

The Fed Speaks, but does the Press Repeat? Investigating the Communication Channel between the Fed and the Written Press.*

Ami Dalloul[†]

August 13, 2024

Abstract

This paper investigates the effectiveness of the media transmission channel of the Federal Reserve (Fed) communication with the general public. Spanning a 20-year period (2003-2023), around 5,400 Fed communication documents and 333,000 articles from *USA Today* are analyzed. A positive and significant relationship between Fed communications and media coverage is found, particularly after the introduction of post-FOMC press conferences. Crisis-related topics strongly resonate with the media, while other topics such as inflation forecasts show varied effectiveness. Changes in the Fed's communication style has been effective for topics like inflation, however the effect is not uniform across all Fed communications topics.

Keywords: monetary policy, central bank communication, topic modelling, media transmission channel.

JEL classification: E52, E58, C55

*Many thanks to Aleksei Chernulich, Lena Dräger, Michael Ehrmann, Olga Goldfayn-Frank, Joe Haubrich, Alistair Macaulay, Christoph Paetz, Dieter Nautz, Giang Nghiem, Ryan Rholes, and participants at the Ifo Dresden Workshop on Macroeconomics and International Finance, at the 28th ICMAIF conference as well as at the 99th WEAI conference for the very helpful comments, questions and discussions. Any errors remain my own.

[†]Leibniz University Hannover. Email: dalloul@gif.uni-hannover.de.

1 Introduction

In recent times, marked by economic fluctuations and heightened inflation concerns, the relevance of central bank communication has come further to the fore. The objectives of central banking communication have evolved with the broadening of their target audience— transcending professionals and markets to encompass firms and households (Binder, 2017a; Blinder et al., 2008; Blinder, 2009; Blinder et al., 2024; Dräger, 2023). While extensive literature confirms market reactivity to central bank messaging, there exists a tangible gap: the frequent disconnect that leaves firms and households either uninformed or overwhelmed by complex monetary discourses (Haldane et al., 2020; Coibion et al., 2018). When looking at the reach of central banks among households, media outlets emerge as pivotal players (Larsen et al., 2020). Indeed, as households frequently sidestep intricate central bank resources (like the central bank website, media channels emerge as essential intermediaries (Haldane et al., 2020). They distil and broadcast central bank communications, rendering intricate monetary policy nuances accessible to a wider audience.

This paper aims to contribute to a better understanding of the reasons behind the general public’s low level of awareness about monetary policy. Effective communication strategies assume that the media, acting as “information intermediaries” as highlighted by Nimark and Pitschner (2019), accurately capture and relay central bank communication. These strategies rest on the belief that the transmission channel operates without glitches. This research investigates this assumption, seeking to quantify how effectively communication from the Federal Reserve (Fed) is relayed to the broader public through media outlets. The examination is particularly pertinent given the shift in central bank strategies from erstwhile opacity to present-day emphasis on transparency and managing expectations, especially during periods of economic fluctuations or policy deviations when negative economic news is ample. Within this study, the *USA Today* newspaper –third largest non partisan circulating print newspaper– acts as a proxy for the media. The analysis spans 20 years (2003-2023), allowing me to examine the effect of the introduction of press conferences post-FOMC meetings, which began in 2011. To quantify both the media content and Fed communication, a Latent Dirichlet Allocation (LDA) algorithm for topic modeling is used. Subsequently the econometric analysis employs Least Absolute Shrinkage and Selection Operator (LASSO) regression for variable selection, followed by a Distributed Lag (DL) regression with an event study component to evaluate the effect of the introduction of post FOMC press conferences.

The methodology employed is two-pronged. Initially, a latent Dirichlet allocation (LDA) topic model (Blei et al., 2003), a probabilistic machine learning algorithm, is applied to two datasets: 5,407 Fed communication documents and 333,384 articles from *USA Today* from 2003 to 2023. This approach, uncovers latent *topics* –words that tend to appear together– in a collection (*corpus*) of texts. Contrary to other approaches in text analysis, LDA is free from the limitations of narrow keyword searches. It treats documents within a *corpus* as big bags of words, from which it draws individual words and sorts them into smaller bags of words (*topics*). This approach makes it possible to capture the comprehensive range of media reporting on economic and monetary themes. The LDA model is instrumental in integrating even subtle Fed references, providing a comprehensive view of the bank’s communication impact. The analysis yields a time series, showing the distribution

over time of the proportions each uncovered *topic* represents within both the Fed communication as well as the *USA Today* news articles. For the *USA Today corpus*, a distinct monetary policy topic is uncovered by the LDA model. This monetary policy topic is marked by specific references to monetary policy, inflation, and the Federal Reserve. Conversely, for the Fed, 40 *topics* are identified, allowing to categorize the themes that the Fed has been communicating about as well as the change in the communication style. In light of this high number of potential predictors, and in line with other works in this field such as Hansen et al. (2018) and Larsen et al. (2020), LASSO regression, a penalized linear regression method, is applied in order to select the significant predictors. In this LASSO regression the model is fitted with all 40 Fed topics and their corresponding lagged values over time. Unlike in regular ordinary least squares, the estimated coefficients are shrunk towards zero and only the non-zero coefficients are retained. The final outcome of the subsequent DL regression is an estimate of the strength of the reaction of the monetary policy *topic* found in the *USA Today* newspaper to the communication done by the Fed.

This work aims to contribute to the literature with an in-depth exploration of the media transmission channel over an extended time frame allows for testing of whether media places heightened emphasis on central bank communications during periods of crises or perceived lack of policy rule commitment, as described by Blinder (2009). Indeed, the analyzed time frame covers the economic boom preceding the 2008 financial crisis, the subsequent recession, the COVID-19 crisis, the Ukraine invasion, the energy crisis and varying levels of inflation and unemployment, providing a robust context to assess changes in media focus. The results allow us to answer four questions regarding the new media channel of Fed communication. The first question concerns the overall perceptibility of the Fed's communication. I find that there is a positive and significant relationship between Fed communications and media coverage over the entire period studied. Fed communication seems to be relayed in a timely manner, either on the same day (especially with the onset of online news articles) or within a few days. The second question is about the effectiveness of the increased efforts of communication made by the Fed over the past 20 years. Specifically, the effect of the introduction of the post FOMC press conference. The analysis points towards an overall improvement in the strength of the media reaction mainly driven by the period with post FOMC press conferences. The third question that I attempt to answer is about the selective hearing of the media. Specifically its appetite for crisis related news. The results point towards a nuanced relation between the media and the Fed. Indeed, crisis related topics such as economic weakness during the great financial crisis or high inflation following the invasion of Ukraine resonate strongly with the media. However, general topics about inflation, inflation forecasting, forward guidance or quantitative easing also make their way into the reporting about the Fed. The fourth question is about the effectiveness of the Fed's evolving communication style. In other words, which topics or methods of communicating work better than others? I find that there are some structural shifts in the way the Fed has been communicating over the 20-year period. For instance, discussion of inflation by the Fed can be observed in three different topics each having a corresponding distinct time distribution. These three topics show that prior to 2011, the Fed's discussions predominantly focused on core inflation. However, a notable shift occurred in the studied documents: the Fed began communicating

about inflation itself and about inflation forecasts. Remarkably, both of these more recent topics demonstrate higher strength, characterized by more immediate and sustained impacts over time, in contrast to the earlier core inflation topic. Intriguingly, Fed communication surrounding stress-tests for banks or banking supervision has resonated less with the media. This suggests that while the media is responsive, there remains room for improvement to ensure a broader spectrum of central bank communications reaches the public.

The robustness of these findings is further supported by various tests. Reverse causality is explored, topics not selected in the LASSO model are examined, and the impact of Fed communications on other economic and business topics identified in the *USA Today* corpus is assessed. Across these tests, no effect is found. Further, an Autoregressive Distributed Lag (ADL) model with monthly fixed effects as well as controls for economic variable announcements is tested to control for any autocorrelation or omitted variables. It yields very similar results as the DL model.

There has been considerable research done to understand the lack of awareness of the general public about monetary policy. Notably, research indicates a significant attention gap; households often remain oblivious to monetary policy announcements, demonstrating a lack of understanding about the fundamental roles of central banks (Coibion et al., 2018; D’Acunto et al., 2019; Binder, 2018), or grappling with the intricacies of central bank communications (Haldane et al., 2020). This attention deficiency becomes especially pertinent when juxtaposed with studies underscoring the potential benefits households could reap from clearer monetary policy communication and macroeconomic news (Ehrmann et al., 2017; Larsen et al., 2020; Carroll, 2003). For instance, works like Dräger et al. (2016) find that households’ understanding of key economic concepts is improved after episodes of communication. In a parallel vein, Binder (2017b) ascertained that the Fed’s announcement of a 2% inflation target bolstered the anchoring of inflation expectations among informed consumers, distinguishing them from their uninformed counterparts. By looking at specifically the media transmission channel, this paper aims to improve the understanding of the role media is playing in bridging the gap between the attention and information channels.

Other research that has also looked at the media’s role and relevance for households. Media’s relaying of news has been found to contribute to more accurate inflation forecasts of attentive consumers (Lamla and Vinogradov, 2019), and even a reduction of the gap between inflation expectations of households and those of experts (Lamla and Lein, 2014). However, in a slightly similar vein to the results in this paper, evidence also points towards negative economic news often garnering more attention (Brosius et al., 2019), questioning the media’s impartiality in its broadcasts. Indeed, some studies suggest that media outlets’ portrayal is not always neutral; they may exhibit biases, giving more weight to negative economic news (Dräger, 2015; Dräger et al., 2016; Pinter and Kocenda, 2022).

There is also a rapidly growing literature that uses textual analysis and large language models to analyze both central bank communication and media content (Born et al., 2023; Correa et al., 2021; Ehrmann and Talmi, 2020; Fischer et al., 2023; Munday and Brookes, 2021; Picault and Renault, 2017; Pfeifer and Marohl, 2023; Shapiro and Wilson, 2021; Shapiro et al., 2022; Schmanski et al., 2023; Ter Ellen et al., 2022). For instance, the Canadian central bank communication is found

to effectively reach financial markets via the media in the works of [Hendry \(2012\)](#) and [Hayo and Neuenkirch \(2012\)](#). Other works use ECB constructed media datasets to study the favorability of reporting in the European media on ECB policy decisions ([Berger et al., 2011](#)). In [Binder \(2017b\)](#) an externally constructed media dataset over a 4 year span is used, communications events by the Fed are found to get less coverage than presidential communication events however the congressional agenda tends to draw attention to the reserve’s news. [Binder \(2017b\)](#) further observes that in the last year of her dataset, the introduction of the post FOMC press conference improves the media coverage. By looking at the twelve years that followed the introduction of the press conferences, this paper further supports the findings in [Binder \(2017b\)](#),

The remainder of the paper is organized as follows: Section 2 presents the data used, 3 covers the LDA models, while 4 discusses the empirical findings and Section 5 covers the robustness checks undertaken.

2 Fed Communication and USA Today News

Much like a good meal, when turning text into a quantifiable measure, the quality of the final outcome is only as good as the quality of the text it is based upon. Section 2.1 covers the *USA Today* articles while section 2.2 presents the federal reserve communication data and its processing.

2.1 USA Today News

The *USA Today* ranks as the third-largest circulating newspaper in the U.S. When considering its non-partisan orientation, it ascends to the foremost position, boasting a readership of approximately 7 million daily. This newspaper offers comprehensive coverage on a vast spectrum of topics, from lifestyle and economics to sports, politics, international affairs, and education, among others.

One primary rationale behind the selection of *USA Today* stems from the observation, highlighted in the introduction, of the media’s potential to introduce bias in reporting. Analyzing a non-partisan newspaper, therefore, provides an avenue to mitigate some of the skewing effects of media on our measurements. The secondary rationale behind the selection, is that similar to partisan media, *USA Today* is a profit oriented enterprise and hence it will still look for profit maximizing topics in its process of choosing news-worthy topics to report about.

The comprehensive approach to data extraction from the Lexis Nexis platform, encompassing every article *USA Today* has published over the course of the studied decades, was driven by on the one hand the need to circumvent inconsistencies in the categorization of articles over time. The taxonomy or labeling of news categories underwent multiple revisions throughout this period. Such fluctuations posed a challenge in ensuring uniformity in article types and raised the potential risk of missing pertinent content. To navigate this challenge, all articles were downloaded. On the other hand, by looking at all articles, any introduction of selection bias can be avoided. Further, as will be detailed in the methodology section, instead of relying on keyword search, which could also introduce bias, a Latent Dirichlet Allocation (LDA) was employed to refine and reduce the dataset. The entire dataset of newspaper articles spanned from 1st January 2003 to 31st March

2023, accounting for a total of 333,384 newspaper articles. The impact of the multi-stepped refining process of the dataset can be seen in Table 2.

2.2 Fed Communication

The Federal Reserve communication dataset, spanning from 2003 to 2023, comprises a total of 5407 documents. A detailed overview of the distinct types of documents can be found in Table 1. Over the years, the Federal Reserve has progressively expanded both the length and the diversity of its communication. A significant portion of these communication documents are in written form, such as FOMC transcripts, minutes from FOMC meetings, and the Beige Book reports. A notable enhancement in the Federal Reserve’s communication strategy was observed in 2011, marking the commencement of press conferences hosted by the Fed chair following committee meetings, the transcripts of which are readily available on the Federal Reserve’s official website. In addition, during the period of study, Fed chairs Ben Bernanke, Alan Greenspan, Jerome Powell, and Janet Yellen delivered numerous speeches and testimonies.

Table 1: Fed Communication Composition

	Speeches	Testimonies	Minutes	PR	PCT	CR
Av. Freq. per Year	16	6	8	234	6	2
Time-Span	2003-2023	2003-2023	2003-2023	2003-2023	2011-2023	2003-2023
Total Number	317	128	174	4680	66	42

Notes: The speeches collected are those of the chairperson. The FOMC meeting minutes are published three weeks after the meeting. PR stand for Press Release, PCT stands for Press Conference Transcripts and CR stands for Congress Reports which the FOMC send to the U.S. Congress on a bi-annual basis.

Given the aim to focus on communication events with substantial potential impact on the general audience through media relay, certain types of communication were prioritized. Consequently, this research evaluates speeches, testimonies, meeting minutes, press conferences, press releases and congressional reports, all of which consistently capture media attention and are likely to reach a broader spectrum of the public. Conversely, FOMC transcripts, typically published after a five-year delay, are perceived to be of lesser importance to the general audience and hence, are not analyzed of this study. Figure 1 shows the evolution of the sheer volume of the different communication documents that constitute the dataset. A notable observation from simply curating the dataset for the Fed analysis has been that in terms of sheer volume, the average amount of communication documents have been on a downward trend with the exception of a slight peek during chair Bernanke’s era. Indeed, as can be seen in the top plot of figure 1, chairmen Bernanke and Greenspan were on average more vocal than chairwoman Yellen and chairman Powell. The average yearly other communication (encompassing the minutes, press releases, press conference transcripts and congress reports) in the bottom plot of figure 1 has been steadily declining since the end of chairman Bernanke’s era. This observation stands as further evidence in favor of the improved quality of the Fed communication.

Indeed, while in volume the overall communication is decreasing over the studied period, the effect of its reach, as will be discussed in detail in section 4, has been improving over this same period of time.

Preparing the textual data from the Federal Reserve’s communication for analysis presents unique challenges compared to datasets like the *USA Today*. Notably, the Federal Reserve’s communication is marked by a high degree of thematic uniformity. Recurrent deliberations on macroeconomic indicators, inflation, and interest rates result in the utilization of a specialized and consistent vocabulary (‘Fed Speak’). Furthermore, while the content’s sheer volume is correct, it is dwarfed by datasets like the *USA Today* in terms of both word count and word diversity.

Given these characteristics, the preprocessing of the Federal Reserve data underwent multiple iterations for optimization. The starting point involved using regular expressions to selectively exclude numbers, numeric patterns, and personal names — elements that frequently permeate minutes and press conference transcripts. This strategy was particularly apt given the observed variability in the formatting of the Federal Reserve’s communication throughout the study period. Subsequent steps focused on purging elements like punctuation marks, URLs, hyphens, and other potential noise sources. For stopwords removal, the standard stopwords list available in common programming languages like Python or R proved insufficient due to the specialized nature of the dataset. As a result, a composite list was curated, merging typical stopwords like “the” and “of” with specific terms that were redundant in this context, such as “today”, “chairman”, and “chairwoman”. The following step in the preprocessing was the identification and consolidation of collocations, which are sequences of words that convey singular concepts. For instance, terms like “labor market” were ensured to retain their comprehensive meaning. Additionally, a trimming process was instituted, excluding any word with a frequency below ten occurrences.

