Behavioral Perspectives on Central Bank Communication for Financial Stability

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Abstract

Analyzing central bank communication during financial crises, we draw on a surprisingly informative parallel between management of natural disasters such as earthquakes on one hand, and the corresponding communication infrastructure and social interaction during financial turmoil, on the other. The role of social and emotional behavior thereof points to the importance of interpersonal communication for the dissemination of central bank information in a turbulent context. Overall, our research results inform central banks' attempts to coordinate the desideration of monetary policy, prudential supervision and financial stability in a framework that takes into account social and psychological challenges in the financial markets and the society.

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I can calculate the motion of heavenly bodies, but not the madness of people

Isaac Newton, Master of the Mint

We have never successfully modeled the transition from euphoria to fear.

Alan Greenspan, Fed. Chairman

Introduction

During the last two decades, central bank communication and transparency became undisputable conditions of effective monetary policy. Central banks seek to create a climate of confidence by communicating strategically on their policy goals, rules and operations, with the financial markets and the general public. Central bankers aggregate private information and in-depth macroeconomic knowledge, making it available to their audiences and thus being accountable for the impact they create on the socio-economic landscape and heterogeneous agents behavior. Central bank communication partially responds to the natural asymmetries of information, it builds reputation, often making the difference between a monetary authority that earns public trust and one that fails to do so, despite adequate policymaking.

Nevertheless, transparency has its challenges, particularly in times of financial turmoil, when market participants become hypersensitive and can fundamentally misinterpret central bank signals. Crowding out of private information, conflicts between different policy objectives, time inconsistencies or moral hazard are some of the evils that could threaten the performance of a central bank talking to its various audiences. On the other hand, a monetary authority with a low profile or inadequate media exposure, risks losing the context of influence and the attentiveness of a public already detached from public affairs.

With a limited room for maneuver in monetary terms, sometimes facing the zero bound constraint; central banks have to rely systematically on the ability to affect public perceptions and market sentiments. However, even if the society derives great benefits from openness and transparency, policy makers tend to remain secretive and secluded from public exposure. In the case of central bankers, there are additional challenges, given the usual lack of newsworthiness of monetary policy and the low level of financial literacy among the general public. Consequently, a vicious circle or a spiral of silence result: policymakers become more taciturn, whereas their audiences become more complacent, inattentive and vulnerable to noise. Therefore, beyond the dilemma of secrecy versus disclosure and the legal prescriptions of transparency, it is necessary for central banks to gain more social attention, enhance their context of influence and stimulate a robust demand for central bank information if policy actions are to be facilitated through verbal interventions.

Studying these challenges we point out that we are studying mental and social rather than physical phenomena. Therefore, the Platonic idea that knowledge is nothing else than perception leads our inquiry into the psychological foundations of economic behavior and the contextual nature of knowledge. Our contribution to existing literature is twofold:

Firstly, we use a multi-disciplinary approach to disentangle several problematic contingencies of central bank communication, analyzing from this perspective the role of complex phenomena such as public opinion, perceptions, beliefs, framing, subjective probability, rhetoric, persuasion, cognitive limits and distortions, psychological and cultural biases etc. The result is a survey of theory and practice in central bank communication, from the perspective of political science, social-psychology and media studies. Secondly, we attempt to draw on more psychological realism to central bank communication in the context of financial crises, using a parallel with risk management in the case of natural disasters.

The core part of the paper focuses on central bank communication and social interaction in times of crises or turbulent market conditions. A review of several relevant theories is followed by observations on recent developments of communication practices with impact on financial stability. In this context, we draw on a surprisingly informative parallel between risk management related to natural disasters such as earthquakes, respectively the corresponding communication infrastructure and practices during financial crises. The role of social and emotional behavior thereof points to the importance of interpersonal communication for the dissemination of central bank information in a turbulent context.

1. Theoretical Considerations

In the case of a potential or actual financial crisis, central bank communications are involved in both prevention and reaction to the crisis as the central bank assumes the role of lender of the last resort. The inescapable reality of asymmetric information that occasionally leads to bubbles, panics and bank runs, requires the intervention of the central bank with a multitude of instruments, including communications, especially when the economic fundamentals are good. Bagehot[1] describes the role of understanding between the central bank and the public when a panic erupts:

> *A panic, in a word, is a species of neuralgia, and according to the rules of science you must not starve it. The holders of the cash reserve must be ready not only to keep it for their own liabilities, but to advance it most freely for the liabilities of others (...). There should be a clear understanding between the Bank and the public ... that they will replenish it in times of foreign demand as fully, and lend it in times if internal panic as freely and readily, as plain principles of banking require.*[2]

1. Walter Bagehot (1826-1877) was a British businessman and journalist whose book *Lombard Street* is a reference text on how to cope with financial crises and includes the Bagehot Principles. *Lombard Street* is actually a compilation of articles that Bagehot wrote for *The Economist* during the 1850 s.
2. Ibid.

The public s confidence that the central bank will intervene to supply the financial system with liquidity can reduce the destructive effect of systemic turbulences and can prevent their evolution towards financial crisis. But when the information is asymmetric (e.g. the borrower knows more about his current situation and future prospects than the lender), moral hazard and adverse selection can arise, threatening the functioning of the market. Therefore, transparency rules and practices help to bridge the gap of asymmetric information and sustain confidence. Eichengreen (2002) reviews the efforts to create transparency in the banking system,[1] as a measure to prevent financial crises, although he is rather skeptical about the capacity of enhanced transparency and disclosure to face the crisis threats.

However, the line is very thin between transparency that creates confidence and provision of information that increases uncertainty or creates information overload. Angeletos and Werning (2004), apply the rationale of Morris and Shin (2002) to currency crises, bank runs, debt crises or financial crashes, arguing that in such circumstances, public information leads even more dramatically to the collapse of informational multiplicity. People tend to progressively ignore alternative sources when they observe fundamentals with small enough idiosyncratic noise, relying predominantly on public information. If a crisis emerges in this context, the lack of informational multiplicity negatively affects coordination capacity and reactivity, creating informational asymmetries and adverse selection.

In a model of currency crises with self-fulfilling expectations, Metz (2003) and Geraats (2005) show that if the fundamental state of the economy is good, the probability of a currency crisis decreases in the precision of public information, but increases in the precision of private information. In case of bad fundamentals, however, more precise public information increases the likelihood of a crisis, whereas more precise private information

1. He looks at the impact of the workings of the International Accounting Standard Board, the Basel Committee on Banking Supervision, OECD, IMF etc.

leads to a lower crisis probability. In a world where *we will never have a perfect model for risk,* [1] relying unilaterally on a limited number of information sources can put the market participants at peril.

Although transparency would normally reduce volatility in the financial markets, central bank announcements about interventions in a turbulent context might prove to be a double-edged sword for financial stability. Although there is some evidence that historical transparency of a central bank can predict future performance in crisis management (Fry, Julius and Mahadeva, 2000), maintaining such transparency in the case of emergency refinancing for ailing banks might create anxiety and even panic in the markets (Fergusson, 2002).

