THE ORGANIZATIONAL ENVIRONMENT OF TOO BIG TO FAIL BANKS
An institutional and behavioural perspective on the organizational field

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Abstract

This thesis investigates the human behaviour and institutional structures in the organizational environment of too big to fail banks and their importance of the overall financial stability. The thesis highlights and analyse the most significant reasons to the global financial crisis of 2007-2009. I focus on the organizational environment of too big to fail banks in USA. However, I include examples from other industrialized countries when applicable. The analysis and discussion build upon new institutional theory and behavioural economics. My findings indicate that the behaviour of both internal and external actors of the environment can be explained by behavioural biases. Furthermore, these biases have helped organizations to incorporate institutionalised myths, thus leading to a more homogenous organizational field of too big to fail banks.

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1. Introduction

This thesis examines the organizational environment of too big to fail banks. By making use of theories from the academic fields of new institutionalism and behavioural economics the thesis seeks to explain the driving forces behind the development witnessed both inside too big to fail banks as well as in the external environment of too big to fail banks. Throughout the thesis options of organizational responses and managerial actions to the institutional environment are explained.

The research is motivated by the highly ambiguous circumstances characterizing the period of 2007-2009 during the global financial crisis that pointed to some form of misalignment in terms of market participants' incentives or some type of collective misunderstanding of financial markets and its institutions in general. Because even when recognizing that financial crisis always have been a part of reality the severity of the recent crisis suggests that further studies of human behaviour, objectives of specific organizations and their impact on society as a whole are necessary. We live in a VUCA world. The components of the acronym refer to: volatile, uncertain, complex, and ambiguous. When acknowledging this fact it becomes interesting to investigate the complexity of the financial system and the organizations operating in it. Here the institutionalized field of too big to fail banks is particularly interesting due to their interconnectedness with the system as a whole.

In summary, I want to examine the institutional environment of too big to fail banks drawing from theories from new institutionalism and behavioural economics. Hence, my research question is:

To what extent does an extended view on the organizational environment of too big to fail banks, which include new institutional theory and behavioural economics, provide explanatory power beyond traditional research approaches for the overall robustness of the financial system?

My study has several limitations, however. First I focus on the organizational environment of too big to fail banks in USA including examples from the broader financial system and other industrialized countries when relevant. The reason for the choice is that many of the reasons for the severity of the financial crisis of 2007-2009 are considered to relate to the situation in USA.

The paper is organized as follows. I end this introduction with a brief account of the history of too big to fail. Section two introduces my theoretical foundation consisting of new institutionalism and behavioural economics. I present my methodology in section three. In section four I present my analytical framework. Section five summarizes my findings and concludes the paper.

Congressman Stewart McKinney in relation to the bankruptcy of Continental Illinois popularized the expression of too big to fail in a congressional hearing in 1984. Since then we have seen more examples of companies being considered too big to fail. One example is the hedge fund Long-Term-Capital-Management, which also was considered too big and interconnected to fail. During and after the financial crisis of 2007-2009 too big to fail has been a main focus of politicians and regulators in particular due to necessity of government bailouts during the crisis. Also, the general public has shown an amount of interest in the subject do the externalities on the economy of the broader society caused by these entities.

2. Theory

2.1 New Institutionalism

2.1.1 Origin and Development

Institutionalism experienced a significant revival in 1977 with an influential paper published by John W. Meyer. This paper prompted a shift in the way institutional analysis was conducted by proposing a revised formulation of institutionalism. Research that followed this specific paper became known as new institutionalism or neo-institutionalism in academic literature.

The next significant reformulation of institutionalism occurred in the early 1980's when Paul DiMaggio and Walter W. Powell revisited the iron cage, which was a term coined by Max Weber in the beginning of the 20th century when he tried to explain the increased rationalization inherent in social life. Weber argued that individuals were trapped by bureaucratization especially in Western capitalist societies.

New institutionalism recognises that institutions operate in an environment consisting of other institutions, known as the institutional environment. This environment influences institutions by what could be termed as institutional peer pressure. Organizations main goal is to survive in this environment. In order to survive they need to do more than succeed economically, they need to establish legitimacy within the world of institutions. Until the introduction of institutional conceptions, organizations were viewed primarily as production systems, and their structures were viewed as being shaped largely by their technologies, their transactions, or the power-dependency relations growing out of such interdependencies. Environments were conceived of as task environments: as stock of resources, sources of information, or a group of competitors and exchange partners. While such a view is not wrong, it is clearly incomplete. (Scott, 1987)

Prior to the development of new institutionalism existing theories suggested that institutions could influence individuals to act in one of two ways. They can either cause individuals within institutions to maximize benefits through regulations, also called rational choice institutionalism, or through normative pressures that causes an awareness of what one is supposed to do, also called historical institutionalism. New institutionalism adds a cognitive influence. This perspective suggests that individuals, instead of acting under rules or based on obligation, they act because of conceptions. Hence, individuals make certain choices because they can conceive of no alternative.

2.1.2 Rationalised Myths

In modern societies formal organizational structures arise in highly institutionalized contexts. Professions, policies, and programs are created along with the products and services that they are understood to produce rationally. This permits many new organizations to spring up and forces existing ones to incorporate the practices and procedures. That is, organizations are driven to incorporate the practices and procedures defined by prevailing rationalized concepts of organizational work and institutionalized in society. Organizations that do so increase their legitimacy and their survival prospects, independent of the immediate efficacy of the acquired practices and procedures. (Meyer & Rowan, 1977)

Institutionalized products, services, techniques, policies, and programs function as powerful myths, and many organizations adopt them ceremonially. But conformity to institutionalized rules often conflicts sharply with efficiency criteria and, conversely, to coordinate and control activity in order to promote efficiency undermines an organization's ceremonial conformity and sacrifices its support and legitimacy. To maintain ceremonial conformity, organizations that reflect institutional rules tend to buffer their formal structures from the uncertainties of technical activities by becoming loosely coupled, building gaps between their formal structures and actual work activities. (Meyer & Rowan, 1977)

Meyer and Rowan (1977) observes that formal organizations are often loosely coupled: structural elements are only loosely linked to each other and to activities, rules are often violated, decisions are often unimplemented, or if implemented have uncertain consequences, technologies are of problematic efficiency, and evaluation and inspection systems are subverted or rendered so vague as to provide little coordination. As seen in figure 1 the lines suggests that the post-industrial society, which is dominated by rational organizations even more than by the forces of production, arises both out of the complexity of the modern social organizational network and, more directly, as an ideological matter.

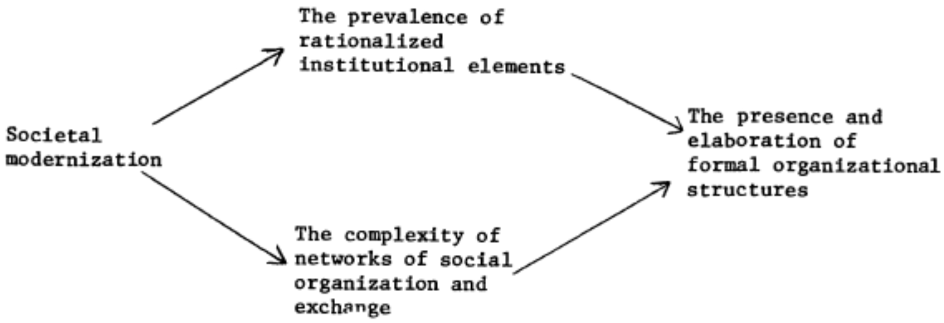

FIG. 1.—The origins and elaboration of formal organizational structures

Figure 1 - Adapted from (Meyer & Rowan, 1977)

Furthermore, three specific processes that generate rationalized myths of organizational structure can be noted:

- The elaboration of complex relational networks
- The degree of collective organisation of the environment
- Leadership efforts of local organizations

Thus, rationalized institutions create myths of formal structure, which shape organizations. Failure to incorporate the proper elements of structure is negligent and irrational, the continued flow of support is threatened and internal dissidents are strengthened. At the same time, these myths present organizations with great opportunities for expansion. Affixing the right labels to activities can change them into valuable services and mobilize the commitments of internal participants and external constituents.

Figure 2 outlines the managerial dilemma of the choice between an elaboration of rationalized institutional myths and organizational efficiency. However, organizations need to conform to institutionalised myths in order to gain legitimacy and resources that are crucial in terms of long term survival of the organization.

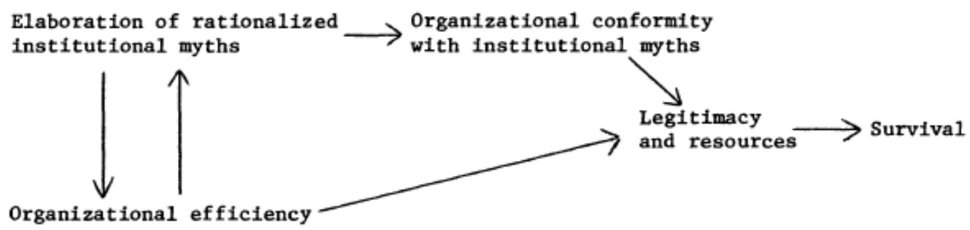

FIG. 2.—Organizational survival

Figure 2 – Adapted from (Meyer & Rowan, 1977)

Finally, six propositions are stated:

1. As rationalized institutional rules arise in given domains of work activity, formal organizations form and expand by incorporating these rules as structural elements
2. The more modernised the society, the more extended the rationalised institutional structure in given domains and the greater the number of domains containing rationalized institutions
3. Organizations that incorporate societally legitimated rationalized elements in their formal structures maximize their legitimacy and increase their resources and survival capabilities
4. Because attempts to control and coordinate activities in institutionalized organizations lead to conflicts and loss of legitimacy, elements of structure are decoupled from activities and from each other
5. The more an organization's structure is derived from institutionalized myths, the more it maintains elaborate displays of confidence, satisfaction, and good faith, internally and externally
6. Institutionalized organizations seek to minimize inspection and evaluation by both internal managers and external constituents

2.1.3 Isomorphism

The bureaucratization of the corporation and the state that Max Weber warned against has been achieved. Organizations are still becoming more homogeneous, and bureaucracy remains the common organizational form. Today, however, structural change in organizations seems less and less driven by competition or by the need for efficiency. Instead, DiMaggio and Powell (1983) contends, that bureaucratization and other forms of organizational change occur as the result of processes that make organizations more similar without necessarily making them more efficient. Bureaucratization and other forms of homogenization emerge out of structuration of organizational fields[1]. This process is fuelled largely by the state and professions, which have become the great rationalizers since the beginning of the second half of the 20th century. Highly structured organizational fields provide a context in which individual efforts to deal rationally with uncertainty and constraint often lead, in the aggregate, to homogeneity in structure, culture, and output. Once disparate organizations in the same line of business are structured into an actual field, powerful forces emerge that lead them to become more similar to one another.

