors might generate a self-fulfilling bank run. **

WA7: *De facto* (such as the implicit 'too-big (interconnected)-to-fail' understanding) or *ex post* (blanket) guarantees should stabilise depositor expectations in the case of an inefficient deposit insurance scheme.

WA8: The coherence and consistency in the actions of policy makers in addressing the crisis affect depositor expectations.

H3: As an additional information asymmetry during a bank run, the lack of depositor awareness towards deposit insurance scheme also affects depositor expectations

H4: Under uncertainty during crises and as a result of bounded rationality, cognitive shortcuts (in different forms) are used in depositor decision-making

WA9: Application of availability heuristic: Previous events and failures (through collective memory) act as road maps to guide action.

WA10: Application of representativeness heuristic (*Generalisation Effects*): In times of crises, institutions are assessed by their similarities to the problem at hand in order to measure the probability of their failure.

WA11: Application of anchoring heuristic: People attach extreme weight to an initial value, which is later 'adjusted to yield the final answer'.

Table 1 Hypotheses and Working Assumptions

* This assumption is shared by both of the theories, although stronger by the sunspots view.

** Within the period under examination, there have not been any deposit freezes or payment re-scheduling.

1.3 Methodology and Case Selection

“Case-study researchers [...] usually look at causes in terms of their combination: How did relevant causes combine to produce the outcome in question? [...] John Stuart Mill called this type of causation “chemical” because the effect of any specific causal condition depends on the presence and absence of other conditions”
(Ragin 2007, 8)

“[...] [I]t is possible to make strong inference in just one or a few cases, based on one or a few pieces of the right kind of evidence, if this evidence strongly discriminates between alternative hypotheses”
(Bennett 2008a, 718)

This chapter has first introduced this research’s puzzle and its argument, and a short historical background for banking crises. It has also illustrated the hypotheses tested and the empirical findings of this research. One last, and yet of great significance, dimension to explore before finishing the chapter will be the methodological foundations of this research. With this aim, this section will now discuss the methodology applied to this research in gathering and interpreting empirical data. While doing so, it will also present a short overview of the methodological literature for qualitative research in general and will highlight the various methods in case selection, as well as for within-case and cross-case analyses. The current section will conclude the chapter by illustrating the thesis structure and outline of the chapters.

As discussed before, the banking panics literature analyses depositor expectation as a function of both material circumstances and institutional settings. This research is an attempt to both (1) test the hypotheses of the current literature with the most recent banking crisis in an advanced market economy and (2) contribute to it by its emphasis on ideas. The research objective of this thesis is to explain and understand the observed variation on the dependent variable across the four cases under examination. To clarify once more, the dependent variable of this research, in other words the outcome of interest, is the depositor behaviour during banking crises, not the bank failures themselves. Depositor behaviour is a continuous concept with varying degrees between the positive and the negative poles (Goertz 2005, 34, 35). It might take on the following values: (1) No bank run, (2) breakdown of trust in the form of limited bank runs, (3) a crisis of confidence within the banking system in the form of a banking panic, or (4) no banking panic.

A qualitative researcher, interested in explaining a certain phenomenon, would prefer focusing on the cases where both the dependent and independent variables take on the value of 1, and would avoid cases where both are zero (Goertz 2008a, 13). Case-oriented research,

therefore, has mostly been criticised for ‘selecting on the dependent variable’, which is “[...] rather than studying an attribute or aspect that simply “varies” from one case to the next, as in variable-oriented research, case-study researchers focus on historically emergent, qualitative phenomena” (Ragin 2007, 7).²⁵ By selecting cases based on their outcomes and then analysing the causes of the phenomenon (Ragin 2008, 149), qualitative research is interested in the ‘causes-of-effects’, in other words, in investigating the causes of specific outcomes (Goertz and Mahoney 2010, 8; Mahoney and Goertz 2006, 230).

Ragin (2008, 176) differentiates between ‘net-effects thinking’ and ‘configurational approach’. “In the net-effects thinking, estimates of the effects of independent variables are based on the assumption that each variable, by itself, is capable of influencing the level or probability of the outcome” (Ragin 2008, 177). According to this view, the impact and the relative importance of an independent variable on the outcome will be the same independent from the values of other variables (Ragin 2008, 112). However, “[...] it is not useful to generalize about the overall effect of *B* without saying something about the context (i.e., other variable values) in which *B* appears” (Mahoney and Goertz 2006, 235). When there is ‘causal complexity’ (Ragin 2008) or ‘equifinality’ (George and Bennett 2005, 8, 19, 27)²⁶, it becomes difficult to assess each variable’s independent and relative effect on the outcome (Ragin 2000, 41-2; see also Mahoney and Goertz 2006, 234).

Qualitative researcher’s view towards the world is one of causal complexity where various combinations of the causes might lead to the same outcome (Ragin 2008, 54). Ragin (2008, 54, 109) defines those causal combinations as ‘causal recipes’, which aim to explain *how* things happen. For a better understanding of this point, a closer look on ‘concept formation’ in qualitative research might be helpful (Goertz 2005, 19).²⁷ There are two main differences between qualitative and quantitative traditions with regards to concept formation. Firstly, asymmetrical causation in qualitative research suggests that “[t]he opposite of a concept is different from its negation” (Goertz and Mahoney 2000, 4; see also Goertz and Mahoney 2010, 12). Secondly, for qualitative researchers “[...] the world is not neatly divided into mutually exclusive categories”, where each concept belongs to only one category (Goertz and Mahoney 2000, 1, 10). Applying those to this research, the causal mechanisms generating a

²⁵ For a detailed critique of the selecting on the dependent variable argument see Bennett and Elman 2006, 460-63. Selecting on the dependent variable has been criticised to increase the number of positive cases where the outcome of interest occurs (Mahoney and Goertz 2006, 239). “The positive case concept is almost always what the researcher is trying to explain” (Goertz 2005, 19). On a related note, Mahoney and Goertz explain how to select negative cases based on the ‘Possibility Principle’, which uses the ‘rule of inclusion’ and ‘rule of exclusion’ (Mahoney and Goertz 2004, 653). “The Possibility Principle holds that only cases where the outcome of interest is *possible* should be included in the set of negative cases; cases where the outcome is *impossible* should be relegated to a set of uninformative and hence irrelevant observations” (Mahoney and Goertz 2004, 653).

²⁶ Equifinality refers to situations where there are multiple paths to the outcome observed.

²⁷ Goertz (2005, 6) distinguishes between three levels of concepts, namely basic (dependent variable), secondary (always referring to the positive concept), and indicator/data levels.

bank run might not be the same as the ones preventing it from happening (*no bank run is not the reverse of a bank run*). As regards to the mutual exclusiveness of concepts, the observation of a limited bank run simultaneously belongs to the category of ‘no banking panics’. In the same way, the outcomes of ‘no bank runs’ shall also be placed under the category of ‘no banking panics’. Nonetheless, this research acknowledges that the causal process leading to these outcomes are not identical with each other.

Given the qualitative researcher’s view towards complex causality, what *methods* are preferred to best analyse this causality? As mentioned above, qualitative researchers “[...] do not look for the net effect of a cause over a large number of cases, but rather how causes interact in the context of a particular case or a few cases to produce an outcome” (Bennett and Elman 2006, 458). Mahoney and Goertz (2006, 238) also emphasise that qualitative researchers attempt to keep the population size of the research manageable in order not to overlook any key causal relationships. As a matter of fact, case-study methods are interested in gaining in-depth knowledge of a small number of cases (Ragin 2000, 26).

Social research tends to cluster around either qualitative, in-dept case studies or large-N variable-oriented quantitative studies (Ragin 2007, 2; Ragin 2000, 29). While large-N studies aim to reveal general patterns recurring in a large number of cases, “[...] case study research is very often defined by its focus on phenomena that are of interest because the N of cases is small. Typically, these phenomena are large-scale and historically delimited, not generic in any sense” (Ragin 2007, 5). Thus, the difference between those two ‘cultures’, as Goertz and Mahoney (2010) label,²⁸ is that while the case-study method gains its confidence from its depth, the variable-oriented research’s confidence is based on its breadth (Ragin 2000, 22).

A case, according to George and Bennett (2005, 17), is an ‘instances of a class of events’. Adopting a ‘configurational view’, Ragin (2000, 39) argues that different aspects of a case should not be viewed in isolation from each other. Furthermore, case study research is “the intensive (qualitative or quantitative) analysis of a single unit or a small number of units (the cases), where the researcher’s goal is to understand a larger class of similar units (a population of cases). There is thus an inherent problem of inference from the sample (of one or several) to a larger population” (Seawright and Gerring 2008, 296). In order to overcome this problem, qualitative researchers define the scope of their theories in a narrow way in order to reach limited generalisations applicable to a certain type of cases (Mahoney and Goertz 2006, 237; Ragin 2000, 23). George and Bennett (2005, 5) label those as middle-range typological theories, [...] which identify recurring conjunctions of mechanisms and provide hypotheses on the pathways through which they produce results, provide more contingent and specific generalizations for policymakers and allow researchers to contribute

²⁸ Regarding them as separate ‘cultures’, Goertz and Mahoney (2010, 2, 15) discuss the major differences between qualitative and quantitative research paradigms, in the areas of research goals, causal inference, concepts and measurements, and theoretical orientation.

to more nuanced theories”. As the ‘building block’ approach suggests, the “[...] study of each subtype fills a “space” in the overall theory or in a typological theory” (Goerge and Bennett 2005, 78). Recalling the different values on the dependent variable, there have been no episodes of banking panics within the specified period under examination with this research.²⁹ Therefore, ‘banking panic’ presents the ‘empty cell’ in the outcome typology and is not covered by this research. This research is mainly interested in explaining the subclasses of ‘bank run’ and, to a limited extent, ‘no bank run’ as the binary values on the dependent variable.

Given the significance of case-studies in order for qualitative researchers to study complex causality, how do they select cases that fit best for their research design and research objectives? Seawright and Gerring (2008) identify seven different types of case studies depending on the case selection techniques, namely typical, diverse, extreme, deviant, influential, most similar, most different method.³⁰ The last two types have been among the oldest methods suggested by Mill’s method of agreement and method of difference, in reverse order (See also Ragin 1989, 36, 37, 39, 40; Goerge and Bennett 2005, 153-160). Mill’s method of agreement requires cases to be similar in their outcomes and in only one independent variable (the most different method). On the other hand, method of difference requires cases to be similar in all independent variables saving one and to have varying degrees on the outcome (the most similar method).³¹ “These two methods, the method of agreement and the indirect method of difference, form the core of the case-oriented strategy. However, while they are both useful, especially as inductive techniques, both appear to be incapable of handling multiple or conjunctural causation” (Ragin 1989, 42).

As the opening quotation of this chapter from Charles Goodhart has underlined, the run on Northern Rock in September 2007 presents a deviant case since no body expected a ‘nineteenth century style’ depositor run on a British bank in the twenty-first century.³² As a first step in case selection, this research applies a similar approach to Mill’s ‘method of difference’ and selects its cases, namely Northern Rock, Alliance and Leicester, HBOS, and Bradford and Bingley, from those having similar economic vulnerabilities but leading to

²⁹ The most recent credit crunch of 2007, as a result of the liquidity concerns in the wholesale and interbank markets, has been defined as a wholesale banking panic by several scholars. However, this is not in the scope of this research. See Gorton (2007); Gorton (2008); Gorton (2009). See also Also Roubini and Mihm 2010. They argue that the crisis was characterised by various types of runs, or bank run-like panics, on the different segments of the financial markets.

³⁰ Also George and Bennett (2005, 75-6) specify six-different types of theory-building research objectives, five of which are borrowed from Lijphart and Eckstein and the sixth of their own.

³¹ “[...] [C]ase-study methodologists have long argued, consistent with Bayesianism, that if a hypothesis appears to accurately explain a tough test case which, a priori, it looked “least likely” to explain, then the hypothesis is strongly affirmed. Conversely, failure to explain a “most likely” case strongly undermines our confidence in a hypothesis” (Bennett 2008a, 713).

³² “[T]he *deviant case* method selects that case that, by reference to some general understanding of a topic (either a specific theory or common sense), demonstrates a surprising value. The deviant case is therefore closely linked to the investigation of theoretical anomalies” Seawright and Gerring 2008, 302.

different outcomes. The point of departure has been the banking panics literature which identifies common underlying economic vulnerabilities that put banks on the edge of the cliff, with the potential to lead to a varying sorts of change in depositor behaviour (dependent variable). As Kirshner (2003) illustrates, in most of the cases, economic logic will render some of the options possible and will eliminate the rest. However, a reference to pure economic theory will fail to provide any 'definitive' explanation for the reasons for choosing a specific path from the spectrum of these 'economically coherent' outcomes (Kirshner 2003, 7). While worsening fundamentals cause a bank failure, not all bank runs can be explained by reference to those. Within the period under examination, only in two out of the four cases, namely Northern Rock and Bradford and Bingley, the dependent variable took on the value of 1, indicating a bank run. Therefore, there seems to be more than an economic explanation to account for the variance on the outcome.

The qualitative researcher's emphasis on the necessary and/or sufficient conditions in causal chains points to a further difference between qualitative and quantitative research paradigms (Goertz and Starr 2003, 15; see also Mahoney and Goertz 2006, 232).³³ As a matter of fact, this emphasis on necessary conditions justifies the researcher's selection on the dependent variable (Goertz and Mahoney 2010, 9). Within this tradition of concept formation, there are five types of causes in historical explanations; namely (1) necessary but not sufficient, (2) sufficient but not necessary, (3) necessary and sufficient, (4) INUS, and (5) SUIN causes (Mahoney, Kimball, and Koivu 2009). While necessary variables are enabling ones and use the logical operator "and", sufficient (with the logical operator "or") or INUS variables are generating variables for the outcome (Goertz and Starr 2003, 6).

Goertz defines a necessary condition as one which does not allow for substitutes within a causal chain (Goertz 2005, 12, 44, 45, 46; Goertz and Levy 2007, 23). The outcome of interest investigated does not take place in the absence of a necessary cause, while the presence of the cause does not guarantee the outcome (Mahoney, Kimball, and Koivu 2009, 118). On the other hand, "[t]hat X is sufficient for Y does not imply that if X had been absent then Y would not have occurred" (Goertz and Levy 2007, 15). Although a sufficient condition leads to the outcome, there are other ways leading to the outcome without the aforementioned sufficient cause (Mahoney, Kimball, Koivu 2009, 121). In other words, "[...] necessary condition causal chains are incomplete, while sufficient ones are not. The existence of a necessary condition makes the next link possible, but usually other factors must be included to explain why it in fact did happen" (Goertz and Levy 2007, 26). As a third option, "[i]ndividual causes that are necessary and sufficient for a given outcome are rarely proposed

³³ Two alternative ways of concept formation are present, namely necessary and/or sufficient conditions and family resemblance in the qualitative paradigm. See especially Goertz 2005, 39-46. For more on concept formation see Goertz 2008b. Since this research applies the language of necessary and sufficient conditions, a special focus will be devoted on the former.

in the social sciences” (Mahoney, Kimball, and Koivu 2009, 123). Finally, INUS causes are the combination of causal factors that are sufficient (but not necessary) for the outcome together, but neither necessary nor sufficient individually (Mahoney, Kimball, and Koivu 2009, 124, 125; see also Goertz and Mahoney 2010, 11). “If you start with an INUS view of the world you do not necessarily believe there is one representative causal effect of X, since, depending on the path, the presence of X or its absence X may be a cause of Y” (Goertz 2008a, 11). Therefore, INUS model causation suggests multiple paths each sufficient to the outcome, in other words, equifinality (Mahoney and Goertz 2006, 232, 236-7; see also Goertz and Mahoney 2010, 11; Ragin 2008, 63).

Ragin (2007, 2) argues that general knowledge should be built through *configurational comparative research*, which “[u]nlike the case-study approach, configurational research attends to cross-case patterns; unlike variable-oriented research, it also attends to the specifics of each case and attempts cross-case analysis of within-case relationships” (Ragin 2007, 13). According to Ragin (2007, 13, 15), the goal with configurational comparative research is to construct typologies of cases, where cases are compared to each other as configurations in order to identify similarities and differences across cases. Qualitative comparative analysis, Ragin (2008, 23) continues, therefore accomplishes analysing complex causality where the outcome might occur through different ‘causal recipes’. George and Bennett also refer to typological theorising and structured, focused case comparisons (SFCC).³⁴ Promoting a typology of different kinds of the phenomenon under investigation, George and Bennett (2005, 78) call this approach to theory development as the ‘building block’ procedure, where “[t]ypological theories specify the pathways through which particular types relate to specified outcomes” (George and Bennett 2005, 235). During SFCC, on the other hand, the researcher asks the same set of questions to several cases for ‘cumulative findings’ (Bennett 2008b, 490). Accordingly,

[t]he method is “structured” in that the researcher writes general questions that reflect the research objective and that these questions are asked for each case under study to guide and standardize data collection, thereby making systematic comparison and cumulation of the findings of the cases possible. The method is “focused” in that it deals only with certain aspects of the historical cases examined (George and Bennett 2005, 67).

Although desired, are qualitative researchers always able to find the perfectly matching cases for SFCC or configurational comparative research in real world, for example for a controlled before-after case comparison? As George and Bennett (2005, 24) mention, rarely does controlled variation in independent and thus in dependent variables exist in real world. Ragin (2008, 154) also makes a similar point and proposes the use of ‘counterfactual cases’ given

³⁴ See also Bennett and Elman 2006, 456.

the lack of perfect comparability across cases. Levy (2008, 629) defines a counterfactual as “[...] a “contrary-to-fact” conditional that identifies a “possible” or “alternative” world in which the antecedent did not actually occur”. Recalling the discussion on the necessary and/or sufficient causes, “[t]o assert a necessary condition is simultaneously to assert a counterfactual: they are bound together” (Goertz and Levy 2007, 15). The ‘minimum rewrite rule’ for counterfactuals is followed by qualitative researchers as to change the variables as little as possible not to ‘change the real world too much’ (Goertz and Mahoney 2010, 12-3; see also Goertz 2008a, 12). In addition to the use of counterfactuals to compensate for the lack of diversity across cases, George and Bennett (2005, 81) also suggest ‘process-tracing’ “[...] to assess whether differences other than those in the main variable of interest might account for the differences in outcomes”.

While examining the four bank failures in the United Kingdom within the span of one year (between September 2007 and September 2008) this research holds several characteristics of the institutional settings (such as the rule of law, contract enforcement) constant across cases. Therefore, by selecting the cases from the same banking crisis period, no major temporal variation between cases or a possible variation between structural/institutional settings is allowed. In addition, the four cases share similar business models and backgrounds.

A crucial feature of the UK system in the run-up to the crisis, was [...] the rapid growth of a number of specific banks – Northern Rock, Bradford & Bingley, Alliance and Leicester and HBOS – which were increasingly reliant on the permanent availability of a large-scale interbank funding and/or on their continuous ability to securitise and sell down rapidly accumulating credit assets, particularly in the mortgage market” (FSA 2009b, 35).

As a note of caution, it acknowledges that the problems for banks in considerably different sizes might vary in their severity. The circumstances surrounding those banks were not identical in order to allow for a fully controlled comparison, nor were their business risks. Similar to Northern Rock, both Bradford and Bingley and HBOS were funded their long-term assets through short-term wholesale markets. Unlike Northern Rock, however, both of them were exposed to buy-to-let markets with a higher rate of risk for borrower default and rising arrears. In addition, deposit balances varied across those institutions, with HBOS being the biggest savings institution operating in the banking sector.³⁵ Nonetheless, both market

³⁵ Nonetheless, according to their half year results for 2008, savings (personal customer deposit) balances for Alliance and Leicester, Bradford and Bingley, and Northern Rock were the following respectively: £24.1bn, £22.2bn and £14.2bn. This amount was much higher for HBOS. Those are available at <http://www.abouthantander.co.uk/investors/results-and-presentations/alliance-and-leicester.aspx> (last accessed on 20/09/2012); <http://corporate.bbg.co.uk/financial-information/results-and-publications/2008.aspx> (last accessed on 20/09/2012).

capitalisation and deposit/savings rates for the banks, excluding HBOS, had been similar for the remaining three ex-mutuals.

Finally, the cross-case analysis across those four failures (within the same banking crisis period) also deploys the following, yet partially incomplete, controlled before-after comparisons³⁶: As mentioned in the preceding discussion on methodology, controlled experiment in social sciences is highly difficult, especially for cases with complex causality where variables are not independent from each other, also known as the ‘Galton’s Problem’. However, as stated in the words of George and Bennett (2005, 34), “[a] lack of independence of cases is useful in research that aims to test whether the lessons of an earlier case played a causal role in a later one”. While the run on Northern Rock is *before* (1) the increase in the deposit insurance level (to £35,000 in October 2007), (2) the introduction of the blanket guarantee in September 2007 and (3) the nationalisation of the bank in February 2008; all the following three cases took place *after* these developments. Since one of the research objectives of this thesis is to understand the impact of the past crises and policy changes on depositor behaviour, the selection of the cases before and after certain turning points within the same period serves well for this purpose. In addition to those, the most recent bank failures preceding the period under examination are also referred to as background cases.

As regards to methods, empirical chapters apply a fully qualitative analysis –process tracing, within-case and cross-case analyses- in order to analyse the ideational, institutional, and material dimensions of a bank run. “Process tracing involves looking at evidence within an individual case, or a temporally and spatially bound instance of a specified phenomenon, to derive and/or test alternative explanations of that case” (Bennett 2008a, 704). The aim, to emphasise once more, is not to assess the causal weight of each individual independent variable, but instead is to explain the causal mechanisms for each specific case to lead to the outcome observed. Having defined her case studies, the next step for a qualitative researcher is to establish the causal links between causes and the outcome analysed. George and Bennett (2005, 181) propose ‘within-case analysis’ as an alternative approach to controlled comparison, which includes process-tracing and congruence testing. Mahoney (2010, 123) defines process tracing as the “[...] tool for causal inference that first comes to mind when one thinks of qualitative methodology in political science”.³⁷ Goertz and Mahoney (2010, 14) suggest that the use of the language of necessary and/or sufficient conditions facilitates

³⁶ The comparison is incomplete since there is more than one variable temporally changing between cases.

³⁷ Refer to this source for short review of the three areas of methodology in qualitative research – namely causal-process observations, concepts, and multimethod research. Goldstone (2008, 47) defines process tracing as consisting “of analyzing a case into a sequence (or several concatenating sequences) of events and showing how those events are plausibly linked given the interests and situations faced by groups or individual actors”. Sequence elaboration assesses the importance of necessary and/or sufficient causes within a sequence mainly based on their type and location on the sequence (Mahoney, Kimball, Koivu 2009, 114). See also Goertz and Levy 2007, 27.

process tracing within cases, while George and Bennett (2005, 13) recommend the method ‘as a means of examining complexity in detail’. Also called as mechanism and process-based explanations (McAdam, Tarrow, and Tilly 2008)³⁸, as opposed to variable-based explanations, “[...] causal analysis consists of identifying the mechanism that underlies and generates empirical regularities and outcomes” (Mahoney 2001, 578). In addition to process-tracing, a second method of within-case analysis suggested by George and Bennett (2005) is congruence testing. Congruence testing utilises from process-tracing and “[...] provides the basis for claims regarding “common patterns” ” (Golstone 2008, 50). Here the aim is not one to provide over all generalisations (Golstone 2008, 50, 51). As a matter of fact, “[u]sing process tracing, scholars seek to uncover causal sequences that produced the results or cases of interest. Using congruence testing, scholars make claims about the number of cases that “fit” a particular causal sequence or pattern (or “model”)” (Golstone 2008, 51).

The research design applies a combination of both inductive and deductive logics. As a first step, the identification of the possible independent variables and hypothesised causal mechanisms between those has been through a deductive analysis of the banking panics and cognitive heuristics literatures. Those have been summarised in the preceding section and will be discussed in detail in this thesis’ theoretical chapter, *Chapter II*. As a second step, this research employs an inductive logic throughout the case studies to explain the variation on the dependent variable. In order to investigate the hypothesised causal mechanisms (hypotheses) between the independent and the dependent variables, it will employ a ‘heuristic’ process-tracing through which new variables and hypotheses may also be revealed with the sequences of events being ‘traced’ (George and Bennett 2005, 7). After detailed within-case analyses for each separate case, a cross-case comparison will be presented in the *Conclusion* while taking equifinality (the presence of multiple paths each sufficient to the outcome) into consideration.

As regards to data collection, process tracing is conducted in order to identify the various turning points within the period under examination and to sort out which independent variables explain each step in the causal chain (Goerge and Bennett 2005, 92). Primary evidence is collected through an in-depth newspaper analysis through ‘Nexis UK’, depositor comment collected from this newspaper coverage, official reports such as *Consumer Awareness of the Financial Services Compensation Scheme* by the Financial Services Authority (‘FSA’, hereafter) and *The Nationalisation of Northern Rock* by the National Audit Office, committee hearings, written evidences and memorandums submitted to the House of Commons Treasury Committee. Finally, the window period has been set at minus 3 months in order to

³⁸ For further information on causal mechanisms and different definitions of the subject see Mahoney 2001.

get a better understanding of the events preceding the bank failures. Periods covered for each specific case are the following:

Case study	Period Covered
Northern Rock	June 2007- September 2008 (inclusive)
A&L	April 2008 – July 2008 (inclusive)
B&B	May 2008 – September 2008 (inclusive)
HBOS	June 2008 – September 2008 (inclusive)

Table 2 Period Covered for Case Studies

In addition to the evidence gathered through process tracing, this research tests its argument against the depositor comments collected through national and regional newspapers on *Nexis UK* during the four days of the offline run on Northern Rock. With an attempt to understand the depositor motivations in forming the queues, more than three hundred seventy depositor comments (presented anonymously in *Appendix*) have been collected from newspaper articles. This has provided this research with an artificial interview based on random sampling from the ‘queuers’. The selection of the newspapers has been made both on the national and on the regional level, which also included the *Financial Times* and the *Evening Standard (London)*, in order to prevent a possible partisanship bias. Comments from the same depositors (collected from different news outlets) have been merged and duplicates have been omitted. A complete list of all the comments and their sources is presented anonymously in the *Appendix*. Finally, opinion polls conducted by various polling houses, such as ICM, Ipsos MORI, Populus, and YouGov are also referred to throughout the thesis in order to get a better understanding of the *depositor perceptions* during the crisis period. All the surveys and polls that have been referred to are publicly available on institutions websites.

The off-line run on Northern Rock, during which depositors were physically present in the queues, provided this research with an invaluable source of data compared to the following electronic on Bradford and Bingley. Ideally, the selection of depositors to conduct interviews with, which in this case was done through newspaper reporters, should be based on an unbiased criterion and be equally representative of the wider population. Unfortunately, given the infrequency of off-line bank runs and the increasing prevalence of electronic deposit withdrawals, this is difficult to apply to the studies of bank runs. Nonetheless, despite suffering from a possible selection bias and incomplete

representativeness of the wider population, depositor comments collected are still the primary sources to gather first-hand evidence on the motivations for depositor runs. Therefore, without discarding their relevance and also acknowledging their limitations, the second best approach to use this source of data is to minimise the selection bias by extending the search to all national newspapers. Secondly, out of more than three hundred seventy depositor comments collected during the run on Northern Rock, most of them were coded according to five main nodes (categories), which were derived from the banking panics literature. The percentages of each of these nodes within the comments coded were then analysed in relation to each other. In other words, although the collected comments might not possess a perfect representation of the wider population (as a result of a possible selection bias discussed above), the frequency of each node at least provided a general understanding of the significance of collective memory of past crises or the lack of trust towards the Authorities in relation to other categories.

1.4 Structure and Outline of the Thesis

To emphasise once more, the goal of this thesis is to understand the underlying reasons for the depositor runs on two of the cases across the four bank failures analysed within the same banking crisis period. More specifically this thesis asks: What were the triggers for the depositor runs on Northern Rock and Bradford and Bingley? This thesis is divided between two main theoretical and empirical parts and structured in seven chapters (including introduction and conclusion). The following theoretical chapter, *Chapter II*, is structured in a way to first present the current literature on banking panics and then to discuss the mainstream cognitive heuristics literature in order to address the former's shortcomings. After a short review of the theories of banking crises in general, the chapter continues with the two mainstream theories of banking panics (namely sunspot explanations and asymmetric information theories of bank runs) and a discussion on deposit insurance schemes as institutionalised safety nets for deposits. This structure allows the chapter to examine the possible 'focal points' put forward by the extant literature, towards which depositor expectations converge in times of crises and led them revise their *perceived risk of bank debt*. While the theories of banking panics explore the reasons for a change in depositor behaviour, either random or based on fundamentals, deposit insurance scheme is promoted to keep *business as usual*. The second part of the chapter starts with a critique of the banking panics literature and promotes 'cognitive heuristics' to address its shortcomings in analysing decision-making under uncertainty. It re-introduces the list of hypotheses derived from the literature and to be tested with the following empirical chapters.

The empirical part of the thesis is structured first to provide the empirical background for each case and then to test this research's argument against them. Therefore, *Chapter III* and

Chapter V are both descriptive in nature in order to set the background information on the cases to be discussed. The former discusses the period between August 2007 and September 2008 for Northern Rock, while the latter presents the remaining three case studies in a structured way to better compare the similar problems they had experienced before their failures. As for the remaining empirical chapters, *Chapter IV* (on Northern Rock) and *Chapter VI* (on Alliance and Leicester, HBOS, Bradford and Bingley) analyse the bank failures in mainly three sections: (1) Fundamentals and information asymmetris (what the current literature can explain), (2) institutions and depositor awareness, and (3) cognitive shortcuts and reference points. The first section interprets the cases from the lenses of the current literature and points out the strengths and weaknesses of the literature's explanatory power for each case. In other words, it tests the hypotheses of *H0* and *H1*. The second section analyses the institutional dimensions for each case (*H2* and *H3*) and tests this research's argument on 'depositor awareness'. Finally, the third section incorporates the insights gained from the cognitive heuristics literature to the cases and tests the remaining hypothesis of *H4*. *Conclusion*, as the final chapter of this thesis, presents an overall discussion on the main empirical findings, as well as a structured, cross-case comparison for the identified common causal pathways to explain the changes in depositor behaviour with an eye towards equifinality.

Chapter II: Literature Review and Literature Gap: Banking Panics and Cognitive Heuristics

“What remains a puzzle, [...] is why collectively held (or group) ideas sometimes radically change. Max Weber compared ideas to “switchmen” who work the railroads: they point actors, like trains, down tracks in some directions and divert them from others. This famous metaphor, however, begs a critical question: What decides the direction of the switch?”
(Legro 2005, 2)

Bank runs are shocks to the *business as usual* for banks. At some points in time, expectations cascade towards certain focal points, which lead to changes in depositor behaviour. What kind of external or internal stimuli do lead to bank runs and, following this, what kind of a *new status quo* does replace the old one? Can bank runs be explained through reference to sunspots as ‘non-fundamental (random) events’ (Goldstein 2010, 12) or through an observed change in fundamentals (as promoted by the asymmetric information theory), or maybe through a combination of both? Mainly interested in the liability side of contagion among depositors and its course of progress, this research investigates the underlying reasons and the much-neglected role played by ideas as triggers for bank runs.

Of the massive amount of failures experienced in corporate history, not every failure or banking distress has triggered a panic among market actors, which were just deemed as ‘bad apples’. On the other hand, there have been numerous instances where the weaknesses in economic fundamentals led to the breakdown of cooperation among market actors in the shape of bank runs. This research proposes an alternative reading of bank runs by its emphasis on ideas, not to replace but rather to supplement the explanations put forward by the banking panics literature. From a constructivist political economy point of view, a combination of material, institutional and also ideational variables is required when hypothesising the causal mechanisms and the processes leading to the various outcomes.

The current economics literature on banking panics, which is broadly divided between two mainstream theories (namely random withdrawal (or sunspot explanations) and asymmetric information theories of bank runs), puts forward several hypotheses regarding the material and institutional dimensions of bank runs. In a nutshell, the literature argues that either changes in the bank-specific fundamentals as to exceed a certain threshold (in combination with a general macroeconomic downturn or a recession) or simply random events trigger an update in depositor expectations. An institutionalist analysis of bank runs further suggests that when depositor confidence is fragile under uncertainty, institutions and

policy responses from the authorities are expected to fulfil this confidence gap between the bank and its depositors. As a response, deposit insurance scheme as a formal and non-discretionary institution is promoted for stabilising expectations. As mentioned in *Introduction* above, the nineteenth-century banking history of the United Kingdom suggests that the LoLR function by the Bank of England had been a sufficient policy action to prevent an individual bank failure spreading. This assumption has generally been supported and exemplified by the events surrounding the City of Glasgow Bank's failure and the Bank of England's success in containing depositor panic. However, the case of Northern Rock stands as an outlier since, rather than preventing the panic, this function by the central bank had been interpreted as a signal strong enough to actually provoke a depositor run on the bank. Therefore, with the aim of explaining depositor behaviour towards Northern Rock and the following bank failures, this research does not examine the possibility that a LoLR commitment can prevent an individual bank failure spreading.

Against this background, three scenarios emerge within the literature: (1) an irrational bank run caused by sunspots (*bad dreams*), (2) a *fundamental bank run* (based on changes in the fundamentals), and (3) no bank runs (*business as usual*) thanks to the guarantees provided by the deposit insurance.³⁹ Below table summarises those values on the dependent variable and the explanations offered in the literature for them.

Value on the Dependent Variable		Explanation in the Literature	
(0)	No bank runs	<i>Business as Usual</i>	Deposit insurance scheme
(1)	Bank run	Either	<i>Bad Dreams</i>
		Or	<i>Fundamentals</i>
			Sunspot explanations
			Information asymmetries

Table 3 Explanations in the Banking Panics Literature

This research argues that the reasons for a change in depositor behaviour may lie in *not only* the directly relevant material circumstances or the shortcomings of the institutional settings, as suggested by the current literature. As opposed to a pure Bayesian rationality in expectation formation, depositor behaviour is also shaped through the use of cognitive heuristics in order to make sense of the ongoing uncertainty in times of crises. Depositor

³⁹ These three scenarios are analysed in detail by Uhlig 2009. This classification of the literature as three separate approaches to bank runs, namely self-fulfilling runs, rational expectations, and deposit insurance scheme, is also presented in Blejer, Feldman, and Feltenstein 1997.

awareness towards institutions and re-collections about the Government's handling of the current and previous crises are equally crucial in shaping depositor behaviour.

As mentioned in the *Introduction*, depositor behaviour might be treated as a continuous process of expectation formation over the course of a banking crisis. This suggests that changes in depositor behaviour do not necessarily take place at a single point in time. In addition, as Pierson (2008, 181) argues, “[s]ocial processes take place at different speeds”. The ‘bank run’ outcome might take two values on the temporal structure; either to take place suddenly or in an incremental fashion. While, as an example, the off-line depositor run on Northern Rock between September 14th and 17th might be classified as a ‘sudden depositor run’, the following silent run on the bank for several weeks resembles more to an ‘incremental depositor run’.⁴⁰

If and when analysed as a *process*, a bank run might be broken down into several phases: (1) Arrival of the situation (introduction), (2) interpretation, (3) policy responses to the ongoing crisis, (4) re-interpretation, and (5) resolution of the crisis. The literature, which is by and large occupied by the disciplines of economics and economic history, mostly under-examines the ‘interpretation’ and ‘re-interpretation’ phases of the aforementioned process. Saving exceptions, a Bayesian bias is present within the asymmetric information theory of bank runs, which assumes expectations to be updated rationally once fundamentals exceed certain value thresholds. In this regard, this research’s emphasis on cognitive heuristics, which are assumed to distort decision-making process, attempts to criticise this Bayesian pre-occupation in the literature.

Against this background, this chapter is divided into two main parts. The first part will present a literature review on banking panics and the main lines of arguments to explain depositor behaviour. The first section of this chapter will provide the reader with a short account of how banking crises are approached in the literature. Following this, the second section will start analysing the main arguments promoted by various scholars working on bank runs. It will discuss the three scenarios mentioned above, while highlighting the testable assumptions put forward by each of them. It will identify the possible independent variables and hypothesised causal mechanisms between those through a deductive analysis of the banking panics literature. The second part of this chapter will present a critique of this literature and highlight the main points of departure for both theories of bank runs from each other. A discussion on cognitive heuristics will follow this section to summarise the

⁴⁰ A distinction between contagious and simultaneous bank runs is available in Dwyer and Gilbert 1989. Accordingly, “[a]s a simple example, suppose that two banks are identical in all respects known by depositors, and one of the two fails because of loan losses. Because of the first failure, depositors will increase their estimate of the probability that the second bank will fail. If this estimate increases sufficiently, depositors will run on the second bank, even though no other information has appeared [...] Simultaneous runs [on the other hand] on many banks need not be contagious runs though. For example, an exogenous event can increase simultaneously depositors’ estimated probability that many banks will fail to redeem at par” (Dwyer and Gilbert 1989, 45-46).

mainstream literature on the subject, especially the studies by Kahneman and Tversky. The final section will show how the insights gained from the cognitive heuristics literature might be applied to understanding depositor behaviour. Before conclusion, the section will also list the main hypotheses put forward by this literature. Conclusion will conclude the chapter, summarise this research's main argument and guide the reader on what to expect in the following empirical chapters of this thesis.

2.1 Theories of Banking Crises in General

There are mainly four generation of models that examine banking crises from different perspectives. Breuer (2004) argues that the first generation explanations of banking crises are basically based on macroeconomic fundamentals and speculative attacks. “[...] [P]oor macroeconomic conditions that recognizably may result in consumer defaults and business failures and in turn led to banking problems incite a speculative attack on bank deposits” (Breuer 2004, 302). On the other hand, second-generation models place more emphasis on speculation, which is regarded to be based on self-fulfilling expectations and not necessarily tied to fundamentals. Unlike the first generation, in the second-generation model of financial crises, “[...] herding behaviour, information cascades, and contagion play a role” (Breuer 2004, 300). Despite their differences, however, these first two generations of models both focus on the liability side of banks' problems. Following those, third generation models address the over-borrowing/over-lending paradigm, boom and bust credit cycles, and highlight the occurrence of ‘twin crises’ (currency and banking crises occurring simultaneously).⁴¹ Finally, fourth generation models, namely institutional models of banking crises, are mostly interested in the role of institutional factors on the well functioning of banking systems and on macroeconomic outcomes (Breuer 2004, 304). Accordingly,

[...] [P]olitics [...], civil order including rule of law, trust, ethnic tensions, culture, social norms; property rights; legal origin; and types of governance be it financial sector or the trade sector, etc. are important determinants of economic outcomes. These variables are important because they impact information, uncertainty, and transaction costs and can affect the efficiency of decision-making (Breuer 2004, 299).

Within the broader literature of banking crises, a well-developed literature exists on banking panics, specialising on the reasons for changes in depositor behaviour and on the policy

⁴¹ As a leading example on the twin crisis see Kaminsky and Reinhart 1999. As an example from the banking panics literature, Miller (1998, 331) also works on “[...] how a domestic bank run can cause a speculative attack on foreign currencies”. In another article, Miller (2003, 385) argues that “[...] as a currency peg constrains a government's ability to finance a bailout, bank runs are more likely in credible fixed exchange rate regimes than in those in which the central bank is less committed to its exchange rate”. Further comparing the Argentinian and Mexican banking crises in the 1990s, the scholar provides an explanation to the different depositor reactions across these two cases with reference to each country's perceived commitment to their currency pegs.

responses to address those. According to random withdrawals theories, sunspots, self-fulfilling expectations, or bad dreams serve as the underlying reasons for bank runs. These explanations might be classified within the second-generation models of banking crises as “[...] the attack can occur in the absence of weak macroeconomic or banking conditions” (Breuer 2004, 302). On the other hand, the second line of explanations, which shall be placed within the first generation of banking crises, argues that the main underlying reason(s) for bank runs are information asymmetries prevailing within the banking system. The theories within this tradition emphasise business cycles, signalling effects of corporate failures, increasing expectations for an upcoming recession or the deterioration of macro and/or micro fundamentals above a certain threshold.

The first part of this chapter is structured as to examine the possible focal points put forward by the literature, towards which depositor expectations converge in times of crises and led them revise their ‘perceived risk of bank debt’ (Calomiris and Gorton 1991, 111). The following second section will review sunspots theories of bank runs, the fundamentals view or the asymmetric information theories and will finally present a discussion on the institutional environment, especially on the deposit insurance scheme, as to preserve *business as usual* despite random triggers or changes in the fundamentals. Further references to relevant studies, which cannot be covered in detail due to space limitations, are provided in footnotes.

2.2 Theories of Banking Panics

Sunspots (Random Withdrawals) Theories of Bank Runs

“Who is to blame? A, *causa remota*? Or Y, *causa proxima*?
Cause remota of any crisis is the expansion of credit and speculation while *causa proxima* is some incident that saps the confidence of the system and induces investors to sell commodities, stocks, real estate, bills of exchange, or promissory notes and increase their money holdings. The *causa proxima* may be trivial: a bankruptcy, a suicide, a flight, a revelation of fraud, a refusal of credit to some borrowers, or some change of view that leads a market participant with a large position to sell. Prices fall. Expectations are reversed”
 (Kindleberger and Aliber 2005, 89)

“If the prophecy of hostility is thoroughly self-fulfilling, the belief that there is a high degree of real conflict will create a conflict that is no longer illusionary”
 (Jervis 1976, 77)

“One is not, in tacit coordination, trying to guess what another will do in an objective situation; one is trying to guess what the other will guess one’s self to guess the other to guess, and so on ad infinitum [...] The reasoning becomes disconnected from the

objective situation, except insofar as the objective situation may provide some clue for a concerted choice. The analogy is not just trying to vote with the majority but trying to vote with a majority when everyone wants to be in a majority and everyone knows it” (Schelling 1960, 92-3-4)⁴²

This section will work through the specifications of the Diamond & Dybvig model of bank runs (‘D&D’, hereafter) as the prominent example of the random withdrawals theories.⁴³ D&D model emphasises multiple-equilibria in deposit contracts resulting from ‘differing levels of confidence’ (Diamond and Dybvig 2000, 15). In this model, panic runs are treated as ‘sunspot equilibria’ (Jacklin and Bhattacharya 1988, 587) and “[...] [t]here is more than one self-fulfilling prophecy about who withdraws at date 1” (Diamond 2007, 196). A bank run, as one of the possible outcomes of multiple-equilibria, depends on the existence of extrinsic random variables (sunspots) and worsens as a result of self-fulfilling prophecies. Accordingly, “[...] the run equilibrium is played if spots appear on the sun, otherwise the no-run equilibrium is played” (Ennis and Keister 2009, 1598).

As an example, Waldo (1985, 269) models bank runs as multiple equilibria when each depositor thinks that other depositors will also withdraw their money from the bank and therefore early withdrawals will always be better off. In this model, sunspots are described as being “[...] totally extraneous and unrelated to any fundamental factors such as changes in the prospective yield on the bank’s portfolio” (Waldo 1985, 273, footnote 7). Ennis also model bank runs as sunspot phenomena with multiple equilibrium outcomes where sunspots are defined as ‘coordination devices’ for depositor expectations (Ennis 2003, 55).⁴⁴ In those models, the run results from the shift in expectations “[...] which could depend on almost anything, consistent with the apparently irrational observed behaviour of people running on banks” (Diamond and Dybvig 2000, 15). To quote these scholars in length,

[...] the selection between the bank run equilibrium and the good equilibrium depended on some commonly observed random variable in the economy. This could be a bad earnings report, a commonly observed run at some other bank, a negative government forecast, or even sunspots [...] The observed variable need not convey anything fundamental about the bank’s condition. The problem is that once agents have deposited, anything that causes them to anticipate a run will lead to a run. This implies that banks with pure demand deposit contracts will be very concerned about

⁴² This argument also resembles the Keynes’ ‘beauty contest’ analogy.

⁴³ Diamond and Dybvig published their paper in 1983, which was preceded by Bryant (1980) publishing on the same subject a couple of years earlier.

⁴⁴ Ennis (2003, 56) further states that “[...] the equilibrium selection story presented here strongly accords with the long-standing belief that some bank runs can be characterized as events resulting from exogenous waves of pessimism and that those mood shifts are more likely when economic conditions are bad or deteriorating”. Peck and Shell (2003, 118) also model bank runs with sunspots triggering the bank run “[...] in which the optimal mechanism tolerates a positive probability of a run”. See also another paper by Peck and Shell (1999) where they analyse the impact of bank portfolio restrictions on the probability of bank runs.

maintaining confidence because they realize that the good equilibrium is very fragile (Diamond and Dybvig 2000, 18)

According to the D&D model, banks offer ‘liquidity transformation’⁴⁵ for their customers through deposits, which are preferred over other types of contracts (such as equities) since they allow depositors to liquidate their assets, not on a single, but on several possible dates, and thus, to reduce their transaction costs (Diamond 2007, 190; Smith 1991, 231).⁴⁶ The role assigned to banks in the D&D model is, therefore, one to insure depositors against liquidity risk⁴⁷ and to offer optimal outcomes as long as depositors stick to their initial liquidity preferences.⁴⁸ The model suggests that banks operate in a continuous time and serve two types of depositors, namely type I (patient) and type II (impatient). This classification is based on depositors’ liquidity needs, which are only available to them and, therefore, are ‘unverifiable private information’ (Diamond 2007, 196). According to the specifications of the model, banks operate under three main limitations, which make them vulnerable to changes in depositor expectations. Those are (1) the sequential service constraint, (2) the liquidity mismatch between their assets and liabilities, and (3) the uncertain investor horizons for their liquidity needs. We shall discuss each of those in turn.

The sequential service constraint, defined as successive spending by each depositor, requires banks to service their customers on a *first-come-first-served* basis (Diamond and Dybvig 2000; Wallace 1988). Under this constraint, the payoffs to depositors become dependent on the order and the number of (previous) withdrawals (Diamond and Dybvig 2000, 17), thus creating a collective action problem among depositors (Diamond and Rajan 1999, 38). Therefore, in a bad equilibrium, the main reason for patient depositors to panic is their fear that “[...] early withdrawals [would] make their promised second-period payoffs infeasible” (Bhattacharya and Gale 1986, 2). Accordingly, until a bank is declared insolvent and forced to leave business, early withdrawals always receive full payments in line with the bank’s liquidation of its assets (Caprio and Honohan 2008, 11).⁴⁹

The liquidity mismatch between banks’ assets and liabilities originates from the fact that, traditionally, banks fund their long-term investments (such as the loans extended to their customers) with short-term and ‘payable-on-demand’ deposits. Since “[...] the face value of deposits is larger than the liquidation value of the bank’s assets” (Diamond and Dybvig 2000, 17) and the banks operate under the sequential service constraint, exogenous random shocks

⁴⁵ Williamson (1988) also emphasise this liquidity transformation in his model of bank runs. For another model based on banks as liquidity creators, see Diamond and Rajan (1999).

⁴⁶ This is named as the ‘intertemporal consumption flexibility’ in banking theory (Calomiris and Gorton 1991, 128). For a review of the contemporary banking theory see Bhattacharya and Thakor 1993.

⁴⁷ This point is also mentioned in Waldo (1985) and Calomiris and Gorton (1991).

⁴⁸ For a brief discussion on deposit contracts’ optimality see Postlewaite and Vives (1987, 489-491).

⁴⁹ Here, insolvency is understood as the decline of the market value of assets below the market value of the liabilities (Kaufman and Seelig 2001, 5).

to depositors' initial liquidity preferences might trigger a demand for deposit conversions into currency.⁵⁰ In tranquil times, a monthly average of deposit withdrawals may provide a benchmark for the bank to approximate the proportion of its depositors with liquidity needs at $t + 1$ (see Diamond (2007, 195-6) for more information). Depositors are confident that withdrawals will not exceed a certain limit, which may put banks in a liquidity shortage. In other words, they are confident of the banking system's intermediation of 'funding long-term assets with short-term liabilities'. However, during a bank run, there is no *a priori* knowledge of either (1) the fraction of depositors to withdraw at $t + 1$ or (2) the type of depositors that withdraw (Wallace 1988, 7).⁵¹ This uncertain horizons of investors for their liquidity needs result in the bank's failure to diversify withdrawal risk, given that any untimely liquidity demand by depositors translates into a lesser level of liquidity for the bank (Wallace 1988, 6).

Establishing their arguments on random variables, a substantial limitation of the studies within the tradition of the D&D model has been their failure to provide testable hypotheses for empirical scrutiny on the triggers of runs.⁵² An understanding of information-based bank runs as an equilibrium phenomenon, as a matter of fact, has challenged the unpredictable panic-based runs resting on multiple-equilibria. Information-based bank runs involve the following two-sided asymmetric information: While banks do not possess the information about the real liquidity needs of their depositors (as also mentioned by the D&D model), depositors also lack relevant information on their banks' asset portfolio (Jacklin and Bhattacharya 1988, 568). This emphasis on the prevailing information asymmetries between the bank and its depositors, as well as across depositors, has paved the way for an alternative mainstream theory of banking panics. The following third section of this chapter will summarise the main arguments put forward by the asymmetric information theories of bank runs.

⁵⁰ Referring to banks' 'risky long-lived assets', Diamond and Dybvig's argument "[...] demonstrates that bank runs do not present a problem when long-lived assets are sufficiently liquid and depositors are not very risk-averse" (Jacklin and Bhattacharya 1988, 587). Al-Zein (2008) also links bank runs to the liquidity position of the bank. A bank run is never a possibility for a liquid bank even after a bad dream. "If the bank holds an illiquid position, domestic depositors will run to the bank if and only if they see a bad dream" (Al-Zein 2008, 5).

⁵¹ Smith (1991) presents a classification between legitimate versus panic motivated (speculative) withdrawals, based on the 'runners' liquidity needs. He argues that "[s]peculative" withdrawal demand is defined here and throughout as withdrawal demand that occurs (only) because those seeking to withdraw are speculating about the ability of a particular bank (or the banking system) to maintain payments" (Smith 1991, 231, footnote 4). Similarly, a further distinction can be made between efficient versus non-efficient bank runs. According to Goldstein and Pauzner (2005, 1295), the difference lies in the expected low long-term return of the asset for the former, and the higher one for the latter.

⁵² As an example to this criticism, see Jacklin and Bhattacharya (1988, 586).

Fundamentals - Asymmetric Information Theories of Bank Runs⁵³

“A key question for the original Diamond and Dybvig model concerned the causes of panic. Why would agents sometimes develop beliefs leading to a panic, while at other times believe that there would be no panic? This question [...] was not really addressed”
(Calomiris and Gorton 1991, 122)

“No financial market can function normally when basic information about the solvency of market participants is lacking”
(Bordo 2008, 15)

The previous section illustrated a banking system in which depositors, as major creditors of banks, are dispersed from each other and act sequentially based on their liquidity needs, which are private information. Alternatively, deposit contracts might also be regarded as a form of cooperation among impatient and patient depositors and their expectations. As opposed to sunspots as random variables, asymmetric information theories of bank runs attribute this failure of cooperation among depositors to the prevailing information gaps on the state of fundamentals. At some moments in the continuum of time, depositor behaviour changes in line with their ‘rational revisions of perceived risks of banks’ after the arrival of adverse news related to the value of bank assets (Calomiris and Gorton 1991, 121, 124; Blejer, Feldman, and Feltenstein 1997, 7). Accordingly, the theory suggests that “[...] bank runs are exclusively driven by changes in economic fundamentals” (Ennis 2003, 55) and are associated with business cycles which take place just after business cycle peaks (Gorton 1988, 753).⁵⁴ Also referred as the fundamentals view, “[...] a panic occurs only if it is the unique equilibrium outcome following an adverse shock” (Keister and Narasiman 2011, 22) and is closely associated with the current economic conditions.⁵⁵

The asymmetric information theory of bank runs focuses on the dissemination of several types of information during banking crises. The use of aggregate knowledge in the absence of bank-specific information, according to this theory, might result in spill-overs and panics across banks. This, as a matter of fact, exemplifies the ‘lemons problem’ in financial markets, a term coined by Akerlof (1970), which is founded on the asymmetric information on the quality of goods traded between buyers and sellers.⁵⁶ Following institutional failures and as a

⁵³ For a discussion on information in capital markets see Stiglitz 1981.

⁵⁴ On the other hand, however, “[t]he panics during the Great Depression appear to be of a different character than earlier panics. Unlike the panics of the National Banking Era, these events did not occur near the peak of the business cycle and did result in widespread failures and large losses to depositors” (Calomiris and Gorton 1991, 114).

⁵⁵ For further discussion see Temzelides 1997.

⁵⁶ Analysing the automobile market to illustrate ‘quality uncertainties’, Akerlof (1970, 489) asserts that since “[...] sellers now have more knowledge about the quality of a car than the buyers [...] it is impossible for a buyer to tell the difference between a good and a bad car [named as a lemon]”. In those situations, buyers demand to know the quality of the product to be purchased, whereas sellers

reaction to the uncertainty, market actors examine the riskiness of other units operating in the system in order to minimise their potential future losses (Kaufman 2000, 14).

Asymmetric information theory asserts that the principal-agent problem within the banking system originates from the opaque nature of bank assets and the varying degrees of liquidity of the banks' investments (Caprio and Honohan 2008, 10; Bhattacharya and Gale 1986, 2-3). Depositors' 'lack of common knowledge' of the bank's portfolio composition creates an information asymmetry during a banking crisis. Given the lack of bank-specific information available to depositors, Gorton (1988, 751) argues that in times of uncertainties 'aggregate information' is used to assess the riskiness of individual banks.⁵⁷ In this view, banking panics are rational responses by uninformed depositors upon the arrival of negative information on the macroeconomy (Gorton and Huang 2002).⁵⁸ Therefore, the hypotheses of the asymmetric information theory "[...] links panics to occurrences of a threshold value of some variable predicting the riskiness of bank deposits" (Gorton 1988, 751).

The empirical basis for the asymmetric information theory rests mostly on the analyses of the National Banking Era in the United States and of the bank failures during the Great Depression (especially between 1929 and 1933). Accordingly, Gorton (1988, 754) documents three versions of asymmetric information theory depending on what sort of aggregate information is taken into account. Those are (1) panics caused by seasonal fluctuations,⁵⁹ (2) panics caused by an unexpected failure of a large firm (failure hypothesis),⁶⁰ and (3) panics caused by major recessions (recession hypothesis). In his analysis on the National Banking Era in the United States, Gorton (1988, 752) concludes that depositors responded systematically to the changing perceptions of risk with the arrival of new information.⁶¹ They perceived the increasing number of firm failures as a signal to an upcoming recession (named as the 'liabilities signal'), which made a panic more likely to occur (Gorton 1988, 771, 778).⁶²

may be willing their 'lemons' to be traded at the same price as 'not-lemons'. The cost of this dishonesty "[...] lies not only in the amount by which the purchaser is cheated; the cost also must include the loss incurred from driving legitimate business out of existence" (Akerlof 1970, 495).

⁵⁷ Gorton and Mullineaux (1987, 463) also emphasise the constraints faced by depositors when relying only on 'aggregate or nonbank-specific information to assess the riskiness of deposits'. An increase in business failures or the failure of a significant (large) firm, they continue, might precipitate a depositor run on all banks (Gorton and Mullineaux 1987, 463).

⁵⁸ These scholars also suggest that banking panics are not experienced in banking systems with large, well-diversified, banks.

⁵⁹ Allen and Gale (1998, 1247, 1249) also suggest that the empirical evidence supports more the 'business cycle' view towards banking panics, rather than the sunspot explanations.

⁶⁰ Failure hypothesis suggests that an unexpected failure of a large financial institution triggers a change in depositor behaviour and leads to a depositor panic.

⁶¹ Calomiris (2009) summarises his own research with several scholars which analyses the bank failures between 1929 and the first several years of 1930s. The conclusions of those works also support the fundamentals-view of banking panics. Alonso (1996) also makes a similar point and argues that bank runs might occur with the arrival of negative signals and news about the bank's investments.

⁶² In an environment where business failures are abundant, banks become more cautious in their lending practices to non-financial firms. Since banks are the major creditors for business' working capital, business failures in large numbers may be perceived as signaling the onset of a coming recession (see Gorton 1988, 771).

Gorton (1988, 766) shows that “[...] panics did correspond to spikes in the predictors of deposit riskiness, but in a rational way”.

Along the same lines, Calomiris (1990) also emphasises the role and the impact of the macro-economy in shaping depositor expectations. Similar to Gorton’s argument above, the logic behind Calomiris’ model is as follows: There is a close and mutually corresponding relationship between the deterioration of the macro-economy and the banks’ credit extension to the real economy. Banks, as creditors of non-financial institutions, are threatened by those institutions’ insolvency, which is evidenced by an increase in the ratio of non-performing loans (or rising arrears) to assets.⁶³ Therefore, even a small class of bank borrowers in financial distress is assumed to have the potential to result in a ‘widespread disintermediation from all banks’ since depositors do not have the relevant information on the degree of the shock or of their banks’ asset portfolio (Calomiris 1990, 284). In a more recent paper, Calomiris (2007, 4) similarly argues that

[d]epositors have reason to believe that a loss has occurred that might cause a bank to become insolvent, but they cannot observe which bank has suffered the loss. In that circumstance, depositors may withdraw large amounts of funds from all banks, including those that are (unobservably) solvent, simply because they would rather not risk leaving their money in a bank that turns out to be insolvent.