Despite crucial reconsiderations of central banks role in the twenty-first century (Issing, 2005), a more fundamental change of paradigm still seems to be unfolding. In a testimony to the Congress, in October 2008, after the collapse of Lehman Brothers and the eruption of the financial crisis throughout the global economy, a perplexed Allan Greenspan confessed about a fundamental trembling in his own thinking:

> Well, remember what an ideology is. It s a conceptual framework with the way people deal with reality. Everyone has one. You have too. To exist you need an ideology. The question is whether it is accurate or not. And what I m saying to you is yes, I have found a flaw. I don t know how significant or permanent it is. But I have been very distressed by the fact. The congressman questioning him asked: In other words, you found that your view of the world, your ideology, was not right. It was not working? Greenspan replied: Absolutely. Precisely. You know that s precisely the reason I was shocked; because I have been going for forty years or more with very considerable evidence that it was working exceptionally well.[2] The fundamental question is what was actually

1. Financial Times, March 2008.
2. Washington Post, October 23, 2008.

> wrong in the policy design that created the global crisis, and, furthermore, what should be changed in the philosophy of central banks in order to avoid, if possible, such unfortunate outcomes. The question is not only a technical one and even not only an institutional[1] one. It is probably a more profound need for a change in paradigm about the role of central banks in relation with the political system and the citizen.

As policy makers and managers of expectations, central banks are not only addressing specific technical issues in the monetary field, but they affect the very way people cope with their economic and even political reality. It is abundantly clear that economic considerations are consequential to the citizens not only for their financial decisions but also as they form their vision about the economic and political spheres. If a monetary policy regime systematically and consistently affects spending and saving decisions, it creates an attitudinal endowment that will lead to political biases vis-à-vis policy makers.

Indeed, independence of central banks from the political power was rightfully considered a condition for monetary policy effectiveness. Central banks ought to be independent from power politics in order to earn the confidence of the public and acquire legitimacy. We say that during the last two decades, the process of setting central banks free from political control, created the context for more legitimacy, trustworthiness and policy performance.

Not only that systematic progress in transparency and communication paved the way for a more vigorous direct relationship between central banks and the citizen, but a certain adjustment of the balance of power within the political systems, enhanced to some extent by the recent financial turmoil, sets the scene for a new philosophy about what central banking means for the

1.The Larosiere report suggests that more integrated supervision should be part of solution in dealing with systemic risks in the banking sector.

polity. Many of the traditional political institutions see their authority and credibility eroded. Despite a lack of political accountability, authority flows to a large extent in the hands of central banks as they could become flagships during financial turmoil. And in this posture, they have to assume new roles. In a crisis context, the central bank could have more responsibility to communicate with the public than the government has.

If monetary policy effectiveness requires transparency and communication, it is because the policy maker has to be trustworthy and to establish a context on influence in order to attain certain policy objectives. A policy maker that is not elected but, nevertheless, has the power to affect systematically people s lives and attitudes is a statesman of a different breed. The mystique or monetary policy stems probably from this unique status of central banks in modern societies, where they are independent from the political games but still have a great power that emanates from a sort of *droit divin* or political fiat, that confers them prevalence and a high profile in the political arena. As Karl Brunner put it in The Art of Central Banking [1]:

> *Central banking has been traditionally surrounded by a peculiar and protected political mystique. The political mystique of Central Banking was, and still is to some extent, widely expressed by an essentially metaphysical approach to monetary affairs and monetary policy-making…. The mystique thrives on the pervasive impression that Central Banking is an esoteric art. Access to this art and its proper execution is confined to the initiated elite. The esoteric nature of the art is moreover revealed by an inherent impossibility to articulate its insights in explicit and intelligible words and sentences. Communication with the uninitiated breaks down.*

Political and esoteric as they are, central banks risk sometimes to remain in an ivory tower, from where the impedimenta in communicating with the public can fundamentally disrupt the management of a financial crisis.

1. Quoted by Issing (2000).

Therefore, the communication skills of the bank, backed by an adequate approach to risk management, should direct the flow of information to the public in such a way that a rightful balance is obtained between transparency and protective secrecy.

2. Some Empirical Evidence

Talking to the markets in times of crises is an even greater challenge for the central banker. Finding the right words at the right time, with respect to monetary policy as well as financial stability, remains at the core of the art of central banking remarked Tommaso Padoa-Schioppa, speaking to a Frankfurt audience after the financial turbulences of the dotcom crisis. Not only finding the right words but also the right personality at the right time is a matter of utmost importance in communicating to an unsettled audience.

As the sub-prime crisis was unfolding in the US, the solution of a *bail-out* plan, as thoughtful as it may have been conceived, sounded dreadful to a distressed public that would have been less contemptuous to hear for example about a *rescue plan* Not only the nuances in wording but also the role of personalities in shaping perceptions could make an important difference. A refreshing Barack Obama and his well choreographed interventions helped the American public and the financial markets restore confidence in a rather quick recovery. After the presidential inauguration of Obama, the Dow Jones Industrial Average spectacularly surged. A month later, after the Senate successfully passed the stimulus package proposed by the Obama administration, the hesitant words of the Treasury Secretary, Timothy Geithner, failing to inspire confidence in that sense of being in command, sent the DJIA down at unprecedented levels since the start of the crisis. In the aftermath of Geithner s speech, Loyd Blankfein, CEO and chairman of Goldman Sachs declared: *In my 26 years at Goldman Sachs, I have never seen a wider gulf between the financial services industry and the public*.[1]

1. Testimony to the Financial Services Committee of the US House of Representatives.

When the news about the Bank of England providing Northern Rock with liquidity went to the public, the run on deposits was inevitable. This is the reason for which, the well established transparency principles of the Bank of England are bypassed by the total secrecy about the amounts and the subjects of such operations. Classic cases of bank runs after central bank announcements of emergency lending are observable in all major financial crises in the last decades. As a consequence, during the current crisis, due to the reputational risks, many banks refused to make use of the liquidity made available by the lender of last resort. Roth (2008) provides some solutions for central bank intervention to support banks in trouble without inducing reputational risks:

1) communicate about exceptional lending in a way that trivializes it;
2) adopting silence as the sole effective communication strategy; or even
3) changing transparency rules about central bank actions in a context of financial turmoil.

The communication problem when it comes to the operations of a lender of the last resort in times of crises becomes relevant also in the case of international financial institutions such as the IMF. The long track record of the IMF in helping countries to solve their liquidity problems is still subject to debate[1] about how to avoid market perceptions vis-à-vis possible default risks. However, the IMF s statements during recent crises had a huge impact on the stock markets, whereas the G7 oral interventions had done a lot in influencing forex markets (Fratzscher, 2004).