3 Quantifying Text

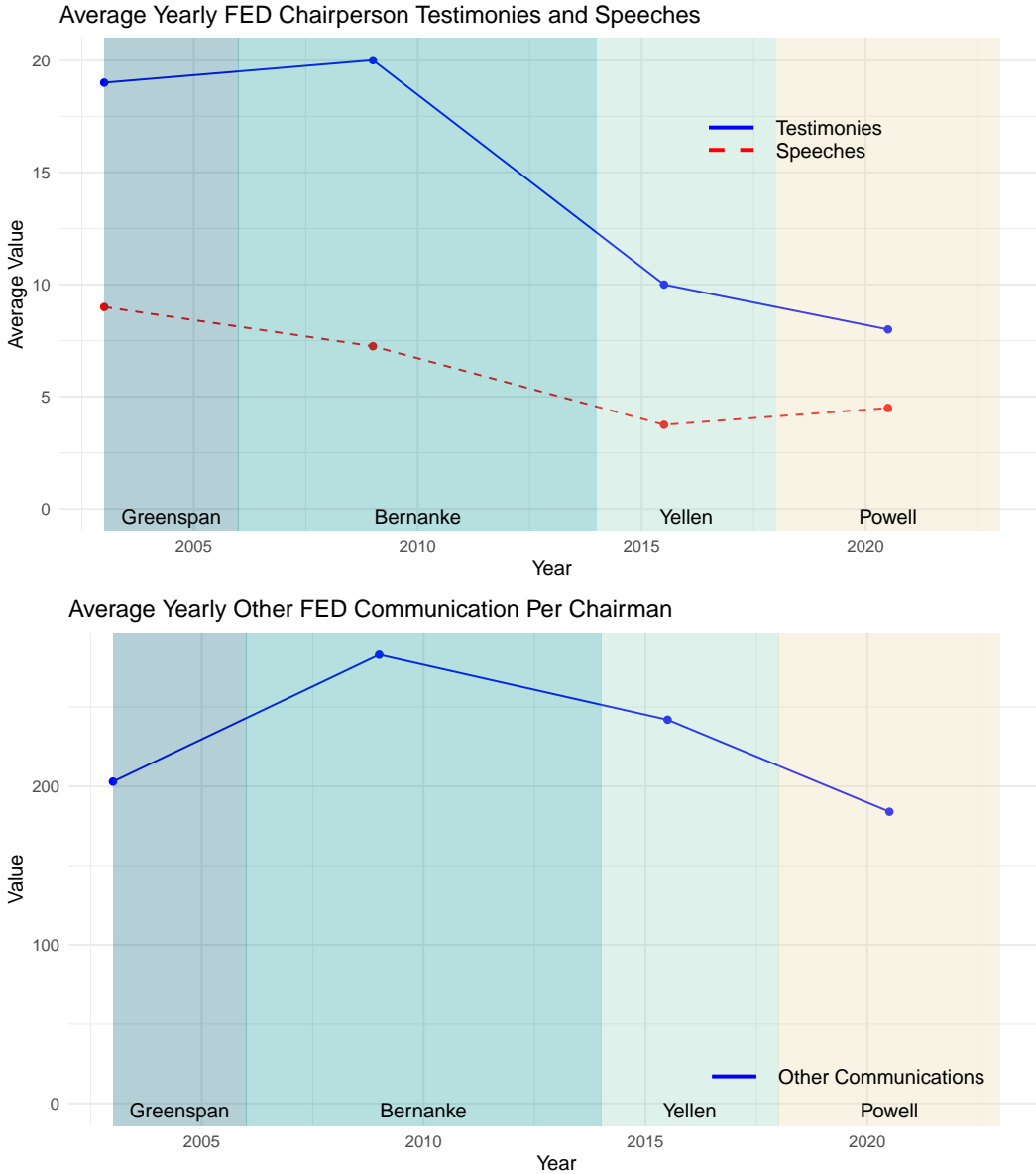
3.1 LDA

3.1.1 LDA specifications for USA Today Communication

LDA is a Bayesian factor model tailored for discrete data, particularly text, formalized by Blei et al. (2003). In essence, given a corpus comprising D documents with V unique terms, LDA discerns K topics. Each topic is a probability vector across the V unique terms. Topics can be conceptualized as clusters of words reflecting a common theme. Each document in the corpus is represented as a mix of these topics, with certain topics dominating based on content. Post estimation, LDA simplifies the high-dimensional document-term matrix into a more manageable topic distribution per document.

The LDA topic model of the *USA Today* dataset was conducted using a two-tiered approach. Initially, the entire corpus, consisting of 333,384 documents, underwent LDA modelling with an estimated 120 topics. This preliminary analysis was needed to identify the irrelevant news articles and eliminated them from the analysis. Within the resulting 120 topics, two particularly relevant

Figure 1: Fed Communication Evolution Per Chairperson



Notes: This figure shows the evolution of the sheer volume of Fed communications in the period from 2003-2023. The top plot shows the average yearly testimonies and speeches given by the chairs of the Fed. The bottom plot shows the yearly average number of other communication documents made available to the public for every chair since 2003. Each yearly average is calculated for the specific chair over their corresponding tenure. Other communication encompass the minutes, press releases, press conference transcripts and congress reports.

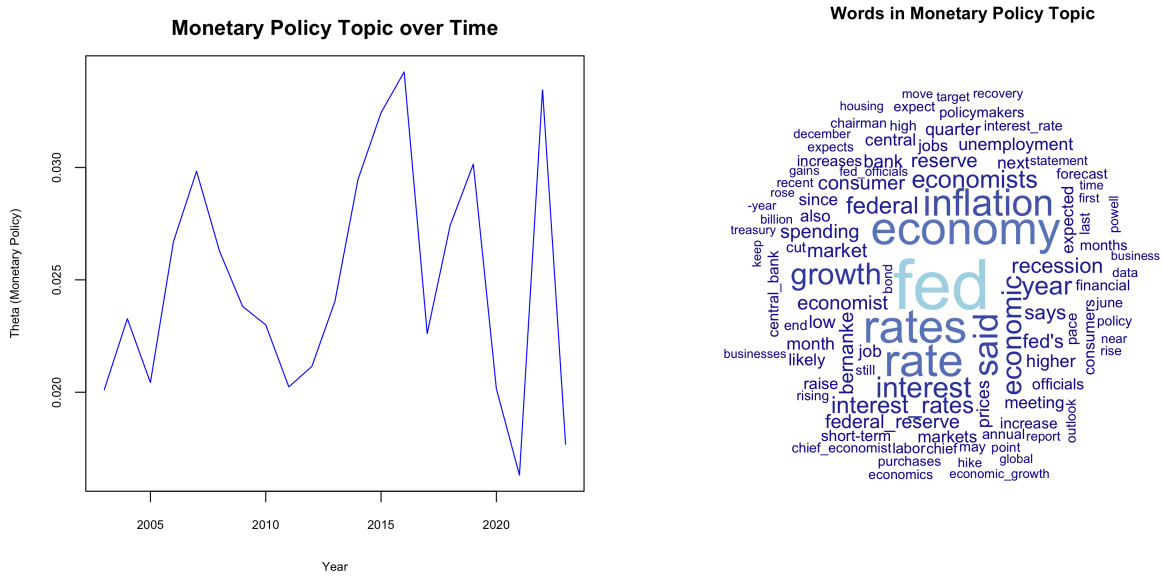
ones were identified: one primarily focused on economic news and the other on fiscal news. Following this initial step, a final LDA model of 80 topics on the *USA Today* articles was implemented, where documents comprising at least 10% content from either economic or fiscal topics were selected. The result of the 80 topics LDA allowed the identification of a distinct topic related to the Fed monetary policy. Table 2 shows the dimensionality reduction from the two-tiered LDA model. The dataset goes from 333,384 articles to 4,884, shrinking the total word count from over 267 million to little over 13 million words.

Table 2: USA Today Dimensionality Reduction through multiple LDA models

	USAT T.120	USAT T.80
Total Words	267,347,930	13,868,657
Post Pre-Processing Total Words	267,347,930	8,040,438
Unique Features	717,041	154,514
Post Pre-Processing Unique Features	717,041	90,170
Total Number of Documents	333,384	4,884

Notes: The raw text contains 267,347,930 words, 717,041 of which are unique, spread over 367,005 newspaper articles. Every column shows how these numbers evolve through the successive LDA topic models with different k topics.

Figure 2: Fed Monetary Policy In USA Today



Notes: This figure illustrates the Fed Monetary Policy Topic found in the USA Today. On the left the plot shows the yearly average distribution (Θ) of the topic Fed monetary Policy found in the USA Today news articles dataset On the right, the wordcloud shows the 100 most frequent words contained in the Fed Monetary Policy Topic.

The resultant topic, depicted in Figure 2, suggest that the LDA model captures a very Fed centred monetary policy topic in the media. The topic contains very clear references to the Fed such as: *fed*, *central bank*, *chairman*, *target*. The plot of the distribution of this monetary policy topic shows that it is found throughout the entire studied time period. It's proportion out of the other economic and business topics is relatively low.

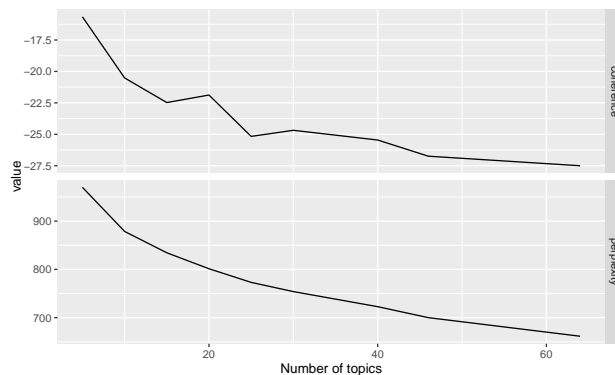
Should the media channel prove effective, a significant correlation would be anticipated between this Fed monetary policy from *USA Today* and the topics from the Federal Reserve (Fed) communication documents.

3.1.2 LDA specifications for Fed Communication

Latent Dirichlet Allocation (LDA) modeling hinges critically on the choices made for the hyperparameter α and the number of topics k . The hyperparameter α determines the distribution of topics across documents. To elucidate, a high α suggests documents will generally possess an even distribution of topics, akin to rolling a fair dice that yields a uniform distribution. Conversely, a low α suggests each document would be dominated by one or a few topics, much like an unfair dice with a predisposition towards specific numbers. It is also pertinent to distinguish between symmetric and asymmetric alpha values. While a symmetric α means each topic has an equal likelihood across all documents despite the unfair distribution within individual documents, an asymmetric α indicates that certain topics are inherently more probable than others. For this analysis, I follow the recommended approach by Griffiths and Steyvers (2004), setting α to $\frac{50}{k}$.

The determination of k was a three legged approach. Firstly, I executed a perplexity analysis, which gauges how well the LDA model can predict the actual word distribution in the corpus. In essence, it quantifies how “perplexed” the model is upon encountering new words in the corpus. Coherence assesses the semantic cogency of topics. It evaluates how often the top tokens of a topic co-occur in documents, thus offering a measure of topic cohesion as introduced by Mimno et al. (2011). After these analyses, I also ran LDA models with various k values, scrutinizing the resultant topics manually for their interpretability. My ultimate decision leaned towards $k = 40$, primarily because it furnished topics that were most interpretable, despite the coherence and perplexity measures as seen in Figure 3 indicating different optimal k . This number of topics is also comparable to the 46 topics that (Hansen et al., 2018) decided on when analyzing the FOMC transcripts. For a more tangible insight, Figure 4 illustrate the topic of *high inflation*. The plot of the distribution (Θ) of the *high inflation* topic from the Fed communication documents, shows that is concurrent with the actual increase of the inflation rate in the U.S., the wordcloud shows that this topic has clear references to the high inflation crisis that followed the invasion of Ukraine. Indeed, words such as *supply, ukraine, increase target, high, bring inflation, and russia* can be found within the 100 most common words associated to this topic.

Figure 3: Average Perplexity and Coherence over k



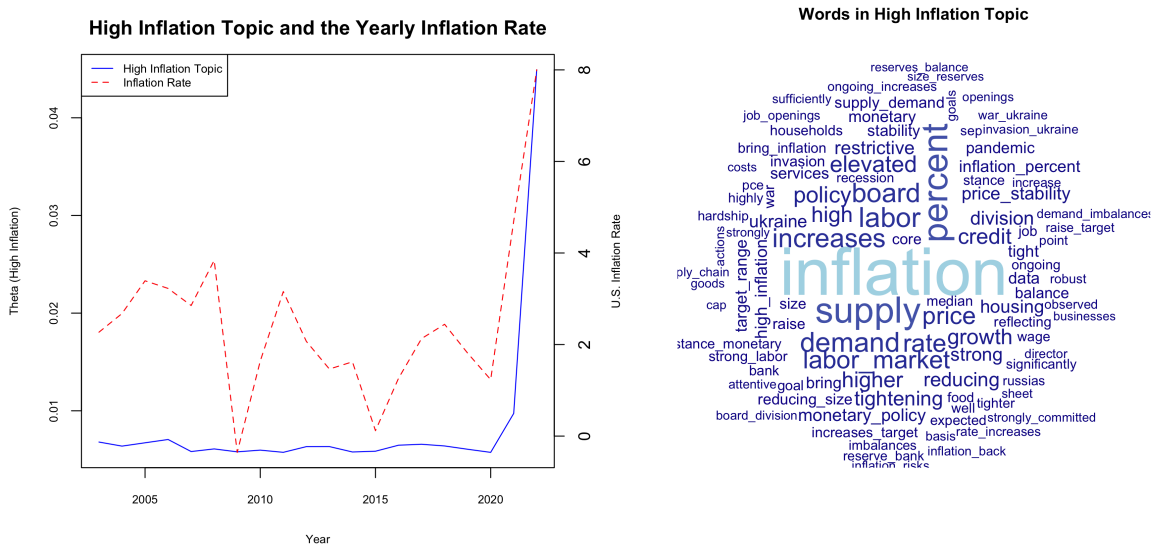
Notes: Lower values are better. Both measures essentially keep decreasing the higher the number of topics become. Look for the inflection point (or “elbow point”) where it goes from a steep decrease to a more gradual decrease. For coherence, this seems to be at 25 topics, while for perplexity this is at 46 topics.

Table 3: Prevailing Fed Topic Category per Day

	Perennial Topic Day	Hot Topic Day	Structural Topic Day
2003-2023	2007	656	430
Pre-2011	840	363	108
Post-2011	1167	293	322

Notes: How to read this table: The structural topic category had the highest proportion out of the three categories of topics on 430 days out of the 3093 days on which the Fed communicated between 2003 and 2023. The Perennial Topic category was the dominant one on 2007 days between 2003 and 2023.

Figure 4: Illustration of Fed High Inflation Topic



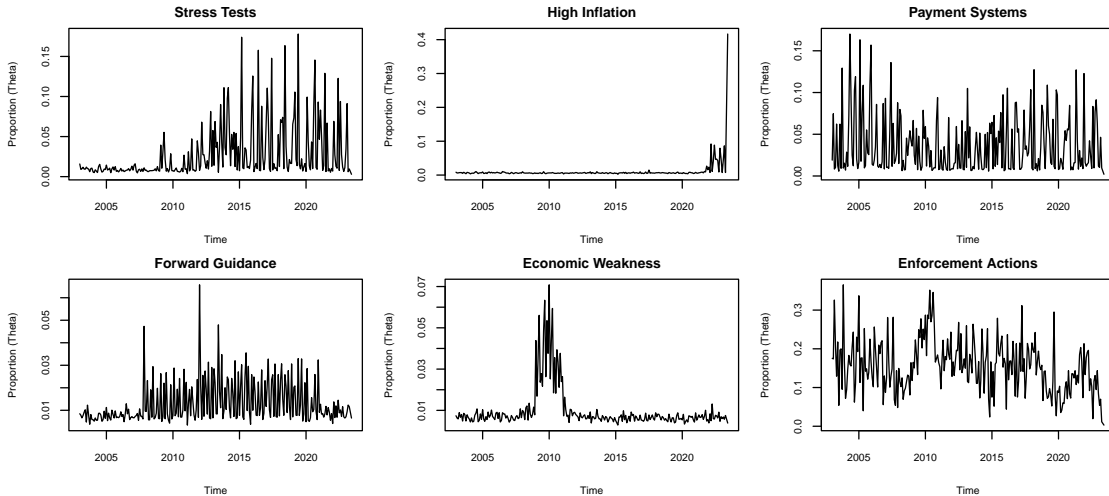
Notes: This figure shows the yearly average distribution of the topic High Inflation found in the Fed communication data and the yearly inflation rate in the U.S.A obtained from the Fred database. This figure also shows a word-cloud of the 100 most frequent words contained in the High Inflation Topic.