A joint paper by Calomiris and Gorton (1991) further develops the asymmetric information theory on bank runs. These scholars argue that the random withdrawals theory explains panics with reference to the unexpected depositor withdrawals related to location-specific economic shocks (Calomiris and Gorton 1991, 111). On the other hand, according to the asymmetric information theory, depositors withdraw from all banks given the lack of bank specific information and “[b]ecause the actual incidence of failure is unknown” (Calomiris and Gorton 1991, 111). The emphasis is on the “[...] sudden, but *rational*, revisions in the perceived riskiness of bank deposits when nonbank-specific, aggregate information arrives” (Calomiris and Gorton 1991, 121, emphasis added). Referring to Chari and Jagannathan (1988), Calomiris and Gorton (1991, 125) further state that, unable to distinguish between real liquidity (consumption) needs and informed deposit withdrawals, the lines in front of bank branches possess signalling effects on uninformed depositors.⁶⁴

⁶³ Although a high ratio of non-performing loans (NPLs) often accompanies banking crises, it will be misleading to assume that NPLs will necessarily lead to a banking crisis. Examples of high NPLs but no banking crises are available in Duttagupta and Cashin (2008, 9, footnote 14). Definitions of banking crises presented in the first chapter also suggest several possible conditions/events to take hold, in addition to increasing NPLs.

⁶⁴ A study by Starr and Yilmaz (2007) also presents findings which point to the signalling effects of larger depositors on smaller ones. In addition, “[...] although the noisy information related to the failure of [one of the Special Finance Houses] and the devaluation was not at all a ‘sunspot’, the development of runs on the SFHs did not grow inevitably out of fundamental economic and financial factors— rather, it likely reflected compound risks of deteriorating fundamentals and depositors’

Regarding bank runs as a (rational) equilibrium phenomenon, Chari and Jagannathan (1988) also model runs where the information asymmetry between informed and uninformed depositors is filled through the latter's observation of the former's actions via 'signal-extraction'. Referring to panic-based runs, they suggest that "[i]f individuals observe long 'lines' at the bank, they correctly infer that there is a possibility that the bank is about to fail and precipitate a bank run. However, bank runs occur even when no one has any adverse information" (Chari and Jagannathan 1988, 749).⁶⁵

This understanding of bank runs as 'rational response[s] to information rather than mysterious panic[s]' is also emphasised by Chen (1999, 961). In an 'informational disadvantage' and under the sequential service constraint, depositors would respond to various sources of information, including the failures of other banks, even before the real value of their own bank's assets is revealed (Chen 1999, 947). Therefore, Chen (1999, 948) connects panic-based bank runs to the receipt of early noisy information. In addition, "[k]nowing that the uninformed depositors will withdraw early, the informed are forced to withdraw early too even if more precise information will soon become available. Therefore, bank runs can be contagious" (Chen 1999, 947).

Goldstein and Pauzner (2005) also model panic-based bank runs where the threshold levels of fundamentals of the economy determine the occurrence of a unique Bayesian equilibrium (i.e. a bank run). They illustrate that their "[...] model has a unique Bayesian equilibrium, in which a bank run occurs if and only if the fundamentals are below some critical value" (Goldstein and Pauzner 2005, 1294). Criticising the D&D model for failing to 'provide tools to derive the probability of the bank-run equilibrium', they emphasise that the bank run outcome is still panic (bad expectations) based, albeit determined by the realisation of fundamentals which are not sunspots (Goldstein and Pauzner 2005, 1293, 1304). "In other words, the fundamentals do not determine agents' actions directly, but rather serve as a device that coordinate agents' beliefs on a particular outcome" (Goldstein and Pauzner 2005, 1295). Similarly, Dasgupta (2004, 1052) also promotes a unique threshold condition for regional economic fundamentals below which depositor runs would cause banks to fail. Since the bank failure mostly depends on the arrival of negative information on local asset returns, Dasgupta (2004, 1053) continues, the probability of bank's failure is determined endogenously.

concerns about sequential servicing. [...] [W]e find evidence that both informational factors and self-fulfilling tendencies were at work in the dynamics of the run." (Starr and Yilmaz 2007, 1130).

⁶⁵ Similarly and closer to the random withdrawals theories of bank runs, Gu (2011, 164) argues that "[b]ecause signals about the fundamentals are imperfect, and because signal extraction from the observed withdrawal history is also imperfect, a bank run can occur when the bank fundamentals are strong [...] A bank run occurs as a result of a herd of withdrawals when all depositors withdraw due to unfavorable signals and/or unfavorable observations on withdrawals".

Analysing the conditions for contagion among depositors, Bougheas (1999) links macro and micro economic environment and emphasises feedback loops between these two different levels. Bougheas' (1999, 132-3) analysis takes the 'transmission of information' to the macro level and investigates the signalling effects of individual bank failures on the interpretation of the health of the banking system, while taking the state of the economy into consideration. He suggests that macroeconomic instability is a precondition for bank runs to become contagious and single bank failures or recession alone are not sufficient themselves to cause a panic among depositors (Bougheas 1999, 132). Park (1991) also emphasises the relationship between 'bank-specific information and bank panics'. According to this scholar, bank failures become contagious in the absence of bank-specific information on bank solvency (Park 1991, 271).⁶⁶ A banking panic (resulting from bank failure contagion) might be prevented through the provision of bank-specific information especially on its solvency, rather than on its liquidity position (Park 1991, 272).⁶⁷ Since depositors base their decision on the general condition of the banking system, a high ratio of bank failures might result in a system-wide banking panic (Park 1991, 271). Dupont (2007) also puts forward a similar argument which focuses on the role played by bank-specific information during banking panics. Defining contagious bank runs as one to affect both solvent and insolvent banks, he asserts that the provision of bank-specific information on a regular basis would help depositors to differentiate between solvent and insolvent institutions (Dupont 2007, 411, 412).⁶⁸ As a note of caution, however, Dupont (2007, 430) cautions against the fact that the provision of bank-specific information is a necessary, yet not a sufficient condition, to prevent bank runs from spreading onto innocent bystanders. Saunders and Wilson (1996) present a similar argument. They investigate bank runs from the 1929-1933 period in order to examine the role of contagion and information on selective versus contagious bank runs. They find that, during 1930-32, there had been a significant number of informed depositors who were able to distinguish among solvent and insolvent banks (Saunders and Wilson 1996, 409). As a matter of fact, the asymmetric information thesis holds true if and when "[...] depositors review selectively the perceived risk of holding their deposits on specific banks"

⁶⁶ Lindgren, Garcia, and Saal (1996, 7) also support the view that the lack of bank-specific information on banks' assets might trigger 'unjustified runs against sound banks'. Accordingly, depositors' inability to distinguish bank-specific problems from systemic conditions might initiate a banking panic (Lindgren, Garcia, and Saal 1996, 122).

⁶⁷ A logical extension of this argument is that when provided with bank-specific information, depositors would "[...] review, selectively, the perceived risk of banks and, as a consequence, only those banks that depositors perceived as less prepared to face the possible losses experienced substantial withdrawals" (Schumacher 2000, 264).

⁶⁸ In a similar way, according to Kaufman (2000), there are two types of contagion that take place among market actors, namely rational (informational one that impacts only guilty parties – firm specific) and random (impacts by-standers – innocent parties – industry specific) contagion. Accordingly, "[r]ational or informed contagion assumes that investors (depositors) can differentiate among parties on the basis of their fundamentals. Random contagion, based on actions by uninformed agents, is viewed as more frightening and dangerous as it does not differentiate among parties, impacting innocent as well as guilty parties" (Kaufman 2000, 15).

(Schumacher 2000, 275). According to Dupont (2007, 417), one indicator for an informed bank run, rather than a contagious one, is the presence of ‘flight to quality’ in the shape of deposit movements from insolvent to solvent banks.

Yorulmazer (2003, 2-3) also suggests that “[...] [accompanied with liquidity support], transparency and disclosure of information on banks’ soundness and management of the crisis can alleviate and eliminate some of the problems related to bank runs”. The absence of public information about the bank’s soundness prevents liquidity support from being successful in containing the bank run (Yorulmazer 2003, 26). Emphasising herd behaviour, the model asserts that having received noisy signals on the bank’s asset quality, others’ behaviour become more informative and “[w]hen the public belief about bank’s prospects fall below a threshold, a run is triggered” (Yorulmazer 2003, 5, footnote 7). In another paper, Schotter and Yorulmazer (2009, 236) once more demonstrate that depositors who are more willing to restrain themselves from running on their banks when they receive more information about an ongoing crisis. In line with the previous studies presented, these scholars also assert that the severity and the dynamics of a bank run depend on the state of the economy (Schotter and Yorulmazer 2009, 219). In a previously mentioned study by Schumacher (2000, 276), further support is provided to “[...] the asymmetry of information approach to bank runs and suggest[ed] that a policy of information disclosure might be effective as a deterrent to bank runs caused by exogenously generated shocks on bank solvency, such as an attack on the domestic currency”. Finally, a recent study by Chen and Hasan (2008, 535, 537) also model panic-based bank runs to take place when depositors do not expect precise bank-specific information, especially during bad times for banks. The research concludes that panic-based bank runs are more likely within banking systems with poor future prospects (Chen and Hasan 2008, 537).

Having presented a detailed literature review on both of the banking panics theories, the following section will now direct readers’ attention to the arguments put forward to *prevent* bank runs from occurring in the first place. Against the background of the 19th century banking panics, the prevention of costly depositor runs has been among the priorities of policy makers. The idea of an institutionalised guarantee on deposit contracts attracted scholarly attention, since it could shape expectations during crises through creating focal points. Since both theories underline prevailing uncertainties within the banking system, either on depositors’ liquidity needs or about banks’ asset compositions, anchoring expectations via publicly available information is of significance in order to keep the *business as usual*.

‘Business as Usual’ – Institutional Dimensions of Bank Runs

“[...] [F]inancial crises are similar to wartimes to the extent that they heighten uncertainty in nearly all types of transactions, relationships, and decision making. Information and incentive problems are exacerbated [...] At the same time, crises reveal institutional, political, and economic weaknesses that may themselves contribute to crises in the first place”
(Breuer 2004, 294)

“The self-fulfilling prophecy, whereby fears are translated into reality, operates in the absence of deliberate institutional controls”
(Merton 1948, 210)

“The behavior of individuals during a banking crisis depends crucially on how they expect the authorities to respond to events”
(Ennis and Keister 2009, 1604)

Despite differences in their analysis and explanations, both theories of bank runs promote deposit insurance for preventing a bank run from either taking place or becoming contagious.⁶⁹ While random variables or adverse fundamentals create focal points for bank runs, deposit insurance scheme aims to stabilise depositor expectations. The D&D model treats deposit insurance as ‘an equilibrium selection device’ (Allen, Carletti, and Leonello 2011, 467), whereas the fundamentals view of bank runs (despite divergent opinions on the subject) regards deposit insurance as an efficient solution to the information asymmetries since it provides transparency with its very public nature (Morris and Shin 1998, 595). Given the significance, this section will summarise the arguments on the institutional determinants of bank runs and illustrate how certain institutional shortcomings make banking systems more prone to bank runs.

To start with the random withdrawals theory, the D&D model offers two solutions for banking panics, namely suspension of convertibility and deposit insurance.⁷⁰ The logic behind suspension of deposits into currency is that it allows authorities to examine the solvency of individual banks and to signal to the public that banks re-opened are actually the solvent ones

⁶⁹ While some scholars suggest deposit insurance to prevent bank runs from taking place in the first place, others argue that the insurance is successful in preventing spill-overs within the banking system under certain conditions.

⁷⁰ Engineer (1989, 444) extends the D&D model to cover a longer period and finds out that in the shorter-horizon model immediate suspension of convertibility is effective in averting a bank run compared to the long-horizon model (conditioned under aggregate consumption certainty). Similarly, Gorton (1985, 178) argues that, under information asymmetries, suspension of convertibility can signal depositors that the “[...] continuation of the long-term investment is mutually beneficial”. An alternative way to change depositor incentives to stop withdrawing their deposits is also to increase their future gains of sticking to their initial liquidity preferences (i.e., type I and type II, as referred in the literature). However, “[i]n periods of great uncertainty and stress, market participants increasingly tend to make their portfolio adjustments in quantities (runs) rather than prices (interest rates)” (Kaufman 2000, 15).

(Park 1991, 272). However, if the ultimate aim is to achieve optimal risk sharing under private liquidity preferences, as mentioned above, the suspension of convertibility does no longer make deposit contracts ‘individually incentive compatible’ (Chari 1989) for impatient people (Diamond and Dybvig 2000, 16, 19). Yet, it may lead to inefficiencies in cases when it is not possible to differentiate between patient and impatient depositors and might prevent depositors with early liquidity needs from withdrawing. Therefore, although it may offer some time for depositors, as well as policy makers, to distinguish between healthy and unhealthy institutions (Detragiache and Ho 2010, 7), even the possibility of suspension alone may cause impatient depositors to run as they have a preference for early consumption.⁷¹ Diamond (2007, 198) clarifies the issue in the following words:

[...] [S]uspension cannot be used only as a threat. Some suspension would actually occur and would be unpopular. If suspension occurred regularly, depositors would desire another way of stopping runs caused by panics. In practice, government-provided deposit insurance has been instituted following many financial crises.

Rejecting the suspension of withdrawals as an effective solution to bank runs, the D&D model suggest deposit insurance to rule out runs without limiting banks from transforming their assets (Diamond and Dybvig 2000, 16). Comparing the two policy prescriptions and ‘commitment devices’ (Martin 2006) during banking crises, namely the lender of last resort and the deposit insurance scheme, the model suggests that “[a] run can even occur in response to expectations about the general willingness of the lender of last resort to rescue failing banks [...] In contrast, deposit insurance is a binding commitment which can be structured to retain punishment of the bank’s owners, board of directors, and officers in the case of a failure” (Diamond and Dybvig 2000, 21). Accordingly, deposit insurance with a full coverage is regarded superior to the discretionary government policies and assumed to rule out the bank-run equilibrium and eliminate bank runs in the multiple equilibria (Diamond 2007, 198). In other words:

[b]ank runs should not occur when deposits are insured against the risk of bank insolvency; deposit insurance may be explicit, i.e. banks may purchase full or partial insurance on behalf of depositors from a government agency or from a private insurer, or it may be implicit, if depositors (correctly) believe that the government will either prevent the bank from failing or that, in the case of failure, it would step in and compensate depositors for their losses (Demirguc-Kunt and Detragiache 1997, 8).

⁷¹ In addition, as the US banking crises during the 19th century illustrate, “[i]n particular, during actual suspension episodes, those who withdrew late, after suspension occurred, received a lower return than those who withdrew early; late withdrawals’ checks passed at a discount” (Wallace 1988, 15). The efficiency of a deposit freeze as a containment policy is also subject to question as delayed access to deposits may exacerbate the already existing panic among depositors. Laeven and Valencia (2008a, 20) argue that in some cases bank runs resumed as soon as the freeze on deposits was removed.

Although, as Demirguc-Kunt, Kane, and Laeven (2006, 4) argue, “[i]mplicit and explicit deposit insurance are critical components of national safety nets”, the effectiveness and the way the scheme is applied depend on the different nature of bank runs (Allen, Carletti, and Leonello 2011, 467). Goldstein (2010, 3) argues that the deposit guarantee, as well as the lender of last resort facility and the suspension of withdrawals, has been articulated on ‘a panic-based view of crises’. The idea of deposit insurance scheme to bring banking panics into a halt has been approached with caution by the rest of the literature. However, there are scholars from the asymmetric information tradition, who also agree with the efficiency of the deposit insurance scheme.⁷² Gorton (1988, 775) argues that the introduction of the deposit insurance scheme help containing panics even in the presence of a liabilities signal. In a joint paper with Calomiris, they argue that the market and institutional structure of the banking system (branch banking versus unit banking and the existence of deposit insurance) are of significance in preventing banking panics from taking place (Calomiris and Gorton 1991, 110).⁷³ Chari (1989, 26) on the other hand argues the opposite. Accordingly, emphasising the ‘advantages of using these central bank policies instead of deposit insurance’, he shows that reserve requirements and a well-functioning inter-bank market can also lead to efficient outcomes (Chari 1989, 17).⁷⁴ Cooper and Ross (1991, 3) argue that the use of capital requirements on intermediaries would allow deposit insurance to eliminate bank runs without any moral hazard. In another article, scholars re-emphasise the need for capital requirements, in addition to deposit insurance schemes, to provide the first-best allocation (Cooper and Ross 2002). Accordingly, “[d]eposit insurance is needed to avoid bank runs. Capital requirements are needed to overcome the adverse incentive problems associated with the provision of deposit insurance” (Cooper and Ross 2002, 70).⁷⁵

Against the background of these divergent views on the issue area, three criticisms have been directed towards the promotion of the deposit insurance as a solution to bank runs. Firstly, although some defend insurance schemes for providing stability during banking crises,

⁷² Schotter and Yorulmazer (2009) argue that deposit insurance can be efficient in *slowing down* bank runs.

⁷³ Criticising the D&D model for failing to specify the events leading to panics (Calomiris and Gorton 1991, 121-124), these scholars argue that the differences in market structure among different banking systems would actually help understand the underlying reasons. In addition, also emphasising the institutional structure of the banking system Smith (1991, 246) argues that “[...] existing models of bank liquidity provision that follow Diamond and Dybvig [1983] can easily be modified to incorporate organizational features of the banking system. When these are introduced, such models can readily explain observed panics without relying on informational asymmetries or multiple equilibria”.

⁷⁴ Martin also investigates the provision of liquidity by the central bank during bank runs and its efficiency in preventing bank runs without causing moral hazard (Martin 2006). As regards to interbank borrowing and lending, another study by Dasgupta (2004, 1053), on the other hand, suggests that although “[i]nterbank deposits thus enable banks to hedge regional liquidity shocks but expose them to the risk of contagion [as a result of balance sheet connections across institutions]”.

⁷⁵ As an alternative to those, an interesting article by Sun and Huangfu (2011, 859) suggests that “[...] allowing claims on demand deposits to circulate as a medium of exchange can help prevent bank runs”. Gangopadhyay and Singh (2000) argue that, when allowed to sell deposit contracts and equities, banks runs can be prevented even in the absence of deposit insurance.

there is a growing body of literature on the adverse effects of deposit insurance on both banks' and depositors' incentives. Those criticisms argue that the scheme removes market discipline imposed by depositors on their banks and injects moral hazard into the system. Since those arguments mostly refer to the trade-off between today's stability (by eliminating banking panics) and the future crises (as a result of decreased discipline and increasing moral hazard), they are indirectly related to this research's discussion on the insurance's efficiency in stabilising depositor expectations.⁷⁶

Secondly, the institutional shortcomings of the scheme (such as the coverage limit and the compensation delays) might provide depositors with negative incentives to withdraw their funds despite the guarantee being in place.⁷⁷ Emphasising the significance of the scheme's design for its efficiency, Demircuc-Kunt, Kane and Laeven (2006, 3) argue that “[t]he central challenge of deposit- insurance management is to strike an optimal balance between the benefits of preventing crises and the costs of controlling bank and customer risk-taking”. The incentive behind the co-insurance principle is to motivate depositors to monitor their banks, as ‘[...] perverse incentives created by deposit insurance [might emerge] when it is not fairly priced’ (Calomiris 1990, 283). The theoretical support for the co-insurance system suggests an increasing awareness by depositors to which institutions they deposit their savings (Calomiris 1990, 283).

⁷⁶ One strand of literature concentrates on the role of deposit insurance in the occurrence of future banking crises. To summarise those arguments shortly, the first line of arguments defends deposit insurance for providing stability during banking crises through eliminating bank runs (see Kindleberger and Aliber 2005, 190-2). In their model Detragiache and Ho (2010, 9) argue that deposit insurance facilitate crisis management through eliminating bank runs. On the other hand, although it has been promoted for preventing bank runs, deposit insurance has mostly been criticised for altering the ‘incentive structure of transactions’ (Breuer 2004, 308). In their study on the determinants of banking crises, Demircuc-Kunt and Detragiache (1997, 6) state that despite reducing the number of self-fulfilling bank runs, the introduction of deposit insurance has promoted excessive risk taking within the banking sector and has worsened banking sector fragility through introducing moral hazard into the system. Boyd, De Nicolo, and Loukoianove (2009, 26) also argue that deposit insurance makes banking crisis more likely and “[...] the probability of a government response to bank distress is significantly higher when an explicit deposit insurance system is in place, consistent with governments’ firmer commitment to intervene under explicit depositors’ protection schemes”. These scholars, at the same time, state that the existence of deposit insurance does not affect the probability of a systemic shock on the banking system (Boyd, De Nicolo, and Loukoianove 2009, 26). In another study, Hoggarth, Jackson, and Nier (2005, 144) also acknowledge the trade off inherent in deposit insurance schemes. “On the one hand, an explicit scheme might reduce the likelihood of a depositor run, on the other hand an explicit scheme may remove the disciplining force of the threat of a run” (Hoggarth, Jackson, and Nier 2005, 149). They discover that the likelihood of a banking crisis increases with an explicit unlimited deposit insurance scheme (Hoggarth, Jackson, and Nier 2005, 144). Accordingly, “[t]he group least likely to experience a crisis is that with an explicit but limited deposit protection scheme, and within that group those countries that require depositors to co-insure” (Hoggarth, Jackson, and Nier 2005, 144). Finally, Eichengreen and Arteta (2000, 31) support the view that “[t]here is at least as much evidence that deposit insurance reduces crisis risk by solving the depositor-run problem than there is of it encourages crises by weakening market discipline”.

⁷⁷ According to Demircuc-Kunt and Detragiache (1997, 26), among specific features of deposit insurance schemes are the extent of the coverage (and also the existence of the co-insurance principle), the type of premia charged to banks and the public or private nature of the scheme.

Finally, focusing specifically on system-wide bank runs and deposit freezes, as well as payment re-scheduling, from the perspective of ‘limited commitment literature’, Ennis and Keister (2009, 1588) examine *ex post* responses from the authorities to a bank runs and how these create *ex ante* incentives for depositors. Their research illustrates that the anticipation of a policy response can prepare the necessary conditions to generate a self-fulfilling bank run (Ennis and Keister 2009, 1588). Highlighting this time-inconsistency problem in banking policy that might lead to an inefficient outcome in multiple equilibria (Ennis and Keister 2007), the scholars continue, “[b]anking authorities would like depositors to believe they will be “tough” in response to a run. However, if a run were to actually start, the authorities would not find it optimal to take a tough stand. Instead, they would choose a more lenient policy, and this policy can end up justifying the original decision of depositors to run” (Ennis and Keister 2009, 1589. See also Ennis and Keister 2007). They suggest that the basis for a self-fulfilling bank run might also be the combination of ‘the lack of commitment and optimism’ on the policymakers’ side (Ennis and Keister 2007, 30). Similarly, in another paper Ennis and Keister (2010b) also argue the impact of limited (or lack of) commitment by the authorities on the formation of self-fulfilling depositor runs. In the model they present, both the authorities and depositors are able to anticipate and react to each other’s behaviour, creating an interplay between depositors withdrawals and policy actions.

Timing of policy responses is also important since government intervention to a banking problem may have an adverse effect on expectations. It might be perceived “[...] like shouting “fire” in a crowded theatre, regulatory interventions may frighten the market and thus create a problem where one did not previously exit” (Gavin and Hausmann 1998, 6). Equally, however, it is of imperative to act on a timely manner to address the ongoing crisis before it worsens.⁷⁸ As Morris and Shin (1998, 595) states, public announcements are significant in restoring common knowledge of fundamentals. In another paper, they also emphasise the ‘dual role’ of fundamentals information that “[p]ublic information has attributes that make it a double-edged instrument. On the one hand, it conveys information on the underlying fundamentals, but it also serves as a focal point for the beliefs of the group as a whole” (Morris and Shin 2002, 1521). They underline the trade-off between timely but noisy

⁷⁸ Prompt corrective action in the United States mainly aims timely government intervention to institutions which may become insolvent in the near future. However, from regulators point of view, it is not always easy to distinguish between cases where the cause of the problem is one arising from illiquidity and not insolvency. Central banks, acting as ‘lender of last resort’s during banking crisis exercise judgment calls, following Bagehot’s advice, to “[...] lend freely but at a penalty rate and only to solvent institutions with good collateral and also lend quickly before a run takes off and use LOLR rarely to avoid moral hazard” (Caprio and Honohan 2008, 15).

information and slow information as a challenge in front of policy makers (Morris and Shin 2002, 1523).⁷⁹

Deposit insurance, however, is not the only policy response available to the authorities during banking crises. When a banking crisis hits an economy, the type of government response varies among measures and occasions (Laeven and Valencia 2008a). Two-phases that mark those policies are containment and resolution, where containment policies are immediate reactions to restore public confidence in the initial stages of a crisis (Detragiache and Ho 2010, 6; see also Laeven and Valencia 2008a, 7). Policies during the containment phase are basically designed to give banks the time and the ‘breathing room’ to restore depositor confidence, as well as urging policy makers to intervene to a depositor run before it spills to bystanders and affects borrowers (Caprio and Honohan 2008, 15). Among policy responses⁸⁰ during banking crises are the *suspension of convertibility of deposits* (deposit freeze), *emergency liquidity support to banks* (as a first line of response),⁸¹ *government guarantee of depositors* (blanket guarantees), *bank holidays* (as temporary suspensions of depositor rights), *regulatory capital forbearance*,⁸² and bank restructuring (such as nationalisation, closures, mergers, sales to foreigners and bank recapitalisation by public funds).⁸³

Public policies during or following banking crises intend to decrease negative externalities of bank failures.⁸⁴ “[...] [S]afety nets are adopted because of the perceived benefits they will confer in either preventing a weak banking system from spilling over a full-blown crisis or in enabling the government to handle a crisis more effectively” (Hoggarth, Jackson, and Nier 2005, 143). In the absence or as a result of the inefficiency of the deposit insurance scheme, the severity of the situation may also require governments to introduce blanket guarantees as (most of the time) unlimited guarantees on deposits to restore depositor confidence (Laeven and Valencia 2008a, 21). However, as Laeven and Valencia (2008b) argue, the success of the blanket guarantee offered by the government in stabilising depositor expectations also rests in its credibility in the eyes of depositors.⁸⁵ Referring to the use of blanket guarantees during banking crises, Laeven and Valencia also suggests that

[...] it may be better to announce blanket guarantees sooner rather than later. Using them at an early stage would imply to put them in place before public confidence

⁷⁹ Prati and Sbracia (2002) also examine the impact of the precision of public information and the state of fundamentals. Their theoretical model concludes that “[...] the precision of public information helps when the public signal is good, but hurts when it is bad” (Prati and Sbracia 2002, 23).

⁸⁰ The ones in italic are the ‘containment policies’ to address a bank run.

⁸¹ The latter policy, however, has a signalling effect that may worsen the situation by altering depositors’ perception towards those banks. For a discussion see Bordo 2008, 13; Kaufman 2000, 21.

⁸² “Under regulatory forbearance, banks that should be closed down are allowed to continue to operate” (Detragiache and Ho 2010, 7).

⁸³ For details see Laeven and Valencia 2008a. See also Detragiache and Ho 2010, 7.

⁸⁴ Lindgren, Garcia and Saal 1996, 105.

⁸⁵ For the cases where market does not react to the blanket guarantees, this might be because of the “undermined credibility of the guarantee” (Laeven and Valencia 2008b, 8).

deteriorates substantially. However, the final outcome will always depend on the credibility of the guarantee, the accompanying policies and the severity of the underlying shock (Laeven and Valencia 2008b, 18).

As Laeven and Valencia (2008a, 21) argue, governments introduce blanket guarantees with an aim to gain some time for implementing a ‘credible policy package’. In their study on blanket guarantees, Laeven and Valencia (2008b) use liquidity support (provided by the monetary authorities) to financially distressed banks as a proxy for depositor confidence. Their findings suggest that “[...] on average, the announcement of blanket guarantees are followed by a statistically significant and quantitatively important slowdown in the provision of liquidity support [excluding foreign creditors]” (Laeven and Valencia 2008b, 4). Even for countries with no *ex ante* deposit insurance, blanket guarantees are built into market expectations to create moral hazard (Hoggarth, Jackson, and Nier 2005, 144).⁸⁶

The phenomenon of ‘too-big-to-fail’ or ‘too-interconnected-to-fail’ is regarded to be another kind of an implicit guarantee by the government (Kaufman and Seelig 2001, 3).⁸⁷ As Laeven and Valencia (2008b, 6-7) argue, the public might interpret *de facto* protection on the banking system as an implicit guarantee on banks. In some instances blanket guarantees may cover only specific banks or a segment of the market (Laeven and Valencia 2008a, 21).⁸⁸ Still, even a fractional blanket guarantee may be perceived as a full coverage by depositors either because of the ignorance on the details of the support or as a result of the belief that the government support will be made available for other banks as well (Laeven and Valencia 2008b, 6). As a criticism to the literature on limited commitment discussed above, it is believed that “[...] governments may end up doing *more* than what they have promised in order to avoid crises and restore the stability of the banking system” (Allen, Carletti, and Leonello 2011, 470-1).

2.3 Critique of the Current Literature

“There are many shocks: only a relatively small proportion of shocks lead to a speculative mania”
(Kindleberger and Aliber 2005, 51)

⁸⁶ Japan is the leading example for an implicit blanket guarantee embedded in market expectations. “[...] [A]necdotal evidence suggests that, there had always been a presumption on the part of depositors and markets in Japan that banks would not be allowed to fail” (Hoggarth, Jackson, and Nier 2005, 146, footnote 5). See also Kindleberger and Aliber (2005, 134).

⁸⁷ An interesting argument has been presented by Miller (2008) on the relationship between the size of the banking sector vulnerable to bank runs and the central bank’s willingness to recapitalize unhealthy banks under fixed exchange regimes. Accordingly, Miller argues that “[...] when policy-makers care about bank solvency and currency peg stability, then a run will not occur when banks are either “too big” or “too small” to fail and that only medium- sized banking sectors will be vulnerable to runs” (2008, 558).

⁸⁸ This was the case during the Northern Rock crisis when the blanket guarantee introduced by the Government covered only the bank’s deposits, not the whole banking system.

The preceding section of this chapter has discussed that while sunspots theories of bank runs promote random variables as triggers, asymmetric information theories prioritise fundamentals - either bank-specific or system-wide. Based on their differing views on the nature of bank runs, four major analytical distinctions can be identified between sunspot explanations and asymmetric information theories of bank runs. Firstly, these two theories put emphasis on the opposite sides of the bank's balance sheet. While sunspots theories emphasise demand side and the liquidity needs of depositors, asymmetric information theories focus on the asset side of the balance sheet where asset shocks are regarded as the sources of panics (due to solvency considerations) (Calomiris and Gorton 1991). As a result, their interpretation of bank runs also differs from each other. While the former regards bank runs as contributing to banking crises and 'destroying optimal risk sharing among depositors' (Diamond and Dybvig 2000, 15), the latter treats them as the 'symptom of problems in the system' (Laeven and Valencia 2008b, 3, footnote 2; Williamson 1988), 'an episode of market discipline' (Schumacher 2000, 258)⁸⁹ and 'monitoring devices' (Gorton and Huang 2002, 3).⁹⁰

A second fundamental difference between the two theories rests in their view towards the sequential service constraint inherent in deposit contracts. As discussed in the preceding sections, the first line of explanations treats banks as 'liquidity providers' and argues that the sequential service constraint might endanger bank stability through motivating bank runs. The asymmetric information theories, on the other hand, suggest that this constraint actually prevents a widespread disintermediation from all banks (Calomiris and Gorton 1991, 126). With regards to crisis resolution, as Calomiris and Gorton (1991, 165) argue, the asymmetric information theories of bank runs do not regard open market operations to be effective in preventing or alleviating panics. According to this view, targeting individual institutions rather than the general system liquidity is suggested to be the key to ease depositor panics. On the other hand, according to random withdrawal theory, Calomiris and Gorton (1991, 154) continue, the inadequacy of reserves in meeting deposit withdrawals or liquidity needs is the main driving factor in suspensions and bank failures. Therefore, in this view, open market operations and/or reserve requirements would help ease depositor panic (Calomiris and Gorton 1991, 165). Finally, while sunspots explanations emphasise multiple-equilibria and regard bank runs as among the many possible outcomes, the asymmetric information theory

⁸⁹ Within this tradition, bank runs are regarded as welfare superior (Samartin 2003; Alonso 1996). Allen and Gale (1998, 1245) describe bank runs as "[...] first-best efficient: they allow efficient risk sharing between early and late withdrawing depositors and they allow banks to hold efficient portfolios".

⁹⁰ Gorton and Mullineaux (1987, 463) also define bank runs as instances of customer monitoring. Yorulmazer (2003, 1) also suggests that "[...] a deposit contract that allows for runs can achieve higher levels of depositor welfare than a contract that completely eliminates them". Similarly and according to Blejen, Feldman, and Feltenstein (1997, 7) bank runs are grounded on solvency concerns and thus monitor bank performance.

to the next” (Metz 2002, 66; see also Metz and Michaelis, 2003). In their work on currency crises, Morris and Shin (1998, 587) argue that merely pointing to self-fulfilling prophecies falls short in explaining the ‘onset of an attack when it occurs’. Yet, an understanding of self-fulfilling prophecies founded on a substantial change in the fundamentals might help us utilise from the analytical strengths of both theories of bank runs.

A mid-way between the pure sunspots and the fundamentals view of bank runs has been the introduction of a ‘noisy signal of the state of fundamentals’ into multiple-equilibria games. Noisy signals that replace common knowledge, as suggested by Morris and Shin (1998), might lead to the unique equilibrium of a bank run.⁹² Here the triggers of the bank run are not pure sunspots, but rather the lack of common knowledge on fundamentals. These scholars argue that even in cases when fundamentals are sound (and this fact is acknowledged by individual depositors), a noisy signal of the state of fundamentals may result in higher order beliefs, as this would generate “[...] a failure of common knowledge of fundamentals” and uncertainty over others’ beliefs about the state of fundamentals (Morris and Shin 1998, 588). These individual interpretations of common (public) knowledge are what transform them into private information. As a matter of fact, this shift from public to private information, in turn, results in the shift from multiple equilibria to the unique equilibrium of a bank run (Pericoli and Sbracia 2003, 591). “In standard models of [...] bank runs, incomplete information typically rules out multiplicity of equilibria. Then, for given levels of fundamentals, small differences in private information or in the degree of uncertainty of agents’ beliefs can produce significant changes in the behaviour of economic agents” (Pericoli and Sbracia 2003, 575).

As depicted in *Figure 1* above, on the extreme right end of the continuum rests asymmetric information theories of bank runs with a fundamentals-equilibrium. Several studies within this tradition prioritise different aspects of fundamentals when explaining depositor behaviour. As a response to the criticism directed towards sunspots explanations, the asymmetric information theories of bank runs put forward the threshold assumption to explain the ‘onset of an attack’. This assumes a rational update of expectations to a Bayesian equilibrium of a bank run⁹³ upon the arrival of adverse news either on the bank itself, on the general economy, or on a combination of both. Following this logic, for two cases operating under similar economic vulnerabilities, an explanation based solely on immediate stimulus (to exceed a certain threshold condition) would require both of them to be (or not to be) exposed to bank run(s).

Economic historians were able to identify the pronounced failures that triggered changes in depositor behaviour during the 19th century banking crises. According to Chari (1989),

⁹² Also discussed in Goldstein and Pauzner 2005, 1294-5.

⁹³ See again Zhu 2001.

there have been seven separate instances of system-wide bank runs between 1864 and 1933 in the United States four of which led to the widespread suspension of convertibility⁹⁴: 1873 (*), 1884 (the shortest panic), 1890, 1893 (*), 1907 (*), 1930, 1933 (*).⁹⁵ Referring to Sprague's study on the history of banking crises during the US National Banking Era, Chari specifies the failure of one or more financial institutions serving as triggers for these banking panics.⁹⁶ Accordingly, Jay Cooke & Co. (1873), Frant & Ward (1884), Decker, Howell, & Co. (1890), the National Cordage Company (1893), and the Knickerbocker Trust Company (1907) were the cases setting off the panics. However, in addition to those positive cases where a banking panic could be identified after a failure, there have been numerous (non)financial corporate failures which, contrary to the several examples from the 19th century, did not result in mass panic among depositors (Chari 1989).⁹⁷ In other words, there have been cases where fundamentals-view failed to explain non-occurrences of bank runs despite deterioration in micro and/or macro environment. There is more than 'a change in economic fundamentals' that shape depositor expectations in those cases when depositor behaviour changes in varying levels.

The banking panics literature not only examines the reasons and triggers for bank runs, but it also promotes certain institutions to stabilise depositor expectations. The significance of institutions in economic analyses has long been promoted by the institutional economics literature, within a special emphasis on transaction costs.⁹⁸ As mentioned in the opening chapter of this thesis, the disappearance of nineteenth century-style bank runs has been attributed to the success and efficiency of the LoLR function by the Bank of England in the United Kingdom and of the deposit insurance schemes especially in the United States. Focusing on the latter, the preceding section has documented several studies discussing the role played by the scheme in either preventing bank runs from taking place or turning into system-wide banking panics. If and when the periods of bank runs are matched with the existence of deposit insurance schemes, however, the following puzzle reveals itself: There have been several episodes when either an institutionalised government guarantee on deposits

⁹⁴ Those, which included a suspension of convertibility, are marked with an asterisk (*).

⁹⁵ Except from the ones during the Great Depression, clearinghouse certificates were issued during all the aforementioned panics (Gorton 1988).

⁹⁶ Sprague 1910, referred in Chari 1989, 4.

⁹⁷ Gorton (1988, 754-5) also criticise the Failure Hypothesis on the grounds that the failures of some large institutions did not cause any depositor panic, despite the fact that the information externality created by the failure creates 'distrust' in the future solvency of the other banks.

⁹⁸ See especially North (1990, 2000) and Coase (1988). According to North's theory of institutions, the main function of institutions is the provision of certainty in human interaction by determining the 'rules of the game' (North 1990, 3, 4). This function is served by both formal (rules) and informal constraints (conventions and codes of behaviour) on individuals, as well as enforcement mechanisms (North 1990, 4). These informal constraints are "[...] extensions, elaborations, and qualifications of rules that have tenacious survival ability, because they become an integral part of habitual behaviour" (North 2000, 53).

failed to prevent changes in depositor behaviour (bank runs) or no change was observed despite the absence of this guarantee.

As Chari (1989, 3) states, “[n]either Great Britain nor Canada had federal deposit insurance, and neither experienced system-wide bank runs as the United States did in the 19th and early 20th centuries. Clearly, then, deposit insurance is not the only arrangement that forestalls bank panics”. The same line of argument can be applied to the cases of Japan and New Zealand. An implicit understanding that the Japanese Government would step in to protect depositors resulted in a crash without any panic (Kindleberger and Aliber 2005, 4). Similarly, “[s]tudies in New Zealand, where there is no deposit insurance, suggests that the normal depositor pays no attention to the vulnerability of their bank. Bank deposits are regarded as safe. There have been no bank failures in the memory of most depositors, so the risk is treated as nonexistent” (Mayes and Wood 2008, 17).

Acknowledging also the shortcomings of the depositor insurance scheme, this research is not novel in its criticism towards the efficiency of the deposit insurance scheme. However, firstly it suggests that the inefficiencies of the scheme update the reference points for future crises and leave cognitive footprints on depositors’ memory. Secondly, the lack of depositor awareness towards the deposit insurance scheme might also hinder the authorities’ efforts for stabilising depositor expectations. Against this background, the rest of this chapter will introduce the mainstream arguments in the cognitive heuristics literature and illustrate how those shall be applied understanding bank runs. Saving exceptions, a Bayesian bias is present within the asymmetric information theory of bank runs, which models a ‘rational depositor’ that rationally updates her expectations with the arrival of new piece of information and once fundamentals exceed certain value thresholds. The self-fulfilling nature of depositor expectations and the *threshold* assumption in the literature with a Bayesian emphasis, however, require a better understanding on the decision-making process of depositors under uncertainty. Deterioration in fundamentals cannot explain the occurrence of all bank runs; neither can the existence of deposit insurance scheme account for the infrequency of bank runs.

For both material and institutional dimensions, it is imperative to understand how a certain piece of information is *interpreted* by depositors. As mentioned earlier, if and when analysed as a *process*, a bank run might be broken down into several phases: (1) Arrival of the situation (introduction), (2) interpretation, (3) policy responses to the on-going crisis, (4) re-interpretation, and (5) resolution of the crisis. The literature mostly under-examines the ‘interpretation’ and ‘re-interpretation’ phases of the aforementioned process. This research argues that there are certain ‘reference (focal) points’ for depositors in order to interpret the current situation and act accordingly. Yet the current literature tends to overlook the influence of the past crises on expectation formation and expects deposit insurance to be

efficient even without taking the state (level) of depositor awareness into consideration. In this regard, this research's emphasis on cognitive heuristics, which distort decision-making process towards certain cognitive biases, is an attempt to overcome these shortcomings.

With this aim in mind, the following section will first present a general argument on the threshold models of behaviour and expectation cascades to better understand the cognitive heuristics literature. This will be followed by an overview of the mainstream arguments on cognitive heuristics, especially but not specifically by Kahneman and Tversky, and how those can be applied to this research's argument. As a note of caution, however, this research does not cover all the variants of research on cognitive heuristics, neither does it present all cognitive biases documented. Given the extensive studies undertaken on the subject area, only the mainstream research conducted to analyse the three most common cognitive heuristics (namely the availability, representativeness, and anchoring heuristics) and the basic propositions of the Prospect Theory are taken into consideration. The final section will argue how the insights from the cognitive heuristics literature might be applied to better understand bank runs. Conclusion will conclude the chapter and introduce the reader on what to expect with the following empirical part of this thesis.

2.4 Cognitive Heuristics and Reference Points

“A crisis in a market may also trigger changes in the interpretation given to existing information. Information reassessment can materialize in various forms: herd behavior – on the ground of asymmetric costly information and/or size heterogeneity; informational cascades – based on the combination of asymmetric information and sequential decisions; reappraisal of economic fundamentals; or alterations in how equilibria are selected in models of multiple equilibria (sunspots)”
(Vaugirard 2007, 404)

“An account of perceived brightness or temperature also requires a parameter for a reference value (often called adaptation level), which is influenced by the context of current and prior stimulation”
(Kahneman 2003, 1455)

In threshold models of collective behaviour, which help explain the linkage of ‘individual choices to aggregate behaviour’, individual action is based both on “[...] its own characteristics (its threshold) and on the behaviour of others (the proportion of adopters)” (Braun and Gilardi 2006, 315). This is also defined as ‘herd behaviour’ and resembles to peer pressure when behaviours tip even when one’s private information directs to another point and route

(Banerjee 1992, 798).⁹⁹ Others' choices and actions are assumed to be the only information on 'beliefs about causal relationships' (Simmons, Dobbin, and Garrett 2008, 28). In those instances of self-fulfilling prophecies, everyone becomes trapped in the logic that tries to analyse their expectations of each other (see Schelling 1960, 208). Preferences, as Jervis (1988, 321) suggests, are influenced by others' responses and may be inferred from their behaviours. Given this interdependency of actions in an uncertain environment, when conventional wisdom points to one direction under a sense of crisis, it is difficult to stay calm and rational in front of the *zeitgeist* – the spirit of the times-.

Domino theory is the most obvious example of bandwagoning (Jervis 1988, 333) and the 'tacit coordination of expectations' (Schelling 1960, 71). During bandwagoning actions gain information content (Schelling 1960, 115) and signalling effects on others, where 'learning from first movers' (Simmons, Dobbin, and Garrett 2008, 47) takes place. As Schelling (1960, 90) suggests bandwagon behaviour under uncertainty depends on 'mutually perceived' signals when each individual prefers to be in a majority or 'see some majority coalesce'. These signals, Schelling (1960, 74) continues, have the power to coordinate expectations. Within a 'spiral of reciprocal expectations', actors are able to concert their expectations (and accordingly their actions) with the rest, if each of them acknowledges that everyone else is also trying to do the same (Schelling 1960, 87). In most situations where the *status quo* is disrupted, "[...] some clue for coordinating behavior, some focal points for each person's expectations of what the other expects him to expect to be expected to do" (Schelling 1960, 57) is need to be present for action. There becomes "successive cycles of "[h]e thinks we think he thinks we think [...] he thinks we think he'll attack; so he thinks we shall; so he will; so we must [...] [The] behavior situation in which each player's best choice of action depends on the action he expects the other to take, which he knows depends, in turn, on the other's expectations of his own" (Schelling 1960, 207, 86). However, where do these focal points originate from which conventional wisdom resides? Referring back to Jervis in length:

[...] expectations create predispositions that lead actors to notice certain things and to neglect others, to immediately and often unconsciously draw certain inferences from what is noticed, and to find it difficult to consider alternatives [...] this way of perceiving is rational. Intelligent decision-making in any sphere is impossible unless significant amounts of information are assimilated to pre-existing beliefs. People are predisposed, set, or ready to see what they expected to be present (Jervis 1976, 145).

Human choices are mainly 'structured by settings in which they arise' and are not just influenced by the 'immediate stimulus' (Jervis 1988, 320, 321). Actors' behaviours are mediated by their interpretation of others' actions and the underlying reasons for those actions (Jervis 1988, 336). Jervis (1976, 3, 31) argues that there are 'perceptual errors in decision-making',

⁹⁹ Actors, when taking decisions, are inclined to refer to the information contained by others' decisions (Banerjee 1992, 798). This, in return, renders each person's decision less informative to other actors.

despite cautioning that perceptions are not the sole important decision-making variables. “[...] [I]t is often impossible to explain crucial decisions and policies without reference to the decision-makers' beliefs about the world and their images of others” (Jervis 1976, 28). Emphasising the role of ‘pre-existing beliefs in the perception and interpretation of new information’, Jervis (1976, 117, 143) suggests that people do fit new-coming information into pre-existing beliefs and ignore the ones that does not confirm those beliefs. While emphasising the stickiness of old ideas during the interpretation of new information, Jervis (1976, 154) suggests that “[e]vidence is being ignored, misremembered, or twisted to preserve old ideas”. Those ‘irrational cognitive distortion[s]’ (Jervis 1976, 154) or ‘inertial human mental habits’ (Legro 2005, 30) are common in human decision-making.

To re-emphasise once more, this research argues that while variables put forward by the banking panics literature are crucial in shaping depositor expectations, they are not be factored into the analysis on their *face value*. It is the interaction of ideas with the institutional and material settings, as structural variables, that provides individuals with focal points to converge their expectations. This research’s argument does not endorse explanations based solely on sunspots and is closer to the information asymmetries theory, which necessities a deterioration in fundamentals. However, it is also critical towards the Bayesian bias embedded in the *critical threshold* models of bank runs, such as the rational update of expectations upon the arrival of adverse news. Bayesian updating suggests that the arrival of each new piece of data, the spectrum of hypothesis may narrow (Simmons, Dobbin, and Garrett 2008, 26). New information will surely affect actors’ probability assessments, however, these update in knowledge will not guarantee a convergence on ‘the truth’ (Simmons, Dobbin, and Garrett 2008, 27). Accordingly, “[e]xactly what actors learn will be influenced by a number of factors, including the source of new information and how it is processed” (Simmons, Dobbin, and Garrett 2008, 27).

The ‘rationality’ in financial modelling requires agents to update their beliefs in line with the Bayes’ law upon receiving a new piece of information (Barberis and Thaler 2003, 1053). “Economists traditionally have assumed that, when faced with uncertainty, people correctly form their subjective probabilistic assessments according to the laws of probability” (Rabin 1998, 24). However, referring to cognitive heuristics, economic decision might also be biased to produce “[...] a wide variety of substantial and systematic reasoning errors relevant to economic decisions [...] the evidence suggests that the magnitude and nature of the errors are themselves systematically related to economic confitions such as deliberation cost, incentives, and experience” (Conlisk 1996, 672). When information is massive, limited or not available at all, people tend to refer to their ‘cognitive shortcuts’ or ‘cognitive heuristics’¹⁰⁰ in order to make satisficing decisions (Simon 1957). Labeling it as ‘deliberation cost’, Conlisk (1996, 671)

¹⁰⁰ ‘Cognitive shortcuts’ and ‘cognitive heuristics’ are used interchangeably in this research.

argues that “[f]or a boundedly rational individual, heuristics often provide an adequate solution cheaply whereas more elaborate approaches would be unduly expensive”.

Unlike Bayesian learning (updating), actual human decision process and expectation formation resemble less to the norms of comprehensive rationality, but more to the empirical patterns of bounded rationality (Weyland 2005, 281). As Simon (1957, 198) argues, decision-making cannot involve the evaluation of all possible alternatives and therefore, Bayesian rationality cannot be extended to situations characterised by uncertainty.¹⁰¹ According to him “[t]he capacity of the human mind for formulating and solving complex problems is very small compared with the size of the problems whose solutions is required for objectively rational behavior in the real world – or even for a reasonable approximation to such objective rationality” (Simon 1957, 198). One reaction that bounded rationality gives in ‘complex choice situations’ is to simplify the current uncertain situation where the goal of ‘maximising’ is replaced by the goal of ‘satisficing’ (with the course of action that is good enough to deal with the situation) (Simon 1957, 246, 199, 204). In these instances, ‘inferential shortcuts’ of the bounded rationality (Weyland 2005, 271) allow actors to gather the relevant information (see also Braun and Gilardi 2006, 306).

“Psychologists hypothesize that subjects make systematic errors by using decision “heuristics”, or rules of thumb, which fail to accommodate the full logic of a decision, as when a person makes systematic forecast errors by using adaptive rather than rational expectations” (Conlisk 1996, 670). Tversky and Kahneman (1974, 1124) highlight the significance of cognitive heuristics in human decision process and argue that they reduce complexity of assessing probabilities during judgement-formation. Accordingly, these scholars have conducted three different programs of research on cognitive heuristics first of which examined the heuristics and cognitive biases in decision-making “[...] that separate the beliefs that people have and the choices they make from the optimal beliefs and choices assumed in rational-agent models” (Kahneman 2003, 1449). This was followed by the ‘Prospect Theory’ and the impact of ‘framing effects’ for rational-agent models (see Kahneman 2003). In the rest of this section I will overview those and their main assumptions respectively.

To start with, three of the mostly referred principal cognitive shortcuts are the heuristics of availability, representativeness, and anchoring.¹⁰² The availability heuristic takes place when people tend to put excessive importance on large and more frequent events, which might also lead to several cognitive biases (Kahneman and Tversky 1982; see also Tversky and Kahneman 1982).¹⁰³ People tend to refer to their memories for relevant information to assess

¹⁰¹ For an analysis of rationality in the disciplines of psychology and economics, see Simon 1986.

¹⁰² For a detailed discussion and the application of those heuristics see Weyland 2005, especially pages between 281-294.

¹⁰³ For a general overview of the cognitive biases originating from heuristics see Camerer 1995.

the probability of an event (Barberis and Thaler 2003, 1066). However, as Tversky and Kahneman (1974, 1127) argue, availability heuristics lead to the examples of large classes to be recalled easier than less frequent events.¹⁰⁴ As Camerer (1995, 596) argues, expectations, based on these misperceived outliers, are not formed rationally “[...] because the processing of new information depends on the stock of old information, or familiar images”.

Secondly, representativeness heuristic refers to cases where probabilities are assessed with reference to the degree of the sample to be the representative of a bigger population (Tversky and Kahneman 1974). “[...] [P]robabilities are evaluated by the degree to which A is representative of B, that is, by the degree to which A resembles B. For example, when A is highly representative of B, the probability that A originates from B is judged to be high” (Tversky and Kahneman 1974, 1124). During this process, the features of the sample are compared to the structures of the population in order to measure the probability of an event (Kahneman and Tversky 1982, 163), while ignoring the prior probabilities of an outcome (Tversky and Kahneman 1974, 1124). Departing from Bayesian judgment, several cognitive biases might arise and distort decision-making process under representativeness heuristic, such as insensitivity to prior probability of outcomes, insensitivity to sample size, misconception of chance, insensitivity to predictability, the illusion of validity, misconceptions of regression.¹⁰⁵ Lastly, the heuristic of anchoring takes place when people attach extreme weight to an initial value, which is later ‘adjusted to yield the final answer’ (Tversky and Kahneman 1974, 1128). This inferential ‘stickiness’ exerts a “[...] gravitational pull that substantially affects subsequent assessments” (Weyland 2005, 284, 285).

Developed as a descriptive critique of expected utility theory, the Prospect Theory, without making any normative claims (Tversky and Kahneman 1986, S272), asserts “[...] the displeasure from a monetary loss is greater than the pleasure from a same-sized gain” (Rabin 1998, 14). Endowment effect proposed by those scholars suggests that as a result of ‘certainty effect’¹⁰⁶ and ‘loss aversion’ (Tversky and Kahneman 1986, S258). According to this theory, outcomes are perceived (from a reference point) as gains or losses, rather than as final states of wealth (Kahneman and Tversky 2000, 32).¹⁰⁷ “A central conclusion of the study of risky choice has been that such choices are best explained by assuming that the significant carriers

¹⁰⁴ See also Kahneman and Tversky 1982, 164; Tversky and Kahneman 1974, 1128.

¹⁰⁵ Each of these cognitive biases are explained in detail in Tversky and Kahneman 1974. In addition to those, Rabin and Schrag (1999) examine a model of confirmatory bias which further leads to overconfidence in agents.

¹⁰⁶ “[...] [P]eople underweight outcomes that are merely probable in comparison with outcomes that are obtained with certainty” (Kahneman and Tversky 2000, 17)

¹⁰⁷ As these scholars highlight, it was first proposed by Markowitz (1952) that utilities are defined on losses or gains, rather than absolute final wealth.

of utility are not states of wealth or welfare, but changes relative to a neutral reference point” (Thaler, Kahneman and Knetsch 1992, 70).¹⁰⁸

The theory further explains “[...] why people made different choices in situations with identical final wealth levels” (Barberis and Thaler 2003, 1071). In relation to their status quo, or in other words their reference points, people tend to dislike losses more than the pleasure of gains. “Perception is *reference-dependent*” (Kahneman 2003, 1454), in other words, changes in the reference point, hence the status quo, lead to reversals of preference (Tversky and Kahneman 2000a, 143). Prospect theory suggests two phases in decision-making, namely the editing (framing) phase and followed by an evaluation phase when “[...] edited prospects are evaluated and the prospect of highest value is chosen” (Kahneman and Tversky 2000, 28). “In the framing phase the decision maker constructs a representation of the acts, contingencies, and outcomes that are relevant to the decision” (Tversky and Kahneman 2000b, 46). Framing effects prevail when “[...] extensionally equivalent descriptions lead to different choices by altering the relative salience of different aspects of the problem” (Kahneman 2003, 1458). Tversky and Kahneman (1986, S251) suggest that different preferences arise from the alternative descriptions of problems as opposed to the principle of invariance proposed by the rational choice theory. As an example, “[t]here has been considerable interest among behavioural economists in a particular type of framing effect, where a choice between two options A and B is affected by designating either A or B as a default option” (Kahneman 2003, 1459). The significance of this framing effect has also been acknowledged in designing social policies when deciding which option to present as the default one. Against this background, the main hypotheses put forward by the cognitive heuristics literature shall be summarised as follows:

<p>Bounded rationality requires cognitive shortcuts to be used under uncertainty.</p> <p>The use of cognitive heuristics may result in cognitive biases in human decision-making</p> <ul style="list-style-type: none"> Instances of large and more frequent classes are better recalled <i>(Availability heuristic)</i> The features of the sample are compared to the structures of the population in order to measure the probability of an event <i>(Representativeness heuristic)</i> People attach extreme weight to an initial value <i>(Anchoring heuristic)</i> Outcomes are perceived from a reference point as gains or losses <i>(Prospect Theory)</i> <ul style="list-style-type: none"> Changes in the reference point, hence the status quo, lead to reversals of preferences <i>(Framing Effects)</i> Outcomes are perceived (from a reference point) as gains or losses, rather than as final states of wealth <i>(Endowment Effects)</i>
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Table 4 Hypotheses by Cognitive Heuristics Literature

¹⁰⁸ Scholars have further improved the Prospect Theory in another paper published in 2000 (Tversky and Kahneman 2000).

2.5 *Application of Cognitive Heuristics into Banking Panics*

“[P]atterns of action may speak louder than words”
(Schelling 1960, 107)

How can we apply the insights from the cognitive heuristics literature to banking panics? In other words, can cognitive heuristics literature help us understand the nature of bank runs and their triggers? Banking panics literature suggests that depositor expectations converge either towards a random variable (which cannot be examined systematically across cases), towards the deterioration of fundamentals below of a certain threshold or, alternatively, towards deposit insurance as an institutional safety net to guarantee *business as usual*. Therefore, the way in which the current literature explains bank runs tends to prioritise material and institutional variables over ideational ones. Expectation-formation, placed at the centre of the analysis, is understood to be a function of interests and/or the institutional environment.

As an attempt towards building this research’s argument and locating it within the current literature, this research has first rejected the sunspots arguments that promote random triggers for bank runs. Although sunspots explanations might seem more predisposed to an ideational analysis, they fail to provide testable assumptions for empirical scrutiny. It therefore has embraced a fundamentals-view towards bank runs and argued that deterioration of fundamentals is a necessary, but not a sufficient condition itself for a change in depositor behaviour. It has finally suggested that the self-fulfilling nature of depositor expectations and the threshold models in the literature with a Bayesian emphasis require a better understanding on the decision-making processes of depositors under uncertainty.

Despite adopting a fundamentals view towards bank runs, this research depicts depositors with bounded rationality and suggests the use of cognitive heuristics under complex situations and uncertainty. Conlisk (1996, 676) describes cognitive heuristics as “[...] rational in the sense that they appeal to intuition and avoid deliberation cost, but boundedly rational in the sense that they often lead to biased choices”. This reference to cognitive heuristics, especially to the use of reference points, might help understand why under similar conditions depositors react differently. Given the “[...] fickle nature of confidence, including its dependence on the public’s expectation of future events” (Reinhart and Rogoff 2009, xlii), the argument put forward with this research highlights the significance of depositor awareness towards the safety nets in place and the memory of past institutional failures, as two alternative reference points for depositors.