On the other hand, it is interesting to observe that despite IMF s rather poor historical performance with its macro stabilization policies, markets and

1. Joseph Stiglitz, a notorious critic of the IMF and the World Bank, argues that the two institutions failed many times to assess the real situation, particularly in the South-Asian crisis in 1998. Stiglitz illustrates this relativism in terms of discourse:
By January 1998, things had gotten so bad that the World Bank's vice president for East Asia, Jean Michel Severino, invoked the dreaded r-word (recession) and d-word (depression) in describing the economic calamity in Asia. Lawrence Summers, then deputy treasury secretary, railed against Severino for making things seem worse than they were, but what other way was there to describe what was happening?

audiences in developing countries listen to its discourse. Lohmann (2003) observes that, indeed, developing countries follow IMF rules, not so much because they desire an IMF loan, but because the IMF endorsement opens the door to economically more important loans. Furthermore, the lack of compliance with IMF programs doesn t hurt the signaling value for IMF agreements. Lohmann finds two reasons for this paradox. Firstly, the poor record of IMF conditionality can be interpreted as a sign of flexibility; therefore accommodation can be a condition of policy performance. Secondly, the audience cost of IMF activities is rather low. The electorate in the member countries does not care that much about IMF, plus they don t have the information or attention to keep track of it. In conclusion, the IMF s relative lack of transparency and communication (accountability), coupled with a significant degree of ignorance on the side of the public, is finally beneficial, as we will see in the following examples. In Lhomann s words, *a well-functioning institution is neither fully transparent nor accountable not totally independent and secretive.*

Suspicion that the country is in serious trouble may cause the markets to abruptly curtail its provision of credit, thus creating a vicious circle that could create self-fulfilling pessimism about the IMF intervention. Extremes like imposing a fine for the use of the word crisis , as it was proposed recently by a Lithuanian politician who argued that politicians who used this word in public speeches should pay a fine of 29 Euros, should clearly be avoided, at least for their ridiculousness in the eyes of the public. At the other end of the communicational spectrum, the eagerness of the media to come up with panicky headlines about the collapse of the global financial markets should also be criticized. Invoking sleeping demons has often lead to self-fulfilling prophecies.

In countries that passed recently to democracy and free markets, as it is the case in Central and Eastern Europe, the public is less experienced in reading the lips of government officials or interpreting macroeconomic fundamentals. Therefore, in this part of the world, panic is easily unleashed by isolated events that should otherwise melt in the broader economic and political trends.

The mechanism of perceptions is not new, as described by Gai and Shin (2003) in a similar situation that occurred during the South-East Asian crisis in 1997, involving the IMF and the Central Bank of Thailand. After the eruption of the Thai financial crisis, in the period leading to the abandonment of the Baht s peg to the dollar on July 2, 1997, the Thai authorities figures for foreign reserve holdings were exaggerated by the inclusion of dollar holdings needed to settle forward and swap positions in dollars put in place to support the peg. When IMF assistance was requested in July, one of the conditions that the IMF imposed was the publication of foreign reserve losses as a result of the crisis. As the IMF package was announced on August 20, the announcement was accompanied by the revelation that 23 billion USD of the Thai reserves were tied up with the settlement of swap and forward contracts. The immediate result was that the Thai baht crashed. The central bank and the IMF itself recognized the mistake and the fact that this episode could have been avoided with more attention paid to the consequences of the announcement.

3. Social Behavior During Natural Disasters and Financial Crises

In response to the recent global financial crisis, there is an increased interest for reconsidering the role of central banks in providing financial stability. In a number of countries, central banks are given a more prominent role as a consequence of the financial crisis, based on the idea that there are multiple synergies between monetary policy and financial supervision.

Restoring and maintaining financial stability can become in certain circumstances the main function of a central bank. In such situations, the policy and communication focus is temporarily transferred to such objectives as containing the damage to the financial sector and limit the impact on the real economy. One of the main and challenging tasks in terms of communication is to restore confidence, by reducing asymmetric information and uncertainty in financial markets. It could even be argued that in a crisis episode, the initial imperative of avoiding the panic and maintaining confidence is essentially a communication issue. If needed, emergency measures follow, in order to reinforce public s trust that the central bank is capable to restore financial stability, while the initial stock of confidence allows for grater operational flexibility during crisis management (Gai and Shin, 2003).

However, there are important risks associated with central bank transparency when pursuing financial stability, given the bank s reputational risks and the risk of creating self-fulfilling prophecies (Shiller, 2000; Enoch, 2006), conflicts that can emerge between different policy objectives (Winkler, 2002; Greenspan, 2003; Sibert, 2007; Stern, 2007; Corbo, 2010), information overload and crowding out (Morris and Shin, 2000), noise (Cruijsen, Eijffinger and Hoogduin, 2008), decrease of vigilance (Turner, 2010), moral hazard (Goodhart and Illing, 2002), misperceptions, etc., as we will discuss further down in this section.

In the economic literature of the past decade or so, the role for central bank communication as a financial stabilization tool, is *grosso modo* overlapping with the comprehensive case for transparency. In general, most arguments in favor of transparency can be extrapolated to the central bank s pursuit of financial stability; inasmuch uncertainty is of the essence in monetary policy, as Alan Greenspan remarked: *Uncertainty is not just an important feature of the monetary policy landscape; it is the defining characteristic of that landscape.*[1] Not only that transparency is considered as a mean to prevent market volatility but, reciprocally, central bank opacity is invoked as one of the conditions for the formation of bubbles.

Blinder (1999) suggests that the emergence of bubbles can be traced back to central bank s lack of transparency and predictability:

1. Greenspan (2003)

A central bank that is inscrutable gives the markets little or no way to ground these perceptions [about monetary policy] in any underlying reality – thereby opening the door to expectational bubbles that can make the effects of its policies hard to predict.

The argument is also developed by Eusepi and Preston (2007) in a simple model of output gap and inflation determination, providing evidence that in the case of no communication, policy rules that implement optimal policy under rational expectations frequently lead to self-fulfilling expectations.

There is also a wide range of counter-arguments to transparency that apply to financial stability. The line of thinking inaugurated by Morris and Shin (2000), predicts that too much transparency is detrimental for financial stability, on two grounds. Firstly, too much information provided by the central bank decreases the perceived quality of private sector forecasts and decreases private agents motivation to seek alternative sources of information. Secondly, as Cruijsen, Eijffinger and Hoogduin (2008) suggest too, the financial stability reports published by various central banks contain a lot of information which might complicate it for private agents to *see the forest for the trees.* In the same logic of risks for financial stability posed by excessive transparency, Turner (2010) provides an additional argument which goes in line with Morris and Shin (2002) and Cruijsen et al. (2008), in the sense of central bank information crowding out private information and decreasing agents vigilance. The stabilization measures of central banks coupled with communication aimed at maintaining confidence in the markets can create misperceptions about the management of the crisis and moral hazard problems.