A concept that best captures the process of homogenization is isomorphism. This concept has been viewed both from a competitive and an institutional perspective. Since organizations do not just compete for resources and customers, but for political power and institutional legitimacy, for social as well as economic fitness, institutional isomorphism is a useful tool for understanding the politics and ceremony that pervade much modern organizational life. Here three mechanisms through which institutional isomorphic change occurs can be identified:

1. Coercive isomorphism that stems from political influence and the problem of legitimacy
2. Mimetic isomorphism resulting from standard responses to uncertainty
3. Normative isomorphism, associated with professionalization

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[1] By organizational field, the authors mean those organizations that, in the aggregate, constitute a recognized area of institutional life: key suppliers, resource and product consumers, regulatory agencies, and other organizations that produce similar services or products.

Coercive isomorphism results from both formal and informal pressures exerted on organizations by other organizations upon which they are dependent and by cultural expectations in the society within which organizations function. Mimetic processes on the other hand do not derive from coercive authority. These processes can stem from problems with ambiguous causes or unclear solutions. The history of management reform in government agencies, which are noted for their goal ambiguity, is almost a textbook case of isomorphic modelling. Uncertainty is also a powerful force, which leads to considerable advantages of mimetic behaviour. Normative pressures stems primarily from professionalization[2]. The professional project, however, is rarely achieved with complete success while professionals must compromise with nonprofessional clients, bosses, or regulators. Two aspects of professionalization are important sources of isomorphism. One is the resting of formal education and of legitimation in a cognitive base produced by university specialists. The second is the growth and elaboration of professional networks that span organizations and across which new models diffuse rapidly.

It is important to note that each of the institutional isomorphic processes can be expected to proceed in the absence of evidence that they increase internal organizational efficiency. To the extent that organizational effectiveness is enhanced, the reason will often be that organizations are rewarded for being similar to other organizations in their fields. Pressures for competitive efficiency are also mitigated in many fields because the number of organizations is limited and there are strong fiscal and legal barriers to entry and exit. Therefore, organizational fields that include a large professionally trained labour force will be driven primarily by status competition. Organizational prestige and resources are key elements in attracting professionals. This process encourages homogenization as organizations seek to ensure that they can provide the same benefits and services as their competitors.

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[2] Professionalization is interpreted as the collective struggle of members of an occupation to define the conditions and methods of their work, to control ”the production of producers”, and to establish a cognitive base and legitimation for their occupational autonomy.

Several hypotheses can be developed and used as predictors of isomorphic change. The following dozen hypotheses, which are divided into organizational and field-level predictors, can be used when doing further empirical research (DiMaggio & Powell, 1983).

Organizational level predictors:

Hypothesis 1: The greater the dependence of an organization on another organization, the more similar it will become to that organization in structure, climate, and behavioural focus.

Hypothesis 2: The greater the centralization of organization A's resource supply, the greater the extent to which organization A will change isomorphically to resemble the organizations on which it depends for resources.

Hypothesis 3: The more uncertain the relationship between means and ends the greater the extent to which an organization will model itself after organizations it perceives to be successful.

Hypothesis 4: The more ambiguous the goals of an organization, the greater the extent to which the organization will model itself after organizations that it perceives to be successful.

Hypothesis 5: The greater the reliance on academic credentials in choosing managerial and staff personnel, the greater the extent to which an organization will become like other organizations in its field.

Hypothesis 6: The greater participation of organizational managers in trade and professional associations, the more likely the organization will be, or will become, like other organizations in its field.

Field-level predictors:

Hypothesis 7: The greater the extent to which an organizational field is dependent upon a single (or several similar) source of supports for vital resources, the higher the level of isomorphism.

Hypothesis 8: The greater the extent to which the organizations in a field transact with agencies of the state, the greater the extent of isomorphism in the field as a whole.

Hypothesis 9: The fewer the number of visible alternatives of organizational models in a field, the faster the rate of isomorphism in that field.

Hypothesis 10: The greater the extent to which technologies are uncertain or goals are ambiguous within a field, the greater the rate of isomorphic change.

Hypothesis 11: The greater the extent of professionalization in a field, the greater the amount of institutional isomorphic change.

Hypothesis 12: The greater the extent of structuration of a field, the greater the degree of isomorphics.

Besides using the theory of institutional isomorphism academics have forwarded functionalist theories, where some version of natural selection should explain the paradox of competitive organizations moving toward homogeneity. Also, elite theories, where key elites guide and control the social system through their command of crucial positions in major organizations. An understanding of the manner in which fields become more homogeneous would prevent policy makers and analysts from confusing the disappearance of an organizational form with its substantive failure.

2.1.4 Framing of Situations

Michel Callon (1998) discusses how economic externalities of markets, both positive and negative, occur and how such externalities can be explained and handled in ever emerging societies. The concept of externalities is linked to that of market failures. The term market failure does not mean that nothing good was produced. It's meaning is more precise: as expressed in terms of efficiency or in terms of the provision of socially desirable goods, the best result that could have been obtained was not achieved in practice. Beneath the concept of externality lies the more fundamental concept of framing, which implies the possibility of identifying overflows and containing them. However, considerable investments are required in order to frame interactions and contain overflows.

Interpersonal relationships, such as arranging the negotiation of a contract, take place in a frame. The frame establishes a boundary within which interactions take place more or less independently of their surrounding context. Hence, framing puts the outside world in brackets, as it were, but does not actually abolish all links with it. Therefore, you can create a holistic view of a specific interpersonal relationship by using the concept of framing. That is, you can investigate the interactions on themselves, including the role of the involved agents, and also highlight the omnipresence of connections with the outside world and the irrepressible and productive overflows which the latter encourage.

Framing defines the effectiveness of the market because, in this closed interactional space, each individual take into account the viewpoint of every other individual when reaching a decision. Yet in certain cases framing is either impossible to achieve or is deliberately transgressed by the actors: this produces overflows that cause the barriers to become permeable. Economic theory seems predisposed to the hypothesis that these overflows should be regarded as accidental and consequently that framing should be perceived as the norm towards which everything should tend. (Callon, 1998)

Another view holds that framing is expensive and always imperfect, thus making overflows the norm. From this perspective framing cannot be achieved by contractual incentives alone, because the specialists involved in the interaction is the same actors who ensure that certain courses of action are followed and at the same time generate externalities.

The definition of externalities implies that it is possible to identify not only actors but also effects produced by their activities. Only once this double identification has taken place is it possible to draw up a list of agents who benefit or suffer from these externalities. Once the overflows, source agents and target agents have all been correctly identified and described, and once measuring instruments for quantifying and comparing them have been set up, it becomes possible to reframe the interactions.

Michel Callon (1998) suggests two types of situations:

1. In hot situations, everything becomes controversial: the identification of intermediaries and overflows, the distribution of source and target agent, the way effects is measured. These controversies, which indicate the absence of a stabilized knowledge base, usually involve a wide variety of actors. The actual list of actors, as well as their identities, will fluctuate in the course of the controversy itself and they will put forward mutually incompatible descriptions of future world states.
2. In cold situations on the other hand, agreement regarding on-going overflows is easily achieved. Actors are identified, interests are stabilized, preferences can be expressed, and responsibilities are acknowledged and accepted. The possible world states are already known or easy to identify: calculated decisions can be taken.

Ronald Coase (1960) is discussing the conditions governing intervention by the public authorities and suggests that agents are capable of sorting out the issue of externalities on their own. However, two conditions have to prevail, property rights are clearly defined and transaction costs are absent. This model presupposes that relevant agents are identified and capable of negotiating with each other. Also, overflows have to be confirmed and acknowledged and property rights allocated in such a way that the identities and responsibilities of the agents can be established. Furthermore, he advocates that we as a society has to take into account the costs involved in operating the various social arrangements (whether it be the working of a market or of a government department), as well as the costs involved in moving to a new system. When devising and choosing between social arrangements we should have regard for the total effect. (Coase, 1960)

2.2 Behavioural Economics

2.2.1 Origin and Development

Behavioural economics study the effects of psychological, social, cognitive, and emotional factors on the economic decisions of individuals and institutions. Psychology has been a part of the field of economics as far back as the 18th century when Adam Smith proposed psychological explanations of individual behaviour. Since then neo-classical economists have sought to reshape the economical discipline as a natural science incorporating more and more mathematical formulas into the theoretical frameworks. This transition has mainly occurred during the second half of the 20th century. However, psychological aspects have again won influence in the field of economics especially starting in the 1980's up till today. The forerunners on the field have been the winner of the 2002 Nobel Prize in economics Daniel Kahneman and Amos Tversky who together developed the prospect theory.

There are three prevalent themes in behavioural economics. First, it is argued that individuals make decisions based on approximate rules of thumb also known as heuristics and not based on strict logic like neo-classical theories suggests. Hence, economic agents have some form of bounded rationality and do not always think in rational probabilistic terms as the concept of homo economicus suggests. Secondly, framing is used as an imagery of how the collection of anecdotes and stereotypes that makes up the mental emotional filters individuals rely on are used to understand and respond to events. Also, framing explains how the use of communication can influence how different actors perceive a specific problem or situation. Individual's use these collected anecdotes and stereotypes when making sense and responding to events. Finally, behavioural economists seek to explain market inefficiencies such as mispricing and non-rational decision-making. Therefore, efficient market proponents such as Eugene Fama has criticized the behavioural field for being a collection of anomalies that are quickly priced out or can be explained by arguments concerning markets microstructure.

