FOMC Forecasts as a Focal Point for Private Expectations

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Abstract
We explore empirically the theoretical prediction that public information acts as a focal point in the context of the US monetary policy. We assess whether the publication of FOMC inflation forecasts affects the cross-sectional dispersion of private inflation expectations. Our main finding is that publishing FOMC inflation forecasts has a negative effect on the cross-sectional dispersion of private current-year inflation forecasts. This effect is found to be robust to another survey dataset and to various macroeconomic controls. Moreover, the dispersion of private inflation forecasts is not affected by the dispersion of views among FOMC members.

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1. Introduction

Does the publication of FOMC inflation forecasts contribute to the anchoring of private inflation expectations? This paper examines both a theoretical question and a topical issue. Policymakers of the Federal Open Market Committee (FOMC) at the Federal Reserve publish inflation forecasts since 1979 and decided to increase the frequency of releases in 2007Q4 in order to provide "the public with more context for understanding the Committee's monetary policy decisions" (see FOMC, 2007), while Morris and Shin (2002), in a theoretical paper, show that public information is a double-edged instrument which conveys information on the underlying fundamentals but also acts as a focal point for beliefs. This paper explores empirically the theoretical predictions of Morris and Shin (2002) on the value of public information by establishing the effect of publishing FOMC inflation forecasts. This is important for policymakers because of the role played by inflation expectations in macroeconomic outcomes and because anchoring inflation expectations is a crucial ingredient of monetary policy.

We aim at investigating whether the publication of FOMC inflation forecasts acts as a focal point for private inflation expectations, and so more specifically, negatively affects the cross-sectional dispersion of private inflation forecasts, using two different surveys of professional forecasters[1]: the Survey of Professional Forecasters and Consensus Forecasts. We also test the effects of the dispersion of views among FOMC members, measured by the magnitude of the dispersion across FOMC inflation forecasts and which can be interpreted as the precision of the signal disclosed to the public, on the dispersion of private inflation forecasts. Since the frequency of the FOMC releases has increased recently, we study as well whether estimates of the two preceding effects have evolved with this modification of the FOMC communication policy.

This work is related to two strands of literature on the dispersion of private expectations: the process for disagreement and the determinants of disagreement. On one side, Mankiw and Reis (2002) propose a sticky-information model of private expectations formation which explains why forecasters disagree. An alternative is the noisy information models of Sims (2003) and Mackowiak and Wiederholt (2009) in which rational inattention also generates cross-sectional dispersion of forecasts.[2] On the other side, Mankiw *et al.* (2003) establish some stylized facts about the dispersion of private forecasts extending Cukierman and Wachtel (1979) which show that differences in expectations are driven by the variance of aggregate demand shocks. Swanson (2006) finds that increased transparency of the US Federal Reserve has reduced dispersion across forecasts of US interest rates, while Bauer *et al*. (2006) show that private macroeconomic forecasts have become more synchronized for the same reason. Fujiwara (2005) assesses whether Bank of Japan's economic forecasts affect professional forecasters. Beechey *et al*. (2011) find larger dispersion across long-horizon forecasts of US inflation than of euro area inflation. Cecchetti and Hakkio (2010) together with Capistrán and Ramos-Francia (2010) and Ehrmann et al. (2012) focus on the effects of inflation targeting and enhanced central bank transparency respectively on the dispersion of private inflation forecasts. Maag and Lamla (2012) find that media coverage affects the dispersion of inflation forecasts of households. Dovern *et al*. (2012) assess the macroeconomic determinants of forecasters'

[1] Carroll (2003) shows that professional forecasters pay attention to news and form their forecasts with the last information available to them. He also suggests that professional forecasts spread epidemiologically to other agents.

[2] Coibion and Gorodnichenko (2008) and Andrade and Le Bihan (2010) provide tests to distinguish empirically both classes of model. Lanne *et al.* (2009) find that the cross-sectional distribution of inflation expectations is consistent with a simple sticky information model, while Pfajfar and Santoro (2010) explain the heterogeneity in private forecasts by three expectations formation processes: a static or highly autoregressive process, a nearly rational process and forecasts formed with adaptive learning and sticky information. Among other sources of forecasters' disagreement, Branch (2004, 2007) propose a model in which private agents select between different costly forecasting models, and Lahiri and Sheng (2008) put forward forecasters' initial beliefs, their associated weights, and the interpretation of public information. Capistran and Timmermann (2009) stress the importance of asymmetries in the forecasters' loss function, while Patton and Timmermann (2010) also focus on prior beliefs and private individual signals.

disagreement as well as the effect of central bank independence. To our knowledge, analysis of the effects of the publication of central bank forecasts – here FOMC inflation forecasts – and their dispersion on the cross-sectional dispersion of private forecasts is so far unexplored.

Our findings suggest that FOMC inflation forecasts play a role in reducing the dispersion of private inflation expectations and document the coordinating effect of Morris and Shin (2002) in the case of the publication of FOMC inflation forecasts. The reduction of the cross-sectional dispersion of private current-year inflation forecasts when FOMC inflation forecasts become public information suggests that FOMC inflation forecasts act as a focal point. This effect is found to be robust to a different data set and to various macroeconomic controls that the existing literature has found to be the main determinants of forecasters' disagreement. Evidence on the effect of the increased frequency of FOMC publication is however inconclusive, possibly because of the extreme volatility of the most recent period. Moreover, the cross-sectional dispersion of private inflation forecasts, for current and next year horizons, is not affected by the dispersion of forecasts among FOMC members.

These results could be of interest for policymakers as they put forward that the publication of FOMC inflation forecasts can significantly contribute to the anchoring of private inflation expectations and that policymakers can document their disagreement concerning the future state of the economy without worrying to disrupt the anchoring of private inflation expectations.

The rest of the paper is organized as follows. Section 2 outlines the theoretical framework and hypotheses. Section 3 describes the data. Section 4 reports the methodology and the results, and Section 5 concludes.

2. Theoretical Framework

This section describes the Keynes' "beauty contest" model of Morris and Shin (2002) to motivate the empirical analysis. The model is a principal-agent game in which the central bank discloses some public information that private agents combine with their private information about the underlying fundamentals of the economy to take decisions. In this setup, with imperfect information and strategic complementarities, public information takes on a dual role: it conveys information of the central bank on the underlying fundamentals, but it also acts as a focal point for private agents' beliefs who attempt to second-guess the actions of other private agents.