4 Regression Results

4.1 Effect of Topic Families and Topic Frequencies

The LDA topic model applied to the Fed data shows that there are three types of topics. One category remains relatively consistent over time and are referred to as *'perennial topics'*. These encompass subjects consistently addressed by the Fed such as enforcement actions, or payment systems. Conversely, the second category appears sporadically, predominating only during specific periods. These are termed *'hot topics'*, examples of which include the Covid-19 pandemic, quantitative easing, economic weakness during the great financial crisis (this is a topic that was also found in Hansen et al. (2018)) and high inflation. The third category of topics is called *'structural shift top-*

Figure 5: Different Topics over Time



Notes: This figure shows the clear difference in the distribution pattern over time of hot topics vs. that of perennial topics as well as that of structural change topics. All communication documents are aggregated per day. The proportion of each topic per day is to be seen as one out of 40 other topics. In the left side column shows two *structural shift topics*, the middle column contains two *hot topics*, the right side column shows two *perennial topics*

ics'. These are topics that have emerged at a certain time and have been around since, but nothing can be said about how long they will continue to be around. Examples of *structural shift topics* are stress tests for banks and forward guidance. Figure 5 displays representative plots for two of each of the aforementioned topic categories. Table 3 shows these categories' prevalence throughout the studied period, with '*perennial topics days*', i.e. days on which the Fed communication documents have a high proportion of perennial topics, comprising the majority of communication days.

$$\text{Media}_t = \alpha + \beta_1 \text{Hot_Topic_Day}_{a,t-1} + \beta_2 \text{Structural_Topic_Day}_{a,t-1} + \epsilon_t \quad (1)$$

By identifying which type of topic is more significantly correlated with the media topic, it becomes possible to determine whether Fed communication during periods of macroeconomic volatility, garners more attention compared to more stable periods. The regression equation 1, captures the effect of '*hot topic days*' and '*structural topic days*' at $t - 1$ with respect to '*perennial topic days*' on the proportion of the monetary policy media topic at time t . In this regression, Media_t is the proportion θ of the media monetary policy on day t . $\text{Hot_Topic_Day}_{a,t-1}$ is a dummy variable that represent Fed communication days where the sum of the θ s of all *hot topics* is the highest amongst the three categories of topics. Similarly, $\text{Structural_Topic_Day}_{a,t-1}$ is a dummy variable that represents Fed communication days where the sum of the θ s of all *structural topics* is the highest amongst the three categories of topics. In order to look specifically at the effect of the introduction of the post FOMC press conferences, the model is estimated over three time periods. The year of the introduction of these press conferences, the year 2011, is used as the cut-off point to split the sample. The results of this regression are summarized in Table 4. Both '*hot topic days*' and '*structural topic*

Table 4: Fed Topic Categories on Monetary Policy Reporting in USA Today

	<i>Dependent variable: Monetary Policy Reporting in USA Today</i>		
	2003-2023	Pre-2011	Post-2011
Hot Topic Day _{t-1}	0.045*** [0.005]	0.036*** [0.005]	0.056*** [0.008]
Structural Topic Day _{t-1}	0.016*** [0.004]	0.007 [0.006]	0.018*** [0.005]
Observations	7,395	2,922	4,473
Adjusted R ²	0.047	0.053	0.049

Note: Robust Standard Errors. The independent variables are dummy variables that take the value 1 when the corresponding category of topics (e.g. Structural Topics) is the dominant one among the three categories of Fed topics on a specific day. The significance levels are: *p<0.1; **p<0.05; ***p<0.01.

days' seem to have a positive, significant and stronger effect on the proportion level of the media monetary policy topic than the more standard '*perennial topic days*'.

$$\begin{aligned} \text{Media}_t = & \alpha + \beta_1 \text{Macro_Topic_Day}_{a,t-1} + \beta_2 \text{Monetary_Topic_Day}_{a,t-1} \\ & + \beta_3 \text{Crises_Topic_Day}_{a,t-1} + \beta_4 \text{IE_Topic_Day}_{a,t-1} + \epsilon_t \end{aligned} \quad (2)$$

A further classification of the forty *topics* uncovered by the LDA model is to categorize them into five *topic families*. These are: International Economics (IE), Crises, Monetary Policy, Macroeconomic Variables and Forecasting (Macro), and Financial Sector. Table 5 shows the different topic families' prevalence across the 3093 days on which the Fed communicated between 2003 and 2023. The crises and IE have the lowest number of dominant days, while the Financial Markets family makes up the majority of remaining days. For a full overview of the *topic* content of each *topic* family, see Figure A1 in the Appendix A.1. By examining the impact of a topic family such as crises on the coverage of monetary policy in the media, compared to the more standard Financial Sector topics, we can determine whether the media's preference for negative news holds true. In a similar vein to equation 1, regression equation 2 estimates the effect of a Crises, IE, Monetary Policy or Macroeconomic Variables and Projection topic family dominated day in comparison to a Financial Markets topic family day at $t - 1$ on the proportion of the monetary policy media topic Media_t at time t . Table 6 summarizes the results of this regression. The effects here are not as clear cut as for the topic categories. The IE family of topics seems to be less relevant than the Financial Sector family of topics. Similarly, while the preference for more negative or crises related news was stronger in the period prior to 2011 with respect to the Financial Sector family of topics, the difference in the effect on the proportion of articles covering monetary policy in the media stops

Table 5: Prevailing Fed Topic Family per Day

	Macro	Financial Markets	Monetary Policy	Crises	International Economics
2003-2023	324	2426	234	67	42
Pre-2011	144	989	110	29	39
Post-2011	180	1437	124	38	3

Notes: How to read this table: The Macroeconomic Variables and Projections (Macro) topic family had the highest proportion out of the five families of topics on 324 days out of the 3093 days on which the Fed communicated between 2003 and 2023. The International Economics family of topics was the dominant discussion on only 42 days between 2003 and 2023.

being significant in the years post 2011. A further, more in detail inspection of the individual topics is hence needed. The results of which are presented in the following sections.

Table 6: Fed Topic Families on Monetary Policy Reporting in USA Today

	<i>Dependent variable: Monetary Policy Reporting in USA Today</i>		
	2003-2023	Pre-2011	Post-2011
Crises Topic Day_{t-1}	0.029*** [0.010]	0.070*** [0.021]	-0.002 [0.005]
Int. Economics Topic Day_{t-1}	-0.004 [0.003]	-0.003 [0.003]	-0.009*** [0.003]
Macro Topic Day_{t-1}	0.084*** [0.008]	0.074*** [0.010]	0.091*** [0.013]
Monetary Topic Day_{t-1}	0.012*** [0.004]	0.010* [0.005]	0.014* [0.007]
Observations	7,395	2,922	4,473
Adjusted R ²	0.084	0.113	0.077

Note: Robust Standard Errors. The independent variables are dummy variables that take the value 1 when the corresponding family of topics (e.g. Macroeconomic Variables and Projections Topic Family) is the dominant one among the five Fed Topic Families on a specific day. The omitted category is the Financial Markets Family Day. The significance levels are: *p<0.1; **p<0.05; ***p<0.01.

4.2 Effect of Individual Topics

4.2.1 Lasso

To study the effect of a change in the proportion of individual topics from the Fed communication documents on the proportion of the media monetary policy topic, the following regression model is formulated:

$$\begin{aligned} \text{Media}_t = & \alpha + \beta_1 \text{Fed_Topic}_{a,t} + \beta_{1.1} \text{Fed_Topic}_{a,t-1} + \dots + \beta_{1.15} \text{Fed_Topic}_{a,t-15} + \\ & \dots + \beta_n \text{Fed_Topic}_{n,t-1} + \dots + \beta_{n.15} \text{Fed_Topic}_{n,t-15} + \epsilon_t \end{aligned} \quad (3)$$

In the regression equation, the proportion of Fed topics from $t - 1$ to $t - 15$ are regressed over the monetary policy media topic at time t . Here Media_t is the proportion θ of the media monetary policy on day t . The independent variable $\text{Fed_Topic}_{a,t}$ is the proportion θ of topic a on day t . The β coefficient of a specific Fed_Topic should take a positive and non-zero value if the effect of an increase in the proportion of this specific topic from the Fed side has an increasing effect on the proportion, the media monetary policy topic, occupies within the economic and fiscal news articles in *USA Today*.

Estimating the above described DL regression to study this relationship between the 40 identified topics from the Fed Communication and the *USA Today* Monetary Policy topic, would be inefficient. Indeed, once lagged over a two week period –the lagging of the Fed topic proportions is to account for both the persistence of the effect and for a potential information processing period from the media’s side– the 40 predictors from the Fed side quickly add up to 600 predictors. Identifying and interpreting any effect within such a high dimensional regression is sub-optimal. In this context, a LASSO (Least Absolute Shrinkage and Selection Operator) regression is employed as outlined by Tibshirani (1996) and widely accepted in the recent economic literature. Similarly to ridge regression, LASSO regression imposes a $L1$ penalty on the regression coefficients, the difference with Lasso being that the penalty can force some coefficient estimates to be exactly zero. This promotes a sparse solution that aids in feature selection.

Upon executing the Lasso regression, only a subset of topics with non-zero coefficients are retained. The Lasso filtering process, yielded 22 predictors from the Fed with non-zero coefficients of which, 17 are unique topics and 5 are different lagged values for the same topics. Table 7 offers an overview of the Fed topics that show non zero coefficients with the media monetary policy topic. Looking at Table 7, it becomes evident that *hot topics* (displayed in the green rows) play a stronger role in the media transmission channel. Conversely, *perennial topics* (displayed in the grey rows) and *structural shift topics* (displayed in the yellow rows) make up a very small portion of the post-LASSO selected variables. There are some surprising topics that don’t make it past the LASSO selection like the crises topic for the Housing Market. Similarly, the coefficient of topics such as Labor Market, Stress Tests or the Fiscal Budget get shrunken to zero. The remaining topics, all point towards the Fed being most followed when making projections, discussing inflation and crises management like Q.E. or the recovery of the economy.

Table 7: Significant Fed Topics post Lasso Regression

		Media	Monetary	Policy
		2003-2011	pre-2011	post-2011
Core Inflation_t-1	H_O		x	x
Phillips Curve t-1	H	x	x	x
Phillips Curve t-14	H			x
Government Sponsored Enterprises t-7	H			x
Central Bank Balance Sheet t-14	H	x		x
Weakness_t-1	H	x	x	x
Recovery_t	H_N			x
Inflation t	H_N	x		x
Inflation t-1	H_N	x		x
Inflation t-2	H_N	x		x
Labor Market Projections t-5	H_N			x
Point Forecast to Range_t-1	H_N	x		
High Inflation_t-2	H_N	x		x
Fund Rate Target_t	H_N			x
Quantitative Easing_t-1	H_N			x
Enforcement Action t-13	P			x
Banking Regulations t	P	x		
Forward Guidance t	P			x
Forward Guidance t-1	P	x	x	
Minutes Glossary t-1	S	x		x
Inflation Forecast t	S			x
Inflation Forecast t-1	S	x		x

Notes: This table is meant to give an overview of the Fed topics that were found to have a non-zero coefficient following the lasso regression. The topics in green are those belonging to the *hot topics* category. The shading is meant to show the time element of the *hot topics*. The lighter the green the earlier is the *hot topics* to be found in the dataset. The topics in grey are those belonging to the *perennial topics* category. The topics in yellow are those belonging to the *structural shift topics* category.

4.2.2 Post-Lasso Individual Topics

The regression equation stated in equation 3 aims to understand how an increase in communication from the Fed about topic X changes the proportion of Fed Monetary Policy news in the media. In other words, the regression measures the elasticity of the reaction of the media to a change in the discussion by the Fed of a certain topic. Table 8 summarizes the regression results.

As with the LASSO regression, in a first regression, the entire dataset is studied. Subsequently, the dataset is split into a pre-2011 and post-2011 group.

In the following the four questions about the media transmission channel and the nature of the Fed communications in general are discussed.

Table 8: FED Communication on Monetary Policy Reporting in USA Today

		<i>Dependent variable: Monetary Policy Reporting in USA Today</i>		
Topic Family	Topic Name	2003-2023	Pre-2011	Post-2011
Macroeconomic	Core Inflation $_{t-1}$	0.117*** [0.026]	0.126*** [0.027]	
Macroeconomic	Philipps Curve $_{t-1}$	0.074*** [0.026]	0.079*** [0.030]	
Macroeconomic	Philipps Curve $_{t-14}$			0.096** [0.043]
Financial Markets	GSEs $_{t-7}$			0.348** [0.177]
Monetary Policy	CB Balance Sheet $_{t-14}$	0.280*** [0.104]		0.230* [0.135]
Crises	Economic Weakness $_{t-1}$	0.125** [0.063]	0.199*** [0.060]	-1.199*** [0.245]
Crises	Recovery $_{t-1}$			0.317** [0.160]
Macroeconomic	Inflation $_t$	0.187*** [0.072]		0.115 [0.076]
Macroeconomic	Inflation $_{t-1}$	0.271*** [0.089]		0.417*** [0.096]
Macroeconomic	Inflation $_{t-2}$	0.108* [0.056]		0.147** [0.059]
Monetary Policy	Point Forecast to Range $_{t-1}$	0.293 [0.192]		0.375* [0.198]
Crises	High Inflation $_{t-2}$	0.234* [0.123]		0.260** [0.129]
Crises	Quantitative Easing $_{t-1}$			0.173* [0.100]
Crises	Pandemic Support $_{t-1}$			-0.282*** [0.090]
Financial Markets	Enforcement Actions $_{t-13}$			0.021** (0.008)
Financial Markets	Banking Regulations $_t$	0.030*** [0.010]		0.028** [0.011]
Macroeconomic	Forward Guidance $_t$			0.094 [0.071]
Macroeconomic	Forward Guidance $_{t-1}$	0.092 [0.085]	0.353** [0.163]	
Macroeconomic	Inflation Forecast $_{t-1}$	0.205*** [0.047]		0.190*** [0.052]
	Observations	7,395	2,922	4,473
	Adjusted R ²	0.149	0.148	0.191

Note: Heteroskedasticity and Autocorrelation-Consistent (HAC) Standard Errors. Insignificant Independent Variables are omitted from the table. The significance levels are: *p<0.1; **p<0.05; ***p<0.01.

Question 1: Does the generalist (main-stream) media listen to what the Fed has to say?

Yes. The results points towards a rather audible Fed speak. I find that there is a positive and significant relationship between Fed communications and media coverage over the entire period studied. Topics across all three categories (*perennial, hot, structural shift*) show a positive and significant elasticity. An increase of 1 percent of communication about the Philipps curve (discussions relating to inflation and unemployment) by the Fed is met by a 7.4% increase in the proportion of the Monetary Policy topic within the news in *USA Today* on the following day. Some topics have an even longer lasting effect such as the topic of inflation which shows an elasticity of media response of 18.7 on the day of communication, a peak of 21.1 the day following the communication and 10.8 two days after the communication by the Fed. These results point towards not only an audible Fed speak, but a strong reactivity on the media's end.

Question 2 : is the increase in efforts to communicate and to be more transparent made by the Fed over time effective?

Yes. By splitting the dataset into a pre-2011 and post-2011 subsets, the effect captured in the first regression is decomposed and better understood. Indeed, the strongest impact is found in the period following the introduction of the post FOMC meeting press conference. Of the 22 predictors that were selected using LASSO, 15 are significant for the post-2011 subset. A major portion of the significant effect found for the full sample seems to be driven by the post-2011 period. For instance, the inflation topic goes from an elasticity at $t - 1$ of 21.1 to 41.7. The positive impact of the press conferences was also seen in [Binder \(2017b\)](#), however, her dataset stopped in 2011. The extended range of this study proves that this positive effect was not the result of the novelty of the press conferences, but rather a lasting effect.

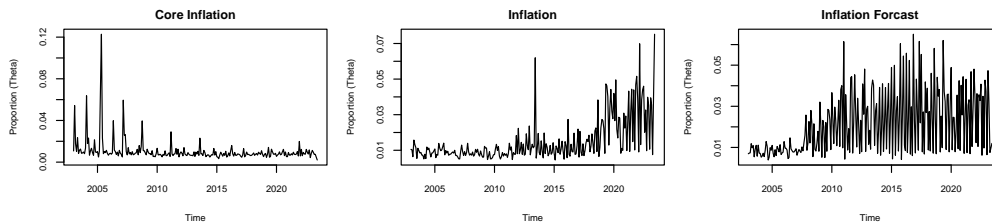
Question 3 : Is there evidence that the generalist media conducts selective hearing with a bias for crises related news?

Largely Yes. Many of the crisis-related topics are found to have a positive and significant elasticity. Indeed, crisis related topics such as economic weakness during the great financial crisis or high inflation following the invasion of Ukraine resonate strongly with the media. Economic weakness during the peak of the great financial crisis had an elasticity of 19.9 on the day following the communication effect. High inflation has an elasticity of 26. However, the results point towards a nuanced relation between the media and the Fed. General topics about inflation, inflation forecasting, forward guidance or quantitative easing also make their way into the reporting about the Fed. A positive topic such as the economic recovery is estimated to have an elasticity of 37.1.

Question 4 : Is the Fed communication a monolith of carefully curated words?

Yes and No. The LDA process has proven that the Fed communication is indeed very homogeneous in comparison to a more topic diverse dataset like the *USA Today*. Differing topics with differing time distributions did emerge. This differing categorization is also further seen in the regression results. Figure 6, shows the break-up of the core inflation topic. While at the beginning of the studied dataset, the Fed seemed to be communicating about core inflation, a structural shift is seen in the data with the emergence of a general inflation topic and an inflation forecast topic. This rise of the two new topics happened in parallel to the disappearance of the core inflation topic. Furthermore this shift happened before the 2011 split, making the effect distinguishable from the overall improved audibility due to the press conference. This shift in communication seems to have had a positive effect. The topic of core inflation had a maximum elasticity of 12.6 on the day following the communication while inflation forecast at $t - 1$ shows an elasticity of 20.5 and inflation at $t - 1$ shows an elasticity of 21.1. This successful communication surrounding inflation is not similarly observed in other new-worthy topics such as stress-tests and banking supervision. Both topics don't make it past the LASSO selection step. The closest topic to them is Banking Regulations and it shows a small elasticity of 3 for the full sample and 2.8 for the post 2011 subset.

Figure 6: Fed Inflation Related Topics



Notes: This figure is meant to illustrate a structural shift in discussing inflation by the Fed. In the initial period, the Fed was mainly discussing core inflation, the topic is the seemingly split into a general inflation topic and an inflation forecast topic.

5 Robustness

The results found in this study are tested for robustness. One potential source of error could be seen as reverse causality. The LASSO penalized regression yields no non-zero coefficient predictors. Regardless, a DL regression for every one of the 40 Fed topics on the media monetary policy topic and its lagged values is run. The results for each regression can be found in the Appendix A.2. Almost no predictor is found to have a significant effect, with the few which do, showing a negative effect. Furthermore, the adjusted R^2 value is extremely low, with the highest value found to be 0.04. I also test the effect of Fed topics on other economic or business related topics identified in the media. Here also, the results shows very little significance and the adjusted R^2 are extremely low. The results for for these regressions can be found in Table A41 in the Appendix A.3. Another source of error could be seen as autocorrelation and omitted variable bias. To this effect, I estimate

an ADL with monthly fixed effects and controls for announcement days of macroeconomic variables such as inflation and unemployment numbers. The results can be seen in the Table A42 in the Appendix A.4. The overall coefficients remain very similar in size and sign and the increase in the adjusted R^2 is very minimal. Furthermore, only the unemployment announcement have a small negative effect.

6 Conclusion

This study examines how the Federal Reserve’s communication is covered by *USA Today*, providing insights into the mechanisms of information relaying to the general public. By studying a large dataset of text data from the Fed and from the *USA Today* over a long period of 20 years from 2003 until 2023, my results show that the media transmission channel works, and has been working better since the launch of the post FOMC meetings press conferences in 2011.

Specifically, this study identifies three types of frequency for topics discussed by the Fed. There are topics that can be found throughout the studied time frame, those are the *perennial topics*. Conversely, there are more temporary topics that show up typically during times of economic volatility and then fade out, those are the *hot topics*. Finally there are the *structural shift topics* which speak more to either a new topic that the Fed starts talking about or a change in how the Fed talks about a pre-existing topic. The *hot topics and structural shift topics* show the strongest and most persistent effect. However, this significant positive elasticity is not uniform across all topics with interesting absences such as banking related topics. A possible explanation could be that generalist media like the *USA Today* will shy away from banking topics and focus more on general public topics like inflation and unemployment. The LDA model uncovered 40 topics in the Fed communication documents, that are categorized into 5 broad families. The biggest and most prevalent family of topics is Financial Sector family of topics. Further behind are the families of Monetary Policy topics and the Macroeconomic Variables and Projections families of topics. The final two families in terms of size are the Crises family of topics and the International Economics. Despite its relatively small size, the media does show a penchant for the Crises family of topics. The analysis further shows that the Fed was more followed when communicating about inflation and economic recovery but less when talking about other macroeconomic related topics such as the labor market. The introduction of post FOMC meeting press conference in 2011, has been very successful in improving the media transmission channel’s effectiveness. Similarly, the structural changes in the way the Fed communicated about inflation has also been an improving factor. A potential area of further research would be to see if the elasticity is similar in partisan media or in other forms of media such as TV or radio.

