Attention, Inflation Expectations, and the Transmission of Monetary Policy

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November 3, 2026

Abstract

We show that the information effect of monetary policy is state-dependent. High-frequency monetary policy surprises often raise inflation expectations, a finding commonly interpreted as evidence that policy announcements convey information about the central bank's assessment of future economic conditions. While the existing literature has focused on identifying the information embedded in policy surprises, we study how the informational environment prevailing before policy announcements shapes the interpretation of those surprises. Using articles published in major U.S. newspapers immediately before each FOMC announcement, we construct real-time measures of pre-FOMC inflation narratives. We use large language models (LLMs) to extract whether newspaper coverage points to rising inflation and prospective monetary tightening. We then estimate state-dependent local projections of household inflation expectations to monetary policy surprises. The results reveal substantial heterogeneity. Tightening surprises have relatively small effects when pre-FOMC narratives are neutral or uncertain. By contrast, when newspapers already emphasize rising inflation, the same surprise generates a significantly larger and more persistent increase in inflation expectations. The effect is robust to lag-augmented specifications and persists when monetary policy surprises are replaced with orthogonalized shocks designed to remove predictable macroeconomic and financial information. Our findings suggest that the information effect of monetary policy is not solely a property of the policy surprise itself. Rather, the transmission of monetary policy to inflation expectations depends on the informational

environment in which policy announcements are received and interpreted. Public narratives therefore play a central role in shaping how households process monetary policy news and update their inflation expectations.

JEL: E31, E52, E71, C32, C55

Keywords: inflation expectations, monetary policy, information effects, attention, newspapers, large language models, local projections.

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1 Introduction

Do monetary policy surprises convey the same information in all informational environments? Evidence from the high-frequency identification literature suggests that they do not. Contractionary monetary policy surprises are often followed by increases in output, prices, or inflation expectations–a pattern that is difficult to reconcile with a purely contractionary policy shock. This empirical regularity has motivated a large literature on the *information effect* of monetary policy. In this view, a hawkish surprise reveals not only a change in the policy stance but also information about the central bank's assessment of future economic conditions. As a result, agents may revise their beliefs about inflation upward, even in response to a tightening surprise (Nakamura and Steinsson, 2018; Jarociński and Karadi, 2020; Miranda-Agrippino and Ricco, 2021; Ricco and Savini, 2025). Recent evidence based on household surveys further highlights the importance of this channel for the formation of inflation expectations (Grigoli et al., 2026).

Most of the existing literature focuses on recovering a monetary policy shock that is purged of the central bank's information. One strand identifies separate policy and information shocks using the joint response of financial asset prices around policy announcements (Jarociński and Karadi, 2020). Another removes the component of high-frequency surprises that is predictable from macroeconomic and financial information available before the policy decision (Miranda-Agrippino and Ricco, 2021; Bauer and Swanson, 2023b). The common objective is to isolate a cleaner measure of monetary policy innovations.

This paper takes a different perspective. Rather than asking what information is embedded in a monetary policy surprise, we ask how the same surprise is interpreted by the public. Our central argument is that the information effect is not only a property of the central bank signal, rather depends on the public information environment in which the signal is received. When inflation is not particularly salient, a hawkish surprise may be interpreted primarily as a contractionary policy action. When public attention is already focused on inflation, however, the same surprise may also be interpreted as confirmation that the central bank perceives inflationary pressures to be stronger or more persistent than previously believed. In this case, a tightening surprise can raise inflation expectations through an information channel. To this extent, we want to empirically test the hypothesis that the transmission of monetary policy to inflation expectations depends on the informational environment in which policy announcements are received.

To test this hypothesis, we construct a real-time measure of the informational environment surrounding FOMC announcements. For each FOMC meeting, we collect articles published in major U.S. newspapers on the day immediately preceding the policy decision. This timing is central to our identification strategy: the newspaper bundle is observed before the monetary policy announcement and therefore reflects information available to the public prior to the

realization of the policy surprise.

We first measure inflation-related attention using the volume of newspaper coverage. We then move beyond simple counts and use large language models (LLMs) to extract the narrative content of each pre-FOMC news bundle. Specifically, we classify whether newspapers point to rising, falling, or stable future inflation and whether they anticipate monetary tightening, easing, or no policy change. This approach allows us to distinguish between the intensity of public attention to inflation and the substance of the underlying narrative.

The distinction proves empirically important. Periods of elevated attention are not simply periods with more newspaper coverage. Rather, they are periods in which the news narrative is more likely to emphasize rising inflation and an increased probability of monetary tightening. The resulting textual indicators therefore capture the informational environment in which households and financial market participants receive monetary policy announcements: not only how much attention inflation receives, but also the narrative through which that attention is framed prior the meeting.

We then estimate state-dependent local projections of inflation expectations to high-frequency monetary policy surprises. The baseline specification interacts monetary policy surprises with the pre-FOMC inflation narrative extracted from newspapers. The results reveal substantial heterogeneity. When the pre-announcement narrative is neutral or uncertain, inflation expectations respond only weakly to a tightening surprise. By contrast, when newspapers point to rising future inflation, the same surprise generates a significantly larger and more persistent increase in the Michigan twelve-month inflation expectations. The unconditional response therefore masks an important form of state dependence: monetary policy surprises raise inflation expectations primarily when the informational environment preceding the announcement already emphasizes inflation risks. Our results relates to Coibion et al. (2020), who find that household inflation expectations respond little to monetary policy communication in a low-inflation environment. We sharpen this interpretation: what governs the response is not the level of realized inflation but the direction of the pre-announcement narrative. When we replace the narrative with a high/low realized-inflation regime the interaction vanishes, and when both enter jointly only the narrative survives.

This evidence is consistent with an information-effect interpretation. A hawkish policy surprise combines two distinct aspects. On the one hand, the policy component should reduce expected inflation by tightening monetary conditions. On the other hand, the informational component may increase expected inflation if agents infer that the central bank is reacting to stronger inflationary pressures than previously perceived. Our results suggest that the relative importance of these two forces depends on the prevailing informational environment. When inflation is salient and newspaper coverage already points to rising inflation, agents place greater weight on the signal embedded in the central bank's action. The monetary policy surprise is therefore interpreted not only as a policy intervention but also as information about

the future inflation outlook.

We formalize this empirical evidence within a simple Bayesian learning framework. Agents observe a monetary policy surprise that contains information about an underlying inflationary state. Higher pre-FOMC attention reduces the perceived noise of this signal because agents have already processed information about inflation and monetary policy before the announcement. As attention increases, agents place greater weight on the surprise when updating beliefs about inflationary pressures. The model predicts that the response of inflation expectations to a tightening surprise becomes more positive in high-attention states. This prediction directly motivates our empirical specification and provides a natural interpretation of the interaction between monetary policy surprises and pre-FOMC narratives.

Several robustness exercises support this interpretation. First, the results are robust to lag-augmented local projections that control for the dynamics of inflation expectations, monetary policy surprises, textual states, and their interactions. *This reduces the concern that the conditional response is driven by persistence in inflation expectations.* Second, the findings remain when we replace the raw high-frequency surprise with an orthogonalized monetary policy shock designed to remove predictable variation associated with macroeconomic and financial conditions. Although the interaction effect becomes smaller, it remains economically and statistically meaningful. *This indicates that newspaper narratives capture an information-environment component that is not fully spanned by standard macro-financial controls.* Third, when real activity is used as the outcome variable, the orthogonalized shock behaves as a conventional contractionary monetary policy shock, while the role of pre-FOMC inflation narrative becomes substantially weaker. Taken together, these findings suggest that the informational environment primarily affects the expectations channel of monetary policy transmission. Finally, the conditional response is specific to the narrative state and is not reproduced by the level of realized inflation. When we replace the pre-FOMC narrative with a high/low realized-inflation regime, the interaction with monetary policy surprises is not statistically significant, and when both states are entered in the empirical estimation jointly, the narrative interaction retains its significance while the inflation-regime interaction remains indistinguishable from zero. This indicates that what matters is whether the pre-announcement environment points to rising inflation, rather than the realized inflation state itself.

Our interpretation naturally relates to the rational inattention framework of Sims (2003), surveyed in Maćkowiak et al. (2023) and applied to inflation expectations by Bracha and Tang (2025) and Pfäuti (2023). In these models, agents allocate limited attention across competing sources of information and update beliefs accordingly. Newspaper attention provides a natural proxy for this information-acquisition margin. When inflation becomes sufficiently salient to dominate the news cycle, households and market participants devote greater attention to inflation-related developments. Monetary policy announcements are therefore interpreted

through a richer informational prior, increasing the likelihood that policy actions are viewed as signals about underlying inflationary pressures.

Contribution to the literature. This paper contributes to three strands of literature.

First, it introduces a novel high-frequency measure of public attention to inflation and monetary policy. Existing attention measures typically rely on surveys, which are available only at relatively low frequencies and often with considerable publication lags (Bracha and Tang, 2025); firm-level textual measures are generally available only at quarterly frequencies (Song and Stern, 2024); and experimental approaches, while informative, cannot be implemented in real time (Weber et al., 2025; Coibion et al., 2022). By contrast, newspaper-based attention measures are observable on a daily basis and can be constructed immediately before every policy announcement. We show that these measures contain economically meaningful information about the transmission of monetary policy that is not captured by standard macroeconomic and financial indicators.

Second, the paper contributes to the literature on the information effect of monetary policy. Since the seminal contribution of Nakamura and Steinsson (2018), a large body of research has emphasized that high-frequency monetary policy surprises may combine a conventional policy component with a signaling component reflecting the central bank's information about future economic conditions. Subsequent studies have focused on disentangling these two components (Jarociński and Karadi, 2020; Miranda-Agrippino and Ricco, 2021), assessing the extent to which policy surprises are predictable (Bauer and Swanson, 2023a,b), or re-evaluating the quantitative importance of the information effect (Hoesch et al., 2023; Ricco and Savini, 2025; Grigoli et al., 2026). Our contribution is conceptually different. Rather than re-identifying the shock, we condition on the audience receiving the shock. The evidence suggests that the same monetary policy surprise can generate very different responses depending on the prevailing informational environment. In this sense, the information effect is not solely a property of the central bank's signal; it also depends on the degree of public attention and on the narratives through which that signal is interpreted.

Third, the paper contributes to the growing literature on text-based macroeconomic monitoring and measurement (Barbaglia et al., 2023; Aprigliano et al., 2023; Boss et al., 2025; Larsen et al., 2021; Angelico et al., 2022; Marcucci, 2024). Existing studies have primarily used newspapers and other textual sources to nowcast or forecast macroeconomic variables. We propose a different use of textual information. Rather than treating newspapers as predictors of economic outcomes, we use them to characterize the informational state of the economy and to study how that state shapes the transmission of monetary policy. Methodologically, we combine traditional media data with large language models to extract economically meaningful narratives in real time. Conceptually, our approach builds a bridge between the rational inattention literature (Sims, 2003; Maćkowiak et al., 2023; Bracha and

Tang, 2025; Pfäuti, 2023) and the rapidly expanding literature on natural language processing (NLP), central bank communication, and monetary policy (Aruoba and Drechsel, 2024; Hansen et al., 2018; Hansen and McMahon, 2016; Lamla and Vinogradov, 2019; Picault et al., 2022; Alexopoulos et al., 2024; Blinder et al., 2024; Gorodnichenko et al., 2025; Chahrour et al., 2025). Whereas much of this literature studies what central banks communicate and how they communicate it, we focus on a complementary question: whether the public is paying attention, and how the informational environment influences the effectiveness of monetary policy communication.

2 Data

This paper combines two sources of information: high-frequency monetary policy surprises and textual information (such as expectations and attention measures) extracted from major U.S. newspapers. The newspaper data are obtained from Factiva and cover the period from January 1980 to December 2025.

Our newspaper sample is designed to capture broad national coverage of inflation and monetary policy. It includes six major U.S. newspapers: the *Wall Street Journal*, the *New York Times*, the *Washington Post*, the *Dallas Morning News*, the *San Francisco Chronicle*, and the *Chicago Sun-Times*. Together, these outlets provide a long and relatively stable record of how information and Federal Reserve policy are discussed in the public domain.

Articles are selected using a title-based keyword filter. The dictionary is intentionally broad in order to capture both direct discussions of inflation and coverage that links inflation to monetary-policy decisions. The keywords are reported below:

```
inflation, price, prices, deflation, disinflation, hyperinflation,
monetary, policy, rate, rates, interest rate, interest rates, fed,
federal reserve, fomc
```

The title filter provides a conservative measure of attention. An article enters the sample only if inflation, prices, monetary policy, or the Federal Reserve are sufficiently central to appear in the headline. This restriction excludes articles in which these topics are only mentioned in passing and focuses attention on news coverage where they are a primary subject of discussion.