As a note of caution, this research is not the first attempt to apply this literature’s insights into the domain of economics. A vast amount of studies exists in behavioural economics, as

well as behavioural finance, which utilise from the cognitive heuristics literature in order to better understand market actor behaviour.¹⁰⁹ The field, according to Barberis and Thaler (2003, 1052), has two building blocks: limitations on arbitrage for rational market actors to correct mispricing in the market and deviations from complete rationality in forming expectations as a result of cognitive heuristics and systematic biases. This research, however, is novel in applying those insights to address the shortcomings of the banking panics literature.

To start with the institutional dimension, the empirical evidence on the impact of deposit insurance both on banking crises and on depositor motivations is mixed in the literature. As Bryant (1980, 343) suggests, “[...] the deposit insurance does not necessarily keep a bank run from occurring [...] Exactly what the effects of deposit insurance are depends upon how the government will meet its insurer’s obligation”. Changes in depositor behaviour may be difficult to alleviate when loss of confidence in the banking system is accompanied with a lack of confidence in the policies and institutions in place. A government policy becomes credible only when it reveals government’s *willingness* as well as its *ability* to rescue its banks and, therefore, their creditors. Coherence and the consistency in the actions of monetary authorities in addressing banking sector distress also affect public confidence. “If providing insurance is not ex post optimal, it cannot be ex ante credible either. Anticipating this, depositors fear they will not obtain their promised repayment and this may precipitate a crisis. In this framework, deposit insurance becomes ineffective in preventing even purely panic-based runs” (Allen, Carletti, and Leonello 2011, 465). Credible government actions should aim to address the underlying problems that stress the banking system (Leaven and Valencia 2008b, 20). As also in Jayanti, Whyte, and Do’s (1996, 105) words; “[...] the existence of a formal deposit insurance scheme may not be enough to prevent contagion effects; the actual and perceived response of regulators to bank failures may shape the investor response”.

From an asymmetric information perspective, the efficiency of the deposit insurance, as well as the blanket guarantee, does derive not from the sum covered, but from its public nature (Morris and Shin 1998, 595). As stated by Ennis and Keister (2010b, 415) “[...] the anticipated policy response to a crisis clearly influences people’s ex ante incentives and behavior”. When panic starts unfolding within the banking system or the distress on the system has been increased due to adverse developments, what needs to be done is the

¹⁰⁹ For a short discussion on the economics literature’s critique of the psychologists and the application of their findings in the economics, see Thaler 1986. For a review on behavioral finance arguments and the critique of the Efficient Market Hypothesis see Shleifer 2000; Barberis and Thaler 2003. For a general overview of the psychological findings applied to economics by the discipline of behavioral economics see Rabin 1998. As a recent example, Akerlof and Shiller (2009) focus on the significance of non-economic motives underlying economic relations, denominated as the ‘animal spirits’ (with reference to John Maynard Keynes). Whilst criticising neoclassical economics for underestimating the role played by those animal spirits, these two scholars put special emphasis on the role played by confidence in financial markets and further relate this with business up and downturns. They label those as the *cycles of confidence* (over and underconfidence in times of boom and bursts, respectively).

‘reproduction of the depositor confidence’ through government assurances.¹¹⁰ This research argues that in order for expectations to stabilise with the deposit insurance, ‘*depositor awareness*’ towards this safety net should be in place in the first place. Without an initial awareness of the safety nets available, the use of those institutions cannot be expected. The efficiency of deposit insurance scheme should be judged to the extent of depositors’ awareness towards its existence. This ‘perception lag’ has commonly been ignored by the literature as the existence of a deposit insurance scheme is assumed to be sufficient in providing assurances to depositor.¹¹¹ This, however, presents an additional information asymmetry between the bank and its depositors.¹¹²

With regards to the fundamentals dimension and as also stated in the introduction of this chapter, the self-fulfilling nature of bank runs and the threshold models in the literature with a Bayesian emphasis require a better understanding on the decision-making process of depositors under uncertainty. Both theories of bank runs refer to self-fulfilling prophecies when depositors’ reactions are not proportionate with the on-going situation. During banking crises, when self-fulfilling prophecies take place among depositors, uncertainty and information asymmetries are intensified by the ‘inherently unknowable’ nature of the others’ value systems (Schelling 1960, 115). Even on the extreme assumption that individual depositors may be ‘well-informed’ about the state of the fundamentals, the uncertainty about how those are interpreted by others, as well as their motivations to withdraw, might trigger a panic and result in their decisions to be influenced by ‘what others are doing’ (Morris and Shin 1998; Banerjee 1992).¹¹³ During a bank run, depositor actions become observable to others and the queues contain a public signal where any early action taken by depositors contains a ‘feedback effect’ on others’ later decisions (Pericoli and Sbracia 2003, 592). This refers to the uncertainty caused by the transformation of common knowledge into private information, as Bikhchandani and Sharma (2001, 284) suggest, when “[a]n individuals assessment of the

¹¹⁰ An interesting study by Vaugirard examines the spread of bank panics across countries through an ‘expectational channel’ since “[...] a banking crisis in a country leads creditors to reexamine policymakers’ willingness to bailouts in other countries, which eventually makes their banks more vulnerable to self-confirming depositors’ runs” (Vaugirard 2005, 93).

¹¹¹ Even the awareness towards the existence of the insurance does not guarantee (1) the full acknowledgement of the scheme’s details, and (2) confidence in the institution.

¹¹² In addition to those presented above, a further information asymmetry arises from the fact that there exists no secondary market for deposits (as banks’ liabilities) where ‘publicly observed market prices of different banks’ liabilities’ (Calomiris and Gorton 1991, 126) could have helped depositors differentiate between banks.

¹¹³ “Information plays a subtle role in speculative crises. What is important is not the amount of information, per se, but rather how public and transparent this information. If market participants are well informed about the fundamentals, but they are unsure of the information received by other participants, and hence unsure of the beliefs held by others, speculative attacks may be triggered even though everyone knows that the fundamentals are sound” (Morris and Shin 1998, 588). Dasgupta (2004) labels it as ‘strategic uncertainty’ under which there prevails uncertainty about the actions of others. Accordingly, “[t]he presence of such strategic uncertainty prevents depositors from coordinating their actions with arbitrary precision and thus greatly reduces the set of potential equilibrium outcomes for a given level of economic fundamentals” (Dasgupta 2004, 1052).

quality of publicly available information is only privately known to her”. The unavailability of information on people’s preferences and the accompanying uncertainty put ‘increasing pressure on laggards to jump on the bandwagon’ (Weyland 2005, 276). Although depositors’ responses, acting on self-fulfilling prophecies, are individually rational (or self-interest motivated) under the circumstances, the decision-making process is closer to the norm of bounded rationality through the use of cognitive shortcuts when processing information under the uncertainty of a crisis.

Complexity and uncertainty requires people to refer to cognitive heuristics during decision-making. Given the limitations on rationality to process all the relevant information, what information is *perceived* to be worth updating the already existing expectations? As Tversky and Kahneman (1974, 1131) state, albeit being effective, these heuristics might lead to ‘systematic and predictable’ errors, and act as the sources of ‘significant, systematic, and lasting biases in human inference’ (Weyland 2005, 282). This simplification of the real situation for practical purposes may, at the same time, produce discrepancies between this simplified model and the interpreted reality (Simon 1957, 256). While the first by product of cognitive heuristics may be the delay in the observation of anomaly,¹¹⁴ secondly, and more importantly, there might also be inference-drawing from the past to the current situations.

The ‘process of literary’ – “[...] a melange of narrative history, memories of past events, stories and conversations, etc., plus an enormous amount of usually ill-digested and carelessly collected current information” (Boulding 1967, 9) paves the way for a new ‘stabilized convergent expectations’ (Schelling 1960, 114). In cases where the current circumstances are similar to past, people tend to follow their past actions not because they represent the best of all possible responses, but because they are already the ‘known and comprehensible’ to them (Rockman 1994, 150). These are the moments when ‘collective memory’ becomes significant as past examples are recalled to provide ‘patterns’ in an unfamiliar world. This, in essence, is called as ‘reasoning by analogy’ by which “[t]he past may be abused as well as used, as in the causal drawing of analogies with the past in support of present interests and inclinations” (Rose 1993, 16-17).¹¹⁵ Old memories of crises and losses may also lead to ‘stickiness’ in understandings (*cases of heuristic of anchoring*) and prevent actors from differentiating between the past and present situations. Actors draw inferences from past examples and are inclined

¹¹⁴ According to a mostly-referred card experiment conducted, the anomalous cards shown to actors were at first identified as normal and fitted to ‘one of the conceptual categories prepared by prior experience’ (Kuhn 1962, 63). A further exposure to anomalous cards, however, resulted in actors’ increasing awareness of anomaly (Kuhn 1962, 63).

¹¹⁵ Boulding (1967, 14) refers to the concept of ‘macro-learning (cumulative learning) process where the accumulation of experience and the affects of ‘the memory of disastrous feedbacks’ on the present images of the system gain significance.

to expect the same outcomes even though the present circumstances may vary from the past in great detail (as an example for *the availability of heuristics*).¹¹⁶

Jervis (1976, 217-8) also cautions against the ‘tyranny of the past upon the imagination’. “By making accessible insights derived from previous events, analogies provide a useful shortcut to rationality. But they also obscure aspects of the present case that are different from the past one [...] It is thus not true that an increase in knowledge necessarily increases the actor’s ability to cope with his environment” (Jervis 1976, 220). Investigating “[h]ow do past events influence current perceptions?”, Jervis concludes the following: “[w]hat one learns from key events in international history is an important factor in determining the images that shape the interpretation of incoming information [...] Previous international events provide the statesman with a range of imaginable situations and allow him to detect patterns and causal links that can help him understand his world” (Jervis 1976, 217).

Against the background of the above discussion, the application of Tversky and Kahneman’s ‘reference points’ to banking panics provides an opportunity to incorporate ideas into the analysis of bank runs. Accordingly, policy actions to address the ongoing crisis and the institutional failures with significant losses set precedent in depositors’ perceptions for future crises. As mentioned previously, depositors’ collective memories of past crises (especially the role played by the Government in managing those) provide recollections of previous losses and update *reference points* through which the following crises are interpreted. Therefore, ‘*doing something*’ in times of crisis becomes significant in order not only to restore market confidence, but also to affect expectations for the future. From this discussion, a set of hypotheses and working assumption can be listed in the below *Table 5*.

¹¹⁶ This is an interesting point raised by many scholars working on ideas. The ‘process of institutionalization’, as Berman calls (2001, 238) illustrates the way ideas become inherited in institutions, patterns of discourse and collective identities. They outlive the original conditions which gave rise to their existence (Berman 2001, 238).

HO: Bank runs are triggered by sunspots as random variables
(Null Hypothesis)

H1: Bank runs are related to the deterioration in economic fundamentals

WA1: For a bank run to become contagious, the dual observation of a bank failure and a recession is required.

WA2: Once a run is in progress, (lines of) informed depositors have signaling effects on uninformed ones.

WA3: Banking panics should not develop in information-rich environments.

WA3a: A banking panic might be prevented through the provision of bank-specific information on the bank's solvency.

WA4: If the bank run originates from information asymmetries and fundamentals, there should be a 'flight-to-quality' from insolvent to solvent institutions.

H2: Triggered by either fundamentals or sunspots, *ex ante* guarantees on deposits such as the deposit insurance scheme is promoted for preventing an inefficient outcome such as a bank run*

WA5: The efficiency in stabilising depositor expectations depends on the specifications of the scheme, such as the upper limit of deposits covered, co-insurance principle and compensation delays.

WA6: The lack of commitment by the authorities on deposit freezes and payment re-scheduling and the anticipation of this by depositors might generate a self-fulfilling bank run. **

WA7: *De facto* (such as the implicit 'too-big (interconnected)-to-fail' understanding) or *ex post* (blanket) guarantees should stabilise depositor expectations in the case of an inefficient deposit insurance scheme.

WA8: The coherence and consistency in the actions of policy makers in addressing the crisis affect depositor expectations.

H3: As an additional information asymmetry during a bank run, the lack of depositor awareness towards deposit insurance scheme also affects depositor expectations

H4: Under uncertainty during crises and as a result of bounded rationality, cognitive shortcuts (in different forms) are used in depositor decision-making

WA9: Application of availability heuristic: Previous events and failures (through collective memory) act as road maps to guide action.

WA10: Application of representativeness heuristic (*Generalisation Effects*): In times of crises, institutions are assessed by their similarities to the problem at hand in order to measure the probability of their failure.

WA11: Application of anchoring heuristic: People attach extreme weight to an initial value, which is later 'adjusted to yield the final answer'.

Table 5 Hypotheses and Working Assumptions, Once More

* This assumption is shared by both of the theories, although stronger by the sunspots view.

** Within the period under examination, there have not been any deposit freezes or payment re-scheduling.

Conclusions

Promoting the significance of ideas, this theoretical chapter has suggested that there are cognitive dynamics to analyse depositor behaviour, which render an economic explanation based solely on fundamentals inadequate. It first presented the relevant literature on and the institutional dimensions of banks runs. Following this, the second part of the chapter put forward a critique of the current literature on banking panics and presented the literature on cognitive heuristics. After a short discussion on threshold models and expectations cascades, the final section illustrated how the insights from the cognitive heuristics literature might be applied to banking panics. It argued that the self-fulfilling nature of bank runs and the threshold models in the literature with a Bayesian emphasis require a better understanding on the decision-making process of depositors under uncertainty. The final section provided a comprehensive list of the hypotheses derived from both literatures and to be tested with the following case studies.

The following empirical chapters of this thesis will test this research's argument against empirical evidence. Accordingly, they will assess the three dimensions of bank runs for each individual case, namely fundamentals, institutions, and collective memory. Cases are selected from the most recent banking crisis in the United Kingdom between 2007 and 2009 with an attempt to address the following research puzzle: Why, under similar circumstances, do depositor expectations converge to certain outcomes in some cases while they remain constant in others? The following *Chapter III*, as a background chapter, starts with the Northern Rock case and presents the relevant empirical data for an argumentative analysis in *Chapter IV*.

Chapter III: Setting the Stage for Northern Rock

The preceding theoretical chapter has outlined the main arguments present in the literature and pointed to a literature gap, which this research intends to fill through its emphasis on ideas. It has argued that the material circumstances (as promoted by the fundamentals view) and the institutionalised guarantees on deposits are significant in creating focal points. However, equally significant are how those are interpreted by depositors. This research disputes the Bayesian rationality attributed to depositors and suggests instead an emphasis on cognitive heuristics in decision-making. Accordingly, through changing the reference points (for future crises), the shadow of the past on the formation of current expectations (collective memory) and depositor awareness towards the safety nets in place (as an additional information asymmetry) are also significant in depositor decision-making.

Against the background of this theoretical discussion, this chapter will provide an account of the period between September 2007 and September 2008 through process tracing of the major turning points for both Northern Rock and policy-making for the banking industry. Accordingly, this chapter is structured in four main sections. The first section will examine the developments during the summer of 2007 and the start of the credit crunch in August 2007. This section is also accompanied by a short discussion on Northern Rock's business model pre-dating its nationalisation. Following this, the chapter will identify the turning points during the peak of the Northern Rock crisis in September 2007. This section will uncover the introduction of the emergency funding by the Bank of England, the 'offline' depositor run on Northern Rock and the introduction of the blanket guarantee on September 17th. The third section will present a political economy analysis on Northern Rock's nationalisation while identifying the various interest groups and institutions involved within the process. Finally, the fourth section will describe the 'regulatory landscape' and the policy changes introduced by the Tripartite Authorities following the Northern Rock crisis. This will be accomplished in three sub-sections each of which will cover a separate Authority (HM Treasury, FSA, and the Bank of England) operating within the Tripartite framework. Conclusion will conclude the chapter after having set the relevant empirical data for an argumentative discussion on the Northern Rock crisis in the following *Chapter IV*.

3.1 Summer 2007 and the Start of the Credit Crunch

“What is clear is that the quake's impact did not depend only on the quake itself but also on pre-existing geology and building structures [...] The point is not that shocks are irrelevant but that their effects depend on preexisting structures”
(Legro 2005, 28)

The characteristics of the banking system in the United Kingdom preceding the crisis rendered banks vulnerable to certain kinds of shocks. Banks' reliance on securitisation decreased their capital ratios, while their use of the wholesale markets for additional funding increased banks', and thus the banking system's, overall leverage. Specifically, the mortgage markets were characterised by the growth of buy-to-let and self-certified mortgages, as well as mortgages with high loan-to-value (LTV) ratios.¹¹⁷ Banks' business models mostly relied on originate-to-distribute mortgages, which were later securitised and sold to Special Investment Vehicles (SIVs) or conduits (House of Commons Treasury Committee 2008a, 19). The prevailing regulatory framework, *Basel II*, also provided banks with the negative incentives to free capital off of their mortgages (Caprio and Honohan 2008, 18). This resulted in an increase in the off-balance sheet activities for those banks and, subsequently, led to the increase of the total leverage within the banking system. Overall, securitisation also increased systemic uncertainty, as it resulted in the separation of the "[...] information held by loan originators from those exposed to the risk of default" (King 2007a, 2). This diversification of credit risk across institutions and countries turned to 'a game of "hunt the loss"' (Briault 2007).

In June 2007, the failure of two hedge funds sponsored by Bear Stearns sparked concerns in inter-bank money markets and resulted in an increase in spreads (FSA 2009a, 12-13). In July, all three major rating agencies announced that they would start a review of the subprime bonds market (Felton and Reinhart 2009, 352).¹¹⁸ On August 7th IKB Deutsche Industriebank was bailed out in Germany and Countrywide Financial and American Home Mortgage Investments in the United States revealed losses due to subprime mortgages (House of Commons Treasury Committee 2008a, 34). On August 9th BNP Paribas decided to freeze its three hedge funds exposed to the US sub-prime mortgage markets ("Suprime hits BNP" 2007, 14). This "[...] unexpected revelation by a French bank that its investment funds could no longer value their exposures to US sub-prime mortgage loans produced a sharp reappraisal of the risks they were taking by investors around the globe" (King 2007b, 3-4).

All these developments resulted in an increase in the awareness towards counter-party risks (see Llewellyn 2009, 18), especially for residential mortgage-backed securities (RMBS) as a result of the growing problems in the sub-prime mortgage markets.¹¹⁹ As stated by the Governor of the Bank of England, "[r]ising default rates on sub-prime mortgages in the United States were the trigger for the recent financial market turmoil" (King 2007a, 1). A

¹¹⁷ Northern Rock's *Together* product served as a leading example.

¹¹⁸ For a detailed account of the developments during this period, see the 'Chronology' section of the book.

¹¹⁹ For a detailed analysis on the roots of the problems see House of Commons Treasury Committee 2008a, 28-31 and 34-7. See also FSA (2008a, 9-12).

reappraisal of risk in those markets (Briault 2007) and the lack of demand for these products exacerbated the difficulties in pricing them by market actors,¹²⁰ which led to the effective shutdown of the secondary markets for those certain types of asset-backed securities and to the functioning of only the overnight debt rollover in inter-bank markets.¹²¹

In addition to the aforementioned difficulties, as Laeven and Valencia (2008a, 25) state, “[h]ard-to-value structured products and other instruments created during a boom financial innovation had to be severely marked down due to the newly implemented fair value accounting and credit rating downgrades”. This, in return, resulted in banks becoming concerned about the financial condition of their conduits or SIVs because of previously arranged credit lines with those institutions (Llewellyn 2009, 19; see also speech delivered by Gieve 2008a). The dry up of liquidity in commercial paper market created difficulties in funding and thus led to a greater maturity mismatch for those investment vehicles (King 2007a, 2). The short-term commercial papers issued by those vehicles had been purchasing the bank’s asset-backed securities (Llewellyn 2009, 19; Eisenbeis and Kaufman 2009, 75). With the start of the credit crunch, the evaporation of the liquidity in the commercial paper market required banks to take vehicles’ assets back on their own balance sheets (FSA 2009a, 13; see also FSA 2009b, 20).

‘Self-insurance’ concerns also contributed to and intensified the dry up of liquidity in the markets. As the Governor of the Bank of England stated; “[f]aced with the possibility that they would have to finance these vehicles themselves, banks with spare cash have hoarded it and have become reluctant to lend to other banks beyond very short maturities” (King 2007b, 4). In addition, “[t]here was a lack of disclosure of the underlying assets which led to distrust of these vehicles. Once the SIVs began to experience difficulties, the existence of wind-down triggers made matters worse, as they had been designed to cover idiosyncratic risks, not general market-wide risks” (FSA 2008a, 20). There were other classes of mortgage-backed securities whose underlying assets were other than sub-prime mortgages. However, the growing suspicion regarding those instruments intensified the already prevailing uncertainties within these certain segments of the financial markets. As in the words of the Chairman of the FSA,

[w]e have moved from one abnormal state of affair - too little risk aversion - to another abnormal state - too much risk aversion. There has been a flight to quality - a sharply increased demand for gilts, treasuries and other government issues; a flight to shorter maturities; and a flight to simplicity - a continuing demand for single name investment grade commercial paper or corporate bonds, but a retreat from more complex instruments (McCarthy 2007b).

¹²⁰ See BNP Paribas’ statement in Gangahar and Jones (2007, 14).

¹²¹ A wide range of asset classes such as collateralised debt obligations, collateralised loan obligations, asset backed commercial papers, RMBS’ were affected during the credit crunch. See speech delivered by McCarthy 2007a.

In addition to securitisation, as mentioned, the wholesale markets had also been used as an alternative source of funding, which led to higher loan-to-deposit ratios and leverage in banks' portfolios.¹²² During the credit crunch, the gap between the money market (inter-bank rates) and the Bank of England base rate also widened, as an illustration of the price for perceived risk in those markets. "A combination of the limited availability and high price of wholesale market funding has placed a particular strain on banks that are particularly reliant on securitisations and on wholesale funding to finance their assets" (Briault 2007). The result was the difficulties in commercial paper markets, the rise in spread of LIBOR rate over the Bank of England base rate and a decreased maturity for funding (McCarthy 2007a).

This increase in the LIBOR rate and the 'liquidity hoarding' (Goodhart 2008, 13) in the markets significantly increased the funding costs for those banks which were more reliant on those alternative sources of funding compared to their retail deposits, such as Northern Rock. With the 75 per cent of its funding from the wholesale markets, Northern Rock had been following a risky business strategy since its de-mutualisation. Three main channels that the bank used for its funding needs had been the retail deposits (only 25 per cent), inter-bank short-term lending and securitisation (HM Treasury 2009a, 13). Expectations of no further interest rate increases (5.75 per cent as of July 2007; see Economist Intelligence Unit 2007a; 2007b) and a rise in inter-bank market LIBOR rate resulted in higher costs of borrowing for Northern Rock.¹²³ In addition to its rising costs, the bank's high dependence on short-term money and capital markets also exposed Northern Rock to a low-probability-high-impact (LPHI) risk,¹²⁴ which required liquidity to evaporate both in interbank and commercial paper markets to become materialised (Llewellyn 2009, 16, 20). This, as a matter of fact, was what happened with the credit crunch in the summer of 2007.

Founded in 1965, Northern Rock was demutualised from a building society into a bank in 1997, operating with a small 76-branch network. The bank had a significant market share in the residential mortgage market (Llewellyn 2009, 14), which issued one in every five mortgages in Britain between January and June 2007 (Pratley 2007, 31). It was also the first lender in the United Kingdom during the late 1990s to have mortgage securitisation as its primary business model (Dey 2007a, 3). Under its business model, retail deposits (amounting to approximately £24bn) were only 25 per cent of the bank's funding for loans, whereas the remaining 75 per cent was funded through the wholesale markets.¹²⁵ On the positive side, this helped the bank to offer ambitious mortgage terms - as exemplified with its Together

¹²² This period also experienced a rise in central bank reserves held by banks, which were also funded by overnight interbank loans. See King 2007a, 3-4.

¹²³ Financial indicators for July (2007b) showed an unexpected fall in consumer price inflation which eased expectations on a further interest rate increases by the Bank of England. See also Dennis 2007, 44.

¹²⁴ Refer to the uncorrected transcript of oral evidence by McCarthy and Sants (2007).

¹²⁵ Just £1.7bn was deposited with the bank in the first half of 2007. See Roberts 2007, 19.

Loan - which allowed borrowing as much as 125 per cent of a property's value, or up to six times as much as a borrower's annual income (Collinson and Seager 2007, 4). On the negative side, although the bank had minimal exposure to sub-prime mortgages (amounting to approximately £75m) and a low percentage of borrowers in arrears,¹²⁶ its unique business model was highly vulnerable to increasing LIBOR-interest rate spread. By early September 2007, Northern Rock "[...] was relying almost entirely on overnight money markets to finance its commitments" (Giles and Larsen 2007a, 2). Therefore, the depositor run hit the bank when it became the most vulnerable as a result of the crisis of confidence in the markets. As Martin Wolf (2007, 15) from the *Financial Times* stated, the Northern Rock's business model left the bank *an accident waiting to happen*.

3.2 Identification of the Turning Points - September 2007

“An accident may precipitate a crisis, but so may action
designed to prevent it- or action by the authorities adopted to
achieve other objectives”
(Kindleberger and Aliber 2005, 91)

June 27th, 2007 stands as the first turning point within the Northern Rock crisis. The bank announced a profit warning (a fall from £200m to £180m in annual profits) (Northern Rock 2007a),¹²⁷ which raised worries about its ability to fund its business through the wholesale markets.¹²⁸ On August 13th Northern Rock approached the FSA to inform the regulator on the funding crisis it had been facing as a result of the conditions in the wholesale markets.¹²⁹ In response, the FSA assigned a strengthened supervisory team, which conducted daily conversations with Northern Rock and the bank's situation was discussed by the Tripartite Standing Committee on the following day (House of Commons Treasury Select Committee 2008b, Ev 221). While the FSA notified the Treasury directly on August 15th, the Northern Rock management spoke to the Bank of England about the bank's situation the following day (House of Commons Treasury Select Committee 2008b, Ev 221, 60). The FSA further increased its contact with the bank to twice daily conversations and the Tripartite Committee's Joint Crisis Coordination Team started a working group for Northern Rock

¹²⁶ On August 19th, 2007 Northern Rock issued a statement indicating that it had minimal exposure to US mortgage-backed securities market (see Hume and Orr 2007a, 36; Farrow 2007, 2). However, the bank still owned £325m in structured investment vehicles and in collateralised debt obligations amounting of £200m (Ho 2007, 4).

¹²⁷ For details see Croft 2007a, 1; Croft and Tett 2007, 19; Hill 2007a, 18.

¹²⁸ This announcement might also be considered as one of the triggers for the initial wholesale run on the bank during the summer of 2007.

¹²⁹ A summary of events during this period is documented by UK Shareholders Association 2007.

(House of Commons Treasury Select Committee 2008b, Ev 225, 221). Finally, on August 29th, the Chairman of the FSA formally wrote to the Chancellor regarding Northern Rock's situation and copied his letter to the Governor of the Bank of England (House of Commons Treasury Select Committee 2008b, Ev 221). On September 11th the bank's auditors also informed the FSA that "[...] they had reasonable grounds to believe that Northern Rock might cease to be a going concern" (HM Treasury 2009a, 14).

On September 12th the Governor emphasised his concern about creating moral hazard in the markets in a letter to the House of Commons Treasury Committee (2008c, Ev 217): "[...] [T]he provision of large liquidity facilities penalises those financial institutions that sat out the dance, encourages herd behaviour and increases the intensity of future crises". The following day and to the surprise of markets, however, the Bank of England agreed to extend a credit line to Northern Rock as a backstop facility, after a short period of search for a private solution (House of Commons Treasury Select Committee 2008b, Ev 221). The FSA (2007a) announced that Northern Rock was solvent, exceeded its regulatory capital requirements and had a good quality loan book to be eligible for the Bank's loan. Accordingly, Northern Rock would provide its mortgage book as collateral with the central bank in exchange for the credit line (on demand), on the condition that it remained solvent (Dey 2007b, 1; "Rock against the clock ..." 2007, 16). This was essentially the second turning point in the Northern Rock crisis.¹³⁰ On September 14th the Tripartite Authorities officially announced the credit line arranged for Northern Rock.¹³¹ The Chancellor authorised the liquidity support facility to Northern Rock on the basis of recommendations from the Bank of England and the FSA (HM Treasury 2007a.). The Chancellor also stated that "[...] the Bank of England stands ready to make available facilities in comparable circumstances, where institutions face short-term liquidity difficulties" (HM Treasury 2007a). This was the first time in three decades that the central bank used its LoLR facility, - fundamentally different than its regular standing facility- to assist a troubled bank (Seager 2007a, 38; for details see Fletcher *et al* 2007, 1; Giles and Larsen 2007b, 3; Giles 2007a, 2; Hume and Larsen 2007a, 1).

As the third turning point in the Northern Rock episode; however, this extension of the credit line from the Bank of England was followed with depositors queuing in front of the bank's branches. During the first few days of the 'off-line run' (September 14th-17th), approximately deposits amounting to £4.6bn were withdrawn from Northern Rock accounts, one fifth of the total deposits (HM Treasury 2009a, 5, 15). An estimated £1bn was withdrawn on the first day of the run (£250m through branches and an even larger amount

¹³⁰ It was later understood that the Greater London Authority, Metropolitan Police, London Fire Authority and other local councils had already extended short-term loans to Northern Rock even before the Bank of England's credit line (Goodway 2007a, 26; Prynne 2007a, 2).

¹³¹ On the same day (September, 14th), the bank issued another profit warning stating that profits would be in the range of £500m-£540m, less than the City forecasts of £647m (Duncan 2007, 30).

via the Internet) (Larsen 2007a, 1).¹³² According to an Internet traffic monitoring company, Northern Rock's website had been visited three times more than usual since Friday September 14th (Wallop 2007, 4). Despite the efforts to stabilize depositor expectations, the run on Northern Rock branches continued on Saturday to the point where the bank was forced to extend its opening hours and order more cash to meet the withdrawal demands from depositors (Smith 2007, 14; Dey and Hennessy 2007, 1). On top of the £1bn withdrawn on Friday, an additional withdrawal of £500m was assumed the following day (Boniface and Kelly 2007, 9).¹³³ This figure excluded the postal accounts amounting to £9.9bn, which could only be withdrawn upon writing to the bank.¹³⁴ On Friday, hundreds of Northern Rock customers also gathered in front of the bank's Dublin office (Brady 2007b, 4). Approximately 25,000 Northern Rock customers in Ireland (working with the bank through the Internet and telephone accounts) were reassured that their savings (amounting of €2.4billion deposits in total) were safe under the Bank of England protection and the Financial Services Compensation Scheme (O'Keefe 2007, 2; Johnson 2007; Doyle 2007; Hegarty and Phaidin 2007, 2). As a response to the ongoing situation, the FSA issued another statement because of "[...] the unusually high volumes of customers trying to access their accounts as a result of the publicity surrounding Northern Rock" (referred in Brignall 2007, 26).

There were efforts from various public bodies to dissolve uncertainty among depositors through their statements and reassurances. The chief executive of Northern Rock tried to calm the panicking depositors after the bank's website had become frozen earlier in the morning and savers had not been able to access their account details because of high demand (Cecil and Prynne 2007a, 2). In his words during an interview when asked about the depositors who were not able to withdraw their savings from the bank: "[p]lease bear with us. People will have to be a little bit patient with us" (Hotten 2007, 30). He portrayed the emergency funding as making Northern Rock "[...] probably one of the safest places to be" (referred in Cecil and Prynne 2007a, 2).¹³⁵ This was re-emphasised by the Chancellor during his interview with *Channel 4 News* through highlighting the fact that the FSA had approved Northern Rock's solvency (Dey and Hennessy 2007, 1). The British Bankers' Association ('BBA', hereafter) also issued a press release to ease the panic amongst depositors: "The

¹³² By the time, savings in online accounts amounted of more than £4bn. One measure taken by the bank to prevent depositors from withdrawing those savings was to give them over-the-counter access to their funds (Conway and Wallop 2007, 5).

¹³³ Some even predicted much bigger amounts to be withdrawn from the bank. One reason to deter depositors from withdrawing their savings was that "[...] transferring a tax-free savings account to another lender is a slow and tedious business, and that savers may be unwilling to jettison ten years' worth of tax concessions" (Purves 2007, 17).

¹³⁴ For details see Brady 2007a, 2; Smith, Ringshaw, and Watt 2007, 2.

¹³⁵ In his words: "If I was a depositor, and I am my funds are with Northern Rock, and given the fact that it is backed by the Bank of England, it is probably one of the safest places to be" (referred in Cecil and Prynne 2007b, 9). See also Giles and Larsen 2007a, 2.

Northern Rock is a sound and safe bank and there is absolutely no reason for either mortgage customers or savers to worry” (Northern Rock 2007b).¹³⁶ On BBC’s *Today* programme, Angela Knight, the chief executive of the BBA, also asked for ‘absolute confidence’ in Northern Rock (Cecil and Prynne 2007b, 9).¹³⁷ In her words: “[...] [Anybody who was] either a saver with Northern Rock or has a mortgage [...] can be absolutely confident that they have got their money with, or they have borrowed from, a very sound financial institution” (Referred in Ringshaw and Smith 2007, 4). BBA’s executive director of retail also stated that “[w]e have to keep a sense of proportion and we have to recognise that we are in exceptional circumstances” (referred in Seager 2007b, 1).

The following turning point in the Northern Rock episode arrived when the Treasury offered a blanket guarantee on September 17th to cover Northern Rock deposits (HM Treasury 2007b).¹³⁸ “These guarantee arrangements supplemented but did not replace any compensation payable by the Financial Services Compensation Scheme” (HM Treasury 2009a, 16). It was understood that the blanket guarantee would be extended to other lenders under similar circumstances, yet on a case-by-case basis (Blackman 2007, 6; Moore 2007a, 36). After the announcement, Northern Rock management tried once more to reassure Northern Rock depositors that it was *business as usual* for the bank.¹³⁹ The bank promised savers that any penalties for their early withdrawals would be compensated on the condition that they re-deposit them with the bank by October 5th (Rayner and Porter 2007, 1). Northern Rock also published a full-page newspaper advertisement that announced the blanket guarantee offered for all Northern Rock deposits (Alleyne 2007a, 5). The chairman of Northern Rock, who had been previously criticised for remaining silent over the crisis, made his first public appearance with the following statement: “If we can get through this and get to calm financial markets we do intend to rebuild. If other options become available we’ll consider those too” (referred in Larsen 2007b, 2). In an interview with the *Times*, he said that “[t]he board takes full responsibility. We’re not solely blaming the market, but the

¹³⁶ As an example from the press see Hill 2007b, 18.

¹³⁷ In another statement and as a response to the unfolding events, Angela Knight (2007) wrote the following: “[...] Yet British banking is more robust than ever. Our system is very efficient at borrowing and investing. Northern Rock is solvent. The Chancellor even said yesterday that the Government would guarantee the deposits of all Northern Rock customers. So what is happening? Last week it arranged an overdraft with the Bank of England [...] The authorities united to explain it was not in trouble. But people panicked. Nobody can expect customers to remain calm just because the authorities say so. But no high street bank has gone bust in living memory”.

¹³⁸ By the time of the announcement, Northern Rock deposits consisted of estimated £22bn of retail deposits and £6bn of wholesale deposits (Hosking and Webster 2007, 1).

¹³⁹ In the chief executive’s words: “Your money is safe and if you want some, or all of it back, then you are perfectly entitled to it” (Prynne 2007b, 2). In another attempt, he advised Northern Rock staff to reassure savers that their deposits were guaranteed by the government with the following memo: “All staff, the Chancellor’s statement makes it clear beyond any doubt that all savings in Northern Rock are safe and secure. Consequently anybody who is in a queue outside a branch, or who is trying to access an online account can be fully reassured that there is no cause for concern whatsoever. Bloody Hurrah!” (Hosking and Webster 2007, 1).

credit crunch was unprecedented and foreseen by nobody” (referred in Hosking 2007, 44). On September 18th, Northern Rock saw queues in only four of its branches and calls from its customers declined to less than a tenth, compared to the previous day (Giles, Parker, Saigol, and Larsen 2007a, 1). This was the fifth and the final turning point in the period under examination.

Date	Turning Point
June 27 th , 2007	Northern Rock’s first profit warning
September 13 th , 2007	Unofficial announcement of the LoLR facility by the Bank of England
September 14 th , 2007	- Northern Rock’s second profit warning - Off-line run starts on Northern Rock
September 17 th , 2007	Introduction of the blanket guarantee by the HM Treasury
September 18 th , 2007	Reduction of the depositor queues in front of Northern Rock branches

Table 6 Turning Points for Northern Rock

3.3 A Political Economy of Northern Rock’s Nationalisation

The previous section has presented the major turning points during the first days of the Northern Rock episode and the immediate policy responses to contain the unfolding crisis. This section will now illustrate the policy actions taken by the Tripartite Authorities with long-term implications on the banking sector in the United Kingdom. As a note of caution, the intention of this section is not to present an argumentative account on the necessity or the sufficiency of the regulatory changes. The critique of the then in place Tripartite framework is beyond the scope of this research. Instead, the aim is to understand the policy changes during this period in order to pave the way for an analytical argument on the empirical cases. It is imperative to analyse these changes since this research argues how various policy responses, through changing the ‘reference points’ for future bank failures, had been significant in shaping depositor expectations, and thus depositor behaviour.

Although a system-wide depositor panic on the whole banking sector had been avoided in September 2007, approximately 75,000 Northern Rock customers withdrew their deposits from the bank (Goodway 2007c, 28). By the end of November it was revealed that more than £10bn, including the senior creditors of the bank, was withdrawn from Northern Rock despite the blanket guarantee by the Government (Croft 2007b, 18; Burgess, Croft, Mackintosh, Saigol, and Larsen 2007a, 21). Starting from September 18th until the end of the month, it was estimated that an additional £4.4bn was withdrawn from the bank (HM

Treasury 2009a, 6). “By October 2007, customer deposits had shrunk to 15.3 per cent of the company’s funding (a drop from £30 billion to £17 billion); and wholesale loans had fallen to 11.8 per cent (from £17 billion to £13 billion)” (HM Treasury 2009a, 16). By the third week of November, deposit withdrawals from the bank reached up to £200m a day, which was only stabilised with the selection of Virgin as the preferred bidder for the bank (Burgess, Croft, Mackintosh, Saigol, and Larsen 2007a, 21; see also Croft 2007c, 19).

The cost of the Northern Rock crisis accrued to the Government was rising over time without any possible solution for the bank’s future. As of January 2008, the Government was supporting Northern Rock with £25bn in loans and approximately £30bn in guarantees (Croft and Parker 2008a, 1), which only started with an initial £3bn (Burgess, Croft, Giles and Tett 2007, 1). In a statement to the House of Commons in January 2008, the Chancellor made it clear that a private sector solution would be the preferable route in order to meet the objectives set by the Government (HM Treasury 2008c). The Government had set the following four conditions for any bidder to take-over Northern Rock: (1) any gain through bank’s sale should be shared with the taxpayers, (2) the Bank of England’s loan to the bank should be re-paid within a three years period, (3) the buyer should inject new capital to the bank, and (4) there should be a viable business plan for the bank’s future (Llewellyn 2009, 26). However, “[i]f it does not prove possible to secure a proposal that meets our stated objectives and conditions, it would be necessary to take Northern Rock into temporary public ownership” (HM Treasury 2008c). As a matter of fact, during the months when private take-over plans were being discussed, nationalisation started to become more viable as an option closer to the European Commission’s deadline on state aid.

The European Commission imposed a structural constraint on the emergency funding to and the Government guarantees on Northern Rock on the grounds that they might violate the European Union rules on state aid and accordingly distort market competition. For the loan to be considered as ‘state (rescue) aid’, rather than a ‘restructuring aid’, the European Union rules required it to be no more than 6 months (in this case until February 2008) (Croft and Tait 2007, 24). Along with Northern Rock’s rivals in the sector, Confederation of British Industry (‘CBI’, hereafter), BBA and the Building Society Association also raised their concerns about a possible impairment of market competition (Croft, Mackintosh, Parker, Larsen, and Tighe 2008, 1; Goff 2008a, 2). There were demands that Northern Rock should operate under similar guidelines as National Savings & Investments (Croft, Mackintosh, Parker, Larsen, and Tighe 2008, 1). In February, it was decided that the Office for Fair Trading (‘OFT’, hereafter) should regularly overview Northern Rock and its business plan to be sent to the European Commission (Croft and Parker 2008b, 5; “N Rock and state aid” 2008, 14).

As long as the bank continued to be defined as a going concern, the decision to put Northern Rock into administration technically rested with its board, rather than the HM Treasury (Croft 2007d, 20). A receiver could only be appointed to a bank after its insolvency, according to the insolvency regime in place back then (Mayes and Wood 2009, 41). On the one hand, the sale of Government-subsidised Northern Rock raised political controversy especially if the future profits were to remain in private business where the risks had been underwritten by taxpayers' money (Croft and Parker 2007a, 1). On the other hand, one of the deepest vested interests against nationalisation rested with the shareholders, since this could result in no compensation for their existing shares (Tighe 2008a, 3; Murphy and Peel 2008, 3; Murphy 2008, 2; Burgess and Saigol 2008, 2). By mid-October, there were debates on class-action suit against Northern Rock on whether or not a false market for its shares had been created as a result of the Government announcements on the bank and the absence of any preceding announcements in August (Saigol 2007, 21; Hill 2007c, 20; Hughes 2007a, 19; Osborne 2007, 1).

In the midst of all these political controversies and even before the official nationalisation of Northern Rock, on February 7th Office for National Statistics ('ONS', hereafter) classified the bank "[...] as a public sector company, saying that the controls the government had taken over the stricken mortgage lender were similar to a nationalised entity" (Atkins and Giles 2008, 1; see also Giles 2008a, 2; Giles 2008b, 2). ONS later decided that approximately £100bn should be added to public sector net debt after the nationalisation of Northern Rock (Giles 2008c, 3). This would, in return, violate the Government's 'sustainable investment rule', which required the public sector net debt to stay below 40 per cent of gross domestic product (Giles 2008d, 3; see also Giles 2008e, 4). In the case Northern Rock remained classified as a private company, the government support would still be classified as contingent liability (Giles 2008d, 3; see also Croft and Daneshkhu 2007a, 21). On February 15th, the final proposals from the bidders were submitted to the Government. Finally, with the suspension of trading in its shares (at 90p per share (Larsen 2008a, 3)), Northern Rock was put into temporary public ownership on February 18th through the Banking (Special Provisions) Act of 2008 on February 22nd (HM Treasury 2009a, 8).

3.4 Regulatory Landscape and Policy Changes: The Tripartite Authorities

Despite being contained to a single bank, the depositor run on Northern Rock served as a *shock* both for the banking sector and for financial regulators. The nationalisation of Northern Rock and the painful bidding process preceding this have emphasised the significance of an efficient bank insolvency regime since "[...] the bankruptcy process is greatly value-destroying for banks" (ICB 2011, 19). By the time of the Northern Rock crisis,

the banking sector in the United Kingdom was operating under the financial regulatory framework provided by a Memorandum of Understanding between the Tripartite Authorities, which shared regulatory responsibilities over the banking industry. This memorandum among the Authorities clarified the duties for each of these bodies. While the Bank of England was responsible for financial stability (as its second core purpose) as well as the provision of the LoLR facility, the FSA was given responsibility for the supervision of individual firms ('prudential regulation'). The HM Treasury undertook responsibility for the overall legislative framework and the Chancellor was accountable to the Parliament (HM Treasury 2007c). From the very start, this division of regulatory responsibilities among three major authorities remained a matter of controversy for creating informational disadvantages and thus hindering an effective solution to the crisis. The efficiency of this Tripartite framework during a crisis was, as a matter of fact, put into question with the first nationalisation of a British bank in February 2008 after decades.

During his interview with the *Financial Times*, the Chancellor mentioned that there were 'quite clearly lessons to be learned at several levels' and was 'prepared to look at the boundaries' between the Tripartite Authorities (Giles and Parker 2007, 3). Lessons learnt from the Northern Rock crisis led to several policy responses in order to address the institutional shortcomings within the banking system. Both policy and academic circles have acknowledged the need for a specialised bank insolvency regime and an improved deposit insurance scheme. In a speech delivered, the Governor of the Bank of England also advocated the reform of the regulation of the banking sector with the following words: "[...] [I]f we are to create a structure for our banking system so that such scenes are not repeated, we must ensure that the temporary measures put in place in recent weeks evolve into permanent reforms in the coming months" (King 2007b, 2). The Governor mentioned that the two of the most significant legislative changes due for the banking industry following the Northern Rock crisis would be the bank insolvency law and the deposit insurance scheme (King 2007b).

On the one hand, the then prevailing insolvency regime had failed to take into account the vulnerabilities specific to the banking sector. This was also stated in the Turner Review by the FSA (2009b, 75): "The Northern Rock failure [...] revealed the fact that the UK had not previously had in place a special bankruptcy-type regime to ensure the orderly resolution of a failing bank". The high-profile failure and the nationalisation of Northern Rock raised the saliency of the issue on the regulatory agenda. On the other hand and as mentioned before, the deposit insurance scheme in place (FSCS) was also criticised for failing to stabilise depositor expectations during the Northern Rock crisis. While the announcement of the LoLR facility by the Bank of England aimed at restoring investor confidence in Northern Rock, the blanket guarantee by the HM Treasury addressed the collapse of the

depositor confidence in the bank. During the following months of the crisis, however, there were various attempts from the Tripartite Authorities to restore both depositor and investor confidence not only in Northern Rock, but also in the banking system in general. With the overarching aim of stabilising confidence in the markets, each of the actors of the Tripartite Authorities addressed a different dimension of the banking sector at various phases of the crisis. The following section will analyse those in three subsections, starting with the HM Treasury. Conclusion will conclude the chapter.

HM Treasury and the ‘Special Resolution Regime’

As mentioned above, the Chancellor was formally informed about Northern Rock’s situation on August 29th through the Chairman of the FSA’s letter (House of Commons Treasury Committee 2008c, Ev 221). Although calling for a return to ‘good, old-fashioned banking’ during his interview with *Daily Telegraph* on September 13th (Porter and Reece 2007, 14), the Chancellor authorised the liquidity support to Northern Rock the following day on the basis of recommendations from the Bank of England and the FSA (HM Treasury 2007a). Later in his statement to the House of Commons, the Chancellor justified the LoLR facility to Northern Rock through defining the bank as ‘a genuine threat to the stability of the financial system’ (HM Treasury 2007c). On September 16th the Tripartite Committee discussed the possibility of a blanket guarantee for the first time,¹⁴⁰ which was announced the next day by the Chancellor (HM Treasury 2007b). As to be discussed in the following section, the Chancellor also emphasised the need for a better deposit protection regime and increased the FSCS’ coverage limit to £35,000 on October 1st (Darling 2007a). On October 11th an extended guarantee and an additional facility for Northern Rock was announced (HM Treasury 2007g; HM Treasury 2007c). The Economic Secretary to the Treasury also announced that Northern Rock savers would be allowed to restore lost ISA tax advantages (HM Treasury 2007h).

Both on September 21st, 22nd and October 9th the HM Treasury announced further extensions to the blanket guarantee in order to assure worried parties involved in the Northern Rock, in addition to the bank’s retail depositors crisis (HM Treasury 2007d; HM Treasury 2007e; HM Treasury 2007f). Firstly, as an update to the previous guarantee in place, the HM Treasury underwrote also the uncollateralized deposits, wholesale borrowing, and the retail bonds of Northern Rock on September 21st (Goodway 2007b, 26).¹⁴¹ Without any set deadlines, this extended guarantee was stated to “[...] remain in place during the current instability in the financial market” (Goodway 2007c, 28). Accordingly, “[t]his guarantee covers[ed] future interest payments, movements of funds between existing accounts, and new deposits into existing accounts. The guarantee [...] [would] also cover

¹⁴⁰ See uncorrected oral evidence by Darling, Macpherson, Neale, Maxwell, and Hughes (2007).

¹⁴¹ For further details see Coney 2007, 56.

accounts re-opened in the future by those who closed them between Thursday September 13 and Wednesday September 19, inclusive” (HM Treasury 2007d). This would cover neither the bank’s covered bonds, securities issued by Northern Rock’s SIVs and subordinated debt, nor the new deposits in addition to already existing Northern Rock accounts (HM Treasury 2007d).¹⁴² The main reason behind this was to avoid the provision of any competitive advantage to Northern Rock over other banks, which had already been criticised by its rivals for being the recipient of extensive government support. However, concerns over making Northern Rock appealing to potential take-over proposals outweighed the worries about market competitiveness. On October 9th “[...] the Treasury announced that the guarantee [...] would now cover all new deposits made after September 19. That could attract new customers and make its savings business more attractive to any bidder” (Croft 2007e, 23). In return for the extended guarantee, the bank would be charged both a fee and a certain percentage of newly attracted deposits (Croft 2007e, 23). On December 18th, the HM Treasury announced the extension of the wholesale guarantee arrangements on Northern Rock (HM Treasury 2007i). By December, “[t]he extended guarantee [...] [accounted] for about a third of Northern Rock's Pounds 113bn balance sheet and [...] cover[ed] any shortfalls on instruments such as covered bonds - an ultra-safe bond - and derivatives that are not backed by mortgage collateral” (Croft, Giles, and Parker 2007, 1).

In addition to those containment policies discussed, the HM Treasury launched a discussion paper on October 11th on reforming the banking system and protecting depositors (HM Treasury 2007j).¹⁴³ The document acknowledged that “[...] the current arrangements for dealing with banks in distress, and in particular depositor protection may not adequately uphold that confidence thus exacerbating financial instability [...] In particular, concerns have been raised about whether timely protection would be available for consumers, and whether there was a lack of understanding of the scope and operation of the compensation arrangements” (FSA 2007b, 8). In his statement to the House of Commons, the Chancellor stated the aim of the new regime as to have depositors “[...] insulated from a bank that has failed, greater compensation for them, and certainty their compensation can be paid out quickly” (HM Treasury 2007c). He further mentioned that the increase in the FSCS’s limit was the initial step towards a more comprehensive change (HM Treasury 2007c). In addition to the possible improvements on the FSCS, as the Economic Secretary to the Treasury mentioned, it also raised “[...] the question of whether there is such a concept as “critical banking functions” that must be preserved for consumers in the event of a firm experiencing difficulties” (Ussher 2007a). On November 7th, a joint paper by the

¹⁴² For media coverage see Kennedy 2007, 53; Goff and Lodge 2007, 1.

¹⁴³ Also see FSA 2007b; Croft and Parker 2007b, 2; Ussher 2007a.

Treasury and the FSA, named as *Strengthening the EU regulatory and supervisory framework: a practical approach*, was published (FSA 2007c).

In the meanwhile, the HM Treasury stated that the choice of the preferred bidder would be a matter for Northern Rock's directors, stressing that the Government advocated no particular blueprint for the bidder's selection (Croft, Eaglesham, and Giles 2007, 18). However, as mentioned before, it published its principles for assessing the proposals on the basis of protecting the interests of the taxpayers, depositors and the wider financial stability (HM Treasury 2007k; Darling 2007b). While on November 14th, the Chancellor "[...] has admitted publicly for the first time that the taxpayer could end up losing money in the multi-billion pound rescue of Northern Rock, a senior MP claimed [...]" (Eaglesham and Parker 2007, 24), in January he promised that the future of Northern Rock would be cleared within the next six weeks (Croft and Parker 2008c, 2).

On December 14th, the Government hired Goldman Sachs to help Northern Rock in a private sale and putting together a financing package (Croft and Parker 2007c, 1). In the meanwhile, the HM Treasury was understood to be preparing an "[...] emergency plan for Rock depositors to be paid off" (Croft and Giles 2007a, 1) and further plans of nationalisation in the case the bidding process failed (Croft and Parker 2007d, 15). On January 21st the HM Treasury announced the financing option for Northern Rock prepared by Goldman Sachs, which suggested turning Northern Rock loans into bank bonds (HM Treasury 2008d, see also HM Treasury 2008c; Croft 2008a, 3; Croft, Eaglesham, Giles, Tait, and Larsen 2008, 1; Croft and Larsen 2008a, 2). This financing option would allow Northern Rock to raise funds from investors against a pool of assets, backed by the HM Treasury's backstop guarantee (HM Treasury 2008d). The HM Treasury (2008d), on behalf of the Tripartite Authorities, stated that

[t]his new financing structure would only be available for proposals that would protect taxpayers' interests, as well as meeting the Tripartite Authorities' other stated objectives of financial stability and the protection of consumers. If no proposal is received which meets these objectives, the Government would bring forward legislation in order to facilitate temporary public ownership of Northern Rock.

Closer to the end of the bidding process, the HM Treasury asked bidders for Northern Rock to improve their offers (Croft and Parker 2008d, 1). Although the negotiations with the Virgin Group was reported on February 13th (Croft, Mackintosh, and Parker 2008, 2; Barker, Croft, and Saigol 2008a, 1), the Chancellor announced the nationalisation of Northern Rock on February 17th (HM Treasury 2008e; see also HM Treasury 2008f; Parker and Larsen 2008, 1). In his words: "We could have chosen to pursue either of the two private sector options. But I have always said that I was determined to protect the taxpayers' interest. It is clear that the private sector alternatives do not meet this test, when compared with public

ownership” (HM Treasury 2008e). On the next day, February 18th, the Chancellor published the Bill to take Northern Rock into temporary public ownership (HM Treasury 2008e). Following its nationalisation, the HM Treasury invited applications on June 5th for appointment as independent valuer for Northern Rock Compensation Scheme (HM Treasury 2008g), whose result was announced on September 8th (HM Treasury 2008h). On August 5th, Northern Rock announced its plans to swap £3bn of its debt to the Bank of England and £400m of preference shares for equity in order to strengthen the bank’s capital base (Croft and Eaglesham 2008, 1).

The nationalisation of Northern Rock was accomplished through the Banking (Special Provisions) Bill, which received Royal Assent on February 21st, 2008. The bill enabled the Government to take the bank into ‘temporary public ownership’ until a private solution was found. This Banking Act of 2008 introduced the *Special Resolution Regime* for banks, which provided the Tripartite Authorities with several early intervention measures (‘stabilization options’ (Lastra 2009, 139)), before a troubled bank reached the level of insolvency (Llewellyn 2009, 29). Among those were the transfer of the bank to a private sector buyer (or a bridge bank) or temporary public ownership (Lastra 2009, 139). There had also been growing emphasis on the preservation of the ‘critical banking functions’ in the event of insolvency (HM Treasury 2007j; FSA 2007b). In addition to those, another bank insolvency procedure would impose “[...] a priority on the liquidator to facilitate the payout or transfer of the accounts of depositors insured by the FSCS” (Bank of England 2008a, 49). As the Governor of the Bank of England emphasised, “[a]t the heart of the case for a special resolution regime is the need to find a way to allow banks to fail in an orderly manner [...] [A] clear framework for accountability should be established to give confidence that decisions relating to the resolution regime are exercised in line with the objectives for the regime set out in legislation” (King 2008, 5). Accordingly, in consultation with the Bank of England and the HM Treasury, the FSA would be the authority to trigger the use of Special Resolution Regime, on the grounds that the deposit-taking institution did not qualify for the threshold conditions (Bank of England 2008a, 49).¹⁴⁴ The use of the appropriate tool, however, would be determined by the Bank of England and would require the Chancellor’s authorisation in the case of a need for additional funds from the HM Treasury (Bank of England 2008a, 49).

Following the nationalisation of Northern Rock, the Chancellor extended the consultation period for the regime for failing institutions (Hughes and Parker 2008, 2). During June and July, the HM Treasury published a new outline for the banking reforms (Giles 2008f, 1), a further joint consultation paper on *Strengthening financial stability and depositor*

¹⁴⁴ More information on the threshold conditions can be found at http://www.fsa.gov.uk/smallfirms/new_to_regulation/how_do_i_get_authorised/threshold.shtml, last accessed at 21/09/2012. Also refer to House of Commons Treasury Committee 2008b, 13-4.

protection (FSA 2008b; see also HM Treasury 2008i; Giles 2008g, 3), launched a consultation period on banking *Special Resolution Regime* on July 22nd (FSA 2008c; see also HM Treasury 2008j; Parker and Burgess 2008, 2). On February 2009, the Banking Act of 2009 replaced the old one, which had been used for the several banking failures in the preceding months.

Financial Services Authority and the Financial Services Compensation Scheme

“We’ll also be learning lessons at home – firstly from the fact that the existing Financial Services Compensation Scheme, the FSCS, clearly did not have the desired effect of giving consumers the confidence they need. As a first step therefore, the FSA has increased the coverage of the Scheme to 100 per cent of deposits up to £35,000”
Kitty Ussher (2007a), Economic Secretary to the Treasury

As mentioned previously, the FSA increased its supervisory focus on Northern Rock to daily conversations after the problems of the bank’s funding model were revealed under market distress.¹⁴⁵ However, this focus did not include “[...] stress tests on a liquidity event as sudden and then sustained as the actual stress experienced this summer”.¹⁴⁶ After a discussion in the Tripartite Standing Committee on August 14th,¹⁴⁷ the FSA directly informed the HM Treasury about the bank’s difficulties the next day.¹⁴⁸ Starting from August 21st, a strengthened supervision team from the FSA increased contact with Northern Rock to twice daily conversations.¹⁴⁹ On August 22nd, the Tripartite Committee’s Joint Crisis Coordination Team started a working group for Northern Rock.¹⁵⁰ As mentioned previously, the FSA Chairman wrote formally to the Chancellor regarding Northern Rock.¹⁵¹ On September 14th the FSA approved Northern Rock’s solvency for the bank to be eligible for a loan from the Bank of England (FSA 2007d).