2.2.2 Prospect Theory

Prospect theory was developed in the late 1970's as a critique of expected utility theory, which was the prevailing theory in terms of analysing decision-making with regard to choices that have uncertain outcomes. There is now general agreement that the expected utility theory does not provide an adequate description of individual choice. Kahneman and Tversky (1979) describe several classes of choice problems in which preferences systematically violate the axioms of expected utility theory. In expected utility theory, the utilities of outcomes are weighted by their probabilities. However, research indicates that people's preferences systemically violate this principle.

During the choice process prospect theory distinguishes two phases, an early phase of editing and a subsequent phase of evaluation. The editing phase consists of preliminary analysis of the offered prospects, which often yields a simpler representation of these prospects. The function of the editing phase is to organize and reformulate the options so as to simplify subsequent evaluation and choice. Editing consists of the application of several operations that transform the outcomes and probabilities associated with the offered prospects. The six major operations of the editing phase are as follows: (Kahneman & Tversky, Prospect Theory: An Analysis of Decision under Risk, 1979)

1. Coding: People normally perceive outcomes as gains and losses, rather than as final states of wealth or welfare and are defined relative to some neutral reference point
2. Combination: By combining the probabilities associated with identical outcomes prospects can be simplified
3. Segregation: Some prospects contain a riskless component that is segregated from the risky component
4. Cancellation: People discards components that are shared by the offered prospects
5. Simplification: Highly unlikely events are either ignored or overweighted, and the difference between high probability and certainty is either neglected or exaggerated
6. Detection of dominance: Offered prospects are scanned to detect dominated alternatives, which are rejected without further evaluation

An essential feature of prospect theory is that the phase of evaluation is based on changes in wealth or welfare, rather than final states. Likewise, value should be treated as a function in two arguments: the asset position that serves as reference point, and the magnitude of the change (positive or negative) from the reference point. A salient characteristic of attitudes to changes in welfare is that losses loom larger than gains, which also is noted in figure 3 below where the value function is concave for gains, convex for losses, and steeper for losses than for gains.

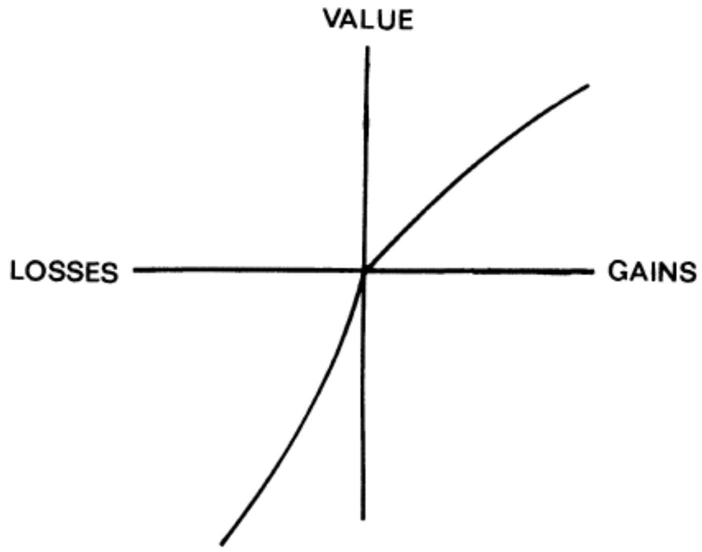

FIGURE 3.—A hypothetical value function.

Figure 3 – Adapted from (Kahneman & Tversky, Prospect Theory: An Analysis of Decision under Risk, 1979)

Figure 4 presents a hypothetical weighting function that is consistent with the notion that there is a limit to how small a decision weight can be attached to an event, if it is given any weight at all. Likewise, it suggests an upper limit on any decision weight that is less than unity. This effect may reflect the categorical distinction between certainty and uncertainty because of simplification in the editing phase.

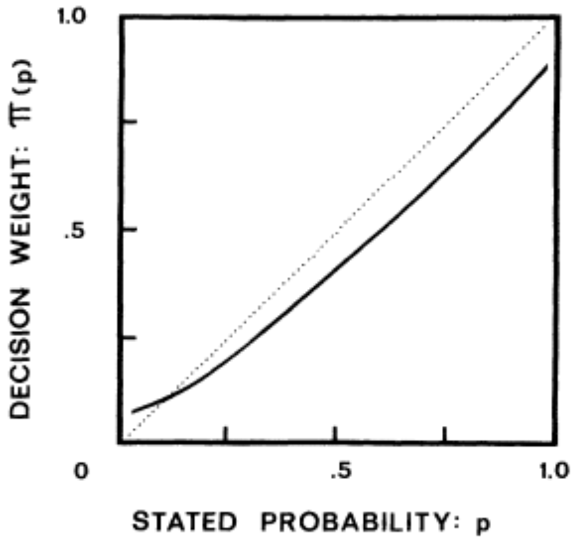

FIGURE 4.—A hypothetical weighting function.

Figure 4 – Adapted from (Kahneman & Tversky, Prospect Theory: An Analysis of Decision under Risk, 1979)

Kahneman and Tversky developed their theory in 1992 and stated five major phenomenon of choice, all confirmed in a number of experiments, with both real and hypothetical payoffs:

1. Framing effects: Variations in the framing of options yield systematically different preferences
2. Nonlinear preferences: The difference between probabilities of .99 and 1.00 has more impact on preferences than the difference between 0.10 and 0.11
3. Source dependence: People's willingness to bet on an uncertain event depends not only on the degree of uncertainty but also on its source
4. Risk seeking: People often prefer a small probability of winning a large prize over the expected value of that prospect. Risk seeking is prevalent when people must choose between a sure loss and a substantial probability of a larger loss
5. Loss aversion: Losses loom larger than gains. The observed asymmetry between gains and losses is far too extreme to be explained by income effects or by decreasing risk aversion (Kahneman & Tversky, Advances in Prospect Theory: Cumulative Representation of Uncertainty, 1992)

3. Methodology

In my view understanding the human behaviour and the influence of institutional environments is crucial in terms of understanding the driving forces behind the institutionalization of todays society. Likewise, these structures leads to a clearer picture of what causes externalities and can be useful when wanting to determine relevant actors and measure the effect of their actions.

I describe and analyse the organizational field of too big to fail banks. The virtue of this unit of analysis is that it directs my attention not simply to competing firms or networks of organizations that actually interact but to the totality of relevant actors. In doing this, the field idea comprehends the importance of both connectedness and structural equivalence. Hence, it leads the way for a holistic view on the financial system as a whole starting from the too big to fail issue.

The intended contribution of my work is to reach beyond traditional quantitative research in terms of the too big to fail issue. By approaching the issue from a more qualitative perspective I seek to illuminate sides of the issue, which have not been investigated yet.

4. Analysis

4.1 Internal Actors

In the following section I will analyse the behaviour of internal actors of too big to fail banks consisting of shareholders, the board of directors, management and employees. All internal actors perform practices that cause both positive and negative externalities to the rest of the society.

4.1.1 Shareholders

To maximize the value of their equity, banks shareholders have incentives to encourage management to engage in excessive risk-taking activities. This is because high risk of banks assets increases the value of deposit insurance and adds no extra cost to shareholders. Bank risk-taking has been more valuable since the mid-1980s, when bank charter value, which is regarded as an offset against the value of excessive risk-taking, decreased significantly due to deregulation and increased competition. Since the main duty of boards of directors is to protect shareholders' interests, high quality boards may, through the oversight of risk management, encourage bank management to take excessive risk in order to benefit shareholders. As a result, high quality board governance may increase banks' excessive risk-taking. (Sun & Liu, 2014) This leads to a shareholder dilemma while they on the one hand seeks this risk-taking behaviour but on the other hand they have insufficient tools in terms of evaluating the oversight of risk management done by the board of directors. However, shareholders may also have relaxed their oversight doing the boom, which can have reinforced risk-taking within too big to fail banks.

The distinction between shareholders and managers is not all that clear in the financial services industry. One-half of the earnings of many financial companies go into a bonus pool that is distributed to certain employees. This suggests that there are two equity claimants to the earnings of the firm. One group is the many outside shareholders that are represented by their duly elected directors. These shareholders are entitled to dividends when directors see fit to declare them and they can vote on matters brought to them by the directors. There are also inside shareholders represented by a relatively few managers. They receive dividends in the form of bonuses also declared by the company's directors. The question is who proposes the slate of directors to represent the shareholders? In most U.S. companies the managers do. If in effect managers or these inside shareholders appoint the directors it should come as no surprise that the dividends/bonuses of these inside shareholders will be upward biased. In this sense there would be a conflict of interest between these inside stockholders or managers and the outside shareholders. (Krainer, 2012) However, even though this apparent conflict of interest exists it may still be in their favour if these conditions attract the human capital that possesses the strongest managerial excellence, which ultimately generates a satisfactory return on the invested capital. Again, shareholders are prone to use certain kind of heuristics in the process of evaluating investments. And if the managers are perceived to make the right decisions in difficult situations, then shareholders can abstract from high bonuses and focus on their own expected welfare due to a simplification bias.

Too big to fail banks have access to cheaper capital while they can garner lower rates of interest in the open markets. This happens because the markets factor in sovereign support to these entities (Nesvetailova & Palan, 2013). Therefore, shareholders in too big to fail banks could perceive their investment as safer than in other companies that do not have a tacit agreement of being saved by the government when failing. Thus, the too big to fail phenomenon leads to moral hazard among shareholders who expect their investment to have some kind of lower limit. Also, they may not conduct the same amount of risk analysis and management oversight as they do when investing in other companies leading to a demand for a lower risk premium. Due to the complexity and interconnectedness of todays financial markets and the institutions present in this organizational field it could be argued that shareholders may decouple from their investments and instead exhibit some kind of confidence and good faith in terms of internal risk management in these organizations. Shareholders do this because of the conventional investment wisdom in terms of portfolio theory proposed by Harry Markowitz. Here investors are advised to diversify their portfolio. A diversified portfolio would also include financial equities even though the related risk can be impossible for outsider to measure like it can be even for insiders. Also, shareholders prefer to own stocks in companies with a steady growth and with consistently growing dividends. When these conditions are fulfilled whether it is real or obtained through smart accounting a company do attract the interest of analysts and ultimately buy side investors. Employees in banks should all else equal possess the prerequisites to meet these expectations.