For each day, we aggregate all selected articles and construct an attention measure based on the total number of inflation- and monetary-policy-related mentions appearing in both article titles and article bodies. The measures therefore captures the intensity with which inflation and monetary policy are discussed in the news on a given day.

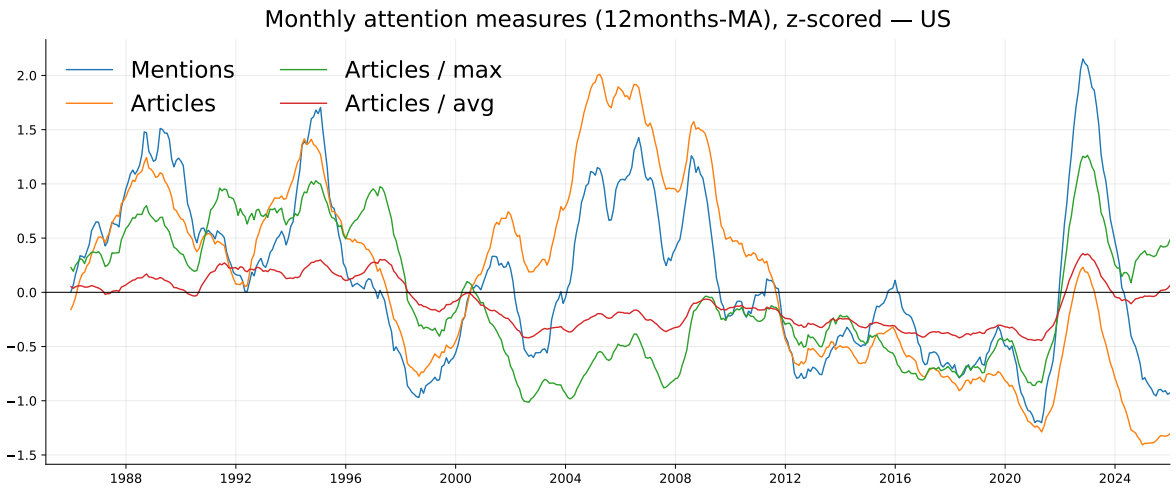
Table 1 reports the descriptive statistics for the resulting corpus. Starting from an original universe of approximately 7.3 million newspaper articles, the keyword filter identifies 151,537 relevant articles containing more than 1.6 million inflation- and monetary-policy-related mentions. Figure 1 plots the resulting daily attention measures over time.

Table 1: Descriptive statistics of the newspaper corpus

Newspaper corpus	Articles	Mentions
Factiva (six major U.S. newspapers)	151,537	1,655,321

Notes: Sample period: January 1980–December 2025. The original Factiva universe contains approximately 7.3 million articles.

Figure 1: Newspaper attention to inflation and monetary policy



Notes: The figure reports the daily attention measure constructed from Factiva articles published in six major U.S. newspapers. Articles are selected using title keywords related to inflation, prices, monetary policy, and the Federal Reserve.

Our empirical analysis focuses on the informational environment immediately preceding FOMC announcements. For each policy meeting, we collect all newspaper articles published on the calendar day before the announcement and combine them into a single news bundle. This timing is crucial. Because the bundle is observed before the policy decision is announced, it is predetermined with respect to the monetary policy surprise and reflects the information available to households, firms, and financial market participants immediately prior to the FOMC meeting.

These pre-FOMC bundles constitute the basic unit of analysis trhoughout the paper. They are used both to construct the attention measure and, in the next section, to extract narrative indicators of inflation expectations and anticipated monetary policy actions using large language models. The high-frequency monetary policy surprises are taken from the United States Monetary Policy Event-Study Database (USMPD) of Acosta et al. (2025), maintained by the San Francisco Fed's Center for Monetary Research. For each FOMC communication event the database records the change in a range of interest-rate futures and asset prices over a narrow window bracketing the release. Our baseline surprise is `MP1`, the surprise change in the federal funds rate target for the current FOMC meeting implied by fed funds futures. We use the *Statements* window, which measures the market reaction in the thirty minutes around the statement release (from ten minutes before to twenty minutes after).

As a robustness exercise, Appendix A reports the main results using two broader measures of monetary policy news: `STMT` and `ME`. These alternative shocks are also taken from the USMPD and are constructed following Acosta et al. (2025). Unlike `MP1`, which isolates the surprise change in the current-meeting federal funds rate target, `STMT` and `ME` summarize revisions in market expectations over a broader segment of the expected policy-rate path.

Specifically, for each FOMC communication window, the database records high-frequency changes in five money-market futures rates: `MP1`, `MP2`, `ED2`, `ED3`, and `ED4`. The variable `MP1` captures the surprise associated with the current FOMC meeting, while `MP2` captures the surprise associated with the next scheduled meeting. The Eurodollar futures rates `ED2`–`ED4` capture revisions to expected short-term interest rates roughly two to four quarters ahead, using the second, third, and fourth quarterly futures contracts following the FOMC event date. The broader surprises are obtained by extracting the first principal component of these five high-frequency rate changes, after standardizing each series. This principal component is then normalized so that the resulting shock has a one-for-one impact on the daily change in the one-year Treasury yield.

The variable `STMT` applies this procedure to the statement window only, and therefore captures the component of monetary policy news revealed by the FOMC statement. The variable `ME` applies the same procedure to the broader monetary-event window, capturing the overall market reaction to FOMC communication around the meeting. These measures therefore combine target-rate news with information about the expected path of policy, including forward-guidance effects. In this sense, they are broader monetary policy news shocks than `MP1`.

Our baseline specification uses `MP1` because it has a direct interpretation as a current-meeting target-rate surprise and is therefore closest to the conventional high-frequency monetary policy shock used in the event-study literature. However, the results are virtually unchanged when replacing `MP1` with either `STMT` or `ME`, suggesting that our findings are not

driven by the particular definition of the monetary policy surprise.

3 LLM-based classification of pre-FOMC narratives

The attention measure introduced in the previous section captures the intensity of news coverage, but it does not reveal the content of that coverage. A period of elevated attention may reflect concerns about rising inflation, expectations of monetary tightening, discussions of past policy decisions, or broader debates about the economic outlook. To distinguish among these possibilities, we use large language models (LLMs) to extract the dominant narrative embedded in each pre-FOMC newspaper bundle.

The unit of analysis is the daily news bundle. For each FOMC meeting, we concatenate all articles published on the calendar day preceding the policy announcement and submit the resulting text to an LLM. Rather than classifying individual articles, the model is asked to read the entire bundle and identify its dominant message. Specifically, we classify the bundle along two dimensions: (i) the policy action anticipated by the news coverage and (ii) the direction of future inflation implied by the narrative.

The prompt used in the classification exercise is reported below.

```
You are a macroeconomist specialised in U.S. monetary policy.  You will
receive a bundle of newspaper articles published on the SAME DAY, the day
BEFORE a Federal Reserve (FOMC) policy announcement.  All articles are
drawn from major U.S. newspapers and mention inflation, prices, or monetary
policy.  Read the bundle as a whole and answer TWO questions about its
dominant content.  Always pick exactly one option per question.

EXPECTED POLICY ACTION --- What policy action does the bundle anticipate?
{RAISE, CUT, STABLE, UNCLEAR}.

FUTURE INFLATION DIRECTION --- What direction does the bundle expect
inflation to take going forward?  {UP, DOWN, NEUTRAL, UNCLEAR}.

Respond ONLY with a JSON object containing the two answers and a
one-sentence reasoning.  No prose, no markdown fences.
```

All models are run within the GPT@JRC project on the internal cloud infrastructure of the Joint Research Center of the European Commission. This environment allows us to process newspaper content entirely on JRC premises and to compare multiple open-weight LLMs under an identical prompt and computational setting.

To obtain a final classification, we construct an adjudicated consensus label for each newspaper bundle. The underlying idea is that agreement[1] across large models provides a strong signal that the narrative is unambiguous. Whenever all models produce the same classification, we assign the common label as the final classification. When the models disagree, we manually inspect the bundle and assign the label that, in our judgement, best reflects the dominant narrative conveyed by the articles. The resulting series, therefore, combines the consistency of model agreement with human judgement in cases where interpretation is less straightforward.

Table 2 reports the agreement between each individual model and the adjudicated consensus. Performance is particularly strong for the policy-outlook classification. Accuracy ranges from 0.838 to 0.875, while macro-F1 scores range from 0.843 to 0.880. The inflation-expectations classification is more challenging,[2] but remains informative. Accuracy ranges from 0.688 to 0.761, and macro-F1 scores from 0.573 to 0.738.

This difference is economically intuitive. Expectations regarding the next policy decision are frequently discussed explicitly in newspaper coverage ahead of FOMC meetings. By contrast, expectations about future inflation are often implicit and must be inferred from broader discussions of economic conditions, policy risks, and inflationary pressures. The latter task, therefore, requires a greater degree of interpretation.

[1]Since the LLMs used in the exercise are quite large, their qualitative performance is comparable to human classification for this task.

[2]Most pre-FOMC newspaper coverage focuses on the upcoming policy decision rather than explicitly discussing the future path of inflation. As a result, inflation expectations often need to be inferred from the broader narrative rather than extracted from direct statements.

Table 2: Agreement of individual LLM classifiers with the adjudicated consensus

	Policy outlook		Inflation expectations	
Model	Accuracy	F1	Accuracy	F1
GPT-OSS-120B	0.838	0.843	0.688	0.573
Llama-3.3-70B	**0.875**	**0.880**	0.728	0.682
Mistral-Small-24B	0.864	0.861	0.750	0.719
MiniMax-M2	0.846	0.852	**0.761**	0.727
Qwen3.5-27B	0.842	0.851	0.754	**0.738**
Observations	272		272	

Notes: Each cell compares the temperature-zero run of a model with the adjudicated consensus label for the same pre-FOMC newspaper bundle. Accuracy is the share of meetings classified identically to the consensus. F1 is the macro-average of the per-category F1 scores. Meetings with an empty bundle are excluded.

Throughout the remainder of the paper, we use the adjudicated consensus classification as our baseline textual state variable. When models agree, the classification is entirely model-generated; when they disagree, the final label reflects human adjudication. Importantly, all empirical results are robust to using the classifications generated by individual models separately, indicating that the findings are not driven by any specific model architecture or classification rule.

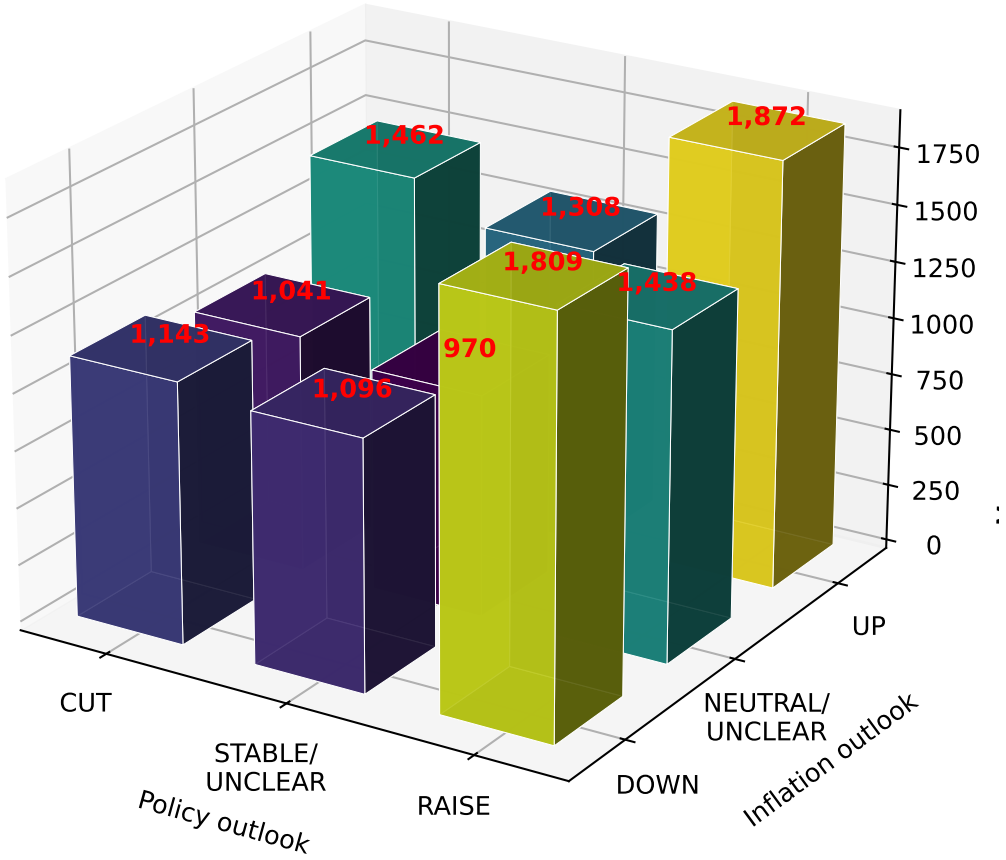
The LLM classifications also provide a useful validation of the attention measure. Attention is lowest when newspaper bundles point to stable monetary policy and neutral or uncertain inflation dynamics. It increases when coverage contains directional policy expectations and reaches its highest levels when newspapers simultaneously anticipate monetary tightening and rising inflation. Figure 2 illustrates this relationship.

