



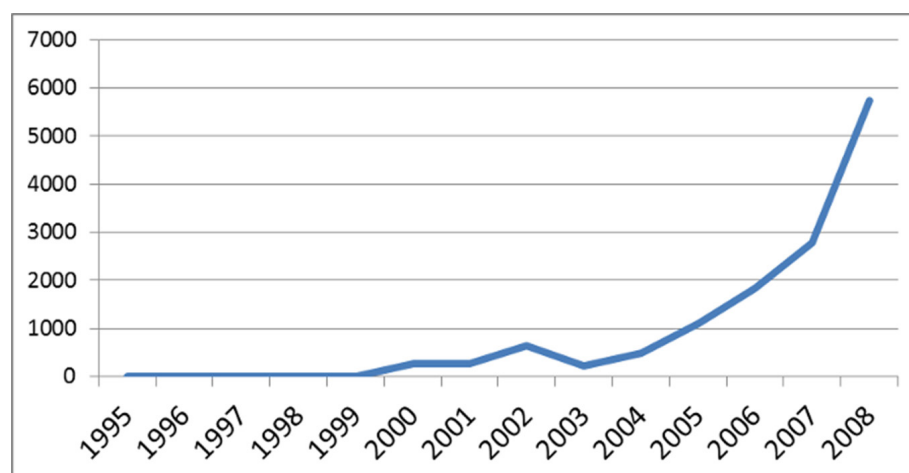
The nature and effectiveness of central-bank communication

Stephen Hansen, Michael McMahon

In addition to setting interest rates, central banks also communicate with the public about economic conditions and future actions. While it has been established that communication can drive expectations, less is known about how it does so. This column attempts to shed light on this question. Applying novel measures to the content of Federal Reserve statements, it shows that forward guidance is a more important driver of market variables than disclosure of information about economic conditions.

Over the past two decades, central bank communication has become an increasingly important policy instrument. Figure 1 plots the use of the phrase “central bank communication” in English books over the recent past. Usage rapidly expands after essentially no coverage before 2000. One illustrative example is the recent decision of the US Federal Reserve’s Federal Open Market Committee (FOMC) to raise policy rates by 25 basis points on 16 December 2015. While markets widely anticipated this decision, there was a great deal of speculation beforehand about the statement the Federal Reserve would release with its decision that would outline its views on economic conditions and forward guidance on future policy decisions.

Figure 1. Frequency of phrase “central bank communication” in Google Books corpus over time



Note: y-axis scale is *10e-10 percentage points.

Source: Google Ngram Viewer.

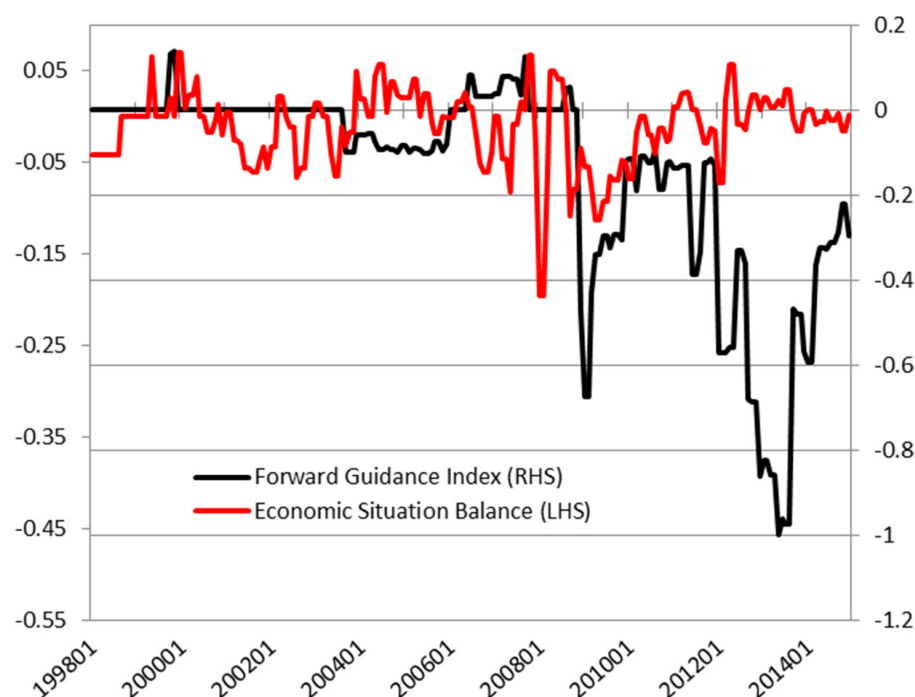
The importance of communication to monetary policy has risen alongside a recognition that controlling market expectations is as important – if not more so – than setting the actual overnight policy rate. Communication is one of the main channels through which central bankers can affect market beliefs about its future actions. Evidence of this comes from the event-study analysis of Gürkaynak *et al.* (2005), who show that on Fed decision days the statement moves markets beyond the effect of the change in contemporary policy rate. More generally,

