Hedging in the discourse of central banks

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Abstract

This paper examines the role and place of hedging in central bank discourse in order to determine to what extent a focus on classical hedges can yield an adequate analysis of the phenomenon. The research hypothesis is that, given the multiple risks at stake, a broader, more inclusive approach to hedging is called for than that adopted by many scholars. The paper bringd evidence that, beyond the quantitative aspects — between 4.5% and 5.8% of the words in the corpus are classical hedging devices — it is important to consider the qualitative and discrusive dimensions of hedging.

Key words Central bank; discourse; hedging; communication; openness; crisis.

Introduction

Central bankers, whose decisions can affect millions of people, know that they are accountable for their actions and decisions, and that their speeches will be carefully analysed by specialists and the media, and made available to a very large public. They have no choice bu hedge against the risks of miscommunication: the potential negative impact on the success of their policy measures should not be overlooked.

The question of hedging has received a great deal of attention in the fields of conversation analysis, and in academic discourse analysis (Rounds 1982; Pindi & Bloor 1986; Myers 1992; Salager-Meyer 1995; Hyland 1994, 1996, 1998; Markkanen & Schröder 1997), in which the widespread use of modal verbs and imprecise numerical lexical units or phrases has been underlined. It has also been studied in other types of corpora dealing with economic forecasting (Pindi & Bloor 1986), economic crises (Milanović & Milanović 2010), economic discourse (Channell 1990; Resche 2010, 2013). In many cases, it has been restrictied to easily identifiable words or phrases and attempts at drawing lists of hedges have been made.

Such an approach, however, may seem too restrictive to provide an accurate picture of all the hedging techniques that seem to characterise central bank discourse. This paper seeks to determine to what extent a focus on classical hedges can yield an adequate analysis of the phenomenon. The research hypothesis is that, given the multiple risks at stake, a broader, more inclusive approach to hedging is called for than that adopted by many scholars. Hedging as a phenomenon should therefore be approached as a response to the risks linked with the responsibilities of the author/speaker, the context, the stakes, the audience's expectations and should be considered *in situ* and *in vivo*. Qaccordingly, the umbrella term "hedging" was preferred to "hedges" in the title of this paper: it suggests the need to investigate further into what makes central bank speeches so characteristic in terms of hedged discourse.

Part one offers a reminder of the changes that have taken place in central bank communication over the last century, in an evolution towards more openness. Part two introduces the corpus and the method used for analysing discourse from a quantitative point of view. Part three provides the first results yielded by an approach to classical hedges and discusses them and their limits. Part four offers a plea for a broader, more qualitative approach to hedged discourse, having to do with the genre, its constraints and the stakes, and calls for adopting a rhetorical perspective to assess the full scope of hedging.

1. Central Bank Communication: past and present

In the past, central banks were very secretive places and policy moves were supposed to surprise the markets. Montagu Norman, governor of the Bank of England in the early 20th century, was known to live by the motto "never explain, never excuse". Before 1994, the US Federal Reserve did not even announce the target for the US Fed funds rate. Central bank communication was then limited to an "insiders' community" consisting of financial markets, academics interested in the field, and journalists specialised in finance. All these people were expected to understand the expert language. Yet, it was not always easy to decipher the message. Fed chairmen Arthur Burns and Paul Volcker were both known for blowing smoke when appearing before Congress. But it was Alan Greenspan, the longest-serving chairman who held his position from 1987 to 2006, who was credited with turning Fedspeak into an art form as evidenced below in two of his most famous quotes:

> **"**Since becoming a central banker, I have learned to mumble with great incoherence If I seem unduly clear to you, you must have misunderstood what I said."

In his book *The Age of Turbulence* (2007), he admitted that his vague, wordy and ambiguous statements were deliberately used to make his language confusing and cryptic so that people would conclude that economics and finance should be left to experts and could not be understood by the lay person. Understandably, he preferred blurring rather than clarifying an answer that could get him — or the US economy — in trouble.

Yet, after a while, he seemed to adopt a different stance: he felt that the time was ripe for the central bank to switch from deliberate obscurity to greater openness. Thus, in December 1999, the Federal Open Market Committee (FOMC) began to issue a statement after every meeting, whether policy was changed or not, and to include a "balance of risks" assessment. In October 2001, Alan Greenspan declared:

> "Openness is more than just useful in shaping better economic performance. Openness is an obligation of a central bank in a free and democratic society. Transparency makes ourselves accountable to our fellow citizens to aid them in judging whether we are worthy of that task." (Transparency in monetary policy, 11 October 2011)[1]

Since August 2003 more explicit statements about the likely future path of interest rates have been included in the FOMC's post-meeting statements, and financial markets and the

[1] <http://www.federalreserve.gov/boardocs/speeches/2001/2011 1011/default.htm>

financial press pay considerable attention to this part of the statements (Michael Woodford 2005). The FOMC has also made the minutes of its deliberations available to the public before its next meeting, which has made it easier for the public to understand current policy.

According to Duvvuri Subbarao (2011), Governor of the Reserve Bank of India, the reason for this change can be found in a shift in the theories that influenced monetary policy. Central banks first favoured obscurity over clarity, taking into consideration Nobel Laureate Robert Lucas's statement that monetary policy would affect real variables such as growth only if the policy changes were unanticipated. Then, economists Finn Kydland and Ed Prescott — two other Nobel winners — countered that fully transparent rules were more efficient and credible than discretionary policy changes, which ushered in a shift towards greater central bank transparency. Today, for example, it has become standard practice for central banks to announce their target rates, but also to indicate the rationale behind their decisions, to communicate on the expected outcomes and to provide forward guidance on future policy actions.