These results suggest that attention is more than a simple measure of news volume. Periods of elevated attention are systematically associated with narratives that emphasize inflation risks and prospective policy tightening—precisely the informational environment in which information effects are most likely to emerge.

This observation motivates our use of the LLM-based narrative classification as the primary conditioning variable in the empirical analysis. Raw attention can be measured in several ways (as shown in Figure 1), including article counts, keyword mentions, or alternative normalizations of news coverage. While these measures capture different dimensions of salience, they do not directly identify the mechanism of interest. By contrast, the LLM-based classification provides a direct measure of whether the informational environment preceding an FOMC meeting points to rising inflation and tighter monetary policy. As such, it offers

a more interpretable and economically meaningful state variable for studying how monetary policy transmission depends on public narratives.

Figure 2: Attention by expected policy action and inflation outlook



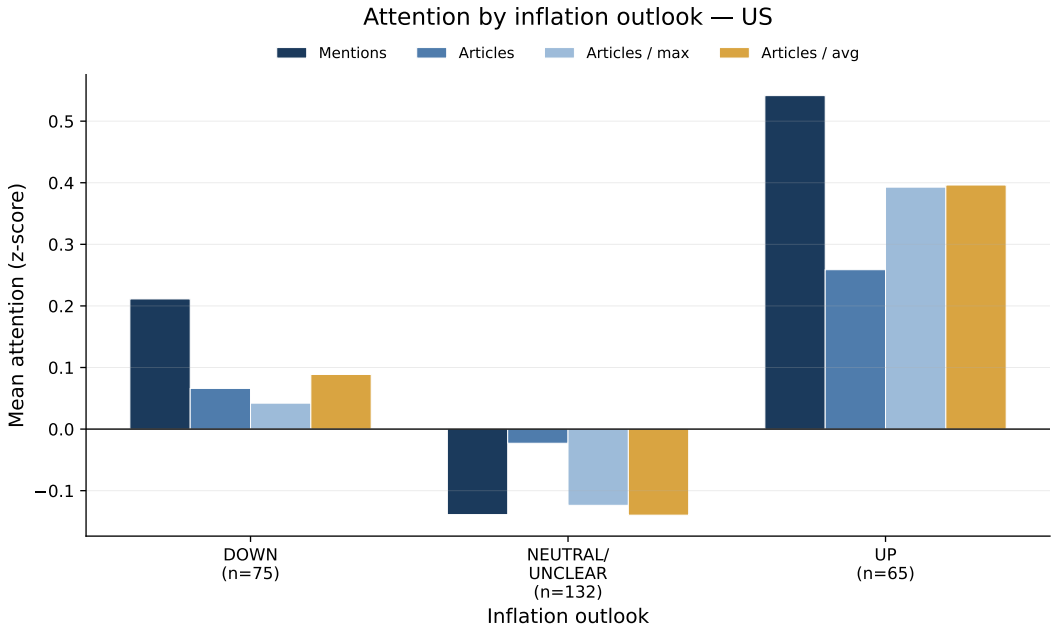
Notes: The figure relates the pre-FOMC newspaper attention measure to the LLM-classified policy outlook and inflation narrative extracted from the corresponding newspaper bundle.

3.1 Attention and the inflation narrative

Figure 3 reports, for each inflation outlook, the (z-scored) average attention in the calendar month of the meeting across the four measures shown in Figure 1. Meetings preceded by

an upward inflation narrative stand apart. For mentions and for both normalized article counts, attention in those months runs between 0.4 and 0.55 standard deviations above that of a typical month; the raw article count rises by about a quarter of a standard deviation. Meetings with a neutral or unclear narrative sit slightly below the sample average, and those with a downward narrative lie in between.

Figure 3: Attention by inflation outlook



Notes: Each bar is the average, across FOMC meetings with a given inflation outlook, of attention in the calendar month of the meeting. Each of the four measures is standardized over all months of the 1994–2025 sample. The inflation outlook is the adjudicated consensus classification of the pre-FOMC newspaper bundle; NEUTRAL and UNCLEAR are pooled. Formal tests are reported in Table 3.

The raw comparison is informative but potentially misleading. Upward narratives cluster in the 2021–2023 inflation surge, when coverage of prices and of the Federal Reserve was elevated for reasons unrelated to any individual meeting, and the size of the Factiva corpus itself changes over the sample. We therefore estimate, at the level of the individual meeting j,

$$\log A_{m(j)} = \alpha + \beta^{\mathrm{UP}}\,\mathbf{1}\{\mathrm{UP}_j\} + \beta^{\mathrm{DOWN}}\,\mathbf{1}\{\mathrm{DOWN}_j\} + \mu_{y(j)} + \varepsilon_j, \tag{1}$$

where $A_{m(j)}$ is attention in the calendar month $m(j)$ in which meeting j takes place, the two indicators flag the inflation outlook of the pre-meeting bundle, and $\mu_{y(j)}$ is a full set of year fixed effects. The neutral and unclear narratives form the omitted category, so β^{UP} and

β^{DOWN} measure the log difference in attention relative to a meeting whose news coverage takes no explicit directional view on inflation. With year fixed effects the comparison is between meetings held in the same year, and the estimates no longer reflect the fact that some narratives are concentrated in periods of intense coverage. Standard errors are HAC to account for the persistence of attention across consecutive meetings.

Table 3 reports the estimates. Within the same year, months with an upward narrative display between 9 and 17 percent more attention than months with a neutral one, and the coefficient is significant at the one percent level for every measure. The downward narrative behaves differently. Its coefficient is positive and precisely estimated for mentions and raw article counts, but it falls to between 2 and 4 percent, and largely loses significance, once coverage is normalized by the size of the corpus. For both normalized measures, the one-sided test that attention is higher under an upward than under a downward narrative rejects the null at the one percent level.

Table 3: Attention and the inflation outlook of pre-FOMC news

	Dependent variable: $\log A_{m(j)}$			
	Mentions (1)	Articles (2)	Articles / max (3)	Articles / avg (4)
Panel A: no controls				
$\mathbf{1}\{\text{UP}_j\}$	0.237***	0.099	0.133***	0.140***
	(0.063)	(0.064)	(0.041)	(0.039)
$\mathbf{1}\{\text{DOWN}_j\}$	0.155***	0.047	0.047	0.067**
	(0.050)	(0.055)	(0.033)	(0.033)
p-value: $\beta^{\text{UP}} > \beta^{\text{DOWN}}$	0.124	0.248	0.032	0.055
R^2	0.07	0.01	0.04	0.05
Panel B: year fixed effects				
$\mathbf{1}\{\text{UP}_j\}$	0.155***	0.083***	0.086***	0.087***
	(0.037)	(0.022)	(0.020)	(0.019)
$\mathbf{1}\{\text{DOWN}_j\}$	0.109***	0.048***	0.019	0.035*
	(0.035)	(0.018)	(0.018)	(0.018)
p-value: $\beta^{\text{UP}} > \beta^{\text{DOWN}}$	0.153	0.104	0.005	0.010
R^2	0.74	0.91	0.76	0.80
Observations	272	272	272	272

Notes: Estimates of equation (1). One observation per FOMC meeting, 1994–2025. $A_{m(j)}$ is the attention measure in the calendar month of meeting j, constructed from title-filtered Factiva articles as in Figure 1. The omitted category pools NEUTRAL and UNCLEAR narratives. The p-value refers to the one-sided test of $H_0\colon \beta^{\text{UP}} \leq \beta^{\text{DOWN}}$. HAC (Newey–West, 8 lags) standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

The inflation narrative is therefore informative about the attention environment, and the relationship is asymmetric. A bundle that takes a directional view, of either sign, tends to appear when there is more to report than usual. Only an upward narrative, however, coincides with a large and robust rise in the salience of prices and monetary policy. The gap between the measures is itself instructive. Mentions count monetary-policy terms alongside inflation terms, and raw article counts grow with the corpus, so both pick up coverage that has little to do with inflation salience. Once these components are purged, as the normalized measures do, a downward narrative is barely distinguishable from a neutral one. This asymmetry in attention is worth keeping in mind, because the same asymmetry reappears in the transmission of monetary policy surprises to household expectations.

4 A Model of Attention and the Information Effect

Our central hypothesis is that the transmission of monetary policy depends on the informational environment in which policy announcements are received. A monetary policy surprise contains two conceptually distinct components. First, it represents a change in the policy stance and therefore affects inflation expectations through the conventional monetary-policy channel. Second, it may reveal information about the central bank's assessment of underlying economic conditions. In particular, a hawkish surprise may lead agents to infer that the Federal Reserve perceives inflationary pressures to be stronger or more persistent than previously believed (information channel).

The relative importance of these two components need not be constant over time. When inflation receives little public attention, a monetary policy surprise may be interpreted primarily as a policy action. By contrast, when inflation is highly salient and newspapers are already emphasizing inflation risks, the same surprise may be interpreted as a stronger signal about the inflation outlook. In such environments, the informational component of the surprise becomes more important and may partially offset, or even dominate, the conventional contractionary effect.

To formalize this intuition, suppose that inflation expectations are determined by two forces: a policy effect and an information effect. Let expected inflation be

$$\pi_t^e = c + \underbrace{\omega\, \mu_t}_{\text{information effect}} - \underbrace{\tau\, MPS_t}_{\text{policy effect}}, \qquad \omega, \tau > 0, \tag{2}$$

where MPS_t denotes the high-frequency monetary policy surprise and μ_t represents agents' posterior belief about underlying inflationary pressure. The policy component lowers expected inflation following a contractionary surprise, whereas the information component raises expected inflation when the surprise leads agents to infer stronger inflationary pressures.

Assume that monetary policy surprises are informative about an unobserved *inflationary state* θ_t:

$$MPS_t = \phi\, \theta_t + \varepsilon_t, \qquad \theta_t | \mathcal{I}_{t^-} \sim \mathcal{N}(\mu_{t^-}, \sigma^2_{\theta,t^-}), \qquad \varepsilon_t | A_t \sim \mathcal{N}\left(0, \frac{\sigma_\varepsilon^2}{1 + \lambda A_t}\right), \tag{3}$$

where A_t denotes pre-FOMC attention. The key assumption is that attention improves the informational content of the policy signal. When inflation and monetary policy receive substantial public attention, agents have already processed more information before the announcement and therefore perceive the policy surprise as a less noisy signal about underlying inflationary conditions.

Assuming that agents know the policy reaction coefficient ϕ, Bayesian updating implies

$$\mu_t = \mu_{t^-} + K_t(A_t)\left(MPS_t - \phi\mu_{t^-}\right), \qquad K_t(A_t) = \frac{\sigma^2_{\theta,t^-}\phi}{\phi^2\sigma^2_{\theta,t^-} + \frac{\sigma^2_\varepsilon}{1+\lambda A_t}}. \tag{4}$$

The updating coefficient $K_t(A_t)$ can be interpreted as a Kalman gain. Importantly, it is increasing in attention. As inflation becomes more salient, agents place greater weight on the information contained in the monetary policy surprise when updating beliefs about inflationary pressure.

Combining equations (2) and (4), the effect of a monetary policy surprise on inflation expectations is

$$\frac{\partial \pi^e_t}{\partial MPS_t} = \omega K_t(A_t) - \tau. \tag{5}$$

The response is positive whenever the information effect dominates the conventional policy effect. Moreover,

$$\frac{\partial^2 \pi^e_t}{\partial MPS_t \partial A_t} = \omega \frac{\partial K_t(A_t)}{\partial A_t} > 0. \tag{6}$$

The model therefore delivers a simple empirical prediction: the response of inflation expectations to a contractionary monetary policy surprise should become more positive as attention increases.

The model also provides a natural interpretation for the narrative indicators extracted from newspapers. Periods in which the pre-FOMC news bundle points to rising inflation and prospective monetary tightening correspond to environments in which agents are already focused on inflation risks. In such states, monetary policy surprises should carry a stronger informational component and therefore exert a larger positive effect on inflation expectations.

