EC 262

Term Paper

Moral hazard during the recent financial crisis

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Introduction

The financial crisis, that began in 2007 quickly started to dominate newspapers' headlines and has often been referred to as the 'Second Great Contraction', is undoubtedly the worst crisis since the Great Depression in the 1930s and whose consequences have been and are being felt by millions of people. So the question is given: Why and how did it all start?

Acharya et al (p. 111, 2014) cites two generally accepted roots of "this dysfunctional behaviour of financial markets": the first one follows the argument developed by Keynes, Minsky and Shiller which puts financial bubbles and investors' "irrational (or not wholly rational) beliefs" at the heart of the crisis. The other argument looks at the problem from the incentives point of view while discussing misguided regulation and monetary policy as well.

This paper focuses on the incentives problem which raises multiple questions: What motivated loan officers, banks, governments and credit rating-agencies during the run-up and early years of the crisis? Can their actions be explained by the poorly designed incentives they responded to? Does this support the subsequent moral hazard argument (so that the participants pursued their own interests regardless of 'morality' since they will not or cannot be held accountable for their actions)? By attempting to answer these questions this paper intends to summarize the main causes and consequences of moral hazard, a problem present at almost all levels of the financial system.

While the main focus here is to analyse the events and actions occurred in the United States, the international dimension of the crisis is by no means unimportant and occasional references to worldwide features will be made.

Section One

What is exactly moral hazard?

Milgrom and Roberts (1992, p.167) defines moral hazard as "the form of postcontractual opportunism that arises because actions that have efficiency consequences are not freely observable and so the person taking them may choose to pursue his or her own private interests at others' expense".

How does it relate to the financial crisis?

Moral hazard is often explained as a consequence of information asymmetry which undoubtedly characterises today's financial world. The three essential components of moral hazard explained by Milgrom and Roberts (1992, p.170) and examples of their respective 'links' to the recent financial crisis are:

- the parties involved have diverging interests: borrowers and loan officers in case of mortgage contracts or managers and stakeholders of financial institutions

  This situation is known as the principal-agent problem: for example, in case of managers and stakeholders the former are the agents who act pursuing their own interest which might be very different from the objectives of the principals (stakeholders) - managers may engage in activities that increase their own welfare or power within the organisation but do not maximise its profits.

- decision makers being insured against some of the consequences of their actions: loan officers do not hold responsibility for the long-term outcomes of the mortgage contracts

  A loan officer working for an organisation that issues a 20-year loan may leave the job earlier and therefore can hardly be punished for the consequences of a loan default.

- monitoring and enforcement is imperfect: a financial institution cannot monitor a (potential) borrower whether he/she uses the funds for the purposes indicated in the contract

  Given the significant costs and effort monitoring requires, many institutions have opted to decrease monitoring standards which leaves more space for undesirable behaviour. Moreover the process of verifying and enforcing this kind of behaviour (eg. via legal proceedings) is also costly.

The next section of the paper examines the role borrowers and loan officers played in the run-up of the subprime mortgage crisis and intends to shed light on the different incentives they responded to. Section three identifies the incentives that lead banks (and more generally financial intermediaries) to excessive risk taking and it also addresses the impacts of the introduction and extension of the Federal Deposit Insurance Corporation (FDIC) and the Federal Reserve's discount window. Section four will proceed with the analysis of the government's actions and offers an overview of the effects that government sponsored enterprises (such as Fannie Mae), the Troubled Asset Relief Programme (TARP) and credit rating agencies' actions had on incentives.

Section Two

The global financial crisis started with a bubble in the US housing market and the collapse of the subprime mortgage market which was linked to the former via the mortgage backed securities. In other words if a subprime borrower defaulted on a mortgage the real estate would serve as collateral. Since during the years preceding the crisis housing prices peaked, lenders remained optimistic and continued to expand loans in order to boost the economy and increase living conditions.

This idea is echoed by Gerardi et al (p.2, 2007) who points out that “the transformation of the mortgage market has improved opportunities for the less-well-off and for first-time homebuyers”. Over the past 35 years changes in regulation, accounting rules and mortgage design and the emergence of the subprime mortgage market (“the part of the mortgage business dedicated to borrowers with less-than perfect credit histories” Gerardi et al, p.8, 2007) made loans available to a wider range of customers who embraced the opportunity to raise their standards of living. This economic prosperity is undoubtedly a positive consequence of the lax regulations however included risks and dangers hardly anyone realised or considered threatening enough to take into account.

One possible explanation is given by Cheng et al (2013): Wall Street itself was not fully aware of the housing bubble and its disastrous consequences. Their research indicates that mid-level managers in securitization (who played a key role in the run-up of the crisis) did not “exhibit awareness of problems in overall house markets” (p.25), emphasising that it is still possible that these agents responded to poorly designed incentives.