The shift that has taken place can be understood as a shift in the metaphorical conception of the economy: people used to think of the economy and the financial system as a machine and they logically pictured central bankers as engineers, captains or pilots, reading dials, trying to keep the engine going, to fine-tune the economy, to steer the ship towards a safe haven in rough seas, or to fly the plane and avoid a crash or a harsh landing. But economies are not machines: they are also living bodies likely to experience mood swings so that market sentiment cannot be ignored. Beyond numerical data, central bankers have to feel the pulse of the public and get feedback on its reactions, fears and expectations. Most importantly, people's collective decisions, which can greatly impact economic outcomes, are based on "what they *think* the future will be, not necessarily what the future will *actually* be" (Boivin 2011). As Keynes (1936) underlined when coining the term "animal spirits", our decision-making is influenced by our perceptions and emotions, and is not purely logical.

Central bankers are now aware of their role and responsibilities in shaping and anchoring expectations and they weigh every word they utter. As Lucas Papademos, Vice President of the ECB, declared in 2008, what is required is "consistency between words and deeds, and a track record of policy decisions that will ensure the predictability, credibility and effectiveness of monetary policy".

Janet Yellen (2013), the current Fed Chair, pointed out that when the FOMC started issuing regular statements on August 12th, 2003, it started "using communication — mere words — as its primary monetary policy tool". And she added: "Until then, it was probably common to think of communication about future policy as something that supplemented the setting of the federal funds rate. [But now] <u>communication is an independent and effective tool for influencing the economy</u>". It seems, then, that explanation has become the policy.

Even in times of crisis or stress, it is still better for central bankers to communicate. Educating, informing and reassuring the public if need be may actually reduce rather than exacerbate anxiety. More importantly, it can help avoid panic. Of course, the challenge is to communicate with the public in such a way as to "establish credibility and prestige in a framework of greater transparency that facilitates the process of accountability" (CEMLA 2004, 3-4). But the degree of openness may vary, and greater transparency may still be fuzzy transparency. For strategic reasons, central bankers may be led to withhold information, as pointed out by Scott G. Alvarez (2009): "our goal is to be as transparent as possible about our policies and operations without undermining our ability to effectively fulfill our monetary policy and other responsibilities". Under such circumstances, silences are almost words: they are as strategic as the information that is provided (Noordegaaf-Eelens 2010).

Thus, whenever they express themselves, central bankers are faced with the dilemma of providing enough information so that people can make informed choices in their lives, while avoiding white noise that might cause their message to be blurred or misunderstood. In order to do so, they have no choice but resort to all the linguistic tools available, many of which are classical hedges, as identified in the literature.

2. Corpus and method

Unlike our previous research focused essentially on the Fed's discourse and aspects of Greenspan's and Bernanke's speeches (Resche 2004, 2006, 2009), this paper is based on a broader corpus: the speeches of three other central bankers (the ECB's, the Bank of Canada's and the Bank of England's) have been added to help determine whether hedges were used more often in some places or circumstances than in others. The period concerned spans 5 years and a half (from January 2008 to July 2013), which corresponds to a very hectic period for central banks — that of the global financial crisis and its aftermath, coupled with the European debt crisis. The period under review was felt to offer an opportunity to check how the global financial crisis or the European debt crisis impacted the use of hedging devices and whether central bank chaimen and governors reacted differently whenever uncertainty was mounting.

Though it was impossible to find a period that would coincide with the beginning and end of the mandates of all four chairmen, the period does coincide with the mandate of Mark Carney as Governor of the Bank of Canada[2]. For the ECB, the period under scrutiny was shared between Jean-Paul Trichet and Mario Draghi, who came into office in late 2011. Ben Bernanke completed his second mandate as Chairman of the Fed in January 2014 and Janet Yellen is now at the helm. The 210,915-word corpus (Appendix A), which includes 103 speeches, was compiled with a view to ending up with comparable individual corpuses for each central bank, not only in terms of size, but also as regards the thematic content, i.e. monetary policy and economic stability. Taking into account a number of differences that exist between central bank systems — such as the fact that the Governor of the Bank of England reports to the Chancellor of the Exchequer by writing official letters, when the Fed's Chairman delivers speeches to one of the houses of Congress — the decision was made to

[2] Stephen S. Poloz is now Governor of the Bank of Canada, and Mark Carney was appointed Governor of the Bank of England and Chairman of the Monetary Policy Committee on July 1st, 2013, replacing Mervyn King.

focus essentially on speeches, hearings and testimonies by the chairmen or governors of all four central banks and to exclude the letters, which belong to a different genre.