4.1.2 Board of Directors

The board in financial organizations typically consists of different committees that oversee the internal processes. In large banks the audit committee and the remuneration committee are vital for the survival of the corporation. The work performed by risk committees has not been adequate in the period leading up to the global financial crisis. It could be that they have relied too much on the financial engineering performed by highly educated bank employees and the scholars who helped develop and vindicate these practices. We now know that some of these financial innovations made the financial system more fragile and that risk cannot always be captured inside a Gaussian normal distribution. A system as complex as the financial system is exposed to low-probability black swan events once in a while. Therefore, a fat-tailed distribution with large kurtoses would maybe be more capable of capturing the appropriate amount of risk involved. The question is whether the people elected to be in such audit committees do have the right tools and knowledge to confront questionable practices of internal financial engineers or if they are prone to be merely influenced by common human biases that we know from the field of behavioural economics. For example people tend to extrapolate the present when considering the future due to representativeness bias. This behaviour leads to too much optimism when trying to forecast the future in the middle of a boom. Empirical evidence suggests that, on average, banks with stronger risk officers, less independent boards, and executives with less variable remuneration incurred fewer losses doing the financial crisis (Becht, Bolton, & Röell, 2011). Due to the fact that banks have the ability to take on risk very quickly, in a way that is not immediately visible to directors or outside investors, another type of bank governance than the existing one may be sought for. Normative pressures from the institutions that produce the professionals who make the managerial decisions could probably solve some of the before mentioned issues. An example of a normative pressure could be to highlight that we live in a VUCA world where causes and effects are hard to identify. This fact has historically let people become fooled by the randomness inherent in our society and in the financial markets in particular.

When it comes to the remuneration committee their main responsibility is to align the incentives of the management with the interests of the shareholders. This alignment can happen by offering managers and key employees variable pay packages. However, an issue immediately arises in terms of an increased incentive to engage in risk shifting from equity holders to debt holders. Risk-shifting favours equity holders because equity investors hold convex claims over firm assets which causes their expected payoffs to rise exponentially with bank risk, by contrast, debt holder payoffs are concave due to limited upside potential in the value of their claims (Srivastav, Armitage, & Hagendorff, 2014). Here it is important that the board is capable of overseeing managers so that the overall organizational robustness is maintained. It is questionable if this is actually happening if the CEO is also part of the board and maybe even the chairman, which is usual practice in American banks. Likewise, the CEO may have an influence on who is chosen for the remaining board seats. Hence, the CEO has an incentive to choose board members from whom he can gain support in his positions. Therefore, there will be an upward bias in terms of remuneration stemming from board members who want to keep their prestigious seat in to big to fail banks including the related fees. The result is an incentive to comply with the wishes of the chairman. These circumstances in conjunction with a lax shareholder oversight due to the implicit government put option (Merton, 1977) questions the overall risk management in too big to fail banks. From a new institutionalism perspective the composition of the board could be a form of mimetic behaviour in the face of uncertainty. Here the organization complies with the rationalized standards in the industry to gain legitimacy and ultimately to survive. Some evidence does suggest that long board tenure audit committees have lower total risk and idiosyncratic risk (Sun & Liu, 2014). This may be explained by the learning curve associated with long tenure where the people involved overcome some biases through experience.

4.1.3 Management

Leadership is a relationship involving a leader, followers and a context. Typically, leaders possess a certain portion of charisma to be able to advance to a position where they are entrusted with leader responsibilities. This is also the case for people in top management positions. However, charisma does not necessarily correlate with competence. Therefore, it is interesting to investigate how much of a company's success or failure that can be assigned to a specific leader. Such an investigation is however characterized by being complex due to the ambiguity of the leadership concept and the importance of external factors, which hampers the analysis of causalities (Pfeffer, 1977). This is especially the case for organizations operating in the cyclical environment of the financial system like too big to fail banks. It will always be subject to some doubt if the success of a company can be assigned a competent management or whether it occurs only on the basis of a booming economy.

Three reasons are worth mentioning when arguing that the observed effects of leaders on organizational outcomes would be small. First of all there is homogeneity among leaders in the same organizational field due to normative pressures. This homogeneity in conjunction with the tendency for people to like those they perceive as similar to themselves causes a selection bias. Therefore, people selected for leadership positions tends to have styles of behaviour compatible to their predecessor. This fact suggests that extraordinary results most likely are caused by factors outside a leaders control. Also, selection of persons is constrained by the internal system of influence in the organization. Therefore, succession is affected both by internal political influence and by external environmental contingencies faced by the organization. Secondly, leaders behaviour is constrained. The leader is embedded in a social system where pressures to conform to the expectations of peers, subordinates, and superiors are all relevant in determining actual behaviour. In order to gain legitimacy as a leader one strategy is to mimic the people in the industry who are perceived to be good leaders. Even in high-level positions leaders have unilateral control over fewer resources and fewer policies than might be expected. Lastly, many factors that may affect organizational performance are outside a leader's control. This could be factors such as interest rates and other economic conditions affected by governmental policies. Organizations do also have relatively enduring strengths and weaknesses where the choice of a particular leader for a particular position has limited impact on these capabilities. Ultimately, leaders have incentives to follow what is perceived as best practices in the industry in order to avoid the downside risk of defying consensus and being wrong.

Leading up to and during the financial crisis of 2007-2009 several charismatic leaders possessed the role as CEO's in the largest banks in USA. To name a few who have maintained this position we have Jamie Dimon, chairman, president and CEO of JPMorgan Chase and Lloyd Blankfein, chairman and CEO of Goldman Sachs. However, one CEO makes himself noticed as one of the centrepieces of the dramatic events occurring in September 2008. This person is Dick Fuld who served as chairman and CEO of Lehman Brothers from 1994 until the firm's collapse in 2008. Lehman Brothers is a relevant example while the circumstances surrounding its bankruptcy was highly ambiguous. Market participants did not know whether the government were going to bail it out or not, thus leading to unprecedented market turmoil. As a spectator it could be perceived as if these too big to fail bank leaders and Dick Fuld in particular could be characterized as being empire builders who trough mergers and acquisitions expanded their organizations meanwhile increasing their own power. Academics have even used superhero metaphors when trying to explain the behaviour and thought processes behind the megamergers occurring in the banking industry (Kane, 1999). Bank consolidation is a global phenomenon that took place especially in the 1990s. Some event studies find that acquirers increase their market value but more studies find that acquirers destroy value. The weight of the evidence raises the question of whether the value-enhancing incentives to merge are being subordinated to the incentives to build a larger institution from which the managers could more easily take greater financial compensation and consume more agency goods, such as perquisites, reduced effort, and risk avoidance (Hughes, Lang, Mester, Moon, & Pagano, 2003). Bankers may have used their status when putting pressure on bank regulators by cross-industry megamergers and by loophole-like opportunities available to federally chartered thrift institutions (Kane, 1999). Historically, it may be argued that the general public, politicians and regulators in particular have been obedient to the wishes of the banking industry due to their status as highly paid authorities specialised in finance (Milgram, 1963).

It is well known that narcissists, driven by intense needs for power and prestige, frequently are to be found in leadership positions (O'reilly, Doerr, Caldwell, & Chatman, 2014). Narcissistic leaders are said to be either constructive (helpful) or reactive (unhelpful) to the organizations that they are managing. Mark Stein (2013) uses Dick Fuld as an example of a narcissistic leader and argues that a single individual at different times may be both constructive and reactive. Dick Fuld did get honoured for his performance during the period of 1994-2005 where he was admired and assigned a special status. Former vice-president at Lehman Brothers Lawrence McDonald explains the circumstances in his book: A Colossal Failure of Common Sense: The Inside Story of the Collapse of Lehman Brothers (McDonald, 2009). A culture reminiscent to the one described in Michael Lewis' book Liar's Poker (Lewis, 1989) was developed inside Lehman Brothers, which lead to significant results leading up to the financial crisis where Dick Fuld was acting in a constructive way. However, when the music stopped playing in terms of securitization of mortgages as soon as 2005 Dick Fuld's behaviour turned into a reactive approach (Stein, 2013). Here the organization seems to decouple from what was perceived as the right thing to do by the organizational environment, namely try to raise capital at an earlier state. It could be argued that Lehman Brothers lost its legitimacy by not conforming to the dominant normative pressure, thus loosing the much-needed political support and ultimately the possibility for survival. Instead, Dick Fuld followed on course and may have been influenced by the fact that the Federal Reserve helped JPMorgan Chase acquiring Bear Stearns earlier the same year leading to a state of moral hazard. Another explanation of this type of behaviour could be the fact that people become risk seekers when facing a choice between a sure loss and a substantial probability of a larger loss, which certainly characterises the choice faced by Dick Fuld. As argued by Pfeffer (1977) ambiguous environments can have the effect of contributing too much emphasise on the leaders role both in good and bad times. Since the organizational environment surrounding too big to fail banks are highly ambiguous we should have in mind that Dick Fuld may have received more honour during the good times than he rightfully deserved, likewise may have been foisted with more blame during the crisis than his actions and behaviour justify.