Agarwal et al (2014) conducted a study to examine the changes in loan officers’ compensation scheme and its effects on the quality and - maybe more importantly – the quantity of their approved loans. Not surprisingly, following the introduction of volume-based compensation officers were more likely to approve riskier loans confirming the intuition that it “encouraged excessive risk-taking with OPM – Other People’s Money” (p.1). They also found evidence that “the defaulting loans are concentrated in the subset of loans that would not have been originated in the absence of commission-based compensation” (p.4). To summarise this form of remuneration misaligned the objectives of loan officers and lenders (the financial institutions they are working for) since the former now had monetary incentives

tied to the quantity of loans issued while the latter preferred (or would have preferred) to avoid originating loans that were likely to default.

As for part of the borrowers it is easy to see that in the world of information asymmetry they had very little motive to reveal their likelihood of defaulting on mortgage loans – given that this information was at their disposal. Moreover they were subject to lower screening and monitoring standards from financial institutions which largely contributes to moral hazard as well.

Section Three

During the past few decades the financial sector underwent substantial changes which are crucial contributors to banks' excessive risk taking. In 1999 the Gramm–Leach–Bliley Financial Services Modernization Act was passed which repealed the Banking Act of 1933 (Glass-Steagall) that "mandated a virtually complete separation of investment banking from deposit-taking activities" (p. 186, Acharya et al, 2011). Their argument goes on to explore the aftermath of this change highlighting that "the new financial conglomerates had become fee-cashing Goliaths". They also draw attention to the fact that these investment banks "chased market share in the securitization business" and did not take a step back when it came to take "riskier credits ranging from subprime mortgages to leveraged loans" (p. 190-191, Acharya et al, 2011). Their motives are explained by Acharya et al (2011): "most would have failed in 2008 had they not by then become systemic institutions and beneficiaries of the largest corporate bailouts in U.S. history, passing on to the public the massive risks that they had assumed in executing their financial conglomerate strategies" who cite moral hazard as a cause of banks behaviour once again.

Furthermore, the expansion of the shadow banking system that included investment banks and hedge funds was mainly unregulated. As Brunnermeier (p.2, 2008) explains "the traditional banking model, in which the issuing banks hold loans until they are repaid, was replaced by the "originate and distribute" banking model, in which loans are pooled, tranched and then resold via securitization." At first sight it appears that this new method made loans safer and sounder, however the interconnectedness of financial instruments carried the biggest risk of all. Consequently lending standards have decreased and largely contributed to the financial crisis that for the same reasons spread around the globe.

Before the introduction of deposit insurance an insolvent (or believed to be insolvent) bank (such that it cannot meet depositors demand when they decide to withdraw their funds) was subject to bank runs, and insolvency could become a 'self-fulfilling prophecy'. The creation of FDIC (Federal Deposit Insurance Corporation), introduced as part of the Banking Act of 1933, insured deposits initially up to $2,500 per depositor and by 2008 this limit was raised to $250,000. Despite all its advantages to protect depositors this explicit guarantee created a serious moral hazard problem: banks covered by the FDIC now had greater incentives to engage in riskier projects since even in case of failure they would not incur significant losses.

It is important to note that moral hazard existed as part of the system well before the introduction of this safety net provided by the government: as T. Bruce Robb pointed out in the early 20th century "before deposit insurance, the only people with real incentive to monitor banks were depositors, but they couldn't do so, since bank debt by design is information-insensitive" (p. 138 Gorton, 2012). This inability from part of the depositors to refrain banks from taking excessive risk put the financial institutions in the delicate position of possessing

private information regarding their own activities. The introduction of FDIC simply shifted the incentives to monitor banks to the government.

The emergence of the phenomenon called “too big to fail” (TBTF) dates back to the 1980s: in 1984 Continental Illinois reached out for help and among others received a $1.5 billion bailout from the FDIC along with the promise that all deposits would be guaranteed (as opposed to the $100,000 limit of that time) to prevent a run on the bank with disastrous consequences for the entire banking system.
(http://www.fdic.gov/bank/historical/history/235_258.pdf, p.244).

Given this particular case large financial institutions had reasonable motives to believe that regardless of the risks they might take, if faced by the ‘bad’ outcome bailout is guaranteed and most depositors would not incur losses. The argument in defence of the intervention was that this can be considered as the ‘less-bad option’ compared to the vast disruption their failure would imply for the financial system. The TBTF problem received little attention until the recent financial crisis when several major institution including Bear Stearns, Fannie Mae, Freddie Mac, Merrill Lynch, Citigroup and Bank of America who “correctly anticipated de facto government guarantees” received a bailout of creditors (p. 184, Acharya et al, 2011).

