"Has the Information Channel of Monetary Policy Disappeared? Revisiting the Empirical Evidence"

by Lukas Hoesch, Barbara Rossi and Tatevik Sekhposyan[*]

A. Information advantage and forecast timing

This section provides a sensitivity analysis to the time-ordering of the Greenbook/Tealbook and Blue Chip Economic Indicator forecasts in Section I. Recall that, in order to compare Greenbook/Tealbook and BCEI forecasts, each Greenbook/Tealbook forecast (which is specifically prepared prior to each scheduled FOMC meeting) needs to be assigned a corresponding BCEI forecast. While the BCEI forecasts are always published on the tenth of each month, the publication day of the Greenbook/Tealbook forecasts varies with the date of the FOMC meeting. To match BCEI forecasts to Greenbook/Tealbook forecasts, in Section I we chose the BCEI forecast which occurred just before each FOMC meeting. Note that while this ensures a fixed ordering between BCEI forecasts and the FOMC announcements, it does not fix the publication order relative to Greenbook/Tealbook forecasts. In fact, in our dataset, there are 210 meetings for which the Greenbook/Tealbook is published after the BCEI forecast, while for 46 meetings the Greenbook/Tealbook forecast is published either on the same day as the BCEI or before.

[*]Hoesch: Vrije Universiteit Amsterdam and Tinbergen Institute, email: l.hoesch@vu.nl. Rossi: Universitat Pompeu Fabra, Barcelona School of Economics and CREI, email: barbara.rossi@upf.edu. Sekhposyan: Texas A&M University, email: tsekhposyan@tamu.edu.

Given the variation in the timing of Greenbook/Tealbook and BCEI forecasts, one might be concerned that a systematic change in the ordering of the forecasts over time, resulting from variation in the publication date of the Greenbook/Tealbook forecasts, might bias our findings of the informational advantage. For example, if Greenbook/Tealbook forecasts are systematically published after BCEI forecasts in the first part of the sample while this is not the case in the later part of the sample, the loss of information advantage could simply arise from this change in timing over the sample. News arriving between the publication of the forecasts could then create systematic differences in the information sets of the private sector and the central bank or forecasters could simply have had more time to process available information in one part of the sample than in the other, incorrectly leading us to conclude that there is time-variation in the information advantage.

To assess the importance of delays between the publication of both forecasts and to inspect whether the timing undergoes a systematic change over the sample, we calculate the difference between the publication dates of the Greenbook/Tealbook and the BCEI forecasts for two alternative timing assumptions which are used to match BCEI forecasts to their Greenbook/Tealbook equivalents. Figure A1
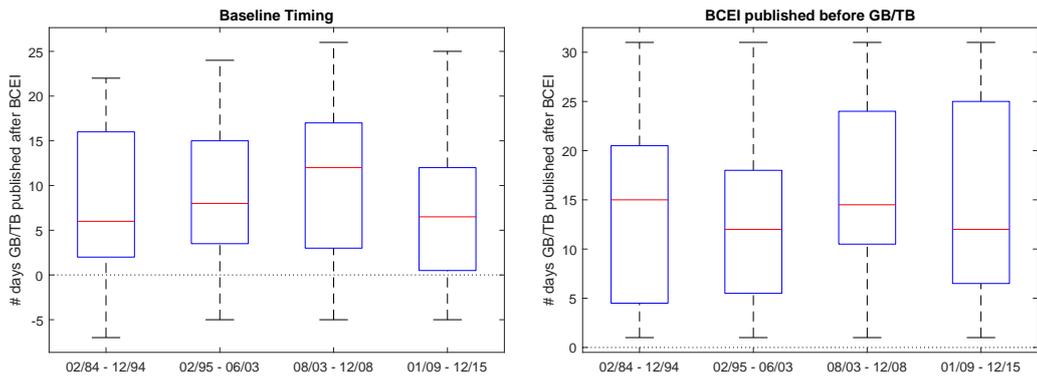

FIGURE A1: DIFFERENCE BETWEEN FORECAST PUBLICATION DATES

Note: Number of days between Greenbook/Tealbook and BCEI forecast publication for the baseline timing of Section I and an alternative timing where the BCEI is always published before the Greenbook/Tealbook forecasts.

reports boxplots for the number of days between the publication of the Green-book/Tealbook forecasts and the BCEI forecasts. Positive values of the difference in publication dates imply that the Greenbook/Tealbook was published after the BCEI while negative values imply the reverse ordering. The difference between publication dates is computed using two different strategies for matching the BCEI forecasts: The left panel of Figure A1 reports the difference between the publication dates for the baseline timing of Section I where BCEI forecasts are matched to FOMC announcements by ensuring that they are strictly ordered be-fore the FOMC meeting, but without enforcing a particular ordering relative to the Greenbook/Tealbook forecasts. In contrast, the right panel of Figure A1 re-ports the difference between publication dates when matching forecasts such that BCEI forecasts are published strictly before their Greenbook/Tealbook counter-parts.[1]