Private agents observe the central bank public information y and their own private public information x_i about the fundamental state of the economy θ, both with noise represented by independent error terms with normal distributions:

$$\begin{aligned} x_i &= \theta + \varepsilon_i \text{ with } \varepsilon_i \sim N(0, \sigma_\varepsilon^2) \\ y &= \theta + \eta \text{ with } \eta \sim N(0, \sigma_\eta^2) \end{aligned} \quad (1)$$

The private signal of one agent is not observable by the others, while the public signal is common knowledge among private agents. Denoting by α the precision of the public information and by β the precision of the private information, we get:

$$\alpha = \frac{1}{\sigma_\eta^2} \text{ and } \beta = \frac{1}{\sigma_\varepsilon^2}$$

In equilibrium (see Morris and Shin, 2002, for details), the optimal action a of the agent i is given by:

$$a_i = \frac{x_i \beta(1-r) + y\alpha}{\alpha + \beta(1-r)} \quad (2)$$

where r is a constant, with $0 < r < 1$, and represents the weight put on each agent's second-guess of the decisions of other private agents in the economy. The higher r, the more the effect of the coordination motive is important for private agents. This variable captures the "beauty contest" part of the private agents' decision process. This implies that the average action of private agents a is:

$$a = \theta \cdot \frac{\beta(1-r)+\alpha}{\alpha+\beta(1-r)} + y \cdot \frac{\alpha}{\alpha+\beta(1-r)} \quad (3)$$

The equation (3) shows that when the public information is very precise, $\alpha \to \infty$, private agents ignore their private information and focus solely on the public information. At the opposite, if the public information is imprecise, $\alpha \to 0$, then it loses its coordination role and is ignored. In general, there is an over-reaction to the public information with regards to its informational content about the fundamental θ. Its relative weight solely based on its precision should be $\alpha / \alpha + \beta$ while its relative weight at the equilibrium is given by $\alpha / \alpha + \beta(1-r)$ which is always higher than the first term and reflects the public signal value in coordinating private agents. They attribute a greater weight to the public information since it incorporates information on higher-order beliefs of other private agents. Applied to FOMC disclosure of information[3], this leads us to formulate the following hypothesis[4]:

> *Hypothesis 1*: the *publication* of FOMC inflation forecasts acts as a focal point for private inflation expectations and therefore affects (and *reduces*) the cross-sectional dispersion of private inflation expectations.

The coordination device of public information depends on the relative weight given to the public signal in equation (3) which is increasing with the precision α of the public signal and with the weight r associated with the coordination motive. Then the higher the precision, the more the public signal acts as a focal point. Taking this relation to the data requires some identifying assumptions: (a) the weight r attributed to the coordination motive is constant over time, and (b) the dispersion of FOMC inflation forecasts is a proxy of (the inverse of) the precision of the public signal disclosed to private agents. Indeed, for a given level of strategic complementarities, imprecise public signals reduce the value of public information as a coordination device and should increase the dispersion of private expectations. This leads us to formulate the second hypothesis we wish to test.

> *Hypothesis 2*: the *dispersion* of FOMC inflation forecasts affects (and *increases*) the cross-sectional dispersion of private inflation expectations.

Cornand and Heinemann (2008) extend the model of Morris and Shin (2002) by complementing the precision of public information with the degree of publicity which is the proportion of agents who receive the public signal. They find that a smaller than full degree of publicity may be optimal if the public information has low precision. Denoting the level of information dissemination P, with $0 < P < 1$, they obtain the following average actions of private agents at the equilibrium:

$$a = \theta \cdot \frac{\beta(1-rP)+\alpha(1-P)}{\alpha+\beta(1-rP)} + y \cdot \frac{\alpha P}{\alpha+\beta(1-rP)} \quad (4)$$

When $P \to 0$ and public information is disclosed to almost nobody, then the coordination content of public information disappears, public information is ignored and do not act as a focal point. Let us reinterpret this model by substituting the degree of publicity by the frequency at which public information is

[3] Demertzis and Viegi (2008) apply the model of Morris and Shin (2002) to the announcement of an inflation target and show that inflation targets may serve as focal points for coordinated private expectations.

[4] While this is an important issue in Morris and Shin (2002), assessing the deviation to fundamentals due to public information and its associated welfare effects is beyond the scope of this paper. We are primarily interested in the effects of publishing FOMC forecasts on the dispersion of private forecasts.

released. In a framework with imperfect information in which private agents are subject to either sticky information (Mankiw and Reis, 2002) or rational inattention (Sims, 2003), increasing the frequency of public information releases should enlarge the proportion of private agents who receive the public signal. This therefore increases the weight put on public information which would again serve as a focal point. Assuming that the precision of public information is independent of the frequency of releases, the following hypothesis is formulated:

> *Hypothesis 3*: the *higher frequency* of publication of FOMC inflation forecasts affects (and *increases*) the negative effect of the publication of FOMC inflation forecasts on the cross-sectional dispersion of private inflation expectations.

This hypothesis relies on the assumption that the precision of public signals are independent of the frequency of releases. Amato et al. (2002) suggest that the mechanism at work could be exactly the opposite: "*Australia moved from a monthly (…) to a quarterly calendar because it was felt that the noise in the monthly statistics was injecting too much volatility into the price signals from financial markets*". Under the exact opposite assumption that more frequent information has a lower precision, the *hypothesis 3* becomes that the higher frequency of publication of FOMC inflation forecast should reduce the coordination feature of FOMC inflation forecasts, i.e. should reduce the negative effect of the publication of FOMC inflation forecasts on the cross-sectional dispersion of private inflation expectations. In order to take this relation to the data, we control for the precision of the public information, the dispersion of FOMC inflation forecasts, when assessing the effect of publishing FOMC inflation forecasts.

3. Data

This section describes all variables used to estimate the effects of the publication of FOMC inflation forecasts on the cross-sectional dispersion of two surveys of private inflation forecasts. Because the FOMC has changed its publication frequency (from biannually to quarterly) in 2007, the analysis is performed on two samples with different frequencies: quarterly before 2007 and monthly after. Data sources are Philadelphia Federal Reserve's and FRED St-Louis' websites, and Consensus Economics. Table 1 summarizes the key descriptive statistics about the following series.

3.1. FOMC

Since 1979, the FOMC has reported forecasts for key macroeconomic variables – inflation, real and nominal GDP growth, and unemployment – twice each year in the Monetary Policy Report to the Congress. Since October 2007, the publication of these FOMC forecasts has become quarterly and its horizon extended by one additional year.

FOMC forecasts were realized each year in early February and early July until 2007Q3, and since then in February, April, July and November. They forecast the fourth-quarter-over-fourth-quarter growth rates and so are fixed-event forecasts. Before 2007, the FOMC published current year forecasts in both February and July, whereas it published next year forecasts only in July until 2004Q3, and then in February and July until 2007Q3. Because the frequency of publication of next year forecasts changed and so that there is only one point per year during most of the sample, we focus exclusively on the publication of current year forecasts in the pre-2007 sample. Our first variable of interest capturing the publication of FOMC forecasts is therefore a quarterly dummy taking the value 1 in quarters (Q1 and Q3) when the FOMC publishes forecasts, and 0 when not. On the post-2007 sample, the dummy becomes monthly and equals 1 the exact four months when the FOMC releases its quarterly current and next year forecasts.

These forecasts are published as two ranges encompassing each individual FOMC member's forecasts: the "full range" includes the highest and the lowest forecasts while the "central tendency" removes the three

highest and three lowest forecasts. Our second set of variables of interest capturing the dispersion of views among FOMC members is the distance between the highest and lowest bounds of the two ranges, the full range and the central tendency. Because the dispersion between FOMC members' views reduces each year meetings after meetings when more information is made available, we correct for the seasonality of the mechanical decreasing dispersion of these fixed-event forecasts.

Since the pre-2007 dataset has a quarterly frequency, we interpolate the FOMC dispersion variables from biannual frequency to quarterly by filling gaps (Q2 and Q4) with the last observation known (Q1 and Q3). This assumption does not distort the information structure as it corresponds to a situation where private agents simply use the last value disclosed and known to them. However, this assumption introduces a bias against the FOMC dispersion variables which remain constant until next FOMC publication whatever the macroeconomic or policy developments. We use the same constant extrapolation technique for the post-2007 sample, except that in January and February of each year the extrapolation of the past November FOMC dispersion for current year forecasts has no meaning for the following year and we replace it by the past November FOMC dispersion for next year forecasts.