With regards to the FSCS and the shortcomings of the deposit insurance scheme, the Chancellor raised the possibility to increase the limit of deposit protection scheme to £100,000 at the opening day of the Labour Party Conference for the first time on

¹⁴⁵ Memorandum by the FSA House of Commons Treasury Committee 2008, Ev 221.

¹⁴⁶ Memorandum by the FSA House of Commons Treasury Committee 2008, Ev 221.

¹⁴⁷ Memorandum by the FSA House of Commons Treasury Committee 2008, Ev 221.

¹⁴⁸ Memorandum by the FSA House of Commons Treasury Committee 2008, Ev 221.

¹⁴⁹ Memorandum by the FSA House of Commons Treasury Committee 2008, Ev 225. On March 2008; however, “[...] it emerged that five of the seven main supervisors of Northern Rock over the past two years had left the FSA - a high staff turnover rate that suggested a lack of continuity might have had a role in the regulator's apparent failures” (Hughes 2008a, 2). Details can be found in the FSA’s internal report on its supervision of Northern Rock (FSA 2008d). As an example of media coverage, see Hughes 2008b, 7. For the press release see FSA 2008e.

¹⁵⁰ Memorandum by the FSA House of Commons Treasury Committee 2008, Ev 221.

¹⁵¹ Memorandum by the FSA House of Commons Treasury Committee 2008, Ev 221.

September 23rd (Eaglesham 2007a, 3; see also Daneshku 2007a, 3). The limit was increased to £35,000 on the 1st of October (FSA 2007e).¹⁵² Despite an ongoing debate about a further increase in the limit (to either £50,000 or £100,000), it was still at £35,000 by September 2008.

On 29th September 2008, the HM Treasury announced that Bradford and Bingley's retail deposit and branch network had been transferred to Abbey-National plc and the remainder of the bank's business would be taken into public ownership (HM Treasury 2008k). Accordingly, "[...] [u]nder the Transfer Order, the FSCS has paid out approximately £14bn to enable retail deposits held in Bradford & Bingley and covered by the FSCS to be transferred to Abbey. The Treasury has made a payment to Abbey for retail deposit amounts not covered by the FSCS, amounting to approximately £4bn" (HM Treasury 2008k). In addition the Government guaranteed "[...] certain wholesale borrowings, and derivative transactions of and wholesale deposits with, Bradford & Bingley plc ("Bradford & Bingley") existing as at midnight on 28 September 2008" (HM Treasury 2008l). The deposit insurance limit was finally increased to £50,000, which would cover 98% of the deposits, in October 7th, 2008 (HM Treasury 2008m). In addition to increasing the compensation limit, addressing also the other shortcomings of the insurance scheme would ease the concerns of Northern Rock depositors, as well as preventing a systemic crisis of confidence. The FSCS was criticised for processing the received claims and payouts in a considerably long period of time. By the time of the Northern Rock crisis in October 2007, the FSCS was able to process 'most simple deposit taking claims within four weeks', while complex or large cases could possibly last longer than this (FSA 2007b, 9).

Finally, the FSA (2008, f) launched an inquiry into speculation in the stock markets on March 19th.¹⁵³ The move was a response to the share price collapse of HBOS in the morning of the same day, which was grounded on false rumours that the bank had demanded an emergency funding from the Bank of England (Burgess, Giles, and Masters 2008, 1). As a regulatory response, the FSA (2008, g) announced on June 13th the introduction of a 'disclosure regime for short-selling positions' in companies that were in the process of a rights issue.¹⁵⁴ Accordingly, short positions for more than 0.25 per cent of the total outstanding shares of a company would have to be disclosed to the markets (Hughes and Larsen 2008, 15). Among the reasons for the FSA's reaction was the fear that companies might have remained reluctant to apply to a rights issue as an alternative way for raising capital (Hughes 2008c, 19). On June 22nd the FSA concluded its investigation on HBOS's share price decline in March and stated that there had been no sufficient evidence to prove market abuse (Thomas and Hughes 2008, 22). In August after a five-month investigation

¹⁵² For media coverage see Parker 2007a, 1.

¹⁵³ See also Burgess, Giles, and Masters 2008, 1; Burgess and Orr 2008, 19.

¹⁵⁴ For media coverage see Hughes and Larsen 2008, 15; Kellehar 2008a, 1.

period, the FSA once more emphasised that it was not able to find any ‘concerned attempt’ to affect the share price downwards (Croft 2008b, 13). However, on September 18th the FSA announced a ban on short-selling for the publicly quoted financial companies (Larsen, Hughes, Mackintosh, and Chung 2008, 1).

To summarise, below listed are the turning points in the introduction and the improvement of the blanket guarantee, the policy responses and changes to the FSCS, as well as discussion papers and consultation documents on additional issues such as liquidity requirements. All those aforementioned updates on the blanket guarantee, as well as on the deposit insurance scheme, helped to increase attention to existing safeguards in the financial system for protecting depositor interests. As the Chancellor stated in January 2008 in the House of Commons, although these arrangements had not been called, they remained necessary to restore confidence in the eyes of depositors (HM Treasury 2008c).

17-Sep-07	Statement by the Chancellor to offer blanket guarantee on Northern Rock deposits (HM Treasury 2007b)
20-Sep-07	Extensions of the blanket guarantee to all accounts existing at midnight on 19th September (HM Treasury 2007d)
21-Sep-07	HM Treasury update on the blanket guarantee on Northern Rock (HM Treasury 2007e)
01-Oct-07	Compensation Scheme updated to cover 100% of depositors’ claims up to £35,000 (FSA 2007e)
09-Oct-07	Extension of the blanket guarantee to all new retail deposits made after 19th September (HM Treasury 2007f)
11-Oct-07	Extended guarantee and additional facility for Northern Rock (HM Treasury 2007g) Joint discussion paper by the HM Treasury, the FSA and the Bank of England on “Banking Reform - Protecting Depositors” (HM Treasury 2007j)
31-Oct-07	FSA approval of the final rules for the FSCS’ new funding model ¹⁵⁵
06-Nov-07	The announcement of the reform of the deposit insurance scheme at the Queen’s speech (Parker 2007b, 4)
13-Nov-07	FSA confirmation of the reformed funding model for Financial Services Compensation Scheme to operate from next year (1 April 2008) (FSA 2007f)
14-Nov-07	FSA confirmation to broaden the restitution pool of the deposit insurance scheme (“Deposit insurance” 2007, 22)
04-Dec-07	Lenders urged by the FSA to protect themselves against a possible worsening of liquidity and credit risks (FSA 2007g)
18-Dec-07	Extension of wholesale guarantee arrangements for Northern Rock (HM Treasury 2007i)

¹⁵⁵ Letter from Chairman of the Financial Services Authority to the Chairman, available at House of Commons Treasury Committee 2008.

- 19 Dec- 07 FSA discussion paper: 'Review of the liquidity requirements for banks and building societies' (FSA 2007h; See also FSA 2007i)
- 30-Jan-08 Consultation Document: Financial stability and depositor protection: strengthening the framework (HM Treasury 2008b)¹⁵⁶
- April 2008 FSA consultation Paper: 'FSCS funding - tariff changes' (FSA 2008j)
- May 2008 Consultation Paper: Financial Services Compensation Scheme: EEA branches of UK insurers (FSA 2008k)
- 27-May-08 FSA debate on 'increasing transparency in regulation' (FSA 2008l; see also FSA 2008m)
Industry feedbacks on liquidity requirements published (FSA 2008n)
- Jun-08 Feedback on Tripartite consultation document by the FSA: Operation of the Financial Services Compensation Scheme (FSCS) for deposit protection
- 01-Jul-08 Strengthening financial stability and depositor protection – Further Consultation paper by the HM Treasury, the Bank of England and the FSA (FSA 2008b)¹⁵⁷
- 25-Jul-08 Policy Statement - Financial Services Compensation Scheme: EEA branches of UK insurers feedback on CP08/9 and final rules (FSA 2008o)
- 29-Sep-08 FSCS payout of approximately £14bn for the transfer of Bradford and Bingley deposits to Abbey and HM Treasury payout amounting to approximately £4bn for the deposits uncovered by the FSCS (HM Treasury 2008k)
- 03-Oct-08 Consultation Paper - Financial Services Compensation Scheme: Review of limits (FSA 2008q)
- 03-Oct-08 Increase in the compensation limit from £35,000 to £50,000 (FSA 2008p)

Bank of England and the Provision of Liquidity into the Markets

The provision of liquidity has been the main concern of the Bank of England ('the Bank', hereafter) after the problems in the financial markets were revealed in the summer of 2007. During the course of the unfolding events, when numerous attempts were made by the Tripartite Authorities to stabilize the ongoing turbulence in the financial markets, the Bank used its balance sheet to provide the markets with liquidity and to reverse the liquidity hoarding by the banks. Over the weekend of 4-5 September, the Bank put £4bn into the market in order to ease liquidity constraints.¹⁵⁸ On September 13th, the Bank (2007a, 502) stated that extra reserves would be re-offered during the maintenance period through its Open Market Operations (OMOs). The first of those was conducted on September 18th, followed by an additional one on September 20th (Bank of England 2007a, 502). The Bank also made clear on September 16th that the loan extended to Northern Rock would stay in place in the event of a private take-over (Giles, Saigol, and Larsen 2007, 1). It also

¹⁵⁶ For media coverage see Croft and Pickard 2008, 2.

¹⁵⁷ See also HM Treasury 2008i; Giles 2008g, 3.

¹⁵⁸ Uncorrected Oral Evidence Darling, Macpherson, Neale, Maxwell, and Hughes 2007.

announced its plans “[...] to conduct a series of special auctions to provide funds at three-month maturity against a much wider range of collateral than is eligible in the Bank’s OMOs and standing facilities” (Bank of England 2007a, 509).¹⁵⁹ On September 26th, the Bank (2007a, 510) offered £10bn as the first term-auction, which were followed by others on October 2nd, 10th, and 17th. On November 29th, the Bank (2007a, 505-507) announced its plan to offer £10bn in the form of a five-week repo open market operation during the maintenance period beginning on December 6th.

December 6th was also the first time since the Northern Rock crisis when the Bank reduced its Bank Rate by 0.25 percentage points to 5.5 per cent, which was maintained on January 10th (Bank of England 2007b; 2008c). On December 12th, with other central banks around the world, the Bank (2007c) announced that it would take measures in order to address the pressures in the short-term funding markets. The ultimate aim of this and the following central bank actions would be to keep overnight market rates in line with the Bank Rate. In its pre-scheduled OMOs on 18 December and 15 January, the total amount of reserves offered at the 3-month maturity would be increased with a wider range of assets accepted as collateral. On February 7th, the Bank further reduced its Bank Rate to 5.25 per cent and maintained this on March 6th (Bank of England 2008d; 2008e). On March 11th, it joined another coordinated central banks measure where it announced “[...] a continuation of its expanded 3-month long term repo open market operations against a wider range of high quality collateral” (Bank of England 2008f). On April 10th, it reduced its Bank Rate by a further 0.25 percentage points to 5 per cent (Bank of England 2008g).

The Bank launched its *Special Liquidity Scheme* on April 21st, which would “[...] allow banks to swap temporarily [for long terms] their high quality mortgage-backed and other securities for UK Treasury Bills” (Bank of England 2008h; see also Bank of England 2008i). According to the scheme, financial institutions that were already able to use the Bank’s Standing Facilities would now be allowed to have long-term swaps for Treasury bills in exchange of high quality but less liquid collaterals (including mortgage backed securities) with a haircut (Bank of England 2008b, 10). Securitised lending by banks would also be used as collateral for the scheme or for the overseas central banks, with a legal commitment to buy them back within a specified period (FSA 2010, 33; Lastra 2009, 145). This, in fact, resulted in the ‘recycling’ of lower value securities held by banks in exchange of central bank liquidity. As the Governor of the Bank emphasised in his speech at the BBA, the scheme was designed to be “[...] a backstop that is available every day” (King 2008, 7). In May 2008, the Bank (2008a, 18) also “[...] [a]nnounced that expanded three-month long-term repos would be maintained in June and July”. These were later expanded for September and October as well (Bank of England 2008a, 18).

¹⁵⁹ See also Oakley 2007, 3.

On September 17th the Bank (2008j) announced the extension of the drawdown period for the Scheme to end on January 30th, 2009. The following day, in a coordinated central bank action, the Bank (2008k) announced to take measures to improve US\$ liquidity in US\$ short-term markets. It committed to offer US\$ funds overnight against collateral (initially amounting to \$40bn) through a reciprocal swap agreement with the Federal Reserve (Bank of England 2008k). In a coordinated action with other central banks, the Bank (2008l) decided to provide US\$ liquidity to the markets with one week maturity on September 26th. “An operation to lend \$30bn of funds for one week will take place today, alongside an operation to lend funds overnight. The size of the Bank’s overnight dollar repo operation will be \$10bn today” (Bank of England 2008l). It also announced that its “[...] long-term repo operations against extended collateral, including mortgage securities, will for a period be held weekly and enlarged”, starting from September 29th (Bank of England 2008l). On this day, the Bank (2008m) further announced the increase in the size of its swap line with the Federal Reserve up to \$80bn in dollar liquidity, if needed, and the extension of the term of the arrangement until the end of April 2009.

Following this operation, on October 1st the Bank (2008n) offered an additional US\$ repo operation to lend \$30bn to the market, which would further be repeated on October 3rd. Also on the October 3rd it announced the “[...] extension of the collateral eligible in its current weekly sterling three-month repo operations” (Bank of England 2008o). On October 7th, the central banks around the world announced their schedules for term and forward actions of US\$ liquidity (Bank of England 2008p). The Bank announced two forward auctions of US\$ liquidity (dates being 10th and 24th of November) through its swap line with the Federal Reserve (Bank of England 2008p). Given the circumstances in the markets, the Bank (2008r) reduced its Bank Rate by 0.5 percentage points to 4.5 per cent on October 8th. On October 13th in another coordinated central bank action, it announced the removal of the fixed limit on the swap line with the Federal Reserve (Bank of England 2008s). The Bank (2008s) stated that it would “[...] hold tenders of US dollar funding at one week, one month and three month maturities, at fixed interest rates with counterparties able to borrow any amount against eligible collateral”. On November 6th, the Bank Rate was further reduced by 1.5 percentage points to 3 per cent (Bank of England 2008q) and to 2 per cent on December 4th (Bank of England 2008t). Finally, on December 19th the schedules for term auctions of US\$ liquidity for the first quarter of 2009 was announced (Bank of England 2008u).

Conclusions

This chapter has summarised the developments between the summer of 2007 and September 2008 in order to set the background both for Northern Rock and the following

cases. It has identified the turning points within the Northern Rock crisis, its nationalisation and the regulatory changes initiated and accomplished by the Tripartite Authorities. The following *Chapter IV* I will refer to the first two sections focusing specifically on Northern Rock when testing the hypotheses against the Northern Rock case. The last two sections before conclusion, on the other hand, will prove useful in explaining the remaining three cases (namely Alliance and Leicester, HBOS, and Bradford and Bingley) and especially explaining the variance on the outcome for each case. Against this empirical background, the following chapter will now present an argumentative analysis on the Northern Rock crisis with an attempt to understand the material, institutional, and ideational dimensions of the depositor run on the bank.

Chapter IV: Within-Case Political Economy Analysis on Northern Rock

Northern Rock depositor: “When I heard the Government telling us not to worry, I knew it was time to get my money out”
(Hazell 2007, 57)

The credit crunch of 2007 reminded the British banking industry how fragile depositor and investor confidence could be under uncertainty. The collapse of the former resulted in the first depositor run in a century, whereas the collapse of the latter ended up in the first nationalisation of a British bank in decades. The examination of the Northern Rock crisis and the depositor run on the bank are the subjects of this chapter. What counts for this change in depositor expectations to form a run on a bank? How can one interpret the period illustrated in the preceding chapter from a theoretical point of view? As has been mentioned previously, the assumptions put forward by the asymmetric information and the sunspots theories possess limited explanatory power, as they fall short in paying adequate attention to the role played by ideas. This research argues that bank runs are not only a function of the fundamentals and/or the institutional settings, but also a function of the collective memory of past institutional failures and the depositor awareness towards the safety nets in place.

The previous chapter has set the empirical background for this research's cases. In addition to the evidence gathered through process tracing presented in *Chapter III*, the current chapter will also test this research's argument against the depositor comments collected through national and regional newspapers from *Nexis UK* during the four days of the offline run on Northern Rock. With an attempt to understand the depositor motivations in forming the queues, more than three hundred seventy depositor comments have been collected from newspaper articles between September 14th and 17th. This provided an artificial interview based on random sampling from the 'queuers'. The selection of the newspapers has been made on both the national and the regional level in order to prevent a possible partisanship bias. A complete list of all the comments and their sources is presented anonymously in *Appendix I*.

All comments have further been uploaded and processed on *NVivo*, a specialist software programme for content analysis. Based on the literature on bank runs, five different nodes (codes) have been identified in order to capture the common themes shared within the depositor comments. Those are the following: **Risk aversion** (i.e., taking no chances/risk, peace of mind, safety), **panic** (either positive or negative, key words are anxious/anxiety, alarmed, concerned, nervous, worried, fear/frightened), **lack of trust** (i.e., lack of trust

towards the Government/politicians/Bank of England/banks, references to previous examples of failures, keywords such as reassurances, faith, confidence), **awareness towards the official guarantees** (either the blanket guarantee or the FSCS, key words are guarantee/guaranteed, the coverage limit), and finally **uncertainty** (about Northern Rock's overall situation and/or the safety of the banking system in general).

The purpose of this exercise was to understand how significant the lack of trust appeared in the depositor comments in comparison and among with the other re-occurring themes. Ideally, the selection of depositors to conduct interviews with, which in this case was done by newspaper reporters, should be based on unbiased and equally representative criteria of the wider population. Unfortunately, given the infrequency of off-line bank runs and the increasing prevalence of electronic deposit withdrawals, this is difficult to apply to the studies of bank runs. Therefore, despite suffering from a possible selection bias and incomplete representativeness of the wider population, depositor comments collected are still the primary sources to collect evidence on the motivations of bank runs. Therefore, without discarding their relevance and also acknowledging their limitations, the second best approach to use this source of data was to minimise the selection bias by extending the search to all national and regional newspapers.

The percentages of each of these nodes within the comments coded were then analysed in relation to each other. In other words, although the collected comments might not possess a perfect representation of the wider population (as a result of a possible selection bias discussed above), the frequency of each node at least provided a general understanding of the significance of collective memory of past failures or the lack of trust towards the Authorities in relation to other categories. As a caveat, however, this is not to replicate a statistical analysis where the relative significance of each variable can be measured with proper modelling. In other words, the figures intend to illustrate the recurring themes in the comments, which might help *understand*, but not to measure, the motivations behind the run. They help associate the abstract concepts and assumptions from the literature with real world examples and first-hand experience from depositors. *Figure 2* presents an overall picture of the distribution of nodes across depositor comments.

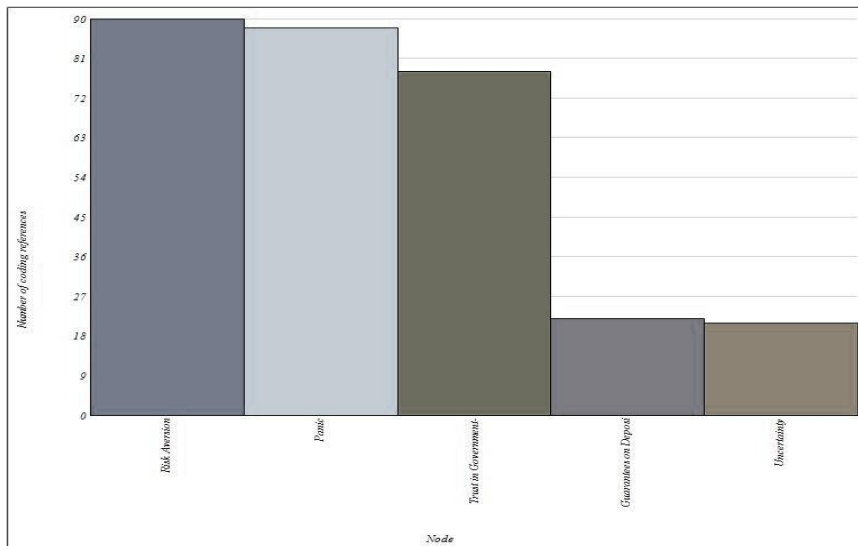


Figure 2 Depositor Comments - Run on Northern Rock

Against this background, this chapter is structured as follows: Following introduction, the second section will present a short overview of the interpretation of the Northern Rock crisis in the current literature. The preceding theoretical chapters of this thesis have intended to differentiate this research’s argument from the overall banking panics literature. The following section, on the other hand, will highlight this research’s departure from an emerging literature on Northern Rock as a case study, while surveying a number of scholars working on the subject area. The rest of the chapter will be structured according to the three sets of hypotheses, namely fundamentals (to test the asymmetric information theory), institutions, and the role of cognitive heuristics in depositor expectations. As a reminder, a full list of the hypotheses to be tested against empirical evidence has been provided in both the *Introduction* and *Chapter II*. The first of these three sections on fundamentals will analyse the Northern Rock period from the current literature’s lenses and point out the strengths and weaknesses of the theories’ explanatory power for the run. In other words, it will test the hypotheses of *H0* and *H1*. The second section will analyse the institutional dimensions of the case (*H2*) and test this research’s argument on ‘depositor awareness’ (*H3*). Finally, the third section will incorporate the insights gained from the cognitive heuristics literature and test the remaining hypothesis, *H4*. It will read the Northern Rock crisis through this research’s argument on cognitive heuristics. In addition to the evidence collected through process tracing, all the sections will utilise the depositor comments in order to strengthen the arguments presented. Conclusion will summarise the argument and conclude the chapter.

4.1 *The Interpretation of the Northern Rock Crisis in the Literature*

“While crises are often related to change,
exogenous shock remains an indeterminate explanation.
Similar shocks seem to have different effects: some lead
to change, some do not. Why?”
(Legro 2005, 11)

This section will summarise the emerging literature on Northern Rock as to illustrate once more how this research’s argument diverges from the current studies. Banks’ financial health is highly vulnerable to external shocks as a result of the maturity and liquidity transformations they provide. Gavin and Hausmann (1998, 3) identify two dimensions of banking crises, namely the role of shocks and the vulnerability of financial institutions and argue that banking crises are the results of the interaction between these two. Demirguc-Kunt and Detragiache (1997, 5) also state that systemic banking problems are not only grounded on a weak macroeconomic environment, but they are also influenced by the structural characteristics of the banking sector. Similarly, several studies on the Northern Rock crisis utilise from a ‘window-catalyst framework’, borrowing from comparative-historical analyses, in order to interpret the retail depositor run on the bank and understand the relationship between the underlying and immediate causes. The window-catalyst framework suggests that “[...] nothing can happen when a window is closed, it must be open: it is a necessary condition for an item to make it onto the agenda [...] To use Aristotle’s language, the catalyst is the proximate cause of the event while the window of opportunity is the prerequisite condition that gives the catalyst its causal effect” (Goertz and Levy 2007, 35, 36).

Both the vulnerabilities of Northern Rock arising from its business model, the insufficiency of regulatory arrangements in place back then, and the collapse of confidence in the inter-bank markets during the summer of 2007¹⁶⁰ put the bank on the edge of the cliff. In other words, as ‘exogenous conditions’, they had created a ‘window-of-opportunity’ for the accumulated tension in the markets to be released. Although these vulnerabilities had been built up throughout years, it required a shock to serve as a *catalyst* to shake the *status quo*. While the catalyst for the bank’s failure was the retail depositor run in September 2007, the catalyst for the run itself, on the other hand, had been the emergency lending (LoLR facility) by the Bank of England. The explanations offered in the literature, nonetheless, tend to over-emphasise the catalyst (in this case the emergency funding) in explaining the depositor run on Northern Rock. They under-analyse the vulnerabilities built up throughout years to put depositor confidence on the edge of the cliff.

¹⁶⁰ Refer to *Chapter III* for a detailed analysis and argument on those dimensions.

The application of a window-catalyst framework implies a necessary condition, which in this case has been the deterioration of the economic fundamentals. As mentioned continuously, this research is in agreement with the asymmetric information theories that the lack of bank-specific information or the arrival of the adverse news is a necessary condition to affect depositor expectations. However, the explanatory power of economic fundamentals as an independent variable weakens under *multifinality*, where different outcomes are observed under similar conditions.¹⁶¹ Instead, this research argues that although the variables put forward by the literature are crucial in shaping depositor expectations, they should not be taken into the analysis on their *face value*. Adverse news on fundamentals “[...] do not determine agents’ actions directly, [...] [they] serve as a device that coordinates agents’ beliefs on a particular outcome” (Goldstein and Pauzner 2005, 1295). It is the interaction of ideas with the institutional and material settings, or in other words the interpretation of those settings through cognitive heuristics, which provides individuals with ‘focal points’ to converge their expectations towards certain outcomes.

Numerous articles, both academic and policy-oriented, have been published on the role of the regulatory framework in the failure of Northern Rock, which have also analysed this crisis’ implications on the Tripartite framework’s future (among many others, see Hall 2009; Mullineux 2008; Lastra 2008 as examples). Marshall *et al* (2012, 174), working on the geography of financial crises, interpret “[...] Northern Rock’s travails as a product of two decades of weakening regulation that transformed the money culture of building society management”. Llewellyn (2008, 43) also argues that “[o]ur central thesis is that NR’s [Northern Rock’s] highly focussed business strategy involving a high and unusual dependency on securitisation and short-term wholesale market funding exposed it to such a LPHI [low-probability-high-impact] risk”.

Against the background of these economic and regulatory vulnerabilities, several analyses on the Northern Rock crisis put forward three main lines of argument in analysing the retail run on the bank. Those might be classified under the following headings: (1) the emergency funding by the Bank of England as the *shock*, (2) the inefficiency of the deposit insurance scheme, and (3) the efficiency of the blanket guarantee in bringing the run into halt. Firstly, many scholars in the field regard the news on the emergency support extended to Northern Rock as the catalyst for the depositor run. As an example, Shin (2009, 115) defines Northern Rock as “[...] a “pinch point” in the financial system, where tensions would finally be manifested”. Although Northern Rock was not the only institution to be on the edge of the

¹⁶¹ “[...] [M]ultiple outcomes in different cases with the same value of an independent variable, depending on the values of other variables” (Bennett and Elman 2006, 466).

cliff, it was the one absent from the 'liquidity support of a larger sponsor' (Shin 2009, 115).¹⁶² Shin (2009, 101-2), Eisenbeis and Kaufman (2009, 76) and Ndong and Scialom (2008, 9) argue that the retail depositors started queueing in front of their branches only after the announcement by the Bank of England. Llewellyn (2009, 13, 15) also emphasises the central bank's announcement sparking the run on the bank, which continued until the unlimited blanket guarantee was introduced by the Government (see also Eisenbeis and Kaufman 2009, 73; Lastra 2008, 166). In their paper, Hallsworth and Skinner (2008, 282) also state that the use of technical terms in their announcements (such as the emergency funding support or the lender of last resort) by the Authorities did not help reassure 'financially unsophisticated consumers'.

A second argument put forward regarding the Northern Rock crisis has been the inefficiency of the deposit insurance scheme in preventing bank runs. As an example, Mayes and Wood (2009, 37) argue that "[t]he Northern Rock episode reveals some very important provisos that must exist for this [deposit insurance scheme] to apply in practice". They suggest that the run on Northern Rock was 'simply a problem of practical implementation' (Mayes and Wood 2008, 5). Accordingly, they argue that the safety net and LoLR facility by the Bank of England "[...] should have provided the confidence depositors and investors required. But they did not" (Mayes and Wood 2008, 6). Ndong and Scialom (2008, 14) also argue similarly: "So the UK Deposit Insurance Arrangement cumulated the incentive for bank runs: co-insurance, liquidity losses due to long reimbursement delays and ex-post funding which reinforce the payout delays". As an example from the policy circles, during his speech just after the Northern Rock crisis at the Northern Ireland Chamber of Commerce and Industry in Belfast, the Governor of the Bank of England, stated that "[m]ost of what happened can be understood in terms of [...] incentives [facing banks, investors, and depositors]" (King 2007b). Comparing the run on Countrywide Financial with the one on Northern Rock, the Governor argued that

[t]he depositors simply did not face the same incentives to withdraw their money. The United States has a well-developed insurance scheme for depositors [...] Without such a scheme in the UK, once the queues started to form at Northern Rock, other depositors faced every incentive to join them. The only way to stop the run was for the Chancellor to announce a government guarantee of the deposits of Northern Rock (King 2007b).

Thirdly and finally, given the inefficiency of the deposit insurance scheme, the blanket guarantee introduced by the HM Treasury on September 17th was assigned the role to end

¹⁶² Acknowledging the difficulties the bank had been facing during the summer of 2007, Shin (2009, 102) continues, "[t]he Northern Rock depositor run, although dramatic on television, was an event in the aftermath of the liquidity crisis at Northern Rock, rather than the event that triggered its liquidity crisis. In this sense, the Northern Rock episode was not an old-fashioned bank run of the sort we see in movies like *It's a Wonderful Life* or *Mary Poppins*".

the queues. In its Annual Report of 2007, Northern Rock (2007c, 25) also described the blanket guarantee to have “[...] significantly slowed the level of customer withdrawals [...] In the weeks following the initial announcement of the HM Treasury guarantee arrangements, Northern Rock’s level of retail deposits stabilised”. The below figure illustrates the level of deposit outflows from Northern Rock during September 2007.

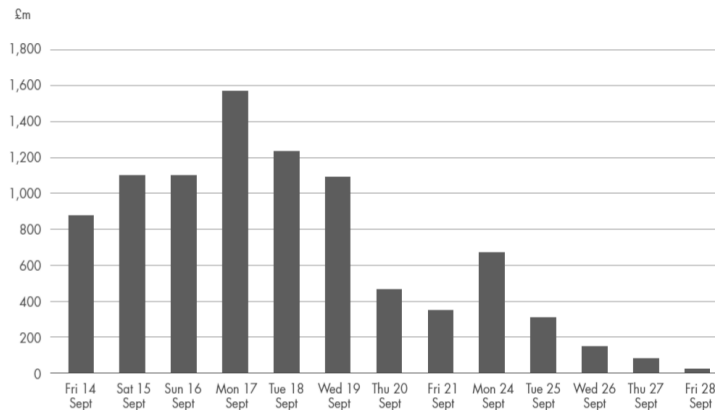


Figure 3 Deposit Outflows from Northern Rock - September 2007¹⁶³

Hall (2009) argues that the “[s]ubsequent provision of a blanket deposit guarantee duly led to the (eventual) disappearance of the depositor queues from outside the bank’s branches but only served to heighten the sense of panic in policymaking circles”. He states that the blanket guarantee on September 17th helped queues in front of Northern Rock branches to disappear despite with some delays. Given the unawareness towards the deposit insurance scheme, Hall (2009) continues, “[...] very few people in the EU actually know about the existence of deposit protection until a crisis occurs, thereby destroying its potential as a stabilisation device”. In a similar way, Llewellyn also mentions the lack of depositor awareness during the Northern Rock crisis. Accordingly,

[i]t became immediately apparent in the NR [Northern Rock] episode that few depositors were aware of the DPS [Deposit Protection Scheme] or of its limitations which, in any case, was brought into question by the government’s subsequent guarantee of all deposits held at NR [Northern Rock] and the announcement that the formal DPS would be reviewed (Llewellyn 2008, 46).

¹⁶³ Figure is taken from HM Treasury 2009a, 15.

These arguments are, as a matter of fact, closer to this research's interpretation of the Northern Rock crisis with its emphasis on depositor *unawareness* of the safety nets. This research suggests that references to economic fundamentals and to the advance of the deposit insurance are not enough *per se* to explain the variance in the different degrees of change in depositor behaviour. As the 'street-car analogy' would suggest, all banking crises are receptive to bank runs if one waits long enough. In interpreting bank runs, this research applies a longer time-horizon to analyse depositor runs and regards depositor behaviour as 'incrementally changing' over time. Instead of treating the emergency funding as an immediate shock to depositor confidence, this research regards it as a 'tipping point' within a gradual change. It therefore suggests a 'backwards looking' understanding in analysing bank runs as to take the recent financial failures into consideration.

Against this background, the rest of this chapter is divided into three sections each of which discusses one building block of this research's argument. The following section will present an application of the current literature to the Northern Rock case to better illustrate its shortcomings. This will be followed by the two additional sections former being on the institutional dimensions of Northern Rock whereas the latter on the application of the cognitive heuristics literature to the case. Conclusion will summarise the argument and conclude the chapter.

4.2 Fundamentals and Information Asymmetries

“As is illustrated by the Northern Rock episode, the ‘smart’ money leaves first and it is only when the less informed find out that the bank cannot raise finance on wholesale markets that the overt run starts”
(Mayes and Wood 2009, 37)

This section illustrates the strengths, as well as the shortcomings, of the existing literature in analysing the depositor run on Northern Rock. The turning points identified in the preceding chapter, as well as the depositor comments collected, are analysed from a theoretically informed point of view in order to shed light on the causal mechanisms during the retail run. In line with this research's overall argument, which suggests the interplay between fundamentals and cognitive shortcuts in interpreting the present situation, this section argues that while the current literature succeeds in explaining some parts of the Northern Rock crisis, it still lacks a convincing account for this research's puzzle. Accordingly, the main findings of this section are the followings: (1) Northern Rock case supports the asymmetric information theory given the 'flight-to-quality' from Northern Rock to other banks during the crisis; (2)

this can also be attributed to the relative ‘tranquillity’ of the period compared to the following months; and finally (3) the efficiency of the blanket guarantee is undetermined without an efficient bank resolution/insolvency regime in place to remove uncertainty.

The system-wide problems in the financial markets, as well as the wholesale investor run on Northern Rock in the summer of 2007, forced the bank to approach the Bank of England for an emergency funding. The aforementioned liquidity hoarding in the money markets hindered the creation of any sort of private pooling of sources for Northern Rock.¹⁶⁴ The search for a safe haven for the bank before the emergency funding had also proved unsuccessful and the credit line had to be announced on September 14th. How was the information conveyed to retail depositors during the first days of the Northern Rock crisis? Before any official statements made by the Tripartite Authorities on September 14th, the BBC announced the bank’s situation the preceding day.¹⁶⁵ In the following days, with no precedent in the near history, the run on Northern Rock was likened to ‘Depression-era queues’ (Reece 2007, 30), ‘scenes from the Weimar Republic’ (Halligan 2007, 6), ‘something from a fragile Latin American state’ (Ringshaw and Smith 2007, 4), and ‘an old-fashioned, 19th-century banking run’ (Warner 2007, 64)¹⁶⁶ by the media. Below are some examples:¹⁶⁷

In extraordinary scenes more reminiscent of the Wall Street crash of 1929 than booming 21st-century Britain, crowds queued for hours to retrieve an estimated GBP 1billion of their savings from the lender’s vaults on Friday. The drain continued yesterday as thousands more queued up to withdraw their money (Jones 2007a, 10)

This is the sort of event that happened in America after the Great Crash of 1929. For Northern Rock, this is catastrophe. For the rest of us it marks the end of an era of easy money (McRae 2007, 2)

[The] queues that formed outside the branches of Northern Rock last Friday brought back memories of newsreel footage of the run on banks during America’s Great Depression (Waples 2007, 6)

The scenes outside Northern Rock branches since Friday are eerily reminiscent of New York and London in 1929 when a stock market crash obliterated the savings of millions and plunged the Western world into economic recession - in the process bringing down the Labour government (McKinstry 2007, 12)

Scenes reminiscent of the Great Depression, saw queues forming at branches of the Rock to extract as much of their savings as possible on Friday (Holmes 2007, 2)

¹⁶⁴ Calomiris and Gorton (1991, 113) argue that “[p]erhaps a single bank, or group of banks at a single location, could honor large withdrawals, even larger than those demanded during a panic, if at the same time other banks were not faced with such demands”.

¹⁶⁵ <http://news.bbc.co.uk/1/hi/6994099.stm>, accessed on 05/12/2011. See also House of Commons Treasury Committee 2008b, 46.

¹⁶⁶ “Alarmed at the sight of the Bank of England being forced to bail out Northern Rock, angry customers rushed to withdraw their deposits in scenes of financial panic not seen since the 1970s” (Roberts 2007, 19). See also Freedland 2007, 33; King 2007c, 46.

¹⁶⁷ To be able to capture those during the period examined, I analysed the news (11 September – 21 September, 2007) through Nexis UK from the following sources: *the Financial Times*, *Daily Express*, *Daily Star*, *Daily Mirror*, *Daily Telegraph*, *Evening Standard*, *Metro*, *the Guardian*, *the Independent*, *the Sun*, and *the Times*.

Dissemination of the news through media served crucial in informing retail depositors on the difficulties faced by Northern Rock. There had been two classes of informed depositors during the Northern Rock crisis. Firstly, even before the extension of the emergency funding by the Bank of England, a wholesale run on the bank had preceded the retail depositor run in September. In Caprio and Honohan's (2008, 10) words "[i]n practice it is often the better-informed wholesale market that undermines a failing bank's liquidity and, as in the case of Northern Rock in 2007, leads to a run in the retail market". By the time of the off-line run, the bank had already been dealing with deposit withdrawals amounting to £1.4bn (Kaletsky 2007, 23; Roberts 2007, 19). In addition to the information asymmetries prevailing across different classes of depositors, a further justification for this silent run earlier on the bank rests with the fact that "[u]ninsured depositors [such as wholesale depositors] [...] carry a stronger incentive to exert market discipline compared to those whose funds are insured" (Hamalainen 2009, 54). This discipline had been in the shape of a silent run on the bank during which creditors refused to rollover the bank's debt.¹⁶⁸ The major difference of the September run, however, had been the signalling effect of the queues on the uninformed retail depositors about Northern Rock's financial difficulties, as suggested by *W&A2*. The observation of the queues helped to close the information gap between the bank's wholesale institutional investors and its retail depositors. According to the depositor comments analysed, both the sequential service constraint (first-come-first-served) and the signalling effects of the queues seem to have precipitated the crisis of confidence for uninformed depositors.

As discussed in the theoretical chapters, self-fulfilling prophecies, through higher order beliefs, take hold as a result of the uncertainty over others' beliefs about the state of fundamentals (regardless of how sounds they are). From this perspective, one might argue that the retail run on Northern Rock started as a self-fulfilling prophecy because of a misinterpreted signal from the Bank of England, which shifted common knowledge of fundamentals and increased uncertainty over other's interpretation of those. While the extension of the LoLR facility to Northern Rock rejects the null hypothesis (H_0) that the run was triggered by a random variable, it was confused for pointing to a solvency problem for the bank (despite the fact that the loan required the FSA's seal of approval on Northern Rock's solvency). Although it was initially planned as a 'backstop facility' to be used on demand, "[t]he speed and extent of [deposit] withdrawals meant that the Bank of England's emergency facility [...] actually needed to be called upon almost immediately" (House of Commons Treasury Committee 2008d, 54, 66).

¹⁶⁸ As also mentioned by Gu (2011, 164), similar to the Northern Rock crisis, "[d]uring the 1994–1995 Argentine banking crisis, large depositors were responsible for most of the deposit outflows at the beginning of the crisis. Small depositors began to make substantial withdrawals two months later".

As Morris and Shin (1998, 595) argue, in order to restore transparency and the common knowledge of fundamentals, “[t]he most effective means towards this would be a prominent public announcement which is commonly known to convey information to all relevant parties”. Relatedly, “[...] once a run is in progress, it will be important to be able to convince all depositors that it will stop and to ensure all the depositors know that all others have been so convinced” (Diamond 2007, 197). This is also argued by *WAB*, which suggests that banking panics should not develop in information-rich environments. Accordingly, the provision of bank specific information on a regular basis, especially on the state of the bank’s solvency, should help stabilize depositor expectations and prevent banking panics (See Park 1991; Dupont 2007). As a matter of fact, the Tripartite Authorities, as well as Northern Rock’s management, emphasised the bank’s solvency in their public statements during the off-line run period. These public announcements, however, did little to ease depositor worries during the first days of the run. Uncertainty prevailed amongst depositors both on the situation of Northern Rock and on the banking sector in general. This is also supported by depositor comments, which mention the uncertainty surrounding the Northern Rock’s situation and how this leaves them indecisive and suspicious towards other institutions’ financial health.

Recalling the arguments in *Chapter II*, policy responses should not delay addressing the on-going crisis and should instead defuse the prevailing uncertainty before panic sets off. Two of the most salient policy tools at the disposal of policy makers during the Northern Rock crisis had been the LoLR facility and the introduction of the blanket guarantee.¹⁶⁹ As a matter of fact, reading through the comments, some of the depositors seemed to have been reassured by the involvement of the Government and the extension of the blanket guarantee. Although depositors refrained from banking with Northern Rock after the negative publicity the bank had received, the problems surrounding the bank were not generalised to the whole banking system in the eyes of depositors. In terms of this research’s outcome categories, there was *no banking panic* as the depositor run had been confined to Northern Rock. Despite the observed outflow of deposits from Northern Rock, most of the bank’s savings did not leave the banking system for either alternative means of investments or to be placed under the mattresses. However, the data reveals that although the queues in front of Northern Rock branches had disappeared, the banking system experienced a *flight-to-quality* for retail deposits (Jones 2007b, 5; Mayes and Wood 2009, 38, footnote 3). Banks operating within the banking system in the United Kingdom enjoyed a considerable amount of deposit *windfalls* during the period of Northern Rock’s troubles.

¹⁶⁹ A more detailed discussion on these policy tools has been presented in the preceding chapter theoretical chapter (*Chapter II*).

This aforementioned flight-to-quality is supported by data and anecdotal evidence collected through newspaper articles. As expected, the 100 per cent government backed National Savings & Investments (‘NS&I’, hereafter) received a 20 per cent jump in the number of inquiries, mostly from Northern Rock depositors (Hosking, Seib, Leroux, and Gilmore 2007, 1). Accordingly, NS&I received £65m in savings via phone, online and post office branches either directly from Northern Rock or from other bank accounts (Jones 2007b, 5). The Easy Access Savings Account received investments totalling £1.8m on Friday, after the news was revealed on Northern Rock (Jones 2007b, 5). Halifax mentioned that it had received as much as £1bn from Northern Rock when up to £3bn savings were believed to be transferred to high street banks (Prynn 2007c, 1).¹⁷⁰ A price comparison website also announced an increase in the number of people to compare the saving deals offered by various banks (Goodway 2007d, 27).¹⁷¹ RBS was stated to have received more than £1bn of deposits in September 2007 (Larsen 2007c, 21), as well as did HSBC (Croft 2007b, 18) and Barclays (Litterick 2007, 12). In addition to those, the Building Society Association also stated that the funds amounting to £3bn flew from Northern Rock into building societies in October 2007 (Houlder 2007, 4). At the end of January 2008, building societies “[...] reported the highest levels of receipts in 2007 for 20 years. According to the Building Societies Association, receipts were more than Pounds 7bn in the last quarter of 2007, nearly three times those of the last quarter of 2006” (Burgess 2008a, 1).¹⁷²

Under the light of the banking panics literature, how can one interpret this flight to safety of retail deposit from Northern Rock to other institutions? Recalling the theoretical discussion present in *Chapter II*, “[a] “pure” contagion implies that withdrawals occur indiscriminately against all banks [...] In a nonpanic situation, we would expect to find depositors withdraw funds from failing banks and redepositing them in solvent banks” (Saunders and Wilson 1996, 415, 411). Accordingly, the aforementioned flight-to-quality is in line with *W44*, which expects to have one if the bank run is as a result of the information asymmetries and fundamentals.¹⁷³ Against the background of this circulation of funds and referring back to the asymmetric information theories, the impact of the

¹⁷⁰ According to one Halifax spokesman: “There have been significant inflows over the past four days [since the Bank of England announced its rescue financing for Northern Rock]. We are not commenting on how much but, yes, it is hundreds of millions” (Goodway and Lea 2007, 24).

¹⁷¹ According to a statement by the company’s chief executive: “We have seen a huge impact from Northern Rock [...] There is a lot of confusion in the marketplace and we have seen a big increase in people doing research and making transactions” (Cunliffe 2007, 56).

¹⁷² As an example, Nationwide Building Society reported its net deposits to rise 96 per cent in the preceding six months to the end of September, most of which was assumed to be coming from Northern Rock (Croft and Urry 2007, 23). See also Hill 2007d, 20; Croft 2008c, 20.

¹⁷³ This point was also mentioned by the *Financial Risk Outlook* in 2008: “There is also a risk that a lack of market confidence could result in investors not discriminating between different levels of risk with respect to different asset classes and institutions [...] This did not happen in the case of Northern Rock, as consumer withdrawals from Northern Rock tended to flow into other deposit-taking institutions” (FSA 2008a, 28, 29).

micro/macroeconomic environment is also crucial in the formation of depositor expectations. Recalling *WAI*, a bank run is assumed and more likely to become contagious under the dual observation of a bank failure and a recession. From this perspective, although the severity of the credit crunch in September 2007 is much clearer in retrospect, by the time of the depositor run the macroeconomic environment had not been deteriorated as to point to a system-wide economic downturn, which was the case in September 2008.

The *relative* tranquillity of the period, analysed compared to the following months, might point to the fact that one of the main reason for the funds to stay within the system, rather than being placed under the mattresses, had been the (perceived) health of the general economic environment. In order to be able to illustrate this, I have checked and compared the opinions polls conducted over the period of April 2007 and August 2008 (inclusive) by Ipsos MORI, in order to understand the perceptions towards the general economic conditions.¹⁷⁴ The questions directed and the results obtained over the months are illustrated in *Figure 4*. Following the first quarter of 2008 the economy and the economic situation started to be a growing concern for the respondents. Still, however, perceptions towards the economy remained more benign during the Northern Rock crisis compared to September 2008. In similar lines, although expectations for a worsening general economy had started increasing in September 2007, they remained relatively low compared to the forthcoming months. Therefore, aforementioned flight-to-quality might also be explained with reference to the relative health of the general economic conditions.

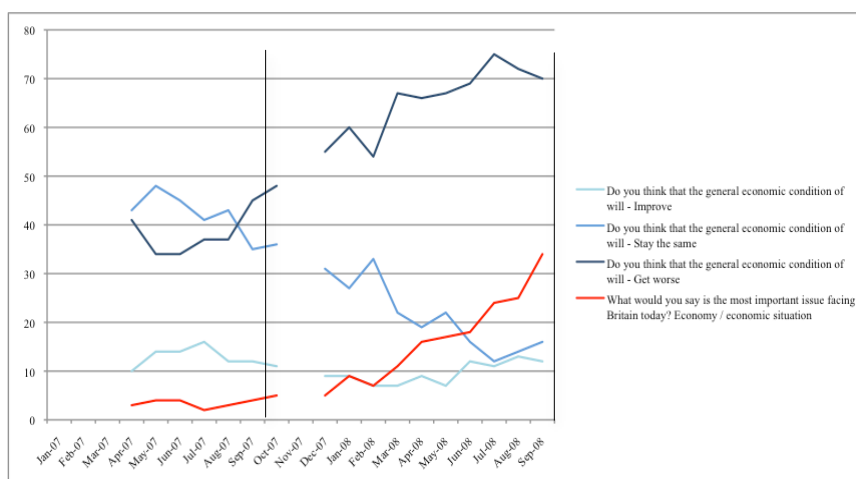
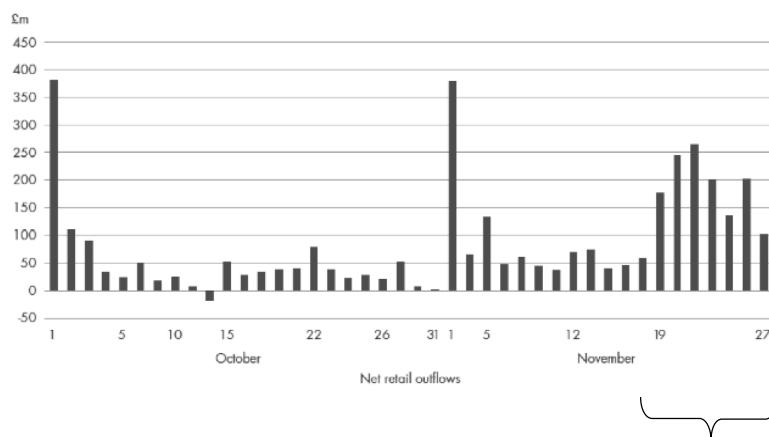


Figure 4 Ipsos MORI Opinion Polls – General Economic Conditions

¹⁷⁴ Systematic data starts from April 2007 and only data for November 2007 is missing for both surveys. All relevant polls can be found on <http://www.ipsos-mori.com/researchpublications.aspx>.

The other side of the coin, however, suggests that the observed flight-to-quality points to the failure of the blanket guarantee introduced by the Government on September 17th. This runs against the assumption put forward by the asymmetric information theories that the blanket guarantee, with its public nature, should be efficient in restoring common knowledge among depositors (in the case of an inefficient deposit insurance scheme) and help alleviate the panic. Although the off-line run in front of the branches was eased following the blanket guarantee, the reading of the period suggests that the deposit withdrawals even after the guarantee was in line with the growing uncertainty surrounding Northern Rock's future. This was especially evident in late November 2007, as *Figure 5* illustrates, when Northern Rock witnessed increasing volatility in depositor confidence as a result of the announcements on its bidding process.¹⁷⁵ The announcement of *Virgin Money* as the preferred bidder for the bank lessened uncertainty over the bank's future and seems to have positively affected depositor behaviour.



19 November 2007 Northern Rock's stock exchange announcement on the offers being 'materially below' the bank's current share price
JC Flowers offers nominal amount to shareholders
News that Northern Rock might need additional funding
Two largest shareholders call for an extraordinary meeting
26 November 2007 *Virgin announced as preferred bidder*

Figure 5 Deposit Outflows from Northern Rock - October and November 2007¹⁷⁶

¹⁷⁵ The bidding process for Northern Rock has been summarised in *Chapter III* and is detailed chronologically in the Appendices.

¹⁷⁶ Figure is taken from HM Treasury 2009a, 25. It is noted that the high deposit outflows at the beginning of October and November 2007 are mainly because of the maturity dates for fixed rate bonds.

Although initially a private take-over was preferred over public ownership, the banking sector in the United Kingdom experienced its first nationalisation in decades when private solutions for Northern Rock's future were exhausted. Below *Figure 6* illustrates media coverage from all national newspapers, in addition to the *Evening Standard* and the *Financial Times* to highlight how *nationalisation* increased its saliency on the headlines.¹⁷⁷ As evident from the figure, the urgency of the situation and the disadvantages of putting Northern Rock into administration, which would technically purport a freeze of deposits for months (Croft and Giles 2007b, 19; Larsen 2007e, 4), resulted in nationalisation to become more viable as an option within the duration of the bidding process.

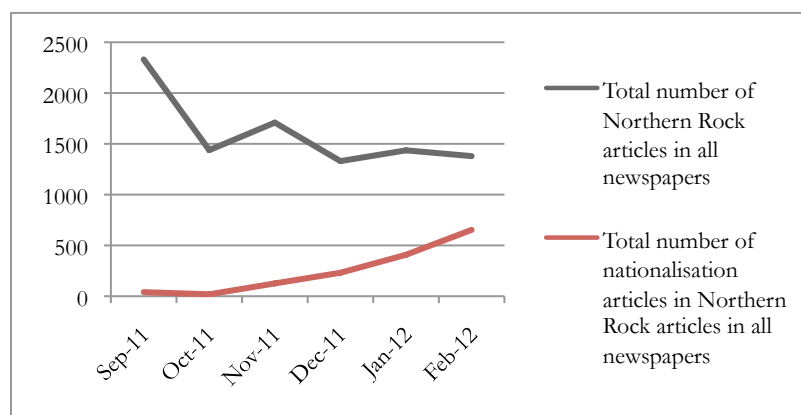


Figure 6 Newspaper Coverage – Nationalisation of Northern Rock

How can we interpret the continuation of the silent run on Northern Rock from a theoretical perspective? The continuation and the intensity of deposit movements until late-November suggests that the blanket guarantee, free from the limitations of an official deposit insurance scheme, proved unsuccessful in stabilising depositor expectations. Despite the difficulty in differentiating between a wholesale and a retail depositor run within data, the above *Figure 5* from HM Treasury (2009a) is still informative for a cross-case comparison. This suggests that the efficiency of the blanket guarantee is undetermined without an efficient bank resolution/insolvency regime in place to remove uncertainty. This, as a matter of fact, is in line with the *W48* put forward by the asymmetric information theory that the coherence and consistency in the actions of authorities (policy makers) in addressing the crisis affect expectations. Laeven and Valencia also argues a similar point. According to those scholars,

¹⁷⁷ The search is conducted through Nexis UK between September 2007 and February 2007 (both inclusive), keyword Northern Rock, search within results (nationalisation OR nationalise OR nationalised OR nationalising).

“[b]ank restructuring policies matter because if credible, they show policymakers’ commitment to clean up existing anomalies. They may enhance the credibility of a blanket guarantee, or may even be sufficient to restore confidence without the need for a blanket guarantee” (Laeven and Valencia 2008b, 11). Northern Rock example has illustrated once more that even a 100 per cent unlimited government guarantee may prove insufficient without certain policy actions to determine the bank’s future.

As a conclusion and against the background of the above analysis, several aspects of the retail depositor run seem to be in line with the assumptions put forward by the asymmetric information of bank runs. In broad terms, the arrival of the adverse news on Northern Rock’s financial health (which was mis-interpreted as signalling its insolvency) affected depositor expectations. As anticipated by the literature and the policy-makers, the introduction of the blanket guarantee stopped the queues in front of the branches, with the aid of the relative tranquillity of the period. This suggests a bell-shaped pattern for deposit withdrawals from Northern Rock, which reached its peak over the weekend of September 15/16th and finalised with the introduction of the blanket guarantee. However, the continuation of the silent run on the bank and the flight-to-quality illustrated the inefficiency of the blanket guarantee in the absence of consistent policy action to address the on-going crisis. With an attempt to assess the institutional dimension of the crisis, what does this tell about the efficiency of the deposit insurance scheme as a formal institution, which had already been in place by the time of the crisis? The following section will analyse this both through the lenses of the current literature and this research’s argument. It will once more emphasise that the level of depositor awareness towards the safety nets in place affect depositor behaviour and, thus, the course of the banking crisis.

4.3 Institutions and Depositor Awareness

This section now turns this chapter’s attention away from the fundamentals towards the role played by the deposit insurance scheme in place. What insights can we acquire about the workings of the deposit insurance schemes from an analysis of the Northern Rock crisis? The two main findings of this section are the followings: *Firstly*, the example of Northern Rock suggests that deposit insurance is not a sufficient condition itself to prevent changes in depositor behaviours. The conventional argument put forward by the banking panics literature suggests that the existence of the formal deposit insurance scheme, even without the need for a blanket guarantee, should ideally be sufficient alone to stabilise depositor expectations (*business as usual*). Deposit insurance as an institution is expected to create a focal point to shape depositor expectations. *Secondly*, according to this research the mere existence of the scheme does not always guarantee depositor awareness towards it. This section argues that there had been low awareness towards the deposit insurance scheme before the

Northern Rock crisis and therefore the shortcomings of the scheme cannot be held accountable for its failure or the depositor run on the bank.

To start with a short historical background, a mandatory deposit insurance scheme was introduced in Britain in 1982 by the *Deposit Protection Board* ('DPB', hereafter), which was run by the Bank of England. During the period when retail deposits were guaranteed by the DPB, the banking system in the united Kingdom experienced two major bank failures, namely Bank of Credit and Commerce ('BCCI', hereafter) and Barings, neither of which had systemic repercussions. With an attempt to improve the existing scheme, The Financial Services and Markets Act of 2000 set up the current *Financial Services Compensation Scheme* that came into operation in December 2001.¹⁷⁸ Initially operating under three sub-schemes (accepting deposits, insurance, and investment),¹⁷⁹ it replaced the previous eight compensation arrangements among which were the Deposit Protection Board, Policyholders Protection Board and the Investors Compensation Scheme.¹⁸⁰

Year	Insurance Coverage
1982	75 per cent of up to £10,000
1987	75 per cent of up to £20,000
1995	90 per cent of up to £20,000
2001	100 per cent of the first £2,000 90 per cent of the next £33,000
2007	100 per cent of £33,000
2008	100 per cent of £50,000
2010	100 per cent of £85,000

Table 7 Deposit Insurance Scheme – Coverage Limits Across Years

By the time of the Northern Rock crisis the deposit insurance scheme, which had been funded through levies from the industry, covered the first £2,000 and 90 per cent of the next £33,000 of all deposits.¹⁸¹ Before October 2007, the FSCS had embraced a *co-insurance* principle to force depositors to exercise market discipline on their banks, as they would also be at the risk of losing a proportion of their savings in the case of a failure (Hamalainen 2009, 53). It has been generally argued that this co-insurance principle had introduced adverse

¹⁷⁸ <http://www.fscs.org.uk/industry/about-the-fscs/>, accessed on 21 September 2011.

¹⁷⁹ For details see FSCS 2001/02.

¹⁸⁰ House of Commons Treasury Committee 2008b, Ev 230.