References

- Berger, H., M. Ehrmann, and M. Fratzscher (2011). Monetary policy in the media. *Journal of Money, Credit and Banking* 43(4), 689–709.
- Binder, C. (2017a). Fed speak on main street: Central bank communication and household expectations. *Journal of Macroeconomics* 52.
- Binder, C. (2017b). Federal reserve communication and the media. *Journal of Media Economics* 30, 191–214.
- Binder, C. (2018). Inflation expectations and the price at the pump. *Journal of Macroeconomics* 58.
- Blei, D. M., A. Y. Ng, and M. I. Jordan (2003). Latent dirichlet allocation. *J. Mach. Learn. Res.* 3, 993–1022.
- Blinder, A. (2009). Talking about monetary policy: The virtues (and vice?) of central bank communication. *SSRN Electronic Journal*.
- Blinder, A., J. Haan, M. Ehrmann, M. Fratzscher, and D.-J. Jansen (2008). Central bank communication and monetary policy: A survey of theory and evidence. *Journal of Economic Literature* 46, 910–45.
- Blinder, A. S., M. Ehrmann, J. de Haan, and D.-J. Jansen (2024, June). Central bank communication with the general public: Promise or false hope? *Journal of Economic Literature* 62(2), 425–57.
- Born, B., H. Dalal, N. Lamersdorf, and S. Steffen (2023, 01). Monetary policy in the age of social media: A twitter-based inflation analysis. *SSRN Electronic Journal*.
- Brosius, A., E. J. van Elsas, and C. H. de Vreese (2019, 07). Bad News, Declining Trust? Effects of Exposure to Economic News on Trust in the European Union. *International Journal of Public Opinion Research* 32(2), 223–242.
- Carroll, C. (2003). Macroeconomic expectations of households and professional forecasters. *The Quarterly Journal of Economics* 118, 269–298.
- Coibion, O., Y. Gorodnichenko, and S. Kumar (2018). How do firms form their expectations? new survey evidence. *American Economic Review* 108, 2671–2713.
- Correa, R., K. Garud, J. M. Londono, and N. Mislav (2021). Sentiment in Central Banks’ Financial Stability Reports. *Review of Finance* 25(1), 85–120.
- D’Acunto, F., D. Hoang, M. Paloviita, and M. Weber (2019). Iq, expectations, and choice. *SSRN Electronic Journal*.
- Dräger, L. (2015, 02). Inflation perceptions and expectations in sweden - are media reports the ‘missing link’? *Oxford Bulletin of Economics and Statistics* 77.

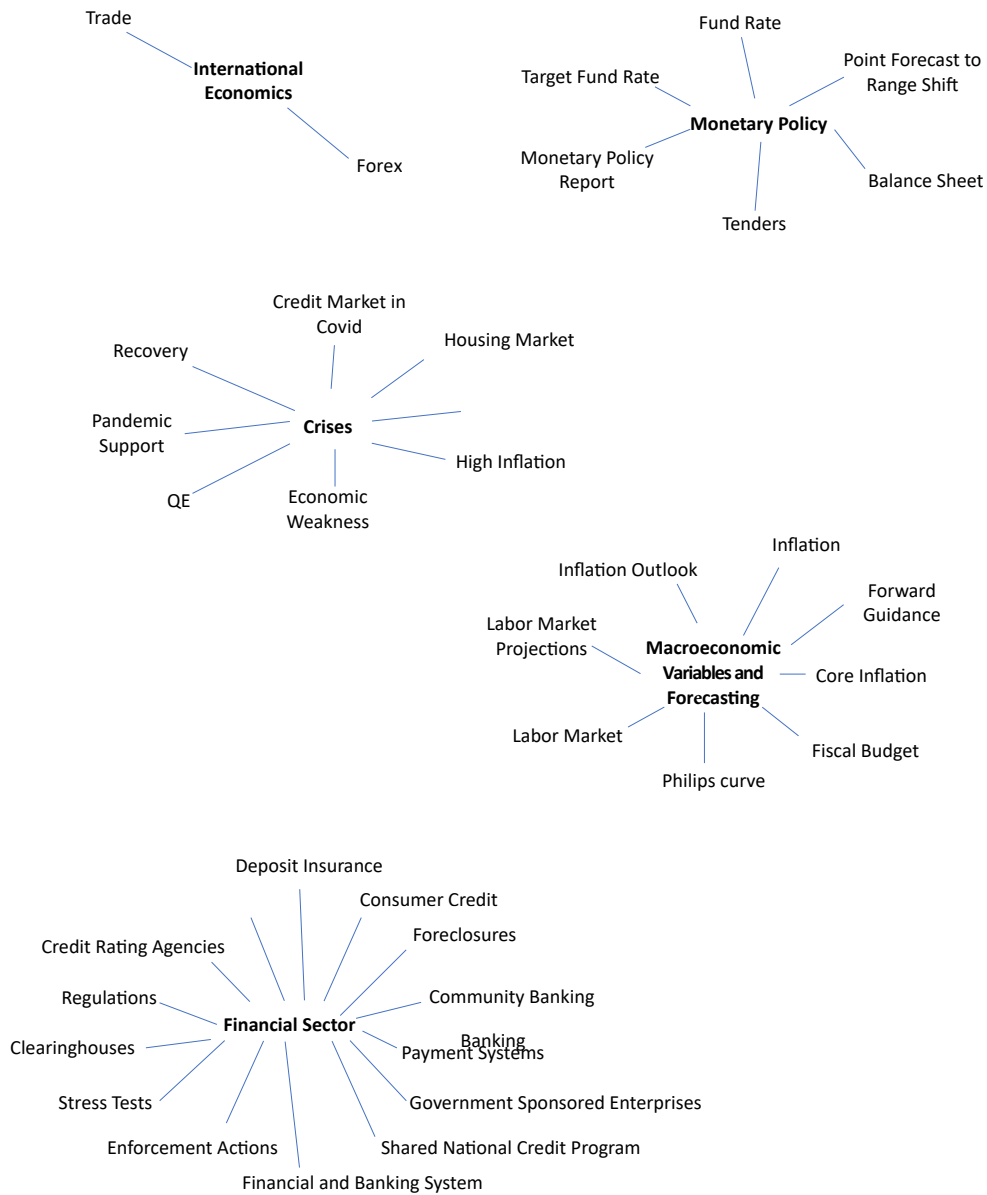
- Dräger, L. (2023). Central Bank Communication with the General Public. Technical report.
- Dräger, L., M. J. Lamla, and D. Pfajfar (2016). Are survey expectations theory-consistent? The role of central bank communication and news. *European Economic Review* 85(C), 84–111.
- Ehrmann, M., D. Pfajfar, and E. Santoro (2017). Consumers’ Attitudes and Their Inflation Expectations. *International Journal of Central Banking* 13(1), 225–259.
- Ehrmann, M. and J. Talmi (2020). Starting from a blank page? semantic similarity in central bank communication and market volatility. *Journal of Monetary Economics* 111, 48–62.
- Fischer, E., R. McCaughrin, S. Prazad, and M. Vandergon (2023, November). Fed Transparency and Policy Expectation Errors: A Text Analysis Approach. Staff Reports 1081, Federal Reserve Bank of New York.
- Griffiths, T. L. and M. Steyvers (2004). Finding scientific topics. *Proceedings of the National academy of Sciences* 101(suppl 1), 5228–5235.
- Haldane, A., A. Macaulay, and M. McMahon (2020). The 3 E’s of central bank communication with the public. Bank of England working papers 847, Bank of England.
- Hansen, S., M. McMahon, and A. Prat (2018). Transparency and Deliberation Within the FOMC: A Computational Linguistics Approach. *The Quarterly Journal of Economics* 133(2), 801–870.
- Hayo, B. and M. Neuenkirch (2012). Bank of Canada communication, media coverage, and financial market reactions. *Economics Letters* 115(3), 369–372.
- Hendry, S. (2012). Central Bank Communication or the Media’s Interpretation: What Moves Markets? Staff Working Papers 12-9, Bank of Canada.
- Lamla, M. and S. Lein (2014). The role of media for consumers’ inflation expectation formation. *Journal of Economic Behavior and Organization* 106(C), 62–77.
- Lamla, M. and D. Vinogradov (2019). Central bank announcements: Big news for little people? *Journal of Monetary Economics* 108(C), 21–38.
- Larsen, V., L. Thorsrud, and J. Zhulanova (2020). News-driven inflation expectations and information rigidities. *Journal of Monetary Economics* 117.
- Mimno, D., H. Wallach, E. Talley, M. Leenders, and A. McCallum (2011, July). Optimizing semantic coherence in topic models. In *Proceedings of the 2011 Conference on Empirical Methods in Natural Language Processing*, Edinburgh, Scotland, UK., pp. 262–272. Association for Computational Linguistics.
- Munday, T. and J. Brookes (2021, October). Mark my words: the transmission of central bank communication to the general public via the print media. Bank of England working papers 944, Bank of England.

- Nimark, K. P. and S. Pitschner (2019). News media and delegated information choice. *J. Econ. Theory* 181, 160–196.
- Pfeifer, M. and V. P. Marohl (2023). Centralbankroberta: A fine-tuned large language model for central bank communications. *The Journal of Finance and Data Science* 9, 100114.
- Picault, M. and T. Renault (2017). Words are not all created equal: A new measure of ecb communication. *Journal of International Money and Finance* 79, 136–156.
- Pinter, J. and E. Kocenda (2022). Media treatment of monetary policy surprises and their impact on firms’ and consumers’ expectations. (30/2021).
- Schmanski, B., C. Scotti, and C. Vega (2023, May). Fed Communication, News, Twitter, and Echo Chambers. Finance and Economics Discussion Series 2023-036, Board of Governors of the Federal Reserve System (U.S.).
- Shapiro, A. H., M. Sudhof, and D. J. Wilson (2022). Measuring news sentiment. *Journal of Econometrics* 228(2), 221–243.
- Shapiro, A. H. and D. J. Wilson (2021, 12). Taking the Fed at its Word: A New Approach to Estimating Central Bank Objectives using Text Analysis. *The Review of Economic Studies* 89(5), 2768–2805.
- Ter Ellen, S., V. H. Larsen, and L. A. Thorsrud (2022). Narrative monetary policy surprises and the media. *Journal of Money, Credit and Banking* 54(5), 1525–1549.
- Tibshirani, R. (1996). Regression shrinkage and selection via the lasso. *Journal of the Royal Statistical Society (Series B)* 58, 267–288.

A Appendix

A.1 Fed LDA Results: Topic Families

Figure A1: Fed LDA: Families of Topics



Notes: This figure is meant to illustrate the individual topics comprising each of the five topic families uncovered by the LDA model on the Fed communication documents.

A.2 Reverse Causality Regression Results

Table A1: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Finance and Banking Systems		
	2003-2013	pre-2011	post-2011
Media _t	0.038** (0.015)	0.073* (0.038)	0.024* (0.014)
Media _{t-1}	0.006 (0.014)	0.037 (0.042)	-0.005 (0.010)
Media _{t-2}	-0.017* (0.009)	0.010 (0.028)	-0.027*** (0.006)
Media _{t-3}	-0.013 (0.011)	0.016 (0.034)	-0.023*** (0.005)
Media _{t-4}	-0.010 (0.007)	-0.012 (0.016)	-0.008 (0.008)
Media _{t-5}	-0.022*** (0.007)	-0.027 (0.020)	-0.019*** (0.006)
Media _{t-6}	0.018 (0.013)	0.039 (0.034)	0.009 (0.013)
Media _{t-7}	0.052*** (0.017)	0.056 (0.039)	0.050*** (0.017)
Media _{t-8}	0.013 (0.014)	-0.013 (0.016)	0.023 (0.018)
Media _{t-9}	-0.003 (0.016)	-0.033** (0.014)	0.008 (0.023)
Media _{t-10}	-0.032*** (0.008)	-0.042*** (0.012)	-0.027*** (0.010)
Media _{t-11}	-0.001 (0.011)	0.017 (0.027)	-0.007 (0.010)
Media _{t-12}	-0.012 (0.009)	-0.016 (0.019)	-0.009 (0.009)
Media _{t-13}	0.001 (0.012)	0.009 (0.034)	-0.0005 (0.010)
Media _{t-14}	0.039* (0.020)	0.074 (0.052)	0.027 (0.019)
Media _{t-15}	0.011 (0.013)	0.037 (0.033)	0.001 (0.012)
Constant	0.016*** (0.001)	0.016*** (0.002)	0.015*** (0.001)
Observations	7,380	2,907	4,473
Adjusted R ²	0.006	0.006	0.007

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A2: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Credit Market in Covid		
	2003-2013	pre-2011	post-2011
Media _t	0.007 (0.006)	0.005** (0.002)	0.007 (0.008)
Media _{t-1}	-0.006** (0.003)	0.005** (0.002)	-0.011*** (0.004)
Media _{t-2}	-0.009 (0.006)	-0.005*** (0.002)	-0.011 (0.008)
Media _{t-3}	-0.015*** (0.005)	-0.008*** (0.002)	-0.018*** (0.006)
Media _{t-4}	-0.005 (0.005)	-0.004* (0.002)	-0.005 (0.007)
Media _{t-5}	0.016 (0.013)	0.001 (0.002)	0.022 (0.019)
Media _{t-6}	0.014 (0.017)	0.002 (0.002)	0.019 (0.024)
Media _{t-7}	-0.001 (0.004)	0.009*** (0.003)	-0.005 (0.006)
Media _{t-8}	-0.006 (0.004)	0.007*** (0.003)	-0.011** (0.005)
Media _{t-9}	-0.014*** (0.003)	-0.0001 (0.004)	-0.020*** (0.004)
Media _{t-10}	-0.015*** (0.004)	-0.008*** (0.002)	-0.018*** (0.005)
Media _{t-11}	-0.007 (0.004)	-0.0002 (0.003)	-0.010 (0.006)
Media _{t-12}	-0.014*** (0.003)	-0.002 (0.002)	-0.018*** (0.004)
Media _{t-13}	-0.003 (0.005)	0.005** (0.003)	-0.006 (0.007)
Media _{t-14}	0.001 (0.005)	0.004 (0.003)	0.0002 (0.007)
Media _{t-15}	-0.012*** (0.003)	-0.003 (0.002)	-0.016*** (0.004)
Constant	0.008*** (0.001)	0.004*** (0.0003)	0.010*** (0.001)
Observations	7,380	2,907	4,473
Adjusted R ²	0.002	0.011	0.002

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A3: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Recovery		
	2003-2013	pre-2011	post-2011
Media _t	0.004** (0.002)	0.003 (0.002)	0.004* (0.003)
Media _{t-1}	0.006 (0.004)	0.006** (0.002)	0.006 (0.006)
Media _{t-2}	-0.004*** (0.002)	-0.002 (0.004)	-0.005*** (0.002)
Media _{t-3}	-0.008*** (0.001)	-0.010*** (0.002)	-0.007*** (0.001)
Media _{t-4}	-0.003** (0.001)	-0.003 (0.003)	-0.002 (0.002)
Media _{t-5}	0.0005 (0.003)	0.008 (0.011)	-0.003* (0.001)
Media _{t-6}	0.0001 (0.002)	0.001 (0.002)	-0.0003 (0.002)
Media _{t-7}	0.005** (0.003)	0.004 (0.002)	0.006* (0.004)
Media _{t-8}	0.002 (0.001)	0.007*** (0.002)	-0.001 (0.001)
Media _{t-9}	-0.006*** (0.001)	-0.006*** (0.002)	-0.006*** (0.001)
Media _{t-10}	-0.008*** (0.001)	-0.008*** (0.002)	-0.008*** (0.001)
Media _{t-11}	-0.007*** (0.001)	-0.006*** (0.002)	-0.007*** (0.001)
Media _{t-12}	0.009 (0.006)	-0.001 (0.002)	0.013 (0.008)
Media _{t-13}	0.006** (0.003)	0.005 (0.003)	0.006* (0.004)
Media _{t-14}	-0.001 (0.001)	-0.0004 (0.002)	-0.001 (0.002)
Media _{t-15}	-0.001 (0.002)	0.001 (0.003)	-0.002 (0.002)
Constant	0.004*** (0.0002)	0.003*** (0.0004)	0.004*** (0.0003)
Observations	7,380	2,907	4,473
Adjusted R ²	0.007	0.005	0.006

Note: Robust Standard Errors

*p<0.1; **p<0.05; ***p<0.01

Table A4: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Labor Market		
	2003-2013	pre-2011	post-2011
Media _t	0.004 (0.005)	0.010** (0.005)	0.002 (0.007)
Media _{t-1}	0.009 (0.007)	0.010*** (0.003)	0.008 (0.010)
Media _{t-2}	-0.009** (0.004)	-0.005* (0.003)	-0.011** (0.005)
Media _{t-3}	-0.007 (0.008)	-0.007* (0.003)	-0.008 (0.012)
Media _{t-4}	0.007 (0.013)	-0.006** (0.003)	0.011 (0.019)
Media _{t-5}	0.022 (0.023)	0.005 (0.007)	0.029 (0.032)
Media _{t-6}	-0.003 (0.006)	0.006 (0.005)	-0.007 (0.008)
Media _{t-7}	0.007 (0.007)	0.011* (0.006)	0.004 (0.009)
Media _{t-8}	0.025 (0.019)	0.007** (0.003)	0.033 (0.026)
Media _{t-9}	-0.014*** (0.003)	-0.009*** (0.003)	-0.017*** (0.005)
Media _{t-10}	-0.011*** (0.004)	-0.011*** (0.002)	-0.011** (0.005)
Media _{t-11}	-0.001 (0.007)	0.007 (0.013)	-0.004 (0.009)
Media _{t-12}	0.005 (0.009)	0.003 (0.005)	0.005 (0.013)
Media _{t-13}	0.001 (0.008)	0.002 (0.003)	0.001 (0.011)
Media _{t-14}	0.003 (0.005)	0.002 (0.003)	0.003 (0.007)
Media _{t-15}	-0.0002 (0.006)	-0.002 (0.002)	-0.0002 (0.008)
Constant	0.006*** (0.001)	0.004*** (0.0003)	0.007*** (0.001)
Observations	7,380	2,907	4,473
Adjusted R ²	0.003	0.009	0.002