4.1.4 Employees

When employees go to work everyday to perform the job that is expected of them they take part in an on-going learning process known as sense making. Included in sense making are different features that people use to understand the past and deal with a present of disruptive ambiguity (Weick & Sutcliffe, 2005). The process is on going and people make use of feedback from the behaviour of others toward them while also trying to influence this behaviour. However, the complexity of, and change in, the environment often overpower our cognitive capacity (March & Olsen, 1975). Therefore, rationalized myths and heuristics are developed within organizations in order to let the management give sense to the employees who in return make sense of what is occurring in the organizational environment. Also, organizations that from the outside seems to possess a similar formal structure may show much diversity in actual practice. Especially inside highly regulated organizations such as too big to fail banks a culture relying on confidence and good faith can be developed in order to deal with and make sense of an uncertain environment. This may have been the case in terms of the development in the industry of securitization. The practice of securitization originated with the sale of securities backed by residential mortgages. Since then a wide variety of assets have been securitized, including loans, auto loan, and credit card receivables (Iacobucci & Winter, 2005). Another arrangement is where the bank transfers the portfolio of securitized assets to a special purpose vehicle and then sells securities against that portfolio to individuals or institutional investors. If a single security is issued against the portfolio now in the special purpose vehicle, it is known as a pass through and is not much different than an ordinary mutual fund. A more complex arrangement is when several types of securities with different priorities relative to one another are issued against the portfolio. The underlying loans are the assets that backup these different securities, called tranches, issued against the portfolio. For a bank there are several advantages of securitization. One advantage is to get the risky loan off the balance sheet, which may have had a higher tier 1 equity capital requirement than the special purpose vehicle. A second advantage is that the bank gets additional funds to make new loans. A third advantage is that the bank gets fee income for originating the individual loans and putting them in the portfolio and subsequent fee from servicing the underlying loans. (Krainer, 2012) It appears that the notion of securitization as a risk transfer from the banking sector to outside investors and thereby a diversification of financial risks across the economy was turned into a rationalized myth within the organizational environment of too big to fail banks. Also, isomorphic processes fuelled the vindication and the greater use of these financial products. Coercive measures were subdued and normative pressures were established.

Again it is relevant to use the example of Lehman Brothers when analysing employees' role in a too big to fail bank. Because of its size and interconnectedness Lehman Brothers caused tremendous negative externalities throughout the global financial system and the general society when it collapsed in September of 2008. Here regulators did perform oversight. However, with the benefit of hindsight it may be that the department responsible for dealing with regulators to a certain degree were loosely coupled from the rest of the organization. This may have happened because attempts to control and coordinate activities in institutionalized organizations can lead to conflicts and loss of legitimacy. Also in order to maintain legitimacy, institutionalized organizations seek to minimize inspection and evaluation by both internal managers and external constituents. This characterizes the circumstances within the American insurance company AIG. Even though AIG is not a bank but an insurance company it is now considered too systemically important to fail. Therefore, the company is relevant to use as an example of an institutionalised organization struggling to maintain its legitimacy after the events of the financial crisis. AIGs subsidiary and department for financial products (AIGFP) were issuing credit default swaps (CDSs) that were a lot riskier than realized. Ordinarily, the life and casualty insurance business should not be a source of systemic risk since they pool and diversify idiosyncratic risks that when realized have devastating consequences for an individual or a firm. That changed however when some companies, most notably AIGFP, started to insure what turned out to be systemic or macro risks. This insurance took the form of guarantees on structured financial products the most popular of which were pools of commercial and residential mortgages, credit card debt, and student loans (Krainer, 2012). When issuing these insurances AIGFP periodically received a fee so what at the time was perceived as a money machine can now rather be described as collecting pennies in front of a steamroller.

A recurring phenomenon in the banking sector is fraudulent behaviour by individuals that only comes to the surface if they encounter a loosing streak. Again this is an example of institutions operating in a highly institutionalized field that operates in state of confidence and good faith in order to maintain legitimacy. Here one example is the rogue trader Nick Leeson who in 1995 singlehandedly led to the demises of Barings Bank. The empirical evidence suggests that Nick Leeson followed a doubling strategy: he continuously doubled his position as prices were falling. Doubling strategies are potentially dangerous from a systemic point of view. An important attribute of doubling strategies is that the inevitable and devastating loss is preceded by a period of high returns with low volatility. Conditional on the bad event not having happened, the doubler's investment performance appears to indicate significant investment skill. The doubler may then become too big to fail, both from the perspective of the investment firm and from the market regulators. The inevitable failure can have catastrophic effects, both for the firm and for the market. Among other things, this has important consequences for the effectiveness of Value at Risk-controls. Being able to track and take out these traders sooner would limit possible systemic risk. (Brown & Steenbeek, 2001) The behaviour of Nick Leeson is a typically example of being ignorant of highly unlikely events. His behaviour was not punished during a period of low-volatility. Therefore, due to representativeness bias he assumed that this environment would remain going forward. It is probably possible that more rogue traders following the same strategy as Nick Leeson were present in the period leading up to the financial crisis because of the presence of a low-volatility environment. One could argue that because of the hectic environment surrounding the financial markets in the period of 2007-2009 some rogue traders have gone unnoticed. Also, proprietary traders like Nick Leeson have an incentive to hide or manipulate the amount of risk associated with their trades while they are paid based on their performance. Here the value at risk is an example of a risk management tool that can be manipulated by employees (Krause, 2003). A normative pressure in terms of the usability of a formula like value at risk to measure risk is one explanation why institutionalized organizations can use it in order to gain legitimacy from the actors in its environment.

4.2 External Actors

In the following section I will analyse a wide range of external actors who are a part of the institutional environment of too big to fail banks. The actors are all influenced by both positive and negative externalities caused by too big to fail banks.

4.2.1 Suppliers and Competitors

Interest in the interdependencies among financial institutions has increased since the financial crisis of 2007-2009. Therefore, vertical integration in the financial industry recently has been a focus for scholars. Historically, community banks have faced only limited competition from large banks due to branching restrictions. Beginning around 1970 and culminating in the early 1990s regulatory changes occurred that removed virtually all branching restrictions, allowing individual banks to expand their geographical reach. Between 1975 and 2005, the number of US banks fell by almost 48%. Besides deregulation the development was also fuelled by technological improvements. (Brickley, Linck, & Smith, 2012) Because small banks cannot efficiently produce all the services their customers demand they have been absorbed by larger, vertically integrated banking organizations. The consolidations that have taken place in the financial industry have reinforced the too big to fail issue. The development may partly have been because of isomorphic pressures from the organizational environment. Policy makers retracted coercive measures. Normative pressures reinforced the development while professionals in the banking industry have been taught to rationally exploit economies of scale through consolidation. And lastly, mimetic behaviour occurred because people and organizations perceived consolidation as the only right thing to do and could not come up with any alternatives.

Other banks that seeks to profit from borrowing to too big to fail banks do so at discounted rates (Nesvetailova & Palan, 2013) while they expect intervention from the government in case of distress thus giving too big to fail banks an advantage in terms of cost of capital. Since the government provide liquidity to too big to fail banks during difficult times other banks have an incentive to engage in more business with these banks in particular to decrease their counterparty risk, thus increasing the interconnectedness between too big to fail banks and the rest of the financial system. Smaller banks have another incentive besides economies of scale to be acquired by a larger bank, which is take part in the implicit government guarantee. Also, smaller banks enjoy the lobbying power of the too big to fail banks, which can improve conditions for the sector as a whole by nudging politicians to forward bills advantageous for the industry.

A group that have been supplying the large American banks with mortgages that they could then securitize and sell to investors in different tranches is the mortgage companies. In the years leading up to the financial crisis more types of mortgages was developed. Examples could be NINJA loans, No Income, No Job or Assets, where no documentation were needed and positive rate loans where the mortgage-taker received a payment during the first period followed by a skyrocketing rate, which they could not afford to accommodate. The inventions in terms of types of mortgages and the great amount of mortgages produced were in part because of the fact that these mortgage companies did not face any of the risk related to the mortgages. As soon as the mortgage was sold to the public the mortgage including the risk was passed to the securitizing entity, thus removing the necessity of risk assessment entirely from the mortgage companies.

4.2.2 Shadow Banks

Shadow banks are financial intermediaries that for the most part are not financed with checkable deposits, but like banks they facilitate the transfer of funds from surplus units to deficit units. Therefore they operate outside the formal regulatory frameworks.

One type of shadow bank is money market mutual funds. These funds are financial intermediaries that are financed with claims denominated in units of $1 that have limited checking account rights. Typically the limitations apply to the dollar amount the check can be written for and the frequency of use per period of time. Because their claims are for all practical purposes demand claims, existing regulation before the crisis required them to invest in short-term high quality securities like short-term government securities and highly rated commercial paper. Money market mutual funds played a key role in the crisis. They were an important source of wholesale financing for commercial and investment banks. When the banks fell into financial difficulties, particularly after the Lehman bankruptcy, there was a run by their customers and the $1 price per unit was threatened. In addition there was a substantial flight to quality and liquidity by the money market mutual funds, which saw them move out of commercial paper and into government securities. At that point the Federal Reserve and Treasury intervened with the Treasury offering temporary insurance on their shares and the Federal Reserve initiating a loan program called the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility. The purpose of this facility was to provide loans to banks to buy the commercial paper held by the money market mutual funds. If the commercial paper defaulted the Federal Reserve would take possession of the defaulted commercial paper and extinguish the loan. Moreover to fill the void of money market mutual funds withdrawal from the commercial paper market the Federal Reserve in October 2008 initiated its Commercial Paper Funding Facility and lent directly to financial and non-financial enterprises. (Krainer, 2012) The case of money market mutual funds is another example of the neglect of small probabilities by investors. And also an ambiguous area while investors could not be certain that the Federal Reserve would hold their hand under the funds. These various cases of ambiguities in terms of government and central bank intervention may have been one of the factors leading to the severity of the financial crisis.

Inside banks were also examples of shadow banking practices. An example is the special purpose vehicle. The vehicle does not appear on the banks books, thus making the banks look less exposed to risk than they really are. Another form of shadow banking is the repurchase agreements or repos. The inability of some shadow banks to refinance themselves as shadow banks in the repo market played a role in amplifying the financial crisis of 2007-2009 although how important a role is still open to question. Why were some of these banks unable to continue borrowing with essentially the same margin in the repo market? The standard answer was that much of the collateral put up by the borrowing bank was in the form of risky securities like corporate bonds and various securitized assets many of which were tied to the subprime market. When real estate prices declined the value of the collateral tied to residential and commercial mortgages declined and lenders would then require additional amounts of collateral. Eventually borrowers could no longer provide acceptable collateral and would be forced to sell assets to repay the loan, and where they could not, lenders would seize the collateral and sell it in the marketplace for whatever they could get. The fire sales would further depress the market value of risky securities that were being used as collateral along with their close substitutes. This in turn had a depressing effect on the balance sheets of relatively sound banks thereby spreading the problems of distressed banks to banks that were previously healthy. (Krainer, 2012)

Gennaioli, Shleifer and Vishny (2013) finds that the diversification that eliminates intermediary-specific risks by pooling loans so as to support the issuance of debt perceived to be riskless actually raises intermediaries' exposure to tail aggregate risks. (Gennaioli, Shleifer, & Vishny, 2013). The neglect of tail risk can be explained by prospect theory. Here it is stated that people are limited in their ability to comprehend and evaluate extreme probabilities. Highly unlikely events are therefore either ignored or over weighted. You could argue that people inside banks has created a rationalized myth where diversification should increase total welfare while really leading to a more fragile financial system. The myth is harmless when market participants recognize all risks but deadly when they do not.