¹⁸¹ The increase in the limit prompted further discussions on whether this would distort the market “[...] by encouraging savers to put money in cash deposits rather than in investment products” (Croft 2007f, 4).

incentives for depositors to run on Northern Rock. While the scheme's resources were estimated to be around £4.4m (Garnham 2007, 42), no protection was offered for those accounts that exceeded the upper limit (of £31,700). In addition to this credit loss, the pressure on the depositors would intensify with a liquidity loss because of the three-month period that the FSCS required to repay frozen deposit accounts (Mayes and Wood 2009, 38; Eisenbeis and Kaufman 2009, 81).

One striking feature of the depositor comments collected during the run is the low number of people aware of or at least correctly mentioning the upper limit of the deposit insurance scheme. Although the exact figure is mostly confused, it was estimated to be between £31,000 and £35,000. This is also in line with the findings of a research conducted for the FSCS on *Consumer Awareness of the Financial Services Compensation Scheme*, in September 2008 (FSA 2009c). This study analysed retail consumers and small businesses during September 2008 in order to better understand their perceptions toward the FSCS.¹⁸² Accordingly, it states that when “[a]ssessed qualitatively, awareness of the compensation scheme and of its limits is low but increasing” (FSA 2009c, 3). Also according to the survey results, one factor contributing to the off-line run on Northern Rock was the lack of depositor awareness towards the compensation scheme and its unique way of operation, as most of the Northern Rock customers had not heard about the deposit protection scheme before the events took place (FSA 2009c, 6, 15). Depositors had decided to spread their funds across banks not with the intention of protecting themselves from the £35,000 limit, but rather as a result of rate-chasing (FSA 2009c, 9).

Similarly and within a broader time horizon, since 2004, the FSA had systematically been conducting surveys to understand consumer awareness towards the financial sector. The 2004 survey reveals that the failure of Enron and Equitable Life had increased the sense of insecurity and placed prudential risk among the top concerns for depositors (FSA 2004a, 4). A comparison between those survey results reveals that depositor awareness had decreased almost 10 per cent throughout the years. In 2007, as *Table 8* illustrates, almost half of the respondents were not aware of any type of financial regulation in place. The table suggests that the level of confidence in the financial regulatory regime differed less than ten per cent between those who are aware of the FSA and those who are not. Only did 61 per cent of the respondents, who were aware of the FSA's existence, report to have confidence in the financial regulatory regime. The percentage of respondents who were aware that some sort of financial regulation had been carried out decreased 10 per cent throughout 2004 and 2007. As

¹⁸² The survey was conducted in London, Birmingham, Glasgow, and Manchester. For details and methodology used see FSA 2009c. Compensation scheme's limit was raised from £35,000 to £50,000 on 7 October 2008. Before presenting its findings, a caveat is in order: By the time the survey was conducted in September 2008, there had already been an increasing amount of media coverage on the FSCS. This possibly contributed to the increase in public awareness towards the scheme. Therefore, not all the findings of this survey are included in this analysis.

a result, the percentage of respondents who were not aware that there was any type of financial regulation had increased by the same amount as of 2007. In 2007, only 13 per cent were unpromptedly aware of the FSA's existence.

	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>
Confidence in the financial regulatory regime				
<i>Within those who are aware of the FSA</i>	61%	N/A	N/A	N/A
<i>Within those who are <u>not</u> aware of the FSA</i>	52%	N/A	N/A	N/A
Assumes some sort of financial regulation being carried out	63%	53%	60%	53%
<i>Aware of a financial regulator (including some of the legacy organizations) but not the FSA</i>	14%	9%	10%	8%
<i>Not aware of any specific regulator but assumed that there was an organization looking after financial regulation</i>	19%	14%	16%	17%
<i>Aware that the FSA regulates the industry</i>	30%	30%	34%	28%
Unprompted	14%	15%	15%	13%
Prompted	16%	15%	19%	15%
Not aware that there was any type of financial regulation	37%	47%	41%	46%

Table 8 FSCS Awareness across Years (Sources: FSA 2004b; FSA 2005; FSA 2006; FSA 2007j)

One reason for this lack of awareness might be the fact that the FSCS had not actually been used to compensate depositors since its establishment. As Angela Knight discussed, there had been no bank failures experienced since the FSCS was created in 2001 (Croft 2007f, 4). In fact, it was understood that no single bank had ever contributed to the scheme since 2001 (Conway 2007, 1). As Mark Oakes, FSCS spokesman, said: "We have never paid out for the failure of a bank, although we have paid out about pounds 1bn in total for mortgage endowments and pensions mis-selling and the failure of around 27 credit unions" (Cowie 2007a, 30). Therefore, the scheme had not been active to compensate for depositors' losses preceding the Northern Rock failure. Accordingly, although the amount of compensation paid to depositors had increased to £1.21m across years, this amount was still a small proportion of the FSCS' total compensation payments for the various financial failures. Between December 2001 and the end of March 2002, the total compensation payments amounted to £40.9m (FSCS 2001/02). During this period, the scheme continued processing claims for London Trust Bank and BCCI with no new claims for the scheme (FSCS 2001/02, 14). As a matter of fact, between 2001 and 2004 there were no new bank failures to activate

the FSCS. For the following years, the compensation for the credit unions' failures was the major line of payment by the FSCS. The total compensation payment during 2002-03 amounted to £0.06m for the accepting deposits sub-scheme (FSCS 2002/03, 10). For the following year, credit unions constituted the majority of the work load for the accepting deposits sub-scheme, which paid £0.4m in total for compensation (FSCS 2003/04, 12). During 2004/05 this amount increased to £0.23m with new claims received for the recently failed credit unions (FSCS 2004/05, 10, 17). This figure was £0.09m for 2005/06 and £1.21m for 2006/07 (See FSCS 2005/05 and FSCS 2006/07).

Finally, the following *Figure 7* demonstrates the media coverage of the FSCS and the frequency of the number of articles referring to the scheme between December 2001 and September 2008. The data is collected from a number of newspapers through *Nexis UK*. To justify the cut-off points for data collection, December 2001 marks the date when the old scheme, Depositor Protection Scheme, was replaced with the FSCS. The two increases in the number of articles correspond to Northern Rock's failure (September 2007) and the peak of the crisis in September 2008. Before these dates, the number of articles referring to the FSCS remained relatively very low throughout the 2000s. Overall the figure also supports the assumption of low depositor awareness before the Northern Rock crisis, as the media coverage of the formal insurance scheme had remained relatively limited before this date. It was with the run on Northern Rock that relatively an extensive coverage of the FSCS started taking place.¹⁸³

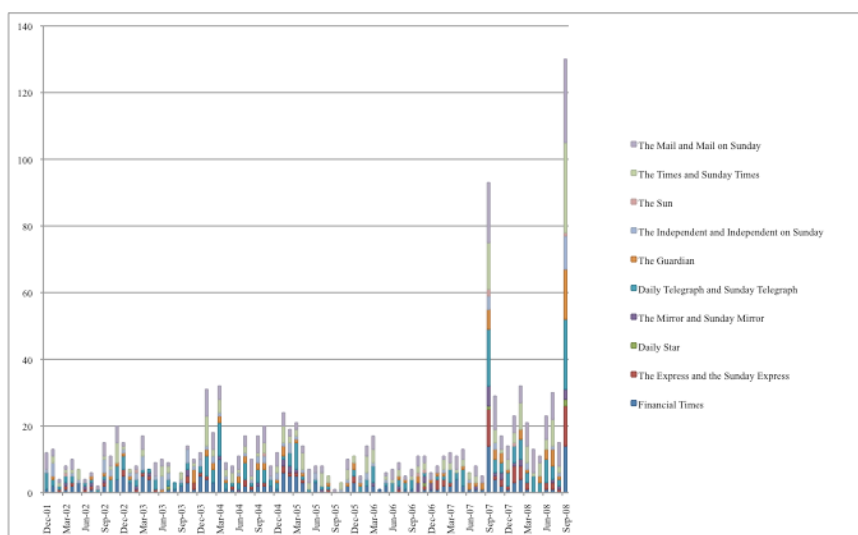


Figure 7 Newspapers Coverage for FSCS – Between December 2001 and September 2008

¹⁸³ For examples from media coverage see “Northern Rock crisis: FAQ...” 2007, 5; “Rock solid” 2007; Lewis 2007; Wright 2007a, 9; “Northern Rocked...” 2007, 2.

To conclude, this section has argued that for the deposit insurance scheme as a formal institutionalised guarantee to succeed, there first needs to be depositor awareness towards the scheme's existence. The conventional argument put forward in the literature, as well as in the policy circles, has been that the shortcomings of the scheme and especially its co-insurance principle have been the main culprits for its inefficiency. In retrospect, it was evident that the shortcomings of institutional arrangements proved it more difficult to stabilize depositor expectations during the course of the Northern Rock crisis. However, the scheme proved inefficient initially less because of its shortcomings in compensation and repayment, but more due to the lack of depositor awareness towards its existence. Against this background, the following final section of this chapter will investigate the 'cognitive' dimension of the bank run with its emphasis on collective memory of the past crisis and the spill-over of the panic under uncertainty.

4.4 Cognitive Shortcuts and Reference Points

“They said the Titanic was unsinkable but it did sink”
(Hall 2007, 12)

This research has been arguing that there are certain reference (focal) points for depositors in order to interpret the current situation and act accordingly. Thinking within the fundamentals/institutions dichotomy, the current literature suggests that these reference points originate from the deterioration of fundamentals or the existence of the safety nets for depositors. The third section above has illustrated that the deposit insurance scheme, as one of the potential focal points promoted by the literature, had not actually been present in depositor awareness previous to the Northern Rock crisis. The preceding second section of this chapter argued that the run on Northern Rock cannot solely be explained with reference to an immediate *external shock*, such as the Bank of England's emergency funding announcement. Explaining bank runs as responses to an immediate shock remains insufficient in taking ideas into account, especially when self-fulfilling prophecies take control of depositor reaction. In addition, while the LoLR commitment by the Bank of England had been successful in preventing banking panics of the nineteenth-century, it was interpreted as a signal strong enough to provoke a depositor run on Northern Rock in September 2007. As discussed above, the involvement of the central bank was mis-interpreted as pointing to a solvency problem for the bank (despite the fact that the loan required the FSA's seal of approval on Northern Rock's solvency). In the case of Northern Rock, while the bank's solvency had been emphasised through numerous policy announcements, this 'backstop facility' from the Bank of England had to be called upon against the high amount of deposit

withdrawals. Public announcements did little to ease depositor worries during the first days of the run. Uncertainty prevailed amongst depositors both on the situation of Northern Rock and on the banking sector in general. This is also supported by depositor comments, which mention the uncertainty surrounding the Northern Rock's situation and how this left them indecisive and suspicious towards other institutions' financial health. In other words, although the emergency funding had not been intended to address to any capital shortage, the difference between liquidity and capital shortages were blurred in the eyes of depositors against the background of previous institutional failures and the Government's success in containing those.

The above historical comparison between Northern Rock and the failure of City of Glasgow Bank, as well as the depositors' perceptions towards the involvement of the central bank (as translating into a capital shortage), point to an obvious change in the credibility of this specific institution in the eyes of depositors across centuries. As mentioned in *Introduction*, given depositors' limited access to market information and their lack of literacy in technical aspects of financial markets; current or previous institutional performance, as well as the performance of the industry as a whole, remain less relevant in retail bank runs. Instead, Government's role in handling previous crises becomes crucial in shaping expectations to the crisis at hand. Vulnerabilities, not only for the bank itself but also for the depositors, are of significant in forming depositor expectations. Against this background, this section will argue that the market actors' decisions are backward-looking and informed by the past. Collective memory of the institutional failures and the lack of confidence in the Authorities are important in interpreting the swings in depositor behaviour and their responses to the current situation.

Recalling *Table 8* from the previous section, a survey conducted by the FSA in 2004 highlighted the low level of confidence in the financial regulatory regime. The level of confidence was 61 and 52 per cent respectively for respondents who were aware of the FSA and for those who were not. Ipsos MORI, one of the leading polling houses in the United Kingdom, has been surveying systematically the level of satisfaction with the Government and economic optimism prevailing in the general population. Accordingly, it directs the following questions: "Are you satisfied with the way the Government is running the country?" and "do you think that the general economic condition of the country will improve, stay the same or get worse over the next 12 months?". Analysing these survey results across 1990s and 2000s reveals that a general sense of dissatisfaction with the Government and economic pessimism had been prevailing during this period. Below figure summarises those findings.¹⁸⁴ While there have been times when the responses appeared

¹⁸⁴ All relevant polls can be found on <http://www.ipsos-mori.com/researchpublications.aspx>.

positive, in general terms the figure points to a consistent economic pessimism and dissatisfaction across respondents.

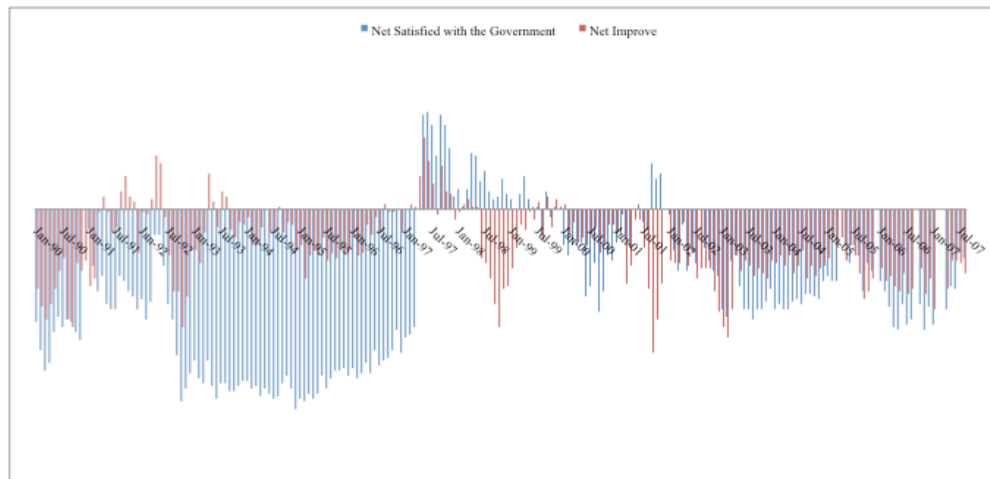


Figure 8 Ipsos MORI Trends - Satisfaction with the Government and Economic Optimism

Depositor comments collected during the run on Northern Rock also point to a wider loss of confidence in the Authorities (rather than merely one in the financial regulatory regime). Out of 378 depositor comments collected from national newspapers, I have coded 244 of them into specified nodes (categories). I have only coded comments which could fit easily into one of the categories. Within codes comments with 299 references in total, there were 21 references to uncertainty, 22 references to guarantees on deposit accounts, 88 references to panic, 90 references to risk aversion, and finally 78 references to trust in the Government, Bank of England, or Northern Rock. While references to panic and risk aversion are expected given the emergency of the situation, the numbers point to the relevance of the past experiences for the interpretation of the current situation. Among the references made to the past crises are the followings: Titanic, foot and mouth crisis, the war in Iraq, Equitable Life, pensions, and Barings. In addition to those, most of the comments coded under this category reflected a lack of trust (confidence) in the Authorities to handle these and following failures. Since these comments were collected during the very first days of the Northern Rock crisis and even before the introduction of the blanket guarantee, they provide a clear example how the current crisis was not assessed in relation solely to the ongoing circumstances, but also with reference to the past and through the use of collective memory.

As illustrated in the examples of British and Commonwealth Merchant Bank ('BCMB', hereafter) (1990) and the Bank of Credit and Commerce (BCCI, hereafter) (1991) preceding the Northern Rock crisis, the time lag between the institutions' failures and the compensation made to eligible depositors remained several months. British and Commonwealth Merchant

Bank had a deposit base amounting to approximately £300m, half of which came from clients of the stockbroking and fund management subsidiaries (“Lessons from B&C” 1990, 22). Similar to the Northern Rock crisis, the situation worsened for the bank with the loss of confidence in the inter-bank markets and the lack of a stand-by arrangement for the bank (“Lessons from B&C” 1990, 22). By the time of its failure, depositors were protected by the DPB and up to a maximum of £15,000 (Waters 1990, 3). When the bank was put into administration, the DPB was obliged to pay out approximately £24m to BCMB depositors (“Banking sector starts ...” 1991, 9). As regards to the timeframe for repayments, while depositors submitted their compensation claims in August (Owen 1990, 8), direct depositors began to receive their pay-outs only in September (“B&C payouts” 1990, 4). There were, however, delays in the payouts for 8,000 indirect depositors through client accounts opened by subsidiaries of B&C in BCMB (“B&C payouts” 1990, 4; see also Waters 1991a, 12; Lascelles 1991a, 20). In March 1991, there were still delays in sending out the cheques to depositors (“Bank Queue” 1991, 20).

The highest pay-out up-to-date by the DPB was made to BCCI in 1991 (Lascelles 1991b). BCCI was shut down worldwide on 5 July 1991 with its assets frozen and a provisional liquidator appointed (Lascelles and Donkin 1991, 1). The bank had approximately 120,000 deposit accounts totaling to £750m (Lascelles 1991b) and as many as 30 local authorities had invested public money in the bank either through placing loans with the bank or through deposit accounts (Buckley and Nakamoto 1991, 6; see also “BCCI may result ...” 1991, 1; Willman 1991, 21). DPB offered protection only for the 75 per cent of the first £20,000 and the customers of BCCI branches outside Britain were not covered by the scheme (Lascelles 1991c, 2). In July 1991, it was confirmed that the local authorities banking with BCCI would not be bailed out (Owen, Buckley, and Lascelles 1991, 6). As an example to ‘flight to quality’, many of them withdrew their funds also from smaller banks and building societies (Corrigan and London 1991, 1). This resulted, as an example, in National Home Loans to rely on a lifeboat from other clearing banks and the Bank of England (Corrigan 1991, 18; Barchard 1991, 14; “Banks step in ...” 1991, 1). In another episode during the BCCI crisis, Southdown Building Society had to be supported by Woolwich Building Society after a depositor run on the former (Coggan 1991a, 16; Coggan 1991b, 3; Hughes 1991a). It was reported that up to £6m might have been withdrawn from the Building Society, £3m of which in a single day (Scott 1991, 18; see also Hughes 1991b). Among the rumours surrounding the bank was its association with BCCI (Jack 1991a, 6). Below are examples from the news on the situation:

[...] [A] depositor [...] was one of many customers withdrawing her savings ‘to be on the safe side’. She said: ‘There may be no truth in the rumours, but I don’t want to lose the little bit of money I have’. [...] [A] depositor for 10 years, was concerned, the queue was evidence enough. ‘There must be some truth in the rumours to get people to join a queue this size’. ‘I’m hypersensitive of anything that puts you in the slightest bit of risk’, one

man with a Pounds 20,000 deposit said. 'The Building Societies Association is only prepared to pay 90 per cent. If I'm not careful I could lose Pounds 2,000' (Lawrence 1991, 5).

The High Court further postponed the Bank of England's attempts to wind-up BCCI, which would have invoked the deposit protection scheme (Waters 1991b, 6). In August 1991, Abu Dhabi government offered a compensation scheme for the sterling accounts in English or Welsh branches of BCCI amounting to the 75 per cent of their deposits, up to a maximum of £5,000 (Jack 1991b, 6). It was only in January 1992 that the High Court issued the winding up order against BCCI and the DPB got activated (Waters 1992, 20). While as of May 1992, payouts totalled to £1.6m to 450 depositors of BCCI ("BCCI Payouts" 1992, 4), this number reached to £58m as of December 1992 and to £78.5m as of March 2003 ("Banks levied for BCCI payment" 1992, 12; FSCS 2003).

In addition to those aforementioned failures with prolonged resolutions of the deposit accounts, there were also other institutional failures with less serious repercussions on the depositors. During the following Barings crisis of 1995, although the deposits were covered up to the limit of the DPB, the bank was purchased by ING for £1 (Cohen 1995, 2).¹⁸⁵ Between 2002 and 2007, 28 separate credit unions failed and were put into administration.¹⁸⁶ Deposit protection for credit unions got in effect on 2 July 2002 and became part of the Accepting Deposits Sub-Scheme under the FSCS (Bennett 2001, 5).¹⁸⁷ Accordingly, 100 per cent of the first £2,000 and 90 per cent of the next £33,000; therefore £31,700 in total was covered by the scheme.

Finally, the most recent corporate failure with widespread losses preceding the Northern Rock crisis was the failure of Equitable Life Assurance Society in December 2000.¹⁸⁸ Following the House of Lord decision on July,¹⁸⁹ Equitable Life Assurance Society was closed to new business with immediate effect in December 2000 (Parliamentary Ombudsman 2003, 1). In June 2001, the company announced reductions in policy and annuity values (Parliamentary Ombudsman 2003, 1; see also HM Treasury 2009d). In May 2002, the FSCS said "[...] it cannot [*sic*] necessarily honour any guarantees where policies have a guaranteed value" (Skypala 2002, 9). It was only in January 2009 that "[t]he Government [...] [decided] to set up a scheme to provide ex-gratia payments for those who have been most heavily

¹⁸⁵ There were less than 3000 depositors eligible for protection totalling approximately to £1.5bn in deposits (Smith 1995a, 2). Deposits held in the bank by local authorities, private clients, and building societies were frozen after administration (Smith 1995b, 3).

¹⁸⁶ "Deposit firms declared in default by FSCS", available at <http://www.fscs.org.uk/industry/sub-schemes/accepting-deposits/deposit-defaults/>, accessed on 16/02/2012. For Taskforce Report by the HM Treasury on Credit Unions see <http://archive.treasury.gov.uk/docs/1999/creditunion.html>, accessed on 17/02/2012.

¹⁸⁷ For the FSCS press release see FSCS 2002.

¹⁸⁸ For the latest documents on Equitable Life see http://www.hm-treasury.gov.uk/fin_equitable_life.htm, accessed on 17/02/2012.

¹⁸⁹ See HM Treasury 2009c for details.

affected by the events at Equitable Life. The Government has also apologized on behalf of public bodies and successive Governments stretching back to 1990 for the maladministration that it believes took place” (HM Treasury 2009e; see also HM Treasury 2009b and HM Treasury 2009c). On July 2010, the Government announced the introduction of the Equitable Life Bill and the establishment of the Independent Commission on Equitable Life Payments (HM Treasury 2010a), to make recommendations on the payments.¹⁹⁰ Accordingly, the Government set up the Equitable Life Payment Scheme “[...] to make fair and transparent payments to Equitable Life policyholders who have suffered financial losses as a result of Government maladministration that was found to have occurred in the regulation of Equitable Life”.¹⁹¹ Announcing that £1.5bn would be made available for compensation on October 2010 (HM Treasury 2010b), the scheme was launched and payments started at the end of June 2011.¹⁹²

Against this background, is it possible to analyse the Northern Rock crisis independently of the previous institutional failures given that, as the most recent example, insurance policy holders from Equitable Life were compensated for their losses ten years after the company’s failure? To quote the FSA (2004b, 11, emphasis added) in length, “[t]here are many aspects of consumer confidence in the financial services industry for example views on the economy, confidence in the products and services provided by firms, and *specific examples of regulatory failure*. Consumers’ views are likely to be driven not only by what is happening in the industry as a whole (which they are often made aware of through the media) but also through their own, and friends’ and relatives’ experiences”.

Given this research’s interest in how depositors interpret a crisis situation, an emphasis on cognitive heuristics is crucial in order to understand the impact of the past (*availability heuristic*) and spill-over effects through *representativeness heuristic*.¹⁹³ This research argues that in addition to the bank’s deteriorating economic circumstances, the collective memory of the most recent institutional failures and the policy responses to address those were also significant in shaping depositors’ responses to the Northern Rock crisis (*H4*). To repeat the discussions above, it is methodologically challenging to establish a direct link between the depositor comments collected from newspapers and the motivations for all depositors who withdrew their money from Northern Rock. In other words, that the depositor comments from newspapers point to references to past failures does not necessarily mean that this motivation can be generalised to all depositors. In addition, it is equally challenging to highlight all the institutional failures to be able to illustrate the changing sentiments towards the credibility of the LoLR function. Therefore, this research concentrates on the major cases after the

¹⁹⁰ For details see <http://equitablelifepaymentscheme.independent.gov.uk/>, accessed on 17/02/2012.

¹⁹¹ <http://equitablelifepaymentscheme.independent.gov.uk/>, accessed on 17/02/2012.

¹⁹² On the news, <http://www.bbc.co.uk/news/business-13966118>, accessed on 17/02/2012.

¹⁹³ Refer to *Introduction* and *Chapter II* for the details of those WAs.

introduction of the mandatory deposit insurance scheme (DPB) in Britain in 1982, which was run by the Bank of England. To recall the discussion presented in *Chapter IV*, during the period when retail deposits were guaranteed by the DPB, the banking system in the united Kingdom experienced two major bank failures, namely Bank of Credit and Commerce ('BCCI', hereafter) and Barings, neither of which had systemic repercussions. With an attempt to improve the existing scheme, The Financial Services and Markets Act of 2000 set up the current *Financial Services Compensation Scheme* that came into operation in December 2001. The most recent corporate failure with widespread losses preceding the Northern Rock crisis was the failure of Equitable Life Assurance Society in December 2000. Against this background, the above discussion mostly concentrated on those three cases in order to present how collective memory might have affected expectations for future crises.

To supplement those, opinion polls also clearly illustrate that there had been a persistent economic pessimism and dissatisfaction with the Government policies throughout the years preceding the Northern Rock crisis. This research, therefore, argues that the depositor run on the bank should be analysed against the background of this growing dissatisfaction towards the Authorities in addressing institutional failures. From this perspective, the depositor comments referring to the past failures might be read as manifestations of these vulnerabilities embedded throughout the years. Below are some of those comments which mention the *shadow of the past*, while the rest is summarised in the *Appendix*.

It didn't affect us, but it is our generation, a lot of our friends had their money in Equitable Life and lost everything. It wasn't that long ago. Our friends lost all their pensions because of Equitable Life (the investment group that nearly collapsed in 2000), and Gordon Brown did nothing - he has probably forgotten about it. We're not talking about 1929 - it's something we remember (Pavia 2007, 7; O'Doherty and Rotberg 2007, 2)

I had a very large amount of money with Equitable Life and I thought it was secure, but unfortunately it clearly wasn't. It is a case of once bitten, twice shy and I am not prepared for the same thing to happen this time (Whitten 2007a, 8)

The problem is that people had their fingers burnt with pensions and now the problem could be with savings (Jenkins and de Bruxelles 2007, 7)

The Government has pulled the rug out from under savers and now they are wondering why people are reacting in this way (Keaveny 2007)

When I heard the news I just thought, 'Oh no, not again' (Smith, Ringshaw, and Watt 2007, 2)

A final discussion before closing the section should be put forward on the representativeness heuristics. Similar in their business models to some extent to Northern Rock, remaining ex-mutuals (Alliance and Leicester, HBOS, Bradford and Bingley) had also started losing their share value and faced with an increasing media coverage (Duncan 2007, 30), amid increasing

fears that those also could become the victims of Northern Rock's problems (See O'Grady 2007a, 10; Prynne and Armitage 2007, 1 ; Larsen 2007d, 3; Inman 2007, 4; Farrell 2007, 36; Cowie 2007b, 4).¹⁹⁴ These are documented in HM Treasury (2009a) and Hamalainen *et al* (2012) and will be the subject of the following *Chapter V*. Goldsmith-Pinkham and Yorulmazer (2010, 83) analyse the “[...] spillover effects during the Northern Rock episode and shows that both the bank run and the subsequent bailout announcement had significant [spillover] effects on the rest of the U.K. banking system, as measured by abnormal returns on the stock prices of banks”.¹⁹⁵ A newspaper analysis conducted between January 2007 and September 2008 also shows that the media coverage (the number of articles) for Bradford and Bingley and Alliance and Leicester had also increased since August 2007. Nonetheless, these two banks were still among those to receive the cash that had been withdrawn from Northern Rock.¹⁹⁶ They did not become subject to a generalised banking panic and were shielded from a depositor run. Already supporting the asymmetric information theory, this runs against the working assumption on the *representativeness heuristic*, which assumes that in time of crises institutions are assessed by their similarities to the problem at hand in order to measure the probability of their failure. The following two chapters will attempt to answer this question. Despite the lack of a generalised collapse of depositor confidence in the banking system, why did only Bradford and Bingley become subject to a depositor run while all the remaining three ex-mutual had been going through similar financial problems?

¹⁹⁴ As an example, on September, 17th A&L, UK's seventh-biggest bank, lost one third of its share value after rumours that the bank approached to the Bank of England for an emergency funding (Hiscott 2007, 4). Another ex-mutual, B&B, also lost 15 per cent of its share value (Shand 2007, 48). See also Martin 2007, 37.

¹⁹⁵ Aharony and Swary (1996) also model bank runs through rational depositors' assessment of the bank's assets. Accordingly, “[t]hree observable bank characteristics are examined as proxy measures for the interim private information by rational depositors [...] [These are] the distance of the solvent banks' headquarters from the headquarters of each failed bank; [...] the size of the solvent bank; [...] the capital ratio as a proxy for their solvency” (Aharony and Swary 1996, 57). They further find evidence “[...] that the extent of the negative impact of a bank failure on the equity value of other banks is greater for banks that are similar to the failed bank and whose capitalization involves more leverage” (Aharony and Swary 1996, 58).

¹⁹⁶ Goodway 2007e, 27.

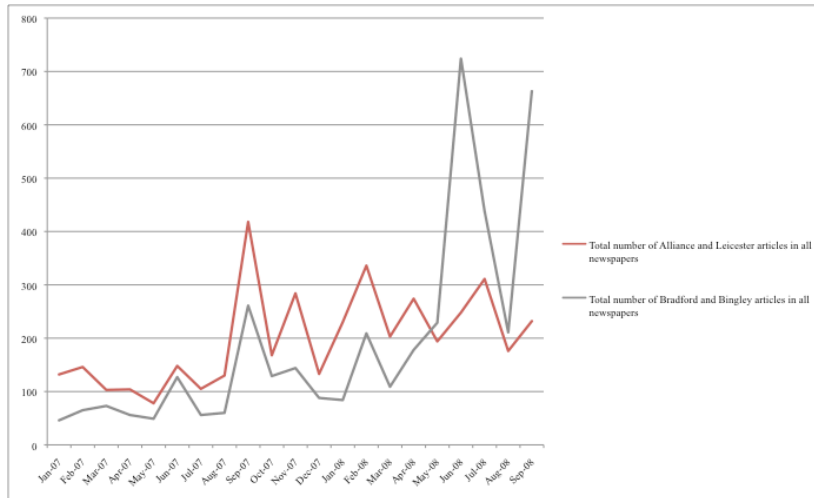


Figure 9 Newspaper Coverage for Alliance and Leicester & Bradford and Bingley - Between January 2007 and September 2008

As a Conclusion: We Have Been Here Before

Against the empirical evidence on the Northern Rock crisis presented in *Chapter III*, this chapter has analysed the depositor run on the bank and tested the hypotheses put forward both by the current literature and this research’s argument. This has been accomplished in three separate sections, which analysed the role played by fundamentals, institutions and cognitive heuristics on depositor expectations respectively. While some of the evidence seemed to support the hypotheses put forward by the asymmetric information theory, the use of counterfactuals and the depositor comments collected through newspapers articles pointed to the role played by additional information asymmetries and the cognitive heuristics in the shape of collective memory.

To re-emphasise this research’s main argument, depositor behaviour is not only an outcome of the external shocks and/or the observed institutional shortcomings. There are deep-seated vulnerabilities arising from past crises which affect depositor expectations and behaviour. Expectations are updated through the use of cognitive heuristics, which render collective memory more relevant to the current situation. The conclusion that this chapter draws from the Northern Rock period is that the arrival of the negative news has been a necessary, but not a sufficient condition itself to trigger a change in depositor behaviour. The collective memory of past crises provides recollections of previous losses and updates the *reference point* through which the following crises are interpreted. In a similar way, this chapter has argued that deposit insurance scheme had not been among the reference points for depositors to assess the Northern Rock crisis.

The remaining empirical chapters of this research will examine the three bank failures following Northern Rock. As also stated in the *Introduction*, the selection of the cases from the same banking crises period with significant turning points will enable this research to better analyse the impact of the past crises through an update in reference points. This said, the following chapter will provide a descriptive account of the remaining three case studies in order to set the background information for the cases. It will present them in a structured way to better compare the similar problems they had experienced before their failures. It will leave the argumentative analysis of the cases to test this research's hypotheses to the final empirical *Chapter VI*.

Chapter V: Setting the Stage for Alliance and Leicester, HBOS, and Bradford and Bingley

This research has so far discussed that the reasons for a change in depositor behaviour may *not only* lie in the directly relevant material circumstances or in the shortcomings of the institutional settings. Depositor behaviour is also shaped through the use of cognitive heuristics with an attempt to make sense of the on-going uncertainty and complexity during crises. This chapter will present an overall account of the common problems encountered by Alliance and Leicester, HBOS, and Bradford and Bingley leading to their failures. The varying degrees of depositor reaction to these bank failures (albeit operating under similar economic problems) render a fundamentals-based view insufficient to explain the run on Bradford and Bingley alone. Therefore, the main purpose of this short chapter is to present the empirical background for the three cases in order for an analytical discussion to follow in the final empirical chapter (*Chapter VI*) of this research.

For depositors, the first phase of a banking crisis is the *diagnosis of the new situation*. This first phase requires a path-dependency explanation where the interpretation of the current situation partially depends on the collective memory of the past.¹⁹⁷ The preceding empirical chapter on Northern Rock has illustrated, with the help of counterfactuals and depositor comments, how past episodes of institutional and policy failures had affected depositor expectations. This was evident throughout the depositor comments collected during the run in September 2007. A sense of *'we have been here before'* prevailed among others, such as panic and risk-aversion. During this first phase, collective memory of the past and a lack of depositor awareness towards the deposit insurance scheme were of significance as reference points in shaping depositor expectations, in conjunction with the immediate material circumstances.

During the *resolution phase* of the crises, on the other hand, the “[p]ublic confidence appears to respond strongly to clear and comprehensive bank restructuring policies” (Laeven and Valencia 2008b, 5). The preceding empirical chapter has also illustrated that the uncertainty surrounding Northern Rock’s future and the absence of an immediate policy response as an effective solution to the bank’s problems were significant in shaping depositor expectations. Although the blanket guarantee eased the *sense of panic*, the uncertainty for depositors did not end with its introduction. During this phase, as also suggested by the literature, the speed and the consistency of policy reactions to resolve the bank’s situation were crucial in bringing the

¹⁹⁷ “[...] [A] conventional definition of path-dependent process is that the social world often follows a particular trajectory; an open period during which there are a number of plausible alternatives, a critical juncture where contingent events results in one of these alternatives being selected, and then feedback that constraints actors to keep that particular path” (Bennett and Elman 2006, 464).

continuing silent run on the bank into a halt. Despite the lack of a generalised collapse of depositor confidence in the banking sector in September 2007, the banking sector in the United Kingdom consolidated following two nationalisations and two take-overs within the span of a year.¹⁹⁸ Two of the last remaining ex-mutuals, namely HBOS and Bradford and Bingley, ceased to exist as independent entities in September 2008. Preceding them was Alliance and Leicester, which had been taken over by Santander in July 2008.

By July 2008 Alliance and Leicester still resisted to raise capital through a right issue, contrary to its rivals and amid speculation that the bank would cut down on its interim dividend (Croft 2008e, 20). On July 8th the bank faced the biggest loss in its share value up-to-date (Hume and Elder 2008a, 40). “The former building society’s shares have collapsed on fears of plunging profits and the worsening outlook for the property market, as well as worse than expected write downs on financial assets” (Lodge 2008a, 1). A take-over bid by Santander was on the headlines again after a failed attempt in December (Larsen and Burgess 2008a, 20). It was in September that the Santander’s deal over Alliance and Leicester was finalised during when Bradford and Bingley’s branch base was also transferred to Abbey (also owned by Santander). In the meanwhile, HBOS was also taken over by Lloyds TSB to create Lloyds Banking Group.

By September 2008, there were growing concerns over HBOS’ future (which held £1 out of every £8 of cash with a deposit base of approximately £15m (Barrow 2008, 1)) since the bank had been extremely exposed to mortgage-backed assets (Lindsay 2008a, 53). On September 16th, HBOS shares lost value almost up to 40 per cent and the bank received a further rating downgrade from Fitch and Standard & Poor’s (Croft 2008f, 1; Elder and Hume 2008a, 40). The following day, which saw HBOS’ share price decline as low as 88p (Larsen, Parker, and Giles 2008, 6), Lloyds TSB revealed a proposed takeover plan of HBOS (amounting to £12bn and offering 83 shares for every 100 HBOS shares owned (Lodge 2008b, 1)), only through a suspension of the competition rules (outlined by the Enterprise Act of 2002) by the Government (Peel, Parker, and Tait 2008a, 6; Croft, Larsen, Burgess, and Parker 2008, 6; Croft, Burgess, and Parker 2008a, 4). The bank’s 22 million customers were one of the main reasons for the FSA to react to HBOS’ situation without any delay in order to avoid another Northern Rock from taking place.¹⁹⁹

¹⁹⁸ Even before September 2008, the UK mortgage market had already been adversely affected by the recent crisis, as the number of mortgage suppliers decreased when a number of lenders relying on securitisation were forced to leave the market.

¹⁹⁹ See, for example, Croft 2008i, 16. The merger of HBOS with Lloyds TSB would create this ‘super bank’ with more than 23 million customers and a share of 28 per cent in the UK mortgage market and a share of 16 per cent in the total savings (Croft 2008j, 3). This merger would also create a market leader in life and household insurance (Peel and Croft 2008, 4). All those were feared to impair the market rates on savings, as well as market competition, because of reduced range of products in the market (Moore 2008, 1; Croft 2008k, 17), as well as the impact of the merger on the housing/real estate sector (Thomas 2008, 17).

In the meanwhile Bradford and Bingley was also going through similar problems in September 2008. Against the backdrop of the negative news and increasing uncertainty on the bank, the chief executive of Bradford and Bingley made the following statement only days before the bank's nationalisation: "We are a strongly capitalised bank now undertaking a complex transition with regrettable job losses, but we are planning to put the problems of the past behind us and have a business which is fit for purpose going forward" (Referred in "B&B shares at a record..." 2008, 30).²⁰⁰ By September 21st the FSA had already started its contingency plans and its search for a potential take-over for the bank. (Kleinman 2008, 1; see also Treanor 2008a, 27; Costello 2008a, 36). Nonetheless the bank had denied this in the following words: "We're not aware of anything in connection with these [...] banks [...] Our funding foundations are solid and we're well capitalised" (Costello 2008a, 36). On September 26th there were talks over the possibility of Bradford and Bingley being nationalised (Elliott and Hosking 2008, 3; Martin and Beattie 2008, 9). As a matter of fact, BBC reported the nationalisation of Bradford and Bingley the following day, while the news had been blogged even earlier.²⁰¹ On the same day the FSA officially declared that Bradford and Bingley ceased to meet its threshold in order to operate as an independent deposit taker.²⁰² On Saturday morning the bank was informed about the FSA Executive Committee's decision on its nationalisation.²⁰³ This suggested that the bank's £50bn of loans would be nationalised based on the Banking (Special Provisions) Act of 2008 (Boles and Jennings 2008, 6; Croft, Burgess, and Parker 2008b, 1),²⁰⁴ and not to be sold to a private party (Waples and Smith 2008, 1).

It was understood that the Government had already approached other banks for a potential take-over of Bradford and Bingley (Griffiths 2008a, 5). However, this was not fully welcomed by the banks as they had already been exposed to Bradford and Bingley through their underwriting of the bank's rights issue (Griffiths and Kleinman 2008, 1). As a result, the Government announced to take the bank's toxic assets on its own books (Griffiths 2008b, 4; Griffiths and Kleinman 2008, 1). On September 28th, a deal with Santander was finalised for the bank to buy Bradford and Bingley's deposit book and branch network (Croft, Burgess, and Parker 2008b, 1), which would not require an explicit Government guarantee on deposits (Giles and Parker 2008, 22). As the chief executive of the FSCS stated during her oral evidence before the Treasury Select Committee, the FSCS "[...] made a one-off payment of £14 billion on 29 September and that meant that people went to bed on Sunday night banking

²⁰⁰ Nonetheless, Bradford and Bingley was later criticised because of this statement, which was also directed to Richard Pym during his oral evidence before the Treasury Select Committee on November 18th, 2008. Available at House of Commons Treasury Committee 2009a, Ev 40-53.

²⁰¹ House of Commons Treasury Committee 2009a, Ev 41. For the original entry see <http://www.bbc.co.uk/blogs/thereporters/robertpeston/2008/09/>; accessed at 31/03/2011.

²⁰² Also mentioned during Richard Pym's oral evidence before the Treasury Select Committee (House of Commons Treasury Committee 2009a, Ev 41).

²⁰³ House of Commons Treasury Committee 2009a, Ev 41.

²⁰⁴ For more information refer to House of Commons Treasury Committee 2008b.

with Bradford & Bingley and woke up on Monday banking with Abbey”.²⁰⁵ Yet, the Chancellor “[...] made clear he will [*sic*] stand behind B&B [Bradford and Bingley] depositors, but there are [*sic*] other creditors who could be put on risk, rather than leaving taxpayers to shoulder that burden” (Croft, Burgess, and Parker 2008b, 1). On September 29th, as the last remaining publicly quoted ex-mutual, Bradford and Bingley was officially nationalised. On the same day, the Government also announced the “[...] guarantee arrangements to safeguard certain wholesale borrowings, and derivative transactions of and wholesale deposits with, Bradford & Bingley plc (“Bradford & Bingley”) existing as at midnight on 28 September 2008” (HM Treasury 2008l).

Against this background, this chapter will illustrate that all the three cases had been through similar problems before their failures. Since the asymmetric information theories of bank runs prioritise fundamentals over sunspots and reject random variables, it is crucial to identify the problems surrounding those banks in order to test the first hypothesis of this research. This chapter will compare the three cases along five dimensions, namely target markets, share price movements, credit downgrades, write-downs and rights issues. This comparison will illustrate that the three banks, despite operating in different segments of the mortgage market, had been going through similar problems before their failures. Albeit to varying degrees, they were all affected by the downward share price movements, credit downgrades and write downs in asset prices. Excluding Alliance and Leicester, the remaining two banks also struggled to raise capital through their rights issues, both of which ended up being less successful than provisioned. Therefore, neither is the deterioration of the bank-specific fundamentals nor the negative publicity that the banks received able to explain the different depositor reactions across those cases. Although the extension of the Bank of England’s emergency funding to Northern Rock had been misperceived as *the* signal for the bank’s insolvency, neither of the banks had any turning points distinguishable to such an extent. Finally, conclusion will summarise and conclude the chapter.

5.1 Target Markets

For a comparative analysis across the cases, it is of significance to understand their business models and the common characteristics shared by the three banks, such as their target markets in the mortgage business and their funding structure. As a matter of fact, as exemplified by Northern Rock, those were the two dimensions that had been threatening banks’ futures during the credit crunch. To start with Bradford and Bingley, the bank had decided to de-mutualise in 2000 to become the leader provider in buy-to-let mortgage markets

²⁰⁵ House of Commons Treasury Committee 2009a, Ev 297.

(in total approximately £24bn)²⁰⁶ (Aldrick 2008a, 6). In numbers, 60 per cent of the bank's business came from buy-to-let mortgages whereas 20 per cent relied on the self-certified ones.²⁰⁷ Those two risky asset types, however, were not funded through conventional retail deposits. Operating as Britain's eight-biggest mortgage provider, Bradford and Bingley relied on whole-sale markets for 60 per cent of its funding (Ashton and Dey 2008, 4). As a point of comparison, this number was approximately 75 per cent for Northern Rock, which troubled the bank when the wholesale markets froze in the summer of 2007.

On the other hand, HBOS decided to de-mutualise in 1997 and became the biggest mortgage provider in the banking system in the United Kingdom, especially through its Halifax brand. The merger of Bank of Scotland with Halifax in February 2001 created HBOS (Larsen, Parker, and Giles 2008, 6), with 1,100 agencies and branches (Croft 2008j, 3). The bank issued one fifth of all mortgages in the mortgage sector in the United Kingdom, was the second biggest buy-to-let mortgage lender and served to be the largest savings institution (Croft, Larsen, Burgess, and Parker 2008, 6). It was exposed to the housing market in the United Kingdom with home mortgages (as well as the commercial property market) and was heavily dependent on wholesale funding (only 57 per cent on retail deposits (Croft 2008l, 20))²⁰⁸. It had a retail loan to deposit ratio of around 160 per cent (Hume and Orr 2008a, 42) and an exposure to the US mortgages (Hume and Orr 2008b, 42). Yet, this exposure was mostly because the bank had been forced to take one of its off-balance funding vehicles onto its books in 2007 (Larsen 2008c, 19). On the liability side, as of February 2008, HBOS was the recipient of 40 per cent of savings in the United Kingdom (along with Nationwide and National Savings & Investments) (Hill 2008a, 18). As of September 2008, however, it only had a retail deposit base amounting to £258bn, with a wholesale funding commitment of £278bn, which translated into a funding gap for the bank (Croft 2008f, 1). The bank's loan portfolio of commercial property, house builders and corporate loans exposed HBOS to an economic slowdown and thus to the threat of rising arrears (Croft 2008m, 18). To compare, while the main problem for Bradford and Bingley was the deterioration in buy-to-let and self-certified markets (in addition to the problems in the wholesale markets), HBOS was especially affected by the rising arrears and the declining house prices in the UK housing sector.

²⁰⁶ The figure was mentioned by Richard Pym during his oral evidence before the Treasury Select Committee on November 18th, 2008. Available at House of Commons Treasury Committee 2009a, Ev 48.

²⁰⁷ This was made clear by Richard Pym during his oral evidence before the Treasury Select Committee on November 18th, 2008. Available at House of Commons Treasury Committee 2009a, Ev 47.

²⁰⁸ While on the contrary, Lloyd TSB “[...] meets one-third of its requirements in the money markets and two thirds through deposits” (“Lloyds TSB” 2007, 20).

5.2 Share Price Movements

Although the banking system in the United Kingdom had succeeded in avoiding a system-wide banking panic in September 2007, market conditions did not ease to guarantee no other bank failure. As their business structures hint, Northern Rock had not been the only institution relying heavily on the wholesale markets for funding. Even though they were less reliant compared to Northern Rock, they still lost a considerable amount of their share prices during the crisis period (Duncan 2007, 30). Yet, the stock market was quick to react to the similarities across banks' business models, given the concerns that they could also become the victims of the Northern Rock's problems.²⁰⁹

To illustrate, by April 2008 Alliance and Leicester became the most shorted company in FTSE 100 (Hume 2008a, 42). By then the bank's share price had already halved amid growing concerns over its liquidity position (Croft 2008n, 20).²¹⁰ It was forced to arrange a new funding facility for the forthcoming year of 2009 (Croft 2008o, 24). Company's annual report in April referred to Northern Rock for serving as a false benchmark for the bank (Croft 2008n, 20). In its Chairman's words: "A&L's [Alliance and Leicester] business model has evolved markedly from its days as a building society [...] but too often we found ourselves bracketed with Northern Rock, with little or no acknowledgement of how different we really are" (Croft 2008n, 20). Similarly, Bradford and Bingley had also lost more than 90 per cent of its market value since January 2008, as the bank's shares fell to an all-time low (to 20p) towards the end of September (Treanor and Wintour 2008, 38). This resulted in the bank to be worth of only £300m and for shareholders to lose more than half of their stock price offered through the bank's right-issue (to be discussed shortly).

Share price movements had more extreme policy outcomes for the HBOS case. On March 19th the FSA started its inquiry into the share price collapse (of up to 19 per cent) of HBOS in the morning of the same day, which was grounded on false rumours that the bank had demanded an emergency funding from the Bank of England (Burgess, Giles, and Masters 2008, 1). "The potential havoc caused by the rumours provoked the Bank of England into the highly unusual action of ringing around news organisations to deny that it had held emergency meetings to discuss the viability of specific UK banks, including HBOS. It described these stories as an "absolute fantasy" " (Burgess, Giles, and Masters 2008, 1). As a response to those rumours and the ongoing turbulence, HBOS stated that the bank had ready access to deposits

²⁰⁹ A similar generalisation effect is also observed with Paragon -a buy-to-let lender- on September, 14th. Its shares fell to a four-year low (27%) amid the growing concerns that the firm had also borrowed funds from the BoE ("Paragon tumbles ..." 2007, 30). However, unlike Northern Rock, Paragon was totally dependent on commercial markets and had not gone to the Bank of England for an emergency funding by the time of the news. The bank made efforts to assure markets that it was not exposed to the same problems, as did Northern Rock. See Bland 2007, 33; "Don't panic' ..." 2007, 25; Davies 2007b, 23; Clark 2007, 66; O'Grady 2007b, 6. Since it does not accept any retail deposits, this research will not analyse Paragon.

²¹⁰ As of July 2008 the bank's shares had lost 75 per cent of their value (Croft 2008e, 20).

and wholesale markets (Croft 2008p, 19), and its directors and senior managers bought large amounts of shares on March 20th, which helped the share price to balance itself (Giles 2008h, 16; Goff 2008b, 14; Hume and Orr 2008c, 42; Croft 2008q, 21).

5.3 Credit Downgrades

During the recent financial crisis, credit downgrades played a significant role. Credit rating agencies helped narrow the information asymmetries between the bank and its creditors, and thus, influenced expectations. Furthermore, as was the case with the Northern Rock episode, the possibility of a credit downgrade limited the range of possible options available to banks and policy makers, partially because of the breaches embedded in the banks' SIVs. Those agencies were later questioned before the House of Commons Treasury Committee for their role in the recent crisis.²¹¹

In the case of Bradford and Bingley, the ambiguity on the bank's rights issue (to be explained shortly) was followed by a credit downgrade by Moody's (Burgess 2008b, 18). The intensification of the bank's problems with the advent of September further increased the frequency of these downgrades. On September 1st Fitch downgraded Bradford and Bingley as a response to the bank's interim losses (Croft 2008r, 18; Bradley 2008, 30), which was made on the basis of the bank's deteriorating asset quality and profitability ("Need to know" 2008, 40). Nonetheless, this was only the start of a chain of rating downgrades during September. On September 15th Moody's also downgraded the bank just one notch above junk status, which caused the bank's share price to fall further and increased the bank's funding costs in the money markets ("Bleak outlook ..." 2008, 15; Clark 2008a, 31; Treanor 2008a, 27). This downgrade was justified partially because of the growing concerns on the Bradford and Bingley's increasing dependence on the Special Liquidity Scheme and its share in risky buy-to-let markets.²¹² The rating agency stated that "[...] the bank would find further equity fundraising difficult, while securitisations and inter-bank loans were "virtually closed" to it, making it dependent on swapping mortgages for cash with the Bank of England under its Special Liquidity Scheme"(Lindsay 2008b, 55). Finally, on September 23rd Fitch downgraded the bank to only one level above junk status, accompanied by another downgrade from Standard and Poor's (Hosking 2008a, 45; Clark 2008b, 41). All these downgrades materially threatened the bank's counter-party positions, as they would require a higher credit rating than the bank had at the time (Griffiths 2008c, 1; Hosking 2008b, 63).

As for the other banks, the situation was similar, although to a lesser degree of severity. May started with a ratings downgrade for HSBC by Standard & Poor's (Hume 2008b, 42).

²¹¹ House of Commons Treasury Committee 2008, Ev 105-122.

²¹² "Moody's raised concerns that B&B was "particularly vulnerable to the increasingly negative outlook on the UK's economic and housing market". It also pointed to B&B's reduced funding flexibility in the wholesale market as the bank was only funded only 43 per cent through retail deposits" ("Bleak outlook ..." 2008, 15). See also Shand 2008.

Amid all the negativity, HBOS managed to raise £500m, relatively a small amount, through the sale of mortgage-backed securities (Davies and Croft 2008, 42). This was interpreted in a positive way as the re-opening of markets for mortgage-backed securities (Jackson 2008, 18), which was later followed by a similar move from Alliance and Leicester in late August to raise £400m through an asset-backed bond sale (Davies 2008, 21). However, confidence collapsed towards bank's ability to fund their businesses through wholesale markets after the repercussions of Lehman's failure on those markets. On September 16th, the shares of HBOS lost value almost up to 40 per cent and the bank received a rating downgrade from Fitch and Standard & Poor's (Croft 2008f, 1; Elder and Hume 2008a, 40). Finally, after having informed the markets on its write-downs in Treasury investments, the Moody's downgraded Alliance and Leicester's financial strength, long-term bank deposit, and debt ratings, on the basis of the "[...] increased funding costs on the bank's profitability as well as the impact of impairment charges and falls in the fair value of its Treasury assets" (Croft 2008o, 24).

5.4 Write-downs in Assets/Profits and Rising Arrears

Bradford and Bingley's problems started in February 2008, when the bank stated write-downs amounting to £225.6m and a fall in annual pre-tax profits to £126m (Lodge 2008c, 18). On August 29th the bank announced that it had faced a £18m loss because of organised mortgage frauds and further losses of £26.7m in the first half of the year mostly because of growing arrears on mortgages (Costello 2008b, 39; Treanor 2008b, 23). The bank's rate of arrears was understood to have risen by almost 50 per cent in the first half of 2008 (Lindsay 2008b, 55). In addition to the difficulties during summer, September was also a difficult for Bradford and Bingley, which started with the bank's sales director's resignation from the bank ("Business Digest" 2008, 40). "[...] Bradford & Bingley announced it had sunk to a first-half loss, hit by GBP 155 million in writedowns and investment losses, while bad debts had risen more than half since the end of 2007" (Bradley 2008, 30). The publicity that the bank had been receiving on the media increased as a result of growing concern over its future. Even though the bank managed to increase its core equity Tier 1 ratio up to 9.1 per cent (due to its rights issue) ("Bleak outlook ..." 2008, 15), by this time Bradford and Bingley had one of the lowest credit ratings of any bank in the developed world (Croft 2008s, 20). The deal set in December 2006 to purchase mortgages from a home loans originator also put the bank in a dire situation.²¹³ This deal was later restructured only with a compensation of £12-13m ("B&B agrees ..." 2008, 40; Aldrick 2008b, 3). On September 25th the bank announced that it would write down £133.8m because of exotic credit assets (Croft and Eaglesham 2008b, 25).

On the HBOS's side, the bank's exposure to the US mortgages was mostly because the bank had been forced to one of its off-balance funding vehicles onto its books in 2007

²¹³ This was also mentioned during Richard Pym's oral evidence before the Treasury Select Committee on November 18th, 2008. Available at House of Commons Treasury Committee 2009a, Ev 40-2.

(Larsen 2008c, 19). It later had to write down assets related to subprime securities amounting to £1.09bn (Croft 2008t, 17). However, this did not leave the bank immune to the ongoing problems in the international financial system. All got worse for the bank with the advance of March 2008 when it declared that the profit margin decreased for the bank (Hammond and Shamsuddin 2008, 16; Gray 2008, 19). On the last week of February, HBOS announced through its annual results that it had an exposure to Alt-A mortgages which were worse than prime mortgages in quality (Hughes 2008d, p 18) (amounting to \$7bn within its bigger amount of Treasury assets (Hume and Orr 2008d, 44)). Amid those news came another announcement from the bank to change its short-term incentive scheme (Croft 2008u, 40; Burgess 2008c, 16).

The annual meeting on 29 April revealed that the reduced value of the assets in HBOS' treasury portfolio would be up to £2.8bn (Larsen 2008c, 19). After the rights issue, the bank stated that its pre-tax profits in the first half of 2008 fell 72 per cent (Croft 2008v, 16). Given its exposure to corporate loans, the troubles in the housing market in the United Kingdom were also reflected in the shape of a rise in corporate bad debts (impaired corporate loans approximately amounting to £469m in the first half of 2008) following corporate defaults (Croft 2008y, 4; "Adapting to straitened ..." 2008, 17). As a response to all these growing strains on bank's future, HBOS suggested to cut jobs and terminate the operation of one of its five mortgage brands (Croft 2008d, 15; Odedra 2008, 16). The mortgage arrears of HBOS had risen to 17 per cent up to £5bn towards the end of the second quarter of the year (in the first five months of the year) (Croft 2008x, 16). As of August, it was clear that 2 per cent of the bank's mortgage books was comprised of impaired home loans in the first half of 2008 ("Adapting to straitened ..." 2008, 17). Nevertheless, worries about the bank's future were intensified by HBOS's exposure to six British house builders whose shares have declined as a response to the growing difficulties in the housing market, resonated in the shape of rising mortgage arrears for banks and falling house prices accompanied with rising unemployment (Croft 2008aa, 16). This resulted in HBOS to write down its equity stakes in those companies amounting to approximately £100m (Pignal and Croft 2008, 19).

Alliance and Leicester also informed markets on its write-downs in its Treasury investments. On May 2008 the bank announced further write-downs from its Treasury assets amounting to £192m (Croft 2008ab, 18). "The fresh writedown was for exotic assets such as structured investment vehicles, which will be included in its profit and loss account [...] It also took another £199m of writedowns through its reserves, though this will not reduce its regulatory capital or hit profits" (Croft 2008ab, 18). All these pointed to the fact that the bank was unlikely to make a pre-tax profit in the first half of 2008 (Croft 2008ab, 18). By July 2008, Alliance and Leicester was still resisting to raise capital through a rights issue, contrary to its rivals and amid speculation that the bank would cut down on its interim dividend (Croft

2008e, 20). The bank proposed scrip dividend option for investors which would enable them to take share rather than cash as dividend (Croft 2008e, 20). By this time, a take-over bid by Santander was in the headlines again after a failed attempt in preceding December (Larsen and Burgess 2008a, 20). By mid-July, the take-over deal of Alliance and Leicester by Santander was finally closed with a share price of 299p, in addition to the right to receive an 18p interim cash dividend (“Alliance & Leicester” 2008, 18; Vermeulen *et al* 2008, 18; Croft and Burgess 2008a, 14). Although Alliance and Leicester had preferred not to raise capital through a rights issue, the remaining two cases followed this route to strengthen their Tier 1 ratios.