Analyzing the Federal Reserve s expansionary monetary policies after 2001, Turner (2010) finds evidence that they fuelled an "extraordinary appetite for risk" in global financial markets. When the Fed policy reversed, the too-well-announced path of interest rate increases (termed by Alan Greenspan with the famous measured pace , starting in 2004) created adverse behavior in the financial markets. Too predictable increases in interest rates encouraged excessive leverage and risk exposures in the financial markets. Similar communication risks associated with the reversal of the monetary policy stance appeared in the Fed s exit strategy after the last crisis episode. In a statement for the House Financial Services Committee, Fed Chairman Ben Bernanke recently[1] hinted that the gap between the discount rate and the Fed funds rate might see a modest rise before too long as part of the normalization of lending. Despite his emphasis that such a move would not signal any change in the policy outlook and that exceptionally low rates would be warranted for an extended period, his address had substantially affected investors' confidence in the stock market.

To avoid the risks of misperceptions, Chailloux et al. (2008) provided several general principles of central bank communication for financial stability, after the first stages of the 2007˚08 financial market turbulence:

1) more information needs to be provided *ex-ante*, including details on operational aspects;
2) information should be delivered in a timely manner and more frequently;
3) insisting on the consistency of operations with the policy objective is essential to anchor inflation expectations.

The first two principles are commonplace in the general case for transparency. The third one reveals the conflicting of pursuit of financial stability and price stability, also discussed by Greenspan (2003), Winkler (2002), Sibert (2007), Stern (2007), Corbo (2010). Related to the last principle, it is important to observe that during the past two years, the Fed and the ECB officials repeatedly underlined that the liquidity provided in response to the crisis would not undermine the price stability objective. Particularly in the emerging markets, central banks were recently confronted with the urgency of providing massive liquidity in the context of a generalized loss of confidence between banks. In these cases, communication with the markets is crucial both for re-establishing confidence and to avoid building inflationary expectations. Moreover, as Enoch (2006) points out, it is important for the central bank to ponder the risks of disclosure when

1. February 10, 2010.

providing liquidity for a particular financial institution, because even admitting to work on financial stability issues may cause self-fulfilling prophecies and moral hazard. In these cases it is preferable for the central bank to try to "buy time" to resolve a situation (e.g. finding a buyer for a distressed bank).

Another relevant example in this sense was provided by Jean-Claude Trichet, speaking on 21 June before the European Parliament, to propose automatic budgetary sanctions for states with high deficit and debt levels, as a measure to restore confidence in the Eurozone. As some government officials have been commenting that expulsion from the Eurozone could be envisaged as the ultimate solution for overspending states, ECB watchers expected comments to be made in the speech. However, the ECB president didn t make any hint on this topic, not even ruling out the idea, as even admitting the discussion could have undermined financial stability.

In an attempt to systematize central banks efforts to provide for financial stability, Gai and Shin (2003), discussing central bank transparency as a means to reduce asymmetric information and uncertainty in financial markets, distinguish between two main channels of communication in the case of a crisis episode:

a) *Ex-ante* central bank communication, that takes place before any specific distress or problems with the financial systems are known; the instruments of this type of communication are for example the regular financial stability reports or reviews;
b) *Ex-post* disclosure, when the central bank has a policy of disclosing sensitive information, either about the financial conditions of an individual entity or about systemic fragility.

As mentioned before, there is extensive economic literature focused primarily on the design of policy measures directed to financial stability, although less on central bank communication and perceptions accompanying them. The mainstream economists account of financial crises used to be based on the rational expectations hypothesis, maximization of stable utility functions and information shocks, theories which are called into question as they failed to predict the current global crisis and even to explain ex post, some of its mechanisms. Therefore, given the critique to the current practical manifestations of central bank communication during the crisis, it is useful to look at behavioral approaches that could provide complementary understanding of the related issues.

New approaches to understand the mechanisms of financial crises and to offer solutions for financial stability, take into account emotional reactions to ambiguity and uncertainty, swings of confidence and trust due to herd behavior, social interactions, shifts in morale and other psychological, social and cultural forces. If the multitude of these factors and their role for financial stability requires an extensive analysis, our focus in this section will be centered on the relevance of these behavioral factors for central bank communication in the context of financial stability. The implications of the behavioral approach will be treated in conjunction with the approaches of mainstream economics, as they will be considered to be complementary and not in contradiction with the postulates of the rational expectations framework. We look at psychological implications of central bank communication during financial crisis in a multi-disciplinary conceptual frame that draws on a variety of studies from earthquake warnings to media and broadcasting goals.

In one of the recent applications of behavioral theories to financial stability, Shiller (2010) criticized the fact that political leaders and policymakers failed to acknowledge the social-psychological nature of the financial crisis, pointing out that the "irrational exuberance" speech of Alan Greenspan in 1996 had only a short-term effect on stock markets, given its singularity among central bank reactions. Similarly, at a recent conference of the Institute for New Economic Thinking in Cambridge, Markus Brunnermeier, pointing out the role of emotional and cognitive factors, suggested that policymakers should do more about warning of bubbles publicly, thus helping asset prices become more attached to their underlying fundamentals (Brunnermeier, 2010).

In order to analyze the communication process that occurs between a central bank and its audiences during a financial crisis we will turn to the patterns of behavior manifested in an essentially similar situation of uncertainty and crisis: an *earthquake*. Attempts to draw parallels between economic crises and physical phenomena like disasters or contagions have been recently undertaken using quantitative methods by Didier Sornette[1], an earthquake scientist and financial expert, and also by Dirk Helbing from ETH Zurich (Swiss Federal Institute of Technology), where he heads Coping with Crises in Complex Socio-Economic Systems. Especially after the failure of mainstream economists to forecast the sub-prime bubble, physicists working on economic crises gained some prominence. From a physics background, Dirk Helbing proposes a multi-disciplinary approach for a better scientific understanding of economic and financial phenomena, including different types of crises.[2]

These attempts are justified by important similarities between natural disasters and financial crises. Given the qualitative nature of central bank communication and the difficulty to quantify its underlying phenomena, the parallel with the risk management of natural disasters is helpful on one hand to observe factual evidence about agents behavior and on the other hand to draw lessons intended to improve authorities reactions in such instances:

a) Earthquakes, like financial crises, are low-probability events, black swans , that occur more or less randomly and display a high degree of uncertainty; however, their distribution in time and space follows certain probabilities: there are regions in the world where local tectonic structures create conditions for more frequent seismic activity (like Chile or Japan), as there are historical periods when earthquakes seem to be more frequent; similarly, it has been observed that countries in transition, emerging

1. In 2003 he published Why Stock Markets Crash - Critical Events in Complex Financial Systems at Princeton University Press.
2. A European research initiative, called Future ICT (www.futurict.eu) brings together scientists from physics, economics, social, computer, engineering sciences to address these issues. A similar project has been initiated by George Soros who established the Institute of New Economic Thinking (INET) to which Dirk Helbing also contributed.