The analysis of central bank discourse is based here on two different approaches that can be described as 'bottom-up' on the one hand, and 'top-down' on the other hand. First the speeches were all read thoroughly, in a very classical approach, with pen and paper and all the elements considered as potential instances of hedges were underlined. Then, in order to have a first idea of the proportion of traditional hedges in the speeches, the Antconc tool[3] was used to analyse the corpus and yield a word count of each type of hedge for each central banker. These broad types of hedges are listed below and illustrated by a few examples from the corpus:

- Impersonal phrases (agentless forms, passive constructions, 1st person plural, evidential verbs like *estimate, suggest* or *indicate*) that can diminish the author's or speaker's presence in the text or speech or withhold personal commitment, if need be:

  [...] economic activity in the second quarter of 2009 is estimated to have declined by 0.1%, compared with the previous quarter. In the period ahead, we expect to see a very gradual recovery. (Trichet, September 28th 2009)

  Available information suggests that economic growth has picked up again this year. (Bernanke, February 26th, 2013)

- Epistemic modal auxiliary verbs such as *may*, *might* and *could*, adjectives, adverbs and nouns expressing probability or possibility, modal lexical verbs (*believe*, *assume*):

  More recently, we have seen increased evidence that a self-sustaining recovery I, consumer and business spending may be taking hold. (Bernanke, March 1st 2011)

- Approximators, vague quantifiers (rounders or downtoners): adverbs expressing degree, quantity, frequency, or verbs expressing vagueness or uncertainty: *recent, frequent, moderate, subdued, some, roughly, nearly, seem, appear.*

  Recent information confirms that we can expect a moderate recovery in the current year. (Trichet, March 22nd, 2010)

  The U.S. economy has continued to recover, but economic activity appears to have decelerated somewhat during the first half of this year. (Bernanke July 17th, 2012)

  There are good reasons to suppose that a gentle recovery is underway. (King, January 22nd, 2013)

- Time references restricting the period when the claims made were valid (*to date, currently, medium term, long term, temporary, etc.)*:

[3] Antconc is a freeware multiplatform tool for carrying out corpus linguistics research created by Laurence Anthony from Waseda University in Japan.

It is important to recognize this statement for what it is – the Bank's judgment that our policy rate should remain at 1/4 per cent at least through the end of June of next year in order to achieve our 2 per cent inflation target. This conditional commitment does not indicate what will happen following the end of the second quarter of 2010. (Carney, September 28th, 2009)

- Conditional clauses (if clauses):

  If we embark on the type of programme I have outlined tonight, I believe we can roll back the black cloud of uncertainty darkening the outlook for demand, allow the rays of supply optimism to peer through, and sustain a recovery based on a successful rebalancing of the UK economy. (King, January 22nd, 2013)

  Given the range of uncertainties about the strength of the recovery and prospects for inflation over the medium term, the Federal Reserve remains prepared to respond should economic developments indicate that an adjustment in the stance of monetary policy would be appropriate. (Bernanke, July 13th, 2011)

- Conjuncts: concessive conjuncts such as *although*, *nevertheless*, *still*, *despite*, *however*; conjuncts asserting the veracity of what is being said (*actually*, *as a matter of fact);* conjuncts asserting the logic behind the reasoning (*thus, therefore, hence*…):

  The global economic recovery is proceeding at a somewhat faster pace than the Bank had anticipated, although risks remain elevated. […] *European growth has also been slightly stronger than anticipated. However, ongoing challenges associated with sovereign and bank balance sheets will limit the pace of the European recovery and are a significant source of uncertainty to the global outlook.* (Carney, January 19th, 2011)

  Indicators for the second quarter of 2012 point to a weakening of growth and heightened uncertainty. But looking ahead, we continue to expect the euro area economy to recover gradually, albeit with dampened momentum. (Draghi, July 9th, 2012)

- Comments on value-judgments or truth-judgments, helping to state personal conviction (*essentially, surprisingly, not surprising, clearly, confirm, notably, in particular)*:

  This is no time for complacency. The challenges lying ahead of us are manifold.[…] In particular, the current crisis has clearly demonstrated that implementing ambitious reforms in economic governance is in the interest both of the euro area countries and the euro area as a whole. […] I am convinced that, over the coming months, the European Parliament will help Europe making the necessary quantum leap in economic governance a reality. (Trichet, November 22nd, 2010)

  A wide range of market indicators supports the view that the Federal Reserve's recent actions have been effective. […]

For each of these broad types, a detailed list of words or phrases (appendix B) was drawn up, in order to enrich and adapt the lists previously compiled by researchers studying other fields and analysing different types of discourse.

Consistent with the approach to hedging as a broad phenomenon mentioned in the introduction, boosters were included (*markedly, sharp/sharply, significantly, importantly, largely, considerable*) namely because they help to reinforce the speaker's authority and to show his commitment when he considers it necessary to steer the public's expectations in the right direction:

> *Let me state at the outset that the speed and synchronized nature of the recent global downturn has resulted in a heightened degree of uncertainty, which is evident in the diverse views on the outlook. [...] It is in this environment that <u>considerable</u> policy actions are being taken globally: the provision of liquidity to stabilize global financial markets, the write-down of assets and the re-capitalization of institutions, and macroeconomic policy measures to boost aggregate demand. A considered and coherent perspective on the likely success of these policies <u>importantly</u> shapes our view of the outlook for the global and Canadian economies.* (Carney, February 10th ,2009)

Strikingly, the sample of examples above confirms the idea that hedging devices do not belong to only one category, however broad. *Importantly*, or *considerable* for example, are boosters, but they also convey vague ideas of quantity ("how important or considerable is it?" one may ask) and they express value-judgment. Besides, there is hardly a sentence that does not use more than one type of hedging device.

3. Classical hedges in central bank discourse: a quantitaive approach to the corpus

The results yielded by the Antconc tool (Table 1) indicate that between 4.7% and 5.8% of the words in the corpus are classical hedging devices. Given the real trauma caused by the failure of Lehman Brothers in the summer of 2007 which marked the onset of the financial crisis, one could have expected the first period to evidence a greater use of hedging devices; this would have reflected the need to restore public confidence in the system. This initial hypothesis was not confirmed by the results. On the contrary, except for the ECB, results seem to indicate that the need to hedge discourse was as high, or even higher in the later period. One possible explanation could be the great uncertainty surrounding the economic environment, the likelihood of an exceptionally fragile and slow recovery, and even fear of a double-dip recession. Strikingly, the results for both the US and Canada are very similar, which might be accounted for by their geographic proximity.