Finally, the variables forecasted have changed over time. Different measures of inflation have been used by FOMC policymakers: the FOMC inflation forecast is for the implicit GNP price deflator until the end of July 1988, the CPI between February 1989 and July 1999, the chain-type price index for personal consumption expenditures (PCE) between February 2000 and February 2004, and the core PCE since then.

3.2. Cross-sectional dispersion of private forecasts

We use two different datasets with different features to measure the cross-sectional dispersion of private forecasts: the Survey of Professional Forecasts (SPF) which is collected quarterly and Consensus Forecasts (CF) which has a monthly frequency. Among others differences, the dispersion is measured with the interquantile range in the SPF and with standard deviation in the CF, and SPF forecasts are fixed-horizon forecasts whereas CF forecasts are fixed-event forecasts.

SPF forecasts of CPI[5] are annualized quarter-over-quarter growth rates. Responses of professional forecasters are due around the third week of the middle month of each quarter, so in the second half of February, May, August, and November. Private forecasters therefore tend to form their forecasts after those of the FOMC have been published. However, the timing difference is small in Q1 while quite large in Q3. The cross-sectional dispersion measure is the interquantile range which is the 75th percentile minus the 25th percentile of individual forecasts. One advantage of this measure[6] is to be independent of outliers compared to the standard deviation. While FOMC forecasts are fixed-event current year forecasts, SPF forecasts are fixed-horizon[7] forecasts for current to next four quarters. For each four quarter of a given year, current quarter forecasts are always in the current year and four-quarter-ahead forecasts are always in the next year, so we associate the dispersion of these two forecasts to current and next year. Because SPF forecasts are collected quarterly, we use them only on the pre-2007 sample.

CF forecasts are published monthly as annual average CPI growth rates for current and next year. They have also been used in related studies by Dovern *et al*. (2012) and Ehrmann *et al.* (2012). They are fixed-event forecasts and we adjust for the decreasing forecasting horizon by correcting this monthly seasonality. The cross-sectional dispersion is measured by the standard deviation of individual forecasts.

[5] For comparison purposes with CF, we focus on the CPI measure of inflation. Moreover, CPI is the inflation measure which has been the longest forecasted by the FOMC and which is the most central measure of inflation.
[6] It has to be acknowledged that cross-sectional dispersion is not a good proxy for inflation uncertainty. D'Amico and Orphanides (2008) show that dispersion across forecasters in the Survey of Professional Forecasters is not necessarily equivalent to the inflation uncertainty expressed by forecasters in the form of probabilistic responses. We nevertheless focus here on the determinants of cross-sectional dispersion rather than uncertainty.
[7] We therefore do not need to correct for a potential decreasing dispersion due to decreasing horizon.

Responses of individual participants are due between the 10th and 15th of each month. This dataset ranges between October 1989 and June 2012.

To match FOMC timing and frequency on the pre-2007 sample, we take care of using CF forecasts of February and July for Q1 and Q3 to ensure that private forecasters form their forecasts after FOMC disclosed its own forecasts, while we use April and October for Q2 and Q4. These quarterly CF forecasts are thus those of the first month of each quarter except for February. On the post-2007 monthly sample, we assign FOMC publication dummy and FOMC dispersion to the month when private forecasters are able to use this information for the first time after its publication. For instance, in 2007Q4, FOMC forecasts were released on November 20th. Private forecasters could therefore include this information only their December CF forecasts.

3.3. Macroeconomic controls

Along with the cross-sectional dispersion of private forecasts as the dependant variable and FOMC publication dummy or FOMC forecast dispersion as our main independent variables of interest, we use the effective Federal Funds rate (FRED series ID: FEDFUNDS), the year-over-year growth rate of the West Texas Intermediate spot oil price (OILPRICE), the conditional volatility of inflation (measured as the year-over-year CPI for all Urban Consumers (CPIAUCSL). Following Capistran and Timmermann (2009) and Ehrmann *et al.* (2012), we estimate a GARCH(1,1) model, with 2 lags to remove serial correlation, to obtain estimates of the conditional volatility of inflation. This control variable is important for at least two reasons. First, higher inflation volatility makes it more difficult to forecast which might intensify the cross-sectional dispersion of private forecasters. Second, the pre-2007 sample coincides with the strong disinflation of early eighties and then the Great Moderation associated with low volatility of macroeconomic variables, while the post-2007 sample coincides with the recent financial crisis and the Great Recession during which uncertainty exploded. In order to compare the determinants of cross-sectional dispersion in the two samples, it is necessary to control for the effect of the conditional volatility of inflation. We therefore expect that the conditional volatility has a positive effect on the cross-sectional dispersion. Since the Fed rate should normally be associated with a higher inflation rate and following the result of Mankiw *et al.* (2003) that disagreement about inflation increases with its level, we expect the Fed rate to have a positive effect on the cross-sectional dispersion. Including this variable also enables to control for FOMC information which would be reflected in the Fed rate and should be disentangled from FOMC forecasts. Finally, we expect changes in oil price to have a positive impact on the cross-sectional dispersion of private forecasts since large variations in oil prices, related to oil shocks, might introduce increased uncertainty.

4. Do FOMC Forecasts affect the Dispersion of Private Expectations?

We investigate the effects of FOMC inflation forecasts on the cross-sectional dispersion of private inflation forecasts using simple regression analysis. More precisely, we test the following first two hypotheses on both the pre-2007 and the post-2007 samples, and then compare estimates in both samples to shed light on the third hypothesis:

Hypothesis 1: the *publication* of FOMC inflation forecasts affects (and *reduces*) the cross-sectional dispersion of private inflation expectations.

Hypothesis 2: the *dispersion* of FOMC inflation forecasts affects (and *increases*) the cross-sectional dispersion of private inflation expectations.

Hypothesis 3: the *higher frequency* of publication of FOMC inflation forecasts affects (and *increases*) the negative effect of the publication of FOMC inflation forecasts on the cross-sectional dispersion of private inflation expectations.

4.1. Empirical model

Following Mankiw *et al.* (2003), Capistran and Ramos-Francia (2010), Dovern *et al.* (2012) and Ehrmann *et al.* (2012), we use simple regression analysis[8] in which our dependent variable is the cross-sectional dispersion of private inflation forecasts. While Mankiw *et al.* (2003) focus solely on the effect of macroeconomic variables, the latter three papers rely in addition on dummies to identify respectively inflation targeting, central bank independance and central bank transparency. In line with this literature, we include a dummy for the publication of FOMC inflation forecasts and a continuous variable for the dispersion of FOMC inflation forecasts as independent variables beyond macroeconomic controls. Our benchmark equation is therefore:

$$SPF_t^h = \alpha + \beta_1 \cdot Publi\_FOMC_t + \beta_2 \cdot FOMC_t^{h,r} + \beta_3 \cdot SPF_{t-1}^h + \beta_4 \cdot X_t + \varepsilon_t \quad (5)$$

where h denotes the forecasting horizon, t current quarter or $t4$ four-quarter-ahead in the case of SPF forecasts, *Publi_FOMC* is the dummy taking the value 1 when the FOMC publishes its inflation forecasts, *FOMC* is the dispersion of FOMC forecasts: the distance between the lowest and highest forecasts (the horizon h being either current year *cy* or next year *ny*) of the two ranges published by the FOMC and differentiated by the subscript r which could be either the full range *fr* or the central tendency *ct*. The vector X_t comprises the macroeconomic controls. This empirical model can be thought as representing the cross-sectional dispersion of private inflation forecasts as an AR(1), an autoregressive process of order 1, complemented by FOMC variables, the conditional volatility of inflation, changes in oil prices and the Fed rate. Only Ehrmann *et al.* (2012) estimate the same type of empirical model and this is equivalent to evaluate the effect of FOMC variables and controls beyond the information contained the lagged cross-sectional dispersion of private inflation forecasts. This model is estimated by ordinary least-squares (OLS), with Huber-White robust standard errors due to potential heteroscedasticity. One may argue that when the variance of ε_t is assumed to be fixed, estimates of the β parameters would be biased if the variance of residuals has evolved across time.