economies are more prone to bubble-burst cycles and that periods of political instability and social unrest are usually correlated with market volatility; Goodhart and Illing (2002) observe that financial crises tended to be a common phenomenon during the nineteenth century and at the beginning of the twentieth century, in many countries; they also point out that the experience with frequent bank runs and currency crises, provided the ground for increasing effectiveness of central bank reactions; but despite centuries experience, earthquakes and financial crises remain idiosyncratic phenomena that are rather difficult to predict;

b) Predicting earthquakes is as controversial and complicated as forecasting financial crises; early optimism was based on the conviction that seismologists were close to find a theoretical model that would adequately account for the various signs often observed before an earthquake, allowing quantitative analysis of the specific place, time and magnitude of the expected event. One important basis of prediction is the so-called *uplift*, which is:

> *the manifestation of a gradual buildup of earthquake producing stresses which should serve to give a renewed sense of urgency in preparing for the large earthquake that someday inevitably will occur in this region.*[1]

c) Enthusiasm over earthquake as well as financial crises prediction was moderated by anxiety regarding potentially unsettling social and economic effects of warning the public about a coming disaster. Especially if the warning involved significant period in advance of the predicted period of the event, the disruption in the social and economic life and the costs (real estate values would decrease and insurance costs would increase; in a more radical perspective the cost can be even outright economic recession, as suggested by Turner et al. (1986) would exceed the benefits from knowing when to expect

1. Rendering of a body of earth scientists at the California Earthquake Prediction Evaluation Council (CEPEC).

an earthquake. If the announcements suggested low risks, the denial and apathy would render the prediction inconsequential. On the other hand, a false alarm would undermine the credibility of a subsequent valid prediction. In a striking similarity with central banks announcements on financial stability, it is interesting to observe that in the case of a city council meeting in California to discuss the imminence of an earthquake (Turner, Nigg and Paz, 1986), the communiqué at the end of the meeting showed concern that a straightforward warning would create panic whereas a negative verdict would give the public a false sense of security.[1] It is also indicative to notice that at the insistence of the state Governor, the meeting was open to the press. In this respect, relevant for the information processing is that journalists who could not understand the essentially technical discussion often featured the most controversial exchanges and the most negative statements made during the meeting. This aspect is helpful to explain how the lack of understanding fosters negativism and distorted behavior during financial crises, thus creating the need for clarity in central bank communication.

d) There is an inherent communication problem in the case of scientific predictions given that usually there are no direct lines of communication between the scientist who study earthquake uplifts and the general public, which creates the room for distortions and misperceptions; media, state officials and the rumors are the paths through which the information from the scientists emanates to the public. Consequently, television, radio, newspapers and the internet (the new medium *par excellence* for spreading the rumors) are crucial in determining what information the public receives, the seriousness and the comprehensibility of this information. As an illustration

1. The main conclusion of the meeting was: After limited study of the data, theory and methods of analysis involved, the Council did not conclude that the probability of an earthquake in the area in question is significantly higher than the average for similar geological areas of California. Nevertheless, the data are sufficiently suggestive of such an increased probability as to warrant further intensive study and testing. It remains possible that a moderate or major earthquake could occur at any time, as is true for many other geologic areas of California.

of this danger for financial markets, in a recent interview[1] Herman van Rompuy, president of the European Union criticized financial markets for being too heavily influenced by rumors and prejudices . He said: *The markets were too indulgent in the first decade, but now they overreact a lot of time to small incidents*.

e) One of the effects of the news about a possible earthquake is the decrease of property values in the concerned area. Therefore a preoccupation both of authorities and people affected is to secure reimbursement for these losses as a result of announcements.[2] In the financial markets, the Credit Default Swaps (CDS) function in a similar manner.

f) In areas with persistent high earthquake risks, authorities put in place architectural on one hand and on the other hand educational efforts to prevent damage for the population; similarly, the subprime crisis raised awareness for the need for a better financial architecture and for more effective educational efforts in preparing the public to deal with modern financial instruments and financial information etc.

Based on the usefulness of this type of comparisons, we will now proceed to analyze the patterns of behavior associated with disaster situation and the processing of hazard knowledge by the concerned public. For a better organization of the analysis the discussion will be focused primarily on the *general public*, secondly on *media* and finally, what interests us most, the reaction of *authorities* to the previous phenomena, essentially in terms of the fundamental aspects of communication under conditions of uncertainty, which are relevant to our behavioral approach to central bank communication.

As pointed out by Mileti and Darlington (1997), the mobilization of a community to prepare for and to deal with a disaster such as an earthquake is deeply affected by the social meanings and social representations embedded in existing social structures and relations. Another important component of

1. *Financial Times*, June 14, 2010.
2. During that period, California Senator Alan Cranston proposed a $150 earthquake preparation bill, given special urgency because of the uplift. The bill was debated and passed in the U.S. Senate but was subsequently defeated in the House of Representatives.

behavior in disastrous situations is that the interpretation of meanings and information is not strictly cognitive but includes affective components into more of a *feeling* than an intellectual image (Turner, Nigg and Paz, 1986). Disaster studies that inform our behavioral approach emphasize from an inter-actionist perspective the construction of reality and the role of communicated symbols that emerge during disasters.

The role of symbols increases with the level of perceived ambiguity and uncertainty which results in the fact that individuals attach higher importance to the legitimacy of information sources (Seligman et al., 1996). Legitimation is not only important for the processing of hazard knowledge but also to the construction of social representations, which in turn have to be legitimized. A communication issue that emerges in contemporary societies is that whereas in traditional societies communication took place in interpersonal networks, in contemporary societies, information is primarily circulated in a communication environment dominated by media discourse, where legitimation is more difficult (Seligman et al., 1996). The role of the legitimating process is to reinforce people s attempts to define an ambiguous social situation. Ball-Rokeach (1973) distinguishes between pervasive ambiguity and focused ambiguity. Pervasive ambiguity occurs when individuals or collectives are unable to define a social situation, whereas focused ambiguity occurs in the difficulty to determine appropriate strategy of action to deal with a *known* situation. The relevance of this distinction is that pervasive ambiguity includes a stress management component, where emotions play a central role, demanding a particular style of communication. The type and level of ambiguity also determine the information seeking behavior (Mileti and Darlington, 1997).

In an effort to identify common patterns of behavior in emergency situations, Mileti and Sorensen (1990) reviewed more than 200 studies of warning systems and warning responses, to provide an ample assessment of communication of emergency public warnings in cases like: hurricanes, tornadoes, floods, earthquakes, nuclear attacks, tsunamis, volcanoes etc. They find that the characteristics of the population receiving the warning are clearly reflected in the subsequent behavior of the respective population.

These include social characteristics such as gender, ethnicity and age, social setting characteristics, psychological characteristics such as fatalism or risk perception, and knowledge characteristics such as experience or education.