5 Empirical Evidence

The model developed in Section 4 yields a straightforward prediction: the response of inflation expectations to a monetary policy surprise should depend on the informational environment prevailing immediately before the FOMC announcement. In particular, the information effect should be stronger when newspaper narratives point to rising inflation and heightened inflation concerns.

Monetary policy surprises and narrative classifications are observed at the FOMC-event frequency, whereas Michigan inflation expectations are observed monthly. Let $\mathcal{E}_t$ denote the set of FOMC events occurring in month t. For each event $j \in \mathcal{E}_t$, let $m_{j,t}$ denote the monetary policy surprise and let $s_{j,t} \in \{-1, 0, +1\}$ denote the LLM-classified inflation

narrative extracted from the newspaper bundle published immediately before that event. We construct the monthly monetary policy surprise and narrative state as

$$MPS_t = \sum_{j \in \mathcal{E}_t} m_{j,t}, \qquad S_t = \sum_{j \in \mathcal{E}_t} s_{j,t}. \tag{7}$$

The variable S_t therefore captures the cumulative directional balance of the pre-FOMC inflation narratives observed during month t.

Crucially, the interaction between the monetary policy surprise and the narrative state is constructed at the event level before aggregation to the monthly frequency:

$$Q_t = \sum_{j \in \mathcal{E}_t} m_{j,t}\, s_{j,t}. \tag{8}$$

This construction ensures that each monetary policy surprise is interacted only with the informational environment prevailing immediately before the corresponding FOMC announcement. In general,

$$Q_t \neq \left(\sum_{j \in \mathcal{E}_t} m_{j,t} \right) \left(\sum_{j \in \mathcal{E}_t} s_{j,t} \right), \tag{9}$$

because the expression on the right-hand side would introduce cross-event interactions between the surprise associated with one FOMC announcement and the narrative preceding another announcement in the same month.

To test the model prediction, we estimate the following state-dependent local projection for each horizon h:

$$\mathbb{E}_{t+h}[\pi_{t+12+h}] = \alpha_h + \beta_h MPS_t + \delta_h Q_t + \eta_h S_t + \sum_{\ell=1}^{L} \gamma_{h,\ell}' W_{t-\ell} + \theta_h' X_t + u_{t+h}, \tag{10}$$

where $\mathbb{E}_{t+h}[\pi_{t+12+h}]$ denotes Michigan twelve-month inflation expectations at horizon $t+h$, MPS_t is the sum of the monetary policy surprises occurring in month t, Q_t is the sum of the corresponding event-level shock–narrative interactions, and S_t is the summed monthly narrative state. Following Plagborg-Møller and Wolf (2021), we lag-augment the projection with $L = 12$ lags of the vector $W_{t-\ell} = (\pi^E_{t-\ell},\, MPS_{t-\ell},\, S_{t-\ell},\, Q_{t-\ell})'$, which includes the dependent variable, the shock, the state and the interaction. Plagborg-Møller and Wolf (2021) show that this practice restores valid inference at longer horizons irrespective of the persistence of the regressors. The vector X_t collects the remaining predetermined controls: lagged year-on-year CPI inflation, the twelve-month rolling volatility of monthly inflation,

and the Bracha and Tang (2025) household (in-)attention measure.[3] The monthly surprise and the interaction Q_t are both divided by the standard deviation of the surprise computed over FOMC months, so that their coefficients are expressed on a common shock scale.

Because the interaction is constructed at the event level, the marginal response to the monetary policy surprise associated with event j, holding the other events occurring in the same month fixed, is

$$\frac{\partial \mathbb{E}_{t+h}[\pi_{t+12+h}]}{\partial m_{j,t}} = \beta_h + \delta_h s_{j,t}. \tag{11}$$

Accordingly, the impulse response to a monetary policy surprise occurring under an event-level narrative state $s^\star \in \{-1, 0, +1\}$ is

$$IRF_h(s^\star) = \beta_h + \delta_h s^\star. \tag{12}$$

A positive interaction coefficient therefore implies that a given monetary policy surprise has a more positive effect on inflation expectations when the newspaper narrative immediately preceding the FOMC announcement points to higher future inflation.

5.1 Testing the narrative-dependence of the response

We test

$$H_0 : \delta_h = 0 \qquad \text{against} \qquad H_1 : \delta_h > 0. \tag{13}$$

Under the null, the response of inflation expectations to a monetary policy surprise does not depend on the pre-FOMC inflation narrative, while under the alternative, the response becomes more positively pronounced when the announcement occurs in an informational environment already pointing to higher future inflation.

[3]The Bracha and Tang (2025) measure is a survey-based index of the share of households who report not knowing, or being unsure about, the inflation outlook, and thus captures inattention on the receiving side of the information channel. We include it because our narrative state is extracted from the supply of news, whereas the mechanism operates on how attentive households are to that news; controlling for measured household inattention guards against the concern that Q_t merely proxies for periods in which households happen to be paying more attention to inflation, rather than for the directional content of the pre-FOMC coverage itself. That the interaction coefficient is unaffected by its inclusion indicates that the two capture distinct margins.

Table 4: Conditional local projections of Michigan 12-month inflation expectations, horizon by horizon. Each column is a separate regression of $\mathbb{E}_{t+h}[\pi_{t+12+h}]$ from 10. All specifications include the levels of the controls and twelve lags of the dependent variable, the shock, the state and the narrative interaction. HAC standard errors with $h+1$ lags in parentheses; *, **, *** denote significance at the 10%, 5% and 1% level.

	h=0	h=1	h=2	h=3	h=4	h=5	h=6	h=7	h=8	h=9	h=10	h=11	h=12	h=13	h=14	h=15	h=16	h=17	h=18	h=19	h=20	h=21	h=22	h=23	h=24
MPS_t	0.006	0.011	−0.040	−0.067	−0.091*	−0.073	0.017	0.022	−0.003	0.050	0.080	0.085**	0.059*	0.093***	0.063	0.052	0.050	0.041	0.056	0.065**	0.096***	0.047	0.048	0.025	0.049
	(0.016)	(0.022)	(0.047)	(0.054)	(0.053)	(0.060)	(0.105)	(0.107)	(0.084)	(0.106)	(0.070)	(0.036)	(0.035)	(0.036)	(0.052)	(0.046)	(0.048)	(0.040)	(0.035)	(0.032)	(0.037)	(0.032)	(0.033)	(0.042)	(0.038)
$MPS_t \times s_t$	0.006	−0.010	0.030	0.018	0.041	0.084	0.188*	0.263**	0.158*	0.104	0.125***	0.036	−0.004	0.043	0.103	0.090	0.154**	0.120*	0.099	0.148*	0.166*	0.161**	0.132	0.036	0.138
	(0.030)	(0.039)	(0.065)	(0.074)	(0.075)	(0.072)	(0.106)	(0.133)	(0.082)	(0.075)	(0.043)	(0.056)	(0.055)	(0.059)	(0.084)	(0.061)	(0.077)	(0.072)	(0.080)	(0.077)	(0.085)	(0.072)	(0.093)	(0.097)	(0.103)
s_t	0.093***	0.145***	0.126***	0.089*	0.115**	0.116**	0.066	0.097*	0.041	0.021	0.046	0.042	0.038	0.063	0.039	0.001	−0.018	−0.049	−0.051	−0.027	−0.029	−0.039	−0.045	−0.050	−0.040
	(0.031)	(0.040)	(0.043)	(0.053)	(0.057)	(0.047)	(0.050)	(0.056)	(0.049)	(0.050)	(0.048)	(0.060)	(0.075)	(0.071)	(0.065)	(0.049)	(0.046)	(0.057)	(0.050)	(0.052)	(0.054)	(0.055)	(0.060)	(0.073)	(0.068)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lags (L=12)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	372	371	370	369	368	367	366	365	364	363	362	361	360	359	358	357	356	355	354	353	352	351	350	349	348
R^2	0.851	0.723	0.640	0.550	0.507	0.480	0.446	0.414	0.391	0.389	0.379	0.353	0.333	0.336	0.343	0.376	0.374	0.359	0.348	0.340	0.335	0.335	0.331	0.324	0.318

Table 4 reports the horizon-by-horizon estimates. The interaction coefficient is indistinguishable from zero over the first two quarters and turns positive from the sixth month onward, peaking at 0.263 at $h = 7$. A hawkish surprise therefore raises household inflation expectations more strongly when the pre-FOMC newspaper narrative points to rising inflation than when the narrative is neutral.

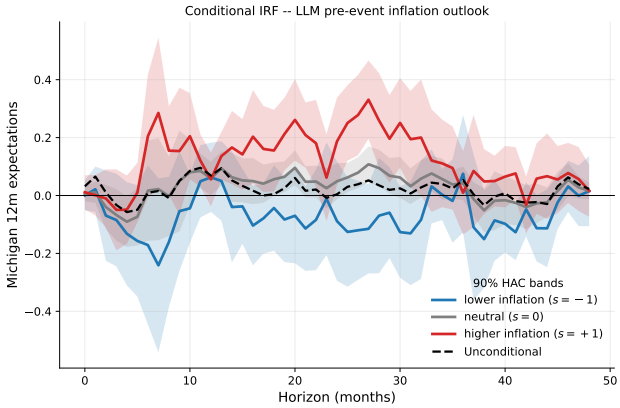
The direct effect of the narrative state, η_h, is positive at short horizons, but we do not interpret it causally. Newspaper narratives respond to economic developments that are also observed by households and may therefore be correlated with unobserved determinants of the level of inflation expectations. This does not, by itself, invalidate the interpretation of δ_h as state-dependent transmission of the monetary policy surprise. The relevant identifying condition is

$$\mathbb{E}\left[m_{j,t} u_{t+h} \mid s_{j,t}, X_t\right] = 0, \tag{14}$$

which requires the event-level monetary policy surprise to be conditionally mean-independent of future innovations in inflation expectations within each narrative state. Thus, the narrative need not be exogenous with respect to the level of expectations; bias in δ_h would arise only if an omitted factor correlated with the narrative also changed the response of expectations to the monetary policy surprise.

This condition is plausible in our setting because the narrative state is measured from newspapers published before the FOMC announcement, whereas the monetary policy surprise is measured within a narrow window around the announcement. A remaining concern is that the narrative may proxy for macroeconomic conditions that independently modify the transmission of the surprise. We address this directly by augmenting the specification with interactions between the monetary policy surprise and both lagged inflation and inflation volatility (see subsection 5.2). The stability of δ_h after including these alternative state interactions indicates that the narrative interaction is not simply capturing state dependence associated with the prevailing inflation environment.

Figure 4: Impulse responses conditional on pre-FOMC inflation narratives



Notes: The figure reports local-projection impulse responses of Michigan twelve-month inflation expectations to a one-standard-deviation monetary policy surprise, evaluated at the three event-level narrative states $s^\star \in \{-1, 0, +1\}$ from equation (12). Confidence bands are 90% and are obtained by the delta method, $\mathrm{Var}(\hat{\beta}_h + \hat{\delta}_h s^\star) = \mathrm{Var}(\hat{\beta}_h) + s^{\star 2}\,\mathrm{Var}(\hat{\delta}_h) + 2s^\star\,\mathrm{Cov}(\hat{\beta}_h, \hat{\delta}_h)$, with the variance–covariance terms taken from the HAC estimator (Newey–West, $h+1$ lags).

Figure 4 reports these coefficients into conditional impulse responses. When the pre-FOMC bundle points to rising inflation ($s^\star = +1$), a one-standard-deviation surprise raises inflation expectations by up to roughly a third of a percentage point over the following half year, whereas in the neutral state ($s^\star = 0$) the response is close to the standard, mildly disinflationary path. The two responses diverge only after several months and remain apart thereafter, so the informational component of the surprise is not absorbed on impact: agents revise their beliefs more strongly, and more persistently, when the announcement lands in an environment already focused on inflation risks. This is the pattern the model predicts when the signal about underlying inflationary pressure receives more weight in high-attention states.