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A5: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Stress Tests		
	2003-2013	pre-2011	post-2011
Media _t	0.016 (0.013)	0.025 (0.019)	0.012 (0.018)
Media _{t-1}	0.021 (0.021)	0.001 (0.003)	0.028 (0.030)
Media _{t-2}	-0.007 (0.016)	-0.001 (0.004)	-0.010 (0.023)
Media _{t-3}	-0.027*** (0.005)	-0.009* (0.005)	-0.035*** (0.007)
Media _{t-4}	-0.002 (0.011)	-0.004 (0.005)	-0.002 (0.015)
Media _{t-5}	-0.002 (0.012)	0.012 (0.015)	-0.008 (0.016)
Media _{t-6}	0.014 (0.015)	0.009 (0.008)	0.013 (0.021)
Media _{t-7}	0.105*** (0.031)	0.005 (0.004)	0.146*** (0.043)
Media _{t-8}	0.027 (0.024)	0.007* (0.004)	0.031 (0.034)
Media _{t-9}	0.017 (0.022)	-0.006 (0.004)	0.026 (0.032)
Media _{t-10}	-0.009 (0.010)	-0.004 (0.004)	-0.012 (0.015)
Media _{t-11}	-0.004 (0.012)	-0.003 (0.004)	-0.006 (0.017)
Media _{t-12}	0.001 (0.015)	-0.003 (0.003)	0.002 (0.022)
Media _{t-13}	-0.00003 (0.010)	0.001 (0.003)	-0.001 (0.014)
Media _{t-14}	0.008 (0.013)	-0.001 (0.003)	0.012 (0.018)
Media _{t-15}	0.011 (0.018)	-0.001 (0.003)	0.014 (0.025)
Constant	0.009*** (0.001)	0.004*** (0.0005)	0.012*** (0.002)
Observations	7,380	2,907	4,473
Adjusted R ²	0.010	0.003	0.013

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A6: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Banking		
	2003-2013	pre-2011	post-2011
Media _t	0.028* (0.016)	0.009 (0.016)	0.035 (0.022)
Media _{t-1}	0.042* (0.022)	0.013 (0.016)	0.053* (0.031)
Media _{t-2}	-0.028*** (0.005)	-0.018*** (0.006)	-0.033*** (0.007)
Media _{t-3}	-0.013 (0.008)	-0.021*** (0.007)	-0.009 (0.011)
Media _{t-4}	0.003 (0.009)	-0.021*** (0.006)	0.013 (0.013)
Media _{t-5}	0.014 (0.023)	0.009 (0.015)	0.016 (0.031)
Media _{t-6}	0.008 (0.009)	0.025 (0.017)	0.0002 (0.012)
Media _{t-7}	0.012 (0.013)	0.022 (0.028)	0.008 (0.015)
Media _{t-8}	-0.003 (0.008)	-0.010* (0.006)	0.0001 (0.011)
Media _{t-9}	-0.019*** (0.004)	-0.011* (0.007)	-0.023*** (0.005)
Media _{t-10}	-0.011* (0.007)	-0.021*** (0.005)	-0.007 (0.010)
Media _{t-11}	-0.002 (0.013)	0.003 (0.021)	-0.005 (0.016)
Media _{t-12}	-0.006 (0.011)	-0.011 (0.010)	-0.003 (0.015)
Media _{t-13}	-0.005 (0.007)	0.013 (0.018)	-0.012* (0.007)
Media _{t-14}	-0.005 (0.007)	0.011 (0.020)	-0.011* (0.006)
Media _{t-15}	0.021 (0.015)	0.044 (0.036)	0.011 (0.014)
Constant	0.008*** (0.001)	0.007*** (0.001)	0.009*** (0.001)
Observations	7,380	2,907	4,473
Adjusted R ²	0.003	0.002	0.003

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A7: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Philips Curve		
	2003-2013	pre-2011	post-2011
Media _t	0.028*** (0.010)	0.055* (0.031)	0.019*** (0.007)
Media _{t-1}	0.037*** (0.013)	0.096** (0.039)	0.012* (0.007)
Media _{t-2}	-0.022*** (0.006)	-0.049*** (0.011)	-0.007 (0.006)
Media _{t-3}	-0.014* (0.008)	-0.007 (0.022)	-0.018*** (0.005)
Media _{t-4}	-0.021*** (0.006)	-0.052*** (0.014)	-0.006 (0.006)
Media _{t-5}	0.005 (0.007)	0.008 (0.019)	0.004 (0.006)
Media _{t-6}	0.010 (0.008)	0.033 (0.024)	0.001 (0.006)
Media _{t-7}	0.006 (0.007)	0.003 (0.017)	0.008 (0.007)
Media _{t-8}	0.007 (0.009)	0.002 (0.024)	0.007 (0.008)
Media _{t-9}	-0.023*** (0.005)	-0.055*** (0.011)	-0.009* (0.005)
Media _{t-10}	-0.034*** (0.003)	-0.070*** (0.010)	-0.021*** (0.003)
Media _{t-11}	-0.028*** (0.005)	-0.055*** (0.012)	-0.015*** (0.005)
Media _{t-12}	0.006 (0.011)	-0.011 (0.020)	0.013 (0.013)
Media _{t-13}	0.013 (0.010)	0.023 (0.023)	0.007 (0.010)
Media _{t-14}	-0.002 (0.007)	0.001 (0.019)	-0.001 (0.006)
Media _{t-15}	0.005 (0.009)	0.001 (0.023)	0.007 (0.009)
Constant	0.014*** (0.001)	0.020*** (0.002)	0.009*** (0.001)
Observations	7,380	2,907	4,473
Adjusted R ²	0.009	0.016	0.006

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A8: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Trade		
	2003-2013	pre-2011	post-2011
Media _t	0.013 (0.010)	0.036 (0.034)	0.005** (0.002)
Media _{t-1}	0.009 (0.010)	0.030 (0.033)	0.001 (0.002)
Media _{t-2}	-0.015*** (0.005)	-0.036** (0.017)	-0.005*** (0.001)
Media _{t-3}	-0.006 (0.008)	-0.005 (0.028)	-0.006*** (0.001)
Media _{t-4}	-0.002 (0.014)	0.001 (0.046)	-0.002 (0.002)
Media _{t-5}	0.002 (0.010)	-0.005 (0.031)	0.005 (0.005)
Media _{t-6}	0.005 (0.010)	-0.015 (0.019)	0.013 (0.012)
Media _{t-7}	-0.001 (0.006)	-0.013 (0.020)	0.005** (0.002)
Media _{t-8}	0.007 (0.009)	0.025 (0.028)	-0.001 (0.002)
Media _{t-9}	-0.012*** (0.004)	-0.024 (0.015)	-0.005*** (0.001)
Media _{t-10}	-0.005 (0.007)	-0.004 (0.023)	-0.006*** (0.001)
Media _{t-11}	-0.016*** (0.006)	-0.043** (0.019)	-0.004*** (0.001)
Media _{t-12}	-0.014*** (0.005)	-0.046*** (0.018)	-0.001 (0.002)
Media _{t-13}	-0.001 (0.007)	-0.006 (0.022)	0.002 (0.002)
Media _{t-14}	0.021 (0.015)	0.064 (0.049)	0.003* (0.002)
Media _{t-15}	-0.006 (0.006)	-0.018 (0.019)	0.0005 (0.002)
Constant	0.009*** (0.001)	0.017*** (0.003)	0.004*** (0.0003)
Observations	7,380	2,907	4,473
Adjusted R ²	0.0001	-0.0001	0.007

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A9: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Minutes		
	2003-2013	pre-2011	post-2011
Media _t	-0.001 (0.009)	-0.0003 (0.009)	-0.001 (0.012)
Media _{t-1}	-0.008 (0.008)	0.005 (0.010)	-0.015 (0.010)
Media _{t-2}	-0.020** (0.009)	-0.013* (0.007)	-0.022* (0.013)
Media _{t-3}	-0.045*** (0.008)	-0.016 (0.017)	-0.058*** (0.009)
Media _{t-4}	-0.020** (0.009)	-0.022*** (0.006)	-0.019 (0.013)
Media _{t-5}	0.012 (0.013)	0.011 (0.015)	0.012 (0.018)
Media _{t-6}	0.011 (0.014)	0.034* (0.019)	0.0003 (0.019)
Media _{t-7}	0.025 (0.018)	0.017 (0.013)	0.029 (0.025)
Media _{t-8}	-0.011 (0.008)	0.025* (0.015)	-0.027*** (0.010)
Media _{t-9}	-0.028*** (0.009)	-0.020*** (0.006)	-0.029** (0.013)
Media _{t-10}	-0.040*** (0.006)	-0.005 (0.012)	-0.055*** (0.007)
Media _{t-11}	-0.039*** (0.006)	-0.015* (0.008)	-0.049*** (0.008)
Media _{t-12}	0.001 (0.012)	-0.007 (0.008)	0.006 (0.017)
Media _{t-13}	-0.013 (0.009)	-0.001 (0.009)	-0.020 (0.013)
Media _{t-14}	0.006 (0.015)	0.001 (0.008)	0.009 (0.021)
Media _{t-15}	-0.034*** (0.006)	-0.019*** (0.005)	-0.042*** (0.008)
Constant	0.019*** (0.001)	0.009*** (0.001)	0.025*** (0.002)
Observations	7,380	2,907	4,473
Adjusted R ²	0.005	0.004	0.006

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A10: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Housing Market		
	2003-2013	pre-2011	post-2011
Media _t	0.013** (0.006)	0.030 (0.020)	0.007*** (0.002)
Media _{t-1}	0.008 (0.006)	0.031 (0.020)	-0.0003 (0.002)
Media _{t-2}	-0.003 (0.008)	0.003 (0.026)	-0.005** (0.002)
Media _{t-3}	-0.007 (0.004)	-0.010 (0.014)	-0.006*** (0.002)
Media _{t-4}	-0.005 (0.004)	-0.006 (0.015)	-0.003** (0.001)
Media _{t-5}	0.001 (0.007)	0.011 (0.022)	-0.003* (0.002)
Media _{t-6}	0.005 (0.004)	0.018 (0.014)	0.001 (0.002)
Media _{t-7}	0.009** (0.005)	0.020 (0.015)	0.006*** (0.002)
Media _{t-8}	0.005 (0.005)	0.013 (0.015)	0.002 (0.002)
Media _{t-9}	-0.011*** (0.003)	-0.018* (0.009)	-0.008*** (0.001)
Media _{t-10}	-0.005 (0.008)	-0.006 (0.025)	-0.005*** (0.002)
Media _{t-11}	-0.013*** (0.002)	-0.028*** (0.006)	-0.005*** (0.001)
Media _{t-12}	-0.003 (0.004)	-0.003 (0.013)	-0.003** (0.001)
Media _{t-13}	0.005 (0.004)	0.0004 (0.009)	0.008** (0.003)
Media _{t-14}	0.003 (0.004)	0.012 (0.014)	0.0002 (0.002)
Media _{t-15}	0.005 (0.007)	0.021 (0.022)	-0.001 (0.002)
Constant	0.006*** (0.0005)	0.009*** (0.001)	0.004*** (0.0003)
Observations	7,380	2,907	4,473
Adjusted R ²	0.002	0.002	0.007

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A11: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Government Sponsored Enterprises		
	2003-2013	pre-2011	post-2011
Media _t	0.005** (0.002)	0.003 (0.006)	0.006*** (0.002)
Media _{t-1}	-0.0001 (0.002)	0.001 (0.007)	-0.001 (0.001)
Media _{t-2}	-0.007*** (0.002)	-0.011** (0.005)	-0.005*** (0.001)
Media _{t-3}	-0.010*** (0.001)	-0.021*** (0.005)	-0.005*** (0.001)
Media _{t-4}	-0.006*** (0.002)	-0.017*** (0.004)	-0.002* (0.001)
Media _{t-5}	0.001 (0.005)	0.005 (0.015)	-0.001 (0.001)
Media _{t-6}	0.002 (0.003)	0.002 (0.008)	0.002 (0.002)
Media _{t-7}	0.006** (0.003)	0.006 (0.009)	0.006*** (0.002)
Media _{t-8}	0.0004 (0.002)	-0.001 (0.004)	0.001 (0.001)
Media _{t-9}	-0.009*** (0.001)	-0.018*** (0.004)	-0.005*** (0.001)
Media _{t-10}	-0.005** (0.002)	-0.007 (0.006)	-0.004*** (0.001)
Media _{t-11}	-0.005** (0.002)	-0.008 (0.007)	-0.004*** (0.001)
Media _{t-12}	-0.005*** (0.002)	-0.013*** (0.004)	-0.002 (0.001)
Media _{t-13}	0.006 (0.004)	0.018 (0.013)	0.001 (0.001)
Media _{t-14}	0.005 (0.004)	0.009 (0.015)	0.003** (0.001)
Media _{t-15}	0.002 (0.004)	0.004 (0.012)	0.001 (0.002)
Constant	0.005*** (0.0004)	0.007*** (0.001)	0.003*** (0.0002)
Observations	7,380	2,907	4,473
Adjusted R ²	0.002	-0.00000	0.013

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A12: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Deposit Insurance		
	2003-2013	pre-2011	post-2011
Media _t	0.005 (0.009)	0.041 (0.027)	-0.010** (0.005)
Media _{t-1}	0.022 (0.015)	0.009 (0.023)	0.029 (0.019)
Media _{t-2}	-0.006 (0.010)	0.002 (0.023)	-0.010 (0.009)
Media _{t-3}	0.002 (0.011)	-0.003 (0.015)	0.005 (0.014)
Media _{t-4}	-0.005 (0.006)	0.015 (0.018)	-0.013*** (0.004)
Media _{t-5}	-0.015*** (0.003)	-0.018** (0.007)	-0.012*** (0.003)
Media _{t-6}	0.0003 (0.009)	0.022 (0.031)	-0.009*** (0.003)
Media _{t-7}	-0.002 (0.005)	0.005 (0.010)	-0.005 (0.005)
Media _{t-8}	0.043** (0.019)	0.044 (0.027)	0.042* (0.025)
Media _{t-9}	-0.010 (0.009)	-0.023*** (0.006)	-0.005 (0.013)
Media _{t-10}	-0.019*** (0.004)	-0.026*** (0.006)	-0.017*** (0.005)
Media _{t-11}	0.006 (0.011)	-0.011 (0.009)	0.013 (0.016)
Media _{t-12}	0.009 (0.010)	0.012 (0.023)	0.008 (0.010)
Media _{t-13}	0.009 (0.007)	0.023 (0.016)	0.004 (0.008)
Media _{t-14}	0.016 (0.013)	0.012 (0.016)	0.019 (0.016)
Media _{t-15}	0.010 (0.017)	0.035 (0.053)	-0.0002 (0.010)
Constant	0.006*** (0.001)	0.005*** (0.002)	0.007*** (0.001)
Observations	7,380	2,907	4,473
Adjusted R ²	0.003	0.003	0.003

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A13: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Monetary Policy Old		
	2003-2013	pre-2011	post-2011
Media _t	0.004 (0.003)	0.005 (0.009)	0.004*** (0.001)
Media _{t-1}	0.006 (0.004)	0.018 (0.015)	0.0005 (0.001)
Media _{t-2}	-0.008*** (0.001)	-0.014*** (0.004)	-0.004*** (0.001)
Media _{t-3}	-0.007*** (0.001)	-0.017*** (0.004)	-0.004*** (0.001)
Media _{t-4}	-0.005*** (0.001)	-0.014*** (0.004)	-0.001 (0.001)
Media _{t-5}	0.00003 (0.002)	0.001 (0.007)	0.0002 (0.001)
Media _{t-6}	0.006 (0.007)	0.020 (0.022)	-0.0001 (0.001)
Media _{t-7}	0.003 (0.003)	0.004 (0.009)	0.004*** (0.001)
Media _{t-8}	0.001 (0.002)	0.001 (0.008)	0.0004 (0.001)
Media _{t-9}	-0.007*** (0.001)	-0.016*** (0.004)	-0.004*** (0.001)
Media _{t-10}	-0.007*** (0.001)	-0.016*** (0.004)	-0.003*** (0.001)
Media _{t-11}	-0.006*** (0.001)	-0.014*** (0.004)	-0.003*** (0.001)
Media _{t-12}	-0.002 (0.002)	-0.003 (0.007)	-0.001 (0.001)
Media _{t-13}	0.005 (0.004)	0.013 (0.012)	0.002 (0.002)
Media _{t-14}	0.005 (0.005)	0.010 (0.019)	0.003** (0.001)
Media _{t-15}	0.005 (0.006)	0.017 (0.021)	0.0004 (0.001)
Constant	0.004*** (0.0004)	0.005*** (0.001)	0.003*** (0.0001)
Observations	7,380	2,907	4,473
Adjusted R ²	0.003	0.003	0.017