5.5 Rights Issues to Raise Capital

Amid growing speculation that Bradford and Bingley was preparing to raise capital through a rights issue, the bank “[...] ruled out suggestions that a rights issue could be announced before or on April 22, when the bank is due to update on trading and hold its annual meeting” (Lodge 2008c, 18). Only one month after this statement (in May 2008) and to the surprise of markets (Hughes 2008e, 20), the bank confirmed a £300m rights issue (Larsen 2008d, 14; see also “Aborted issue ...” 2008, 21), offering 16 shares for every 25 to be priced at 82p (Croft and Larsen 2008b, 21). On June 2nd, however, the bank announced the restructuring of this rights issue (Hume and Elder 2008b, 42; see also Hill 2008b, 24; Jung-a *et al* 2008, 16) and issued a profit warning (losses amounting to £8m in the first four months of 2008 due to rising mortgage arrears) (Goff 2008c, 6). This restructuring, which would raise a total of £400m (Croft 2008ac, 21) suggested that a US private equity firm would invest £178m (55p per share) in return for a 23 per cent stake in the bank, becoming the biggest shareholder of Bradford and Bingley with two seats on the board (“Banks left ...” 2008, 25; “Warning signals ...” 2008, 21; Arnold 2008, 21).²¹⁴ In the meanwhile, a group of investors announced that they would prefer holding their investments in the bank through a restructuring specialist (“Resolution chief ...” 2008, 21; see also “Problems must ...” 2008, 25; Larsen, Hughes, and Arnold 2008a, 1). The board rejected this on the ground that the plan would effectively give the firm bank’s control (Larsen, Hughes, and Arnold 2008b, 21; see also Croft 2008ae, 25; Croft and Arnold 2008, 21). By the beginning of July both of the interested parties withdrew their offers for Bradford and Bingley (Croft, Burgess, and Arnold 2008, 1; Elder and Hume 2008b, 26). In the meanwhile, the bank was forced to feed its main mortgage securitisation vehicle with cash and was also obliged to purchase loans from a home loans originator each quarter amounting to £350m until the end of 2009 (Croft 2008ag, 18; Croft 2008ah, 21).²¹⁵ After the removal of the offers on Bradford and Bingley, investors agreed on a rights issue

²¹⁴ There were growing concerns over investors’ pre-emption rights after the inclusion of TPG into the deal. See Croft 2008ad, 18.

²¹⁵ By the end of September, the bank reached an agreement with loan originator to restructure its deal with the financial group.

amounting to £400m (55p per share) and decided to underwrite the part of the issue which used to be backed by the private equity firm (Burgess and Hughes 2008, 19). At the end of this, however, only the 28 per cent of the offered shares were bought by retail and institutional investors and the remaining (597m shares with the price of £328m) by underwriters and sub-underwriters (Goff 2008d, 16; Croft 2008s, 20; Croft 2008ai, 16).²¹⁶ This resulted in six of the UK high street banks to hold stakes in Bradford and Bingley (Treasor 2008b, 23).

By the end of April, HBOS started shrinking its mortgage range and increasing its mortgage rates (Goff and Kelleher 2008, 1). Despite all the negative publicity; however, the bank succeeded in closing a residential mortgage-backed securitisation deal amounting to £9bn (later to be swapped in Bank of England's Special Liquidity Scheme) most of which received triple-A ratings (Croft 2008aj, 16; Cohen, Davis, and Sakoui 2008, 1). Only two days after this and contrary to its initial statement a few weeks earlier, the bank announced that it was planning for a rights issue to raise £4bn to strengthen its capital base (Croft and Larsen 2008c, 22), preceded by the news of a £3bn Treasury asset write-downs (only £227m in 2007) (Croft and Burgess 2008b, 19; Croft 2008ak, 19). The rights issue was priced at 275p to offer two new shares for every five owned (Kelleher 2008b, 2), creating 1.45bn new shares (Hughes 2008g, 17). Nevertheless, the bank was uncertain if the rights issue would be taken by its 2 million retail investors (Croft 2008al, 19; Croft 2008am, 18). Royal Bank of Scotland ('RBS', hereafter) was also on its way for rights issue (amounting to £12bn) whereas Barclays preferred to apply to international investors for additional funding (Larsen 2008e, 21; Larsen 2008f, 21). The rights issue for RBS was completed successfully where 95 per cent of its shareholders took their rights (Larsen 2008g, 18). During the course of HBOS's rights issue; however, the bank's stock price constantly continued falling which prompted concerns as to whether it could go under the planned rights issue price (Croft 2008am, 18). June 11th saw the bank's share price to fall under the price set for the rights issue for the first time (Elder 2008, 40; Larsen and Mackintosh 2008, 21), which was quick to recover only a day after (Croft 2008an, 18). This fluctuation in its stock price worried markets and raised expectations for another right issue restructuring similar to the Bradford and Bingley's experience. However, although Bradford and Bingley had restructured its right issue after a profit warning, HBOS stated that the "[...] current trading and mortgage arrears performance were in line with the group's expectations" (Croft 2008an, 18). The chairman of the bank emphasised once more that the underlying motivations for the rights issue was prudential in nature in order to increase bank's capitalisation (Bolger 2008, 16). On July 18th the rights issue closed for the

²¹⁶ Those were Barclays, Lloyds TSB, HBOS, HSBC, and RBS that agreed to provide £20m. Those institutions had five days to place those shares in the market before they were banned from selling them for twenty days which became difficult after the drop in bank's share price to 51p.

HBOS, which eventually saw most of the bank's institutional investors not participating, only 8.3 per cent taking their rights (Croft 2008a, 17).

Conclusions

This background chapter has process traced, through primary sources, the developments surrounding Alliance and Leicester, HBOS, and Bradford and Bingley before their failures. As a result of the similarities in their business models and the deepening of the credit crunch into a financial crisis, one can identify several common denominators across those cases to pinpoint their problems. The identification of the main turning points along five separate dimensions has been crucial in setting the empirical background for the following argumentative chapter. To emphasise once more, the overarching objective of this chapter has been to illustrate that the three cases had been through similar problems before their failures, despite the varying degrees of depositor behaviour to each of them.

Against this empirical background and the changes in the regulatory landscape identified in *Chapter III*, the following final empirical chapter will present an analytical and theoretically informed discussion on the three cases with an attempt to understand the different depositor behaviours across these failures. It will act on the assumption that the containment and resolution policies towards the Northern Rock, as well as the following regulatory changes initiated by the Tripartite Authorities have been crucial in shaping depositor perceptions (through changing their reference points) and expectations for the future bank failures. It will argue that, against the updated reference points following the Northern Rock crisis, the varying degrees of depositor behaviour might lie within the increasing uncertainty in both domestic and international markets, the growing negative sentiments in line with the reflections of the credit crunch onto the real economy, as well as the signalling effect of the failure of HBOS. The final chapter of this thesis, *Conclusion*, will present a cross-case comparison across the four cases and compare the empirical regularities and the differences in the outcomes.

Chapter VI: Three Failures and One Bank Run: Across-Case Political Economy Analysis on Alliance and Leicester, HBOS, and Bradford and Bingley

Given the length and the amount of information available, the previous chapter has provided a descriptive account of the cases, while saving the analytical argument for the current chapter. It has illustrated that, despite to varying levels, all the three cases had gone through similar financial difficulties such as share price losses, credit downgrades, and asset write-downs, to name a few. Therefore, it has suggested that an explanation based solely on the deterioration of the economic fundamentals (be it bank-specific or system-wide) could not account for the varying degrees of depositor behaviour across the three bank failures. As has been illustrated with the Northern Rock case, this research argues that there are certain reference points towards which depositors' expectations converge. In addition to the relevance of fundamentals to depositor behaviour, depositor awareness towards the safety nets in place and the collective memory of the past (which is not directly related to the current situation) are also significant in decision-making.

This chapter argues that the reasons for the different depositor reactions to Alliance and Leicester, HBOS and Bradford and Bingley might lie (1) within the growing negative sentiments in line with the reflections of the credit crunch onto the real economy, (2) in the increasing uncertainty in both domestic and international markets, and (3) in the signalling effect of the failure of HBOS on the perceived risk of Bradford and Bingley. The lack of depositor awareness cannot be held accountable for the run on Bradford and Bingley, as there had been an increasing awareness towards the FSCS since the Northern Rock failure. In addition to this, an implicit understanding of 'too-big-to-fail' was also set in the common knowledge of the market actors. The below figure summarises this research's variables, the values that the dependent variable (outcome) takes across cases, and the timing of failure for each case.

		Alliance and Leicester	HBOS	Bradford and Bingley
	<i>(In order of failure)</i>	July 2008	September 2008	September 2008
Variables Tested Across Cases and Their Values				
Independent Variables	Fundamentals <i>(Bank-specific)</i>	Similar across cases <i>(See Chapter V for details)</i>		
	Macroeconomic Environment	Relatively calm	Peak of the crisis	Peak of the crisis
	Institutional Background			
	<i>FSCS coverage limit</i>	£35,000	£35,000	£35,000
	<i>Co-insurance principle</i>	Absent	Absent	Absent
	Reference (Focal) Points	Depositor Awareness Towards the FSCS	Increased	Increased
Collective memory of past crises (most recent)		Northern Rock	Northern Rock + Alliance Leicester	Northern Rock + Alliance Leicester + HBOS
	De facto or ex post guarantees	Too-big-to-fail	Too-big-to-fail	Too-big-to-fail
Dependent Variable	Depositor Behaviour	No reported bank run	No reported bank run	Reported bank run
	<i>Banking Panic</i>	Absent	Absent	Absent

Figure 10 Across-Case Analysis - Mill's Method of Difference

The present chapter follows a different methodological approach than the one applied to the Northern Rock case. *Chapter IV* was structured as to analyse the three possible explanations for the depositor run on Northern Rock in three sub-headings. Those were the fundamentals, institutional background, and the cognitive heuristics. While the first two are derived from the literature, this research refers to depositor awareness and the use of cognitive heuristics as alternative and complementary explanations for bank runs. Within this structure, it has highlighted the significance of the lack of depositor awareness towards the safety nets and the collective memory of the past in affecting depositor behaviour. Despite acknowledging its necessity, it has discussed that the deterioration in fundamentals was not sufficient alone to account for the run.

This chapter also examines the three possible explanations in order to shed light onto the reasons for the run on Bradford and Bingley. However, different from the single-case analysis of Northern Rock presented, the current chapter employs Mill's 'method of

difference' for an across-case analysis on the three cases.²¹⁷ This methodological approach expects cases to be similar in all independent variables saving one and to have varying degrees on the outcome. Accordingly, variables that are constant across the three cases are eliminated as possible explanations since they fail to explain the variance on the outcome. The previous chapter has analysed the fundamentals explanations and illustrated that since all the three cases had gone through similar financial problems, thus similar media coverages, this could not account for the changes in depositor behaviour. This chapter concentrates on the remaining two explanations and analyses their explanatory power for the different depositor reactions across the cases. By eliminating the possible explanations that fail to account for the variance, it aims to reach to the most likely reason(s) for the depositor run on Bradford and Bingley.

One of the conclusions reached with this analysis is that the failure of HBOS possessed signalling effects on the perceived solvency of Bradford and Bingley. Unless one treats Bradford and Bingley as an 'accident waiting to happen', the main counterfactual to this argument would be the following: we should not have observed a depositor run on Bradford and Bingley, if HBOS had not failed and taken over by Lloyds TSB. This, as a matter of fact, had been the case throughout the summer of 2008 during when the financial tensions for the bank were increasing. As discussed in the preceding chapter, bank-specific fundamentals had been deteriorating for all the three cases, including Bradford and Bingley. The timing of the depositor run, however, hints that expectations deteriorated significantly in September.

The macroeconomic environment had changed significantly during this month when HBOS and Bradford and Bingley failed within days from each other. While July 2008 had been relatively calmer in comparison to the following months, the developments in the international markets worsened with the advance of September 2008. As regards to the institutional background, the FSCS' limit remained constant with no co-insurance principle attached for all the three cases. Given the increasing media attention to the deposit insurance scheme, this chapter acts on the assumption that the depositor awareness towards the scheme had increased since the Northern Rock crisis and also as a result of the policy actions to fix the scheme's shortcomings. As an alternative reference point for depositor expectations, the Northern Rock legacy and a 'too-big-to-fail' understanding prevailed in all the three cases. However, an additional piece of information, which was the failure of HBOS, was also factored in depositors' decision-making in order to assess the solvency of Bradford and Bingley. Against the background of the turbulence in the financial markets and the growing negative sentiments towards the economy, this chapter argues that the signalling effect of HBOS' failure as the biggest savings institution in the market serves as a convincing explanation for the depositor reaction to Bradford and Bingley.

²¹⁷ For a detailed discussion on Mill's method of difference, refer to *Introduction*.

During the initial months of the credit crunch, Northern Rock had been the only institution to become exposed to a change in depositor behaviour. Without any generalised collapse of depositor confidence, it was *business as usual* for other banks. Following the first quarter of 2008, however, all demutualised building societies (ex-mutuals) were understood to be in financial difficulty and on the verge of collapse. Hence, at the end of the year, they were either nationalised (Northern Rock and Bradford and Bingley) or taken over by their bigger rivals (Alliance and Leicester, HBOS, Bradford and Bingley). A detailed process tracing of the period reveals that while Alliance and Leicester and HBOS²¹⁸ had not been subject to any depositor run (to the best of available data), there had been a silent run on Bradford and Bingley between September 20th and 28th 2008, only days before its nationalisation. Although those were not in the shape of an off-line run (as experienced during the Northern Rock episode), there were still “*hundreds of millions*” of deposits withdrawn quietly from the bank.²¹⁹ A comparison between HBOS and Bradford and Bingley during September 2008, when both these institutions failed, is especially puzzling. Albeit operating within the same institutional settings, under similar problems and during the same turbulent period, only the latter became exposed to a depositor run within the space of a week. The difference in the depositor behaviour across the three cases is the puzzle that this chapter intends to uncover while applying the insights gained through Northern Rock as a case study.

Bradford and Bingley was both different from and similar to Northern Rock (“TPG's investment ...” 2008, 21). As opposed to Northern Rock, Bradford and Bingley, with a deposit base amounting to approximately £20bn in total (Waples and Smith 2008, 1), had one of the highest core Tier 1 ratio in the banking sector ratios by September 2008 and had secured funding for its operations for the following year (Croft and Parker 2008e, 21). Similar to Northern Rock, however, the bank issued its first profit warning in June 2008, which raised concerns over possible depositor reactions. Without any off-line run on the bank, it was later understood that there had been a *silent run* amounting to £800m during June and July mostly by institutional investors²²⁰, as the most informed among the bank's creditors (Aldrick 2008c, 3; Treanor 2008b, 23; “What The Brokers Say” 2008, 6; Murray-West 2008, 1; Hosking 2008a, 45; Croft and Saigol 2008, 14). Following the uncertainty on the bank's rights issue and its profit warning (Croft and Parker 2008e, 21) the bank stated that there had been hundreds of millions of deposit withdrawals during when it was dealing

²¹⁸ Anecdotal evidence suggests that HBOS had also been subject to an outflow of deposit during September 2008. However, this is not as well documented as the run on Bradford and Bingley and is only mentioned in a few newspaper articles. This point is discussed further below.

²¹⁹ Refer to the oral evidence of Richard Pym and Rod Kent to the House of Commons Treasury Select Committee on November 18th, 2008. Available at House of Commons Treasury Committee 2009a.

²²⁰ Although some sources also refer to retail deposit outflows, it is not possible to be certain about the composition of deposit withdrawals.

with a troubled rights issue. When analysed through newspaper articles, no significant off-line depositor runs captures attention.²²¹

Towards the end of September, however, during when uncertainty over the bank increased on a daily basis, there had been increasing amounts of daily withdrawals from the bank through its website (“Savers flock ...” 2008, 5; Watkins and Ebrahimi 2008, 59; Watkins 2008, 8). This was emphasized by the chief executive of Bradford and Bingley during his oral evidence before the House of Commons Treasury Select Committee (2009, Ev 41). Accordingly, he stated that the situation worsened for the bank on Friday (26th) and Saturday (27th). On Friday the bank was “[...] in very close contact and during high periods of customer activity the FSA were receiving hourly reports on our cash flows” (House of Commons Treasury Committee 2009a, Ev 41). Deposit outflows from the bank worsened on Saturday,²²² while only a small number of depositors queuing in front of four (out of 197) of Bradford and Bingley branches (Griffiths and Kleinman 2008a, 1).²²³ This urged the bank to increase the number of staff in branches to deal with deposit withdrawals (Conway and Griffiths 2008, 1; Sunderland and Robinson 2008, 6). The bank closed its branches at 1 o’clock on Saturday during ‘when every single customer’ had been served.²²⁴ Although the bank’s declining share price was significant, one of the overarching reasons for the FSA to take action for Bradford and Bingley’s situation was the increasing amount of deposit outflows from the bank in the spite of a week. Below is the chief executive’s oral evidence before the Treasury Select Committee (2009, Ev 40):

The position on the Wednesday was we had an outflow of funds from the branches and from online of only £12 million. Previously that week it had been a lot higher because of media speculation, so by the Wednesday things had normalised, we were holding our own in UK deposits, but on that Thursday, after we made the statement, we lost £26 million. On the Friday, following further media reporting, we lost around £90 million and by lunchtime on the Saturday we had an outflow of around £200 million branches and online, and it was that which forced the FSA to act.

²²¹ According to a *Financial Times* article: “The contrast with the height of the Northern Rock crisis, when that bank's branches were thronged with anxious customers and the queues snaked outside, could not have been greater [...] It's fine,” said [...] one of the counter staff. “We were expecting queues yesterday but there weren't any. And our shares have gone up today. We have good customers. There's no problem [...] a hairdresser, was one of the few customers to emerge. A depositor, he said he was not worried about Bradford & Bingley. “I haven't got much [in my account]”, he said. Was this another Northern Rock in the making? “I don't think so.” (“All quiet ...” 2008, 25).

“B&B’s lone City branch, on London Wall, saw a trickle of customers and none that the *Financial Times* talked to was walking out of the troubled bank with their life savings [...] “I have a bit of money there and I am going to keep it,” [...] said. “There's a government guarantee in place so it's protected [...] Most other savers said that the government promise to pay out up to £35,000 of lost savings, made after the Northern Rock meltdown last year, had reassured their [...] One staff member said: “It's been very calm - business as usual!” (“All calm ...” 2008, 25).

²²² House of Commons Treasury Committee 2009a, Ev 40, 41.

²²³ See also House of Commons Treasury Committee 2009a, Ev 44.

²²⁴ Richard Pym’s oral evidence before the Treasury Select Committee on November, 18th 2008. See House of Commons Treasury Committee 2009a, Ev 44.

The current chapter will follow the same order with *Chapter IV*, where three sets of hypotheses are tested in separate sections. Accordingly, these will be (1) fundamentals and information asymmetries, (2) institutions and depositor awareness, and (3) cognitive shortcuts. The following fundamentals section will test the hypotheses put forward by the asymmetric information theories against the empirical evidence presented in the preceding chapter. The main preliminary finding of this section is that there must have been more than economic fundamentals in place to explain the different depositor reactions to the three cases given that all cases had been operating under similar economic conditions/vulnerabilities. Following this, the section on institutions will argue that, unlike the Northern Rock crisis, there had been an increase in the depositor awareness towards the deposit insurance scheme. Therefore, depositor reaction cannot be attributed to a lack of awareness towards the safety nets.

To further support the above point, this section will further discuss how the ‘too-big (interconnected)-to-fail’ understanding through the ‘Northern Rock legacy’ should have updated depositors’ reference points for future bank failures. The analysis on Northern Rock has argued how collective memory of past institutional failures and the Government’s handling of those had left affected depositor behaviour. However, *Chapter III* and *Chapter V* of this research have illustrated the numerous efforts by the Tripartite Authorities in addressing the crisis situation following Northern Rock’s failure. There had been several announcements and policy changes (including an update on FSCS’ coverage limit) following the run on Northern Rock to indicate a ‘blanket guarantee’ on the whole banking system, as opposed to only on Northern Rock. Given these policy reactions to contain the crisis, this research argues that the negative sentiments preceding the Northern Rock crisis must have altered throughout the period under examination. By the time of the failures of Bradford and Bingley and HBOS, depositors should have been assured of Government’s willingness to save them in cases of future bank failures.

Against this background, the section on cognitive heuristics will suggest that the signalling effect of HBOS’s failure on the perceived solvency of Bradford and Bingley, as a potential reference point, was influential in shaping depositor reaction. It summarises the developments in the international markets between October 2007 and September 2008, with a special emphasis on the final month. To conclude, this chapter will argue that the run on Bradford and Bingley was a ‘fundamentally informed but panic driven’, which rejects the sunspots explanations in the literature, yet also question a pure fundamentals-view of depositor runs. It will instead suggest self-fulfilling prophecies, informed by the state of the domestic and international economic fundamentals, to have affected depositor expectations during September 2008.

Empirical findings are collected from the *Financial Times* through *Nexis UK*, HM Treasury Reports published during the crisis, and the oral evidences before the House of Commons Select Committee. Different from the Northern Rock chapter, however, there are no depositor comments available to analyse given that the run on Bradford and Bingley was mostly an electronic (silent) one. In order to compensate this, the chapter will refer to the opinion polls conducted by various polling houses, such as ICM, Populus, Ipsos MORI, YouGov, between September 2007 and September 2008 to understand the general perceptions towards the Government's handling of the crisis, as well as towards the economy in general. For a full list of the hypotheses to be tested against empirical evidence, readers should refer to either *Introduction* or *Chapter II*. The first two hypotheses (*H0* and *H1*) will be tested against evidence collected in the preceding chapter. *H2* and *H3* will be the subject of the section where the institutional dimensions of bank runs are analysed. Finally, the last hypothesis, on the role of cognitive heuristics, will be tested in the final section of the chapter. Conclusion will summarise the argument and conclude the chapter.

6.1 Fundamentals and Information Asymmetries

Given that the deterioration of the bank-specific fundamentals cannot account for the varying depositor behaviour across cases, how much explanatory power does the asymmetric information theories have in addressing this chapter's puzzle? The preceding *Chapter V* presented a descriptive account of the similar problems within six dimensions faced by the three cases. This section will first summarise those shortly to remind the reader of the empirical background. Secondly, it will test the hypotheses put forward by the asymmetric information theory against the empirical evidence collected on the three cases. It is of significance to illustrate that each individual case had gone through similar economic problems. This rejects the null hypotheses (*H0*) that sunspots as random variables had triggered the run on Bradford and Bingley. On the contrary, there had been growing attention to the banks' difficulties in conducting their businesses during the preceding months of each individual bank failure. Therefore, despite being non-identical, they all signalled the markets of the financial difficulties in their businesses. As a way of comparison, the first figure below, *Figure 11*, illustrates the media coverages of Northern Rock, Alliance and Leicester, and Bradford and Bingley over the years between 1997 and 2008. The second figure, *Figure 12*, presents the monthly coverage between September 2007 and September 2008. As observed from those figures, although media coverage for Northern Rock had been higher compared to the other two cases, all the three cases received increasing publicity.

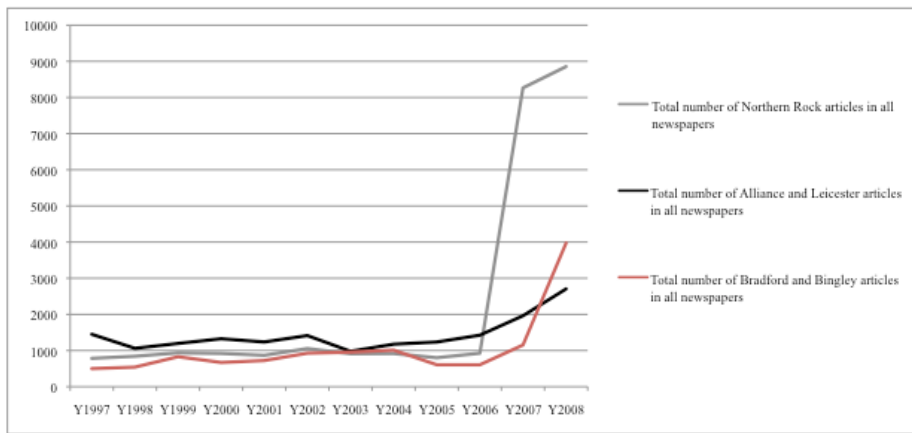


Figure 11 Newspaper Coverage for Northern Rock, Alliance and Leicester, Bradford and Bingley - Between 1997 and 2008

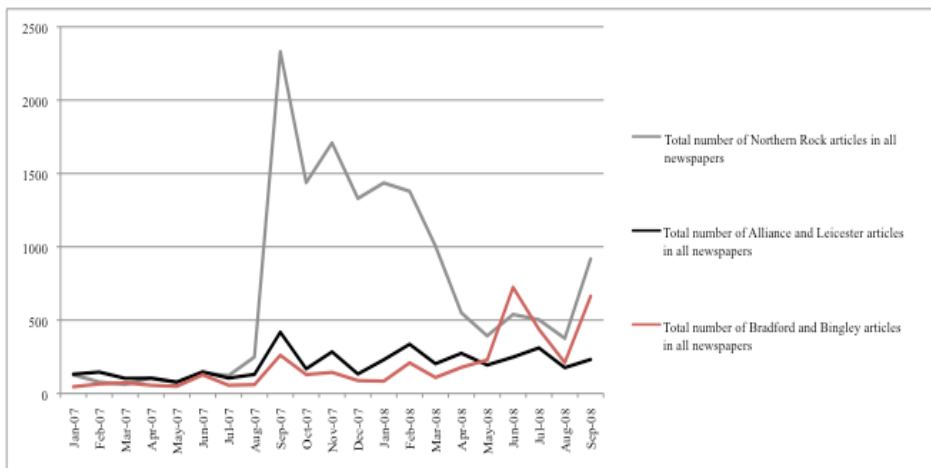


Figure 12 Newspaper Coverage for Northern Rock, Alliance and Leicester, Bradford and Bingley - Between September 2007 and September 2008

To summarise the developments preceding the failure of those three cases²²⁵, by April 2008, the share price of Alliance and Leicester had already halved amid growing concerns over its liquidity position. During the following months, the bank announced several write-downs in its Treasury investments, which were followed by credit downgrades by the major credit rating agencies. At the end of the first week of July, the bank faced the biggest loss in its share value and by mid-July was taken over by one of its bigger rivals, Santander.

²²⁵ All the relevant references for the empirical information are provided in the preceding chapter through primary sources.

The writedowns in credit market investments, nonetheless, were not specific to Alliance and Leicester. Since the Northern Rock crisis, HBOS share price had also been losing substantial amount of its value. By March, the bank announced the tightening of its profit margin and its exposure to Alt-A mortgages. Following the rumours that HBOS had reached Bank of England for an emergency funding, the FSA started its inquiry on March 19th into the bank's share price collapse. By the end of April, the bank started shrinking its mortgage range and increasing its mortgage rates. Contrary to its initial statement a few weeks before, HBOS announced that it was planning for a rights issue in order to raise £4bn to strengthen its capital base, preceded by the news of a £3bn Treasury asset write-downs. Worries about the bank's future were further intensified by HBOS's exposure to six British housebuilders, which resulted in the bank to write down its equity stakes in those companies amounting to approximately £100m and a rise in its mortgage arrears. In the meanwhile, the bank had been downgraded in May, as well as in September 2008, and its share price had been losing value. Eventually, the bank, with its 22 million customers, was taken over by Lloyds TSB through the suspension of the competition rules by the Government.

Finally, in February, Bradford and Bingley also revealed writedowns and its share price had been losing value during the preceding months. Going through a difficult rights issue, the bank issued a profit warning as a result of rising mortgage arrears, which further led to the restructuring of its rights issue. These negative developments were also accompanied by credit downgrades and intensified during September 2008. Eventually, Bradford and Bingley, as the last remaining publicly quoted mortgage lender, was partially nationalised and bought over by Abbey on September 29th. While the bank's declining share price was significant, one of the overarching reasons for the FSA to take action for Bradford and Bingley's situation was the increasing amount of deposit outflows from the bank within the span of a week.

Against this empirical background, each individual case had gone through similar economic problems and been exposed to a certain amount of negative publicity. Given the depositor run on Bradford and Bingley, the above discussion supports the first hypothesis by the asymmetric information theory that bank runs are related to the deterioration in economic fundamentals (*HT*). Despite being necessary, however, it also proves that the deterioration is not a sufficient condition on its own to trigger a change in depositor behaviour.²²⁶ While all the cases had been through similar problems, only one of them was exposed to a silent run to the extent that the FSA had to attend to the situation.

Recalling the working assumptions derived from the literature, the asymmetric information theories of bank runs expect a 'flight-to-quality' from insolvent to solvent banks, if the bank run is as a result of the fundamentals. Evidence collected through newspaper

²²⁶ Since the run on Bradford and Bingley was an electronic one (a silent run), it is not possible to test the the second working assumption (*W42*).

articles during this period also supports these theories and points to a flight-to-quality from insolvent to solvent banks. During September 2008, even though there had been no significant queues in front of banks branches, the numbers revealed that “[...] billions of pounds of savings [...] [were] quietly being shifted” (Oxlade 2008, 66). According to Building Societies Association, building societies had received a net of £1.44bn compared to the previous year when the number was £723m (Aldrick 2008c, 3). According to one source, during the period where HBOS’ difficulties received increasing media coverage, other building societies (such as Abbey, Bradford and Bingley, Nationwide, and Northern Rock) started receiving deposit inflows (Prestridge 2008, 67). Northern Rock, which experienced the first depositor run only a year ago, was seen as one of the securest and the most attractive places for savings due to the explicit blanket guarantee offered by the Government (Prestridge 2008, 67).²²⁷ During the first half of 2008, the bank had already strengthened its deposit base with an increase from £10bn to £13bn (Prestridge 2008, 67). Towards the end of September, it was understood that more than £1bn of deposits were placed with Northern Rock (“Savers flock to the Rock” 2008, 5). Although anecdotal evidence suggested that “[...] waves of HBOS [HBOS] savers have reduced their deposits in the bank below the £35,000 safety net - provided by the Financial Services Compensation Scheme - as a precaution against the Lloyds TSB takeover collapsing” (Prestridge 2008, 67)²²⁸, the bank had not infringed any threshold conditions for the FSA to attend to the situation. Despite the aforementioned flight-to-quality had affected HBOS (on the basis of this anecdotal evidence), it did not require any regulatory action, which was the case with Bradford and Bingley.

In conclusion, this section put forward two arguments: (1) given the economic circumstances and financial difficulties surrounding each case, the run on Bradford and Bingley rejects sunspots explanations. The silent run on Bradford and Bingley cannot be regarded as a ‘sunspot phenomena’. (2) Despite being non-random, however, it cannot also be explained with reference only to economic fundamentals. The varying degrees of depositor reactions across the three cases (albeit operating under similar economic problems) also render a fundamentals-based view insufficient to explain the run. There must have been more than economic fundamentals in place to explain the different depositor reactions to the failures of those cases. Those additional variables will be discussed in the following second and third sections.

²²⁷ Northern Rock Retail Deposit Changes semi-annually between 2005 and 2008 can be found at Northern Rock end year and half year reports are available at the following sources: Northern Rock 2008a, 2008b, 2007c, 2007d, 2006a, 2006b.

²²⁸ “Northern Rock is believed to have first seen a surge in deposits after rumours began to circulate about the financial health of HBOS in the days leading up to its deal with Lloyds TSB. Barclays, HSBC and Royal Bank of Scotland Royal Bank of Scotland are all thought to have benefited from large flows of deposits as customers began to fret about the future of HBOS. Over the past two weeks about £10 billion of savings has flowed out of HBOS into rival institutions, according to banking sources” (“Savers flock to the Rock” 2008, 5).

6.2 Institutions and Depositor Awareness

Can the run on Bradford and Bingley be treated as an institutional failure for the deposit insurance scheme? The previous *Chapter IV* on the Northern Rock crisis has argued that the depositor run on the bank could not certainly be attributed to the failure of the institutional arrangements given the lack of depositor awareness towards the safety nets in place. As regards to the institutional dimensions, this section puts forward two main arguments. Firstly, it will argue that the lack of depositor awareness cannot hold true for the Bradford and Bingley case, as there had been an increasing awareness towards the FSCS, as well as its shortcomings and limitations, since the Northern Rock crisis. Secondly, in addition to an increasing awareness towards the formal safety nets, an implicit understanding of ‘too-big (interconnected)-to-fail’ had also been set in the *common knowledge* of the market actors, including depositors.

To start with the former argument, the Northern Rock crisis had increased awareness towards the formal deposit insurance scheme (FSCS), as well as towards its shortcomings. This assumption is also echoed by the aforementioned FSA survey conducted in September 2008.²²⁹ The following months of the Northern Rock crisis experienced an increased media coverage for the FSCS compared to the months preceding the credit crunch. Below *Figure 13* illustrates this point. There had been on-going talks about the increase in the limit of the deposit insurance scheme (to either £50,000 or £100,000). Moreover, the aforementioned shuffling of deposits within the banking system might have also been motivated to keep the individual deposit accounts below the limit guaranteed by the FSCS.²³⁰

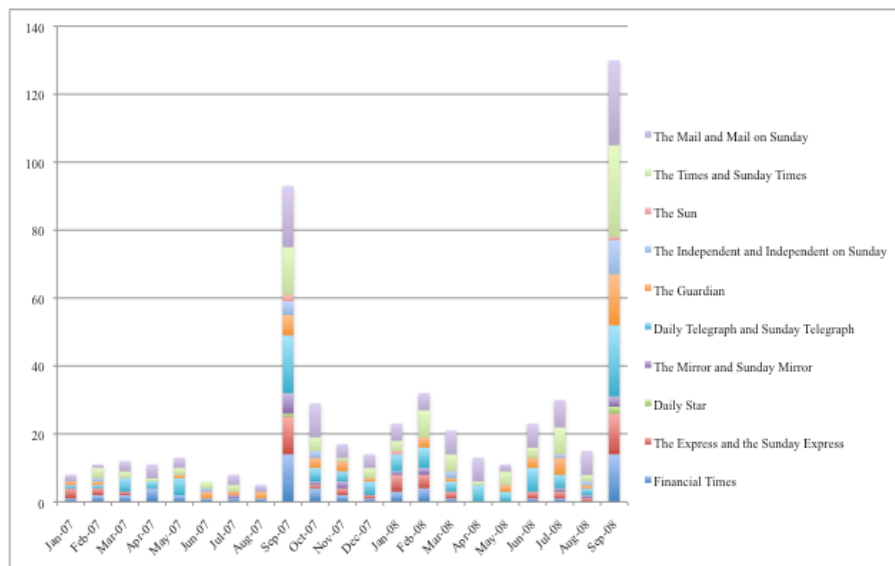


Figure 13 Newspaper Coverage for FSCS - Between January 2007 and September 2008

²²⁹ FSA 2009c.

²³⁰ The efficiency in stabilising depositor expectations depends on the specifications of the scheme.

Secondly, the literature argues that in the case of an inefficient deposit protection scheme, *de facto* (such as the ‘too-big (interconnected)-to-fail’ understanding) or *ex post* (blanket) guarantees should stabilise depositor expectations. Recalling the discussion presented on Northern Rock, it was argued that the blanket guarantee introduced after the first days of the depositor run had not been sufficient in preventing a silent run on the bank as a result of the policy uncertainties on the bank’s future. The Tripartite Authorities addressed the loss of confidence in the markets and in depositors through various policy tools. The previous *Chapter III* has provided a descriptive summary of the policy actions taken ranging from bank resolution to bank restructuring, all of which shared the overarching aim of stabilising confidence in the markets. The immediate reaction of the Authorities to the Northern Rock crisis has been the classical policy responses with the LoLR facility by the Bank of England and the blanket guarantee provided by the Government. While this unlimited guarantee on Northern Rock had been an urgent fix to stabilise depositor expectations, there had also been various attempts from the Tripartite Authorities during the following months to restore confidence back in the banking system in general. There were policy changes addressing the shortcomings of the bank insolvency regime (Special Resolution Regime – with a special emphasis on preserving the ‘critical banking’ functions in the events of insolvency), deposit insurance scheme, and the provision of liquidity in vast amounts into the markets by the Bank of England. Although some of those policies were not specifically directed towards depositors, as opposed to the blanket guarantees or the updates on the depositor scheme, this research argues that they still dispersed the *too-big-to-fail* understanding in the markets’ perception and served as new *reference points* for depositor expectations. In other words, any bank failure following this period would be interpreted under the light of the ‘Northern Rock legacy’ since it was now part of the common knowledge.

This would assume that all banks operating in the UK were implicitly, although not officially, under the blanket government guarantee.²³¹ As a matter of fact, the HM Treasury had made it known in its announcements that should the necessity arose, a similar help would be provided to other institutions. Below are the Chancellor’s announcements.

14 September 2007 *Announcement of the liquidity support facility to Northern Rock:*

“[...] In its role as lender of last resort, the Bank of England stands ready to make available facilities in comparable circumstances, where institutions face short-term liquidity difficulties” (HM Treasury 2007a)

²³¹ This point was also emphasised by Laeven and Valencia in the literature. “In other instances, the guarantee has been extended only for a specific institution or set of institutions, whenever bank runs have been contained within a segment of the system [...] including the most recent case of Northern Rock in the United Kingdom. While in these cases guarantees are explicitly limited to specific institutions, the public may have interpreted them as if similar actions would be taken should problems at other banks arise” (Laeven and Valencia 2008b, 6).

17 September 2007 *Announcement of the blanket guarantee to Northern Rock*:

“[...] As I have discussed with Secretary Paulson, we will continue to work here and internationally to do everything we can to maintain a stable and strong economy”
(HM Treasury 2007b)

This assumption is also echoed in the aforementioned FSA survey conducted in September 2008, with the following comments from respondents:²³²

“Judging by Northern Rock, the government bails them out. Whether or not they’ve put in place other measures I don’t know”

“The government will stick its nose in and sort it out. That’s my belief [...] They have done, so why should they not do so again?”

“I don’t perceive there to be a risk you need to spread, because NR [Northern Rock] was saved and the two big mortgage companies in America have both been rescued. Bradford & Bingley will be next, though there doesn’t seem to be a rush to get money out”

“The government wouldn’t even want that sort of social disorder going on...you can’t have banks collapsing every 6 months and people losing money”

“I look at what just happened in the US with the mortgage institutions, and they’re too big to allow them to fail, so they’re going to print money for them, they’re in public ownership. And I think it would be the same with Lloyds”

“I also feel that if they stepped in for Northern Rock, it’s pretty likely they’d step in for the likes of HSBC”

“I think there is always someone to take them over or bail them out. I am sure that someone would help them if they got into real schtuck ... Northern Rock were bailed out”

To summarise, the two arguments put forward by this section suggested that there had been an increasing awareness towards both the formal (FSCS) and informal (the blanket guarantee) safety nets in place since the Northern Rock crisis. Therefore, since all the three cases had been operating under the same institutional settings and shortcomings, the variance on the dependent variable (i.e. the depositor behaviour) cannot be explained with reference to those given the unconditional implicit blanket guarantee by the Government on the banking system. Although the aforementioned flight-to-quality might be attributed as a reaction to the FSCS’s shortcomings, it also points to the fact that the blanket guarantee and *de facto* guarantees failed to stabilise depositor expectations given the silent run on Bradford and Bingley.

One could highlight the different types of runs between Northern Rock and Bradford and Bingley to argue the incomparability of these two cases. While Northern Rock, at least during the first days after the announcement of the LoLR facility, had been exposed to an off-line retail run, no queues to such an extent were observed in front of Bradford and Bingley branches. There had been a silent run on the bank, which could include wholesale depositors along with retail ones. However, following the Northern Rock crisis, even the banks’

²³² FSA 2009c.

wholesale depositors, who had been traditionally exempt from the deposit insurance scheme, were protected by the blanket guarantee. There had been several extensions to the blanket guarantee to cover uncollateralised deposits, wholesale borrowing and the retail bonds of Northern Rock (on September 20th) and all the new deposits made after September 19th (on October 9th). As a matter of fact, by December, “[t]he extended guarantee [...] [accounted] for about a third of Northern Rock's Pounds 113bn balance sheet and [...] cover[ed] any shortfalls on instruments such as covered bonds - an ultra-safe bond - and derivatives that are not backed by mortgage collateral” (Croft, Giles, and Parker 2007a, 1). Therefore, against the example of the Northern Rock crisis and its resolution, these guarantees should have also prevented a silent wholesale run on Bradford and Bingley.

6.3 Cognitive Shortcuts and Reference Points

In the previous sections, this chapter has so far argued that (1) the run on Bradford and Bingley resembles less to a sunspots phenomenon but more to a fundamentals equilibrium and (2) it cannot be explained through the lack of depositor awareness towards the FSCS. To further support this, it has also argued (3) how the too-big-to-fail understanding updated reference points for future bank failures and how common knowledge had been restored through the actions of the Tripartite Authorities. This final section will argue that the run on Bradford and Bingley was ‘fundamentally informed but panic driven’ against the developments in the international financial markets which were not *directly* related to the bank itself, including the failure of one of the biggest savings institutions in the market, namely HBOS. The uncertainty on the bank’s future, accompanied with the ongoing financial problems, intensified the information asymmetries between the bank and its depositors. It will argue that the failure of HBOS within a period of economic uncertainty and increasing expectations for a recession had signalling effects on the perceived risk of Bradford and Bingley. In other words, the failure of HBOS was the most recent reference point for depositors to form their expectations on.

Against this background, this section will first present the opinion polls during and after the Northern Rock crisis to illustrate the changing sentiments towards the Government’s handling of the crisis and towards the macroeconomy in general. As obvious with the opinion polls across months, there had been an incremental change in how the general health of the economy was perceived. In addition, the developments in the international financial markets in September 2008 also increased uncertainty within the markets. The turning points of this period, as well as within the preceding months, will be discussed shortly. Secondly, the section will also utilise from the case of Alliance and Leicester as a *counterfactual*. To emphasise once more, the outcomes that this research intends to explain are the occurrences of bank runs. Therefore, any assumption or the analysis on the case of Alliance and Leicester will

remain incomplete under the analytical tools of this research. It refers to Alliance and Leicester only to present a counterfactual analysis and to shed light on the reasons for the depositor run on Bradford and Bingley. Having said this, this section will argue that albeit having similar problems and operating under a similar funding structure to Bradford and Bingley, the arrangements put in place (i.e., the take-over by Santander) and the relatively calmer international financial environment during its resolution helped Alliance and Leicester to keep depositor expectations stable. The failure of HBOS just week before Bradford and Bingley's nationalisation had constructed a reference point for the perceived riskiness of Bradford and Bingley. As a first step towards this analysis, this section now turns its attention to the opinion polls conducted by various polling houses.

As discussed in the previous section on institutions, while the Government and the Tripartite Authorities had illustrated that they would take the necessary measures to restore market confidence, the opinion polls deteriorated during the following months of the Northern Rock crisis. During the initial month of the crisis (September 2007) public opinion towards the economy in general and the Government's handling of the Northern Rock crisis in particular remained positive, in comparison to the following months. Opinion polls conducted by different polling houses reveal that depositor confidence in banks and building societies remained high (42 per cent answered to have *a great deal of confidence* and 44 per cent as *moderate confidence*) as of 17th September 2007 (Populus 2007). According to another poll conducted in September, only 20 per cent of the interviewees stated they were either very worried or fairly worried that their savings could be at risk with banks and building societies (as opposed to 74 per cent of respondents who were either not very worried or not worried at all) (YouGov 2007a). Finally, a further poll by Ipsos-Mori (2007) conducted in the same period shows that 45 per cent of the respondents (net) were satisfied with the way the Government had handled the problems with the Northern Rock.

By November 2007, only 12 per cent of all respondents rated the Government's performance on Northern Rock above *fair*, whereas fifty four per cent of them rated it as either poor or awful (YouGov 2007b). Sixty eight per cent of the respondents said they were either not very confident or not confident at all that the Government and the taxpayers would get all or most of their money back (as opposed to the 25 per cent of very or fairly confident). According to two separate *Times Northern Rock Polls* by Populus (2007; 2008a), while the financial problems in the American mortgage market had been blamed for Northern Rock's problems in September 2007, this had shifted towards domestic institutions (including the Government) and Northern Rock itself in the following months.

A YouGov (2007c) poll conducted for the *Sunday Times* in December 2007 revealed that 44 per cent of the respondents thought the Government had handled the problems facing the Northern Rock badly. Populus (2008b) directed a similar question for its *Economic*

Confidence Survey in January 2008, during which sixty one per cent of the respondents ranked the Government's handling of the Northern Rock crisis either poor (24 per cent) or awful (37 per cent).²³³ In December 2007, an ICM (2007a) poll for the *Guardian* asked the respondents whether they felt less or more confident about their savings' safety in a British Bank or Building Society. Only 23 per cent of the answers were positive, whereas 47 per cent of the interviewees replied as being less confident about their savings.

During February 2008, the month of Northern Rock's nationalisation, three different polling houses conducted opinion polls, two of which succeeding and one preceding the bank's nationalisation. Seventy one per cent of the respondents stated that *Virgin Money* should be allowed to take over Northern Rock (YouGov 2008a). Another poll conducted immediately after the nationalisation of Northern Rock reveal that sixty nine per cent of the respondents believed the Government could have pursued a private option harder for Northern Rock (Populus 2008a). In another poll, half of the interviewees thought the Government did not handle the crisis surrounding Northern Rock well (Populus 2008c). A YouGov (2008a) poll in February 2008 also showed that fifty one per cent of the respondents rated the Government's handling of the Northern Rock crisis as either *poor* or *awful*. These again contrast with the outcomes of the September poll by Ipsos-Mori (2007) where only 25 per cent of the respondents were dissatisfied with the Government's handling of the problems with Northern Rock. Against this background, can the growing dissatisfaction with the Government's handling of the Northern Rock crisis account for the run on Bradford and Bingley?

Taking the Alliance and Leicester case as a counterfactual, depositor perceptions towards the Authorities' handling of the crisis and the deterioration of the bank's economic health remain insufficient in explaining the different degrees of change in depositor behaviour. Although the microeconomic circumstances for Bradford and Bingley and Alliance and Leicester were not completely identical, both banks had been exposed to negative publicity through the news and saw their share prices lose great value before their failures. Therefore, the deterioration of the bank's economic health remains insufficient in explaining the different degrees of change in depositor behaviour. However, the case of Alliance and Leicester with no substantial depositor movements from the bank might suggest that depositor expectations had been stabilised compared to the Northern Rock episode, which was also assisted by a relatively calm international financial environment. As illustrated in the preceding section, the lack of institutional awareness, which had been constant across cases, cannot also explain the different outcomes. Neither can the negative sentiments towards the Authorities' handling of the crisis. Applying Mill's method of difference to those cases, what changed across these two

²³³ In contrast, 8 per cent answered as good and 21 per cent as fair.

bank failures were the macroeconomic environment and the uncertainty diffused following the problems in the domestic and international markets.

September 2008 has been one of the most important turning points during the recent financial crisis with the bailout of Fannie Mae and Freddie Mac (on September, 7th), the takeover of Merrill Lynch by the Bank of America ('BofA', hereafter), the nationalisation of American International Group ('AIG', hereafter) and the collapse of Lehman Brothers (all on September 15th). In order for a better understanding of this period, I now present a short summary of the developments and major turning points in the international financial markets within the period under examination.

The problems in the international financial markets had already revealed themselves since the credit crunch of the summer of 2007.²³⁴ In October 2007 Citigroup, JP Morgan and the BofA announced their plan to create a super fund, backed by the Treasury, in order to address the ongoing stress in the commercial paper markets. This was only to be abandoned in December as a result of the unwillingness from the banking industry. The Fed injected \$41bn into the markets in November in order to reverse the widening gap between money market rates and the Federal funds rate. During this month and also in December, there were several announcements of initiatives both from the Fed and the European Central Bank to ease market (liquidity) conditions in the money markets. At the start of the new year, it was announced that the BofA had decided to buy Countrywide Financial. Ambac, and previously ACA Financial Guaranty in December, received ratings downgrades, which were later transmitted to the markets through downgrades of the bonds guaranteed by these institutions. In the spite of a month, the Fed announced two Federal funds rate cuts amounting to 3 per cent. Ambac Financial and the BofA announced losses in January, while Credit Suisse announced losses on structured credit products and AIG increased its estimations for the losses in February. A \$170bn fiscal stimulus package was enacted in the United S.²³⁵

In mid-March Bear Stearns was bailed out through an emergency funding from JPMorgan Chase&Co and the United States Government (Bank of England 2008b, 9; FSA 2009a, 13). One of the largest investment banks in the financial markets, Bear Stearns' problems had started in July 2007 due to hedge fund losses during the credit crunch (Guerrera, Guha, and Larsen 2008, 2). On March 14th the bank stated "[...] its liquidity position had "significantly deteriorated" and that it would tap the Fed's emergency finance facility - known as the discount window - through an arrangement with JPMorgan. The Fed took on the credit risk involved in the loans, which are secured against collateral" (Gangahar, Guerrera, Guha, Mackenzie, and White 2008, 1). It was the first time since 1960s when an emergency funding

²³⁴ For a detailed chronology of the international developments see Felton and Reinhart 2009.

²³⁵ All the information contained in this paragraph are a summary of the chronological events presented by Hall 2009.

by the Fed was provided to a non-deposit taking bank, during when JPMorgan acted as a broker between the Fed's discount window and Bear Stearns (Guha 2008a, 2).

Also in March, the spotlights were on the back then the government-sponsored mortgage providers, Fannie Mae and Freddie Mac. They received a reduction in their surplus regulatory capital requirements in order to provide liquidity into the mortgage market (which would later be supplemented by an additional \$10bn new capital raised by those enterprises). This was followed by a further cut in May from 20 to 15 per cent. "In a further bid to support the US housing market, the US Government, through the Federal Housing Finance Board, gives [sic] the Federal Home Loan Banks permission to increase (by over \$100 billion) for two years their purchases of mortgage-backed securities guaranteed by Fannie Mae and Freddie Mac, the Government-chartered mortgage financiers" (Hall 2009). In April, it was revealed that those entities, as well as Federal Home Loan Bank, had taken a 90 per cent market share of the new mortgages in the United States by the end of 2007. By August 2008, Fannie Mae and Freddie Mac revealed second-quarter losses.²³⁶

After the support they had received from the United States Government during the summer of 2008, Fannie Mae and Freddie Mac were rescued and taken into conservatorship on September 7th 2008. This piece of news hit the world financial markets, as the operation would be the biggest financial bailout back then (Guha, Giles, Scholtes, and Chung 2008, 1). According to its plan, the United States Government would provide each government-sponsored enterprise capital up to \$100bn, purchasing mortgage-bonds issued by these entities and an additional backstop liquidity arrangement for them (Guha 2008b, 2). As a matter of fact, the 'too-big-to-fail' argument was emphasised by Hank Paulson, the United States Treasury Secretary, in the following words: "Fannie Mae and Freddie Mac are so large and so interwoven in our financial system that a failure of either of them would cause great turmoil in our financial markets here at home and around the globe" (referred in Guha, Giles, Scholtes, and Chung 2008, 1).

Against the background of all these developments, the international financial system was shaken to its foundations in the following week. In spite of a few days, some of the most established institutions of the financial system were either bailed out or let go bust. Yet, on September 15th Lehman Brothers filed for bankruptcy (after having announced a third-quarter loss a few days earlier) and Merrill Lynch was taken over by BofA (Clark 2008d, 43). It was announced that Merrill Lynch, one of the last remaining investment banks, had agreed to be

²³⁶ In the meanwhile however, there have been numerous developments to illustrate the weaknesses of the financial markets. There were writedowns announced by UBS, Deutsche Bank, BayernLB, Citigroup, first quarter losses by Wachovia, Citigroup in April, and second quarter losses by Lehman Brothers in June. In July, IndyMac Bancorp collapsed with depositors queueing in front of its branches. "Merrill Lynch announces sales of \$30 billion of CDOs for \$6.7 billion, raising just 22 cents on the dollar, intensifying pressure on other banks to make further writedowns on mortgage-related securities". In Denmark, Roskilde Bank was taken control of the Danish central bank. See Hall 2009 for details.

sold to BofA to the amount of \$50bn (Farrell 2008, 3). On the same day and to the surprise of markets, once though ‘too-big-to-fail’ Lehman Brothers was let fail and the bank filled Chapter 11 for bankruptcy.²³⁷ This, as a matter of fact, “[...] triggered a widespread crisis of confidence” (House of Commons Treasury Committee 2009b, 17). Writing-off Lehman related investment caused a general anxiety about counter-party risks which led to a freeze in credit and money markets (House of Commons Treasury Committee 2009b, 17).

Problems in AIG were also revealed during the same period as the group applied to Fed for additional funding amounting to approximately £20bn (Clark 2008e, 31; Mackenzie, van Duyn, Guha, and Guerrero 2008, 1). “On 15 September, AIG’s credit rating was downgraded, forcing it to post a substantial amount of collateral to its counterparties. It was unable to liquidate sufficient assets quickly enough and on 16 September the US government announced a support package, agreeing to lend US\$85 billion in return for a 79.9% stake” (Bank of England 2008a, 18-9). In addition to Fed’s actions, a private liquidity fund was created by eleven banks to help ailing institutions in case of a trouble (Scholtes and Guha 2008, 4).

On the same day, major rating agencies downgraded Washington Mutual to junk status (which collapsed towards the end of the month) and Goldman Sachs announced a fall in its third-quarter profits. The shares of Morgan Stanley and Goldman Sachs crashed on September 17th (only to increase back in two days) and both these institutions requested to become bank holding companies (Hall 2009). On September 22nd Goldman Sachs and Morgan Stanley became regulated bank holding companies, which would provide them with access to the Fed’s discount lending window (Bank of England 2008a, 19). On September 29th, Wachovia was rescued by Citigroup through a government-arranged takeover (Hall 2009). “The pressures were also felt in Europe. At the end of September Dexia, Fortis and Hypo Real Estate all had to receive emergency capital injections, mostly government supplied [and Glitnir had to be nationalised in Iceland]” (Gieve 2008b).

All these developments were accompanied by the domestic problems in the banking sector in the United Kingdom. There were the following three main issues to deal with during this period: The failing share price of HBOS, increasing financial problems of Bradford and Bingley, and the completion of the deal between Alliance and Leicester and Santander. As the Bank of England’s *Financial Stability Report* described, all these developments

[...] led to the third, and most violent, phase of the turmoil, with system-wide financial sector fragilities emerging internationally. In response, governments facilitated bank mergers or nationalised firms to stabilise the banking system. In the United Kingdom, Bradford & Bingley was partly nationalised, Alliance & Leicester was taken over by Banco Santander and Lloyds TSB instigated an acquisition of HBOS (Bank of England 2008a, 23).

²³⁷ For a brief recent history of Lehman Brothers see Sender, Guerrero, Larsen, and Silverman 2008, 9.

Below list summarises the domestic and international developments during September 2008.

- 1st September Fitch downgrades Bradford and Bingley (Croft 2008r, 18)
Group sales director leaves Bradford and Bingley (Croft 2008r, 18)
- 7th September US Treasury takes Fannie Mae and Freddie Mac into conservatorship (Felton and Reinhart 2009)
- 8th September Nationwide, The Derbyshire and The Cheshire announce their intentions for a merger (FSA 2008h)
- 10th September Lehman Brothers announces quarterly loss (Felton and Reinhart 2009)
- 15 September Lehman Brothers files for bankruptcy (Felton and Reinhart 2009)
Bank of America buys Merrill Lynch (Felton and Reinhart 2009)
AIG approaches the Fed (Felton and Reinhart 2009)
Fed expands the type of collateral for TSLF and PDCF (Felton and Reinhart 2009)
Bank of England auctions an additional £5 billion (Hall 2009)
- 16 September Bank of England injects £20 billion (Hall 2009)
Shares in HBOS falls (Croft 2008f, 1)
Fitch downgrades HBOS (Croft 2008f, 1)
Positive statement by the FSA on HBOS: “We can confirm that HBOS has stated it has a strong capital base and continues to fund very satisfactorily” (Croft 2008f, 1)
S&P and Moody's downgrade Washington Mutual (Hall 2009)
Goldman Sachs announces a fall in third-quarter profits (Hall 2009)
Fed agrees to help AIG (Felton and Reinhart 2009)
- 17th September Lloyds TSB takes over HBOS (Croft, Larsen, Burgess, and Parker 2008, 6)
BBC reports the merger four hours earlier than the official confirmation of the deal (Hill 2008d, 22)²³⁸
Bank of England announces the Special Liquidity Scheme (Bank of England 2008j)
Morgan Stanley and Goldman Sachs shares crash (Hall 2009)
Fed extends loan to AIG (Hall 2009)
- 18th September Chancellor's statement on the merger of Lloyds TSB and HBOS (HM Treasury 2008a)
Coordinated central bank action to improve US\$ Liquidity (Bank of England 2008k)
FSA agrees to prohibit the short selling of the publicly quoted financial companies (FSA 2008i)
Fitch put HBOS and Lloyds on rating watch negative (“Lloyds TSB chief hails ...” 2008, 4)
- 19th September Moody's downgrades Bradford and Bingley to just one notch above junk status (“Bleak outlook for B&B ...” 2008, 15)
The SEC temporarily bans short-selling in the US (Felton and Reinhart 2009)
“The US Treasury announces that it will insure money market funds for a year” (Felton and Reinhart 2009)
“The US Treasury first proposes the TARP” (Felton and Reinhart 2009)
- 21st September “Goldman Sachs and Morgan Stanley announce to become bank holding companies” (Felton and Reinhart 2009)
- 22nd September “Morgan Stanley announces to sell a stake to MUFJ” (Hall 2009)
“Australia, Taiwan, and the Netherlands announce temporary short-selling bans” (Felton and Reinhart 2009)

²³⁸ See Robert Peston's blog on BBC - http://www.bbc.co.uk/blogs/thereporters/robertpeston/2008/09/lloyds_to_buy_hbos.html, accessed on 20/12/2011.