By inspecting the boxplots for the baseline timing in the left panel of Figure A1, we note several key points. First, for the majority of FOMC meetings, the Greenbook/Tealbook forecast is typically published within two weeks after the BCEI forecasts. There are some cases in which the Greenbook/Tealbook was published first. For those cases, the BCEI is typically published within a week of the Greenbook/Tealbook publication.[2] Second, the distribution of the delay in Greenbook/Tealbook forecasts relative to the BCEI forecasts has changed over time. In particular, the mean lag between BCEI and Greenbook/Tealbook pub-lication dates increased from about 6-7 days to about 12 days for the mid-2000s sample period. However, in the most recent period, this lag decreases to 6 days. Note that this change in the timing could in principle affect the results from our information advantage tests. However, importantly, this timing change would bias our analysis towards finding an information advantage for the Fed forecasts

---

[1]In practice, this matching strategy implies that if a Greenbook/Tealbook publication date falls after the 10th of each month, the relevant BCEI forecasts is the one published in the same month as the Greenbook/Tealbook while for Greenbook/Tealbook forecasts which are published before the 10th of each month, the previous month's BCEI forecast is associated with the meeting.

[2]Note that at the time of "publication", the Greenbook/Tealbook forecasts are still not available to private forecasters as they are only released to the public with a five-year delay.

4

in the later part of the sample rather than the earlier part of the sample. As we find the opposite, namely a weakening of the information advantage in the most recent sample, removing such potential bias would further strengthen our conclusion that there is substantially less evidence of an information advantage in recent years.

Next, compare these results with the boxplots in the right panel of Figure A1, which reports the Greenbook/Tealbook publication lag for the alternative matching strategy where BCEI forecasts are always published before Greenbook/Tealbook forecasts. We note that using this matching strategy the mean publication lag of the Greenbook/Tealbook is generally higher by about 12-15 days and there is also no systematic change in timing which could explain a weakening of the information advantage. Thus, under the alternative matching scheme, the Greenbook/Tealbook should on average have more information advantage compared to the baseline scheme.

To verify that a difference in timing of the forecasts does not lead to a dramatically different conclusion regarding the weakening of the information advantage, we repeat the Information-Advantage Fluctuation test from Section I using the alternative timing assumption where BCEI forecasts are always published before Greenbook/Tealbook forecasts. Figures A2 and A3 show the path of $\tau_{GB,t}$ with the alternative forecast timing (blue-dashed line) compared to the baseline timing of Section I (black solid line). The figures clearly show that the weakening of the information advantage in the most recent sample period overall remains robust to changing the timing of the forecasts. Specifically, the paths of $\tau_{GB,t}$ are very close to the original ones. There is more evidence of an information advantage in the recent sample period relative to the baseline only for the nowcast and one-quarter-ahead forecasts of GDP growth and the interest rate.
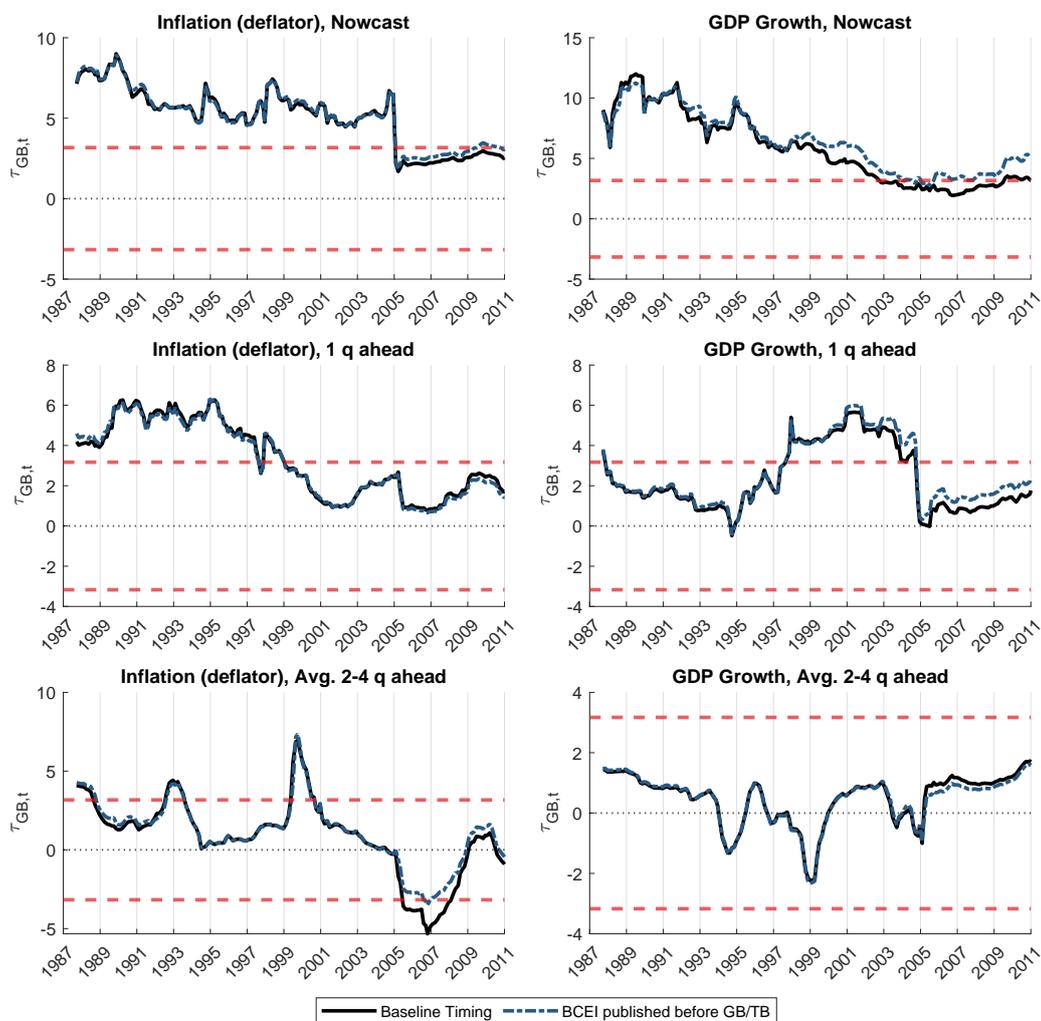
FIGURE A2: INFORMATION ADVANTAGE TIMING: GDP GROWTH AND INFLATION