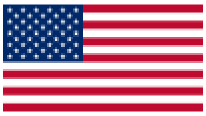
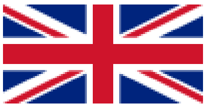
Occurrences of hedging devices (%)	BERNANKE 	TRICHET/DRAGHI 		CARNEY 	KING 
2008-09	5.80%	5.08%	-	5.74%	4.83%
2010-13	5.87%	4.34%	4.85%	5.85%	5.79%
2008-13	5.84%	4.77%		5.81%	5.45%

Table 1 Percentages of classical hedges in the corpus

Strangely enough, the ECB, which was hit by the debt crisis of some of its member countries and particularly the Greek problem in the later period, did not feel the need to use more hedging devices when faced with the new crisis, though one can notice a slight increase in Mario Draghi's speeches from 2011 onward. As for the results for the Bank of England, they are surprisingly low for the first period, though analyses have confirmed that the credit crunch did blow across the Atlantic and hit the British economy quite hard. However, a possible interpretation is that the situation deteriorated even more after 2009, when the euro zone problems really affected trade: actually the British economy greatly depends on its European partners. So, the fragile conditions in the euro zone introduced even more uncertainty as to the economic outlook and it was understandably necessary to be particularly cautious and explain why recovery was likely to be choppy and delayed.

Such explanations, though, are but tentative, and these results can only provide a very partial idea of the amount of hedging used in central bank discourse. As already mentioned, hedging cannot be restricted to a number of easily identifiable words or phrases. For example, approaching hedged discourse by counting the number of occurrences of specific conjuncts fails to account for the impact they can have when used to mesh opposite arguments, or to qualify some statements in a skillfully-built paragraph. Also, the power of compound hedges is greater than the sum of their parts, as shown in the statement, "Business and consumer sentiment is expected to soften somewhat" (Mark Carney April 24th 2008). Actually, traditional hedging devices are just the tip of the iceberg and the difficulty of egreeing on a definition of hedges is repeatedly underlined in the literature.

According to Hyland (1996: 5), hedging can be content-oriented or reader-oriented. When resorting to content-oriented hedging, the speaker or author is careful to mitigate his assertions in order not to be proven wrong as to the truth of the facts or the accuracy of his statements: his credibility is at stake and he tries to protect his own face. Reader-oriented, or addressee-oriented hedging devices are used either in order to avoid shocking the audience or the addressee, to avoid any misunsderstanding, or to convince the reader or audience of the acceptability of the claims. However, these two categories are not completely satisfactory as they may overlap. Actually, because of their polypragmatic character (Hyland 1996), hedges can be said to represent a fuzzy set, i. e. a class with unsharp boundaries (Coates 1983).

As Crompton (1997) underlined, Lakoff's (1972) conversion of the verb (to hedge) into a noun (a hedge) in 1972 raised problems precisely because it seemed to suggest the existence of "a discrete set of linguistic items". Obviously, many researchers did not entirely subscribe to the idea and felt the need to set up their own lists; but they soon realised that defining and classifying hedges is a very tricky matter as they appear in an "indefinite number of surface forms" (Brown & Levinson 1987: 146), ranging from lexical items — whether individual or in clusters — to syntactic structures. And although Hyland (1996) attempted to provide a description of major hedging expressions that can be found in various genres, he made a point of stating that hedges "can only be understood in terms of a detailed characterisation of the institutional, professional and linguistic contexts in which they are employed". Clemen (1997: 236, 243) also insisted that hedges derive their real meaning from the context in which they are used, so that it is impossible to draw a universal "list of hedges". Obviously, attempting to classify hedges is a challenge: whether one chooses to consider them from the point of view of form or to focus on the functions they perform, one is bound to come to the conclusion that some hedges can fit in several categories and that some hedges can only be considered as such in the particular context in which they are used.

This brief overview was meant to show that hedging cannot be restricted to 'hedges', i.e. a number of words or expressions which, though they help to hedge discourse, may not be enough to account for all the "shields" (Prince *et al*. 1982) that can be used by a speaker or writer with a large audience. Though the corpus of central banks speeches that was gathered for the purpose of this paper does evidence the use of classical hedges, the result yielded by the Antconc tool with which the corpus was analysed will have to be put into perspective and complemented by considering other types of hedging techniques. To illustrate how diffuse a phenomenon hedging canbe, and to apprehend hedging in context, it is essential to return to a bottom-up approach which can provide a more holistic view of the phenomenon.