4.2.3 Central Banks

Rosenhek (2013) explores a key facet of the ideational dynamic underlying the politics of the global financial crisis, examining the interpretative and communicative practices through which the two most powerful central banks in the world, the Fed and the ECB, made sense of the events. An important power resource of central banks is their privileged positioning as state agencies that appear to be external to the political sphere. Based on this institutional location, central banks, more than any other state agency, are able to make the argument that, in contrast to political actors and their narrow interests, their actions derive from undisputed economic expertise. Central banks have therefore gained a high amount of legitimacy within society. The professionalization of the field of central bankers in conjunction to a more interconnected global financial system have led to various formal structures being implemented in central banks around the world. These structures include rationalized myths in terms of which measures that most preferably can be used to obtain the objectives of the institutions.

Central banks have played an essential role at the level of the formulation and implementation of concrete measures to manage the crisis. The enormous injection of liquidity by various means, unprecedented drastic monetary easing, exceptional intensive intervention in financial markets, and recapitalization of financial institutions by central banks, have been the major measures employed in the attempts to contain and resolve the crisis. As a result of this substantial and highly visible intervention, as the crisis evolved, the public salience of central banks increased significantly, and they came to be broadly seen as crucial actors in the management of the crisis. This intensive and extensive involvement, in turn, further strengthened the positioning of central banks – particularly of the two most powerful central banks in the world, the Fed and the ECB – in the global political-economic field as leading players with the necessary authority to interpret, explain, and act upon the economic world. (Rosenhek, 2013) The central banks have gained increased authorities as a result of the crisis. Therefore, they in all likelihood will play a more central role in the years to come. An example of the phenomenon is the three-arrowed Abenomics recently implemented in Japan, one of the arrows being monetary easing. Here Bank of Japan gains legitimacy as an institutionalised organization by showing mimetic behaviour and implementing the same measures as the other institutions in the organizational field. The objective is to stimulate growth in the economy to end the multi-decade stagnation experienced in Japan.

During the first months of the events that would rapidly turn into the financial crisis, the two central banks described the situation mainly using terms that connote passing and confined incidents, although worrying and deserving of close attention. Most likely deliberately aimed at calming players in financial markets and restoring confidence, this diagnosis characterized the incipient market stress as essentially temporary and controllable. The most commonly used expressions were market volatility, turbulence, turmoil, and nervousness. Though it was noted that these conditions were not confined solely to the American subprime mortgage market but were affecting other financial markets as well, the diagnosis implied that this was a circumstantial and quite normal situation well known in financial markets. The natural and basically positive character of the events as an expression of the efficient functioning of self-correcting financial markets was underlined also by the President of the ECB, Jean-Claude Trichet, who, in October 2007, remarked: “It is important to note that the present significant market correction is not an event that should surprise us. In many respects the present episode can be interpreted as correcting those anomalies and paving the way, once the turbulences would have dissipated, for a more sustainable structure of global finance.” As conditions deteriorated, from early 2008 onwards, the diagnosis of the situation as an increasingly threatening and urgent systemic crisis became explicit. The potential severe and protracted damage of the current dynamics to the financial system and to the economy as a whole was vehemently emphasized. (Rosenhek, 2013) The behaviour just described is an example of an institution that has incorporated the rationalised myth that the markets always stabilizes itself and the expressions are therefor build upon confidence and good faith.

An important component in the diagnosis of the crisis as threatening and acute was the emphasis put on its global character, which made it even more daunting. The events, particularly following the collapse of Lehman Brothers in September 2008, were defined as affecting the hear of the global financial system and posing extraordinary systemic risks to global financial and economic stability. Furthermore, the magnitude of the crisis was highlighted also by referring to historical analogies. Mentioning the Great Depression of the 1930s as an historical point of reference and analogy serves as an extensively used rhetorical device to communicate the severity and urgency of the situation, not only in the media but also in the ECB and the Fed diagnoses, that from mid-2008 onwards frequently defined the situation as the worst financial crisis since the 1930s. The Fed and the ECB focused on three causal accounts. The first type of account focused on the specific actions of players in the financial markets, highlighting their misbehaviours and misjudgements as a key source of the crisis. The second account focused on references to specific failures in institutional arrangements that have encouraged, or at least allowed for, the actors’ misbehaviour. The third account was systemic dysfunctions linking the global dynamic of saving glut[3] and the intensive process of financial innovation, defining the interaction between the two as being at the root of the crisis. (Rosenhek, 2013) When using Callon's framing framework it is incontrovertible that we experienced a hot situation during the financial crisis of 2007-2009. A lot of decisions were made and even more repercussions were initiated. Maybe it could be argued that the central bankers by using the type of rhetoric just described made the situation even hotter while leading to more panic than may have been necessary.

The functions of a central bank include the implementation of monetary policies to manage inflation and exchange rates, regulation and supervising of the banking industry and the position as lender of last resort. Political intervention into markets can take a nearly endless number of forms. One form is to rescue insolvent banks known as bailouts. Another form is to enforce bank closures, also known as the Bagehot approach. Bagehot's dictum after the journalist Walter Bagehot who wrote an influential work on the subject in 1873 says: "To avert panic, central banks should lend early and freely, to solvent firms, against good collateral, and at high rates". (Rosas, 2006) It could be argued that Hank Paulson, Ben Bernanke and Timothy Geithner made use of both forms during the financial crisis of 2007-2009. On the one hand they gathered the management of the largest American banks and persuaded them to take on loans in order to provide liquidity to the financial markets in general. (Johnson & Kwak, 2010) On the other hand they let Lehman Brothers fail on September 15 leading to even more ambiguity in terms of central bank actions on the turmoil. However, central banks as institutionalised organizations have to develop their actions through experimentation (March & Olsen) and their statements are therefore always subject to a certain amount of ambiguity. On the same note it is necessary to recognize that the involved decision-makers had to make decisions in a hot situation. Here everything were chaotic and perhaps to a certain extent transgressed by some actors. Likewise, it is impossible to know how the economic reality would have been had they made different decisions.

[3] Term used in 2005 by Ben Bernanke to describe the shift of emerging economies from being net capital borrowers to net suppliers of funds to international capital markets.

4.2.4 Governments

The government's main goal is to remain in power and they therefore follow the wishes of the people. At the same token they depend on contributions from the private sector. The financial sector is one of the largest contributors and politicians are therefore incentivized to accommodate the wishes of this industry in particular. However, politicians as the spokesmen of the public are also explicitly demanding consequences after a financial disaster as the one in 2008. For example Elisabeth Warren rephrased the too big to fail problem as a too big to jail problem during a congressional hearing. Also, Elizabeth Warren was the main coordinator of the consumer protection side of the Dodd-Frank bill on which basis she was appointed the first Chairwoman of the Consumer Financial Protection Bureau.

In order to work in peace without too much unrest politicians want a robust financial sector that can provide the society as a whole with financial stability. Elected politicians are also chosen on behalf of different communities consisting of businesses and individuals who need the financial sector for their daily work in the form of credit lines. Likewise, the financial sector provides mortgages, credit cards and credit for riskier projects such as new business ventures. A robust financial sector that provides financial stability let the communities focus on the daily duties without worrying for their savings. Fiscal policy is one of the tools used to achieve financial stability. Here we can distinguish between Keynesian measures and austerity measures. Keynesian measures have been implemented after the financial crisis while it is perceived as the most applicable instrument in terms of stimulating economic growth. This has especially been the case in the US. In Europe however, politicians have been afraid of redistributing wealth from the rich countries in the north to the countries in the south perceived as irresponsible in terms of budget and spending management. That may be the reason why we are yet to see noticeable economic growth in Europe following the financial crisis.

Government Sponsored Enterprises (GSEs) played a key role in causing the 2007-2009 crises. GSEs in the area of housing were the creation of various congresses and administrations going back to the depression era of the 1930s. They are the reflection of a bi-partisan social policy that encouraged home ownership for low and middle-income families. The two central GSEs were the Federal National Mortgage Association (FNMA) and the Federal Home Loan Mortgage Corporation (FHLMC). The objective of FNMA was to insure home mortgages provided by private lenders to middle and low-income families. That objective expanded to one of providing stability and liquidity to the secondary market for residential mortgages of all income classes. In this role FNMA was more like a hedge fund in that it engaged in buying, holding, and selling Federal Housing Administration or FHA-insured mortgages. Congress created FHLMC in 1970 to provide competition to FNMA. (Krainer, 2012) The unintended consequences of the development of these GSEs points out the complexity and interconnectedness of today's financial markets. It seems that bad incentives and a state of moral hazard have been the norm inside these GSEs. It occurred while they had access to the same benefits as other private companies while also having the implicit backing of the US government. Therefore, the GSEs could take a more risk-seeking approach likening the one followed by private firms but still be perceived as legitimate institutions approved by the US government.

Signed by President Obama on 21 July 2010 the Dodd-Frank Act is widely described as the biggest historic financial overhaul since the 1930s, when the 1933 Securities Act was enacted in the aftermath of the stock market crash of 1929. The stated objective of the act is: To promote the financial stability of the United States by improving accountability and transparency in the financial system, to end "too big to fail", to protect the American taxpayer by ending bailouts, to protect consumers from abusive financial services practices, and for other purposes. (H.R.4173, 2010) Following are the 16 provisions, which will change the environment for too big to fail banks. These new and strengthened coercive measures will likely increase the homogeneity of too big to fail banks in the future while they have stronger incentives to mimic each other's behaviour and structures to deal with the uncertainty due to the new regulatory framework:

Title I – Financial Stability

Title I creates the Financial Stability Oversight Council and the Office of Financial Research. The Council is chaired by the Treasury Secretary and have three purposes assigned to it:

1. Identify the risks to the financial stability of the United States from both financial and non-financial organizations
2. Promote market discipline, by eliminating expectations that the Government will shield them from losses in the event of failure
3. Respond to emerging threats to the stability of the US financial system

The Council has very broad powers to monitor, investigate and assess any risks to the US financial system. It has the authority to collect information from any state or federal financial regulatory agency, and may direct the Office of Financial Research, which supports the work of the Council, to collect information from bank holding companies and nonbank financial companies.