Most findings are in line with Turner et al. (1986) who argue that the same experiences have very different effects on different populations, which justifies preparedness programs and communication strategies to be designed in a manner sensitive to these differences. Culture and status variables relate to awareness and to fear in opposite directions. Thus, women, young adults and less educated individuals tend to have low earthquake awareness but high levels of fear and concern. On the other hand it is interesting to notice that experience with earthquakes does not enhance awareness and fear directly. (Seligman et al., 1996) observe that in transition countries pervasive ambiguity is higher, which favors informal communication. Most importantly and conclusive for our concern is that high general levels of involvement in informal communication on one hand accompany a less discriminating use of communication sources and on the other hand enhance both awareness and fear. The lack of authoritative or legitimate information sources enhances informal communication insofar as people are already inclined to rely primarily on friends, family or neighbors to obtain information and advice (Mileti and Darlington 1997):

> *Under circumstances in which people wonder what is happening in their world and question the information they receive, communication takes on characteristics quite different from those in normal times. More reliance is placed on informal and unconventional channels. Even though the news may be available from sources usually relied on, such as radio and television, individuals seek to confirm and supplement this news by exchanging information with one another*.

The reference we made in the previous section to all-encompassing concepts like background, or social representations, is useful for the behavioral approach to economic uncertainty and the central bank response to possible types of agents behavior in such situations. Our hypothesis is that central bank communication is suboptimal, particularly in a crisis situation, if it ignores cognitive and emotional components of collective behavior. In a reference to these components, Allan Greenspan admitted that *we have never successfully modeled the transition from euphoria to fear,* [1] the failure of economic models to predict agents behavior under uncertainty being to a large extent due to the difficulty of modeling psychological processes under market stress.

The utility of the behavioral approach resides in its attempt to include such variables in the economic models. One hypothesis that we already discussed in the previous sections is that framing matters for economic behavior. The importance of framing effects as widely acknowledged mainly due to the work of Kahneman and Tversky (1979) has found in social psychology a similar strain in the idea of a definition of the situation, or Thomas theorem : *If men define a situation as real, it is real in their consequences*.[2] Blumer (1969), following Thomas and Herbert Mead, formulated the theories of *symbolic interactionism*, claiming that people interact with each other by interpreting or defining each other s actions instead of simply reacting automatically to those actions. Their response is thus based on the meaning that they attach to such actions.

An illustration of the importance of perceptions for financial stability is the fact that during the initial phase of the recent Greek sovereign debt crisis, the financial press was trying to discern the spin or pep talk [3] from the material policy measures proposed with the rescue package, given that, for example, the French newspaper Le Monde quoted an Elysee official saying that: *Si nous disons les choses assez fortement, nous n'aurions rien a faire.*[4] Similarly, developing the argument of self-fulfilling prophecy about the capacity to restore financial stability, Hank Paulson, US Treasury secretary accounts in his memoirs that he told the Senate Banking Committee in July

1. Editorial in FT, March 27, 2009.
2. W. I. Thomas and D. S. Thomas, *The Child in America: Behavior Problems and Programs*, Alfred A. Knopf, New York, 1928.
3. Robert Shiller suggests that at the origin of the crisis lies a social-psychological phenomenon, over-confidence that was not properly managed by leaders. The collapse of confidence is identified as the fundamental cause of the financial crisis.
4. Le Monde, February 13, 2010.

2008: *If you have a bazooka in your pocket and people know it, you probably won't have to use it.*[1]

The meaning derived from social interaction, is mediated by the use of symbols and finally modified through interpretation. As we will discuss later, both the social interactions and the interpretation are relevant for agents behavior during crises. As Moscovici (1988) points out, social representations create information which feeds back into collective behavior. This is one of the mechanisms that creates contagion and herd behavior. Social representation becomes even more important in a crisis situation insofar their role is to familiarize us with the strange , according to the categories of our culture.

Turner et al. (1986) find that people refer what they hear and see in mass media to locally based opinion leaders or experts when forming their representation about the phenomenon. In this process, personal relationship or relations invested with high degree of familiarity supply the needed credibility of sources which is complementary to the impersonal or questionable authority of media spokespersons. Like other communication theories, this insight was developed from the study of public opinion on political issues. If not necessarily the informational content but rather the confidence in the central bank message is the main factor of effectiveness in achieving financial stability. Therefore, it is helpful to identify the determinants of central bank credibility in a context of market distress. Cukierman and Meltzer (1986) identified two measures for the credibility of central bank announcements: firstly, *average credibility* which is inversely related to the distance between the current announcements and the public s beliefs; secondly, *marginal credibility*, measuring the extent to which one unit change in announced targets affects expectations. Both measures are inversely correlated with the relative noise in announcements, i.e. the noisier the announcement the longer it takes to *build-up and deplete the stock of credibility*.

Noise is also negatively affecting disaster warnings. Mileti and Sorensen (1990) find that earthquake warnings are more credible if they are

1. *Financial Times*, February 13, 2010

pronounced with confidence and certainty in tone, while Enoch (2006) emphasizes that during financial crises it is crucial to avoid mixed messages and to refine the heavily nuanced messages. As for the average credibility in the case of disaster alerts, Mileti and Sorensen (1990) show that because people have different views of credibility, it is usually desirable for messages to come from multiple channels or sources: scientists, engineers, public officials, volunteer disaster organizations, or community opinion leaders. Another factor increasing the effectiveness of warnings to alert the public is the frequency of message dissemination, given that a single warning is not sufficient to get people believe and respond.

Familiarity of communication seems key to the diffusion of information and interpretation by the various audiences. First, experts with a familiar discourse manage more effectively to raise awareness and understanding of the people that would otherwise be ignorant about the issue at stake. Second, once a circle of lay people grasp the message delivered through a familiar discourse, they become a *reservoir* of people who appreciate the significance of the phenomenon, being thus able to disseminate the message through interpersonal communication, thus increasing common knowledge (Turner et al., 1986). This crucial observation is a key example of social behavior that informs economic theories. Gai and Shin (2003) argue that common knowledge is achieved only in a scenario where all market participants understand the full picture and are certain that everyone has grasped it. In reality, however, common knowledge is transmitted also through interpersonal communication, from dispersed *reservoirs* of such knowledge to the less informed agents. In the end, interpersonal communication between agents with different knowledge and different rational beliefs creates a landscape where agents can retain different models of the world (Winkler, 2002) which can help to resolve multiplicity problems (Morris and Shin, 2000). As Winkler puts it: In some sense, agents who know less, may know more, i.e. have less difficulty in choosing and co-coordinating their actions.