Note: The figure shows $\tau_{GB,t}$ from eq. (1) based on $m = 60$ meetings rolling windows using a Newey-West covariance estimator with a truncation lag of $m^{1/4}$. Horizontal axes correspond to mid-window dates. Dashed (red) lines denote 5% critical value lines based on Rossi and Sekhposyan (2016)'s two-sided Fluctuation test.

FIGURE A3: INFORMATION ADVANTAGE TIMING: UNEMPLOYMENT AND INTEREST RATE

Note: The figure shows $\tau_{GB,t}$ from eq. (1) based on $m = 60$ meetings rolling windows using a Newey-West covariance estimator with a truncation lag of $m^{1/4}$. Horizontal axes correspond to mid-window dates. Dashed (red) lines denote 5% critical value lines based on Rossi and Sekhposyan (2016)'s two-sided Fluctuation test.
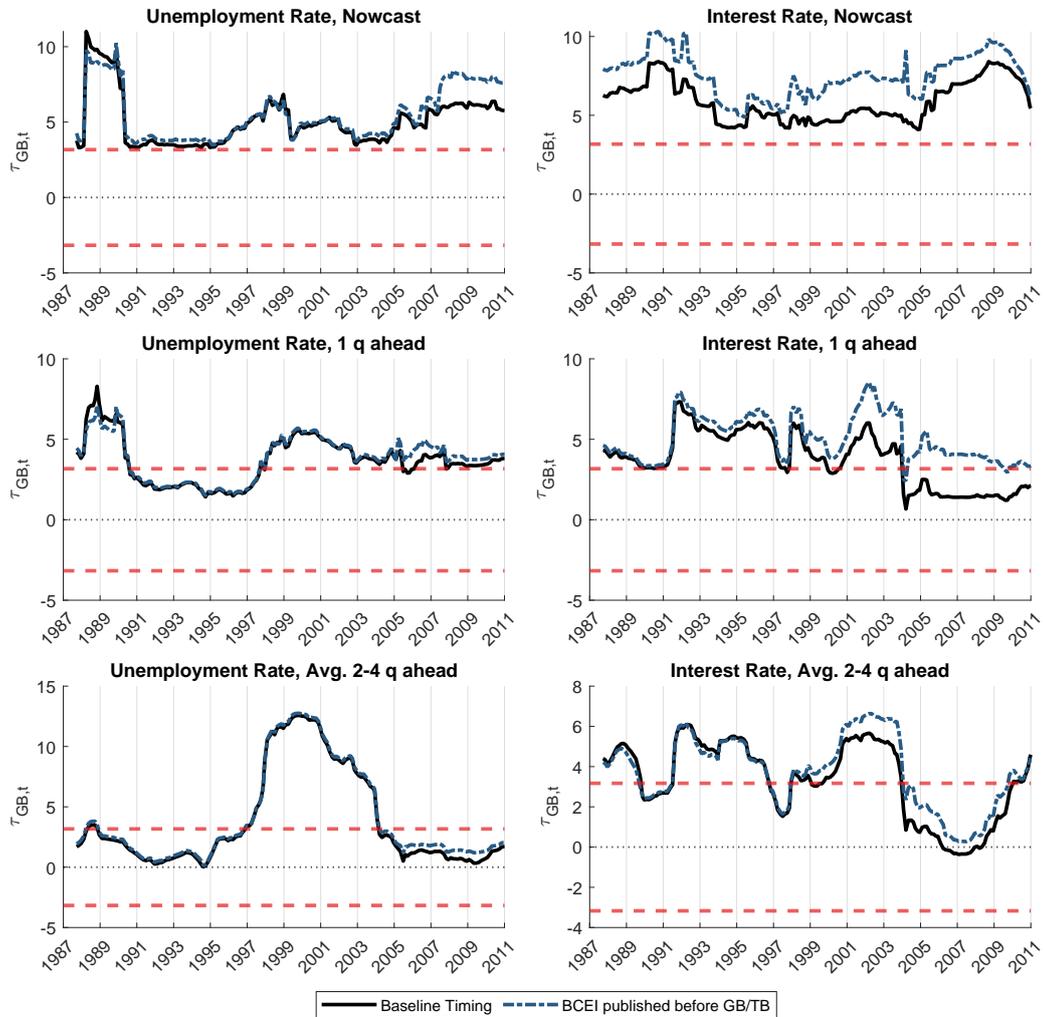
B. Additional evidence on the information content of high-frequency market-based surprises

In addition to the horizon-by-horizon projections reported in Section II, we also consider a specification similar to Romer and Romer (2004) which jointly includes the forecasts and their revisions for all horizons. This specification is the same used to construct the information-robust instrument in Section II.B. Miranda-Agrippino and Ricco (2021) also consider this regression and report that in their sample (1990-2009), an F-test rejects the null of joint significance of the coefficients (at the 5% level).