4.2. Estimates

The determinants of the cross-sectional dispersion of private inflation forecasts are analyzed in table 2. Column 1 reports that the cross-sectional dispersion of SPF forecasts for the current-year decreases by 0.26 percentage point when the FOMC publishes its inflation forecasts. The past cross-sectional dispersion and the conditional volatility of inflation increase as expected the cross-sectional dispersion of SPF forecasts. These findings are in line with Dovern *et al.* (2012) and Ehrmann *et al.* (2012). Columns 2 and 3 display that the cross-sectional dispersion of private forecasts is not affected by the dispersion of inflation forecasts among FOMC members. Columns 4 and 5 test both hypotheses together and confirm the previous outcomes.

Columns 6 to 10 investigate how the cross-sectional dispersion of SPF next-year forecasts is affected by FOMC variables and the macroeconomic controls. Neither the publication of FOMC inflation forecasts nor their dispersion affects our dependent variable. The Fed rate, as for it, has a positive effect on the cross-sectional dispersion of private forecasts. Our interpretation is that the central bank interest rate may signal policymakers' will to counter inflationary pressures and therefore coincides with higher uncertainty about expected future inflation.

It is particularly interesting to compare the effects of FOMC inflation current-year forecasts and the Fed rate over the two different horizons: current-year and next-year private forecasts. Indeed, the interest rate instrument gives the central bank some control over the forecasted variable after a certain period of time.

[8] We have checked that our two variables of interest are not subjected to endogeneity and we do not need to use instrumental variables analysis. Test statistics are available upon request to the author.

As the rationale of this study is to assess the publication and communication effects of FOMC forecasts, the control issue is circumvented when the horizon of forecasts is shorter than the transmission lags of monetary policy because policymakers have no effective control on variables forecasted. It appears that the effects of FOMC inflation forecasts on the dispersion of private ones are different from the effect of interest rate changes on the dispersion of private forecasts on both the horizons and the sign of the effect.

Table 3 analyzes drivers of the cross-sectional dispersion of CF forecasts. This estimation also serves as robustness test in many dimensions: CF forecasts have a different frequency, are fixed-event forecasts as FOMC ones, and the dispersion is measured by the standard deviation. Moreover, because Consensus Economics only started to gather CF forecasts in October 1989, the estimation is performed on a more stable and smaller pre-2007 sample, after the disinflation of the eighties has been realized. Columns 1 and 2 confirm that the publication of FOMC inflation forecasts reduces the cross-sectional dispersion of private current-year forecasts. The standard deviation of the dispersion measure of CF forecasts (0.06) being approximately 10 times smaller than the one of the dispersion measure of SPF forecasts (0.5 on the same sample period), the size of both effects of FOMC inflation forecasts is quantitatively similar. Again, the publication of FOMC inflation forecasts has no effect on the cross-sectional dispersion of private next-year forecasts. The dispersion of FOMC inflation forecasts has also no effect on the dispersion at both horizons. Last, the Fed rate has a positive effect on the dispersion of current-year forecasts. This could be once again interpreted as the Fed rate signals higher uncertainty about expected future inflation.

We control for the effect of some additional variables in table 4. We include separately and together the NBER recession dummy, a news variable, the level of CPI, and the square change in the Fed interest rate. Indeed, Bloom *et al.* (2012) find that uncertainty, based on measures of firm and industry dispersion and forecasters' disagreement, increases during recessions. This is confirmed by Dovern *et al.* (2012) which show that the cross-sectional dispersion of private forecasts rises during recessions. To control for this effect, we add the NBER recession dummy to the equation. We also add a variable comprising the set of macroeconomic news released between *t* and *t-1*. Based on the news and announcement literature (see Andersen *et al.* 2003), we construct the news variable by deducting the forecast of a given variable (inflation) in *t-1* from the actual realized value of this given variable in *t*. Private forecasters update their information set with new macroeconomic data, possibly at different frequencies, and adjust their forecasts. This may affect the cross-sectional dispersion of their forecasts. Gürkaynak *et al.* (2005, 2010) show that, in response to macroeconomic news shocks, long-term interest rates and inflation expectations are better anchored in inflation-targeting countries, in which central banks' strategy relies heavily on communication and on the publication of Inflation Reports or macroeconomic forecasts. We also include the level of CPI since Mankiw et al. (2003), D'Amico and Orphanides (2008) and Dovern *et al.* (2012) report that the cross-sectional dispersion of inflation forecasts increases with the level of inflation. Finally, Dovern *et al.* (2012) show that the square change in the policy interest rate, considered as a proxy for the variation and uncertainty about monetary policy has a positive effect on forecasters' disagreement about inflation. The negative effect of the publication of FOMC inflation forecasts on the cross-sectional dispersion of private current year forecasts is confirmed with all additional variables, as well as the absence of an effect of the dispersion of FOMC inflation forecasts.

It has to be acknowledged that the dummy variable identifying the publication of FOMC inflation forecasts might well capture omitted variables occurring each year in Q1 and Q3 and which also affect the dispersion of private inflation expectations. We attempt to control for this potential bias by generating a variable which is the interaction of the dummy for FOMC publication and of FOMC inflation forecasts published, and by replacing the FOMC dummy by this new variable in the equation estimated. The standard approach in the literature is to consider the midpoint of the central tendency as the figure for the level of the FOMC forecast (Romer and Romer, 2008). We generate a second control variable which is the dummy for FOMC publication times the full range dispersion of FOMC inflation forecasts. Both variables in table 5 provide evidence that the publication of FOMC inflation forecasts has a negative effect on the cross-sectional dispersion of private inflation current-year forecasts and no effect on next-year forecasts.

Finally, table 6 investigates whether this could be the change in the dispersion of FOMC inflation forecasts that affects the cross-sectional dispersion of private forecasters and whether this change in the dispersion of FOMC inflation forecasts modify the impact of the publication of FOMC inflation forecasts on our dependent variable. It appears that the publication of FOMC inflation forecasts still has a negative effect on the dispersion of current year forecasts. The change in the full range dispersion of FOMC forecasts has a positive effect, but is not confirmed by the change in the central tendency dispersion of FOMC forecasts, so the value of this specific result seems limited.

These outcomes all suggest that the publication of FOMC inflation forecasts acts as a coordination device for private inflation current-year forecasts and therefore reduces their cross-sectional dispersion. In the meantime, the cross-sectional dispersion of private forecasts does not react to the dispersion of views among FOMC members: the detrimental effect of a low precision of the public signal on coordination does not seem at work. It has to acknowledge that we can not test empirically the effect of the distance of the public information to the true fundamentals of the economy, the other component of the precision of the public signal; however, this result shows that disagreement between FOMC members does not contribute to disrupt the anchoring of private inflation expectations.