- “The Chancellor announces a wide-ranging review of UK banking regulation to be conducted by the new Chairman of the FSA” (Hall 2009)
- “It emerged [...] that Spain's Banco Santander could be willing to play a role difficult” (Croft 2008ar, 23)
- 24th September Bradford and Bingley arranged an agreement to avoid taking £1bn worth of mortgages on to its balance sheet (Larsen 2008b, 24)
- Bradford and Bingley is downgraded by S&P and Fitch (Croft 2008aq, 25)
- “[...] outflow of funds from the [Bradford and Bingley] branches and from online of only £12 million” (House of Commons Treasury Committee 2009a, Ev 40)
- Bradford and Bingley arranges a counterparty for its covered bond programme (Hall 2009)
- 25th September B&B announces job cuts and further writedowns (Croft and Eaglesham 2008b, 25; Croft 2008as, 25)
- B&B shares fall and the bank's credit default swap spreads rise (Croft 2008as, 25)
- B&B statement – “We are a strongly capitalised bank now undertaking a complex transition with regrettable job losses, but we are planning to put the problems of the past behind us and have a business which is fit for purpose going forward” (Referred in “B&B shares at a record...” 2008, 30)
- Bradford and Bingley loses £26million of deposits after the announcement (House of Commons Treasury Committee 2009a, Ev 40)
- “The FDIC closes Washington Mutual and arranges a sale to J.P.Morgan” (Felton and Reinhart 2009)
- 26th September Further deposit outflows amounting to approximately £90m from B&B following media reporting (House of Commons Treasury Committee 2009a, Ev 40)
- Situation becomes public before the official announcement (House of Commons Treasury Committee 2009a, Ev 41)
- The Belgium Government offers reassurances to the depositors of Fortis (Hall 2009)
- Coordinated central bank action to address pressures in the markets (Bank of England 2008l)
- 27th September Further deposit outflows from Bradford and Bingley - “[...] by lunchtime on the Saturday we had an outflow of around £200 million online” (House of Commons Treasury Committee 2009a, Ev 40)
- “The immediacy of the talks was underlined by the “tens of millions” of pounds that were being withdrawn by savers from Bradford & Bingley's 200 branches and internet site on Friday and Saturday” (Croft 2008at, 21. See also Croft 2008au, 23)
- FSA states Bradford and Bingley no longer able to meet the threshold conditions (House of Commons Treasury Committee 2009a, Ev 41)
- The government invited bids for Bradford and Bingley's retail deposit base (Croft, Burgess, and Parker 2008b, 1; Giles and Parker 2008, 22)
- 28th September Santander agrees to buy Bradford and Bingley branches and its retail deposits (Croft, Burgess, and Parker 2008b, 1)
- 29th September Treasury announces that Bradford and Bingley's retail deposit and branch network has been transferred to Abbey-National plc, where the remainder of the business will be taken into public ownership (HM Treasury 2008k)
- FSCS pays out approximately £14bn to enable Bradford and Bingley's retail deposits to be transferred to Abbey. The Treasury makes addition payment to Abbey in for the transfer of the deposits uncovered by the FSCS (HM Treasury 2008k)
- Government guarantee arrangements are put in place for Bradford and Bingley's “[...] certain wholesale borrowings, and derivative transactions of and wholesale deposits with, Bradford & Bingley plc (“Bradford & Bingley”) existing as at midnight on 28 September 2008.” (HM Treasury 2008l)

In order to be able to understand the different depositor reactions across the bank failures, it is also of significance to understand how the state of the economy was *perceived* by depositors. The discussion below will once more utilise from the opinion polls conducted by various polling houses in order to capture perceptions towards the economy and the level of confidence towards economic stability. As was the case with the growing dissatisfaction towards the Government's handling of the Northern Rock crisis, the negative sentiment had been taking place with the passage of time and the level of confidence in the overall economy had been declining significantly due to the repercussions of the credit crunch onto the real economy. The below *Figure 14* illustrates a correlation between voting intentions and the expectations from each party to manage Britain's economy. Especially from February 2008 onwards the gap between the Conservative and the Labour Party widens. With a decreasing intention to vote for the Labour Party, respondents believe less in the Party's ability to run Britain's economy well.

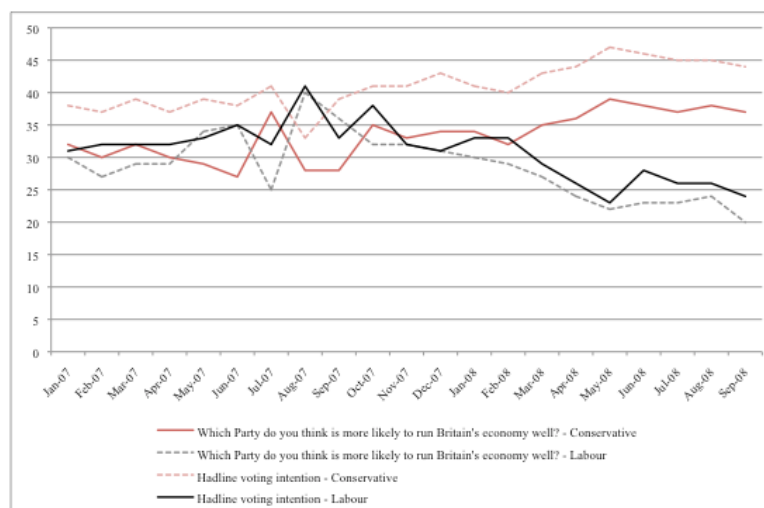


Figure 14 YouGov Opinion Polls - Voting Intentions and Expectations on the Economy²³⁹

The preceding chapter on Northern Rock has argued that the expectations for a worsening macroeconomy remained relatively low compared to September 2008. The reverse, however, is true for the period after December 2007, during when *economy and economic situation* increased its salience as an issue. Similarly, expectations for the economy either to 'improve' or at least 'stay the same' remained low. This was also supported by the increasing expectations of an upcoming recession. The total number of respondents worried about an economic downturn or even a recession increased from 60 per cent in December 2007 to 70 per cent in March

²³⁹ Complete survey results are accessible on *YouGov's* website: <http://labs.yougov.co.uk/>.

2008 (YouGov 2008b). It was expected in March that the then current economic downturn was likely to continue into the following year (YouGov 2008c). When asked whether Britain was heading to a recession, 80 per cent of the respondent answered positively in July 2008 (ICM 2008a). In July 2008, 76 per cent of the interviewees regarded Britain’s economy either *quite bad* or *very bad* (YouGov 2008d). This number increased to 82 per cent by September 2008 (YouGov 2008e).

ICM also periodically asked respondents how confident they were feeling about the economy in general and their financial situation in particular. Specifically, it directed the following question: “Please consider the economy for a moment, your current personal financial situation and your ability to keep up with the cost of living. Taking this into account, how confident do you feel about things at the moment?” While in September 2007 seventy per cent of the respondents felt *confident*, this number decreased to 38 per cent by July 2008. The below *Figure 15* summarises the responses across months. As a matter of fact, the same polling house found out that the 80 per cent of the respondents for another survey thought Britain was heading for a recession, while only 16 per cent did not agree with this (ICM 2008a).

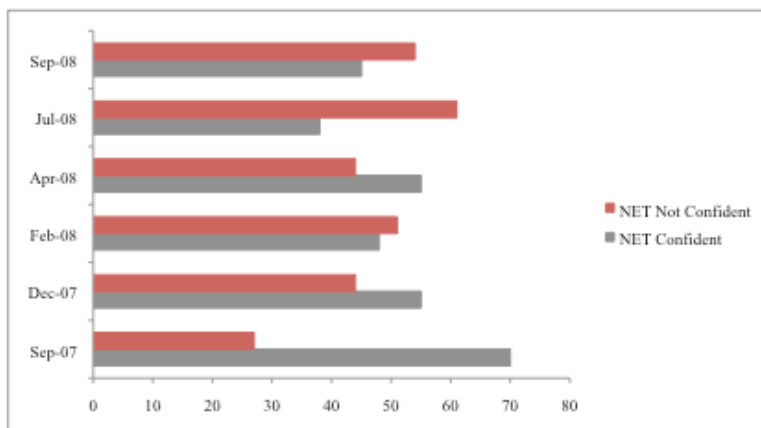


Figure 15 ICM Opinion Poll - Economic Confidence²⁴⁰

Similarly, the *G/K* had been conducting another survey to assess the perceptions and the expectations towards the general economic situation in the UK. The below *Figure 16* illustrates the results of the October 2008 survey.²⁴¹ The light gray line in the figure indicates consumer perceptions towards the economy: “How do you think the general economic situation in

²⁴⁰ Sources: ICM 2007a; 2007b; 2008a; 2008b; 2008c; 2008d.

²⁴¹ Available at <http://www.gfknop.com/pressinfo/releases/singlearticles/003126/index.en.html>, accessed on 12/01/2012.

this country has changed over the last 12 months?’. The dark gray line, on the other hand, captures the expectations on the general economic environment for the following 12 months: “*How do you expect the general economic situation in this country to develop over the next 12 months?*”. The dashed line marks September 2007. Accordingly, both perceptions and expectations had started worsening with the start of the credit crunch in summer 2007 and deteriorated throughout the crisis.

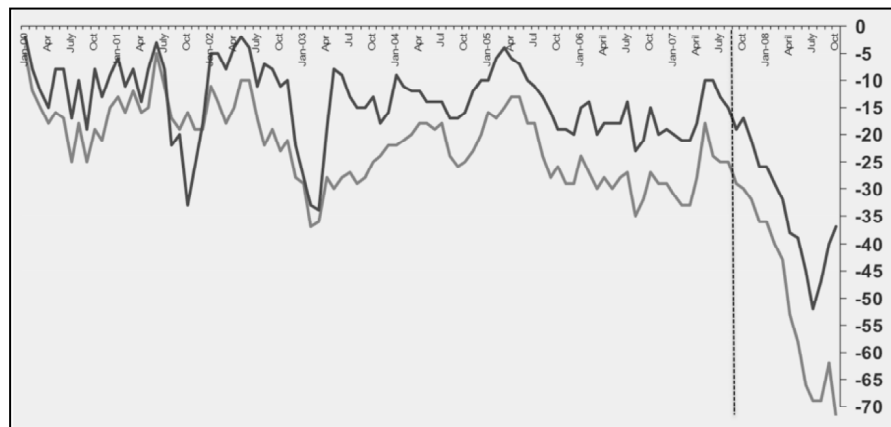


Figure 16 GfK Survey - Perceptions and Expectations Towards the Economy²⁴²

An alternative way to comprehend the perceptions towards the economy might be through analysing media coverage within the period examined. Increased media coverage of the ongoing problems in the financial markets in general and in the banking sector in specific might have also had a negative effect on the perceptions of the health of the economy. In order to capture this, two key words (*sub-prime or subprime or sub prime*’ and *credit crunch*) are searched through national newspapers published in the UK (as well as the *Financial Times* and the *Evening Standard*) between October 2007 and September 2008 (inclusive). While the number of articles referring to *sub prime* had started decreasing, references to *credit crunch* increased steadily during the period under examination, almost trebled in September 2008 compared to October 2007 (which is expected given the developments in the international markets). The results are illustrated in *Figure 17*. Although this does not suggest a one-to-one positive correlation between the media coverage of the financial crisis and the negative sentiments towards the economy, it still suggests that newspaper references might have been a significant input in shaping public perception towards the state of the economy and increasing awareness to the ongoing financial market turmoil.

²⁴² Source: <http://www.gfknop.com/pressinfo/releases/singlearticles/003126/index.en.html>, accessed on 12/01/2012.

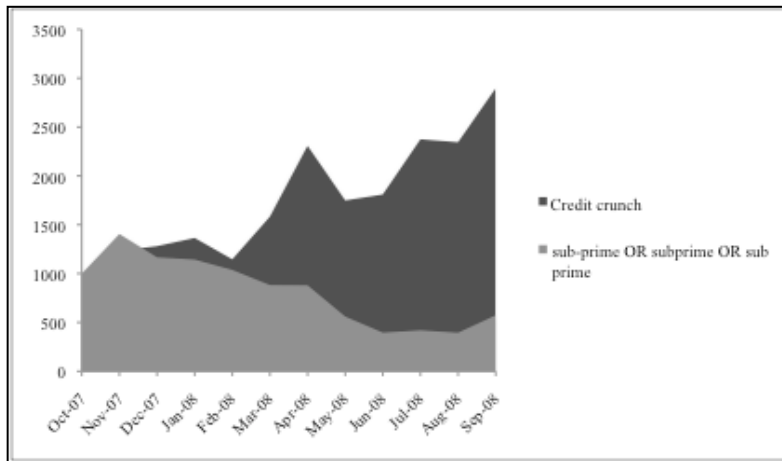


Figure 17 Newspaper References to *credit crunch* and *sub-prime OR sub prime OR sub prime* - Between October 2007 and September 2008

How informative are those figures and polls in explaining depositor behaviour across the cases? Neither can bank-specific fundamentals, the turbulence in the international financial markets, nor the negative sentiments towards the economy in general account for varying depositor behaviour to HBOS and Bradford and Bingley, since all those dimensions had been constant across the two cases. During his oral evidence before the HM Treasury Select Committee, the chairman of the FSA mentioned the implications of the developments in September 2008 to the UK banking system. In his words: “[...] [T]he pace at which things were moving in those two weeks after the Lehman’s bankruptcy is almost impossible to exaggerate” (House of Commons Treasury Committee 2009a, Ev8). As a response to the growing pressures after the turmoil in the US financial markets, Angela Knight underlined that the UK banks, in no terms, were in similar circumstances to Lehman Brothers (Williams and Lynch 2008, 23). However, according to the chief executive of the Bradford and Bingley, among the underlying reasons for the FSA’s decision [to declare that the bank had ceased to operate as an independent deposit taker] were the increasing media attention on the bank after the failure of Lehman Brothers, the nationalisation of Fanny Mae and Freddie Mac and Lloyds TSB’s take-over of HBOS (House of Commons Treasury Committee 2009a, Ev 41). According to him, the simple fact that Bradford and Bingley was the only remaining ex-mutual after the failure of HBOS had intensified the attention on the bank (House of Commons Treasury Committee 2009a, Ev 41).

After the take-over of HBOS by Lloyds TSB on September 16th, Bradford and Bingley began experiencing deposit withdrawals throughout the week of 20th-28th of September. This suggests that although both banks failed within a span of weeks, the lack of a deal for Bradford and Bingley increased the uncertainty over the bank’s future under escalating

macroeconomic turmoil. Also the perceived health of the economy had been influential on depositor behaviour, despite not causing any generalised collapse of confidence in the banking sector. In addition to this, the failure of HBOS, as the biggest savings institution, served as the most recent reference point to assess the perceived solvency of Bradford and Bingley. This does not support the sunspot explanations according to which the silent run on the bank is perceived as a purely panic-motivated random phenomenon. On the contrary and as illustrated in the preceding chapter, Bradford and Bingley had been experiencing financial difficulties similar to the ones experienced by HBOS and Alliance and Leicester. However, the timing of the run on Bradford and Bingley points to the cognitive heuristics (specifically ‘representativeness heuristics’) being in place when assessing the bank’s financial situation. Given (1) increasing uncertainty arising from the international turmoil, (2) the failure of HBOS only days before Bradford and Bingley’s nationalisation, and (3) the similarities of problems faced by both banks during the same period led to a ‘fundamentally informed but panic-based bank run’ on Bradford and Bingley.

To conclude, the argument presented with this chapter is two-fold: A comparison of the failure of Alliance and Leicester with the one of Bradford and Bingley suggests that the relative calmness of the international financial markets as well as the implicit blanket guarantee on the banking system might have helped the former not to experience any significant change in depositor behaviour. A further comparison between HBOS and Bradford and Bingley within the same turbulent period in September 2008, however, points to another direction. As was the case with the Northern Rock experience, the increasing uncertainty on the bank’s future and the signalling effects of the failure of HBOS, accompanied with the turbulence in the international financial markets, resulted in a panic driven change in depositor behaviour, despite being fundamentally informed. Contrary to the Northern Rock case where the shock to trigger the panic was directly related to the bank itself (i.e. the LoLR facility by the Bank of England), for Bradford and Bingley the shock was indirect and interpreted through the use of the representativeness heuristic under increasing uncertainty.

Conclusions

This chapter has investigated whether a comparison between Alliance and Leicester, HBOS and Bradford and Bingley could provide some insights and a better understanding on the phenomenon of bank runs. According to the findings from this comparative analysis across cases, it has argued that the shortcomings of the FSCS and the deterioration of bank’s economic fundamentals seem insufficient on their own to explain the different degrees of changes in depositor behaviour. Even though the circumstances surrounding the cases were not identical, it still remained a puzzle to explain what was different with Bradford and

Bingley that lead to a change in expectations. It has argued that the most significant difference across the cases was the turmoil and the system-wide risk in the international financial system during September 2008, as well as the take-over of HBOS by Lloyds TSB.

The findings of this chapter might help us better understand the complex nature of bank runs and further contribute to the literature. As opposed to the asymmetric information theories of bank runs, this chapter has argued that the varying values that the depositor behaviour takes across these three case studies, namely Alliance and Leicester, HBOS, and Bradford and Bingley, lie less in the deterioration of the bank-specific fundamentals or in the rational update of expectations upon the arrival of the negative news. This chapter has argued that the run on Bradford and Bingley was a ‘fundamentally informed but panic driven’ through the use of the representativeness heuristic, against the background of the developments in the international markets and in the failure of HBOS as the most recent reference point for depositors. The next and the final chapter of this thesis, *Conclusion*, will summarise the arguments and the findings of the empirical chapters. It will provide an overall cross-case comparison of the three sets of hypotheses tested with the four cases and propose possible directions for future research.

Conclusion: Why are we running? Structured, Focused Case Comparison

This research has inquired into the motivations behind depositor runs. It has argued that depositors do not interpret adverse news, be it bank-specific or system-wide, on its face value. In times of crisis information asymmetries between banks and their depositors widen as a result of the uncertainties over the banks' future. In order to fill this gap, depositors require reference (focal) points to anchor their expectations on. As a matter of fact, cognitive heuristics provide inferential shortcuts under uncertainty and are factored in depositors' decision-making process. While the current state of the fundamentals serves as one of them (which makes them a *necessary* condition), there are several others (including also the institutions), that affect common knowledge in the marketplace.

A depositor run on a single bank might either be contained at an early stage or turn into a systematic collapse of depositor confidence. This research is interested in the former and has examined the most recent bank runs in an advanced market economy from a political economy perspective. The following four cases have been examined (in chronological order of failure) in order to shed light on the varying degrees of change in depositor behaviour (dependent variable): Northern Rock, Alliance and Leicester, HBOS, and Bradford and Bingley. It has illustrated and summarised the details of this period in *Chapter III* and *Chapter V*. To emphasise once more, the research puzzle addressed with this thesis is the following: During the banking crisis of 2007-2009, out of four bank failures only two of them experienced bank runs, albeit to different degrees and types. There had been no significant change in depositor behaviour (as to require regulatory action) for the remaining two cases.

This research has offered an alternative reading of bank runs with an emphasis on *ideas*, as to complement the material and institutional dimensions mostly analysed in the banking panics literature. In order to be able accomplish this; it has challenged the understanding of a bank run as a function of the prevailing macro or bank-specific fundamentals and/or the institutional settings. To complement those, but not to replace, it has also promoted the use of reference points, applying the language of the cognitive heuristics literature, in times of crises. Two of the most salient reference points identified with this research have been the depositor awareness towards the safety nets in place and the collective memory of the past institutional failures. This, in no terms, rejects the explanations put forward by the extant banking panics literature. The prevalence of the information asymmetries, signaling effects of the adverse news in various levels and the efficiency of the institutional settings have been repeatedly referred to as possible reference points for depositors. What this research suggests,

however, is the interpretation of those through a new lens, which challenges the depiction of depositors as ‘rational’ market actors.

Although sunspots explanations are found not to hold for the cases, this research still embraces the explanations referring to the self-fulfilling nature of bank runs. According to this research’s view, self-fulfilling prophecies take place in combination with the information asymmetries (both on the fundamentals and institutional settings) *and* through the use of cognitive shortcuts. Against this background, in what follows this chapter will put forward a comparative analysis in order first to summarise the variables tested and then draw the empirical findings of this research. In the final section it will illustrate this research’s limitations and possible directions for future research.

7.1 Variables Tested Across Cases and Their Values

The theoretical chapter of this research (*Chapter II*) presented the two mainstream theories in the banking panics literature, namely sunspots (random withdrawals) and asymmetric information theories of bank runs. Against the background of a range of studies covered on the subject area, *Chapter II* has also constructed a list of the three main hypotheses and a number of working assumptions available in the literature. In a nutshell, the literature argues that either (1) changes in the fundamentals or (2) simply random events trigger an update in depositor expectations. On the other hand, (3) deposit insurance, as an institutionalized guarantee with its public nature, is regarded to keep *business as usual*.

Saving the last one for a later discussion, the first two hypotheses above rest on the differences between the mainstream theories of bank runs. Sunspot theories, pioneered by the D&D model, does not put forward any single variable that can be traced through and empirically tested across cases in a consistent way. On the other hand, the asymmetric information theory of bank runs prioritises fundamentals over random variables and expects bank runs to take place when bank-specific fundamentals (in conjunction with a general macroeconomic downturn) exceed a certain threshold. As a matter of fact, there is a vast amount of empirical evidence in the literature (mostly from the National Banking Era in the United States or from early Great Depression) to support the fact that the occurrence of bank runs is closely associated with business cycles.

Against this background, the following two variables were identified from the banking panics literature: bank-specific fundamentals and the macroeconomic environment. To start with the former, the empirical chapters of this research have illustrated that all the four cases went through significant financial problems before their failures. Northern Rock had been the most publicised across the four as a result of the LoLR facility extended by the Bank of England. Yet, as discussed at the beginning of *Chapter IV*, the stigma attached to this facility was and still is mostly pointed out as the trigger for the depositor run on the bank. Although

none of the following three cases had any turning points as distinguishable as this emergency funding to Northern Rock, they also went through similar financial difficulties, such as downwards share price movements, credit downgrades, write-downs and difficult rights issues (for the two of the cases).

Depositors' behaviour becomes highly sensitive to rumours when information is not available (or costly to gather) and the awareness of the fragilities in the banking system increases (Pericoli and Sbracia 2003, 593). Public information may become private and more contagious because of these individual interpretations of public knowledge (Pericoli and Sbracia 2003, 591). Referring to the significance of the state of the economy, the asymmetric information theory of bank runs combines the two levels of fundamentals and suggests it to be more likely that idiosyncratic adverse news towards specific banks will precipitate a change in depositor expectations under adverse macroeconomic circumstances. Therefore, an additional variable analysed in this research has been the state of the macroeconomy, or more accurately, how this is perceived by the market actors.

In cases of larger episodes of systemic crisis, expectations about macroeconomic and business prospects are generally subject to change (Caprio and Honohan 2008, 2, 7). This research has argued that the Northern Rock period and the months of Alliance and Leicester's failure remained relatively calm compared to September 2008. The developments in both domestic and international markets were traced in *Chapter III, V, and VI*. Despite the fact that the beginning of the credit crunch in financial markets dates back to July/August 2007, this turned to be a full-fledged financial crisis in September 2008. In the meanwhile, as illustrated through several opinion polls, perceptions towards the health of the economy, as well as towards the success of the Government to handle the crisis, had been deteriorating with the repercussions of the credit crunch onto the real economy. Therefore, while Northern Rock and Alliance and Leicester fell under a relatively calmer macroeconomic environment (in retrospect), Bradford and Bingley and HBOS failed as independent entities at the peak of the crisis.

Recalling the beginning of this section, there is a third hypothesis in the literature, which focuses on the prevention of changes in depositor behaviour. In addition to the material circumstances (fundamentals), the banking panics literature also discusses the institutional dimensions of bank runs, the most salient one being the deposit insurance scheme. *Chapter II* has also presented a detailed argument on how the current literature analyses the institutional background of banking panics. Accordingly, two of the most important variables regarding deposit insurance are the coverage limit and the co-insurance principle.²⁴³ While the coverage

²⁴³ “[...] [E]ven with such guarantees, bank failures still invoke widespread fear. In part, this reflects a concern that protected and/or unprotected depositors may not receive full and immediate access to their claims on the insolvent banks at the time that the institutions are declared insolvent and placed in receivership” (Kaufman and Seelig 2001, 3). Four potential sources of economic losses to depositors

limit of the FSCS before and during the Northern Rock crisis had been £31,900 with co-insurance attached, this amount was raised to £35,000 with co-insurance principle removed in October 2008.

Against this background, this research has argued that it is the interaction of ideas with the material and institutional settings that provides depositors with reference points to facilitate ‘stabilised convergent expectations’ (Schelling 1960, 114). In addition to fundamentals as necessary conditions, depositor responses are shaped through collective memory of past failures and depositor awareness towards the safety nets in place. Starting with the latter, this research has argued that the mere existence of the deposit insurance is not sufficient to test the scheme’s efficiency in times of crises. As a matter of fact, depositor awareness towards the existence of this institutionalised safety net was crucial in shaping expectations. An analysis on the newspaper coverage of the FSCS revealed the low media coverage of the deposit insurance preceding the recent crisis. This was also echoed by the FSCS’ own study that discovered a low level of awareness amongst depositors. Across the four cases, however, Northern Rock served as a turning point in increasing this level. As discussed in *Chapter IV* and *Chapter VI*, the newspaper coverage for the FSCS thus and depositor awareness towards the scheme had increased significantly following the Northern Rock crisis.

In addition to promoting the relevance of depositor awareness during bank runs, the second main argument of this thesis has been the use of cognitive heuristics under uncertainty by depositors. Supported theoretically by the Prospect Theory put forward by Kahneman and Tversky, this research argued that perceptions are ‘reference-dependent’, which logically concludes that changes in reference points lead to reversals of preferences. What sorts of reference points, or in other words focal points, are there for depositors to converge their expectations towards? As mentioned above, the current banking panics literature suggests either fundamentals or the institutional settings as focal points. This research, on the other hand, argues that the selection of these focal points is not conducted through a perfect Bayesian updating but with references to cognitive shortcuts.

In addition to *de facto* (‘too-big-to-fail’ understanding) or *ex post* (blanket) guarantees on the banking system, a further reference (focal) point promoted by this research has been the collective memory of the past institutional failures. The former two has already been promoted by the critiques of the efficiency of the deposit insurance scheme, which suggest the use of blanket guarantees to stabilise depositor expectations. As for the Northern Rock case, the blanket guarantee had proved inefficient in stabilizing depositor expectations until the Government announced a preferred bidder for the bank. As explained in *Chapter IV* and also illustrated through depositor comments collected from various newspapers, legacy of

are poor disclosure rule, regulatory forbearance, bad market conditions after resolution, and inefficient receiver (Kaufman and Seelig 2001). In cases of deposits not being full of their par value, this effectively translates into a ‘freeze’ on deposits.

past failures and the inefficiencies of policies to address those had been factored in depositor behaviour during the Northern Rock crisis. As mentioned in the previous chapters, collective memory, as an additional variable to explain bank runs, refers to the re-collections about the Government's handling of previous crises. In the case of Northern Rock, *Chapter IV* illustrated how collective memory of past institutional failures and the Government's handling of those had affected depositor behaviour. A comparison between the failure of City of Glasgow Bank in the nineteenth-century and the Northern Rock case in 2007 illustrates the changing sentiment towards Government's efficiency in crisis management. While the LoLR action of the Bank of England had been successful in preventing City of Glasgow Bank's failure from spreading, the announcement by the Bank of England's support for Northern Rock was mostly blamed for precipitating the run on the bank. Against the background of this comparison, this research argued that the lack of credibility of Government actions (captured by the collective memory variable) had been significant in shaping depositor behaviour.

On the other hand, *Chapter III* and *Chapter V* of this research illustrated the numerous efforts by the Tripartite Authorities in addressing the crisis situation following Northern Rock's failure. Given these policy reactions to contain the crisis, this research argued that the negative sentiments preceding the Northern Rock crisis must have altered throughout the period under examination. By the time of the failures of Bradford and Bingley and HBOS, depositors should have been assured of Government's willingness to save them in cases of future bank failures. As *Chapter VI* discussed, a 'too-big-to-fail' understanding had been set in market perceptions following the Northern Rock crisis. However, given the run on Bradford and Bingley, that understanding also proved unsuccessful in stabilising depositor expectations. Instead, the empirical *Chapter VI* has suggested that, in addition to the resolution of the Northern Rock crisis and the policy actions taken by the Tripartite Authorities, the failure and take-over of HBOS by Lloyds TSB should also have filled the information asymmetries across depositors and served as a potential reference point for the following bank failures (i.e. Bradford and Bingley).

As a note of caution and recalling the INUS conditionality discussed in the *Introduction*, the variables analysed with this research are not treated individually. Multivariate causal explanations suggest 'a variety of causally relevant factors' (Mahoney and Goertz 2006, 234). Although, for example, the lack of depositor awareness is regarded to be a crucial ingredient in depositor behaviour, equifinality suggests several pathways to the same outcome. Therefore, more than the variables individually, their interaction with each other as causal processes is investigated as triggers. Having clarified this, the following section will now illustrate the empirical findings and causal mechanisms across the four cases.

7.2 *Empirical Findings across Cases*

The empirical cases of this research aimed at testing the hypotheses identified in the literature, as well the ones put forward by this research. This section will summarise the empirical findings through a structured, focused cross case analysis. The hypotheses and working assumptions tested with this research were classified into three main headings: (1) fundamentals, (2) institutions, and (3) cognitive heuristics (reference points). While the first two include hypotheses from the banking crises literature, as well as this research's own argument, the final hypothesis and the set of working assumptions are derived from the cognitive heuristics literature. This thesis draws several conclusions by testing those hypotheses against empirical evidence.

To start with the first one, as discussed in the preceding section, there are two main hypotheses in the literature, namely bank runs being triggered by either sunspots or the deterioration of economic fundamentals. The empirical cases of this research invalidated the first hypothesis in evidence and were supportive towards the fundamentals-view of bank runs. However, they have also revealed that the deterioration of fundamentals is not sufficient on its own for bank runs to take place. As a critique to the current literature, this research has argued that the deterioration of economic fundamentals is a necessary but not a sufficient condition on its own to trigger a bank run. Although all the bank run periods were preceded by bank-specific financial problems, only two of them became exposed to bank runs.

The four working assumptions regarding fundamentals are summarised in *Figure 18*. Accordingly, *WA1* and *WA3* require further research on the occurrence and non-occurrence of banking panics, as the two cells in the typology of depositor behaviour. This will be discussed in the following section. To further support the asymmetric information theory of bank runs, Northern Rock crisis revealed that informed depositors had possessed 'signalling effects' on uninformed ones. Since there were no bank runs on Alliance and Leicester and HBOS and only a silent run on Bradford and Bingley, this outcome could not be cross-tested with the other cases. Finally, in all the cases there had been a flight-to-quality from insolvent to solvent banks. While in the beginning the deposit movement had been in the shape of outflows from Northern Rock to other banks or building societies in the banking system, by September 2008 this trend was understood to have reversed towards Northern Rock, as one of the safest places with a hundred percent Government guarantee. As a result, this evidence is also supportive of the asymmetric information theory of bank runs rather than suggesting a pure contagion. All these are summarized in the below figure.

Moving onto the third hypothesis put forward by the literature, this research remained critical towards the efficiency of deposit insurance schemes in preventing bank runs. Several studies on bank runs promote deposit insurance as an efficient way to prevent bank runs (or

to stabilize depositor expectations). On the other hand, there are equally convincing arguments against the efficiency of the scheme and its long-term effects on market incentives. This research criticised the current literature for failing to take ‘depositor awareness’ into account. It has argued that first there needed to be an initial depositor awareness in place towards the scheme’s existence so that its efficiency can be tested in times of crises. This has been, as a matter of fact, the fourth hypothesis tested with this research. On the institutional dimension of bank runs, the sixth working assumption put forward by the literature was not applicable to this research since there had been neither depositor freezes nor payment re-scheduling by the Authorities during the crisis period. Northern Rock case supported the hypothesis (*H3*) that there had been a lack of depositor awareness towards the FSCS, which might have contributed to the change in depositor behaviour. As regards to Bradford and Bingley, the depositor awareness had increased since the Northern Rock crisis, along with a ‘too-big-to-fail’ understanding, which cannot account for the run on the bank. Finally, neither *de facto* nor *ex post* guarantees seemed to be efficient to stabilize depositor expectations in both of the cases.

The final and the fifth hypothesis put forward by this research’s argument was related to the role of cognitive heuristics in depositors’ decision making during banking crises. Derived from the three main cognitive heuristics identified in the literature, there are three working assumptions relevant and applicable to banking crises. As mentioned above, the relevance of cognitive heuristics to understand depositor behaviour is theoretically supported by the Prospect Theory. This theory assumes that perceptions are reference dependent and updated through the use of cognitive heuristics. As illustrated in *Chapter IV*, depositor comments collected during the Northern Rock crisis also pointed to the use of collective memory and a sense of ‘*we have been before*’ when analyzing the ongoing situation. Since the run on Bradford and Bingley was an electronic one, the relevance of the collective memory was more difficult to assess. This presented a further challenge and a possible direction for improvement for this research. However, a comparative analysis between HBOS and Bradford and Bingley has suggested that HBOS’s failure might have served as a reference point to assess the perceived solvency of Bradford and Bingley. The preceding *Chapter VI* has argued that the run on Bradford and Bingley was a ‘fundamentally informed but panic driven’, against the background of the developments in the international and domestic markets, especially with the failure of HBOS.

		Northern Rock	Alliance and Leicester	HBOS	Bradford and Bingley
	<i>(In order of failure)</i>	September 2007	July 2008	September 2008	September 2008
Variables Tested Across Cases and Their Values					
Independent Variables	Fundamentals <i>(Bank-specific)</i>	LoLR by the Bank of England	Similar across cases <i>(See Chapter VI for details)</i>		
	Macroeconomic Environment	Start of the crisis (Relatively calm)	Relatively calm	Peak of the crisis	Peak of the crisis
	Institutional Background				
	<i>FSCS coverage limit</i>	£31,700	£35,000	£35,000	£35,000
	<i>Co-insurance principle</i>	Present	Absent	Absent	Absent
Reference (focal) Points	Depositor Awareness Towards the FSCS	Low	Increased	Increased	Increased
	Collective memory of past crises	BCCI, Barings, Equitable Life	Northern Rock	Northern Rock + Alliance Leicester	Northern Rock + Alliance Leicester + HBOS
	De facto or ex post guarantees	Blanket guarantee	Too-big-to-fail	Too-big-to-fail	Too-big-to-fail
Dependent Variable	Depositor Behaviour	Reported bank run	No reported bank run	No reported bank run	Reported bank run
	<i>Banking Panic</i>	Absent	Absent	Absent	Absent
Empirical Findings Across Cases					
		Northern Rock	Alliance and Leicester	HBOS	Bradford and Bingley
Hypotheses Put Forward by the Banking Panics Literature	HO: Bank runs are triggered by sunspots as random variables <i>(Null Hypothesis)</i>	Rejects	Research Puzzle <i>Not can all bank runs be explained with reference to economic fundamentals only</i> <i>Economic fundamentals 1</i> <i>Bank run 0</i>		Rejects
	H1: Bank runs are related to the deterioration in economic fundamentals.	Supports	Critique of the current literature <i>Deterioration of economic fundamentals is a necessary, but not a sufficient variable to trigger a bank run</i>		Supports

Working Assumptions (WAs) Testing the Role of Fundamentals	WA1: For a bank run to become contagious, the dual observation of a bank failure and a recession is required.	<i>Directions for future research – Investigation of the occurrence and non-occurrence of banking panics as the two cells in the typology of ‘depositor behaviour’</i>		
	WA2: Once a run is in progress, (lines of) informed depositors have signaling effects on uninformed ones.	Observed	Not applicable (no bank run)	Not applicable (silent run)
	WA3: Banking panics should not develop in information-rich environments <i>WA3a</i> : A banking panic might be prevented through the provision of bank-specific information on the bank’s solvency.	<i>Directions for future research – Further investigation of relationship between silent and off-line runs</i>		
	WA4: If the bank run originated from information asymmetries and fundamentals, there should be a ‘flight-to-quality’ from insolvent to solvent banks.	Observed	Not applicable (no bank run)	Observed
Empirical Findings	<ul style="list-style-type: none"> - Both Northern Rock and Bradford and Bingley cases reject the null hypothesis (<i>H0</i>) and assert that the reasons for the depositor runs did not originate from sunspots. The empirical evidence seemed to support more the asymmetric information theory (<i>H1</i>). - To support the asymmetric information theory of bank runs, queuing (informed) depositors had ‘signalling effects’ on uninformed ones during the Northern Rock crisis. - In both cases, there had been a ‘flight-to-quality’ from insolvent to solvent banks. This evidence also supports the asymmetric information theory of bank runs 			

Hypotheses and Working Assumptions (WAs) Testing the Role of Institutions	H2: Deposit insurance scheme should prevent bank runs.	<i>Critique of the current literature</i>		
	<i>WA5</i> : The efficiency of the scheme depends on its specifications.	<i>There needs to be an initial depositor awareness towards the scheme’s existence to be able to assess its efficiency</i>		
	<i>WA6</i> : The lack of commitment by the Authorities on deposit freezes and payment re-scheduling might generate self-fulfilling bank runs.	Not applicable (no deposit freeze or re-scheduling)		
	<i>WA7</i> : <i>De facto</i> or <i>ex post</i> guarantees should stabilize depositor expectations.	<i>Directions for future research – Investigation of ‘no-bank run’ outcomes</i>		
WA8: The coherence and consistency in the actions of policy makers in addressing the crisis affect depositor expectations.				
H3: An additional information asymmetry during a bank run is the lack of depositor awareness towards deposit insurance scheme.	<i>Contribution to the current literature on the institutional determinants of bank runs</i>			

<p style="text-align: center;">Empirical Findings</p>	<ul style="list-style-type: none"> - This research remained critical towards the efficiency in deposit insurance to prevent bank runs (H2). - Northern Rock case supports the hypothesis (H3) that there had been a lack of depositor awareness towards the FSCS, which might have contributed to the change in depositor behaviour. - As regards to Bradford and Bingley, the depositor awareness had increased since the Northern Rock crisis, along with a 'too-big-to-fail' understanding, which cannot account for the run on the bank. - Finally, neither <i>de facto</i> nor <i>ex post</i> guarantees seemed to be efficient to stabilize depositor expectations in both of the cases. 	
<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><i>Hypotheses and Working Assumptions (WAs) Testing the Role of Cognitive Heuristics</i></p>	<p>H4: Under uncertainty during crises and as a result of bounded rationality, cognitive shortcuts (in different forms) are used in depositor decision-making.</p>	<p style="text-align: center;"><i>Contribution to the current literature on the ideational determinants of bank runs</i></p>
<p style="text-align: center;">Empirical Findings</p>	<ul style="list-style-type: none"> - Depositor comments collected during the Northern Rock crisis also pointed to the use of collective memory and a sense of 'we have been before' when analyzing the ongoing situation. - A comparative analysis between HBOS and Bradford and Bingley suggested that HBOS's failure served as a reference point to assess the perceived solvency of Bradford and Bingley. 	

Figure 18 Variables Tested and Main Empirical Findings

7.3 Limitations and Directions for Future Research

Future expectations are formed as a function of today's actions and their success in addressing the crisis situation. While the emphasis is on the material and institutional circumstances in the literature, the overall argument of this research has emphasised the significance of ideas in explaining bank runs. In this respect, it has referred to reference points, such as collective memory of past crises and depositor awareness towards the institutional safety guards in place.

This research possesses mainly two limitations. Firstly, cognitive heuristics literature has mostly been criticised for having 'so many degrees of freedom' as "[...] there are [...] competing behavioral explanations for some of the empirical facts" (Barberis and Thaler 2003, 1112). As a response to this criticism, this research has mainly concentrated on the concept of reference points and specifically on collective memory. Additional case studies might further strengthen this research's argument on cognitive heuristics. The most serious limitation of this research, however, is the infrequency of bank runs. As seen with the Northern Rock example, they are 'one-in-a-lifetime' events for advanced market economies,

which prove difficult for a medium or large N analysis, yet make Northern Rock all the more interesting as a case study to analyse. Relatedly, since the unit of analysis is depositors, it is highly problematic to gather *direct* data *on the spot* without any intervening variables. To the best of available data, this research has referred to depositor comments collected during the off-line bank run period and the opinion polls conducted during the crisis period in order to understand the perceptions towards the economy in general. However, it has also utilised from *indirect* comparative analyses and counterfactuals, which still helped explain the different depositor reaction across the cases.

Against these limitations, the analytical emphasis has been on the explanation of the occurrence and the underlying triggers for bank runs. *Introduction* has discussed the ‘asymmetrical formulation of concepts’ in the social sciences, which suggests that the lack of the processes leading to a bank run might not directly translate into a non-bank run situation. Therefore, this research possesses limited explanatory power in explaining either the occurrence of no bank runs, banking panics, or no banking panics.²⁴⁴ As a most interesting area of study, conditions under which bank runs turn into banking panics (either through the dual observation of a recession or within information-poor environments, as suggested by the literature) require further research. Finally, a natural extension of this research might also be the investigation of the relationship between silent electronic runs with off-line, 19th century depositor runs.

²⁴⁴ A detailed discussion on the values that the dependent variable takes has been presented in *Introduction*.

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Appendix: Northern Rock Depositor Comments Collected During the Off-line Run in September 2007

I have collected over three hundred and seventy comments from various newspapers and coded them according to the following common themes shared: Trust in the Government/Bank of England/Northern Rock, guarantees on deposit accounts, risk aversion, uncertainty, and panic. Details of those categories can be found in *Chapter IV*.

1. “All my money is with them so I don't want to have all my eggs in one basket. We are being told not to panic and that everything will be alright [*sic*] but people said the ‘Titanic’ could never sink” (“Panicking customers take ...” 2007, 2).
2. “All my savings are in Northern Rock. I'm leaving them in for now. But it's a worry. You don't know what's going to happen next” (Whitten 2007d, 8-9).
3. “All these people coming – it's creating a domino effect. If everybody pulls their money out of Northern Rock, then what will be left of it? And if it spreads to other building societies, what happens to us then? Is the Bank of England going to bail all of us out? I don't think so” (Morgan 2007, 4).
4. “Although the Government says it will bail them out, we are still not certain about that. We will be going to either another bank or building society - somewhere our money is a little bit more secure” (“Troubled bank fails ...” 2007, 2).
5. “Anyone can get credit these days regardless of whether you can pay it back or not. But the real losers aren't them – it's us. The customer always pays” (Hiscott 2007, 4).
6. “As a pensioner I can't afford to take any risks with my savings. I take with a pinch of salt the promises that we have been given through the media” (“Hundreds queue over ...” 2007).
7. “At 2pm on Saturday they said they were shutting and a police officer came up. It was amazing. Without a word the crowds just turned and went away. People had been queuing four or five hours. If they were young people there would have been riots. The people were in such a state of abject misery. We were told we did not have a hope of getting in on the day. One woman, had just sold her business and all that money was in Northern Rock. Another woman had sold her father's bungalow and thought she was going to lose it all. In the end it was almost like the Blitz. People were holding your place in the queue so you could go and have a cup of tea. On Friday they promised us that even if it took until midnight they would stay open. They closed eventually at 11pm. It was an extraordinary situation but the crowd was so well behaved. The Natwest [*sic*] manager was going up and down the line handing out cards and telling people when you have been in come to us” (Menhinnitt 2007).
8. “Believe it or not I wanted to take some money out. I could have done it over the internet but we wanted to shuffle a few things around. We have been trying all weekend. We were supposed to be in Spain (until Thursday) but we cut that short and came back because there's been a bit of a panic about this. It's just that panic thing. The Bank of England said it had given Northern Rock a loan to tide them over if they need it, but I think people would have been more confident if the Bank of England had said your money is definitely safe. There's still a worry with people” (“Comedy star queues ...” 2007).
9. “Best not to have all your eggs in one basket, but where else do you put your money - will this happen elsewhere? The Government says not to panic but they've said that before. They said that about foot and mouth” (“Northern Rock customers in savgins panic...” 2007).
10. “Despite all the assurances, I have decided to take no chances and will be withdrawing GBP 70,000 and taking it elsewhere” (Jones 2007a, 10).

11. “Despite the Government’s assurance, I am still sceptical that if the Rock does roll and it’s sold, it will take a long time to get our money. I want the money now so I can have peace of mind. I just can’t afford to take the risk” (“Queues fade away ...” 2007).
12. “Even though the bank is urging customers to be calm, I still want to withdraw my life savings. Everything I’ve got is in this bank” (“Northern Rock customers show ...” 2007).
13. “Everybody’s panicking. I’ve got too much in the bank to not do anything. I don’t believe what the politicians are saying” (Wilson 2007a, 8).
14. “Everyone knows panic has set in, but nobody wants to risk losing their [sic] savings” (Coles 2007).
15. “Everyone’s anxious because we’re all in the same boat. Most of these people have their life savings in there – it’s the same for us. You don’t want to lose everything you’ve got and end up with a few pennies” (Morrall 2007, 2).
16. “Everything I’ve got is in this bank. When it’s all you’ve got, you’d just rather play it safe” (Judd 2007, 25).
17. “How can we trust him when you see how badly organised this is? If the phone lines don’t work, the website doesn’t work and they haven’t even got a numbering system for the queue, then I have no faith” (Hardman 2007, 15).
18. “I am a little alarmed” (Grier 2007).
19. “I am a shareholder, it is a concern but I will hang on to my shares. I am taking my savings out because there are other one-year bonds available” (Jamieson 2007, 4).
20. “I am extremely concerned so I have come to get my money out. This situation should not be happening in England in 2007” (Dellafiora 2007a).
21. “I am furious. There are 200 people inside and they are not letting us in. I have come down here especially and told them we are their customers” (Cameron 2007, 11).
22. “I am going to clear my account. As soon as I heard, I knew straight away that I would have to take the money away” (Caroe 2007, 8-9).
23. “I am going to close my accounts, both bonds and savings. There was worry before and they said it was all OK but I would be much happier if all my money was out. We will wait as long as it takes” (Jenkins and de Bruxelles 2007, 7).
24. “I am going to take out all of my savings. I know Northern Rock is saying ‘don’t panic’ but I am not going to take the risk. I worked hard for my money, it’s my life savings and I’m not prepared to lose it” (Cullwick 2007a, 4).
25. “I am going to transfer some of my money. I am not going to close my account. I am going to leave it open because I have direct debits coming out and my wages going in. I know they keep saying they are not in trouble, but you don’t get all this madness if they aren’t in trouble. I feel really sorry for the staff. There are rumours that jobs might be lost and I have seen customers be really horrible” (Roberts and Burton 2007, 5).
26. “I am here to reduce the amount I have got in the bank to the level that’s guaranteed” (Keaveny 2007).
27. “I am just withdrawing some money. I have been with Northern Rock for about 20 years. It’s just another global problem with finance. It could have happened to any building society. We’ve been guaranteed everything is safe” (Wilson 2007a, 8).
28. “I am not at all concerned, if I had any spare cash I would buy shares in Northern Rock” (Watts and Donnelly 2007, 8).
29. “I am not happy about it, especially when we have all worked all our lives for this money. I am not going to take any chances” (Caroe 2007, 8-9).
30. “I am obviously very worried. I spoke to my financial adviser and he told me to withdraw my money so it is safe, because nothing is guaranteed” (“Northern Rock: Pleas for calm ignored” 2007).
31. “I am so angry, they are not letting me transfer my money. It’s unbelievable. They threatened to call the police on me” (Kirby 2007 and Cameron 2007, 11).

32. "I am taking my money out but I don't want to. It is my money, my life, I would rather be safe than sorry" (Roberts and Burton 2007, 5).
33. "I called a friend who lives in Spain and she told me Northern Rock was being bailed out by the Bank of England. I thought 'Oh hell, I've got a lot of money in that bank. I didn't expect to see so many people here though, I was amazed. I am going to clear out every last penny to give me peace of mind. This is the only branch in Birmingham and I have got a special passbook account which means I can only withdraw money by coming into the bank. I had a feeling Northern Rock was not one of the best places to leave all my money but the interest is so good. I wish I had put it all in an ISA now" (Scotney 2007, 3).
34. "I came down to withdraw £32,000 from a fixed rate bond. Today I cancelled that withdrawal" ("Investor says northern rock ..." 2007, 8).
35. "I came down to withdraw most of my money. I have been a customer for many years and I have always been happy with them, so it is a shame I have had to do this. But it is my savings and I just can't afford to take any chances" ("Northern rock customers withdraw cash" 2007).
36. "I come here every Friday and I've never seen anything like this. I am very concerned, but I can't take my money out straight away because I have to give notice. Why haven't we been told before this? They must have known. They sponsor a lot of charities and sports teams so what is going to happen to that?" ("They tell you not to panic ..." 2007).
37. "I couldn't take it anymore. It's a shambles in there. The staff are [*sic*] bang out of order for refusing to allow people in. Some scared old folk are trying to get their hands on tens of thousands. I feel really sorry for them" (Kirby 2007).
38. "I didn't want to keep my money in a sinking ship. This is what you expect from a cowboy builder" (Pukas 2007, 24).
39. "I don't 100 per cent trust the Chancellor or the Government. We have quite recently been lied to over the war in Iraq and I can't 100 per cent believe them" (Pavia 2007, 7).
40. "I don't believe anything they say, I'm not prepared to take the risk" (Miles 2007, 17).
41. "I don't care how long I have to wait as long as I get my money. It is always the little people that get hurt in these situations" (Dayani 2007, 2).
42. "I don't have any loyalty to Northern Rock – I'm loyal to my money" (Boniface and Kelly 2007, 9).
43. "I don't mind going home as long as Northern Rock gives me a reassurance I won't lose any money by Monday. But they can't" ("AND STILL SAVERS QUEUE ..." 2007, 3).
44. "I don't really know what is going on, but I want to talk to someone about my savings. I am considering taking my money elsewhere" ("Another day dawns in the ..." 2007).
45. "I don't really want to withdraw my savings but I've not had enough reassurance that my money's safe and I'm not going to leave [the branch] until I've got it out" ("All-night drive to get his money" 2007, 6).
46. "I don't think people should be worried now. Not after hearing the news everything is guaranteed. I don't think the government could go back on its word when they have said no-one's going to lose a penny. It would be dangerous, they would be completely finished" (Settle and Donnelly 2007, 4).
47. "I don't trust any more banks. I'm going to put my money under the mattress" (Hiscott 2007, 4).
48. "I don't trust banks or what they say and I think it's the little savers that are affected each time. I feel that if Northern Rock went under everybody would, so I'm definitely jumping ship" (Wilson 2007b, 4).
49. "I don't trust the bank. I need to close the account and take my money elsewhere" (Smith, Ringshaw, and Watt 2007, 2).
50. "I don't want to be sitting this time next week, wishing I had moved in time. I am not going to close my account - just lift a few thousand as a precaution" (Jamieson 2007, 4).

51. "I don't want to be the mug left without my savings" (Hosking, Seib, Leroux, and Gilmore 2007, 1).
52. "I don't know what they were thinking offering these ridiculous mortgages. It's their own bloody fault they are in this mess and its just greed. Basically they've just gambled with everyone's savings and they've lost. But the real losers aren't them its us the customers always pays" (Prynn 2007d, 5).
53. "I don't trust any more banks. I'm going to put [my money] under the mattress when I get it [...] Too bad. Its [sic] my money" (Prynn 2007d, 5).
54. "I feel a bit safer because the Bank of England have [sic] stepped in but I'm still taking a little out" ("Northern Rock customers 'calmed'" 2007a).
55. "I feel too nervous leaving it there at the moment" (Bailey 2007a).
56. "I feel totally confident in the Government, although they could have prevented the panic by acting earlier" (Whitten 2007c, 6-7).
57. "I feel very sorry for them because they are sweet, helpful people and the pressure is on them. They might lose their jobs if there is a takeover and they are doing their very best. I was told that I would have my cheque from head office in a week. Obviously, I would like to have my money now, but I'm not going to and it's not the staff's fault. I don't think there is any need to panic. They've got big assets and they are underwritten. I compare the situation to when it's announced there is going to be a water or bread shortage and everyone rushes to the shops to stock up" ("Troubled bank fails to persuade ..." 2007, 2).
58. "I feel very strongly they should all be forced to resign they've put profit before people. They've taken risks where they shouldn't have and it's with ordinary people's money. They should be held accountable. I've worked hard all my life and been frugal with my money, and it's hard to save in this current climate, so then to be punished like this. It's a matter of trust. When that's gone then the relationship has gone, so I've taken everything out. And if I hadn't been able to withdraw my money today I would have gone down to Northern Rock's head office with the bailiffs and ordered them to seize goods to the value of my savings. I feel that strongly about it. For now I've put the cash in another bank but I'm going to investigate to see where the safest place to keep it is. I think this will have a knock-on effect across all banks so I'm going to have to think long and hard" (Mckenzie 2007, 6).
59. "I got here at 5.30 but I got up at two this morning because I couldn't sleep. I'm here for my mother. She's 88 and she's terrified because we're talking about her life's savings in this bank. I got here in advance so she wouldn't have to queue, but she got here at 7am anyway because she was so scared. She has spoken to someone on the phone but they didn't offer much reassurance. They said your money's safe, but obviously we don't believe them" (Alleyne 2007b, 3).
60. "I got out of Northern Rock just in time. It is interesting that everyone is panicking. I would not want to risk it either" (Caroe 2007, 8-9).
61. "I had a very large amount of money with Equitable Life and I thought it was secure, but unfortunately it clearly wasn't. It is a case of once bitten, twice shy and I am not prepared for the same thing to happen this time" (Whitten 2007a, 8).
62. "I had't [sic] intended to, but the panic sets in ... with all the television, the panic spreads. My pension goes in there and I do not want to lose my livelihood and savings" (Woods 2007, 15).
63. "I hadn't taken any action until I saw all the people queueing [sic] at the weekend. Then I began to panic. But as soon as the Government guaranteed that all savings would be safe and that there was no chance of money being lost I put my faith back into Northern Rock. As soon as I got my cheque yesterday morning I opened another account with them and reinvested it all. I think far too many people are panicking even after these guarantees from the Chancellor. I would advise Northern Rock customers to keep their money where it is, it is as safe as anywhere else" ("Customer puts faith in troubled ..." 2007).
64. "I have a lot of savings which I can't afford to lose. I am hoping to get them out today" (Dellafiora 2007b).
65. "I have a substantial amount in a savings account. I'm here to draw my money out. I want to make sure my money is safe, that's all" (Gabriel 2007).

66. "I have all my savings in here and I can tell you that is not much but I tell you, a bird in the hand is worth two in the bush. I will only leave when I get my money" ("WE'RE CASHING IN; HUNDREDS QUEUE ..." 2007, 8).
67. "I have banked here for 60 years. A bank is supposed to be safe but it doesn't feel very safe right now. I'm closing my account" ("Panicking customers take £1.5bn from Northern Rock ..." 2007, 2).
68. "I have banked with them for 40 years. I have got lots of confidence in my bank to recover from this, especially if the Government is backing them. I'm going to keep with them, I have never had any bother with them. I'm not scared to stay with them" (Stokes 2007, 4).
69. "I have been with the bank for seven years and I'm concerned about what is going to happen with my pension. However, I do have confidence that it'll all be sorted out. I'm going to leave my savings in there for now. Gordon Brown says it's going to be all right and I trust him" (Whitten 2007d, 8-9).
70. "I have come to get my money out. You can't take a chance when it's your life savings" ("Northern Rock savers withdraw billions as ..." 2007).
71. "I have drawn all of my savings out. I wasn't going to, but when the Government injected money into them everyone started taking their money out. I decided I had to get on the bandwagon in case there was nothing left. I feel better now I've got my savings out and I'm going to put them into my other bank account. I know the Government has guaranteed the money now, but I've got no faith in governments" ("Is wave of panic subsiding?" 2007, 4).
72. "I have drawn my savings out. I am really anxious. When you're old you think your money is safe. I don't understand how this could happen. It was quite a shock seeing it on the television this morning" (Stokes 2007, 4).
73. "I have got 100 per cent confidence in the bank. I have got my mortgage with them and I'm quite happy to leave my savings with them as well. The Government's announcement has boosted my confidence and I believe what the bank has said. I don't think anyone is in any danger of losing out" ("Is wave of panic subsiding?" 2007, 4).
74. "I have got a lump sum invested and I don't want to just leave it. I know I'm helping to make the problem worse but you have got to look after yourself. Myself and my wife are relying on the money in our retirement so we can't afford to lose it" (Sims and Poulter 2007b, 6).
75. "I have kept my account open with a small amount in there, but I took the bulk of my savings out. I saw a financial adviser on the television who said it was safe, but when she was asked if she would withdraw funds, she said she would. I have had bad experiences in the past so I am wary and I didn't want to take any chances" ("Is wave of panic subsiding?" 2007, 4).
76. "I have lost all confidence in this Government. How can we trust people who consistently says [sic] all kinds of things and then cannot stand them up. It's always no jam today, jam tomorrow" (Alleyne 2007a, 5).
77. "I have lost confidence. They have gone too heavily into the US market" (Lawrie 2007, 6).
78. "I'm taking most of it out, I am losing a month of interest but it's all about peace of mind" (Jenkins and de Bruxelles 2007, 7).
79. "I have nearly a million pounds in here. I am not going to take any chances. They shouldn't have lent to so many people" (Perrie 2007).
80. "I have no confidence in what the Government has said. I can't afford to lose my redundancy money. I feel guilty about clearing my account and adding to Northern Rock's problems, but I can't risk it" (Whitten 2007c, 6-7).
81. "I have thousands of pounds in savings with Northern Rock. You put your trust into a company with such a good reputation and I never expected anything like this to happen. I'm angry that this has just suddenly been dropped on customers without even so much as a letter or phone call from Northern Rock" (Cullwick 2007b, 4).
82. "I have two savings accounts with Northern Rock and as soon as I heard the news I decided to withdraw all my money. I haven't got many years left of my working life so my savings are more important than ever" (Valler 2007, 2).