5.2 Robustness: the inflation environment

The narrative state could in principle stand in for the prevailing inflation environment: high-inflation months are precisely those in which coverage turns to price pressures, and the transmission of a surprise may itself vary with the level or the volatility of inflation. If this is the case, then δ_h would capture ordinary state dependence in the inflation regime rather than the directional content of the pre-FOMC coverage. We address this by adding to equation (10) the interactions of the surprise with lagged year-on-year inflation and with inflation volatility, both demeaned so that β_h retains its interpretation as the response evaluated at the average inflation environment.

$$\mathbb{E}_{t+h}[\pi_{t+12+h}] = \alpha_h + \beta_h MPS_t + \delta_h Q_t + \eta_h S_t + \zeta_h \left(MPS_t \times \tilde{\pi}_{t-1}\right) + \xi_h \left(MPS_t \times \tilde{\sigma}_t^{\pi}\right) + \sum_{\ell=1}^{L} \gamma_{h,\ell}' W_{t-\ell} + \theta_h' X_t + u_{t+h}, \tag{15}$$

Table 5: Conditional local projections of Michigan 12-month inflation expectations, horizon by horizon. Each column is a separate regression of $\mathbb{E}_{t+h}[\pi_{t+12+h}]$ from 15. All specifications include the levels of the controls and twelve lags of the dependent variable, the shock, the state and the narrative interaction. HAC standard errors with $h+1$ lags in parentheses; *, **, *** denote significance at the 10%, 5% and 1% level.

	h=0	h=1	h=2	h=3	h=4	h=5	h=6	h=7	h=8	h=9	h=10	h=11	h=12	h=13	h=14	h=15	h=16	h=17	h=18	h=19	h=20	h=21	h=22	h=23	h=24
MPS_t	0.010	0.033	−0.008	−0.064*	−0.087**	−0.083*	−0.002	−0.006	−0.031	0.024	0.066	0.052	0.037	0.071*	0.057	0.052	0.058	0.054	0.060	0.059	0.095**	0.038	0.041	0.019	0.042
	(0.020)	(0.022)	(0.032)	(0.036)	(0.036)	(0.043)	(0.067)	(0.070)	(0.064)	(0.086)	(0.081)	(0.052)	(0.047)	(0.038)	(0.048)	(0.056)	(0.052)	(0.047)	(0.050)	(0.046)	(0.046)	(0.042)	(0.037)	(0.039)	(0.042)
$MPS_t \times s_t$	0.012	−0.015	0.039	0.038	0.062	0.112	0.235***	0.321***	0.202***	0.143***	0.133***	0.036	0.004	0.046	0.097	0.091	0.143**	0.107*	0.104	0.159*	0.172*	0.179**	0.133	0.016	0.124
	(0.031)	(0.038)	(0.060)	(0.070)	(0.073)	(0.071)	(0.077)	(0.090)	(0.054)	(0.046)	(0.040)	(0.059)	(0.060)	(0.063)	(0.078)	(0.061)	(0.070)	(0.065)	(0.085)	(0.083)	(0.091)	(0.082)	(0.092)	(0.085)	(0.095)
$MPS_t \times \tilde{\pi}_{t-1}$	−0.051	0.094	−0.027	−0.199*	−0.198*	−0.310**	−0.513***	−0.640***	−0.505**	−0.447***	−0.110	−0.068	−0.126	−0.078	0.050	−0.010	0.105	0.130	−0.033	−0.112	−0.062	−0.168*	−0.018	0.174**	0.120
	(0.059)	(0.069)	(0.094)	(0.111)	(0.119)	(0.139)	(0.168)	(0.175)	(0.197)	(0.122)	(0.130)	(0.106)	(0.105)	(0.111)	(0.128)	(0.091)	(0.099)	(0.113)	(0.140)	(0.136)	(0.152)	(0.101)	(0.102)	(0.089)	(0.128)
$MPS_t \times \tilde{\sigma}_t^{\pi}$	0.628	2.089**	3.466***	0.872	0.918	−0.226	−0.723	−1.354	−1.663	−1.581	−1.193	−3.267	−1.948	−2.155	−0.774	−0.011	0.567	0.869	0.515	−0.224	0.105	−0.429	−0.637	−1.255	−1.090
	(0.696)	(0.902)	(1.148)	(1.302)	(1.436)	(1.643)	(1.701)	(1.950)	(2.360)	(2.083)	(2.169)	(2.376)	(1.950)	(1.741)	(1.840)	(1.858)	(1.972)	(2.037)	(1.859)	(1.773)	(1.489)	(1.389)	(1.505)	(1.568)	(1.720)
s_t	0.093***	0.150***	0.132***	0.088*	0.114**	0.110**	0.056	0.085	0.030	0.010	0.042	0.034	0.032	0.057	0.038	0.001	−0.015	−0.044	−0.051	−0.030	−0.030	−0.043	−0.046	−0.049	−0.040
	(0.031)	(0.039)	(0.042)	(0.052)	(0.056)	(0.045)	(0.046)	(0.053)	(0.050)	(0.049)	(0.047)	(0.059)	(0.074)	(0.070)	(0.064)	(0.048)	(0.046)	(0.056)	(0.048)	(0.051)	(0.054)	(0.055)	(0.060)	(0.073)	(0.069)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lags (L=12)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	372	371	370	369	368	367	366	365	364	363	362	361	360	359	358	357	356	355	354	353	352	351	350	349	348
R^2	0.852	0.726	0.648	0.554	0.512	0.488	0.468	0.448	0.412	0.406	0.381	0.359	0.336	0.339	0.344	0.376	0.375	0.360	0.348	0.341	0.335	0.337	0.331	0.328	0.320

Table 6: Stability of the narrative interaction coefficient δ_h across specifications. Panel A excludes the interactions between the surprise and the inflation environment; Panel B includes them. HAC standard errors in parentheses; *, **, *** denote significance at the 10%, 5% and 1% level.

	h=0	h=1	h=2	h=3	h=4	h=5	h=6	h=7	h=8	h=9	h=10	h=11	h=12	h=13	h=14	h=15	h=16	h=17	h=18	h=19	h=20	h=21	h=22	h=23	h=24
Panel A: narrative interaction only																									
δ_h	0.006	−0.010	0.030	0.018	0.041	0.084	0.188*	0.263**	0.158*	0.104	0.125***	0.036	−0.004	0.043	0.103	0.090	0.154**	0.120*	0.099	0.148*	0.166*	0.161**	0.132	0.036	0.138
	(0.030)	(0.039)	(0.065)	(0.074)	(0.075)	(0.072)	(0.106)	(0.133)	(0.082)	(0.075)	(0.043)	(0.056)	(0.055)	(0.059)	(0.084)	(0.061)	(0.077)	(0.072)	(0.080)	(0.077)	(0.085)	(0.072)	(0.093)	(0.097)	(0.103)
Panel B: adding $MPS_t \times \tilde{\pi}_{t-1}$ and $MPS_t \times \tilde{\sigma}_t^{\pi}$																									
δ_h	0.012	−0.015	0.039	0.038	0.062	0.112	0.235***	0.321***	0.202***	0.143***	0.133***	0.036	0.004	0.046	0.097	0.091	0.143**	0.107*	0.104	0.159*	0.172*	0.179**	0.133	0.016	0.124
	(0.031)	(0.038)	(0.060)	(0.070)	(0.073)	(0.071)	(0.077)	(0.090)	(0.054)	(0.046)	(0.040)	(0.059)	(0.060)	(0.063)	(0.078)	(0.061)	(0.070)	(0.065)	(0.085)	(0.083)	(0.091)	(0.082)	(0.092)	(0.085)	(0.095)

Table 5 reports the augmented specification and Table 6 places δ_h side by side with its baseline counterpart. Including the two environment interactions does not weaken the narrative coefficient; it sharpens it. At the peak horizon $h = 7$ the point estimate rises from 0.263 to 0.321 and its standard error falls from 0.133 to 0.090, and the window of significance widens from three horizons to five, now significant at the one-percent level over $h = 6$ to $h = 10$. The reason is visible in the coefficient on $MPS_t \times \tilde{\pi}_{t-1}$, which is large, negative and significant over the same $h = 3$ to $h = 9$ range: realized inflation and the pre-FOMC narrative are positively correlated in sample, so omitting the former attenuates the latter toward zero. The two interactions carry opposite signs — a tightening surprise is more disinflationary when realized inflation is already high, and more inflationary when the narrative points upward —

so they partially offset in the baseline, and separating them recovers a cleaner estimate of each. The volatility interaction is significant only on impact and adds no discernible pattern thereafter. A confound would not generate this configuration, and the narrative therefore carries information about the transmission of the surprise that conditioning on the inflation regime does not.

5.3 Robustness: response to orthogonalized monetary policy shocks

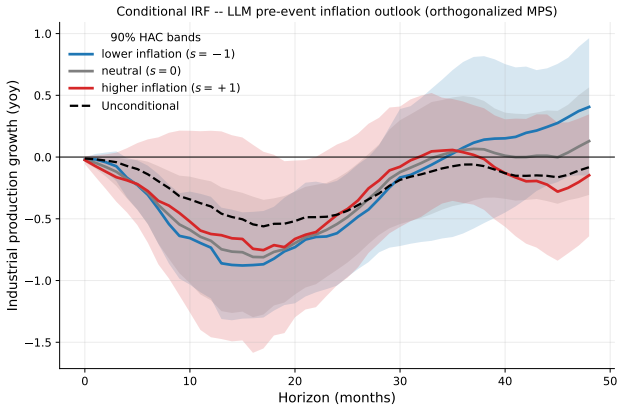
A second concern is that conventional high-frequency monetary policy surprises may contain a systematic component related to macroeconomic conditions known before the FOMC announcement. If so, the estimated responses may not reflect the effects of a truly exogenous monetary policy innovation.

To address this issue, we follow Bauer and Swanson (2023b), who construct an orthogonalized monetary policy shock by removing the component of high-frequency surprises that is predictable from publicly available macroeconomic and financial information before the FOMC announcement. The resulting residual can be interpreted as a cleaner measure of monetary policy innovations.[4]

We first verify that the orthogonalized shock behaves as a conventional contractionary monetary policy shock when the outcome variable is real activity. To do so, we re-estimate equation (10) using year-on-year industrial production growth (INDPRO from FRED) as the dependent variable. This exercise is intended to replicate the standard finding that, once the predictable information component is removed, a tightening surprise reduces real activity.

[4]Conceptually, this approach is closely related to Miranda-Agrippino and Ricco (2021). The key difference is that Bauer and Swanson (2023b) rely on publicly available information to clean the shock, whereas Miranda-Agrippino and Ricco (2021) use information contained in Federal Reserve forecasts.

Figure 5: Impulse responses of industrial production conditional on pre-FOMC inflation narratives, using the orthogonalized shock of Bauer and Swanson (2023b).



Notes: The figure reports local-projection impulse responses of year-on-year industrial production growth to an orthogonalized monetary policy surprise. The shock is constructed following Bauer and Swanson (2023b).

Figure 5 reports the results. The orthogonalized shock generates the expected response of real activity: industrial production declines following a contractionary monetary policy shock, and there is no evidence of an output puzzle. The interaction between the shock and the narrative state is not statistically significant, which suggests that the newspaper narratives primarily affect the expectations channel rather than the transmission of monetary policy to real activity.[5]

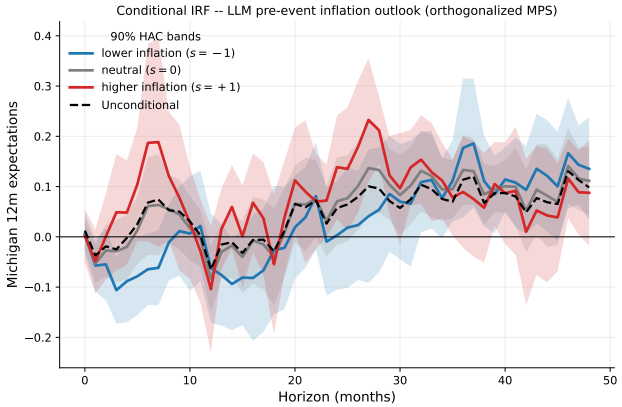
We then return to inflation expectations and repeat the baseline analysis using the orthogonalized surprise. This is an additional test of our interpretation: if the state-dependent response of inflation expectations were entirely driven by the predictable component embedded in standard high-frequency surprises, the interaction effect should disappear once the shock is orthogonalized (Bauer and Swanson, 2023b).

[5]The unconditional component of the shock is negative and significant, while the conditional component is not, meaning that attention and prior expectations matter for inflation expectations but not for real activity.