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A14: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Monetary Policy: reserve stability		
	2003-2013	pre-2011	post-2011
Media _t	0.010 (0.007)	0.009 (0.012)	0.011 (0.009)
Media _{t-1}	-0.001 (0.006)	0.011 (0.016)	-0.006 (0.006)
Media _{t-2}	-0.009* (0.005)	-0.001 (0.011)	-0.012** (0.006)
Media _{t-3}	-0.013* (0.007)	-0.003 (0.022)	-0.017*** (0.004)
Media _{t-4}	-0.011** (0.005)	-0.012 (0.012)	-0.010* (0.006)
Media _{t-5}	0.014 (0.014)	-0.0004 (0.013)	0.019 (0.019)
Media _{t-6}	0.012 (0.012)	-0.009 (0.008)	0.020 (0.016)
Media _{t-7}	0.003 (0.006)	0.002 (0.011)	0.002 (0.007)
Media _{t-8}	0.017 (0.011)	0.005 (0.011)	0.021 (0.015)
Media _{t-9}	-0.010 (0.009)	-0.021*** (0.008)	-0.006 (0.012)
Media _{t-10}	-0.014*** (0.005)	-0.014 (0.011)	-0.014*** (0.005)
Media _{t-11}	-0.007 (0.007)	0.002 (0.020)	-0.010* (0.005)
Media _{t-12}	-0.015*** (0.004)	-0.017* (0.009)	-0.014*** (0.005)
Media _{t-13}	0.003 (0.006)	-0.002 (0.011)	0.005 (0.008)
Media _{t-14}	0.013 (0.009)	0.032 (0.022)	0.007 (0.009)
Media _{t-15}	0.011 (0.010)	0.039 (0.029)	0.0001 (0.008)
Constant	0.010*** (0.001)	0.010*** (0.001)	0.009*** (0.001)
Observations	7,380	2,907	4,473
Adjusted R ²	0.002	-0.0002	0.003

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A15: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Fiscal budget		
	2003-2013	pre-2011	post-2011
Media _t	0.002 (0.004)	0.0004 (0.012)	0.003 (0.002)
Media _{t-1}	0.0001 (0.004)	0.003 (0.013)	-0.002 (0.001)
Media _{t-2}	-0.009*** (0.002)	-0.012 (0.008)	-0.007*** (0.001)
Media _{t-3}	-0.010*** (0.002)	-0.020*** (0.006)	-0.006*** (0.001)
Media _{t-4}	-0.003 (0.003)	-0.009 (0.009)	-0.001 (0.002)
Media _{t-5}	-0.007*** (0.002)	-0.017*** (0.006)	-0.003* (0.002)
Media _{t-6}	-0.001 (0.003)	-0.004 (0.009)	0.00001 (0.002)
Media _{t-7}	0.005 (0.005)	0.009 (0.016)	0.005*** (0.002)
Media _{t-8}	0.010 (0.007)	0.038 (0.024)	-0.002 (0.001)
Media _{t-9}	-0.005 (0.003)	-0.009 (0.010)	-0.003 (0.002)
Media _{t-10}	-0.008*** (0.003)	-0.014 (0.010)	-0.006*** (0.002)
Media _{t-11}	-0.008** (0.004)	-0.012 (0.013)	-0.007*** (0.001)
Media _{t-12}	0.001 (0.005)	0.003 (0.014)	0.0005 (0.005)
Media _{t-13}	0.008 (0.007)	0.024 (0.022)	0.002 (0.002)
Media _{t-14}	0.001 (0.004)	0.003 (0.011)	0.001 (0.002)
Media _{t-15}	0.001 (0.006)	0.009 (0.021)	-0.002 (0.001)
Constant	0.005*** (0.001)	0.007*** (0.001)	0.004*** (0.0004)
Observations	7,380	2,907	4,473
Adjusted R ²	0.0002	-0.001	0.00004

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A16: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Monetary Policy New		
	2003-2013	pre-2011	post-2011
Media _t	0.007** (0.003)	0.005*** (0.002)	0.008** (0.004)
Media _{t-1}	-0.002 (0.001)	0.003** (0.002)	-0.005** (0.002)
Media _{t-2}	-0.002 (0.003)	-0.003 (0.002)	-0.002 (0.004)
Media _{t-3}	-0.008*** (0.001)	-0.007*** (0.002)	-0.009*** (0.002)
Media _{t-4}	-0.003 (0.002)	-0.004*** (0.002)	-0.003 (0.003)
Media _{t-5}	0.009* (0.005)	0.0001 (0.002)	0.013* (0.007)
Media _{t-6}	-0.003 (0.002)	0.004* (0.002)	-0.006*** (0.002)
Media _{t-7}	0.008* (0.004)	0.007*** (0.002)	0.009 (0.006)
Media _{t-8}	0.004 (0.003)	0.007*** (0.002)	0.003 (0.004)
Media _{t-9}	-0.004* (0.002)	-0.001 (0.003)	-0.005* (0.003)
Media _{t-10}	-0.006*** (0.001)	-0.006*** (0.002)	-0.006*** (0.002)
Media _{t-11}	-0.006*** (0.001)	-0.004** (0.002)	-0.007*** (0.002)
Media _{t-12}	0.005 (0.004)	0.0004 (0.002)	0.007 (0.006)
Media _{t-13}	-0.001 (0.001)	0.005** (0.002)	-0.004* (0.002)
Media _{t-14}	0.002 (0.002)	0.003 (0.002)	0.001 (0.002)
Media _{t-15}	0.008 (0.007)	0.00004 (0.002)	0.012 (0.010)
Constant	0.004*** (0.0003)	0.003*** (0.0002)	0.004*** (0.0004)
Observations	7,380	2,907	4,473
Adjusted R ²	0.004	0.030	0.003

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A17: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Inflation		
	2003-2013	pre-2011	post-2011
Media _t	0.026*** (0.010)	0.006** (0.002)	0.034** (0.014)
Media _{t-1}	0.018** (0.008)	0.012*** (0.003)	0.020* (0.011)
Media _{t-2}	-0.008** (0.004)	-0.004** (0.002)	-0.010* (0.005)
Media _{t-3}	-0.013*** (0.002)	-0.008*** (0.002)	-0.016*** (0.003)
Media _{t-4}	-0.008*** (0.002)	-0.005*** (0.002)	-0.010*** (0.003)
Media _{t-5}	0.006 (0.005)	-0.0001 (0.002)	0.008 (0.007)
Media _{t-6}	0.003 (0.005)	0.001 (0.002)	0.003 (0.007)
Media _{t-7}	0.004 (0.003)	0.007*** (0.002)	0.004 (0.005)
Media _{t-8}	0.003 (0.004)	0.010*** (0.003)	-0.001 (0.006)
Media _{t-9}	-0.004 (0.004)	-0.003 (0.003)	-0.004 (0.006)
Media _{t-10}	-0.011*** (0.002)	-0.006*** (0.002)	-0.013*** (0.003)
Media _{t-11}	-0.009*** (0.003)	-0.006*** (0.002)	-0.010** (0.004)
Media _{t-12}	-0.001 (0.003)	0.005 (0.004)	-0.004 (0.004)
Media _{t-13}	0.010* (0.005)	0.006** (0.003)	0.011 (0.008)
Media _{t-14}	-0.006*** (0.002)	0.003 (0.003)	-0.010*** (0.003)
Media _{t-15}	-0.001 (0.003)	0.001 (0.002)	-0.001 (0.004)
Constant	0.006*** (0.0004)	0.004*** (0.0002)	0.007*** (0.001)
Observations	7,380	2,907	4,473
Adjusted R ²	0.012	0.031	0.012

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A18: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Balance Sheet		
	2003-2013	pre-2011	post-2011
Media _t	0.005*** (0.002)	0.001 (0.002)	0.007*** (0.002)
Media _{t-1}	0.0002 (0.001)	0.002 (0.002)	-0.001 (0.001)
Media _{t-2}	-0.006*** (0.001)	-0.005** (0.002)	-0.006*** (0.001)
Media _{t-3}	-0.006*** (0.001)	-0.010*** (0.002)	-0.005*** (0.001)
Media _{t-4}	-0.002* (0.001)	-0.004 (0.004)	-0.002 (0.001)
Media _{t-5}	0.001 (0.002)	0.004 (0.005)	0.001 (0.001)
Media _{t-6}	0.007 (0.008)	0.028 (0.025)	-0.001 (0.001)
Media _{t-7}	0.005*** (0.002)	0.006* (0.003)	0.006** (0.002)
Media _{t-8}	0.001 (0.001)	0.006* (0.003)	-0.001 (0.001)
Media _{t-9}	-0.005*** (0.001)	-0.004 (0.003)	-0.004*** (0.001)
Media _{t-10}	-0.006*** (0.001)	-0.008*** (0.002)	-0.005*** (0.001)
Media _{t-11}	-0.004*** (0.001)	-0.006** (0.002)	-0.004*** (0.001)
Media _{t-12}	-0.002 (0.001)	-0.0004 (0.002)	-0.002* (0.001)
Media _{t-13}	0.001 (0.001)	0.001 (0.003)	0.001 (0.002)
Media _{t-14}	0.003* (0.001)	0.001 (0.002)	0.003* (0.002)
Media _{t-15}	-0.001 (0.001)	-0.004** (0.002)	0.0002 (0.001)
Constant	0.004*** (0.0002)	0.004*** (0.0005)	0.003*** (0.0003)
Observations	7,380	2,907	4,473
Adjusted R ²	0.006	0.017	0.004

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A19: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Foreclosures		
	2003-2013	pre-2011	post-2011
Media _t	0.013 (0.015)	-0.010** (0.005)	0.022 (0.021)
Media _{t-1}	0.013 (0.018)	0.006 (0.007)	0.015 (0.025)
Media _{t-2}	-0.032*** (0.007)	-0.006 (0.009)	-0.043*** (0.010)
Media _{t-3}	-0.027** (0.011)	-0.007 (0.010)	-0.035** (0.014)
Media _{t-4}	-0.010 (0.015)	-0.008 (0.009)	-0.011 (0.020)
Media _{t-5}	-0.017* (0.010)	-0.002 (0.011)	-0.026* (0.013)
Media _{t-6}	0.011 (0.013)	-0.0005 (0.008)	0.017 (0.019)
Media _{t-7}	0.049*** (0.018)	0.063** (0.027)	0.041* (0.023)
Media _{t-8}	0.023 (0.018)	0.005 (0.010)	0.032 (0.024)
Media _{t-9}	-0.036*** (0.008)	-0.014* (0.008)	-0.047*** (0.011)
Media _{t-10}	-0.011 (0.015)	0.005 (0.013)	-0.018 (0.021)
Media _{t-11}	-0.011 (0.013)	-0.013** (0.006)	-0.011 (0.019)
Media _{t-12}	-0.010 (0.012)	-0.005 (0.010)	-0.012 (0.016)
Media _{t-13}	-0.005 (0.010)	0.014 (0.015)	-0.012 (0.012)
Media _{t-14}	-0.017** (0.007)	-0.005 (0.007)	-0.023** (0.010)
Media _{t-15}	0.008 (0.014)	-0.003 (0.008)	0.013 (0.020)
Constant	0.017*** (0.001)	0.008*** (0.001)	0.022*** (0.002)
Observations	7,380	2,907	4,473
Adjusted R ²	0.003	0.005	0.002

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A20: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Clearinghouses		
	2003-2013	pre-2011	post-2011
Media _t	0.007 (0.005)	0.017 (0.015)	0.003 (0.002)
Media _{t-1}	0.006 (0.006)	0.010 (0.008)	0.004 (0.007)
Media _{t-2}	-0.008*** (0.002)	-0.007** (0.003)	-0.008*** (0.002)
Media _{t-3}	-0.005 (0.004)	-0.013*** (0.004)	-0.002 (0.005)
Media _{t-4}	-0.002 (0.003)	0.001 (0.008)	-0.002 (0.002)
Media _{t-5}	-0.0004 (0.003)	0.003 (0.007)	-0.001 (0.003)
Media _{t-6}	0.001 (0.002)	-0.001 (0.003)	0.002 (0.003)
Media _{t-7}	0.009** (0.004)	0.001 (0.003)	0.012** (0.006)
Media _{t-8}	0.001 (0.002)	0.013** (0.006)	-0.003** (0.002)
Media _{t-9}	-0.001 (0.005)	0.012 (0.015)	-0.007*** (0.002)
Media _{t-10}	-0.007*** (0.002)	-0.012*** (0.003)	-0.004 (0.003)
Media _{t-11}	-0.004* (0.002)	-0.006 (0.004)	-0.004 (0.003)
Media _{t-12}	-0.004** (0.002)	-0.006* (0.003)	-0.003 (0.002)
Media _{t-13}	0.003 (0.003)	0.007 (0.010)	0.002 (0.002)
Media _{t-14}	0.007* (0.004)	0.016 (0.010)	0.003 (0.003)
Media _{t-15}	-0.002 (0.003)	0.003 (0.008)	-0.004** (0.002)
Constant	0.004*** (0.0003)	0.004*** (0.001)	0.004*** (0.0004)
Observations	7,380	2,907	4,473
Adjusted R ²	0.002	0.003	0.001

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A21: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Enforcement Actions		
	2003-2013	pre-2011	post-2011
Media _t	0.163*** (0.036)	0.186*** (0.070)	0.157*** (0.041)
Media _{t-1}	0.023 (0.028)	0.054 (0.060)	0.008 (0.032)
Media _{t-2}	-0.107*** (0.023)	-0.153*** (0.043)	-0.087*** (0.027)
Media _{t-3}	-0.096*** (0.022)	-0.195*** (0.044)	-0.056** (0.026)
Media _{t-4}	-0.060** (0.025)	-0.143*** (0.045)	-0.026 (0.030)
Media _{t-5}	0.025 (0.036)	0.052 (0.071)	0.014 (0.041)
Media _{t-6}	0.030 (0.032)	0.072 (0.070)	0.016 (0.033)
Media _{t-7}	0.179*** (0.038)	0.300*** (0.076)	0.135*** (0.041)
Media _{t-8}	0.081** (0.033)	0.248*** (0.075)	0.015 (0.030)
Media _{t-9}	-0.120*** (0.023)	-0.154*** (0.056)	-0.101*** (0.021)
Media _{t-10}	-0.075*** (0.027)	-0.116* (0.069)	-0.057** (0.026)
Media _{t-11}	-0.079*** (0.026)	-0.084 (0.061)	-0.075*** (0.027)
Media _{t-12}	-0.031 (0.028)	-0.053 (0.062)	-0.018 (0.031)
Media _{t-13}	0.089** (0.035)	0.170** (0.076)	0.054 (0.038)
Media _{t-14}	0.128*** (0.036)	0.124* (0.070)	0.130*** (0.042)
Media _{t-15}	0.004 (0.031)	-0.051 (0.052)	0.025 (0.038)
Constant	0.064*** (0.003)	0.075*** (0.005)	0.056*** (0.003)
Observations	7,380	2,907	4,473
Adjusted R ²	0.022	0.032	0.018

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A22: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Inflation Outlook		
	2003-2013	pre-2011	post-2011
Media _t	0.032** (0.014)	-0.002 (0.005)	0.045** (0.020)
Media _{t-1}	0.028** (0.014)	-0.0005 (0.004)	0.038* (0.020)
Media _{t-2}	0.002 (0.011)	-0.015*** (0.004)	0.008 (0.015)
Media _{t-3}	-0.029*** (0.003)	-0.023*** (0.004)	-0.031*** (0.005)
Media _{t-4}	-0.019*** (0.004)	-0.008 (0.009)	-0.023*** (0.004)
Media _{t-5}	0.001 (0.006)	0.004 (0.009)	0.0001 (0.008)
Media _{t-6}	-0.009 (0.005)	-0.004 (0.004)	-0.011 (0.008)
Media _{t-7}	0.0001 (0.006)	0.007 (0.007)	-0.002 (0.007)
Media _{t-8}	-0.006 (0.006)	0.006 (0.006)	-0.012 (0.008)
Media _{t-9}	-0.013** (0.005)	-0.018*** (0.004)	-0.010 (0.007)
Media _{t-10}	-0.026*** (0.003)	-0.019*** (0.004)	-0.029*** (0.004)
Media _{t-11}	-0.020*** (0.004)	-0.014*** (0.004)	-0.024*** (0.006)
Media _{t-12}	0.001 (0.006)	-0.006 (0.004)	0.002 (0.009)
Media _{t-13}	0.009 (0.007)	-0.0005 (0.004)	0.013 (0.010)
Media _{t-14}	-0.005 (0.008)	0.003 (0.010)	-0.008 (0.010)
Media _{t-15}	-0.003 (0.008)	-0.0002 (0.005)	-0.005 (0.011)
Constant	0.010*** (0.001)	0.007*** (0.001)	0.011*** (0.001)
Observations	7,380	2,907	4,473
Adjusted R ²	0.007	0.002	0.009

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A23: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Labor Market Projections		
	2003-2013	pre-2011	post-2011
Media _t	0.009** (0.005)	0.005*** (0.002)	0.011* (0.006)
Media _{t-1}	0.003 (0.004)	0.005*** (0.002)	0.002 (0.006)
Media _{t-2}	0.003 (0.007)	-0.004*** (0.001)	0.005 (0.010)
Media _{t-3}	-0.004 (0.004)	-0.005** (0.002)	-0.004 (0.005)
Media _{t-4}	-0.001 (0.003)	-0.005*** (0.001)	-0.0002 (0.003)
Media _{t-5}	-0.001 (0.002)	0.0001 (0.002)	-0.002 (0.002)
Media _{t-6}	-0.002 (0.002)	0.003* (0.002)	-0.004** (0.002)
Media _{t-7}	0.006 (0.004)	0.006*** (0.002)	0.005 (0.006)
Media _{t-8}	0.007 (0.008)	0.007*** (0.002)	0.007 (0.011)
Media _{t-9}	-0.008*** (0.002)	-0.001 (0.003)	-0.010*** (0.002)
Media _{t-10}	-0.005*** (0.002)	-0.005*** (0.002)	-0.005** (0.002)
Media _{t-11}	-0.005*** (0.001)	-0.003 (0.002)	-0.006*** (0.002)
Media _{t-12}	-0.003** (0.001)	0.0003 (0.002)	-0.005*** (0.002)
Media _{t-13}	-0.001 (0.002)	0.004** (0.002)	-0.004 (0.003)
Media _{t-14}	0.004 (0.004)	0.002 (0.002)	0.004 (0.005)
Media _{t-15}	0.013 (0.013)	0.0003 (0.002)	0.019 (0.018)
Constant	0.004*** (0.0004)	0.003*** (0.0002)	0.004*** (0.001)
Observations	7,380	2,907	4,473
Adjusted R ²	0.002	0.026	0.001