4. Hedging as a diffuse phenomenon in central bank discourse

The more inclusive approach that is suggested here can only be understood if the specific risks inherent in central bankers' discourse are kept in mind. Being in a position of authority and responsibility, a central banker faces the risk of being proved wrong, of losing credibility, of causing the public to doubt his ability to fulfill his mission, of failing to be understood, of arousing excessive reactions among the public, of hurting people's feelings by disregarding their problems, of being criticised for sounding too distant and indifferent, or for reacting too soon or too late. Based on hte well-known definition of hedging in the financial realm as a means to cover against the risk of losing money, the definition of hedging in discourse can be restated as any means that helps to cover against the risks faced by the speaker or author in a given context or situation. The examples mentioned below are thus to be understood on the basis of this broader definition. The careful selection by central bankers of terms, arguments, themes, repeated reminders of the difficulty of their task and of their relentless efforts to do their best are to be considered as instances of hedging.

cntral bank chairmen and governors can naturally resort to the three pillars of ancient rhetoric — ethos, pathos, and logos — to make the public adhere to hteir policy choices and ensure the success of such policies. Ethos is obvious when they use their position of authority to express their views and confidence in a forceful way, hoping to convince and reassure:

> *There is no reason to despair. All crises come to an end. [...] Helped by the right policy actions, the UK and world economies can and will recover.* (King, January 24th, 2012)

> *I am confident that the euro area and its currently weaker members will emerge from the crisis with stronger and better functioning economies.* (Draghi, October 9th, 2012)

Ethos is also at play when they insist that they are committed to their job and repeatedly assure the public that they can be trusted; the goal here is of course to maintain or restore confidence.

> *I can assure you that from its side, the ECB will continue to guard our currency, the euro, and deliver price stability to Europe's citizens.* (Trichet, October 4th, 2011)

Pathos underpins their consideration for the public's preoccupations and their sympathy for the difficulties encountered:

> *I sympathise completely with savers and those who behaved prudently who now find themselves among the biggest losers from the crisis.* (King, October 19th, 2010)

> *I am well aware of the hardship that the current situation entails for many people, especially those whose job is lost or at risk.* (Draghi, October 9th, 2012)

Logos refers to the logic behind the information and the explanations provided by central bank authorities: central bankers must tell the public well-built stories that clearly link cause and effect in order to help build knowledge in a cumulative and chronological way. The measures announced must be consistent with the analysis that has been made on the basis of the information available at the time, of course.

Central bank chairmen and governors are in a position not only to decide *what* can be communicated, but also to choose *how* it should be communicated. Obviously, they have a wide range of hedging tools in their toolboxes beyond the ones that can be measured quantitatively. It is therefore important to take into consideration a number of elements such as lexical items, including euphemisms, metaphors and sentence, text or paragraph organisation. Likewise rhetorical questions can also be considered as a hedging technique, since they help to introduce explanations and reminders, maki,g the message clearer; thus they serve the purpose of justifying decisions and shaping expectations, as shown in the following extracts from the corpus:

> *How should a central bank enhance financial stability? One means is by assuming the lender-of-last-resort that Bagehot understood and described 140 years ago, under*

which the central bank uses its power to provide liquidity to ease market conditions during periods of panic or incipient panic. (Bernanke, July 13th, 2013)

What were the causes of the unsustainable build-up *of debt in Europe and elsewhere? [...] So what is to be done? [...] What does this mean for our economy?* (King, October 18th, 2011)

For their discourse to be effective, central bankers must keep in mind that, beyond their targeted audience, their speeches now get broader distribution and coverage than they used to and reach the general public; it is important to make sure that all economic actors have the knowledge required to understand the message and eventually make informed choices. So, central bankers must pay attention to the illocutionary effect of their speeches. Yet, apart from being understood, their message must also be accepted. This implies persuading and reassuring the public, and justifying the decisions, in other words, paying attention to the perlocutionary effect of their speeches (Austin 1976 [1955]): Whether one chooses to speak of "speech acts" (Searle 1969) or "hedged performatives" (Fraser 1975), well-managed discourse is a means to influence people's actions or decisions. Unavoidably, central bankers and their audience interact in some sort of conversation (Donohue 2006): the former anticipate the public's questions, fears, and potential reactions and the latter try to guess the decisions to come. In order for this to be possible, a number of principles, known as the Gricean maxims, have to be respected, in terms of the quantity of information provided, as well as the truthfulness, relevance and clearness of the message. Speakers are supposed to observe the cooperative principle and listeners, as a rule, assume they do, which makes inferences — or Grice's implicatures (1975) — possible.

Of course, nothing can be achieved without trust. So apart from rhetoric proper, central bank authorities often rely on a number of themes that will serve this purpose and are all related. To establish credibility, central bankers must first convince the public that they never lose sight of their primary mission: fighting against inflation and unemployment, stimulating growth and stabilizing the economy whenever problems arise:

The euro area and our 329 million fellow citizens can count on the ECB and the Eurosystem to take the necessary decisions whilst having always in mind monetary and financial stability as an aim in the medium and long term. (Trichet, February 20th, 2009)

Canadians can rely on the Bank of Canada to fulfill its mandate; they can expect inflation to be low, stable, and predictable. (Carney, January 22nd, 2009)

Accordingly, one of their techniques consists in asserting their **independence** from the political powers that be, which guarantees that their decisions are simply guided by their commitment to meet their goals:

The central bank's operational independence insulates it from the short-run pressures of the political system. (Carney, May 1st, 2013)

> *The Governing Council of the ECB — as the Open Market Committee on the other side of the Atlantic — takes decisions independently, on the basis of its monetary policy strategy, […] and after careful assessment of the risks to price stability in its economy.* (Trichet, September 10th, 2008)

> *The role of the Bank of England is to create the right amount of money, neither too much, nor too little, to support sustainable growth at the target rate of inflation. We are not doing it at the behest of the Government to help finance its spending. It is the independence of the Bank that allows us to create money without raising doubts about our motives.* (King, October 23rd, 2012)

Credibility can only be sustained or regained if a number of **values** are clearly announced and respected: confidence, transparency and accountability are three themes that flow through the various speeches and are used as "shields":

> *In our democratic society, the Federal Reserve's independence brings with it the obligation to be accountable and transparent. The Congress and the public must have all the information needed to understand our decisions, […] and to be confident that our actions are consistent with the mandate given to us by the Congress.* (Bernanke, March 2nd, 2011)

Whenever central bankers share their interpretation of economic conditions, they must take extra precautions to explain that they have no crystal ball and that **projections are not promises**. Any remark of the sort is to be considered as a manifestation of hedging.