4.3. Post-2007

Since 2007Q4, the FOMC started to publish its forecasts more frequently and for one additional year. According to the minutes from the Oct. 31 Federal Reserve meeting (FOMC, 2007), "the release of more frequent forecasts was seen as providing the public with more context for understanding the Committee's monetary policy decisions". This subsection assesses whether more frequent public information is beneficial or detrimental to coordination and so to the cross-sectional dispersion of private inflation expectations. Two competing hypotheses conflict: more frequent public information may reinforce the value of public information as a focal point for higher-order beliefs while more frequent public information may be associated with a lower precision of this public information and reduce the value of public information as a focal point. Because these two hypotheses might be at work in the same time, we keep controlling for the precision of the public signal by including the dispersion of FOMC inflation forecasts in the estimated equation.

Table 7 investigates the effect of FOMC inflation forecasts on the cross-sectional dispersion of CF inflation forecasts on a monthly sample from 2007m10 to 2012m06. Compared to the pre-2007 sample, we are now able to estimate the effects of both current and next year FOMC inflation forecasts. Neither the publication of FOMC inflation forecasts nor the dispersion of FOMC inflation forecasts has an effect on the dispersion of private forecasts. Neither separately, nor together[9]. One might suppose that the disappearance of the negative effect of the publication of FOMC inflation forecasts on the cross-sectional dispersion of private forecasts is due to the relationship according to which more frequent information is correlated to a lower precision of information. However, the fact that the dispersion of FOMC inflation forecasts is quantitatively similar over the pre- and post-2007 samples, and the outcome that this dispersion of views among FOMC members still does not impact the cross-sectional dispersion of private forecasts challenge this view. At least, it is possible to conclude that the more frequent publication of FOMC inflation forecasts does not enhance the dispersion of private forecasts.

One would have therefore expected that the more frequent release of FOMC inflation forecasts increases the coordination device and the negative effect on the cross-sectional dispersion of private inflation forecasts. The reason for the disappearance of this negative effect is thus a puzzle. Some speculative explanation might be that the post-2007 sample is too small and encompasses an extremely volatile period including the Great Recession. Over the same period of time before and after 2007Q4, the mean (standard

[9] The same robustness tests than for the pre-2007 sample are presented in the Appendix. They confirm that the effect of the publication of FOMC forecasts on the dispersion of private forecasts has vanished in the post-2007 sample.

deviation) of the dispersion of CF inflation forecasts for current-year has risen from 0.31 (0.05) to 0.47 (0.10). In the absence of a counterfactual of what would have been the effect of the more frequent publication of FOMC inflation forecasts in a sample of lower volatility, equivalent in size to the pre-2007 sample, it is difficult to conclude on the hypothesis that more frequent publication of FOMC inflation forecasts has nullified the coordinating effect of the publication of FOMC inflation forecasts. Further insights about the coordinating effect of FOMC publications will be available once more data points are collected.

5. Conclusion

Our findings document the coordinating effect of the publication of FOMC inflation forecasts on private expectations. The reduction of the cross-sectional dispersion of private inflation current-year forecasts when FOMC inflation forecasts become public information suggests that FOMC inflation forecasts act as a focal point. This effect is found to be robust to a different data set and to various macroeconomic controls that the existing literature has found to be the main determinants of forecasters' disagreement. Evidence on the effect of the increased frequency of FOMC publication is however inconclusive, possibly because of the extreme volatility of the most recent period. Moreover, the cross-sectional dispersion of private inflation forecasts, for both horizons, is not affected by the dispersion of views among FOMC members which can be interpreted as the precision of the public signal disclosed to private agents. This paper suggests that the publication of FOMC inflation forecasts can significantly contribute to the anchoring of private inflation expectations and that policymakers can document their disagreement concerning the future state of the economy without worrying to disrupt the anchoring of private inflation expectations.

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Table 1: Introductory Desriptive Statistics

Pre-2007Q3

SPF data - 104 observations

	SPF_t	*SPF_t4*	*Publi_FOMC*	*FOMC_fr_cy*	*FOMC_ct_cy*
SPF_t	1				
SPF_t4	0.36	1			
Publi_FOMC	-0.18	-0.01	1		
FOMC_fr_cy	0.20	0.52	-0.01	1	
FOMC_ct_cy	0.43	0.59	-0.01	0.54	1

CF data - starting in 1989Q4 - 72 observations

	CF_cy	*CF_ny*	*Publi_FOMC*	*FOMC_fr_cy*	*FOMC_ct_cy*
CF_cy	1				
CF_ny	0.39	1			
Publi_FOMC	-0.17	0.05	1		
FOMC_fr_cy	0.23	0.22	-0.04	1	
FOMC_ct_cy	0.35	0.33	-0.02	0.34	1

	Obs	**Mean**	**Std. Dev.**	**Min**	**Max**
SPF_t	104	0.96	0.60	0.25	3.55
SPF_t4	104	0.81	0.34	0.3	2.3
Publi_FOMC	104	0.50	0.50	0	1
FOMC_fr_cy	104	1.13	0.47	0.25	2
FOMC_ct_cy	104	0.45	0.26	0	1.54
CF_cy	72	0.31	0.06	0.21	0.54
CF_ny	72	0.45	0.08	0.32	0.68
Fed rate	104	5.81	2.87	1	14.51
Cond_Volatility	104	0.32	0.21	0.09	1.05
Oil price	104	5.82	28.73	-50.13	120.79

Post-2007Q3

	CF_cy	*CF_ny*	*Publi_FOMC*	*FOMC_fr_cy*	*FOMC_ct_cy*	*FOMC_fr_ny*	*FOMC_ct_ny*
CF_cy	1						
CF_ny	0.50	1					
Publi_FOMC	0.05	0.02	1				
FOMC_fr_cy	-0.06	0.20	-0.11	1			
FOMC_ct_cy	-0.04	0.24	-0.22	0.65	1		
FOMC_fr_ny	-0.14	0.09	-0.02	0.83	0.46	1	
FOMC_ct_ny	-0.08	0.13	0.05	0.65	0.55	0.66	1

	Obs	**Mean**	**Std. Dev.**	**Min**	**Max**
CF_cy	57	0.47	0.10	0.33	0.92
CF_ny	57	0.65	0.13	0.43	1.10
Publi_FOMC	57	0.33	0.48	0	1
FOMC_fr_cy	57	0.90	0.25	0.3	1.34
FOMC_ct_cy	57	0.43	0.12	0.2	0.72
FOMC_fr_ny	57	1.08	0.51	0.28	1.90
FOMC_ct_ny	57	0.54	0.18	0.2	0.95
Fed rate	57	0.75	1.24	0.07	4.76
Cond_Volatility	57	0.30	0.27	0.03	1.39
Oil price	57	18.07	44.24	-58.93	98.47

SPF_t, SPF_t4, CF_cy and *CF_ny* are the dispersion of private inflation forecasts and refers to the interquantile range for SPF forecasts and to the standard deviation for CF forecasts. *FOMC* is the distance between the upper and lower bounds of either the full range or the central tendency.