Table 7: Conditional local projections of Michigan 12-month inflation expectations on the orthogonalized Bauer and Swanson (2023b) monetary policy surprise, horizon by horizon. Each column is a separate regression of $\mathbb{E}_{t+h}[\pi_{t+12+h}]$ as in 10. All specifications include the levels of the controls and twelve lags of the dependent variable, the shock, the state and the narrative interaction. HAC standard errors with $h+1$ lags in parentheses; *, **, *** denote significance at the 10%, 5% and 1% level.

	h=0	h=1	h=2	h=3	h=4	h=5	h=6	h=7	h=8	h=9	h=10	h=11	h=12	h=13	h=14	h=15	h=16	h=17	h=18	h=19	h=20	h=21	h=22	h=23	h=24
$MPS_t^{\perp}$	0.007	−0.047*	−0.023	−0.017	−0.011	0.011	0.064	0.062	0.045	0.042	0.008	−0.016	−0.089**	−0.033	−0.020	−0.031	−0.011	−0.017	−0.038	0.009	0.066	0.056	0.056	0.012	0.051
	(0.019)	(0.026)	(0.034)	(0.041)	(0.042)	(0.043)	(0.059)	(0.061)	(0.039)	(0.039)	(0.038)	(0.034)	(0.039)	(0.031)	(0.035)	(0.038)	(0.047)	(0.050)	(0.053)	(0.048)	(0.043)	(0.056)	(0.047)	(0.044)	(0.052)
$MPS_t^{\perp} \times s_t$	0.004	0.012	0.031	0.083*	0.072	0.097**	0.135**	0.136*	0.075	0.046	0.025	−0.014	−0.002	0.064	0.092***	0.053	0.089**	0.066	−0.001	0.046	0.067*	0.040	0.011	0.056*	0.084**
	(0.024)	(0.029)	(0.039)	(0.044)	(0.045)	(0.044)	(0.067)	(0.073)	(0.047)	(0.059)	(0.055)	(0.053)	(0.056)	(0.044)	(0.035)	(0.040)	(0.040)	(0.041)	(0.050)	(0.042)	(0.040)	(0.047)	(0.035)	(0.033)	(0.035)
s_t	0.114***	0.169***	0.134***	0.097**	0.127**	0.123***	0.053	0.107**	0.070	0.041	0.093*	0.105**	0.100*	0.099*	0.083*	0.039	0.041	0.046	0.033	0.031	0.034	0.051	0.079	0.064	0.055
	(0.033)	(0.039)	(0.044)	(0.046)	(0.054)	(0.046)	(0.049)	(0.049)	(0.046)	(0.043)	(0.048)	(0.045)	(0.056)	(0.058)	(0.045)	(0.043)	(0.045)	(0.064)	(0.054)	(0.066)	(0.061)	(0.049)	(0.060)	(0.071)	(0.066)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lags (L=12)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	348	347	346	345	344	343	342	341	340	339	338	337	336	335	334	333	332	331	330	329	328	327	326	325	324
R^2	0.844	0.732	0.657	0.568	0.515	0.467	0.418	0.377	0.345	0.334	0.322	0.302	0.271	0.261	0.256	0.257	0.258	0.241	0.226	0.223	0.231	0.232	0.232	0.230	0.238

Figure 6: Impulse responses of Michigan inflation expectations conditional on pre-FOMC inflation narratives, using the orthogonalized shock of Bauer and Swanson (2023b).



Notes: The figure reports state-dependent local-projection impulse responses of Michigan twelve-month inflation expectations to a one-standard-deviation orthogonalized monetary policy surprise, evaluated at the three event-level narrative states $s^{\star} \in \{-1, 0, +1\}$ from equation (12); the dashed line is the unconditional response. The shock is constructed following Bauer and Swanson (2023b). Confidence bands are 90% and obtained by the delta method from the HAC variance–covariance matrix (Newey–West, $h+1$ lags).

Table 7 and Figure 6 show that the state dependence does not vanish. The interaction coefficient is again positive and significant, reaching 0.135 at $h = 6$, and inflation expectations continue to respond more positively to a contractionary surprise when the pre-FOMC narrative points to rising inflation. The magnitude is smaller than under the raw surprise—the peak falls from roughly 0.26 to 0.14—and significance is now concentrated in the first two quarters rather than spread across long horizons.

Indeed, part of the baseline result does reflect information embedded in conventional monetary policy surprises, as the attenuation of the interaction makes clear. More importantly, the newspaper narrative captures a dimension of information that standard orthogonalization does not remove: macroeconomic and financial variables account for part of the predictable component of the surprise, but they do not fully absorb the information contained in public narratives. The informational environment identified by the LLM-classified bundles is therefore economically distinct from conventional macroeconomic indicators. Households interpret the same policy innovation differently depending on the narrative prevailing before the announcement, generating heterogeneous responses of inflation expectations even when the shock has been purged of predictable macroeconomic variation.

The contrast between the two sets of interaction estimates is itself informative. With the raw high-frequency surprise (Table 4 and Figure 4), δ_h, is muted at short horizons and builds up over the medium term, staying positive and significant well beyond the first year. With the orthogonalized shock (Table 7), the profile shifts forward: the coefficient becomes significant already at $h = 3$ and peaks around $h = 6$, then fades. We read this difference as a direct consequence of the systematic component embedded in conventional surprises. The raw surprise is partly predictable from the macro-financial environment prevailing before the announcement, and that same environment is what keeps the pre-FOMC narrative state elevated and persistent. The raw-surprise interaction therefore captures not only the reaction to the policy innovation but also the slow-moving influence of the inflationary regime that jointly drives the predictable part of the surprise and the narrative state. Because inflation is persistent in high-attention states, its effect on expectations fades only gradually, which produces the long horizon of significance: there, expectations respond less to the announcement than to the broader inflationary environment in which it is embedded. Cleaning the shock of the predictable component isolates the unanticipated innovation, whose informational content is incorporated into beliefs soon after the announcement. The conditional response survives this cleaning—confirming that the narrative carries information beyond standard macro-financial controls—but it is shorter-lived, consistent with a clean information effect rather than with persistent regime dynamics.

5.4 Predictability of monetary policy surprises

The previous subsection shows that the conditional response of inflation expectations remains present even when monetary policy surprises are replaced by the orthogonalized shocks proposed by Bauer and Swanson (2023b). This finding is informative for the mechanism developed in Section 4. If the orthogonalization procedure successfully removed all economically relevant information embedded in high-frequency surprises, then the pre-FOMC newspaper narrative should no longer matter for the response of inflation expectations. Instead, the

interaction between the shock and the narrative state remains positive and statistically significant. This suggests that the LLM-encoded newspaper narratives capture information that is not fully spanned by the macroeconomic and financial variables used to construct the orthogonalized shock.

To investigate this possibility more directly, we examine whether pre-FOMC newspaper narratives predict monetary policy surprises. If newspaper coverage summarizes information available to the public before the policy announcement, then the LLM-coded policy outlook should contain information about both the sign and the magnitude of the subsequent monetary policy surprises. More importantly, if the newspaper narrative captures information beyond that contained in standard macroeconomic controls, it should retain predictive power even for the orthogonalized shock.

We test this hypothesis by estimating

$$MPS_t = \alpha + \beta_+ D_t^{raise} + \beta_- D_t^{cut} + \gamma' X_t + \varepsilon_t, \tag{16}$$

where D_t^{raise} and D_t^{cut} are indicator variables equal to one when the LLM-classified newspaper bundle published before the FOMC meeting anticipates, respectively, a rate hike or a rate cut. The omitted category consists of bundles classified as *stable* or *unclear*. The vector X_t contains predetermined macroeconomic controls, including lagged Michigan inflation expectations and lagged inflation volatility.

Table 8: Pre-FOMC narrative content and the monetary policy surprises

	$MPS_t = \alpha + \beta_+ D_t^{raise} + \beta_- D_t^{cut} + \gamma' X_t + \varepsilon_t$	
	$MP1$	MPS^*
	(1)	(2)
D_t^{raise}	0.0217**	0.0110*
	(0.0099)	(0.0061)
D_t^{cut}	-0.0394***	-0.0046
	(0.0123)	(0.0153)
Observations	196	180
Sample	1994–2025	1994–2023

Notes: $MP1$ is the monetary policy surprise from Acosta et al. (2025); MPS^* is the orthogonalized monetary policy surprise from Bauer and Swanson (2023b). The policy-outlook indicators are obtained from the adjudicated LLM classification of the pre-FOMC newspaper bundle. The omitted category includes bundles classified as stable or unclear. The vector X_t contains predetermined macroeconomic controls, including lagged Michigan inflation expectations and lagged inflation volatility. Standard errors are reported in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table 8 reports the results. The estimated coefficients are consistent with the interpretation that newspapers narratives contain information about the expected policy decision before the announcement. Bundles that anticipate a rate hike predict positive (hawkish) monetary policy surprises, while bundles that anticipate a rate cut predict negative (dovish) surprises. The relationship is strongest for the raw $MP1$ surprise of Acosta et al. (2025): the coefficient associated with expected hikes is positive and statistically significant, while the coefficient associated with expected cuts is negative and highly significant.

The more informative result concerns the orthogonalized shock MPS^* proposed by Bauer and Swanson (2023b). Even after removing the component of monetary policy surprises that is predictable from standard macroecnomic and financial variables, the expected-hike indicator remains positive and statistically significant. In other words, part of the variation in the orthogonalized shock remains predictable from the newspaper narrative observed before the FOMC announcement.

This finding has two implications. First, it suggests that newspaper narratives contain economically meaningful information about the policy environment that is not fully captured by conventional macroeconomic and financial indicators. Second, it helps explain why the conditional information effect survives when orthogonalized monetary policy shocks are used.

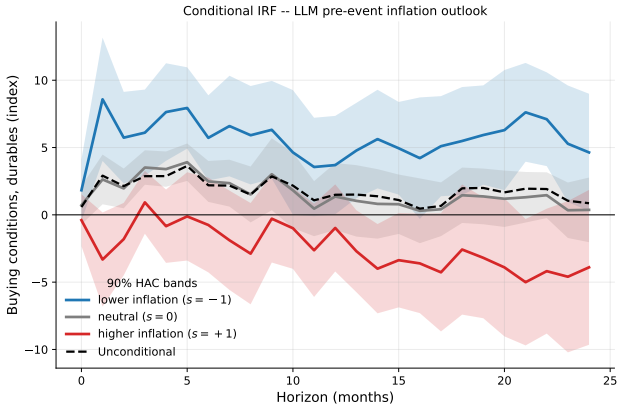
The orthogonalization removes information spanned by standard macro-financial variables, but not the public narrative component embedded in pre-FOMC newspaper coverage. In this sense, the narrative state captures a distinct dimension of the information set through which households and financial market participants interpret monetary policy announcements.

Taken together, the results suggest that LLM-encoded newspaper narratives capture a distinct dimension of the informational environment surrounding monetary policy decisions. This dimension is observable to households and financial market participants before the policy announcement and influences how monetary policy surprises are interpreted. Consequently, the transmission of monetary policy depends not only on the surprise itself, but also on the informational environment in which that surprise is received.

5.5 The pass-through to consumption expectations

The narrative also shapes how the surprise reaches households' spending plans. We re-estimate equation (10) with the Michigan index of buying conditions for large household durables as the dependent variable, keeping the specification unchanged. When the pre-FOMC narrative points to rising inflation, a tightening surprise makes households markedly more pessimistic about the time to buy durables: the interaction coefficient is negative and significant at almost every horizon, reaching about -4.8 index points, or roughly a sixth of a standard deviation of the index, after fourteen months (Table **??** and Figure 7). The same announcement that raises inflation expectations in this state therefore lowers the willingness to purchase durables, which points to households reading higher expected inflation as bad news rather than as a reason to bring purchases forward. The interaction is less precisely estimated with the broader statement and monetary-event surprises and with the orthogonalized shock, so we regard this evidence as complementary to the results on inflation expectations.

Figure 7: Buying conditions for durables conditional on pre-FOMC inflation narratives



Notes: Local-projection impulse responses of the Michigan index of buying conditions for large household durables to a one-standard-deviation monetary policy surprise, evaluated at the event-level narrative states $s^\star \in \{-1, 0, +1\}$ from equation (12); the dashed line is the unconditional response. Confidence bands are 90% and obtained by the delta method from the HAC variance–covariance matrix (Newey–West, $h + 1$ lags).

6 Conclusion

This paper studies how the informational environment shapes the transmission of monetary policy to inflation expectations. We combine a high-frequency measure of newspaper attention with large language models (LLMs) to characterize the narratives surrounding FOMC announcements. Using articles published immediately before each policy meeting, we construct real-time indicators of both public attention to inflation and the dominant narrative regarding future inflation and expected policy actions.

Our findings reveal a pronounced state dependence in the response of inflation expectations to monetary policy surprises. When the pre-FOMC narrative is neutral or uncertain, tightening surprises have relatively modest effects on inflation expectations. By contrast, when newspapers already emphasize rising inflation and prospective monetary tightening, the same surprise generates a substantially larger and more persistent increase in expected inflation. These results are robust to alternative specifications, including lag-augmented local projections and the use of orthogonalized monetary policy shocks designed to remove predictable macroeconomic and financial information.

The evidence is consistent with an information-effect interpretation of monetary policy. A hawkish surprise is not interpreted solely as a contractionary policy action. It also conveys information about the central bank's assessment of inflationary pressures. Crucially, our results suggest that the strength of this informational channel depends on the informational

environment prevailing before the policy announcement. When inflation is highly salient and public narratives already point to inflation risks, households place greater weight on the signal embedded in the central bank's action and update their beliefs accordingly.