Table B1 below reports the same F-test for our dataset. Column (1) shows that for the sample considered in Miranda-Agrippino and Ricco (2021), we replicate their F-statistic exactly. Column (2) shows that the coefficients continue to be significant at the 5% level even when extending the dataset to 2015. Finally, columns (3) and (4) show that our result from Section II continues to hold in this specification: High-frequency market-based surprises were significantly predictable by the Federal Reserve staff before the mid-2000s (the F-test rejects at 5% level), but that the predictability disappeared in the most recent period (the F-test does not reject at 5% level).

TABLE B1: PROJECTION ON FED INFORMATION (ALL HORIZONS)

	Feb 1990 - Dec 2009	Feb 1990 - Dec 2015	Feb 1990 - Jul 2003	Aug 2003 - Dec 2015
F	1.651	1.598	2.170	1.575
p	0.039	0.046	0.004	0.070
N	186	234	127	107

Note: The table shows F-tests, p-values and number of observations from regressing the FF4 surprises on all the forecasts and at all horizons. F-statistics and p-values are based on heteroskedasticity-robust standard errors. Note that column (1) is the original sample of Miranda-Agrippino and Ricco (2021).

C.   Additional SVAR evidence

We assess the robustness of our SVAR conclusions in Section III by carrying out two additional exercises.

Figure C1 compares impulse responses obtained using the information-robust instrument ($\mathbb{S}_t^{MPI}$) to the associated information component ($\mathbb{S}_t^{CBINFO}$) for the two sub-samples considered in Section III. Our conclusion that information effects were important historically, but much less important in the most recent sample period is mostly robust to this change: In the earlier sub-sample, the two sets of impulse responses have the opposite sign for real activity variables, and their differences are even more pronounced. In contrast, in the later sub-sample, both impulse responses become indistinguishable, with exception of the impulse response for inflation, which shows a price puzzle in the post-sample for the response obtained using the information component. In addition, the information component shows large estimation uncertainty in the later part of the sample. This is consistent with the result established in Section II that the information associated with the economic outlook of the Federal Reserve becomes less relevant in the most recent period.

Figure C2 addresses potential misspecification concerns by repeating the analysis using a local projection approach rather than a BVAR. As the figure shows, our conclusion from Section III continues to hold, even though the confidence bands obtained from the local projections are much larger than the BVAR credible intervals.
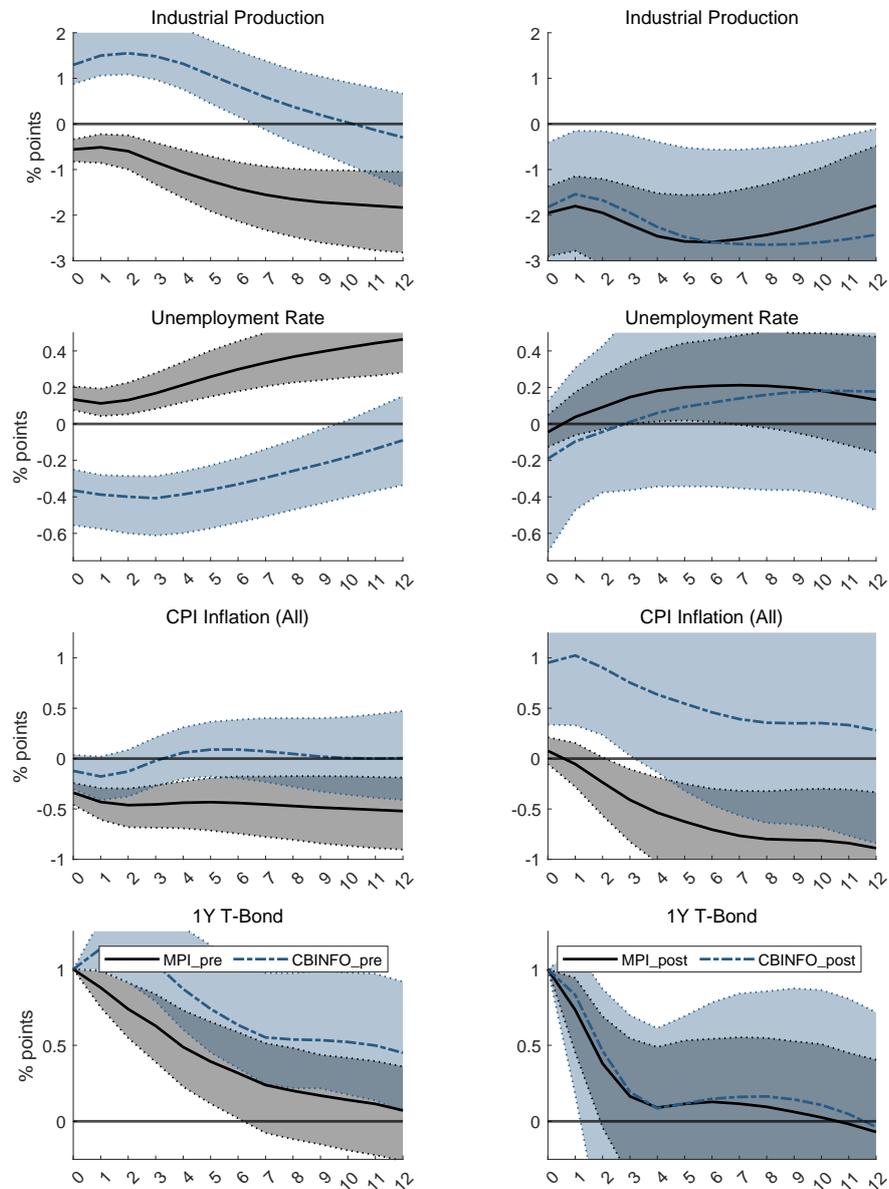
FIGURE C1: RESPONSES TO A MONETARY SHOCK: DECOMPOSITION