Table 2: Effect of FOMC Inflation Forecasts on SPF Inflation Forecasts Dispersion

Dependent variable: Interquantile range of SPF forecasts of CPI											
	SPF_t						*SPF_t4*				
	Hyp. 1	**Hypothesis 2**		**All**			**Hyp. 1**	**Hypothesis 2**		**All**	
	[1]	[2]	[3]	[4]	[5]		[6]	[7]	[8]	[9]	[10]
Publi_FOMC	-0.258**			-0.257**	-0.245**	*Publi_FOMC*	-0.009			-0.008	-0.008
	[0.10]			[0.10]	[0.10]		[0.04]			[0.04]	[0.04]
FOMC_fr_cy		0.065		0.06		*FOMC_fr_cy*		0.09		0.09	
		[0.15]		[0.14]				[0.06]		[0.07]	
FOMC_ct_cy			0.66		0.621	*FOMC_ct_cy*			0.061		0.059
			[0.42]		[0.41]				[0.13]		[0.13]
Fed rate	0.007	0.001	-0.014	0.002	-0.012	*Fed rate*	0.045***	0.040***	0.044***	0.040***	0.043***
	[0.02]	[0.02]	[0.02]	[0.02]	[0.02]		[0.01]	[0.01]	[0.01]	[0.01]	[0.01]
L.SPF_t	0.208**	0.15	0.143	0.209**	0.200**	*L.SPF_t4*	0.205**	0.174	0.199*	0.175	0.200*
	[0.10]	[0.10]	[0.09]	[0.10]	[0.09]		[0.10]	[0.11]	[0.11]	[0.11]	[0.11]
Cond_Volatility	0.977***	1.088***	0.792*	0.973***	0.700*	*Cond_Volatility*	0.532***	0.548***	0.507***	0.548***	0.507***
	[0.34]	[0.33]	[0.42]	[0.34]	[0.41]		[0.19]	[0.19]	[0.17]	[0.19]	[0.17]
Oil price	0.001	0.001	0.002	0.001	0.002	*Oil*	-0.001	0.000	0.000	0.000	0.000
	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]		[0.00]	[0.00]	[0.00]	[0.00]	[0.00]
Constant	0.535***	0.387***	0.346***	0.494***	0.449***	*Constant*	0.219***	0.162***	0.208***	0.166**	0.212***
	[0.14]	[0.14]	[0.11]	[0.15]	[0.13]		[0.06]	[0.06]	[0.05]	[0.07]	[0.06]
N	104	104	104	104	104	*N*	104	104	104	104	104
R^2	0.29	0.25	0.28	0.29	0.32	R^2	0.66	0.67	0.66	0.67	0.66

Huber-White robust standard errors in brackets. * p < 0.10, ** p < 0.05, *** p < 0.01. *L* is the lag operator.

Table 3: CF forecasts and Smaller Sample

Dependent variable: Standard Deviation of CF forecasts				
	CF_cy		*CF_ny*	
	[1]	[2]	[3]	[4]
Publi_FOMC	-0.022*	-0.021*	0.01	0.01
	[0.01]	[0.01]	[0.01]	[0.01]
FOMC_fr_cy	0.014		0.016	
	[0.02]		[0.03]	
FOMC_ct_cy		0.065		0.053
		[0.05]		[0.04]
Fed rate	0.007**	0.007**	0.004	0.004
	[0.00]	[0.00]	[0.01]	[0.00]
L.CF_cy	0.082	0.055		
	[0.16]	[0.16]		
L.CF_ny			0.342***	0.326***
			[0.12]	[0.12]
Cond_Volatility	0.201***	0.189***	0.199**	0.192**
	[0.07]	[0.07]	[0.08]	[0.08]
Oil price	0.000	0.000	0.000	0.000
	[0.00]	[0.00]	[0.00]	[0.00]
Constant	0.208***	0.210***	0.212***	0.217***
	[0.05]	[0.05]	[0.05]	[0.05]
N	71	71	71	71
R^2	0.33	0.35	0.40	0.41

Huber-White robust standard errors in brackets.

* p < 0.10, ** p < 0.05, *** p < 0.01. L is the lag operator.

Table 4: Robustness News, NBER, CPI & (Δ Fed rate)²

	Dependent variable: Interquantile range of SPF forecasts																			
	News variable				NBER				CPI				(Δ Fed rate)²				All variables			
	SPF_t		*SPF_t4*		*SPF_t*		*SPF_t4*		*SPF_t*		*SPF_t4*		*SPF_t*		*SPF_t4*		*SPF_t*		*SPF_t4*	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]
Publi_FOMC	-0.251**	-0.239**	-0.013	-0.014	-0.237**	-0.236**	-0.01	-0.012	-0.257**	-0.244**	-0.009	-0.009	-0.251**	-0.244**	-0.009	-0.009	-0.215**	-0.211**	-0.017	-0.018
	[0.11]	[0.11]	[0.04]	[0.04]	[0.11]	[0.10]	[0.04]	[0.04]	[0.10]	[0.10]	[0.04]	[0.04]	[0.10]	[0.10]	[0.04]	[0.04]	[0.10]	[0.10]	[0.04]	[0.04]
FOMC_fr_cy	0.074		0.078		0.119		0.077		0.06		0.087		0.061		0.09		0.134		0.065	
	[0.14]		[0.06]		[0.15]		[0.06]		[0.14]		[0.06]		[0.14]		[0.07]		[0.14]		[0.06]	
FOMC_ct_cy		0.624		0.059		0.524		0.123		0.643		0.081		0.513		0.116		0.544		0.111
		[0.41]		[0.13]		[0.48]		[0.15]		[0.44]		[0.15]		[0.50]		[0.18]		[0.54]		[0.18]
Fed rate	0.003	-0.01	0.040***	0.043***	-0.007	-0.011	0.041***	0.043***	0.002	-0.005	0.046***	0.051***	-0.003	-0.011	0.040***	0.043***	0.035	0.035	0.034***	0.035***
	[0.02]	[0.02]	[0.01]	[0.01]	[0.02]	[0.02]	[0.01]	[0.01]	[0.03]	[0.02]	[0.01]	[0.01]	[0.02]	[0.02]	[0.01]	[0.01]	[0.03]	[0.03]	[0.01]	[0.01]
L.SPF_t	0.209**	0.200**			0.180*	0.184**			0.209**	0.193**			0.217**	0.205**			0.149	0.144		
	[0.10]	[0.09]			[0.09]	[0.09]			[0.10]	[0.09]			[0.10]	[0.09]			[0.10]	[0.09]		
L.SPF_t4			0.158	0.176			0.181	0.199*			0.167	0.187			0.176	0.197*			0.168	0.182
			[0.12]	[0.12]			[0.11]	[0.11]			[0.12]	[0.12]			[0.11]	[0.11]			[0.12]	[0.12]
Cond_Volatility	0.942***	0.672	0.588***	0.555***	0.838**	0.671*	0.583***	0.544***	0.969***	0.767*	0.602**	0.569**	0.804**	0.666	0.568***	0.521***	1.060***	0.944**	0.573**	0.540**
	[0.35]	[0.41]	[0.22]	[0.20]	[0.33]	[0.40]	[0.20]	[0.18]	[0.37]	[0.39]	[0.25]	[0.23]	[0.35]	[0.40]	[0.20]	[0.18]	[0.35]	[0.38]	[0.23]	[0.21]
Oil price	0.000	0.001	0.001	0.000	0.001	0.002	0.000	0.000	0.001	0.002	0.000	0.000	0.001	0.002	0.000	0.000	0.001	0.002	0.000	0.000
	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]
News	0.053	0.047	-0.051	-0.058													0.151	0.172	-0.068	-0.069
	[0.09]	[0.09]	[0.05]	[0.05]													[0.10]	[0.11]	[0.06]	[0.05]
NBER					0.361**	0.202	-0.075	-0.129									0.396***	0.279*	-0.071	-0.112
					[0.14]	[0.18]	[0.07]	[0.10]									[0.14]	[0.16]	[0.08]	[0.09]
CPI									0.002	-0.028	-0.021	-0.028					-0.169*	-0.176*	0.025	0.028
									[0.08]	[0.08]	[0.03]	[0.04]					[0.09]	[0.10]	[0.03]	[0.03]
(Δ Fed rate)²													0.048*	0.023	-0.007	-0.012	0.037*	0.018	-0.001	-0.004
													[0.02]	[0.03]	[0.01]	[0.02]	[0.02]	[0.03]	[0.01]	[0.02]
Constant	0.490***	0.454***	0.173**	0.212***	0.505***	0.491***	0.165**	0.189***	0.492**	0.476***	0.191***	0.240***	0.539***	0.487***	0.159**	0.192**	0.733***	0.725***	0.143*	0.158*
	[0.16]	[0.13]	[0.07]	[0.06]	[0.15]	[0.14]	[0.07]	[0.07]	[0.20]	[0.17]	[0.07]	[0.06]	[0.15]	[0.14]	[0.07]	[0.07]	[0.22]	[0.21]	[0.08]	[0.08]
N	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
R^2	0.29	0.33	0.68	0.67	0.31	0.33	0.67	0.67	0.29	0.33	0.67	0.67	0.31	0.33	0.67	0.66	0.34	0.35	0.68	0.68