More broadly, the paper contributes to the literature by shifting attention from the information contained in monetary policy surprises to the informational environment in which those surprises are received. Existing research has largely focused on disentangling policy shocks from information shocks. Our findings suggest that an additional dimension is equally important: the same monetary policy surprise can generate different outcomes depending on the degree of public attention and the narratives through which it is interpreted.

These results have practical implications for central banks. Monetary policy is communicated into a pre-existing information environment shaped by media coverage, public narratives, and expectations about future economic conditions. Understanding this environment may therefore be essential for assessing the effectiveness of policy communication and for interpreting the response of inflation expectations to monetary policy decisions in real time.

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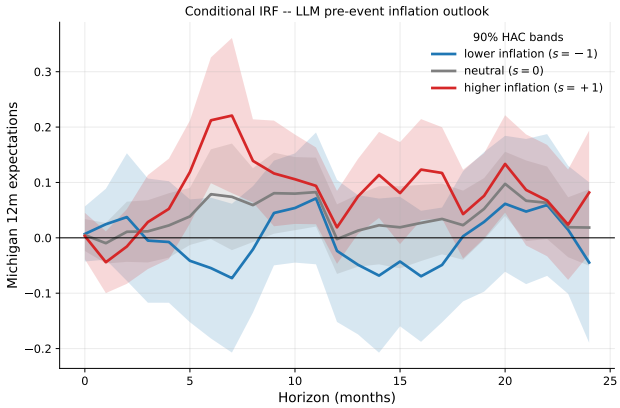
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A Empirical analysis using alternative proxies for monetary policy shocks

This appendix verifies that the baseline results are robust to alternative definitions of the monetary policy shock. In the main analysis, we use `MP1`, which captures the current-meeting target-rate surprise. Here we replace it with two broader USMPD measures: `STMT` and `ME`. The `STMT` shock is constructed from the statement window, while `ME` captures the broader monetary-event window around the FOMC meeting. Both measures summarize high-frequency changes in `MP1`, `MP2`, and `ED2`–`ED4` through their first principal component, normalized to have a one-for-one effect on the one-year Treasury yield.

Statement-window shock (`STMT`). Figure 8 and Table 9 report the estimates when the surprise is the statement-window shock. The state dependence carries over: the interaction coefficient is inert on impact and turns significantly positive from the sixth month, peaking at 0.141 at $h = 7$, with a further significant stretch around $h = 14$–17. Inflation expectations again respond more positively to a tightening surprise when the pre-FOMC narrative points to rising inflation.

Figure 8: Conditional impulse responses with the `STMT` shock



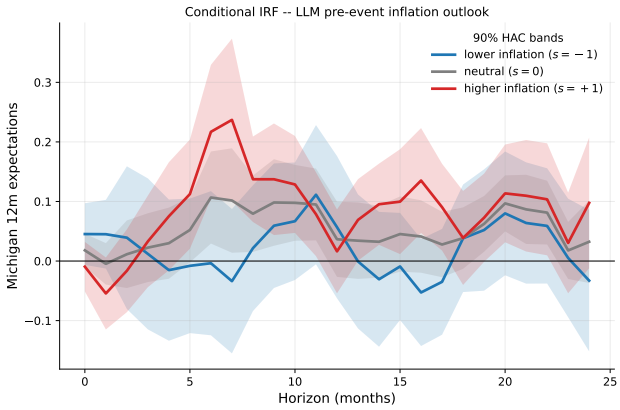
Notes: State-dependent local-projection impulse responses of Michigan twelve-month inflation expectations to a one-standard-deviation `STMT` surprise, evaluated at the event-level narrative states $s^\star \in \{-1, 0, +1\}$ from equation (12). Confidence bands are 90% and obtained by the delta method from the HAC variance–covariance matrix (Newey–West, $h + 1$ lags).

Table 9: Conditional local projections of Michigan 12-month inflation expectations on the `STMT` surprise, horizon by horizon. Each column is a separate regression of $\mathbb{E}_{t+h}[\pi_{t+12+h}]$ from 10. All specifications include the levels of the controls and twelve lags of the dependent variable, the shock, the state and the narrative interaction. HAC standard errors with $h+1$ lags in parentheses; *, **, *** denote significance at the 10%, 5% and 1% level.

	h=0	h=1	h=2	h=3	h=4	h=5	h=6	h=7	h=8	h=9	h=10	h=11	h=12	h=13	h=14	h=15	h=16	h=17	h=18	h=19	h=20	h=21	h=22	h=23	h=24
MPS_t	0.002	−0.014	0.004	0.004	0.011	0.026	0.071	0.066	0.046	0.067	0.063*	0.065**	−0.017	0.001	0.007	0.009	0.018	0.023	0.011	0.034	0.086**	0.066	0.059	0.013	0.019
	(0.017)	(0.022)	(0.035)	(0.037)	(0.040)	(0.035)	(0.058)	(0.064)	(0.044)	(0.049)	(0.036)	(0.030)	(0.035)	(0.036)	(0.038)	(0.037)	(0.035)	(0.032)	(0.033)	(0.031)	(0.038)	(0.042)	(0.038)	(0.035)	(0.042)
$MPS_t \times s_t$	−0.005	−0.037	−0.026	0.014	0.029	0.078	0.126**	0.141**	0.076*	0.030	0.024	0.008	0.012	0.057	0.086*	0.054	0.088**	0.076**	0.011	0.020	0.039	0.018	0.004	0.007	0.064
	(0.022)	(0.029)	(0.047)	(0.050)	(0.051)	(0.054)	(0.059)	(0.062)	(0.044)	(0.039)	(0.036)	(0.043)	(0.050)	(0.045)	(0.051)	(0.042)	(0.045)	(0.037)	(0.043)	(0.053)	(0.059)	(0.055)	(0.058)	(0.059)	(0.067)
s_t	0.082***	0.150***	0.101**	0.064	0.085	0.088**	0.041	0.061	0.024	0.003	0.032	0.055	0.094	0.111	0.070	0.038	0.007	−0.027	−0.025	−0.027	−0.050	−0.063	−0.056	−0.037	−0.045
	(0.030)	(0.040)	(0.049)	(0.053)	(0.055)	(0.043)	(0.051)	(0.052)	(0.044)	(0.046)	(0.046)	(0.060)	(0.076)	(0.077)	(0.074)	(0.060)	(0.059)	(0.061)	(0.057)	(0.062)	(0.065)	(0.068)	(0.072)	(0.073)	(0.070)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lags (L=12)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	372	371	370	369	368	367	366	365	364	363	362	361	360	359	358	357	356	355	354	353	352	351	350	349	348
R^2	0.849	0.718	0.633	0.537	0.487	0.454	0.409	0.363	0.338	0.337	0.327	0.312	0.295	0.297	0.308	0.340	0.338	0.325	0.306	0.308	0.312	0.307	0.302	0.299	0.292

Monetary-event-window shock (`ME`). Figure 9 and Table 10 report the estimates for the broader monetary-event shock. The pattern is again the same, with the interaction significant from the sixth month and peaking at 0.147 at $h = 7$. Because `ME` incorporates revisions to the expected path of policy, the state-dependent response is not specific to the narrow `MP1` target-rate surprise but survives for broader monetary-policy-news shocks.

Figure 9: Conditional impulse responses with the `ME` shock



Notes: State-dependent local-projection impulse responses of Michigan twelve-month inflation expectations to a one-standard-deviation `ME` surprise, evaluated at the event-level narrative states $s^\star \in \{-1, 0, +1\}$ from equation (12). Confidence bands are 90% and obtained by the delta method from the HAC variance–covariance matrix (Newey–West, $h+1$ lags).

Table 10: Conditional local projections of Michigan 12-month inflation expectations on the ME surprise, horizon by horizon. Each column is a separate regression of $\mathbb{E}_{t+h}[\pi_{t+12+h}]$ from 10. All specifications include the levels of the controls and twelve lags of the dependent variable, the shock, the state and the narrative interaction. HAC standard errors with $h+1$ lags in parentheses; *, **, *** denote significance at the 10%, 5% and 1% level.

	h=0	h=1	h=2	h=3	h=4	h=5	h=6	h=7	h=8	h=9	h=10	h=11	h=12	h=13	h=14	h=15	h=16	h=17	h=18	h=19	h=20	h=21	h=22	h=23	h=24
MPS_t	0.005	−0.010	0.011	0.012	0.022	0.039	0.079	0.074	0.059	0.081*	0.080**	0.083**	−0.002	0.013	0.023	0.019	0.027	0.034	0.023	0.052	0.097***	0.067	0.063	0.019	0.019
	(0.018)	(0.022)	(0.033)	(0.034)	(0.035)	(0.031)	(0.049)	(0.059)	(0.041)	(0.044)	(0.040)	(0.038)	(0.038)	(0.040)	(0.043)	(0.045)	(0.042)	(0.039)	(0.038)	(0.034)	(0.035)	(0.044)	(0.040)	(0.033)	(0.042)
$MPS_t \times s_t$	−0.002	−0.034	−0.027	0.017	0.030	0.080	0.133**	0.147**	0.080*	0.036	0.026	0.011	0.021	0.062	0.091*	0.062	0.096**	0.083**	0.020	0.024	0.036	0.020	0.004	0.005	0.063
	(0.022)	(0.029)	(0.047)	(0.050)	(0.050)	(0.054)	(0.054)	(0.060)	(0.043)	(0.037)	(0.037)	(0.046)	(0.049)	(0.047)	(0.053)	(0.045)	(0.049)	(0.042)	(0.048)	(0.054)	(0.055)	(0.055)	(0.058)	(0.057)	(0.067)
$MPS_t \times \bar{\pi}_{t-1}$	−0.053	−0.045	0.007	−0.039	−0.008	−0.044	−0.141***	−0.104	−0.068	−0.107***	−0.023	−0.040	−0.173***	−0.058	−0.046	−0.145***	−0.121*	−0.094	−0.136***	−0.020	0.091**	−0.030	0.006	0.065	0.004
	(0.035)	(0.038)	(0.040)	(0.048)	(0.049)	(0.046)	(0.052)	(0.064)	(0.056)	(0.040)	(0.037)	(0.048)	(0.048)	(0.061)	(0.068)	(0.054)	(0.068)	(0.071)	(0.051)	(0.038)	(0.039)	(0.050)	(0.044)	(0.046)	(0.047)
$MPS_t \times \bar{\sigma}_t^*$	0.969*	1.257	1.804	1.990*	3.116**	3.363**	2.379	2.326	3.478***	3.754***	4.129***	4.481***	4.139**	3.086*	3.795**	2.945**	2.851*	3.138**	3.611***	3.958***	1.814	0.499	0.856	0.752	−0.157
	(0.571)	(0.858)	(1.104)	(1.090)	(1.302)	(1.395)	(1.570)	(1.464)	(1.165)	(1.341)	(1.467)	(1.536)	(1.772)	(1.826)	(1.682)	(1.459)	(1.528)	(1.448)	(1.382)	(1.418)	(1.184)	(1.091)	(1.257)	(1.116)	(1.052)
s_t	0.086***	0.155***	0.107**	0.072	0.096*	0.101**	0.050	0.070	0.038	0.019	0.048	0.073	0.112	0.125	0.087	0.052	0.021	−0.012	−0.008	−0.010	−0.043	−0.060	−0.052	−0.034	−0.046
	(0.030)	(0.040)	(0.050)	(0.054)	(0.057)	(0.046)	(0.052)	(0.053)	(0.045)	(0.047)	(0.048)	(0.063)	(0.077)	(0.080)	(0.076)	(0.061)	(0.060)	(0.063)	(0.058)	(0.062)	(0.063)	(0.068)	(0.072)	(0.072)	(0.070)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lags (L=12)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	372	371	370	369	368	367	366	365	364	363	362	361	360	359	358	357	356	355	354	353	352	351	350	349	348
R^2	0.851	0.720	0.637	0.542	0.498	0.466	0.423	0.373	0.352	0.356	0.345	0.333	0.325	0.308	0.323	0.357	0.352	0.339	0.327	0.324	0.321	0.308	0.303	0.302	0.292

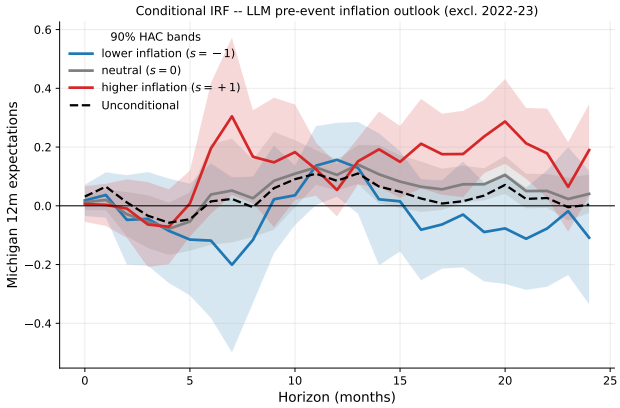
Figures 8 and 9 confirm that the state-dependent response is not specific to the narrow MP1 target-rate surprise. For both broader shocks the interaction coefficient is positive and significant over the same medium-horizon window as in the baseline, so the findings carry over to monetary-policy-news measures that incorporate revisions to the expected path of policy.