83. "I have withdrawn all my money. I got here at about 8.40am and was about 12th in the queue. It took me well over an hour to be served and by the time I got outside there must have been at least 50 people queuing out into the street. I know everyone has been urged not to panic 20%off but I just felt safer moving the money somewhere else rather than worrying about Northern Rock's financial position over the next few days" (Cecil and Prynne 2007b, 9).
84. "I heard about it on the news. I am prepared to wait as long as it takes to make sure I get every penny I have deposited" (Perrie 2007).
85. "I heard about the problems on the news and thought I'd better come and make sure my money is safe. It's my life savings so I'm worried. I've put all my money in this one bank. Whether it's for a new car or for your daughter's wedding, you put your money into a bank for it to be there when you want it. I only called them last week and they didn't mention anything like this" ("I'm making sure my money is safe" 2007, 7).
86. "I heard about this on the news on Thursday night, and when I looked on the website, Northern Rock's share price had dropped. The Bank of England is lending them a lot of cash so I think there is a 95 per cent chance they will be alright now - but I don't want to risk that five per cent. I'm moving all my savings. I remember Equitable Life, one of the biggest pension providers, suddenly went bust and people lost their pensions" ("Chaotic scenes at branch as bank's shares plunge" 2007).
87. "I heard Northern Rock was opening at 8am and wanted to make sure I wasn't at the back of the queue. It was a total shock when I heard the bank was in trouble last week and when politicians tell you not to panic, it's the first thing you do" (Dayani 2007, 2).
88. "I hope people will listen to them rather than getting caught up in the misdirected levels of concern" (Jenkins 2007, 8).
89. "I just want to close my account. Give me my money and let's go...get it paid straight into my bank account" ("Northern Rock customers in run on the bank" 2007).
90. "I just wasn't taking any chances. I don't believe a word the Government says. People have been stung before by these financial institutions. I do not think it has restored confidence" ("Cash pledge helps ease panic at Northern Rock; ..." 2007, 8).
91. "I know they're saying not to panic, but you see everyone else taking out their money and we don't want to be the ones left losing our savings" (Haddon 2007, 2).
92. "I listened to Gordon Brown saying people shouldn't worry and I decided not to do anything. But then I thought this is all my money and I just couldn't risk it. I am not going to take all my money out, but it will be a lot of it and I'll transfer it somewhere else to spread the risk a bit. But I'm not sure any institution is safe because of the crisis in America" (Jamieson 2007, 4).
93. "I might still come back tomorrow to the branch but I feel easier after the statement" (Wainwright and Allen 2007, 4).
94. "I never believe anything this Government tells me. They said there were weapons of mass destruction in Iraq and how many of our lads have died?" (Hall 2007, 12).
95. "I picked up my paper this morning, had a look, then put it on the table. Quarter of an hour later I looked at it again. I thought I'd better come down here. I'm going to try to take money out" ("They tell you not to panic - ..." 2007).
96. "I plan to close my savings account. I wonder what Northern Rock's been up to. I'm just being cautious, I thought to myself: why wait until next week or the week after?" (Stokes 2007, 4).
97. "I put all my savings in one basket and the best thing to do is to get out of this basket" (Braithwaite *et al* 2007, 1).
98. "I queued all day yesterday from 8am to 6 pm and was one of around 20 people told that we would have to come back today. I was in disbelief they could have dealt with all of us in less than an hour. There were some elderly people here, and some even in wheelchairs. It doesn't make you feel any more positive about the company. I'm now seventh in the queue. Six others got here before 3am. The first person began queuing at 1 am" (Prynne, Waugh, and Bar-Hillel 2007, 1).
99. "I queued up for four hours outside the branch in Cardiff but they couldn't, or wouldn't, help me. They said I should telephone the helpline that everyone else is ringing. I pleaded with them

but they wouldn't help. No matter what time, day or night, the problems are still there - you just can't access your personal account. I have been up early in the morning and gone to bed late at night but it doesn't seem to make any difference whatsoever. Initially, I hadn't wanted to do that. I just wanted to pay a bill. But because of the problems and the way I've been treated, I've had enough. I'm no expert but it looks to me as if their website is not functioning. On Friday I was getting to put my security details in before it crashed. Now, I can't even seem to get that far. At the moment I have no way of accessing my account" (Sims and Poulter 2007a, 4).

100. "I realise we are going to lose out on a lot of interest by closing our account. We had invested a not unsubstantial amount of money and our bond only had one more year to go. We could have waited for the interest, but my wife didn't sleep at all for worrying last night" (Morgan 2007, 4).
101. "I reckon I will be waiting at least a couple of hours. I'm going to take all my money out to be on the safe side - I fear for the safety of it. If my husband can get here he will do the same" ("Northern exposure" 2007).
102. "I saw the news and I wasn't too worried, but after seeing this I'm going to go home and get my bank book and join the queue" ("I'm going to cash my cheque in and put my savings elsewhere" 2007, 2).
103. "I sent an e-mail to them on Saturday saying, 'if you tell me my money is safe, then I won't take any further action'. But I didn't get a reply. We're panicking now. This is really serious" (Doyle 2007).
104. "I spoke to my financial adviser this morning. He said, 'Let me put it this way: if it was my sister's money, I would be urging her to get it out'" (Jenkins and de Bruxelles 2007, 7).
105. "I suppose I am being a little bit irrational, but safety comes first. I do believe Northern Rock when they say my money will be safe, but I've got a lot of money in that account and there is no point in taking an unnecessary risk" ("I'm going to cash my cheque in and put my savings elsewhere" 2007, 2).
106. "I suppose it was inevitable you'd get a lot of people turning out who are worried. I've got a savings account with them, I'm not sure if I'll move, but I just want to have a word with them about what's going on" (Scotney 2007, 3).
107. "I suppose this is the price we pay for always looking for a bit extra in interest" (Brady 2007b, 4).
108. "I tell you I am worried enough to make me stand here for hours. I am going to look for another safe home for my money in one of the major banks. You felt like you could not access your money. You felt like it was being hidden from you - kept at arms length" ("WE'RE CASHING IN; HUNDREDS QUEUE ..." 2007, 8).
109. "I think everybody is over- reacting. Panicking like this is not going to alter anything" ("Northern Rock customers 'calmed'" 2007a).
110. "I think it's just a hiccup and am not too worried. People are just panicking that's all. I just came down to draw money out as usual and am going to go home and finish the decorating and not think about it" (Whitten 2007d, 8-9).
111. "I think it's perfectly safe to keep your money with Northern Rock and the panic that's going on is quite ridiculous. I really hope people don't sell their shares because it's a regional company" (Wilson 2007b, 4).
112. "I think the money will be safe eventually - but they might say 'your money is safe but you can't have it until a certain time'. I don't have all of my savings at Northern Rock but if I did I would be concerned. The bank has handled it wrongly. The guys on the board have not done a good job. The other leading banks will take Northern Rock over but they are waiting for it to go to the wall first. The Bank of England should put pressure on the other banks to take it over if the situation gets worse. Whatever happens, the boys who run it will come away without getting hurt too much financially" (Alleyne 2007b, 3; Hiscott 2007, 4)
113. "I think the whole thing is dodgy. Yes, we've got these reassurances from the Government now but we don't know how long they will last for" (Watts and Donnelly 2007, 8).
114. "I think these people are bloody stupid. If the Bank of England is willing to stand by Northern Rock, why are these people worrying about their measly savings. If there is a crisis, it is people

- like these that will have caused it. It's like panic buying in the war - it just makes things 10 times worse. Having lived through the war, I think this is madness" (Watts and Donnelly 2007, 8).
115. "I think things are looking better now. I was worried at first, but I think my money's safe after what the Government have said. I can't see Northern Rock slumping now" (Whitten 2007c, 6-7).
 116. "I think this goes to show how shoddy the banking industry is. We need more regulation" (Kirby 2007).
 117. "I think this has been on the cards for about a month. In my case it's a big part of my life's retirement savings and it's worrying. We're being reassured everything is okay, but how can you take the chance? The only way you know you are safe is to take your money out and put it somewhere else" ("I'm making sure my money is safe" 2007, 7).
 118. "I think you are quite safe up to £33,000" ("Anxious customers hit northern rock" 2007, 7).
 119. "I tried the website several times but couldn't get on. I tried the helplines but there was no answer" (Carroll 2007, 12).
 120. "I tried to get on the website to see what was happening with my account, but it seemed to be down and I couldn't get anywhere, so I thought I'd better get in here quickly" (Scotney 2007, 3).
 121. "I understand why people panic and it has a knock-on effect when you see other people panicking. After last night people can stop panicking now. If you can trust the Government, but I think it's unlikely they would say that if they couldn't carry it through. But I am amazed there are big queues this morning, although I think people in Newcastle are quite sympathetic" (Wescott 2007).
 122. "I used to work in the financial services for a number of years. I will come back if the bank survives. I have to keep my money safe. It is my life savings I don't want to risk it" ("Another day dawns in the big cash scramble" 2007).
 123. "I want my money and I am going to get it. I don't care how long I have to stay" ("WE'RE CASHING IN; HUNDREDS QUEUE..." 2007, 8).
 124. "I want the money for my old age, I have got my life savings in there and I want it for my family when I hop off" (Alleyne 2007b, 3).
 125. "I want to draw my money from my savings account. It may not be much but it is a lot to me. Today's generation is one that borrows. We are the generation that saved and only bought something if we could afford it. I'm not prepared to risk losing my savings now. I don't know what we will do with the money yet but I don't trust what the Government says. We were here yesterday but were told we had no chance of getting in, so we are back today and will wait as long as we have to" (Prynn, Waugh, and Bar-Hillel 2007, 1).
 126. "I want to spend my cash before someone else does" (Roberts and White 2007a, 4).
 127. "I wanted to see what the situation was - I have been a bit panicked by the press coverage. I have got quite a lot of money in there. I'm not sure what I'm going to do with it, so I'll wait and see what I'm told" ("Northern rock customers withdraw cash" 2007).
 128. "I was adamant that I would not join the panic but was totally unconvinced by Alistair Darling on the radio this morning. It's my money and I need it for my future" (Alleyne 2007b, 3).
 129. "I was away at the weekend and my husband queued to get his money out. Unfortunately he caught a cold and has taken to his bed. He called me and I have come down here today. The trouble is nobody trusts the Government any more and so everyone just wants to be safe rather than sorry. It's your savings and you have worked hard for them. You don't want to lose them at the time when you should be enjoying them" (Alleyne 2007a, 5).
 130. "I was here on Friday but the queues were horrendous. I have just decided to close my account" (Pascoe-Watson and Perrie 2007).
 131. "I was here yesterday but the queue was too large. I have another account and want to empty my savings into that. What the Government has said gives us more hope but there is still doubt and I am not taking any chances" (Prynn and Waugh 2007, 1).

132. "I was hoping it would have been done by now, but it hasn't come through. I'll have to wait until Monday. The staff have [sic] been under a lot of pressure but they have been very kind" (Cameron 2007, 11).
133. "I was listening to all the news and I don't really think there's a problem, but I was going to take it out anyway. "It was my mother's money and I was going to put it somewhere else. I was planning to do it a while ago, but this has just made me do it now" ("Another day dawns in the big cash scramble" 2007).
134. "I was midway through a holiday and decided to come back because it's my money and I can't take any risks with it. I don't feel loyalty to Northern Rock. The bank has been mismanaged to get into this situation" (Wilson 2007a, 8).
135. "I was shocked when I heard. The last of all the banks and building societies I would have expected to have problems would be Northern Rock. I have moved my money today as I have saved for years and I don't want to see it go. I know they've said not to panic and that might be good enough for the big clients but not for me" (Wilson 2007b, 4).
136. "I was supposed to be flying to Madrid, but I caught a plane back home to Liverpool instead to come and sort this mess out" ("City savers queue at crisis bank" 2007, 1).
137. "I was worried for a few days but held back from closing my account. I'm happy I did because I think it's been sorted out now" (Whitten 2007c, 6-7).
138. "I was worried they'd shut at 5pm. If they had, this place would have been stormed" ("They tell you not to panic - ..." 2007).
139. "I wasn't going to withdraw my savings at first, but when everyone else started, I felt I had to in case there wasn't anything left" ("We could see some customers return cash to the bank" 2007, 10).
140. "I wasn't panicking until I saw the queues on television and now I want to get my money out to guarantee my savings are safe" (Dayani 2007, 2).
141. "I wasn't particularly happy about Alistair Darling's U-turn, I don't think it was very confidence inspiring, and I don't think the buck will stop with Northern Rock. There's more bad news to come" (O'Doherty and Rotberg 2007, 2).
142. "I went in on Friday and they said I didn't have the right ID - I needed a driving licence. I rushed home and came back and they took my details and promised me the money would be transferred to my account today. I looked and it wasn't so I had to come back. It's a very big sum of money and they've issued me with a cheque now, but I don't know why they didn't do that on Friday. These are my life savings" (Peplow and Wright 2007, 3).
143. "I worry, not everyone will be covered financially" (Gibney 2007, 8).
144. "I would not be here if I was not worried" (Pascoe-Watson and Perrie 2007).
145. "I'd be surprised if they let Northern Rock go under. But who wants to risk it? I'm still here" ("Patience, good humour and a touch of the Blitz spirit" 2007, 2).
146. "I'm a borrower, an investor, and a shareholder - and I'm not worried. The fact the Bank of England has offered to lend them money is the best guarantee you can get" ("They tell you not to panic - then you see hundreds in the queues" 2007).
147. "I'm at the back of the queue and I can't see myself getting in by 12. It's a disgrace. I just want to get all my money out and close my account" ("Police called to calm bank customers" 2007).
148. "I'm attracted for two reasons. With the new guarantee it's like having the security of a Government bond and they also offer very attractive rates of interest. With the Government now backing them with this 100 percent guarantee, Northern Rock is the safest bank out there. Sharp investors will now go there. I'm opening a savings account and investing a six-figure sum" ("Investor says northern rock is 'safest bank'" 2007, 8).
149. "I'm deliberating whether to act or not. I may well do something this week but it's a case of wait and see what happens over the next few days" ("Northern Rock customers look for their money" 2007).
150. "I'm extremely concerned about what is going to happen. As soon as I heard the news I immediately tried to get on to the internet to find out more information and attempted to

phone the bank, but I could not get through. All my life savings are at the bank and I am here to withdraw them” (Whitten 2007a, 8).

151. “I’m frantic. I need the money to live” (Boniface and Kelly 2007, 9).
152. “I’m frightened in case I lose everything. But there were two people in front of us opening accounts, and one of them said her husband was a financial adviser, and they’ve taken all their money from the Halifax” (Carrell 2007, 4).
153. “I’m going to cash my cheque in case it bounces. They should have used more precautions instead of giving mortgages away like confetti. They are lending too much, that’s the trouble” (Brown 2007, 6; Perrie 2007; Roberts and White 2007b, 10).
154. “I’m going to cash my money in, get a cheque and put my savings into another bank. Northern Rock has lost its reputation over this. Once you lose your reputation it’s hard to get back. If people up and down the country are closing accounts the company might not be in business next week so I think it’s wise to get out quickly” (“I’m going to cash my cheque in and put my savings elsewhere” 2007, 2).
155. “I’m here to get my money out. It’s a concern. It looks like they might go under as other financial bodies won’t lend to them. I wouldn’t like to say how much I have in there but they’re only guaranteeing to safeguard up to £31,000 and I have more than that. I will move my money to the NatWest. I do internet banking but have been locked out of the system and had no word from Northern Rock. They’ve told us that transfers will take several days and even then we’ll only get cheques. The closest branches we can get a cheque from are Reading and Birmingham. It’s disappointing” (“Stampede to pull out cash” 2007, 13).
156. “I’m here to move my money to my other bank. I hope the same doesn’t happen there” (Lyons 2007, 1).
157. “I’m here to take the lot out, because they’re going under, aren’t they?” (Braithwaite *et al* 2007, 1).
158. “I’m just going to let them get on with it, because I think everyone has a down time and people are panicking unnecessarily” (Carrell and Hodgson 2007, 5).
159. “I’m just worried that I will lose what I have been saving for over many years. I’ve had to pay a £35 charge, but it’s worth it for the peace of mind. I’ve moved between £50,000 and £80,000, but will be looking to open a new account somewhere else. I decided to move the cash because I didn’t want to take the risk of something terrible happening” (Moroz and Hanif 2007, 8).
160. “I’m looking to take everything in my name out of Northern Rock today. I fear I could lose it if I don’t act now. I do think the media have played a large part in this and probably blown it out of all proportion but I dare not take the risk” (“Northern Rock customers look for their money” 2007).
161. “I’m looking to take out all the deposits I can and I’m going to put them into another bank; I need the interest as I’m retired” (“Northern Rock customers show little faith in new assurances” 2007).
162. “I’m not reassured by the Bank of England. I just want my money out. I will reinvest it somewhere else and if the bank is still here in the future, I will bring it back” (Authi 2007, 8).
163. “I’m not young and don’t have a chance to make it back again” (Braithwaite *et al* 2007, 1).
164. “I’m only here because I’m panicking. I saw the queue and decided I’d better join it” (Drury 2007, 2).
165. “I’m playing it safe. My life savings are in that bank” (Brown 2007, 6).
166. “I’m prepared to wait as long as it takes. I’m taking the lot out if they’ll let me have it. I’m absolutely appalled that they should be so badly run and so badly regulated. I thought they were totally reliable and secure - they’re supposed to be regulated, these companies. My confidence has been shattered. I would not put a penny into that company. There are a lot of older people who must be really scared” (Griffiths 2007, 31; Sims and Poulter 2007b, 6).
167. “I’m quite sure they have done that in order to stop us withdrawing our money. I don’t for one minute believe it’s technical difficulties. I will be back here on Monday to withdraw my savings. It’s money I cannot afford to lose and I’m not willing to take any chances” (Leake 2007, 6).

168. "I'm sure it will clear, but frankly I could have done without this whole episode" (Brignall 2007, 26).
169. "I'm taking my money out while I still can. At my time of life my savings are more important than ever. If I stay with them I am putting my future in their hands" ("Panicking customers take £1.5bn from Northern Rock;..." 2007, 2).
170. "I'm taking out my savings, I'm really worried" (Roberts and White 2007a, 4).
171. "I'm thinking there might be more trouble ahead. It is better not to take a chance because they have big problems. I've got a bit of financial security at the moment, but I'm worried I could lose my savings" (Devey 2007).
172. "I'm under tremendous stress. I am going to buy a house" (Kirby 2007).
173. "I'm withdrawing a retirement fund. I'm going to leave part of it in though. I do feel a bit sorry for the bank but I've debated all weekend whether to do it or not. I don't want to put all my eggs in one basket" (Wilson 2007a, 8).
174. "I'm withdrawing some of my money but not all of it. I don't think customers are reassured. There must be some problem and I'd rather not be part of the problem" (Wilson 2007a, 8).
175. "I'm worried about losing money which I had earmarked for my retirement. I think a lot of old people have saved at the Northern Rock and they are naturally worried" (Devey 2007).
176. "I'm coming to close my account if they'll let me. I don't trust them" (Jenkins and de Bruxelles 2007, 7).
177. "I'm worried and I can't afford to risk losing my money. I've heard so many reports, it's hard to know what to do" (Hedley 2007, 8-9).
178. "I've already got pounds 15,000 invested with the Northern Rock and this morning I put in another pounds 1,000. I take great comfort from the Bank of England backing for Northern Rock. If the Bank is prepared to back it, then it's secure" (Alleyne 2007b, 3).
179. "I've been a bit on edge for a week but people are really beginning to panic now. We are lucky as we've got help and have been promised we will get our bond money in three to four days. There are still lots of questions to be asked" ("Clients flock to branch" 2007, 3).
180. "I've been a customer with them for 20 years and have been quite happy up until now. I would like to be relaxed and feel that this will blow over but there seems to have been a stampede of people withdrawing their savings. It must reach a point where there's not enough money to fund Northern Rock business. The Bank of England are not going to write a blank cheque and I am genuinely concerned my savings will disappear. Despite assurances from the Government, we unfortunately live in an age where we simply don't trust officialdom" (Leake 2007, 6).
181. "I've been following what's been happening, and I'm convinced there's no problem. When the Government and the Bank of England guarantee support, it must be OK. It actually makes the accounts safer than anywhere else" (Whitten 2007c, 6-7).
182. "I've been here for about four hours now. There is no way everyone will get seen today. The bank says our money is safe but it's not worth taking the risk" (Doyle 2007).
183. "I've been here since 6am. It's a lot of money. I'm retired. I saved it and don't want to lose" ("Stampede to pull out cash" 2007, 13).
184. "I've been queueing [*sic*] since about 7.45 am. I've got a lot of money in here. I am sure they won't go bust but I can't take that risk" (Alleyne 2007b, 3).
185. "I've been thinking about it all night, it's our burial money and everything" (Braithwaite *et al* 2007, 1).
186. "I've been with Northern Rock for 15 years and I am not worried at all. Everybody seems to be panicking, which is just a knee-jerk reaction and is totally unnecessary" (Whitten 2007d, 8-9).
187. "I've been with Northern Rock for 40 years but I want to get all my money out. Most people can't afford not to play it safe. It's pandemonium here and I can see it getting worse" ("Panicking customers take £1.5bn from Northern Rock; ..." 2007, 2).
188. "I've brought a flask and some sandwiches because it looks like I'm in for a long wait" (Pascoe-Watson and Perrie 2007).

189. "I've closed two ISAs and withdrawn money from my current account. I wasn't going to do anything but when I woke up it was the first thing on my mind. I had to take action. I would normally be in bed at this time on a Saturday morning but I decided I had to come down and do something. I opened my first ever bank account with Northern Rock when I was 18 and this is the first problem I have ever had" (Watts and Donnelly 2007, 8).
190. "I've come in from Evesham to get my money out. It's my life savings in there. If the bank went under, I wouldn't know what to do. I want my money out and in another account" ("Customers keep up dash for their cash" 2007, 2).
191. "I've come to withdraw all my money as I don't particularly trust the firm's financial viability" (Perrie 2007).
192. "I've got a number of accounts here. It's my life savings. I think the risk is pretty low but you never know" (Leake 2007, 6).
193. "I've got GBP 20,000 in there that I would never have let them have if I had known they were over-stretching themselves so much" (O'Grady 2007b, 6).
194. "I've got savings in Northern Rock which I've worked a long time to build up so I just want to get it out so I know it's safe" (Hedley 2007, 8-9).
195. "I've got to hope now that my money comes through" (Lyons 2007, 1).
196. "I've had a savings account at the branch for six or seven years. But when I heard on the news that the Northern Rock was in crisis I decided it might be time to come down here and get my money out. Everyone else in the queue seems to be doing the same" ("Northern Rock customers panic" 2007).
197. "I've heard all the reassurances about our money being safe. But when you see headlines like 'Northern Wreck' then what do you do? I couldn't get through on the phone, so we came straight down here. I'm withdrawing it all - absolutely every penny. We put all our eggs in this one basket. Never again" (Morgan 2007, 4).
198. "I've just found out how the bank really operates and I'm not very keen on it. It relies a lot less on savers like me" (Judd 2007, 25).
199. "I've just got back from Italy, so I don't know much about the situation, except we just want to get our money. I'm just a bit worried at the moment - I fear for the safety of my money" ("Northern exposure" 2007).
200. "I've just taken out what I normally take out. Some people are in there withdrawing all their savings. But I don't think there's any need" (Whitten 2007d, 8-9).
201. "I've recently taken early retirement and my nest egg is my savings. It's all very well being told not to panic, but this is my future at stake. I'm not prepared to sit back idly and wait to watch my 40 years of hard graft being flushed down the toilet" (Cullwick 2007b, 4).
202. "I've thought of nothing else so I had to get down here and try to take my money out. I can't afford to lose it" (Whitten 2007b, 8-9).
203. "I've withdrawn about £60,000 in savings which I will reinvest, because I just don't want to take the chance" (Moroz and Hanif 2007, 8).
204. "I'm missing work but I had to tell them I'm coming here to get the money. My husband died two years ago and the money in there is what he left me. I can't take a chance that I don't get the money& it's got to last me the rest of my life" (Prynn 2007d, 5).
205. "If everyone takes all their money out of this bank, then I don't want to be left at the end with nothing. I'm buying a house with my partner and I need it for the deposit. It's been a bad financial time for us with property and we can't afford to lose what we've got. We're taking the safer option and turning up and taking the money out" (Morrall 2007, 2).
206. "If I wanted to withdraw money with a fixed interest account I could lose up to 160 days interest. I was trying to get through to them on the phone for an hour and a half this morning" (Devey 2007).
207. "If it closes, how long will it take before you get your money back? I'm on permanent sick - we can't afford to lose anything" ("Jobs are safe vow Northern Rock bosses" 2007).

208. "If Northern Rock had wanted to cause me to panic, they couldn't have done better. I asked the sales manager what right he's got to withhold my money. He told me they have been overwhelmed by requests. You expect a friend to say they will pay you next week, but not your financial institution" (Jenkins and de Bruxelles 2007, 7).
209. "If the bank closes this afternoon and I am not seen there's going to be a riot" ("WE'RE CASHING IN; HUNDREDS QUEUE ..." 2007, 8).
210. "If you do get in and manage to get your money out in a cheque, you probably won't get it lodged in another financial institution for a while. If AIB or Bank of Ireland see you coming with a Northern Rock cheque they'll want a guarantee that the cheque is safe before they lodge anything" (Doyle 2007).
211. "It did help us feel a bit better when we heard he did that. But you work all your life for your savings and it's just not worth the risk" ("Cash pledge helps ease panic at Northern Rock; ..." 2007, 8).
212. "It has been a bit stirred up by the media. I don't think it will fold" ("AND STILL SAVERS QUEUE FOR THEIR CASH" 2007, 3).
213. "It has been terrible. I've stood here for three hours because I believed the branch would be open until 2pm, only to be told just before noon that the doors would be closing. I was prepared to queue because I thought I would be able to withdraw my money, but that hasn't happened and I'm now feeling more anxious than ever" (Lavender 2007a).
214. "It is my inheritance. My father left me some money when he died and I want to take it out just in case. I would be devastated if I lost it" (Jenkins 2007, 8).
215. "It is not much but it's all I have in the world" (Pascoe-Watson 2007).
216. "It is quite simple. I would rather have the money in my hand than in a bank that I am worried might go bust. I choked on my breakfast coffee when I heard the news this morning. I arrived at 9.30am when there were more than 100 people queueing out of the door and around the block. It took me an hour of waiting before I was served" (Dyson and Walne 2007, 13).
217. "It is these queues that are causing the panic. Apparently, 90 per cent of our money is guaranteed but we don't want to lose the ten per cent. I don't know whether to leave it and see what happens next week" ("AND STILL SAVERS QUEUE FOR THEIR CASH" 2007, 3).
218. "It may just be a glitch but who knows and we are not prepared to take that risk. After watching the news we knew we had to come down this morning and ensure our money was safe. We are laughing now because our money is safe" (Adams 2007).
219. "It may not seem a lot to some people but is all I have and need it to pay for my funeral. It might go back in there once this is over" (Whitten 2007d, 8-9).
220. "It was absolutely dreadful. Everything we have in our lives is in that bank - we would be left with nothing if it is lost. We were trying to buy a place in Cyprus and have put a deposit down but it may now fall through as we can't get the rest of the funds. The website crashed overnight and the help lines were cut off by the morning. We were sick with worry. When we got to the bank the manageress just didn't want to know. I'm losing weight from stress. I feel nervous waiting for the money. When we got to the bank I couldn't believe their attitude. The manageress just didn't want to know. That was it. They had our money, would not give it to us and refused to help so we said we weren't leaving till they did and we would sleep there if we had to. She tried to usher us out of her office so I sat in the doorway. Then she called the police. It was only when the officer arrived, having been told to throw us out, that he saw sense and told her to sort things out. Then she finally made some phone calls. It took about two hours, but hopefully we'll hear from them within the next 24 hours" ("Northern Shock: I want my £1m" 2007, 3; "Couple are waiting for life savings 2007, 3).
221. "It was my wife who told me about this. I was in bed and was about to get up to take the dog for a walk when she heard it on the radio. There's probably nothing to worry about, but it's better to be safe than sorry" ("Rock customers caught in a hard place" 2007).
222. "It was only when the Government started to make reassuring noises that I got worried" (Hall 2007, 12).
223. "It was worth the wait to know my money was safe" (Wright 2007b, 3).

224. "It's a disgrace they had so few staff on to deal with the situation" (Cusick 2007, 2).
225. "It's a long time to wait but when you don't know what's going to happen with your money, it's better to be safe" (Peplow and Wright 2007, 3).
226. "It's a panic, but all our life savings are here. All the staff have [*sic*] been very good and have looked after us" (Peplow and Wright 2007, 3).
227. "It's all I have in the world. But then, when I think of the staff, not knowing how this will turn out and their whole livelihoods are at stake, I feel rotten" (Wilson 2007a, 8).
228. "It's all right for the Bank of England and other institutions to say, 'sit tight and everything will be fine', but it isn't their life savings that are at risk. I'd never forgive myself if I lost all my grandchildren's inheritance. We haven't thought about where we'll put our money next, but we can't leave it here. Everyone is jittery about the situation in the States. I'm worried about the economic climate" (Jenkins and de Bruxelles 2007, 7).
229. "It's all right people saying don't panic, but at the end of the day you've worked hard for what you have in the bank" (Braithwaite *et al* 2007, 1).
230. "It's better for us to queue for two hours now and have a bit of piece of mind than worry all weekend. They tell you not to worry but when it's yours, trust me, you worry. It's all the savings we've got" (Braithwaite *et al* 2007, 1).
231. "It's better to be safe than sorry and have peace of mind, my brother was talking to a stockbroker and he said it was best to get it out. I saw all the crowds yesterday and decided I'd better come today" (Westcott 2007).
232. "It's better to have the money in your hand" (Meneely 2007).
233. "It's bound to be worrying. I'm going to take my money from here and put it somewhere else, but you can't be sure it's safe anywhere" ("Northern Rock customers 'calmed'" 2007a).
234. "It's good for the Bank of England to say that, but I'm not reassured enough to leave my money in there - they said the Titanic couldn't sink, didn't they? I will put my savings in a couple of different places and not one place now" (Authi 2007, 8).
235. "It's hard not to panic. Look what happened to Equitable Life and to Barings" (Watts and Donnelly 2007, 8).
236. "It's hard to know what to do because nobody knows which bank will be the next to get in trouble" (Brady 2007b, 4).
237. "It's hard to trust them when they say not to worry. All they keep saying is that there isn't a problem but aren't telling us anything else" ("Anxious customers in bank fury" 2007, 2).
238. "It's just like football managers. Their jobs are guaranteed - then they are sacked the next day" (Braithwaite *et al* 2007, 1).
239. "It's just stupid, it's perfectly safe. If I could get in there I would get some money out and buy some Northern Rock shares. They've come down from £ 12 to £ 4" (Woods 2007, 15).
240. "It's like a banana republic. When I saw the newspapers over the weekend, I decided it was time to get my money out. There were problems also getting on the website. People don't want to lose their savings and if it means taking a half day off work, so be it. It's been a long time building it all up, so I didn't want anything to happen to it. I think people will be wary and stick to their bricks and mortar banks for a while where they can access their funds" ("Panicked customers queue for savings" 2007).
241. "It's my life savings we're talking about, my pension. I'll have nothing left if they go under" (Hosking, Seib, Leroux, and Gilmore 2007, 1).
242. "It's not big money like some of them only about E30,000 but it's taken me 60 years to save that up. I've been burnt before. I lost thousands in investments after September 11 and didn't want to go through that again. All I want back is the money I put in nothing more, nothing less. We were on holiday watching the situation on the telly and yes, they're saying people will be reimbursed, but it's just too much of a risk. How sure can you be really be with financial institutions? We'll probably put it with one of the Irish ones now better the devil you know I suppose" (Fleming 2007, 14).

243. "It's not good news when you think that life is going to be comfortable and then this happens. I've been advised to move all my savings into batches of £30,000 but we are only here because everyone else has withdrawn money - it is a self-perpetuating problem. It's been caused by bad public relations not getting the bank's situation across and people are panicking" ("Troubled bank fails to persuade savers that their money is secure" 2007, 2).
244. "It's people like him who got us into this mess and now they are trying to say that we are the stupid ones" (Carroll 2007, 12).
245. "It's really upsetting because I've been with them for years and this has come out of the blue. It is especially difficult at our time in life, and also my husband has dementia" ("Savers withdraw pounds 2 billion from bank; BANKING CRISIS" 2007, 7).
246. "It's very sloppy, very badly regulated. I've no confidence in them whatsoever. I thought I was going to pay for winning the All Ireland yesterday. I want my money, not a guarantee. There are risks when you have to travel a couple of hundred miles just to make sure" ("Panicked customers queue for savings" 2007).
247. "Lucky for us, at least the sun is shining. It could have been a lot worse. We left home this morning at 7.30am so we didn't have to wait. But we couldn't believe our eyes when we arrived to find 20 people already waiting outside the branch" (Roberts and White 2007a, 4).
248. "Most of the queue here are of a certain age. We've all been loyal customers to Northern Rock for years, but we just can't take the chance with our money. It might seem a bit of a knee-jerk reaction, but when it's your life-savings at stake you have to act" (Jamieson 2007, 4).
249. "Most people with savings accounts fear what will happen if people continue to take all their money out. If the bank went bust, we would lose everything" ("Savers withdraw pounds 2 billion from bank; BANKING CRISIS" 2007, 7).
250. "My 72-year-old grandad has come to the bank today to withdraw all his savings. He got up early to make sure he got to the bank quickly today" (Whitten 2007d, 8-9).
251. "My account matures next July and there is no guarantee what will happen in that time. I do believe the Bank of England, but I can't leave my money in that long. We are retired and I would rather take it out and lose a couple of hundred pounds than have something else happen" (Authi 2007, 8).
252. "My daughter had said not to panic because the Bank of England had stepped in, but when I saw the people queuing I had to come back. I've got my silver savings here and have been all jittery and unable to sleep with the worry" ("Northern rock - massive queues" 2007, 1).
253. "My head tells me the bank is totally solvent and there is no risk to depositors' money, however my heart tells me it's better to be safe than sorry" (Grier 2007).
254. "My husband is an accountant and he said trust them, but I didn't want to lose my savings" (Bailey 2007a).
255. "My life savings are in that bank. You can never be too careful when money is involved" (Sims and Poulter 2007b, 6).
256. "My life savings are in the Northern Rock and I was preparing to use a significant amount of money for a business deal. My partner is pregnant and is facing being made redundant. If Northern Rock does go under, we will be in dire straits" (Hunter 2007, 10).
257. "My savings are in there, all my life's savings. I could hardly stay on holiday when I saw all this unfolding on Sky News. I couldn't get through on the phone so I have come up in person. The past few weeks have been the most stressful experience you could imagine. And now they want to reduce me to a bag lady and make me sleep out here all night just to get my own money back ...' At this point, it is all too much. [...] I'm sorry, I really can't believe how British we are being about all this. There really should have been a riot by now. The docility of this crowd makes me very cross" (Hardman 2007, 15).
258. "My son's a financial adviser and he says I'm silly to draw it out, but he knows I will not sleep unless I do. The problem is where to put it - who knows where is going to be safe?" (Stokes 2007, 4).
259. "Northern Rock are ruined now, nobody is going to trust them. People here are not adventurous investors we are not looking to make a killing" (Prynn 2007d, 5).

260. "Northern Rock are [*sic*] saying there's no need to be concerned but that's hard to believe. I can't afford to gamble with my money" (Hedley 2007, 8-9).
261. "Northern Rock have [*sic*] handled this extremely badly. They did not answer the phone or have any information on the internet. I am going to get my money back now and I'm not going until I do" ("WE'RE CASHING IN; HUNDREDS QUEUE ..." 2007, 8).
262. "Northern Rock keep telling us not to panic but I can't help it. It was very easy to do the transaction and my account is now closed. To be fair, the staff were [*sic*] great. I really don't know what I'm going to do with the money I've withdrawn" (Moroz and Hanif 2007, 8).
263. "On August 9 we saw it was getting difficult, so we took out most of our money. We never had more than Pounds 33,000 (in deposit). Now, we just want to get the rest. It didn't affect us, but it is our generation, a lot of our friends had their money in Equitable Life and lost everything. It wasn't that long ago. Our friends lost all their pensions because of Equitable Life (the investment group that nearly collapsed in 2000), and Gordon Brown did nothing - he has probably forgotten about it. That was not that long ago. We're not talking about 1929 - it's something we remember" (O'Doherty and Rotberg 2007, 2; Pavia 2007, 7).
264. "Out of tragedy comes togetherness - that's something you don't get very often these days. It's the same sort of experience as in the air-raid shelters. It has brought people together. People say if you've got £31,700, you should be happy, but that's not the point. It's hard-earned money, and it's taxed money as well. And people say don't you trust the banking system? Well, in my old shop we had a notice up saying 'We trust in God - everybody else pays cash'" ("Patience, good humour and a touch of the Blitz spirit" 2007, 2).
265. "People have travelled far to deal with this" ("Panicked customers queue for savings" 2007).
266. "Perhaps we should just stick it under the bed" (Roberts and White 2007b, 10).
267. "Right away, I turned the car round. Everything I've ever earned and saved is in that bank. I would rather face the dentist's drill than this" (Morgan 2007, 4).
268. "She once lost a lot of money in shares and she's adamant she won't be caught out again" (O'Grady 2007, 10).
269. "That didn't reassure me. It makes me think they've got a real problem, if they've got a director in the branch. When you're our age, you can't afford to risk it. We've our pensions but if something catastrophic was to happen, we can't come back and get it again. We just thought there's no smoke without fire. The money people don't appear to have confidence and we heard in the news this morning that Northern Rock lost £100m on the stock exchange, so that was an important factor. We'll hang on to the money and wait until the market improves and we think it's stable" (Carrell and Hodgson 2007, 5).
270. "That's [Bank of England] good enough for me" (Braithwaite *et al* 2007, 1).
271. "the bank needed "to repay the loyalty of its customers"" (Wainwright and Allen 2007, 4).
272. "The Bank of England should not have made the stupid statement in the first place that it had put the facility in place for Northern Rock - it should have said it had made funds available in the market place" ("Northern Rock customers show little faith in new assurances" 2007).
273. "The banking code says people have the first £35,000 of their savings protected but the rest isn't. We have significant savings and just didn't want them to be put at risk. We have worked hard for our savings and we want to make sure we will be financially secure in the future" (Moroz and Hanif 2007, 8).
274. "The captain of the Titanic said there was no need to panic and look what happened there" (Woods 2007, 15).
275. "The fact that the Government has stepped in doesn't make me feel any more confident. I'm putting my savings in a building society - I trust them more than the banks" (Hosking, Seib, and Webster 2007, 6).
276. "The first I knew of it was hearing it on the radio on Friday - I felt panic" (Bailey 2007a).
277. "The Government can talk plenty but talk is cheap and a certain age group, which a lot of these people are in, has no faith in the Government" (Alleyne 2007a, 5).

278. "The Government has pulled the rug out from under savers and now they are wondering why people are reacting in this way" (Keaveny 2007).
279. "The Government no longer retains the trust of the majority of the country. The more one is assured on TV, the worse it becomes -particularly when 24 hours after Mr Darling said he wasn't going to rescue a private company he then says he would. How is anybody to trust or believe and have faith in that sort of behaviour?" (Pavia 2007, 7).
280. "The government won't let it go under - they'd get slaughtered in the North at the next election, so they'll bust a gut to keep it going" (Carter and Tighe 2007, 2).
281. "The interest was great and it was a good pension. But what everyone's worried about is losing their pension" (Prynn 2007d, 5).
282. "The number of people here today shows we no longer believe what we are told these days" (Walker 2007, 35).
283. "The only information we've had is from the media" ("Anxious customers in bank fury" 2007, 2).
284. "The only thing that will put my mind at rest is taking my money out" (Whitten 2007b, 8-9).
285. "The problem is that people had their fingers burnt with pensions and now the problem could be with savings" (Jenkins and de Bruxelles 2007, 7).
286. "[...] [T]he system was 'disgraceful' and vowed she 'would never bank with them again'" (Gibney 2007, 8).
287. "The thing which always attracted me to Northern Rock was that it never had any queues. It was always empty. Now look! I want to get this cheque into my HSBC account before it bounces" (Hardman 2007, 15).
288. "The way they had organised everything was shocking" (Cusick 2007, 2).
289. "The website has always been pretty bad compared to other banks but now it's useless. I rang them last week and they never got back to me and now I've been in this queue for five hours and I'm not going to get any money out today. So I'll just have to stay here overnight" (Hardman 2007, 15).
290. "There are not enough safeguards in place. There should be legislation to protect people" ("Clients flock to branch" 2007, 3).
291. "There is a concern. We don't know what the future will hold. The Scottish Government and the Bank of England have said we shouldn't panic. But we've all heard the politicians say things before" (Lawrie 2007, 6).
292. "There were about a dozen people in front of me when I arrived. There have been conflicting reports. You have just got to go by your own feeling" ("Anxious customers hit northern rock" 2007, 7).
293. "They are telling us our money is safe. But nobody is taking any notice. It is probably right what they have said. The money probably is safe but people have their money saved and are not prepared to risk it. Nobody within my sight has left the queue" (Police calmed to calm bank customers 2007; Northern Rock savers withdraw billions as takeover ... 2007).
294. "They said the Titanic was unsinkable but it did sink. I have no faith in the Government" (Hall 2007, 12).
295. "They tell you not to panic, but then you see hundreds of people in the queues. I didn't panic, but then everyone else is, so you think - well I'd better panic too" ("They tell you not to panic - ..." 2007).
296. "They tell you not to panic, so of course you're going to panic. My life savings are with this bank and I do not want to lose it" (Doward *et al* 2007, 24).
297. "They tell you not to worry, but you do. I'm drawing most of my money out. I was thinking about doing it anyway and going to a financial advisor. I would think everybody is here because of Northern Rock's problems. There's not normally a queue like this at 9 o'clock in the morning" ("Northern Rock customers 'calmed'" 2007b).

298. “They tell you one thing but nothing's sure at the minute. They'll say whatever they must to get you off their back. Weren't we told the Titanic wouldn't sink? It's frightening listening to the radio. By God, I've been in a terrible panic, I've a lot of money in there and couldn't take the risk, I've four children to look after when I'm gone. I'll have my cheque in my hand now at three o'clock but I won't stop worrying for the next four days until it clears” (Fleming 2007, 14).
299. “They were confident everything would be okay” (Bailey 2007a).
300. “They were incredibly nice even though their jobs could be affected” (Bailey 2007a).
301. “They won't let me take out my money. It is my money” (Drury 2007, 2).
302. “They're saying people are making things worse. But it's their earnings they've made over years” (Carter and Tighe 2007, 2).
303. “They're telling us not to worry, but we've heard it before, with Marconi” (Hosking, Seib, Leroux, and Gilmore 2007, 1).
304. “They're trying to tell us everything is fine. We're not all stupid though” (“Panicked customers queue for savings” 2007).
305. “This is a question of the Government allowing free and easy access to debt. When I left school and got a job you had to jump through hoops to borrow money” (“Northern Rock customers 'calmed'” 2007b).
306. “This is a state of controlled panic and I know I am adding to it. I have been trying all week to get online and no joy. Every time I tried this pop-up came up on screen telling you that the log in time would be longer than normal. I am not overly worried though. I have some faith in the Bank of England but I feel they are not giving it full backing” (“WE'RE CASHING IN; HUNDREDS QUEUE ...” 2007, 8).
307. “This is all panic but also a reflection of the society of today . . . There are no leaders, everybody just follows on” (Carter and Tighe 2007, 2).
308. “This is capitalism gone mad. It's a nightmare having to queue here for hours, and I'm going to have to do it again, and again. I'm going to take it all out, go on a holiday, and put what's left in the post office” (“Patience, good humour and a touch of the Blitz spirit” 2007, 2).
309. “This is just silly, absolute madness. I'm just here to pay in a cheque and I'm amazed. Everyone's just panicking and it's ridiculous. I've got shares but I'm not going to sell them. They'll go up again” (Wilson 2007b, 4).
310. “This is money I had set aside for my retirement and I do not want to take any chances with it. I blame the government and Gordon Brown. If they had come out earlier and said they were going to back the bank instead of pussyfooting around I think customers would have been more confident” (Pascoe-Watson and Perrie 2007).
311. “This is the only money we have in savings and we want it somewhere we know it is safe. I was made redundant from GKN and all that money is in Northern Rock to help with my pension. If another bank takes over, I may not be able to get access to it straight away and it's the savers who are always bottom of the queue” (Dayani 2007, 2).
312. “This money is a large part of our life savings. We retired early and moved to France, but if this bank goes down, we'll have to move back and start working again” (“All-night drive to get his money” 2007, 6).
313. “This morning I was hanging on the phone for an hour and a half and I just couldn't get through. I have come down to the bank because I want to try and get my money out but I don't know if I will be able to” (“Hundreds queue over Northern Rock crisis” 2007).
314. “To be honest, we've got most of our life savings here and we're not happy that we might lose everything. We've never had a day when we haven't worked...but people are living longer so the money's got to last” (“Northern Rock customers in run on the bank” 2007).
315. “Unfortunately I'm doing what everybody else is doing and panicking. I don't think I'll lose anything but I'm joining the herd” (Pascoe-Watson 2007).
316. “We all like the bank, and this branch is excellent, with really pleasant staff. But you can't wait for real reassurances [*sic*] for ever. How stupid you would look if the unthinkable happened,

- and you'd had the chance to get your money out but failed to take it" (Wainwright and Allen 2007, 4).
317. "We are all worried for our life savings. I am buying a brand new car next week and the money for that is in Northern Rock" ("Hundreds queue over Northern Rock crisis" 2007).
 318. "We are elderly and this is our life saving, we can't afford to lose it" (Braithwaite *et al* 2007, 1).
 319. "We are not being irrational, we just want our money back before it all goes down the drain. If his money was in here I think he would be taking it out pretty quickly as well" (Carroll 2007, 12).
 320. "We are old age pensioners and we can't afford to lose everything. We were willing to go along with it to start with, but it was beginning to get a bit scary, so we decided to close the account" (Wright 2007b, 3).
 321. "We are pensioners and this is all the money we have in the world. If it goes, we won't survive" (Roberts and White 2007a, 4).
 322. "We became very concerned as soon as we heard the news last night because we have all our retirement savings in this bank. We wanted to make sure we emptied the account before it is too late. We are going to move all our funds to another bank. You can't afford to take any chances with your money. We haven't even been told anything by Northern Rock or been reassured that our money is secure, so why take the risk?" (Scotney 2007, 3).
 323. "We got in the queue at 9.30am. It's 11.30am now, and we still haven't been seen, but we were told we could be waiting until 2pm. We are just concerned, like everyone here, about what is happening. We want to make sure our money is safe, and that may mean withdrawing all of our money. I feel very sorry for the staff here, as they are being bombarded with questions. They are doing the best they can to help us get sorted" (Video: Queue resumes as staff ... 2007).
 324. "We had a lump sum of cash which is our retirement fund that we put into the savings account. Since I saw the announcement on the news last night I've been worried sick and I barely slept. I am not prepared to give Northern Rock the benefit of the doubt. If everyone is doing what we are and taking their money out too that can't be a sign that the business is going to recover. By that time, the bank could have gone bust and we could have lost everything" (Cullwick 2007a, 4).
 325. "We had heard some rumours, but nothing at all from the bank itself. The news, when it finally came out, didn't instil confidence in us. A relative who works for Northern Rock mentioned something to us about a week ago, but we didn't think much of it, to be honest. We could well be taking our money away, we don't want to seem like we're panicking, but when news like this comes out so suddenly it makes you paranoid" (Scotney 2007, 3).
 326. "We had no idea there would be this many people here. It looks like it might take hours, there's only a few people helping in there, but we've no choice so I suppose we'll have to wait. We haven't even been told anything by Northern Rock or been reassured that our money is secure, so why take the risk?" (Scotney 2007, 3).
 327. "We had to fight our way into the shop to get information. We were told all our cheques were guaranteed and we could withdraw pounds 500 cash but we're just so unsure we really want to close the account and get our money" ("Anxious customers in bank fury" 2007, 2).
 328. "We have got a cheque but we are worried it will bounce and won't feel completely happy until the funds are in our account" (Coles 2007).
 329. "We have money and bonds in here and we're trying to get them out. We don't know what the future will hold. The politicians and the Bank of England say we shouldn't panic but we've all heard the politicians say things before" (Lyons 2007, 1).
 330. "We have to look after our own interests. I'm closing my accounts and my ISAs. It's my life savings -about £ 60,000" (Brown 2007, 6; Jenkins and de Bruxelles 2007, 7).
 331. "We haven't got a pension apart from that money. It would be devastating if we lost it" (Morrall 2007, 2).
 332. "We just kept seeing it in the news and thinking about it more and more" (Bailey 2007b).
 333. "We just think it is better to be safe than sorry" (Wright 2007b, 3).

334. "We just wanted to put it somewhere until the market settles down" ("Lesley's Express delivery; Your Money" 2007, 35).
335. "We may have to wait in the cold, but at least we know we will have the money by the end of the day" (Wainwright and Allen 2007, 4).
336. "We shouldn't have to queue in the cold from 5am to keep our money safe. My mother's 95, and I have a lot of money saved with Northern Rock to pay for her care - it's been a nightmare weekend with all this to worry about" (Carter and Tighe 2007, 2).
337. "We think it's best if we take it all out, then we've got peace of mind" ("Northern Rock customers in run on the bank" 2007).
338. "We thought that if there's this many people coming to get money out, then most banks would be in trouble. We don't want to risk it, so we'll close the account. It's a concern. It's all very well them saying that our money's okay, but it's not going to be them that lose it. It's our future" ("Another day dawns in the big cash scramble" 2007).
339. "We travelled to the Dundee branch from Aberdeen as Aberdeen doesn't have a branch to deal with this, only a mortgage advisor" ("Customers descend on crisis-hit bank" 2007).
340. "We were never told they would be closing the doors at 12noon. This is disgusting, we've been here since before 9am and here has just been a complete lack of information, which is appalling and causing this panic. I've completely lost confidence in Northern Rock and just want to get my money out of there, and this situation really hasn't helped" (Lavender 2007b).
341. "We're here for the same reason as everyone else. We are taking some of my savings out so we can share it about a bit instead of having it all in one place" ("Chaotic scenes at branch as bank's shares plunge" 2007).
342. "We're here to collect our savings. It's everything we've got and we didn't want to take the risk with our future" (O'Grady 2007b, 6).
343. "We're just getting more and more annoyed that no-one's coming out here to address this queue and explain things to us all" ("Anxious customers in bank fury" 2007, 2).
344. "We're not taking any chances. We just want to take our money out!" (Morrall 2007, 2).
345. "We've all been talking about this in the queue and the thing is we don't have the confidence not to be here. Nothing that we've seen or heard has reassured us. I'm going to be keeping my current account and closing my savings. That's all I have in my life. This all stems back to the pensions situation when a lot of people lost their pensions and I just keep thinking that the same thing might happen here. I'm blaming the Government because they should have controlled this" (Roberts and Burton 2007, 5).
346. "We've been standing here for hours and it's just not good enough" (Doyle 2007).
347. "We've been trying to access an online account for my Mum overnight but we just can't get on there. My brother lives in Singapore, and the time difference meant we could pass it on to him to keep trying, but it's just busy all the time. We thought the site might have shut down" (Morrall 2007, 2).
348. "We've been with Northern Rock for years. They're very good. Once it's okay, we will be back" ("Patience, good humour and a touch of the Blitz spirit" 2007, 2).
349. "We've been with Northern Rock since it opened in Liverpool 15-20 years ago and I'm sure it will all work out fine in the end, but we can't afford to take any chances. This money is all we have. We've no loyalty to Northern Rock because we've been trying to get a straight answer out of them for days" ("City savers queue at crisis bank" 2007, 1).
350. "We've had an account here for three years because it pays better interest than other banks. It is only a few thousand pounds but we are not prepared to risk losing it. I haven't decided where to put the money yet because from what I have heard other banks could be going the same way, so I will wait for a few days and see if things settle down" (Perrie 2007; Stokes 2007, 4).
351. "We've heard that it was closing and that it was going bankrupt. You're not guaranteed of keeping your money. You hear about other banks going like this, but this one has borrowed too much and they shouldn't have borrowed it" ("Another day dawns in the big cash scramble" 2007).

352. "We've more than £20,000 saved for our old age. We can't lose it as it is our lifetime's savings" ("Rock cash rescue bid" 2007, 2).
353. "We've too much money with them to risk" (Wilson 2007a, 8).
354. "Well, I'm not thinking about depositing!" ("Northern Rock customers 'calmed'" 2007a).
355. "Well, you worry don't you? If you think other people are worried, you think: shouldn't I be worried too?" ("They tell you not to panic - ..." 2007).
356. "What do they expect when the phone lines are jammed and you can't get through on the internet? They've no branches around the country so we all assume the worst. I've nothing like the e90,000 or more lots of them this morning were taking out but it's my little investment and I don't want to lose it. People just want to come up, get a cheque and be rid of it" (Fleming 2007, 14).
357. "What kind of way is this to do business? We have been treated abysmally. This note is not worth the paper it's written on. I don't believe a word of it so I'll have to waste another day back here tomorrow. It's disgraceful" (Poulter 2007, 4).
358. "When I couldn't get online or talk to someone over three days, I lost faith. Online banking works fine when you can get onto it but you really can't beat a branch network where you can talk to someone" ("Panicked customers queue for savings" 2007).
359. "When I heard the Government telling us not to worry, I knew it was time to get my money out" (Hazell 2007, 57).
360. "When I heard the news I just thought, 'Oh no, not again'" (Smith, Ringshaw, and Watt 2007, 2).
361. "When I saw all the people, I wondered what was going on, so I called my son, and he told me to pull all my money out. My whole life is in there. But I think it's better to take every penny out. What I'm going to do after that, I don't know. I'm retired sick and I'm too unwell to stand here for an hour, waiting. But I don't have any other choice" (Morgan 2007, 4).
362. "When I saw so many people taking their money out it was scary. Everyone is saying the panic is only making things worse, but people need to be careful about their money" (Walker 2007, 35; Cusick 2007, 2).
363. "When you get to our age you want to look after your savings and make sure they are totally safe. I know the Government have said the money is safe but I don't trust that. We came down here early because we expected to queue for hours so we were thrilled to be able to walk straight in and close our accounts" (Adams 2007).
364. "When you have been stung once you get frightened" (Pavia 2007, 7).
365. "When you have large savings in an account that is unreliable, you want to get it out" (Seib, Rossiter, Gilmore, and Sheard 2007, 6).
366. "When you phone them, you can't get through and when you go to the website, it just crashes. When you read all the reports over the weekend and you think about your money, I decided it just was not worth the risk" ("Northern Rock customers show little faith in new assurances" 2007).
367. "Whether the cheque they will give me will clear NatWest I just do not know" (Jenkins and de Bruxelles 2007, 7).
368. "Who's to say this won't happen at Halifax or Bradford & Bingley next? People won't take any chances with their money nowadays. We all stand to lose too much" ("City savers queue at crisis bank" 2007, 1).
369. "Why did they have to make this public? If the Bank of England had supported Northern Rock privately, without the announcement, there would have been none of this panic" (Watts and Donnelly 2007, 8).
370. "Why do we have to fill in forms and why does it take half an hour or more to close one account?" ("Northern Rock customers show little faith in new assurances" 2007).
371. "Yes, we are making matters worse. But people need reassurance that their money is safe" (Smith 2007, 14).

372. "You don't know what's going to happen and that's the top and bottom of it. You don't whether this is just the beginning" ("Another day dawns in the big cash scramble" 2007).
373. "You feel a bit more pressure when it's charitable money" (Wilson 2007a, 8).
374. "You get your chairman on the phone and tell him to get his bloody branch open. I am so furious about this. We have been here since 8.30 this morning and it is only now that we have heard that they will close. We are desperate" (Watts and Donnelly 2007, 8).
375. "You have to worry when something like this happens. We have decided to be cautious and move all our money to a different bank. We came straight to the bank when we heard the news but were surprised to see such a long queue. It shows a lot of people are very worried about their savings" (Scotney 2007, 3).
376. "You look at this queue, and it's this long - what will it be like at other branches? This is just one branch. It will probably be worse elsewhere" ("They tell you not to panic - ..." 2007).
377. "You put your faith in the banks, but then something like this happens" (Hiscott 2007, 4).
378. "You put your money in a bank because you want some security. If I had wanted to gamble it I would have put it on the stock market" (Prynn 2007d, 5).