Huber-White robust standard errors in brackets. * p < 0.10, ** p < 0.05, *** p < 0.01. *L* is the lag operator.

Table 5: Robustness Interacting FOMC publication Dummy

Dependent variable: Interquantile range of SPF forecasts								
	SPF_t				*SPF_t4*			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
*Publi_FOMC*level*	-0.062*	-0.058*			-0.002	-0.002		
	[0.03]	[0.03]			[0.02]	[0.02]		
*Publi_FOMC*disp*			-0.205**	-0.179**			0.004	0.018
			[0.10]	[0.08]			[0.04]	[0.04]
FOMC_fr_cy	0.066		0.165		0.09		0.088	
	[0.14]		[0.17]		[0.07]		[0.06]	
FOMC_ct_cy		0.632		0.673		0.06		0.06
		[0.42]		[0.42]		[0.13]		[0.13]
Fed rate	0.012	-0.003	0.002	-0.007	0.040***	0.044***	0.040***	0.043***
	[0.02]	[0.02]	[0.02]	[0.02]	[0.01]	[0.01]	[0.01]	[0.01]
L.SPF_t	0.185*	0.176*	0.203**	0.187**				
	[0.10]	[0.09]	[0.10]	[0.08]				
L.SPF_t4					0.176	0.201*	0.174	0.196*
					[0.11]	[0.11]	[0.11]	[0.11]
Cond_Volatility	1.031***	0.751*	0.977***	0.695*	0.548***	0.507***	0.548***	0.510***
	[0.34]	[0.41]	[0.36]	[0.42]	[0.19]	[0.17]	[0.19]	[0.17]
Oil price	0.001	0.002	0.001	0.001	0.000	0.000	0.000	0.000
	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]
Constant	0.401***	0.363***	0.367***	0.387***	0.163**	0.209***	0.162**	0.202***
	[0.14]	[0.12]	[0.13]	[0.12]	[0.06]	[0.06]	[0.06]	[0.06]
N	104	104	104	104	104	104	104	104
R^2	0.28	0.31	0.29	0.32	0.67	0.66	0.67	0.66

Huber-White robust standard errors in brackets. * p < 0.10, ** p < 0.05, *** p < 0.01. L is the lag operator.

Table 6: Robustness Delta FOMC Dispersion

Dependent variable: Interquantile range of SPF forecasts				
	SPF_t		*SPF_t4*	
	[1]	[2]	[3]	[4]
Publi_FOMC	-0.255**	-0.253**	-0.007	-0.012
	[0.10]	[0.10]	[0.04]	[0.04]
Δ FOMC_fr_cy	0.235*		0.089	
	[0.13]		[0.10]	
Δ FOMC_ct_cy		0.314		-0.117
		[0.25]		[0.17]
Fed rate	0.008	0.007	0.045***	0.045***
	[0.02]	[0.02]	[0.01]	[0.01]
L.SPF_t	0.219**	0.220**		
	[0.09]	[0.09]		
L.SPF_t4			0.204*	0.205**
			[0.10]	[0.10]
Cond_Volatility	0.968***	1.000***	0.536***	0.515***
	[0.33]	[0.33]	[0.18]	[0.18]
Oil price	0.001	0.001	-0.001	-0.001
	[0.00]	[0.00]	[0.00]	[0.00]
Constant	0.520***	0.520***	0.215***	0.223***
	[0.14]	[0.14]	[0.06]	[0.05]
N	104	104	104	104
R^2	0.30	0.30	0.67	0.66

Huber-White robust standard errors in brackets.

* p < 0.10, ** p < 0.05, *** p < 0.01. L is the lag operator.

Table 7: Effect of FOMC Inflation Forecasts on CF Inflation Forecasts Dispersion

Dependent variable: Standard Deviation of CF forecasts											
	CF_cy						*CF_ny*				
	Hyp. 1	**Hypothesis 2**		**All**			**Hyp. 1**	**Hypothesis 2**		**All**	
	[1]	[2]	[3]	[4]	[5]		[6]	[7]	[8]	[9]	[10]
Publi_FOMC	0.015			0.014	0.011	*Publi_FOMC*	-0.003			-0.005	-0.002
	[0.02]			[0.02]	[0.02]		[0.02]			[0.02]	[0.02]
FOMC_fr_cy		-0.017		-0.012		*FOMC_fr_ny*		-0.029		-0.03	
		[0.04]		[0.05]				[0.03]		[0.03]	
FOMC_ct_cy			-0.075		-0.064	*FOMC_ct_ny*			-0.075		-0.074
			[0.06]		[0.06]				[0.10]		[0.10]
Fed rate	0.009	0.006	0.005	0.007	0.006	*Fed rate*	-0.004	-0.014	-0.013	-0.014	-0.013
	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]		[0.01]	[0.02]	[0.01]	[0.02]	[0.01]
L.CF_cy	0.453***	0.446***	0.445***	0.454***	0.452***	*L.CF_ny*	0.501**	0.472**	0.496**	0.471**	0.496**
	[0.11]	[0.11]	[0.11]	[0.11]	[0.11]		[0.19]	[0.18]	[0.19]	[0.18]	[0.19]
Cond_Volatility	0.126*	0.129*	0.134*	0.126*	0.131*	*Cond_Volatility*	0.124	0.142	0.131	0.143	0.131
	[0.07]	[0.07]	[0.07]	[0.07]	[0.07]		[0.08]	[0.09]	[0.08]	[0.09]	[0.08]
Oil price	0.000	0.000	0.000	0.000	0.000	*Oil price*	0.000	0.000	0.000	0.000	0.000
	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]		[0.00]	[0.00]	[0.00]	[0.00]	[0.00]
Constant	0.211***	0.235***	0.251***	0.222***	0.240***	*Constant*	0.294***	0.344***	0.339***	0.347***	0.340***
	[0.04]	[0.07]	[0.05]	[0.07]	[0.06]		[0.11]	[0.10]	[0.10]	[0.10]	[0.10]
N	56	56	56	56	56	*N*	56	56	56	56	56
R^2	0.54	0.54	0.55	0.54	0.55	R^2	0.55	0.55	0.55	0.55	0.55

Huber-White robust standard errors in brackets. * p < 0.10, ** p < 0.05, *** p < 0.01. *L* is the lag operator.