For the next step, we identify which paragraphs are predominantly about economic conditions and then, within these paragraphs, count the number of ‘expansionary’ words – such as “increasing”, “accelerating”, etc. – and subtract the number of ‘contractionary’ words such as “weak”, “slow”, etc. (The specific lists are taken from Apel and Blix Grimaldi 2012). This allows us to construct an index for each meeting’s statement of how positive the Fed is about economic conditions.

To measure forward guidance, we manually identify relevant paragraphs.¹ We take a broader conception of forward guidance than some of the recent literature. We consider paragraphs to contain forward guidance if they reflect conditional statements about the extent of monetary support going forward, if they contain the date-based guidance of the FOMC in recent years, or if the FOMC statement is clear about the balance of risks as seen by the FOMC. To form our measure of a particular meeting’s forward guidance, we multiply the share of a statement’s total words made up of paragraphs about forward guidance and multiply it by the overall direction of the guidance (an increase in future rates = 1; a neutral stance = 0; and a decrease in future rates = -1). To arrive at the final index, we rescale this measure by the number of words in the forward guidance paragraphs that reflect uncertainty (the specific list is taken from Loughran and McDonald 2011) – the more ‘uncertain’ words the paragraphs contain, the lower the index. The idea is that more precise forward guidance should be more informative than ambiguous statements.

Figure 3 plots the time series of both our economic conditions and forward guidance indices. The former roughly tracks the business cycle (though it is noisy), while the latter grows in prominence over time, in particular in the recent period in which the Fed engaged in unconventional monetary policy.

Figure 3. Indices of Fed communication about economic conditions and forward guidance



Effects of public communication

Our ultimate question of interest is which dimension of monetary policy communication —economic conditions or forward guidance— is more important for explaining the market responses to Fed statements. We also need to control for the policy rate decision that accompanies Fed statements. For this, we use the shadow rates constructed in Wu and Xia (2014) that correct for the fact that the main policy rate of the Fed reached its effective lower bound in the wake of the financial crisis of 2008-2009.

To study the impact of multi-dimensional monetary policy (communication in addition to the monetary stance), we employ a factor-augmented vector autoregression (FAVAR) statistical model. This allows us to model interdependencies among all variables while capturing the effects of the macroeconomy using factors from a large array of macroeconomic time-series data.

We first study the reaction of financial asset prices to monetary policy. In terms of bonds, we find that the short end of the yield curve reacts very little to communication, but is fairly sensitive to the policy rate. But as one goes out further in the yield curve, forward guidance plays an increasingly important role in explaining variation in bond prices. On the other hand, communication about economic conditions explains very little of the observed bond price movements in our data at all time-horizons. The overall pattern is similar for equity prices – forward guidance explains three to four times as much movement in market indices as economic conditions communication.

We also study the relationship between monetary policy and the real economy. Here again, we find an important role for forward guidance relative to economic conditions. In fact, forward guidance explains as much variation in short-term unemployment rates as the monetary stance itself. Again though, there is little role for economic conditions in explaining movement in unemployment, prices, and other measures of economic activity.

Overall, then, the message of our work is that markets appear to put much more weight on what central banks say about their future policy decisions than what they say about economic conditions. This is consistent with a view in which market participants and the Fed have a similar understanding of the state of the economy at any given point in time, but substantial uncertainty exists regarding the future behaviour of the central bank. In this environment, communication shapes expectations through providing markets with additional information on how the central bank will behave in the future.

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Footnotes

1 For larger sets of documents, one can apply classification algorithms to automate labeling.

About CAGE

Established in January 2010, CAGE is a research centre in the Department of Economics at the University of Warwick. Funded by the Economic and Social Research Council (ESRC), CAGE is carrying out a five year programme of innovative research.

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