Title II – Orderly Liquidation Authority

The title provides a process to quickly and efficiently liquidate a large, complex financial company that is close to failing. As an alternative to bankruptcy, the Federal Deposit Insurance Company (FDIC) is appointed as a receiver to carry out the liquidation and wind-up of the company. The FDIC is given certain powers as receiver, and a three to five year time frame in which to finish the liquidation process.

Title III – Transfer of Powers to the Comptroller, the FDIC, and the Fed

The title is intended to streamline banking regulation and reduce competition and overlaps between different regulators by abolishing the Office of Thrift Supervision and transferring its power over the appropriate holding companies to the Board of Governors of the Federal Reserve System, state savings associations to the FDIC, and other thrifts to the Office of the Comptroller of the Currency (OCC). Also, the amount of deposits insured by the FDIC is permanently increased from $100,000 to $250,000.

Title IV – Regulation of Advisers to Hedge Funds and others

The title requires certain previously exempt investment advisers to register as investment advisers under the Investment Advisers Act of 1940. It requires many hedge fund managers and private equity fund managers to register as advisers for the first time. Also, it increases the reporting requirements of investment advisors to the various federal government agencies.

Title V – Insurance

The title establishes the Federal Insurance Office, which main purpose is to monitor the insurance industry.

Title VI – Improvements to Regulation

Title VI introduces the Volcker Rule after former Chairman of the Federal Reserve Paul Volcker. The aim is to reduce the amount of speculative investments on large firms' balance sheets. It limits banking entities to owning no more in a hedge fund or private equity fund than 3% of the total ownership interest. The total of all of the banking entity's interests in hedge funds or private equity funds cannot exceed 3% of the Tier 1 capital of the banking entity. Although Paul Volcker proposed a total ban on proprietary trading by commercial banks a number of exceptions to this ban are included in the Dodd-Frank law. E.g. some forms of market making are still allowed.

Title VII – Wall Street Transparency and Accountability

The title concerns regulation of over the counter (OTC) derivatives markets including credit default swaps. These derivatives now have to be cleared through exchanges or clearinghouses.

Title VIII – Payment, Clearing and Settlement Supervision

The title aims to mitigate systemic risk in terms of payment, clearing and settlement activities. The Federal Reserve is set to create uniform standards of risk management.

Title IX – Investor Protections and Improvements to the Regulation of Securities

The title contains ten subtitles and revises the powers and structure of the Securities and Exchange Commission (SEC), credit rating agencies, and the relationships between customers and broker-dealers or investment advisers.

Title X – Bureau of Consumer Financial Protection

The title establishes the Bureau of Consumer Financial Protection, which regulates consumer financial products and services in compliance with federal law. A new Consumer Advisory Board assists the Bureau and informs it of emerging market trends.

Title XI – Federal Reserve System Provisions

A new position is created on the Board of Governors, the Vice Chairman for Supervision, to advise the Board in several areas. Also, banks with assets of $50 billion or more have to periodically submit resolution plans to the Federal Reserve and the FDIC. Each plan, commonly known as a living will, must describe the company's strategy for rapid and orderly resolution in the event of material financial distress or failure of the company.

Title XII – Improving Access to Mainstream Financial Institutions

The title provides incentives that encourage low- and medium-income people to participate in the financial systems. The goal should be obtained by an expanded access to mainstream financial institutions, low-cost alternatives to payday loans and grants to establish loan-loss reserve funds.

Title XIII – Pay It Back Act

The title is an amendment to reduce TARP authorization from $700 billion to $475 billion and further mandating that unused funds cannot be used for any new programs.

Title XIV – Mortgage Reform and Anti-Predatory Lending Act

The title focuses on standardizing data collection for underwriting and imposes obligations on mortgage originators to only lend to borrowers who are likely to repay their loans. The new Bureau of Consumer Financial Protection will conduct the oversight.

Title XV – Miscellaneous Provisions

The title instructs FDIC to conduct a study to evaluate the definitions of core deposits and brokered deposits for the purpose of calculating the insurance premiums of banks.

Title XVI – Section 1256 Contracts

Section 1256 contracts described tax treatment for any regulated futures contract, foreign currency contract or non-equity option. These trades have traditionally been marked to market on the last business day of the year. The title enforces that certain swaps are not included in 1256 contracts. (H.R.4173, 2010)

Only a few provisions have become effective along with the Act, others require implementation by the respective regulatory authorities. The Dodd-Frank Act gains general recognition because of its ambition, comprehensiveness and the legislator's sincere effort. It aims in the right direction: the control of systemic risk, the creation of an orderly resolution mechanism, and the end to taxpayer funding of large firm failure. But concerns also arise about the extent to which the Act could address these problems. (Zhang, 2012) The Federal Reserve has a new mandate to preserve the stability of the U.S. financial system along with its traditional mandates on full employment and price level stability. It is clear that all three mandates are not internally compatible. The Federal Reserve orchestrated liquefaction of the financial system in the 2007-2009 crisis carries with it massive increase in bank reserves and the dangers of future inflation. Whether the Federal Reserve will be able to extinguish these reserves without causing a recession and prevent inflation in the goods/or asset markets in the future remains to be seen. One objection to the Dodd-Frank approach of addressing systemic risk is: Why impose clean-up fees on prudently managed financial institutions that do not fail in order to pay for the losses incurred by imprudently managed companies that do fail? That kind of policy sends the wrong signal to the financial industry and exacerbates the moral hazard problem. In terms of the Volcker Rule it might be very difficult to differentiate trades related to market making from proprietary trading. (Krainer, 2012) The impact of the shift towards a more macro prudential approach of regulations is still unclear. One possible outcome is that investors in the future will be too confident in terms of the regulators opportunities to prevent future financial crisis. However, history tells us that investors generally are myopic and forgets what have happened as soon as we have experienced a streak of steady growth and low volatility in the general economy. And as Gennaioli, Shleifer, and Vishny (2013) points out in relation to the shadow banking system: it is optimistic to expect market regulators to identify these risks when investors and even intermediaries fail to do so.

4.2.5 Regulators

“Basel III” is a comprehensive set of reform measures, developed by the Basel Committee on Banking Supervision, to strengthen the regulation, supervision and risk management of the banking sector. (Supervision, 2011) The measures are developed to be a global and voluntary standard. The reform measures have been strengthened following the financial crisis. They are strengthened both in terms of capital requirements and liquidity requirements and are planned implemented by 2019. According to (Allen, Chan, Milne, & Thomas, 2012) several transitional problems are likely to arise in implementing Basel III. First of all there are material risks that the supply of credit to the economy will be disrupted by the implementation of the new regulations. Moreover, the long run rate of growth of the economy will be adversely affected if riskier borrowers such as some small businesses are unable to get adequate access to finance. Another problem is the definition of the range of assets eligible to meet the liquidity requirements, which is dangerously heavily concentrated on government debt and it needs to be broadened to enable banks to generate liquidity from their commercial assets. Also, they emphasize that managing this transition will require close coordination of monetary policy, including liquidity provision by central banks and governments. Likewise, it seems likely that comparable transitional problems may arise in the implementation of other elements of global financial re-regulation including the introduction in the Dodd-Frank Act of the Volcker rule limiting wholesale market activities of insured commercial banks in the US and other reforms of wholesale financial markets such as the introduction of central clearing in OTC derivative markets. Finally, they state that extensive policy coordination of a kind that has not been seen for many years will be required for a long time to come. On the positive side they find that in the long run there are few real resource costs from having a safer financial system, and argue that there may even not be any need to trade-off the level of output and the safety of the financial system at all: We can have our cake (financial stability) and eat it (higher economic activity) too. The whole transition creates a need for investors to explore and develop instruments that will provide finance to relatively riskier borrowers such as small businesses, a type of finance that has been greatly limited since the onset of the global financial crisis.

As mentioned above some repercussions and unintended consequences during and maybe also after the implementation of the stricter requirements will be seen. The question is what influence this will have on the financial system in general. We may see new forms of financing such as crowd-funding, peer-to-peer lending, or other types of microfinance erupt. If this in turn makes are more fragmented and fragile financial system we as a society faces quite a paradox of increasing regulatory oversight leading to increasing fragility.

In terms of regulating over the counter derivatives, this is a very difficult area for implementing regulation. The regulatory authorities involved will be the SEC and the Commodity Futures Trading Commission. One problem encountered in the 2007-2009 crisis was that the regulatory capital requirements for banks did not reflect the risk exposure of operating in the over the counter market where illiquidity, counterparty risk, and systemic risks on collateralized debt obligations and credit default swaps turned out to be substantial. This was because banks carried out this business off-balance sheet in special purpose vehicles where minimum Basel capital ratios were not required. Another problem was the opacity of exposure in over the counter derivatives. One proposal in the Dodd-Frank Act is to move as much derivative trading to centralized trading platforms as possible where margin and transparency requirements would be imposed by the platforms. (Krainer, 2012) We must assume that market participants still will engage in regulatory arbitrage and that financial innovations will surpass the regulators' attempt to contain riskier practices on transparent exchanges. The reason is that some inside actors have the incentive to transgress the possibility for measuring overflows to lower the risk of being held accountable for actions on a later stage in time. However, it is a double-edged sword for regulators as well as the society in general while these financial innovations helps intermediaries in terms of transferring risk and capital among each other. In terms of credit derivatives we just have to realize that too much of a good thing perhaps is not desirable in the long run.