Note: Impulse responses from Bayesian SVAR with standard macroeconomic priors and external instrument identification. VAR sample: January 1979 - December 2019. Instrument samples: February 1990 - July 2003 (left panel) and August 2003 - December 2015 (right panel). Shaded areas correspond to 90 percent credible intervals.
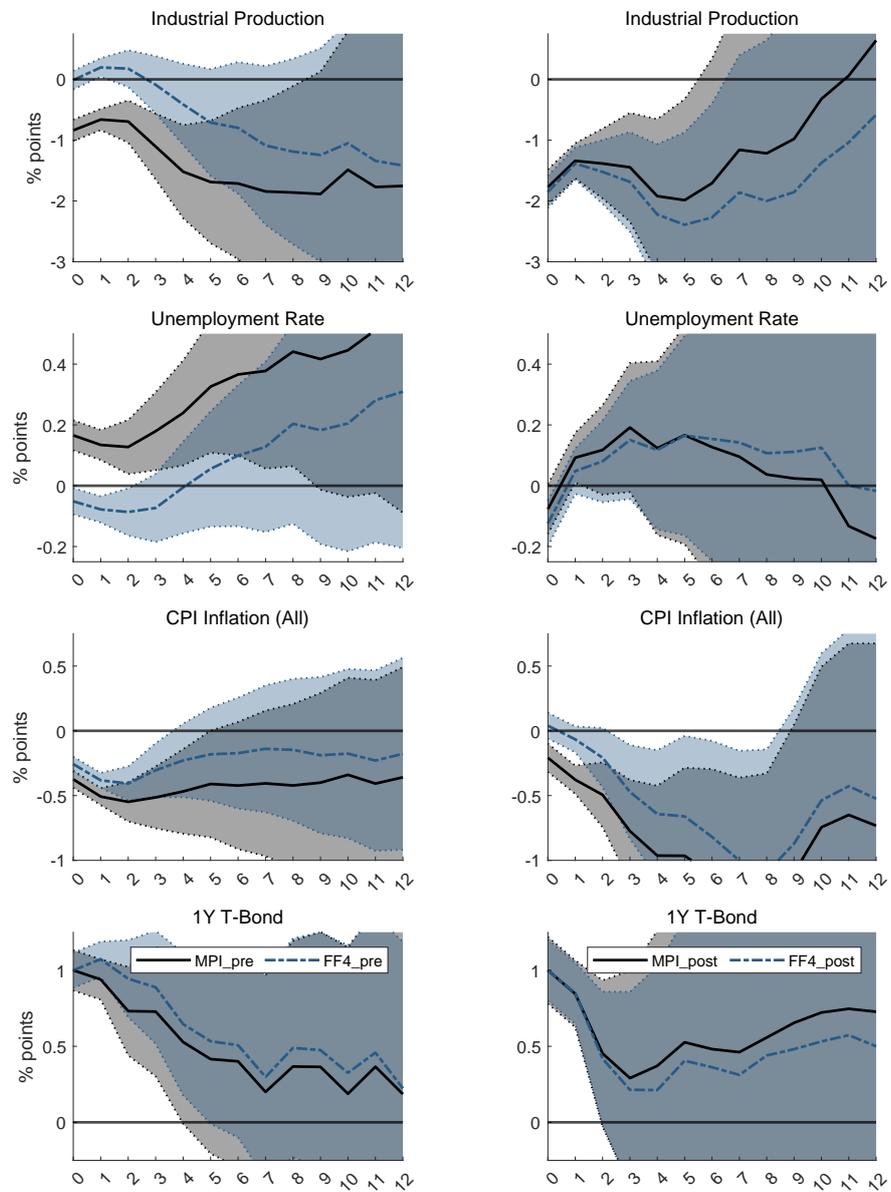
FIGURE C2: RESPONSES TO A MONETARY SHOCK: LOCAL PROJECTION

Note: Impulse responses from local projections (LP) with external instrument identification. LP sample: January 1979 - December 2019. Instrument samples: February 1990 - July 2003 (left panel) and August 2003 - December 2015 (right panel). Shaded areas correspond to 90 percent confidence intervals.