The authoritative communication during emergency situations is largely influenced by the pervasive role of the media. Media interpretation of events or media discretion about a specific issue determines how the public perceives and understands hazard information. As Otmar Issing put it:

> *These days, no significant institution- whether public or private, central bank or a sports club-can survive without a press office. Media advisers are ubiquitous: They thrive on the belief that, if need be, even poor results can be given a positive spin, while incontestable successes will fail to have the desired effect if not communicated in the right way (Issing, 2004).*

Turner et al. (1986) identify two important problems in the way communication is altered by the media. First, media have a problem in communicating technical information that is seldom popularly comprehensible in its original form. Second, media are confronted with the problem of stating the implications of disaster or emergency news for individual and collective action. There is also an inherent difficulty in summarizing public or authoritative pronouncements without bias, which results sometimes in higher uncertainty generated by media reports.

The problem is complicated further by cases of perceived unreliability of media reports, which often affects the credibility of the sources. The consequence in these cases can be that interpersonal discourse takes the primary role as source of information (Seligman et al.,

1996) which could impede the task of the central bank to communicate effectively with a public that looses faith in the bank s authority and capacity to manage the crisis. Another substantial and perceptive problem is that media spokespersons rarely manage to convey expertise and authority, which creates the need for central bank governors or board members to appear in person more frequently in the media.

The above perspectives over the role of public s perceptions and behavior on one hand and the role of media on the other, allows insights about the central role of authorities in crisis management. One important observation about the reactions of authorities during disasters is observed by Nigg (1982) in her investigation of earthquakes, in that organizations usually take longer to react to the new information and events than do individuals and families. Turner et al. (1986) established that in the case of seismologists warnings about earthquake uplifts it took usually one to two months after the announcement of the uplift for the principal state agencies to launch their communication to the public. The resulting lags of authoritative communication are to be filled basically through interpersonal communication and especially rumors (Shibutani, 1966). In all cases, the ambiguity fosters uncertainty and distorts perceptions.

4. Behaviorally Informed Policy Making and Communication

In the case of central banks public reaction to potentially threatening factors to financial stability, there are inherent tradeoffs. Given the importance of preventing the formation of bubbles, highlighted by the costs of the current crisis, central banks have to choose between responding aggressively or conservatively to potential bubbles. The lags mentioned above in the case of earthquake warnings, could be the sign of a more conservative approach to communication with the public, which nevertheless has its justifications. Correspondingly, in the case of the central bank it can be the strategy to temporize the reaction in order to find the appropriate solution (Enoch, 2006). An aggressive communicational response could of course have a greater success in preventing the bubbles but may also cause instability in financial markets and increase macroeconomic volatility (Amato and Shin, 2003).

Responding conservatively may entail less controversy, but may be less effective in tackling the bubble. Corbo (2010), drawing lessons from the current crisis, observes that political will is a crucial orientation for the central bank when designing the response to the build-up of bubbles or the clean-up when the crisis has erupted. To overcome the political drawback, central banks can ensure and convey adequate leadership by cooperating with other agencies (Corbo, 2010) and/or they could assume and explain the political underpinnings of policy decisions in case of emergency (e.g. as ECB president explained the dangers posed by the sovereign debt crisis to the political construction of the Eurozone), as we will discuss later in this chapter.

The political dimension is often observable in the style of communication. Using the notions of pervasive versus focused ambiguity proposed by Ball-Rokeach (1973) to analyze the role of media and authorities in shaping the definition of situation under uncertainty, Yan (2004) discusses the case of SARS (Severe Acute Respiratory Syndrome) as it was handled by authorities in China and Hong Kong respectively Comparing the style of communication and the informational content of the announcements pronounced by China s authoritarian media system with the more responsive media system in Hong Kong, Yan (2004) finds that the lack of familiarity and responsiveness of China s authorities led to a poorer awareness and higher levels of panic. The case is a good illustration of what Enoch (2006) emphasizes in the case of central bank communication: *If a strategy cannot be communicated effectively, it cannot be implemented effectively.*

The familiarity of discourse is associated with a more egalitarian and more human contact with the general public, thus creating the context for a less intellectual and more comprehensible orientation towards the resolution or cooperative approach during emergency situations. Mileti and Sorensen (1990) rank source familiarity among the important factors determining public s responsiveness to warnings, other determining characteristics being credibility, consistency and clarity. The source familiarity corresponds to what Salmon (2007) calls the exchange value on the social market pointing to the same importance of message design that has the potential of further dissemination through interpersonal communication. Other accompanying characteristics are narrative competence, contextualization and moralities. Habermas (1993) based his theory of communicative action on his validity claims that follow the same line: empirical truth, moral rightness, authenticity, personal sincerity and not least important, aesthetic value. They are fundamental for conveying to the audience the inherent telos [1] of a speech, which is the practical stance oriented toward reaching understanding.

One way for the authority to obtain the convergence between communication practices and the population s *habitus* is to mix the use of official channels of communication with more informal channels. The informal briefings used by some central bank officials, as observed by Summers (2009), represent an important toll of communication when the official channels would not reach the targeted audience or the dissemination has to follow informal patterns. Following the argument of informal communication, Gai and Shin (2003) even suggest that a central bank should engage in whistle-blowing to deter financial markets euphoria without building up a context of fear. The communication strategy in these cases of critical importance given the risk of creating rather than preventing market stress through whistle-blowing or informal dissemination of warnings is:

> *Blow it too soon, and the central bank is accused of venturing into judgement too quickly when the uncertainties are too large to allow such presumptions. Blow it too late, and the central bank is accused of failing in its duties, and allowing imbalances to develop*.

A conclusive argument suggested by studies of communication under conditions of uncertainty and stress like earthquakes, suggests that particularly in a crisis situation, the central bank faces a fundamental impossibility of solving the communication problem in a rational expectations framework while being simultaneously transparent and credible.

The inherent difficulty of being transparent and maintaining credibility while pursuing all policy objectives is further enhanced by the supervisory role that central banks are entrusted with following the recent financial crisis. In a considerable number of countries central banks began to combine monetary policy with financial supervision, which leads to synergies through informational gains on one hand, but on the other hand creates additional difficulties for communication. One important risk is that supervision in a

1. purpose (Greek)

transparent framework could create a reputational risk for the central bank, ultimately affecting the effectiveness of its monetary policy and its credibility.

Reputational risk emerging from communication on financial stability were recently illustrated by the efforts of the European Central Bank to implement the measures designed to contain the Greek debt crisis, while attempting to convince the markets and the public about the consistency of its stance with the Treaties and its mandate. The ECB has been notoriously criticized for being opaque in its financial stability role (Sibert, 2009), which increased the suspicions, and temporarily the panic, about possibly unpredictable policy decisions vis-à-vis the purchase of Greek bonds. However, a positive effect of communication is expected from the recent call by the European Commission President Jose Manuel Barroso, at the end of the EU Council meeting on 17th of June, made to European leaders to allow the results of stress tests currently being carried out on the European banks, to be made public on a "bank-by-bank" basis. Recognizing the role of transparency as a stabilizing factor in the current context of mistrust among European banks is an important step towards dispersing market concerns.