APPENDIX

Table A: Robustness Interacting FOMC publication Dummy

Dependent variable: Standard Deviation of CF forecasts				
	CF_cy	*CF_ny*	*CF_cy*	*CF_ny*
	[1]	[2]	[3]	[4]
*Publi_FOMC*level*	0.010		0.014	
	[0.01]		[0.02]	
*Publi_FOMC*disp*		0.001		-0.012
		[0.02]		[0.02]
FOMC_fr_cy	-0.008		-0.016	
	[0.05]		[0.04]	
FOMC_fr_ny		-0.029		-0.027
		[0.03]		[0.03]
Fed rate	0.007	-0.014	0.007	-0.014
	[0.01]	[0.02]	[0.01]	[0.02]
L.CF_cy	0.456***		0.451***	
	[0.11]		[0.11]	
L.CF_ny		0.472**		0.473**
		[0.18]		[0.18]
Cond_Volatility	0.124*	0.142	0.127*	0.143*
	[0.07]	[0.09]	[0.07]	[0.08]
Oil price	0.000	0.000	0.000	0.000
	[0.00]	[0.00]	[0.00]	[0.00]
Constant	0.218***	0.343***	0.228***	0.345***
	[0.08]	[0.10]	[0.07]	[0.10]
N	56	56	56	56
R^2	0.55	0.55	0.54	0.56

Huber-White robust standard errors in brackets.

* p < 0.10, ** p < 0.05, *** p < 0.01. L is the lag operator.

Table B: Robustness Delta FOMC Dispersion

Dependent variable: Standard Deviation of CF forecasts				
	CF_cy		*CF_ny*	
	[1]	[2]	[3]	[4]
Publi_FOMC	0.024	0.022	0.005	-0.005
	[0.02]	[0.02]	[0.02]	[0.02]
Δ FOMC_fr_cy	0.068			
	[0.06]			
Δ FOMC_ct_cy		0.065		
		[0.08]		
Δ FOMC_fr_ny			0.116*	
			[0.06]	
Δ FOMC_ct_ny				0.139
				[0.12]
Fed rate	0.009	0.010	-0.007	-0.003
	[0.01]	[0.01]	[0.01]	[0.01]
L.CF_cy	0.443***	0.446***		
	[0.11]	[0.11]		
L.CF_ny			0.544***	0.511***
			[0.17]	[0.18]
Cond_Volatility	0.127*	0.125*	0.092	0.107
	[0.07]	[0.07]	[0.07]	[0.08]
Oil price	0.000	0.000	0.000	0.000
	[0.00]	[0.00]	[0.00]	[0.00]
Constant	0.213***	0.212***	0.272***	0.293***
	[0.04]	[0.04]	[0.10]	[0.11]
N	56	56	56	56
R^2	0.55	0.55	0.58	0.56

Huber-White robust standard errors in brackets.

* p < 0.10, ** p < 0.05, *** p < 0.01. L is the lag operator.

Table C: Robustness NBER, CPI & (Δ Fed rate)²

Dependent variable: Standard Deviation of CF forecasts																
	NBER				CPI				(Δ Fed rate)²				All variables			
	CF_cy		*CF_ny*		*CF_cy*		*CF_ny*		*CF_cy*		*CF_ny*		*CF_cy*		*CF_ny*	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]
Publi_FOMC	0.015	0.015	-0.004	-0.002	0.016	0.012	-0.005	-0.002	0.012	0.009	-0.003	-0.001	0.009	0.009	-0.003	-0.002
	[0.02]	[0.02]	[0.02]	[0.02]	[0.02]	[0.02]	[0.02]	[0.02]	[0.02]	[0.02]	[0.02]	[0.02]	[0.02]	[0.02]	[0.02]	[0.02]
FOMC_fr_cy	0.037				0.026				-0.018				0.055			
	[0.05]				[0.04]				[0.05]				[0.04]			
FOMC_ct_cy		0.041				-0.027				-0.072				0.063		
		[0.07]				[0.06]				[0.06]				[0.07]		
FOMC_fr_ny			-0.016				-0.022				-0.028				-0.011	
			[0.03]				[0.04]				[0.03]				[0.04]	
FOMC_ct_ny				-0.036				-0.058				-0.065				-0.027
				[0.10]				[0.10]				[0.09]				[0.10]
Fed rate	-0.002	-0.006	-0.021	-0.019	0.005	0.000	-0.014	-0.014	0.009	0.008	-0.016	-0.014	-0.001	-0.006	-0.02	-0.02
	[0.01]	[0.01]	[0.02]	[0.02]	[0.01]	[0.01]	[0.02]	[0.01]	[0.01]	[0.01]	[0.02]	[0.01]	[0.01]	[0.01]	[0.02]	[0.02]
L.CF_cy	0.265**	0.272**			0.383***	0.392***			0.448***	0.445***			0.156	0.164		
	[0.12]	[0.13]			[0.13]	[0.13]			[0.11]	[0.11]			[0.16]	[0.17]		
L.CF_ny			0.430**	0.443**			0.468**	0.480**			0.473**	0.497**			0.431**	0.437**
			[0.18]	[0.19]			[0.18]	[0.19]			[0.18]	[0.19]			[0.18]	[0.19]
Cond_Volatility	0.111	0.108	0.13	0.123	0.187*	0.183*	0.152	0.151	0.127*	0.132*	0.142	0.131	0.168	0.158	0.136	0.136
	[0.07]	[0.07]	[0.09]	[0.08]	[0.10]	[0.10]	[0.09]	[0.09]	[0.07]	[0.07]	[0.09]	[0.08]	[0.10]	[0.10]	[0.10]	[0.10]
Oil price	0.000	0.000	0.000	0.000	-0.001*	-0.001	0.000	0.000	0.000	0.000	0.000	0.000	-0.001	-0.001	0.000	0.000
	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]
NBER	0.086***	0.084***	0.042	0.043									0.096***	0.097***	0.04	0.04
	[0.03]	[0.03]	[0.03]	[0.03]									[0.03]	[0.03]	[0.03]	[0.03]
CPI					0.024*	0.022	0.005	0.008					0.022*	0.02	0.004	0.005
					[0.01]	[0.01]	[0.01]	[0.01]					[0.01]	[0.01]	[0.01]	[0.01]
(Δ Fed rate)²									-0.036	-0.039	0.037	0.034	-0.126**	-0.134**	0.01	0.006
									[0.06]	[0.05]	[0.14]	[0.14]	[0.05]	[0.05]	[0.14]	[0.14]
Constant	0.248***	0.265***	0.351***	0.345***	0.164**	0.204***	0.329***	0.323***	0.233***	0.248***	0.341***	0.332***	0.234***	0.261***	0.336***	0.333***
	[0.07]	[0.05]	[0.10]	[0.11]	[0.06]	[0.05]	[0.11]	[0.11]	[0.08]	[0.06]	[0.10]	[0.10]	[0.07]	[0.05]	[0.11]	[0.10]
N	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56
R^2	0.62	0.61	0.57	0.56	0.59	0.59	0.55	0.55	0.55	0.55	0.55	0.55	0.68	0.67	0.57	0.57

Huber-White robust standard errors in brackets. * p < 0.10, ** p < 0.05, *** p < 0.01. *L* is the lag operator.