D. Additional evidence on the impact of information effects on forecasters' expectations

We explore the robustness of our findings in Section IV to including unscheduled FOMC meetings. The latter are more likely to be associated with the release of central bank's information as they often take place as a reaction to important economic events.

Tables D1 and D2 report the results. Consistent with the findings in Paul (2020), the inclusion of unscheduled meetings leads to a larger number of statistically significant coefficients compared those based on scheduled meetings and the results for the response to FF4 show more evidence in favour of an information channel. Importantly, however, Table D2 shows that in the second sub-sample, most of the significance disappears and the signs of the responses to CBINFO are mostly inconsistent with the information channel theory.

TABLE D1: FORECASTERS' RESPONSE - FULL SAMPLE, ALL MEETINGS

Horizon	FF4	MPI	CBINFO	MP1
GDP Growth				
Nowcast	0.64	0.22	1.54	1.28
	(0.56)	(0.53)	(0.95)	(0.68)
1 q ahead	0.16	-0.06	0.33	0.60
	(0.42)	(0.44)	(0.73)	(0.35)
Avg. 2-4 q ahead	-0.30	-0.23	-0.53	-0.13
	(0.16)	(0.18)	(0.40)	(0.11)
GDP Deflator Inflation				
Nowcast	-0.02	-0.17	0.24	-0.03
	(0.21)	(0.20)	(0.35)	(0.12)
1 q ahead	0.06	-0.11	0.37	0.08
	(0.15)	(0.14)	(0.23)	(0.10)
Avg. 2-4 q ahead	-0.02	-0.15	0.24	0.03
	(0.09)	(0.10)	(0.13)	(0.07)
Unemployment Rate				
Nowcast	-0.08	-0.02	-0.25	-0.17
	(0.13)	(0.14)	(0.18)	(0.09)
1 q ahead	-0.03	0.09	-0.41	-0.13
	(0.16)	(0.17)	(0.24)	(0.15)
Avg. 2-4 q ahead	-0.09	0.07	-0.43	-0.22
	(0.20)	(0.18)	(0.32)	(0.17)
Interest Rate				
Nowcast	0.87	0.63	1.22	0.86
	(0.32)	(0.31)	(0.49)	(0.21)
1 q ahead	1.03	0.67	1.59	0.97
	(0.37)	(0.40)	(0.49)	(0.26)
Avg. 2-4 q ahead	0.89	0.62	1.29	0.82
	(0.38)	(0.40)	(0.53)	(0.27)

Note: The results are based on all (scheduled and unscheduled) FOMC meetings that do not fall into the BCEI survey period. Robust standard errors in parentheses.

Table D2: Forecasters' response - Sub-samples, all meetings

Horizon	Feb 1990 - July 2003			Aug 2003 - Dec 2015		
	FF4	MPI	CBINFO	FF4	MPI	CBINFO
GDP Growth						
Nowcast	1.09	0.48	2.44	0.55	0.91	-0.74
	(0.67)	(0.62)	(0.87)	(1.12)	(1.14)	(2.25)
1 q ahead	0.17	-0.28	0.72	0.55	0.67	0.20
	(0.37)	(0.33)	(0.77)	(1.24)	(1.22)	(2.07)
Avg. 2-4 q ahead	-0.21	-0.25	-0.21	-0.17	0.11	-1.04
	(0.20)	(0.24)	(0.43)	(0.40)	(0.33)	(0.71)
GDP Deflator Inflation						
Nowcast	0.05	-0.06	0.17	-0.12	-0.33	0.62
	(0.23)	(0.21)	(0.39)	(0.46)	(0.49)	(1.09)
1 q ahead	0.16	-0.06	0.55	-0.19	-0.21	-0.13
	(0.23)	(0.19)	(0.32)	(0.25)	(0.26)	(0.55)
Avg. 2-4 q ahead	-0.01	-0.16	0.26	-0.06	-0.10	0.08
	(0.12)	(0.12)	(0.15)	(0.15)	(0.19)	(0.34)
Unemployment Rate						
Nowcast	-0.15	-0.02	-0.49	-0.10	-0.17	0.15
	(0.12)	(0.13)	(0.13)	(0.33)	(0.34)	(0.63)
1 q ahead	-0.03	0.17	-0.65	-0.04	-0.16	0.38
	(0.13)	(0.14)	(0.19)	(0.52)	(0.49)	(0.84)
Avg. 2-4 q ahead	-0.16	0.14	-0.79	0.07	-0.10	0.63
	(0.17)	(0.13)	(0.21)	(0.67)	(0.60)	(1.07)
Interest Rate						
Nowcast	1.01	0.62	1.63	0.96	1.21	0.08
	(0.29)	(0.22)	(0.55)	(0.71)	(0.72)	(0.90)
1 q ahead	0.99	0.43	1.97	1.37	1.57	0.73
	(0.33)	(0.25)	(0.55)	(1.09)	(1.16)	(1.33)
Avg. 2-4 q ahead	0.78	0.34	1.54	1.38	1.54	0.88
	(0.37)	(0.26)	(0.63)	(1.09)	(1.16)	(1.33)

Note: The results are based on all (scheduled and unscheduled) FOMC meetings that do not fall into the BCEI survey period. Robust standard errors in parentheses.