Our hypothesis, in line with the previous behavioral considerations, is that assuming a political posture is beneficial for central bank communication in a context of financial instability. Furthermore, this is a way to circumvent the inconsistency triangle of communication and the subsequent reputational risks. One of the reasons is that the public perceptions regarding a potential loss of independence are outweighed in terms of credibility by gains from the public s perceptions of more effective leadership. One question is whether the sense of leadership could not be better communicated through more direct forms of public disclosure like having the policymaking committee s discussions televised or broadcasted (Huang, 2007). There are some arguments that allowing cameras into the policy meeting room would provide a clearer picture and conclusive information about the deliberation and the policymaking process. However, there is again the inherent risks of information overload and information crowding out, insofar more transparency does not necessarily translate in better understanding (Morris and Shin, 2002; Issing, 2005). The argument against broadcasting policy meetings is developed by Issing (2005), who argues that simple access to the policy discussions does not increase public s understanding of the underlying reasons of decision making, which are practically impossible to grasp at a glance on TV:

Does not one also need to know why one member voted one way and why another member voted the other way? Is it perhaps due to differences in the underlying economic philosophies — a Keynesian as opposed to a monetarist approach? Or maybe it is simply due to different levels of preparation for the meeting? Would not there then also be a need to televise the preparatory meetings of the policymakers with their staff? Likewise, what are the preparations for these preparatory meetings? Where would the cutoff point be?

Noise, information overload or cognitive limits seem to be sufficient arguments to water down the plead for broadcasting as a mean to increase understanding of monetary policy. Furthermore, apart from being short of utility for the public, TV exposure could impede on the policymaking process itself, by inhibiting committee members from overtly debating certain sensitive issues, particularly if financial stability is at stake.

Raymond Kuhn, a scholar of political communication and media policy observed:

Neither partisan control of broadcasting nor the ability to perform well on radio and television guarantees electoral success. Yet it would be jejune to argue convincingly that broadcasting exerted no influence on the electorate at all.

Despite its statutory independence from the political sphere, a democratic central bank needs to pay attention to its media presence, particularly given the need to convey a sense of leadership during crisis situations. A familiar figure of central bank governor or board member explaining on TV the dynamics of a financial crisis and the central bank s measures to manage it, would be beneficial both for the effectiveness of policy operations and for the bank s reputation. An interesting effect of familiar style of communication is accounted by Shiller (2010) who points to the crucial importance and the enormous success of the fireside chats used by president Franklin D. Roosevelt in the wake of the Great Depression. In these informal, cordial, seemingly one-on-one conversations, the president explained regularly on national radio, among another issues, the danger of bank runs, the importance of confidence in the banking system and the fact that the fear was the greatest danger for the economy. In 1933, when referring to the risk of bank runs he uttered: *The success of our whole great national program depends, of course, upon the co-operation of the public — on its intelligent support and use of a reliable system*, which points to the fact that to a large extent the crisis was the result of a coordination failure (Sibert, 2007). In his March 4th inaugural address he pronounced the famous phrase: *The only thing to fear is fear itself* making the suppression of fear and the willingness to support the economy a moral obligation.[1] Fireside chat pleas from leaders have been used also effectively during national emergencies by Winston Churchill, John F. Kennedy and others.

Displaying unambiguous position in support of stability measures sometimes requires the central bank to adopt a political posture, as it was evident in the case of the ECB during the recent months. Jean-Claude Trichet, assumed a quasi-political role as guardian of the Eurozone in a speech in Munich, declaring that what we need most at this time is a strong sense of direction [2] and that Europe needed a giant step forward [3] in the way economic policy operated. As an increasing number of economists question the viability of the monetary union without a strong version of political union, the ECB is gradually assuming a political role that is crucial for avoiding further deterioration of financial stability. Even if the ECB initially rejected the idea of outright asset purchases, by fear of endangering

1. Barack Obama and Gordon Brown are among those who used exactly the same phrase in similar situations.
2. Keynote speech at the 9th Munich Economic Summit, April 29, 2010.
3. Ibid.

its own independence, the decision to buy Greek bonds was finally made, with all the political consequences and the critique that followed.

In an illustration of the need to communicate a strong sense of leadership, the ECB president and the US Treasury secretary, Timothy Geithner, published in the same issue and on the same page of Financial Times[1] two editorials, respectively: "Europe has mapped its monetary exit and Stability depends on more capital. The respective pull quotes for the two articles were:

> *Our fellow citizens can have full confidence in the determination and ability of the ECB to deliver price stability* and *Regulation should be designed to ensure stability of the system, not just the solvency of individual institutions.*

Scott, Schultz and Taylor (2010) criticize this type of bailouts on grounds of increasing perceptions that the central banks are losing independence and creating room for moral hazard, but Taylor, commenting on the very decision of the ECB to buy Greek debt, acknowledged that ECB credibility was at stake when it had to choose between compromising on independence of facing threats to the stability of the monetary union.[2]

More frequent and more personalized media exposure, particularly on television where a sense of familiarity can be conveyed better, would provide central bank officials discourses with a higher persuasiveness and better dissemination. Also, more personalized communication tools, such as the open letter that the Bank of England governor uses to write to the Chancellor of the Exchequer whenever economic conditions are disrupted, are useful to increase visibility and familiarity of central bank statements (Buiter, 2008). With such open letters, media visibility and, in general, a more public *persona* of the governor, the general public would be better and more timely informed, while a more familiar and egalitarian discourse would facilitate understanding of the emergency situation and of the issues at stake. The current crisis and the experience from crisis management in the case of natural disasters provide evidence that media proficiency is the key for the

1. *Financial Times*, September 4, 2009.
2. *Financial Times*, May 11, 2010.

convergence between authorities rhetoric and the public s habitus. Furthermore, a two-way communication with the public (Kosuke and Takeshi, 2009) offers the central bank the possibility to finely tune its messages, optimize its communication and increase its reputation.

Furthermore, better knowledge of central banks about the general public s biases and attitudes, acquired through regular surveys, as conducted by the Bank of England (Barnett, Oomen and Bell, 2009) or De Nederlandsche Bank, would improve central bank communication and would provide the background for timely signals and better signaling effects during emergency situations. Better knowledge about public attitudes could also improve central bank rhetoric aimed at removing the stigma and the blame that some time the public attaches to the central bank role in financial crisis. The last but not the least, the reputational gains from a clearer political posture, either symbolic or real, would outweigh the perceived losses in terms of central bank independence. Monetary policy in ordinary times is more separable from the political sphere, but in emergencies central bankers have to coordinate with politicians and adopt some of their rhetoric if the credibility of the status is to be maintained. Because, ultimately, as Tomaso Padoa-Schioppa remarked:

> *When we say that a currency is a 'safe haven', we refer not only to the quality and credibility of its central bank, but to the solidity of the whole social, political and economic structure to which it belongs.*

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