B Empirical analysis excluding 2022–2023

This appendix examines whether the baseline results are driven by the exceptional inflation episode of 2022–2023. Following the Russian invasion of Ukraine, energy-price shocks, supply-chain disruptions, and heightened macroeconomic uncertainty generated a sharp increase in inflation and an unprecedented level of public attention to price developments. Because this period combines unusually high inflation with intense media coverage, it provides a natural setting in which attention-based measures could become particularly influential. Excluding these years therefore offers a useful test of whether our results reflect a broader mechanism or are primarily driven by this exceptional episode.

We re-estimate the baseline conditional local projections in equation (10) after removing all observations between January 2022 and December 2023. Apart from the sample restriction, the specification is unchanged: monetary policy surprises are standardized within the estimation sample, the state variable is the LLM-classified pre-FOMC inflation narrative, and the set of controls is identical to that used in the baseline analysis.

Figure 10: Conditional impulse responses excluding 2022–2023



Notes: State-dependent local-projection impulse responses of Michigan twelve-month inflation expectations to a one-standard-deviation monetary policy surprise, evaluated at the event-level narrative states $s^\star \in \{-1, 0, +1\}$ from equation (12), after excluding all observations in 2022 and 2023. Confidence bands are 90% and obtained by the delta method from the HAC variance–covariance matrix (Newey–West, $h+1$ lags).

Table 11: Conditional local projections of Michigan 12-month inflation expectations, horizon by horizon. Each column is a separate regression of $\mathbb{E}_{t+h}[\pi_{t+12+h}]$ from 10. All specifications include the levels of the controls and twelve lags of the dependent variable, the shock, the state and the narrative interaction. HAC standard errors with $h+1$ lags in parentheses; *, **, *** denote significance at the 10%, 5% and 1% level.

	h=0	h=1	h=2	h=3	h=4	h=5	h=6	h=7	h=8	h=9	h=10	h=11	h=12	h=13	h=14	h=15	h=16	h=17	h=18	h=19	h=20	h=21	h=22	h=23	h=24
MPS_t	0.013	0.025	−0.023	−0.058	−0.082	−0.069	0.013	0.013	−0.023	0.039	0.069	0.080**	0.056	0.087**	0.054	0.037	0.036	0.044	0.059	0.064	0.101**	0.063	0.119***	0.086**	0.116***
	(0.018)	(0.022)	(0.044)	(0.053)	(0.052)	(0.057)	(0.104)	(0.111)	(0.082)	(0.107)	(0.073)	(0.036)	(0.034)	(0.038)	(0.061)	(0.055)	(0.054)	(0.048)	(0.046)	(0.045)	(0.050)	(0.039)	(0.037)	(0.034)	(0.031)
$MPS_t \times s_t$	−0.015	−0.019	0.015	−0.003	0.033	0.094	0.205*	0.291**	0.185**	0.094	0.105**	0.022	−0.008	0.063	0.147	0.119*	0.150**	0.103	0.096	0.144*	0.183**	0.176**	0.014	−0.069	−0.029
	(0.031)	(0.040)	(0.057)	(0.069)	(0.074)	(0.073)	(0.108)	(0.144)	(0.090)	(0.076)	(0.048)	(0.057)	(0.061)	(0.060)	(0.090)	(0.068)	(0.076)	(0.074)	(0.085)	(0.078)	(0.093)	(0.086)	(0.049)	(0.061)	(0.052)
s_t	0.073**	0.112***	0.060	0.033	0.065	0.094*	0.050	0.084	0.056	−0.004	0.014	0.001	0.016	0.021	0.020	0.012	−0.008	−0.043	−0.047	−0.029	−0.039	−0.040	−0.019	−0.007	0.023
	(0.032)	(0.042)	(0.046)	(0.055)	(0.062)	(0.049)	(0.052)	(0.055)	(0.049)	(0.047)	(0.046)	(0.047)	(0.060)	(0.053)	(0.058)	(0.050)	(0.054)	(0.060)	(0.050)	(0.050)	(0.054)	(0.061)	(0.057)	(0.071)	(0.072)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lags (L=12)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	348	347	346	345	344	343	342	341	340	339	338	337	336	335	334	333	332	331	330	329	328	327	326	325	324
R^2	0.813	0.635	0.514	0.404	0.355	0.329	0.296	0.264	0.247	0.263	0.262	0.254	0.254	0.267	0.277	0.301	0.318	0.340	0.352	0.355	0.364	0.361	0.353	0.341	0.311

Figure 10 and Table 11 show that the main findings survive. The interaction coefficient is inert over the first two quarters and turns positive from the sixth month, peaking at 0.291 at $h = 7$ — if anything marginally larger than the 0.263 obtained on the full sample. Inflation expectations therefore continue to respond more positively to a contractionary surprise when the pre-FOMC narrative points to rising inflation, and the state dependence is not an artefact of the 2022–2023 episode.

Table 12: Conditional local projections of Michigan 12-month inflation expectations, horizon by horizon. Each column is a separate regression of $\mathbb{E}_{t+h}[\pi_{t+12+h}]$ from 10. All specifications include the levels of the controls and twelve lags of the dependent variable, the shock, the state and the narrative interaction. HAC standard errors with $h+1$ lags in parentheses; *, **, *** denote significance at the 10%, 5% and 1% level.

	h=0	h=1	h=2	h=3	h=4	h=5	h=6	h=7	h=8	h=9	h=10	h=11	h=12	h=13	h=14	h=15	h=16	h=17	h=18	h=19	h=20	h=21	h=22	h=23	h=24
MPS_t	0.019	0.024	0.002	−0.018	−0.036	−0.011	0.102*	0.121*	0.067	0.108	0.103	0.073*	0.065	0.077**	0.029	0.034	0.023	0.037	0.053	0.059	0.082	0.070	0.119***	0.060	0.116***
	(0.022)	(0.022)	(0.031)	(0.037)	(0.034)	(0.039)	(0.057)	(0.064)	(0.048)	(0.085)	(0.076)	(0.042)	(0.042)	(0.034)	(0.047)	(0.058)	(0.052)	(0.046)	(0.047)	(0.051)	(0.054)	(0.048)	(0.037)	(0.039)	(0.036)
$MPS_t \times s_t$	−0.013	−0.025	0.019	0.016	0.055	0.126*	0.257***	0.356***	0.240***	0.135***	0.125***	0.022	−0.002	0.060	0.134*	0.118*	0.140**	0.091	0.086	0.135*	0.166**	0.178**	0.017	−0.082	−0.020
	(0.031)	(0.039)	(0.051)	(0.065)	(0.068)	(0.068)	(0.071)	(0.090)	(0.049)	(0.047)	(0.047)	(0.064)	(0.070)	(0.064)	(0.081)	(0.067)	(0.068)	(0.066)	(0.079)	(0.073)	(0.079)	(0.084)	(0.051)	(0.057)	(0.058)
$MPS_t \times \tilde{\pi}_{t-1}$	0.013	0.147*	0.070	−0.211	−0.262*	−0.429***	−0.715***	−0.908***	−0.804***	−0.580***	−0.278***	−0.037	−0.085	−0.002	0.149	0.012	0.101	0.153	0.140	0.110	0.202	−0.015	−0.036	0.108	−0.143
	(0.073)	(0.080)	(0.117)	(0.153)	(0.134)	(0.126)	(0.145)	(0.171)	(0.161)	(0.132)	(0.100)	(0.143)	(0.153)	(0.147)	(0.163)	(0.143)	(0.124)	(0.127)	(0.142)	(0.146)	(0.141)	(0.144)	(0.142)	(0.163)	(0.161)
$MPS_t \times \tilde{\sigma}_t^{\pi}$	0.909	2.419**	4.234***	1.214	1.078	−0.295	−1.424	−2.369	−2.731	−1.525	−0.606	−1.433	−0.327	−1.256	−0.558	−0.113	0.014	1.487	1.412	1.188	0.933	0.614	−0.487	−1.304	−2.143
	(0.812)	(1.013)	(1.172)	(1.204)	(1.222)	(1.382)	(1.384)	(1.939)	(2.306)	(1.641)	(1.798)	(2.015)	(1.642)	(1.530)	(1.581)	(1.461)	(1.570)	(1.529)	(1.699)	(1.590)	(1.213)	(1.129)	(1.382)	(1.392)	(1.433)
s_t	0.075**	0.118***	0.070	0.034	0.065	0.090*	0.040	0.070	0.042	−0.013	0.010	−0.003	0.014	0.018	0.020	0.012	−0.007	−0.038	−0.042	−0.026	−0.035	−0.039	−0.021	−0.010	0.015
	(0.032)	(0.042)	(0.046)	(0.055)	(0.061)	(0.047)	(0.049)	(0.053)	(0.052)	(0.049)	(0.048)	(0.048)	(0.062)	(0.054)	(0.056)	(0.049)	(0.053)	(0.059)	(0.048)	(0.049)	(0.054)	(0.061)	(0.056)	(0.071)	(0.071)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lags (L=12)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	348	347	346	345	344	343	342	341	340	339	338	337	336	335	334	333	332	331	330	329	328	327	326	325	324
R^2	0.813	0.640	0.527	0.410	0.363	0.342	0.332	0.322	0.292	0.286	0.268	0.255	0.254	0.268	0.280	0.301	0.318	0.342	0.354	0.356	0.367	0.362	0.353	0.344	0.315

Table 13: Stability of the narrative interaction coefficient δ_h across specifications. Panel A excludes the interactions between the surprise and the inflation environment; Panel B includes them. HAC standard errors in parentheses; *, **, *** denote significance at the 10%, 5% and 1% level.

	h=0	h=1	h=2	h=3	h=4	h=5	h=6	h=7	h=8	h=9	h=10	h=11	h=12	h=13	h=14	h=15	h=16	h=17	h=18	h=19	h=20	h=21	h=22	h=23	h=24
Panel A: narrative interaction only																									
δ_h	−0.015	−0.019	0.015	−0.003	0.033	0.094	0.205*	0.291**	0.185**	0.094	0.105**	0.022	−0.008	0.063	0.147	0.119*	0.150**	0.103	0.096	0.144*	0.183**	0.176**	0.014	−0.069	−0.029
	(0.031)	(0.040)	(0.057)	(0.069)	(0.074)	(0.073)	(0.108)	(0.144)	(0.090)	(0.076)	(0.048)	(0.057)	(0.061)	(0.060)	(0.090)	(0.068)	(0.076)	(0.074)	(0.085)	(0.078)	(0.093)	(0.086)	(0.049)	(0.061)	(0.052)
Panel B: adding $MPS_t \times \tilde{\pi}_{t-1}$ and $MPS_t \times \tilde{\sigma}_t^{\pi}$																									
δ_h	−0.013	−0.025	0.019	0.016	0.055	0.126*	0.257***	0.356***	0.240***	0.135***	0.125***	0.022	−0.002	0.060	0.134*	0.118*	0.140**	0.091	0.086	0.135*	0.166**	0.178**	0.017	−0.082	−0.020
	(0.031)	(0.039)	(0.051)	(0.065)	(0.068)	(0.068)	(0.071)	(0.090)	(0.049)	(0.047)	(0.047)	(0.064)	(0.070)	(0.064)	(0.081)	(0.067)	(0.068)	(0.066)	(0.079)	(0.073)	(0.079)	(0.084)	(0.051)	(0.057)	(0.058)

Table 12 adds the interactions of the surprise with demeaned lagged inflation and inflation volatility, and Table 13 places the narrative interaction side by side across the two specifications. As in the full sample, including the environment interactions does not weaken δ_h but sharpens it: at $h = 7$ the point estimate rises from 0.291 to 0.356 and its standard error is essentially unchanged, and significance at the one-percent level now runs from $h = 6$ to $h = 10$. The coefficient on $MPS_t \times \tilde{\pi}_{t-1}$ is again large and negative over the same range, so that omitting realized inflation attenuates the narrative interaction toward zero. That this pattern reappears once the extraordinary inflation years are removed indicates that it reflects the genuine correlation between the narrative and the inflation environment rather than the influence of a handful of high-inflation observations.

Taken together, the evidence indicates that the informational environment preceding FOMC announcements systematically shapes how households interpret monetary policy surprises. The role of newspaper narratives extends beyond periods of exceptionally high inflation and characterizes the transmission of monetary policy to inflation expectations throughout the sample.