E.   Data

This section provides additional details on the data that is used in the analyses presented in the paper. It also describes which data series are publicly available and which data series have restricted access and, as such, have been redacted in the public version of the replication package (Hoesch, Rossi and Sekhposyan, 2022). Data citations are included in the reference list at the end of this appendix.

E.1   Public access data (contained in the replication package)

The following data series are publicly available and can be directly obtained from the sources described in detail below. They are also provided as part of the replication package in the `data_raw/` folder.

- **List of FOMC meetings.** FOMC meeting dates and characteristics of each meeting. This data has been collected manually by the authors from the website of the Historical Archive of the FOMC and is distributed as part of the replication package (Hoesch, Rossi and Sekhposyan, 2022).

  The Historical Archive of the FOMC can be accessed at the following URL: `www.federalreserve.gov/monetarypolicy/fomc_historical_year.htm`.

- **Greenbook/Tealbook forecasts.** Greenbook/Tealbook forecasts of real GDP growth, inflation and the unemployment rate relative to the previous quarter, the current quarter, and up to four quarters ahead were retrieved from the Federal Reserve Bank of Philadelphia's "Tealbook Data Set" (Federal Reserve Bank of Philadelphia, 2021b). The following series have been used:

  - gRGDP: Real GDP, Q/Q Growth, Annualized Percentage Points
  - gPGDP: GDP Price Inflation, Q/Q Growth, Annualized Pct. Points
  - UNEMP: Unemployment Rate, Level, Pct. Points

- **Philadelphia Fed Real-Time Data Set.** Real-time data on realizations for GDP growth, inflation and the unemployment rate were retrieved from the Philadelphia Fed's "Real-Time Data Set for Macroeconomists" (Federal Reserve Bank of Philadelphia, 2020; Croushore and Stark, 2003). We use the following series from the dataset on first-, second-, and third-release values:

  - Real GNP/GDP, Q/Q Growth, Annual Rate, Percentage Points
  - Price Index for GNP/GDP, Q/Q Growth, Annual Rate, Percentage Points

  For real-time realizations of the unemployment rate, we use the following series from the "Real-Time Data Set: Full Time Series History".

  - Unemployment Rate (RUC), Quarterly Vintages and Monthly Observations, Percentage points, seasonally adjusted

  To convert the monthly history into a quarterly series of realizations, we use the quarterly average of the monthly observations (of quarterly vintages).

- **St. Louis Fed FRED Data Service.** We obtained the following series from the St. Louis Fed FRED Data Service which can be accessed at `http://fred.stlouisfed.org`.

  - Market Yield on U.S. Treasury Securities at 1-Year Constant Maturity, Quoted on an Investment Basis [DGS1], Percent, Monthly, End of Period, Not Seasonally Adjusted (Board of Governors of the US Federal Reserve System, 2021).
  - 3-Month Treasury Bill Secondary Market Rate, Discount Basis [TB3MS], Monthly, Percent, Not seasonally adjusted (Board of Governors of the US Federal Reserve System, 2020a).

- **FRED-MD Data Set.** The following data series were retrieved from the FRED-MD Database (Federal Reserve Bank of St. Louis, 2020; McCracken and Ng, 2015) using the 2020/06 vintage.

    - INDPRO, Industrial Production

    - UNRATE, Unemployment Rate

    - CPIAUCSL, CPI All Items

- **BCEI survey closure dates.** The dates on which the Blue Chip Economic Indicator survey closed have been manually calculated by the authors from the FOMC announcement dates using business-day calendars for the respective years (the BCEI survey was conducted over three days, beginning on the first working day of each month, and has subsequently been shortened to two days in December 2000). The data is distributed as part of the replication package (Hoesch, Rossi and Sekhposyan, 2022).

- **Excess Bond Premium.** The original Excess Bond Premium series is from Gilchrist and Zakrajšek (2012). The updated series was obtained from Zakrajsek, Lewis and Favara (2016) and a permanent link to the updated series is supplied in the FEDS Note (Board of Governors of the US Federal Reserve System, 2020b).

E.2   Restricted access data (redacted in the replication package)

Access to the following data series is restricted and thus, these series cannot be (fully) provided in the public replication files. Most values of these series have been redacted by replacing them with ".r" in the raw data files.

- **High-frequency market-based monetary surprises.** Meeting-level high-frequency market-based surprises in the three-month Federal Funds Futures Rate (FF4) as well as the high-frequency surprise in the 30-day

Federal Funds Futures Rate (MP1). The latest vintage of these data series, which include data up to December 2017, were privately provided to us by Refet Gürkaynak (refet@bilkent.edu.tr) in December 2020. An earlier vintage of these series, containing data up to December 2004, can be obtained from the replication code of Gürkaynak, Sack and Swanson (2005) which is available at `http://www.bilkent.edu.tr/~refet/GSS_IJCB_DataCode.zip` (Gürkaynak, Sack and Swanson, 2020).

- **Commodity price series.** The data for the commodity price index were retrieved from Bloomberg (2021) via the ticker *CRB CMDT Index*, Last Price, Monthly (Last Day). This source requires a subscription to the service.