> *Of course, economic forecasts must be revised when new information arrives and are thus necessarily provisional.* (Bernanke, July 18th, 2013)

> *Because there are risks on both sides of the outlook, reasonable people can disagree about the monetary policy judgement. […] After the event, no doubt whichever risk has crystallized will be described by the critics as inevitable. Unfortunately, we do not have a crystal ball. So in setting policy today the only coherent approach Is to balance those two risks.* (King, October 19th 2010)

> *This conditional commitment does not indicate what will happen following the end of the second quarter of 2010. […] In short, it is an expectation, not a promise.* (Carney, September 28th, 2009)

Uncertainty is therefore a recurring theme in central bank discourse. Over the period under review, for example, any mention of a possible recovery needed to be announced very carefully as the likelihood of unexpected events that would delay or derail it could never be swept aside. The collocates for "recovery" (Table 2) are quite revealing: obviously, they all function as hedging devices, in a very uncertain context where "recovery" might turn out to be too optimistic a term; they help mitigate central bankers' pronouncements, and prevent them from being accused of arousing unnecessary, unrealistic hopes, and of failing to properly assess the situation.

Verb + recovery	Adjective + recovery
Endanger, delay, derail, hamper, restrain	Attenuated, choppy, delayed, difficult, fragile, gentle, gradual, incipient, milder-than-usual, moderate, modest, muted, nascent, protracted, reluctant, recalcitrant, (disappointingly) slow, sluggish, uneven, (historically) weak, weakest

Table 2 Recovery and its collocates in the corpus

The collocates for recession or downturn — a euphemism for recession — are also quite insightful (Table 3): they all aim at insisting on the difficulties, but help to avoid the word depression and its traumatic connotation as a result of the Great Depression of the late twenties.

Adjective + recession	Adjective + downturn
Cyclical, deep (the deepest recession since World War II), global, great (the Great Recession), mild, severe, sharp, synchronous, (the) worst (global recession since the Great depression)	Global, large, persistent, protracted, severe, sharp, (extraordinarily) steep, simultaneous, unprecedented, the worst…

Table 3 Recession or downturn and their collocates in the corpus

Over time, one can see the evolution in the diagnosis of the situation. While early mentions referred to the situation using the adjectives “mild” or “cyclical”, recession was later described more realistically as “deep” and “severe”. Mentioning the “global” and “synchronous” character of the recession, or the “unprecedented” character of the downturn also helped to underline the idea that the problems originated elsewhere and made central bankers’ tasks all the more challenging. It preserved their reputation and could even underline their efforts to innovate and introduce extraordinary measures to save the world from dramatic developments. Characteristically, the term “Great Recession” was used in retrospect, as well as the allusion to the “worst global recession since the Great Depression”. Central bankers were faced with the challenge of finding the right balance between painting as faithful a picture as possible of the current situation and making sure they introduced reassuring elements to avoid causing people to worry, or lose confidence and then react excessively. In central bank discourse, this translates into frequent series of opposite arguments that are interwoven, meshed together, either within a sentence or a paragraph, or over a series of paragraphs:

> *Economic activity in the euro area contracted for a sixth consecutive quarter in the first quarter of 2013. Labour market conditions remain weak. Recent confidence indicators based on survey data have shown some further improvement, albeit from low levels. Overall, euro area economic activity should stabilize and recover over the course of the year, although at a subdued pace.* (Draghi, July 8th, 2013)

> *While indicators of spending and production have been encouraging on balance, the job market has improved only slowly. Following the loss of about 8-3/4 million jobs from early 2008 and 2009, private-sector employment expanded by only a little more than 1 million during 2010; a gain barely sufficient to accommodate the inflow of recent graduates and other entrants to the labor force. We do see some grounds for optimism about the job market over the next few quarters, including notable declines in the unemployment rate in December and January, a drop in new claims for unemployment insurance, and an improvement in firms' hiring plans. Even so, if the rate of economic growth remains moderate; as projected, it could be several years before the unemployment rate has returned to a more normal level...* (Bernanke, March 2nd, 2011).

By blowing hot and cold, so to speak, monetary policymakers underline how tricky the situation is and how careful they are not to overlook any element that could cause them to make inappropriate decisions. The technique helps them to justify their analysis of the situation and the ensuing measures.

Actually, any form of justification is to be considered as part of the overall hedging strategy. Thus, regular **references to economic theory and well-known researchers and thinkers** can be used to support the views expressed by central bankers:

> *Considerable evidence supports the view that countries with independent central banks enjoy better economic performance over time.*[6] (Bernanke, March 1st, 2011)
>
> 6. See, for example, Alberto Alesina and Lawrence H. Summers (1993), […]or, more recently, Christopher Crowe and Ellen E. Meade (2008) […]

Likewise, **references to history and past crises** offer a welcome introduction to the explanations provided to the public, especially in difficult times:

> *History suggests that after a financial crisis the hangover lasts for a while. So the next decade is likely to be a sober decade […]* (King, October 19th, 2010).