As it has been emphasized many times, an explicit guarantee reinforces moral hazard and the case is no different when it comes to the ‘lender of last resort’ function of a central bank. Mishkin (p.16, 1991) concludes that monetarists suggest that “the lender of last resort role should be very a narrow one: the central bank should only lend freely to banks when there is a sudden desire on the part of depositors to withdraw their funds from bank”. During the crisis the Federal Reserve provided funding via the lowered discount window and as Acharya et al

notes “The lender-of-last resort role probably is of greatest relevance in dealing with institutions whose instability would pose a direct threat to the financial system as a whole” (p.67, 2011).

Section Four

Throughout the financial crisis there has been great controversy regarding the government’s decision to bail out troubled financial institutions. Opponents claim that even the prospect of a bailout indeed reinforces moral hazard encouraging undesirable behaviour and excessive risk taking. Advocates of the decision argue that sometimes bailout is the response from the government to avoid the devastating consequences of a bank failure.

What is the role of the government then? “The Livingstone doctrine tells us that bailouts should only occur when many institutions are in crisis” (p.139, Gorton, 2012). According to this doctrine the optimal response from the government is to intervene in case of a crisis which fulfils the troubled institutions’ expectations about bailout and therefore leaves space for opportunistic behaviour.

The case of Bear Sterns, an American investment bank that received a $29 billion (http://www.nytimes.com/interactive/2009/02/04/business/20090205-bailout-totals-graphic.html) bailout in March 2008 from the Federal Reserve, can be viewed as an extreme case of government intervention. However when months later another investment bank, Lehman Brothers, found itself in a remarkably similar situation no such bailout was made. Gorton summarized the reactions: “The failure of Lehman Brothers stunned the market

because participants apparently thought that no large institution would be allowed to fail" (p.148, 2012).

In October 2008 the US government launched the Troubled Asset Relief Program (TARP), another important milestone "to strengthen market stability, improve the strength of financial institutions, and enhance market liquidity" (http://www.federalreserve.gov/bankinforeg/tarpinfo.htm). Despite the restrictive covenants of the programme this additional support from the government might deepen the moral hazard problem as well. However the US government's reaction was not unique, for example in 2008 a £500 billion rescue package was announced by the British government (http://www.telegraph.co.uk/finance/financialcrisis/3156711/Bank-bailout-Alistair-Darling-unveils-500billion-rescue-package.html).

Government sponsored enterprises (GSE) such as Fannie Mae and Freddie Mac "whose mission is to help families realize the 'American Dream' of owning a home" (p.2, Gerardi et al, 2007) also played a significant role in the crisis. These organisations by design enjoy the benefits of federal guarantee and both Freddie Mac and Fannie Mae "worked closely with Wall Street firms and became the largest issuers of mortgage-backed securities" (p.6, Gerardi et al, 2007). As Jaffee et al (http://whitepapers.stern.nyu.edu/summaries/ch04.html) highlights "GSEs' activities are funded through "cheap" credit made available in capital markets under the presumed guarantee". They go on to explain that as a consequence the GSE's portfolio "contained a variety of risks" and later on they eventually required a bailout.

Another type of moral hazard problem arises when an organisation provides multiple services to one client creating substantial conflicts of interest. Before and during the financial crisis

credit rating agencies (CRA) often dealt with rating and consulting at the same time. Criticism regarding their role often include arguments such as their benefit from the 'issuer pays' system: the institution that issues the securitized asset in question is obliged to compensate the CRA which leaves room for opportunistic behaviour as it has been implied by Davies (p. 125, 2010) "positive ratings were sometimes offered as part of the fee negotiations between issuers and CRAs".

Conclusion

It can hardly be denied that the recent financial crisis has caused the most severe economic downturn since the Great Depression and due to its global extent the consequences has spread all over the world. However, quite often the "human component" of the crisis is forgotten: it was loan officers, bankers and government officers who made the decision that affected the economy and therefore - people's lives too. This paper examined the phenomenon of the omnipresent moral hazard, the term used to describe how (insured) people have an increased likelihood of engaging in activities that carry significant, above-average risk and which are hard to verify and monitor.

If moral hazard played such a key role in the crisis, why weren't we able to detect and eliminate it from the system? Taking the TBTF problem as an example, James Barth and Apanard Prabha offer and interesting insight (p. 377-378, Acharya et al, 2014): "In theory, of course, regulators have long been expected to prevent banks from reckless behavior and to shut down failing banks in a timely, orderly and cost-effective manner.". They go on to discuss various approaches to this regulatory demand and evaluate how different actions from part of the regulators affected banks' risk taking.

As a response to the financial crisis in 2010 the Dodd-Frank Act was passed that established regulations regarding, for example, banks' size, capital and liquidity requirements. However the result was ambiguous and many people – including Barth and Prabha – have concluded that "these reform efforts may fall short of solving the too big to fail problem" (p. 398, Acharya et al, 2014).

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Word count: 3019