4.2.6 Credit Rating Agencies

The current financial crisis has prompted an examination of the role of credit-rating agencies (CRA). The three main CRAs of Moody’s, Standard & Poor, and Fitch were grouped together in 1975 and given the designation of nationally Recognized Statistical Rating Organization or NSRO’s. These three CRAs were thought to play an important role in the financial and economic crisis of 2007-2009 in that a number of complex securities originally given the very highest Aaa rating fell to junk bond status in a short period of time. The collapse in the valuation and ratings of these securities created a crisis in the confidence of suppliers of finance and a freeze on lending in certain markets due to the uncertainties associated with the financial strength of the counterparties. Many have argued that two parts of the market for credit ratings have contributed to this problem. The first is that many types of regulated investors such as banks, insurance companies, pension funds, endowment funds, money market mutual funds and others require an investment grade rating in order to make an investment in a particular financial instrument. That requirement drives the demand for credit ratings. The other factor is credit ratings are issuer-paid. This provides an incentive for the issuer to shop around for a favourable rating. Together these two factors help account for the fact that there is a bias towards high credit ratings. (Krainer, 2012) In the case of CRAs we have seen institutionalized organizations mimic the practices of their competitors to deal with the uncertainty of the new products they were rating. The reason was to gain legitimacy in order to receive resources necessary for the survival of the companies. It is possible to argue that some departments of the CRAs must have been loosely coupled to the rest of the organization. Also when it went through internal and external control that it was based on confidence and good faith due to normative pressures.

The agencies rapidly expanded their rating business because of the rise of structured finance products. E.g. Moody's tripled its profits between 2002 and 2006. However, ratings quality seems to have suffered, as the three main agencies, Standard & Poor's, Moody's and Fitch, increasingly gave top ratings to structured finance products shortly before the financial markets collapsed. The fact that CRAs are paid by the firms they rate generates conflicts of interest that can lead to inaccurate ratings. The standard argument is that in the absence of conflicts of interest, incentives to safeguard the reputation would make CRAs worry enough about providing reliable information to investors, and hence would ensure accurate ratings. Evidence suggests that it might not be sufficient to solve the problem of conflicts of interest to secure the best possible ratings (Mariano, 2012). In order not to damage their reputation and ultimately their profits, CRAs do not want to be seen to make mistakes and worry about giving the appearance of competence. As a result, they can simply ignore or contradict some available information when assigning a rating. CRAs observe public information and obtain either precise or noisy private information about a security. Reputational concerns dictate that a rating reflects private information when it is precise. However, when private information is noisy, it has incentives to contradict public information as a way to pretend that it holds precise private information. Likewise, it may become more likely to issue good ratings in an attempt to gain legitimacy and protect market power while denying clients to conduct rating agency arbitrage and give competitors the possibility to issue a second rating and the chance to build up reputation.

Credit rating analysts can make mistakes, either because their credit models and rating methodologies might contain errors, the information they have is incomplete or inaccurate, or they do not fully understand the securities for which they are providing a rating. From a new institutionalism perspective it can be argued that rationalised myths are developed within the field of CRAs. In the years preceding the 2007-2009 financial crisis CRAs assigned the highest rating grades to many new and hard-to-value securities such as mortgage backed securities and collateralized debt obligations. Even though nobody fully understood how these securities worked, there was generally little concern about their quality and many investors even regarded them as conservative and low-risk investments. In the case of these structured finance products most public information suggested that a high grade were appropriate on most of these securities. Therefore, CRAs conformed to this myth in order to gain legitimacy, resources and ultimately to ensure survival. Hence, CRAs had strong reputational incentives to simply issue high ratings. Investors would see their expectations fulfilled and be able and prepared to buy these securities, thus CRAs would appear competent and capable of understanding the securities they had been hired to rate. The more the CRAs conformed to this myth the more they maintained an elaborate display of confidence, satisfaction, and good faith, internally and externally. Also, they tried to minimize inspection and evaluation by both internal managers and external constituents.

Another reason for the analysts to be biased towards following the demands put forth by the issuer banks appears. A revolving door between CRAs and investment banks results in a lack of adequate staff, motivation, and quality personnel just at the time when their business is booming the most. The best and most motivated analysts are headhunted for positions in the banks facing a higher salary and a more prestigious position. If analysts are directly involved in structuring new issues that are then rated, the employment of more and better analysts at the banks may create better issues overall, gaming of the rating system, or both. Findings suggest that CRA accuracy is likely to be countercyclical (Bar-Isaac & Shapiro, Ratings Quality over the Business Cycle, 2013). Therefore, the concern of analysts gaming the rating system is more pronounced when CRA resources are stretched thin during booms, making them rely increasingly on standardized valuation models which former analysts, now at investment banks, are well versed (Bar-Isaac & Shapiro, 2011). This revolving door between CRA's and investment banks has been a policy concern. The Dodd-Frank financial reform bill (2010) addresses the conflicts of interests of analysts working on deals with an issuer just before being hired by that issuer, and puts in place disclosure requirements (Bar-Isaac & Shapiro, Credit Ratings Accuracy and Analyst Incentives, 2011). One proposal to improve the business model in terms of proper ratings could be a shift from issuer-paid CRAs to investor-paid CRAs (Bongaerts, 2014). However, this leads to another issue known as the free rider problem where some investors wont pay for the ratings and instead just follow the paying investors, thus decreasing the overall transparency.

4.2.7 Universities

Universities, including business schools, teach after the demands of the private sector. Professors want their research papers to be published and used by the private sector. Also, they would like to be consultants for the private sector to supplement the salary they are paid by the universities. One example is Larry Summers who went from Harvard to the government to the private sector. An example of cooperation between the private sector and academics is the case of Long-Term Capital Management that blew up during the Asian crisis in 1998. Here Merton Miller and Black Scholes thought that they had created a regular money machine through financial engineering but as we now know this was not the case. This type of overlapping between universities, the public sector and the private sector helps institutionalised organizations to gain legitimacy because of the adaptation of various normative mechanisms.

4.2.8 Security Analysts

Security analysts play an important role in terms of setting the overall frame for market participants. We have seen herd behaviour among analysts through times. Security analysts career concern does not only depend on accuracy, but also on being relatively optimistic. The latter finding is most likely due to investment bankers and stockbrokers at brokerage houses wanting analysts to promote stocks so as to generate underwriting business and trading commissions. Also, there is a conflict of interest for analysts covering stocks underwritten by their brokerage houses. (Hong & Kubik, 2003) Some investors perceive analysts recommendation as if it was helpful in terms of the evaluation on an investment. However, you may argue that security analysts are prone to the exact same biases as the general investor. Therefore, investors should not make their investment decisions relying on these analysts. Due to the inherent uncertainty of investing and the future in general analysts have an incentive to mimic their peers and follow the herd in order not to loose legitimacy.

4.2.9 Speculators

Hedge Funds did not have much to do with originating the crisis of 2007-2009. Nevertheless the largely unregulated hedge fund industry has been subject to regulatory and public suspicion ever since Long-Term Capital Management's orderly bankruptcy was brokered by the New York Federal Reserve in 1998, the Madoff affair, and the series of insider trading scandals involving hedge funds of 2009-2011. The Dodd-Frank Act now requires hedge funds with assets in excess of $150 million to register with the SEC with an exemption granted to family hedge funds. If these large hedge funds are thought to pose a threat to the financial stability of the U.S, by the SEC and the Financial Stability Oversight Council, they can require them to reduce their leverage and in the extreme liquidate. (Krainer, 2012) However, speculators can have an influence in terms of distorting the market. Evidence suggests that in the investment climate from September 2008 going forward good news from the housing market are associated with falling US stock prices, and vice versa. The likely explanation is that falling house prices increased the market's trust in a government bailout, which thereby increased market valuation of firms that were expected to benefit from government rescue measures (Löffler & Posch, 2013). Again an example of how the external environment influences the behaviour of other actors also present in the environment.

5. Discussion

We as a society could hope that the various actors analysed in this thesis would learn from the experiences we have had in the recent past. However, history suggests that people are myopic and generally have a short memory. It is worth pointing out that this may be the reason that people are able to most of the time navigate successfully in a VUCA world where a set of developed heuristics are crucial to ones survival. That is also the reason why we see an increase in coercive measures following events like the financial crisis of 2007-2009. The problem with increasing coercive measures is that it leads to repercussions and unforeseen consequences, which may lead to the development of the next crisis. As Ronald Coarse points out we as a society has to take into account the costs involved in operating the various social arrangements, whether it be the working of a market or of a government department, as well as the costs involved in moving to a new system. The challenge is that these new frameworks and structures are developed based on outcomes from hot situations where framing of overflows are impossible either because of a complex environment or actors deliberately transgressing their boundaries. One view would be to tax the externality of systemic risk created by individual financial institutions much like a tax on pollution. This approach internalizes the externality and would be a factor that managers in financial institutions would have to take into account when making the investment and financing decisions for their firm. The problem here is that the pollution of systemic risk created by the financial system is not as easily measured as the smokestack pollution created by nonfinancial enterprises. There are unfortunately no easy answers for designing regulatory structures for complex financial systems.

In terms of handling too big to fail banks one option would be to call for normative pressures that would emphasize the difficulty related to measuring risk in a VUCA world. Therefore, we will only get a more robust financial system and hopefully mitigate severe future financial crisis by increasing the capital buffers of too big to fail banks. Coercive pressures have been put in place. If that is enough only time will tell. However, the history tells us that we will see other financial innovations, which will be mimicked by the rest of the marketplace in order to gain legitimacy. The institutionalised field of too big to fail banks is now more homogeneous than ever, which may help regulators in their pursuit for prudent oversight. If we see an increasing trend towards smaller types of financing as for example crowd funding, peer-to-peer lending and microfinance our financial system will become more fragmented and maybe even more fragile leading to more hot situations in the future.

My findings related to the new regulatory frameworks relying on councils of wise men and women points to several issues. The problem is that they have failed in the past and are likely to do so in the future, notwithstanding the army of highly qualified financial economists that will stand behind them. One could fear that a future financial crisis would be even more severe because of the above-mentioned issues. But also because of the rising prosperity of people living in the emerging markets. An increase in wealth creation and an increase in peoples access to the financial system will inevitably lead to issues, which may increase the overall fragility. However, one should also be optimistic in terms of the future perspective and appreciate people's ability and desire to develop financial innovations that for the most part makes everyone in the society richer.

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