> *[…] history teaches that recessions involving financial crises tend to be more severe and have recoveries that take twice as long.* (Carney, August 19th, 2011)

Analysis of the corpus has also evidenced that central bankers insist on **the extraordinary character of the situation**; they repeatedly remind the public of the temporary character of the measures taken to remedy the problems and avoid the worst. Thus, the monetary stimulus will be withdrawn and the argument is meant to reassure the public that inflation will be contained:

> *We also believe that it Is important to assure the public and the markets that the extraordinary policy measures we have taken in response to the financial crisis and the recession can be withdrawn in a smooth and timely manner as needed, thereby*

avoiding the risk that policy stimulus could lead to a future rise in inflation. (Bernanke, July 21st, 2009)

Logically, such arguments will be more convincing if the public can trust the central bank for closely monitoring the situation. **Insistence on central bank flexibility** is meant to reassure the public:

> *The Bank retains considerable policy flexibility which we will use if required.* (Carney, February 10th, 2009)

> *[…] the Federal Reserve remains prepared to respond should economic developments indicate that an adjustment in the stance of monetary policy would be appropriate.* (Bernanke, July 14th, 2011).

Even efforts to adapt explanations of a complex situation to a lay public through the use of **metaphors can be seen as part of a hedging strategy**, especially when one is faced with a challenging situation:

> *Over the year, the west wind of a credit crunch emanating from the United States and the east wind of higher energy and food prices resulting from the strength of Asians economies have been stirring up the waters through which our economic ship must pass.* (King, June 18th, 2008)

Though the list of themes mentioned is not comprehensive, all these examples bring evidence of the diffuse character of hedging as a broad strategy. Clearly, the results concerning the percentage of traditional hedging devices used by central bankers (Part 2) must be qualified. While the ECB's results are noticeably lower than those of the three other central banks, it does not mean that Jean-Paul Trichet and Mario Draghi do not hedge their discourse; simply, they may well resort to fewer classical hedges and feel more comfortable with other hedging strategies. Actually, they take great pains to provide explanations in a very logical way, as they are conscious that they are addressing the citizens of 18 (though only 17 then) different member states; they regularly call for more discipline on the part of European governments, underlining the fact that they cannot be held responsible for all the problems:

> *The adoption of the euro cannot be a substitute for the need of domestic policy adjustment.* (Trichet, March 30th, 2009)

> *Effective crisis resolution needs bold actions by central banks but it also needs bold actions by other policy actors, notably governments.* (Draghi, July 9th, 2012)

Clearly, this brief overview seems to indicate that trying to measure hedging mathematically would be a vain endeavour for it would fail to take into consideration the situation, the stakes, and the specificity and complexity of the role of central bankers. Central bankers are at once academics and storytellers when they provide explanations, guides when they try to manage expectations and reactions, moralists when they combat the excesses of the financial world, supervisors, crisis managers, stability guardians and policymakers. They must also be diplomats in all circumstances.

Conclusion

This paper has highlighted the need to go beyond hedges as defined in the literature and to consider hedging as a much broader concept, which implies understanding what the risks, norms and constaints are in a given situation. As there is no standard approach, any approach that would tend to disconnect discourse from the specialised context and culture that surrounds it risks leading to biased or partial conclusions.

From this perspective, Crompton's "test of a hedge" (1997: 282) may not prove very helpful; actually he suggested asking the following question:

> Can the proposition be restated in such a way that it is not changed but that the author's commitment to it is greater than at present? If "yes" then the proposition is hedged

If one tried to detect hedges only by applying this method, one would no doubt leave aside many sentences or paragraphs that do not match the definition, but that are meant to hedge discourse and do so if one considers the co-text and context.

Likewise, John Lyons's definition (1977: 797) is much too restrictive:

> A hedge is an item of language which a speaker uses to explicitly qualify his/her lack of commitment to the truth of a proposition he/she utters.

Even Lakoff (1972), seems to have missed the mark by only considering "words" and not text and context, though, admittedly, he was less restrictive than others in his approach: he did state that hedges were meant either "to make things fuzzy or less fuzzy" (1972: 195). Still, hedging cannot be restricted to "words" or a set list of expressions. As Clemen (1997: 6) points out:

> There is no limit to the linguistic expressions that can be considered as hedges […] no linguistic items are inherently hedges but can acquire this quality depending on the communicative context of the co-text. This also means that no clear-cut lists of hedging expressions are possible.

This paper's contribution has benn to bring evidence that overlooking the qualitative aspects of discourse would only yield a superficial and partial analysis of the role and place of hedging which is inherent in central bank discourse. It is embedded in its fabric, linked with the magnitude of the risks, the size of the audience, the inevitable room for error when dealing with forecasts and projections. In a context when communication is essential if policy is to be conducted in an efficient way, central bank chairmen and governors have to decide what information to share and what information to retain. Greater openness need not mean transparency. If they expressed all their doubts and concerns on some occasions, they would risk precipitating problems according to the well-known principle of self-fullfilling prophecies. So, they use the whole range of hedging strategies in such a way as to enjoy the benefits of information asymmetry; they seek to maintain economic stability by disclosing only the data and details that can help them steer the public's expectations in the right direction. Hedging as a diffuse phenomenon and an overall strategy could well be what reinforces the difference between hard, i.e. quantitative, and soft, or qualitative information. In order to apprehend its full scope, and to better analyse central bankers' message, researchers should consider not only semantics, but also rhetoric, pragmatics, logic, stylistics and psycholinguistics.