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A24: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Regulations		
	2003-2013	pre-2011	post-2011
Media _t	0.144*** (0.038)	0.060* (0.031)	0.178*** (0.052)
Media _{t-1}	0.013 (0.028)	0.012 (0.018)	0.010 (0.039)
Media _{t-2}	0.009 (0.024)	0.039 (0.030)	-0.003 (0.032)
Media _{t-3}	-0.046*** (0.016)	-0.009 (0.026)	-0.065*** (0.020)
Media _{t-4}	0.028 (0.027)	-0.018 (0.018)	0.048 (0.037)
Media _{t-5}	-0.016 (0.018)	-0.013 (0.022)	-0.021 (0.023)
Media _{t-6}	0.032 (0.025)	-0.012 (0.018)	0.048 (0.035)
Media _{t-7}	0.037 (0.023)	0.011 (0.019)	0.045 (0.031)
Media _{t-8}	0.001 (0.022)	0.009 (0.020)	-0.005 (0.030)
Media _{t-9}	-0.020 (0.019)	-0.011 (0.018)	-0.024 (0.026)
Media _{t-10}	-0.040** (0.017)	-0.050*** (0.011)	-0.037 (0.024)
Media _{t-11}	-0.011 (0.021)	-0.003 (0.020)	-0.018 (0.029)
Media _{t-12}	0.010 (0.028)	-0.011 (0.019)	0.018 (0.038)
Media _{t-13}	-0.023 (0.016)	-0.028** (0.012)	-0.024 (0.022)
Media _{t-14}	-0.003 (0.021)	-0.031** (0.015)	0.008 (0.029)
Media _{t-15}	0.049* (0.026)	0.069** (0.032)	0.037 (0.035)
Constant	0.027*** (0.002)	0.017*** (0.002)	0.035*** (0.003)
Observations	7,380	2,907	4,473
Adjusted R ²	0.008	0.005	0.010

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A25: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Payment Systems		
	2003-2013	pre-2011	post-2011
Media _t	0.057*** (0.021)	0.088* (0.048)	0.044** (0.022)
Media _{t-1}	-0.002 (0.016)	-0.005 (0.023)	0.004 (0.020)
Media _{t-2}	-0.024** (0.010)	-0.004 (0.030)	-0.033*** (0.006)
Media _{t-3}	-0.027** (0.011)	-0.049* (0.028)	-0.017 (0.011)
Media _{t-4}	-0.017* (0.010)	-0.034 (0.024)	-0.009 (0.011)
Media _{t-5}	0.004 (0.013)	0.007 (0.028)	0.0003 (0.014)
Media _{t-6}	0.038* (0.021)	-0.013 (0.026)	0.060** (0.028)
Media _{t-7}	0.049** (0.025)	0.009 (0.024)	0.063* (0.034)
Media _{t-8}	-0.002 (0.014)	-0.039*** (0.013)	0.013 (0.020)
Media _{t-9}	-0.010 (0.015)	-0.051*** (0.016)	0.005 (0.021)
Media _{t-10}	-0.018* (0.010)	-0.045** (0.023)	-0.008 (0.011)
Media _{t-11}	-0.007 (0.012)	-0.007 (0.023)	-0.004 (0.015)
Media _{t-12}	-0.006 (0.020)	0.047 (0.064)	-0.029*** (0.006)
Media _{t-13}	0.011 (0.015)	0.002 (0.023)	0.020 (0.018)
Media _{t-14}	0.014 (0.015)	0.068 (0.043)	-0.010 (0.010)
Media _{t-15}	-0.021** (0.010)	-0.042** (0.016)	-0.009 (0.013)
Constant	0.015*** (0.001)	0.020*** (0.003)	0.012*** (0.001)
Observations	7,380	2,907	4,473
Adjusted R ²	0.004	0.004	0.008

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A26: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Forward Guidance		
	2003-2013	pre-2011	post-2011
Media _t	0.020** (0.008)	0.004 (0.006)	0.027** (0.012)
Media _{t-1}	0.019* (0.010)	0.0002 (0.003)	0.026* (0.015)
Media _{t-2}	0.001 (0.007)	-0.010*** (0.002)	0.005 (0.009)
Media _{t-3}	-0.014*** (0.002)	-0.014*** (0.003)	-0.014*** (0.003)
Media _{t-4}	-0.008*** (0.002)	-0.012*** (0.003)	-0.007** (0.003)
Media _{t-5}	0.007 (0.005)	0.005 (0.005)	0.007 (0.007)
Media _{t-6}	-0.003 (0.003)	0.007 (0.008)	-0.008*** (0.002)
Media _{t-7}	0.002 (0.003)	0.005 (0.004)	0.001 (0.003)
Media _{t-8}	0.011* (0.006)	0.009 (0.006)	0.011 (0.009)
Media _{t-9}	-0.009*** (0.002)	-0.011*** (0.002)	-0.008** (0.003)
Media _{t-10}	-0.011*** (0.002)	-0.013*** (0.003)	-0.011*** (0.003)
Media _{t-11}	-0.009*** (0.002)	-0.008** (0.003)	-0.010*** (0.003)
Media _{t-12}	0.002 (0.004)	-0.003 (0.003)	0.003 (0.005)
Media _{t-13}	0.004 (0.003)	0.002 (0.004)	0.005 (0.004)
Media _{t-14}	-0.001 (0.004)	0.009 (0.011)	-0.005* (0.003)
Media _{t-15}	0.0005 (0.003)	0.002 (0.004)	-0.0001 (0.004)
Constant	0.005*** (0.0004)	0.005*** (0.001)	0.006*** (0.001)
Observations	7,380	2,907	4,473
Adjusted R ²	0.009	0.006	0.011

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A27: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Credit Market		
	2003-2013	pre-2011	post-2011
Media _t	0.017 (0.013)	0.025 (0.040)	0.015** (0.006)
Media _{t-1}	-0.001 (0.007)	0.011 (0.021)	-0.005** (0.002)
Media _{t-2}	-0.009 (0.007)	-0.014 (0.020)	-0.006 (0.006)
Media _{t-3}	-0.015** (0.007)	-0.043** (0.017)	-0.002 (0.007)
Media _{t-4}	-0.008 (0.007)	-0.026 (0.020)	-0.0003 (0.006)
Media _{t-5}	-0.005 (0.006)	-0.004 (0.018)	-0.004 (0.003)
Media _{t-6}	0.006 (0.008)	0.016 (0.024)	0.003 (0.004)
Media _{t-7}	0.015* (0.009)	0.025 (0.022)	0.013* (0.008)
Media _{t-8}	0.012 (0.009)	0.037 (0.030)	0.002 (0.004)
Media _{t-9}	-0.010 (0.007)	-0.008 (0.022)	-0.010*** (0.003)
Media _{t-10}	-0.018** (0.007)	-0.043* (0.023)	-0.006 (0.004)
Media _{t-11}	-0.007 (0.007)	-0.006 (0.022)	-0.006** (0.003)
Media _{t-12}	0.003 (0.009)	0.022 (0.028)	-0.003 (0.005)
Media _{t-13}	0.010 (0.011)	0.034 (0.033)	0.002 (0.007)
Media _{t-14}	0.015 (0.011)	0.042 (0.032)	0.004 (0.007)
Media _{t-15}	-0.005 (0.009)	-0.016 (0.021)	0.001 (0.009)
Constant	0.011*** (0.001)	0.018*** (0.002)	0.006*** (0.001)
Observations	7,380	2,907	4,473
Adjusted R ²	0.001	0.00001	0.001

Note: Robust Standard Errors

*p<0.1; **p<0.05; ***p<0.01

Table A28: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Point Forecast to Range		
	2003-2013	pre-2011	post-2011
Media _t	0.012* (0.007)	0.005*** (0.002)	0.015 (0.010)
Media _{t-1}	0.009 (0.007)	0.004** (0.001)	0.010 (0.010)
Media _{t-2}	-0.004 (0.003)	-0.003*** (0.001)	-0.004 (0.005)
Media _{t-3}	-0.009*** (0.001)	-0.005*** (0.002)	-0.011*** (0.002)
Media _{t-4}	-0.003 (0.002)	-0.003** (0.001)	-0.003 (0.003)
Media _{t-5}	-0.0003 (0.003)	0.001 (0.002)	-0.001 (0.004)
Media _{t-6}	0.0003 (0.003)	0.005** (0.002)	-0.002 (0.004)
Media _{t-7}	0.005** (0.003)	0.007*** (0.002)	0.005 (0.004)
Media _{t-8}	0.004 (0.005)	0.006*** (0.002)	0.004 (0.008)
Media _{t-9}	-0.005*** (0.002)	-0.004** (0.002)	-0.005** (0.003)
Media _{t-10}	-0.007*** (0.001)	-0.004*** (0.002)	-0.009*** (0.002)
Media _{t-11}	-0.006*** (0.001)	-0.004** (0.002)	-0.007*** (0.002)
Media _{t-12}	-0.002 (0.002)	0.0003 (0.001)	-0.003 (0.003)
Media _{t-13}	0.005 (0.005)	0.004** (0.002)	0.006 (0.008)
Media _{t-14}	-0.001 (0.002)	0.002 (0.002)	-0.002 (0.003)
Media _{t-15}	0.002 (0.003)	0.001 (0.002)	0.002 (0.005)
Constant	0.004*** (0.0003)	0.003*** (0.0001)	0.004*** (0.0005)
Observations	7,380	2,907	4,473
Adjusted R ²	0.006	0.032	0.004

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A29: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	High Inflation		
	2003-2013	pre-2011	post-2011
Media _t	0.004*** (0.001)	0.005*** (0.002)	0.004** (0.002)
Media _{t-1}	0.001 (0.002)	0.004*** (0.001)	-0.0001 (0.002)
Media _{t-2}	-0.006*** (0.001)	-0.002 (0.002)	-0.008*** (0.002)
Media _{t-3}	-0.003 (0.005)	-0.006*** (0.002)	-0.001 (0.007)
Media _{t-4}	-0.004* (0.002)	-0.003** (0.001)	-0.004 (0.003)
Media _{t-5}	0.008 (0.005)	0.001 (0.002)	0.011 (0.007)
Media _{t-6}	0.007 (0.006)	0.003 (0.002)	0.008 (0.008)
Media _{t-7}	0.003* (0.002)	0.006*** (0.002)	0.001 (0.002)
Media _{t-8}	0.001 (0.001)	0.008*** (0.002)	-0.002 (0.002)
Media _{t-9}	-0.002 (0.003)	-0.002 (0.003)	-0.003 (0.004)
Media _{t-10}	-0.006*** (0.001)	-0.005*** (0.001)	-0.007*** (0.002)
Media _{t-11}	-0.006*** (0.001)	-0.003* (0.002)	-0.007*** (0.001)
Media _{t-12}	-0.002 (0.002)	-0.0002 (0.001)	-0.002 (0.002)
Media _{t-13}	0.005 (0.004)	0.005** (0.002)	0.005 (0.005)
Media _{t-14}	0.002 (0.002)	0.003* (0.002)	0.001 (0.003)
Media _{t-15}	-0.0003 (0.002)	0.00003 (0.001)	-0.0005 (0.002)
Constant	0.003*** (0.0003)	0.003*** (0.0001)	0.004*** (0.0005)
Observations	7,380	2,907	4,473
Adjusted R ²	0.003	0.032	0.001

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A30: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Consumer Credit		
	2003-2013	pre-2011	post-2011
Media _t	0.026* (0.015)	0.071 (0.045)	0.011 (0.008)
Media _{t-1}	0.027 (0.023)	0.121* (0.071)	-0.011*** (0.004)
Media _{t-2}	-0.016 (0.011)	-0.016 (0.032)	-0.009 (0.007)
Media _{t-3}	-0.013 (0.014)	-0.012 (0.044)	-0.013*** (0.004)
Media _{t-4}	0.024 (0.022)	0.044 (0.063)	0.021 (0.016)
Media _{t-5}	-0.001 (0.014)	0.026 (0.044)	-0.010** (0.004)
Media _{t-6}	-0.009 (0.010)	-0.031 (0.031)	0.00000 (0.006)
Media _{t-7}	0.011 (0.011)	0.027 (0.032)	0.008 (0.006)
Media _{t-8}	0.033* (0.018)	0.109* (0.058)	0.001 (0.007)
Media _{t-9}	-0.017* (0.009)	-0.026 (0.029)	-0.009* (0.005)
Media _{t-10}	-0.016* (0.009)	-0.034 (0.024)	-0.008 (0.007)
Media _{t-11}	-0.002 (0.015)	-0.011 (0.042)	0.005 (0.011)
Media _{t-12}	-0.00001 (0.014)	0.025 (0.043)	-0.005 (0.006)
Media _{t-13}	0.050** (0.023)	0.145** (0.071)	0.011 (0.011)
Media _{t-14}	0.021 (0.019)	0.011 (0.041)	0.032 (0.020)
Media _{t-15}	0.050** (0.021)	0.152** (0.062)	0.008 (0.012)
Constant	0.013*** (0.001)	0.019*** (0.003)	0.007*** (0.001)
Observations	7,380	2,907	4,473
Adjusted R ²	0.005	0.015	0.004

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A31: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Core Inflation		
	2003-2013	pre-2011	post-2011
Media _t	0.023 (0.014)	0.081* (0.045)	0.008*** (0.002)
Media _{t-1}	0.106*** (0.029)	0.357*** (0.082)	0.002 (0.002)
Media _{t-2}	-0.023*** (0.009)	-0.045* (0.027)	-0.004*** (0.001)
Media _{t-3}	-0.0002 (0.011)	0.001 (0.034)	-0.003*** (0.001)
Media _{t-4}	-0.025*** (0.004)	-0.077*** (0.015)	-0.001 (0.001)
Media _{t-5}	-0.006 (0.005)	-0.023 (0.019)	0.0003 (0.001)
Media _{t-6}	0.004 (0.008)	0.011 (0.027)	0.001 (0.001)
Media _{t-7}	-0.005 (0.006)	-0.022 (0.019)	0.004*** (0.001)
Media _{t-8}	-0.011** (0.005)	-0.045*** (0.017)	0.0004 (0.001)
Media _{t-9}	-0.015* (0.008)	-0.043 (0.027)	-0.003* (0.001)
Media _{t-10}	-0.028*** (0.004)	-0.089*** (0.013)	-0.004*** (0.001)
Media _{t-11}	-0.014** (0.006)	-0.035* (0.020)	-0.003*** (0.001)
Media _{t-12}	0.002 (0.006)	0.016 (0.020)	0.001 (0.002)
Media _{t-13}	0.012 (0.008)	0.035 (0.026)	0.0005 (0.001)
Media _{t-14}	-0.012* (0.007)	-0.041* (0.021)	0.004*** (0.001)
Media _{t-15}	-0.003 (0.009)	-0.017 (0.027)	0.001 (0.001)
Constant	0.010*** (0.001)	0.019*** (0.003)	0.003*** (0.0001)
Observations	7,380	2,907	4,473
Adjusted R ²	0.012	0.043	0.017

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A32: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Pandemic Support		
	2003-2013	pre-2011	post-2011
Media _t	0.013 (0.009)	0.005*** (0.002)	0.017 (0.013)
Media _{t-1}	0.004 (0.005)	0.004** (0.001)	0.004 (0.007)
Media _{t-2}	-0.008*** (0.001)	-0.003*** (0.001)	-0.009*** (0.002)
Media _{t-3}	-0.008*** (0.001)	-0.005*** (0.002)	-0.009*** (0.002)
Media _{t-4}	-0.006*** (0.001)	-0.004** (0.001)	-0.006*** (0.002)
Media _{t-5}	-0.00002 (0.002)	0.001 (0.002)	-0.0004 (0.003)
Media _{t-6}	0.004 (0.004)	0.003 (0.002)	0.005 (0.006)
Media _{t-7}	0.001 (0.001)	0.006*** (0.002)	-0.001 (0.002)
Media _{t-8}	-0.0003 (0.001)	0.007*** (0.002)	-0.003** (0.001)
Media _{t-9}	-0.007*** (0.001)	-0.004*** (0.002)	-0.008*** (0.002)
Media _{t-10}	-0.008*** (0.001)	-0.005*** (0.001)	-0.009*** (0.001)
Media _{t-11}	-0.006*** (0.001)	-0.003** (0.002)	-0.007*** (0.002)
Media _{t-12}	-0.003** (0.001)	0.001 (0.002)	-0.004*** (0.002)
Media _{t-13}	-0.0002 (0.001)	0.006*** (0.002)	-0.003 (0.002)
Media _{t-14}	-0.001 (0.001)	0.002 (0.002)	-0.003 (0.002)
Media _{t-15}	-0.003*** (0.001)	-0.0003 (0.001)	-0.004*** (0.002)
Constant	0.004*** (0.0003)	0.003*** (0.0001)	0.005*** (0.001)
Observations	7,380	2,907	4,473
Adjusted R ²	0.006	0.036	0.005

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A33: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Foreign Exchange Operations		
	2003-2013	pre-2011	post-2011
Media _t	0.006** (0.003)	0.001 (0.004)	0.008** (0.003)
Media _{t-1}	0.001 (0.002)	0.010 (0.008)	-0.004** (0.002)
Media _{t-2}	-0.002 (0.004)	-0.006* (0.004)	0.001 (0.005)
Media _{t-3}	-0.007*** (0.002)	-0.005 (0.007)	-0.008*** (0.001)
Media _{t-4}	-0.005*** (0.001)	-0.009*** (0.003)	-0.003** (0.001)
Media _{t-5}	0.001 (0.003)	0.005 (0.007)	-0.00003 (0.002)
Media _{t-6}	0.002 (0.003)	0.009 (0.010)	-0.002 (0.002)
Media _{t-7}	0.004* (0.002)	0.002 (0.004)	0.005* (0.003)
Media _{t-8}	0.001 (0.003)	0.011 (0.010)	-0.003** (0.001)
Media _{t-9}	-0.007*** (0.001)	-0.005 (0.003)	-0.007*** (0.001)
Media _{t-10}	-0.007*** (0.001)	-0.010*** (0.003)	-0.006*** (0.001)
Media _{t-11}	-0.007*** (0.001)	-0.009*** (0.003)	-0.006*** (0.001)
Media _{t-12}	-0.001 (0.002)	-0.003 (0.003)	-0.001 (0.002)
Media _{t-13}	0.001 (0.002)	0.001 (0.003)	0.001 (0.002)
Media _{t-14}	0.001 (0.002)	0.003 (0.007)	0.0001 (0.002)
Media _{t-15}	-0.001 (0.002)	0.001 (0.004)	-0.002 (0.002)
Constant	0.004*** (0.0003)	0.004*** (0.001)	0.004*** (0.0004)
Observations	7,380	2,907	4,473
Adjusted R ²	0.002	-0.0004	0.002

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A34: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Target Fund Rate		
	2003-2013	pre-2011	post-2011
Media _t	0.012** (0.005)	0.004** (0.002)	0.015** (0.008)
Media _{t-1}	0.021** (0.010)	0.008*** (0.003)	0.026* (0.014)
Media _{t-2}	0.004 (0.006)	-0.004*** (0.001)	0.007 (0.009)
Media _{t-3}	-0.008*** (0.002)	-0.006*** (0.002)	-0.009*** (0.003)
Media _{t-4}	-0.004** (0.002)	-0.003** (0.002)	-0.004** (0.002)
Media _{t-5}	0.004 (0.003)	0.001 (0.002)	0.005 (0.004)
Media _{t-6}	-0.001 (0.001)	0.003 (0.002)	-0.003** (0.001)
Media _{t-7}	0.003** (0.002)	0.006*** (0.002)	0.002 (0.002)
Media _{t-8}	0.001 (0.002)	0.006*** (0.002)	-0.001 (0.003)
Media _{t-9}	-0.004** (0.002)	-0.004*** (0.002)	-0.003 (0.003)
Media _{t-10}	-0.007*** (0.001)	-0.006*** (0.001)	-0.008*** (0.001)
Media _{t-11}	-0.005*** (0.002)	-0.004** (0.002)	-0.006** (0.002)
Media _{t-12}	-0.001 (0.001)	0.0004 (0.001)	-0.002 (0.002)
Media _{t-13}	0.004* (0.002)	0.006*** (0.002)	0.003 (0.003)
Media _{t-14}	0.002 (0.003)	0.001 (0.002)	0.002 (0.004)
Media _{t-15}	0.001 (0.004)	0.001 (0.002)	0.001 (0.005)
Constant	0.003*** (0.0003)	0.003*** (0.0001)	0.004*** (0.0004)
Observations	7,380	2,907	4,473
Adjusted R ²	0.012	0.039	0.012

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A35: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Tenders		
	2003-2013	pre-2011	post-2011
Media _t	0.045** (0.021)	0.056 (0.047)	0.041* (0.022)
Media _{t-1}	0.004 (0.023)	0.014 (0.045)	0.002 (0.026)
Media _{t-2}	-0.027* (0.015)	-0.086*** (0.019)	-0.002 (0.019)
Media _{t-3}	-0.047*** (0.009)	-0.071*** (0.020)	-0.036*** (0.010)
Media _{t-4}	-0.008 (0.014)	0.035 (0.037)	-0.023* (0.014)
Media _{t-5}	0.027 (0.019)	0.106** (0.050)	-0.004 (0.015)
Media _{t-6}	0.048** (0.023)	0.089 (0.058)	0.033 (0.021)
Media _{t-7}	0.044* (0.027)	0.037 (0.054)	0.047 (0.030)
Media _{t-8}	-0.006 (0.019)	-0.050** (0.021)	0.012 (0.025)
Media _{t-9}	-0.030* (0.016)	-0.099*** (0.017)	-0.002 (0.022)
Media _{t-10}	-0.047*** (0.009)	-0.073*** (0.018)	-0.038*** (0.010)
Media _{t-11}	-0.021* (0.012)	0.020 (0.033)	-0.035*** (0.009)
Media _{t-12}	0.048** (0.023)	0.146** (0.066)	0.007 (0.018)
Media _{t-13}	0.027 (0.020)	0.027 (0.042)	0.030 (0.022)
Media _{t-14}	0.080*** (0.027)	0.118* (0.065)	0.063** (0.027)
Media _{t-15}	-0.012 (0.023)	-0.035 (0.044)	0.002 (0.027)
Constant	0.019*** (0.002)	0.021*** (0.003)	0.016*** (0.002)
Observations	7,380	2,907	4,473
Adjusted R ²	0.007	0.016	0.004

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A36: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Credit Rating Agencies		
	2003-2013	pre-2011	post-2011
Media _t	0.023** (0.011)	0.064** (0.026)	0.005 (0.011)
Media _{t-1}	-0.008 (0.009)	-0.007 (0.011)	-0.006 (0.012)
Media _{t-2}	-0.003 (0.016)	0.037 (0.047)	-0.020** (0.009)
Media _{t-3}	-0.008 (0.011)	-0.001 (0.026)	-0.011 (0.012)
Media _{t-4}	0.015 (0.019)	-0.009 (0.012)	0.026 (0.026)
Media _{t-5}	-0.018 (0.011)	-0.026** (0.010)	-0.015 (0.015)
Media _{t-6}	0.006 (0.014)	0.001 (0.013)	0.010 (0.020)
Media _{t-7}	0.007 (0.011)	0.038 (0.031)	-0.007 (0.008)
Media _{t-8}	0.022 (0.019)	0.007 (0.014)	0.030 (0.026)
Media _{t-9}	0.003 (0.015)	0.012 (0.022)	-0.002 (0.019)
Media _{t-10}	-0.025*** (0.007)	-0.033*** (0.009)	-0.021** (0.009)
Media _{t-11}	-0.018*** (0.006)	-0.014 (0.013)	-0.019** (0.007)
Media _{t-12}	0.010 (0.016)	0.007 (0.021)	0.010 (0.021)
Media _{t-13}	0.019 (0.028)	-0.010 (0.009)	0.032 (0.039)
Media _{t-14}	0.012 (0.011)	0.013 (0.018)	0.011 (0.014)
Media _{t-15}	0.005 (0.009)	0.038** (0.019)	-0.008 (0.009)
Constant	0.012*** (0.001)	0.010*** (0.002)	0.012*** (0.001)
Observations	7,380	2,907	4,473
Adjusted R ²	0.001	0.009	0.001

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A37: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Honorary Titles		
	2003-2013	pre-2011	post-2011
Media _t	0.016 (0.014)	0.033 (0.033)	0.010 (0.015)
Media _{t-1}	0.017 (0.016)	0.049 (0.040)	0.004 (0.015)
Media _{t-2}	-0.037*** (0.007)	-0.054*** (0.013)	-0.031*** (0.009)
Media _{t-3}	-0.005 (0.015)	-0.045*** (0.013)	0.012 (0.020)
Media _{t-4}	-0.015 (0.009)	-0.007 (0.023)	-0.019** (0.010)
Media _{t-5}	-0.033*** (0.008)	-0.017 (0.020)	-0.038*** (0.007)
Media _{t-6}	0.053** (0.025)	0.104** (0.049)	0.033 (0.030)
Media _{t-7}	0.004 (0.014)	0.024 (0.027)	-0.003 (0.016)
Media _{t-8}	-0.007 (0.009)	0.005 (0.024)	-0.012 (0.008)
Media _{t-9}	-0.016 (0.012)	-0.018 (0.029)	-0.014 (0.012)
Media _{t-10}	-0.010 (0.014)	-0.003 (0.025)	-0.011 (0.017)
Media _{t-11}	-0.007 (0.015)	0.021 (0.040)	-0.018 (0.013)
Media _{t-12}	-0.024*** (0.008)	-0.023 (0.017)	-0.024** (0.010)
Media _{t-13}	0.039 (0.025)	0.033 (0.032)	0.041 (0.034)
Media _{t-14}	0.039** (0.019)	0.056 (0.040)	0.031 (0.021)
Media _{t-15}	-0.010 (0.011)	-0.038*** (0.013)	0.002 (0.014)
Constant	0.016*** (0.001)	0.015*** (0.002)	0.015*** (0.002)
Observations	7,380	2,907	4,473
Adjusted R ²	0.004	0.005	0.002

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A38: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Community Banking		
	2003-2013	pre-2011	post-2011
Media _t	0.025** (0.011)	0.049** (0.023)	0.015 (0.012)
Media _{t-1}	0.018 (0.014)	0.036 (0.025)	0.012 (0.017)
Media _{t-2}	-0.031*** (0.007)	-0.018 (0.020)	-0.035*** (0.005)
Media _{t-3}	-0.014 (0.009)	-0.007 (0.019)	-0.017* (0.009)
Media _{t-4}	-0.022*** (0.008)	-0.027* (0.014)	-0.018** (0.009)
Media _{t-5}	0.018 (0.016)	0.061 (0.045)	-0.001 (0.013)
Media _{t-6}	0.041** (0.019)	0.037 (0.031)	0.045* (0.024)
Media _{t-7}	0.020 (0.013)	0.034 (0.027)	0.015 (0.015)
Media _{t-8}	0.002 (0.009)	0.026 (0.021)	-0.007 (0.009)
Media _{t-9}	0.002 (0.018)	0.013 (0.032)	-0.003 (0.021)
Media _{t-10}	-0.010 (0.015)	-0.024 (0.015)	-0.005 (0.020)
Media _{t-11}	-0.020** (0.009)	-0.008 (0.019)	-0.024** (0.010)
Media _{t-12}	-0.016 (0.011)	-0.008 (0.020)	-0.019 (0.014)
Media _{t-13}	0.018 (0.013)	-0.001 (0.020)	0.025 (0.017)
Media _{t-14}	0.050** (0.024)	0.030 (0.037)	0.058* (0.030)
Media _{t-15}	-0.019*** (0.008)	0.003 (0.021)	-0.029*** (0.007)
Constant	0.014*** (0.001)	0.013*** (0.002)	0.014*** (0.001)
Observations	7,380	2,907	4,473
Adjusted R ²	0.006	0.002	0.007

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A39: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Quantitative Easing		
	2003-2013	pre-2011	post-2011
Media _t	0.013** (0.005)	0.005*** (0.002)	0.016** (0.007)
Media _{t-1}	0.0001 (0.003)	0.005** (0.002)	-0.002 (0.004)
Media _{t-2}	0.002 (0.004)	-0.003* (0.002)	0.004 (0.006)
Media _{t-3}	-0.009*** (0.001)	-0.006*** (0.002)	-0.010*** (0.002)
Media _{t-4}	-0.005*** (0.001)	-0.004** (0.002)	-0.005*** (0.002)
Media _{t-5}	0.005 (0.005)	0.001 (0.002)	0.006 (0.007)
Media _{t-6}	-0.001 (0.001)	0.003 (0.002)	-0.003* (0.002)
Media _{t-7}	0.003* (0.002)	0.008*** (0.002)	0.001 (0.002)
Media _{t-8}	0.006 (0.006)	0.007*** (0.002)	0.005 (0.008)
Media _{t-9}	-0.004** (0.002)	-0.004** (0.002)	-0.004 (0.003)
Media _{t-10}	-0.008*** (0.001)	-0.006*** (0.001)	-0.008*** (0.002)
Media _{t-11}	-0.007*** (0.001)	-0.004*** (0.002)	-0.008*** (0.001)
Media _{t-12}	0.001 (0.002)	0.001 (0.002)	0.001 (0.003)
Media _{t-13}	0.007* (0.004)	0.007*** (0.002)	0.006 (0.005)
Media _{t-14}	0.004 (0.004)	0.002 (0.002)	0.005 (0.005)
Media _{t-15}	-0.002 (0.002)	-0.0002 (0.002)	-0.003 (0.002)
Constant	0.004*** (0.0003)	0.003*** (0.0002)	0.004*** (0.0004)
Observations	7,380	2,907	4,473
Adjusted R ²	0.006	0.036	0.004

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

Table A40: Media Monetary Policy Topic effect on FED Communication

	<i>Dependent variable:</i>		
	Economic Weakness		
	2003-2013	pre-2011	post-2011
Media _t	0.002 (0.003)	-0.005 (0.009)	0.004*** (0.001)
Media _{t-1}	-0.001 (0.002)	-0.007 (0.006)	0.001 (0.001)
Media _{t-2}	-0.002 (0.005)	0.004 (0.016)	-0.005*** (0.001)
Media _{t-3}	-0.013*** (0.002)	-0.033*** (0.006)	-0.004*** (0.001)
Media _{t-4}	-0.007*** (0.002)	-0.023*** (0.007)	-0.001 (0.001)
Media _{t-5}	0.0001 (0.003)	-0.001 (0.010)	0.001 (0.001)
Media _{t-6}	0.001 (0.003)	0.004 (0.011)	0.0002 (0.001)
Media _{t-7}	0.006 (0.004)	0.011 (0.014)	0.004*** (0.001)
Media _{t-8}	-0.001 (0.002)	-0.003 (0.006)	0.0001 (0.001)
Media _{t-9}	-0.008*** (0.002)	-0.020*** (0.006)	-0.004*** (0.001)
Media _{t-10}	-0.011*** (0.002)	-0.030*** (0.006)	-0.004*** (0.001)
Media _{t-11}	-0.010*** (0.002)	-0.028*** (0.006)	-0.004*** (0.001)
Media _{t-12}	-0.002 (0.002)	-0.007 (0.006)	-0.0005 (0.001)
Media _{t-13}	0.004 (0.005)	0.009 (0.017)	0.002 (0.001)
Media _{t-14}	0.001 (0.004)	-0.003 (0.012)	0.003** (0.001)
Media _{t-15}	-0.001 (0.004)	-0.003 (0.013)	0.0001 (0.001)
Constant	0.005*** (0.0005)	0.009*** (0.001)	0.003*** (0.0001)
Observations	7,380	2,907	4,473
Adjusted R ²	0.001	0.001	0.017

Note: Robust Standard Errors.

*p<0.1; **p<0.05; ***p<0.01

A.3 Other USA Today Topics Regression Results

Table A41: FED Communication on other Economic and Business Topics in USA Today

	<i>Dependent variable:</i>			
	Banking Sector	Trade	Retirement	Corporate Sector
Phillips Curve _t				0.030*** (0.008)
Enforcement Actions _t	0.016*** (0.003)	0.006*** (0.002)		0.015*** (0.003)
Banking Regulations _t		0.010*** (0.003)		0.015*** (0.004)
Tenders _t		0.012*** (0.003)		
Credit Market _t			0.024** (0.010)	
Payment Systems _t				0.021*** (0.006)
Fund Rate Target _t				0.067* (0.039)
Constant	0.007*** (0.0004)	0.004*** (0.0002)	0.005*** (0.0003)	0.009*** (0.0004)
Observations	7,395	7,395	7,395	7,395
Adjusted R ²	0.007	0.011	0.003	0.019

Note: Robust Standard Errors. The table shows the regression results of selected FED communication topics on other Economic and Business Topics found in the USA Today Newspaper. The selected FED topics used as independent variables are the only ones to show non-zero coefficients after running a LASSO for variable selection. The significance levels are: *p<0.1; **p<0.05; ***p<0.01.

A.4 Augmented Regression

Table A42: Specific FED Communication Topics on Monetary Policy Reporting in USA Today

Topic Family	Topic Name	<i>Dependent variable: Monetary Policy Reporting in USA Today</i>		
		2003-2023	Pre-2011	Post-2011
Macroeconomic	Inflation _t	0.178** [0.071]		0.107 [0.075]
Financial Markets	Banking Regulations _t	0.029*** [0.011]		0.028** [0.012]
Macroeconomic	Forward Guidance _t			0.085 [0.071]
Monetary Policy	Point Forecast to Range _{t-1}	0.291 [0.192]		0.372* [0.198]
Crises	High Inflation _{t-1}	0.237* [0.123]		0.261** [0.128]
Macroeconomic	Core Inflation _{t-1}	0.116*** [0.025]	0.126*** [0.026]	
Crises	Pandemic Support _{t-1}			-0.285*** [0.089]
Crises	Economic Weakness _{t-1}	0.125** [0.063]	0.197*** [0.060]	-1.220*** [0.264]
Macroeconomic	Philips Curve _{t-1}	0.074*** [0.026]	0.079*** [0.030]	
Crises	Recovery _{t-1}			0.316* [0.166]
Macroeconomic	Inflation Forecast _{t-1}	0.206*** [0.047]		0.191*** [0.051]
Macroeconomic	Forward Guidance _{t-1}	0.086 [0.085]	0.360** [0.166]	
Macroeconomic	Inflation _{t-1}	0.262*** [0.089]		0.407*** [0.095]
Macroeconomic	Inflation _{t-2}	0.086 [0.058]		0.114* [0.062]
Financial Markets	GSE _{t-7}			0.334* [0.187]
Financial Markets	Enforcement Actions _{t-13}			0.022** [0.008]
Monetary Policy	Balance Sheet _{t-14}	0.273*** [0.104]		0.227* [0.135]
Macroeconomic	Philips Curve _{t-14}			0.096** [0.044]
June	0.006* (0.003)	0.003 (0.004)	0.010* (0.005)	
Unemp. Rate Announcements		-0.006** [0.003]	-0.007** [0.003]	-0.0005 [0.004]
USA Today _{t-1}		0.036** [0.017]	0.011 [0.019]	0.049** [0.024]
Observations		7,395	2,922	4,473
Adjusted R ²		0.151	0.149	0.192

Note:(HAC) Standard Errors. Insignificant I.V. are omitted from table. June and Unemployment Rate Announcements are categorical variables. For the monthly fixed effects, the month of December was omitted and only the Month of June shows positive significant effect over December. The significance levels are: *p<0.1; **p<0.05; ***p<0.01.