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Appendix A. CORPUS DATA:

2008 - 2013				
Ben Bernanke	Jean-Paul Trichet	Mario Draghi	Mark Carney	Mervyn King

(Fed)	(ECB)	(ECB)	(Canada)	(BoE)
	35,780 words	15,891 words		
53,175 words	51,671 words		53,817 words	52,252 words

Total number of words for the whole corpus (2008-2013) = 210,915 words

Ben Bernanke = 20 speeches
Jean-Paul Trichet = 19 speeches
Mario Draghi = 9 speeches
Mark Carney = 34 speeches
Mervyn King = 21 speeches

103 speeches => average length of speech = 2047 words

Speeches included in the corpus:

2008 and 2009				
Ben Bernanke (Fed)	Jean-Paul Trichet (ECB)	Mario Draghi (ECB)	Mark Carney (Canada)	Mervyn King (BoE)
17 Jan. 2008	26 March 2008		18 Feb.2008	22 Jan 2008
27 Feb. 2008	3 June 2008		13 March 2008	10 June 2008
15 July 2008	25 June 2008		24 April 2008	18 June 2008
24 Sept 2008	10 Sept. 2008		1st May 2008	20 Jan. 2009
24 Feb. 2009	8 Dec. 2008		17 July 2008	17 March 2009
5 May 2009	21 Jan 2009		23 Oct. 2008	17 June 2009
21 July 2009	20 Feb. 2009		22 Jan. 2009	20 Oct. 2009
3 Déc. 2009	30 March 2009		10 Feb. 2009	
	28 Sept. 2009		6 May 2009	
	7 Dec. 2009		23 July 2009	
			28 Sept. 2009	
			28 Oct. 2009	
			16 Dec.2009	
18,843 words	18,745 words	0 word	19,207 words	18,779 words

Total number of words for 2008 and 2009 = 75,574

2010-2013				
Ben Bernanke (Fed)	Jean-Paul Trichet (ECB)	Mario Draghi (ECB)	Mark Carney (Canada)	Mervyn King (BoE)
24 Feb. 2010	22 March 2010	1 Dec. 2011	21 Jan 2010	19 Jan 2010
25 May 2010	21 June 2010	19 Dec. 2011	27 April 2010	16 June 2010
21 July 2010	27 Sept. 2010	25 April 2012	22 July 2010	15 Sept 2010
1st March 2011	22 Nov. 2010	9 July 2012	26 Oct. 2010	19 Oct. 2010
13 July 2011	30 Nov. 2010	9 Oct. 2012	9 Nov. 2010	25 Jan. 2011
18 Oct. 2011	21 March 2011	17 Dec. 2012	19 Jan. 2011	15 June 2011
29 Feb. 2012	30 June 2011	18 Feb. 2013	13 April 2011	18 Oct. 2011
17 July 2012	29 Aug. 2011	16 April 2013	22 June 2011	24 Jan. 2012
1st Oct. 2012	4 Oct. 2011	8 July 2013	20 July 2011	24 March 2012
26 Feb. 2013			19 Aug. 2011	14 June 2012
10 July 2013			1st Nov. 2011	23 Oct. 2012

17 July 2013			18 Jan. 2012 24 Feb. 2012 24 April 2012 18 July 2012 15 Oct. 2012 30 Oct. 2012 12 Feb. 2013 25 Feb. 2013 23 April 2013 1st May 2013	22 Jan 2013 16 April 2013 19 June 2013
	17,035 words	15,891 words		
34,332 words	32,926 words		34,610 words	33,473 words

Appendix B: List of hedging items

a) approximators and vague quantifiers

About, a degree of, almost, a number of, approximately, around, at some point, barely, broadly, (to a …) extent, generally, gradual(ly), in part, largely, mainly, markedly, moderate(ly), modest(ly), most (of), mostly, much of, near, nearly, not all, often, overall, partly, quite, rather, relatively, roughly, sharp(ly), slight(ly), some, sometimes, somewhat, subdued, substantial(ly), unusual (ly), usual(ly), weak

b) time references

At present, current(ly), frequent(ly), long(er) (-) term, medium (-) term, near (-) term, now, recent(ly), short(-) term, temporary/ temporarily, thus far, to date

c) modality/ probability/uncertainty

Apparent, appear, can, could, estimate, expect; if, imply, indicate, indication, likelihood, likely, may, might, perhaps, possibility, possible, possibly, probable, probably, seem, suggest, tend to, unlikely, would

d) conjuncts

Albeit, although, but, contrary to, despite, even so, even though, however, in addition, in / by contrast, in spite of, moreover, nevertheless, notwithstanding, on the one hand, on the other hand, still, though, unlike, thus, while, yet.

e) logic / justification

Accordingly, actually, after all, as a result (of), as I said, as… mentioned, (as) you/we know, available (data, information, indicators, instruments, tools), confirm, (as a) consequence; consequently, consistent with, data, evidence, expected to, for example, given, hence, in any case, indeed, in fact, in light of, in this view, in view of, no only, of course, (from a …) perspective, prove, show, therefore.

f) value and truth judgments / intensifiers

Assume, believe, clear(ly) confident, critical(ly), essential(ly), exceptional(ly) extraordinary, extremely, in MY/our view, importantly, most (+ adjective / adverb), much (+ comparative), no doubt, ,notably, noticeable, noticeably, not surprising (ly), particularly, significant(ly), unexpected(ly), unprecedented, very (+adjective/ adverb)