  Note that an earlier vintage of this data series is available from Miranda-Agrippino and Ricco (2020) who reconstruct the series by merging two publicly available sources.

- **Historical projections of 3-month treasury bill.** The historical projections of the three-month treasury bill rate relative to the current quarter, and up to four quarters ahead can be retrieved from the Federal Reserve Bank of Philadelphia's dataset on "Financial Assumptions: Interest Rates and Equity Pieces" (Federal Reserve Bank of Philadelphia, 2021a).

  Note that updates to this dataset beyond September 2008 have been discontinued by the Philadelphia Fed and hence are not publicly available. The updated series for the "Historical Projections: 3-month T-Bill Rate" were provided to us by the Board of Governors of the Federal Reserve in January 2021.

- **Blue Chip Economic Indicators Forecasts.** The BCEI is a monthly commercial survey-based forecast dataset that is published by Wolters Kluwer

since August 1976. This data is proprietary and is thus not publicly accessible. An archive file of the forecast history can be acquired from Wolters Kluwer Legal & Regulatory U.S. (Aguinaldo et al., 2021).

Note that many university and central bank libraries have subscriptions to the archive publication of these forecasts.

We use the consensus forecasts for the following series:

- Real GDP (Real GNP prior to 1992), Percentage Change From Prior Quarter At Annual Rate, Percentage Points

- GDP Price Index (GNP Deflator prior to 1992), Percentage Change From Prior Quarter At Annual Rate, Percentage Points

- Unemployment Rate, Average for Quarter, Percentage Points

- 3-Month Treasury Bills, Average For Quarter, Percentage Points

References

Aguinaldo, Joseph, Carol Stone CBE, Sandy Batten, and Thomas J. Moeller. 2021. "Blue Chip Economic Indicators - Consensus Forecasts." Wolters Kluwer Legal & Regulatory U.S.

Bloomberg. 2021. "CRB Commodity Index. Ticker: CRB CMDT Index, Last Price, Monthly (Last Day)." (accessed March 2021).

Board of Governors of the US Federal Reserve System. 2020*a*. "3-Month Treasury Bill Secondary Market Rate, Discount Basis [TB3MS]." Retrieved from FRED, Federal Reserve Bank of St. Louis. `https://fred.stlouisfed.org/series/TB3MS` (accessed August 2020).

Board of Governors of the US Federal Reserve System. 2020*b*. "Excess Bond Premium indicator (EBP) of Gilchrist and Zakrajšek (2012)." `https:`

//www.federalreserve.gov/econres/notes/feds-notes/ebp_csv.csv (accessed August 2020).

Board of Governors of the US Federal Reserve System. 2021. "Market Yield on U.S. Treasury Securities at 1-Year Constant Maturity, Quoted on an Investment Basis [DGS1]." Retrieved from FRED, Federal Reserve Bank of St. Louis. https://fred.stlouisfed.org/series/DGS1 (accessed March 2021).

Croushore, Dean, and Tom Stark. 2003. "A Real-Time Data Set for Macroeconomists: Does the Data Vintage Matter?" *The Review of Economics and Statistics*, 85(3): 605–617.

Federal Reserve Bank of Philadelphia. 2020. "Real-Time Data Set for Macroeconomists." https://www.philadelphiafed.org/surveys-and-data/real-time-data-research/real-time-data-set-for-macroeconomists (accessed August 2020).

Federal Reserve Bank of Philadelphia. 2021*a*. "Financial Assumptions: Interest Rates and Equity Prices." Updates to this discontinued series provided by the Board of Governors of the US Federal Reserve System in January 2021. Discontinued series (up to September 2008) available at https://www.philadelphiafed.org/surveys-and-data/real-time-data-research/gap-and-financial-data-set.

Federal Reserve Bank of Philadelphia. 2021*b*. "Philadelphia Fed's Tealbook (formerly Greenbook) Data Set." https://www.philadelphiafed.org/surveys-and-data/real-time-data-research/philadelphia-data-set (accessed March 2021).

Federal Reserve Bank of St. Louis. 2020. "FRED-MD: A Monthly Database for Macroeconomic Research (2020/06 vintage)." https://research.stlouisfed.org/econ/mccracken/fred-databases (accessed July 2020).

Gilchrist, Simon, and Egon Zakrajšek. 2012. "Credit Spreads and Business Cycle Fluctuations." *American Economic Review*, 102(4): 1692–1720.

Gürkaynak, Refet S, Brian Sack, and Eric Swanson. 2005. "Do Actions Speak Louder Than Words? The Response of Asset Prices to Monetary Policy Actions and Statements." *International Journal of Central Banking*, 1(1): 55–93.

Gürkaynak, Refet S, Brian Sack, and Eric Swanson. 2020. "Updated Data for: Do Actions Speak Louder Than Words? The Response of Asset Prices to Monetary Policy Actions and Statements." Updated series (up to December 2017) privately provided by the authors in December 2020. Earlier vintage (up to December 2004) available at `http://www.bilkent.edu.tr/~refet/GSS_IJCB_DataCode.zip`.

Hoesch, Lukas, Barbara Rossi, and Tatevik Sekhposyan. 2022. "Data and Code for: Has the Information Channel of Monetary Policy Disappeared? Revisiting the Empirical Evidence." American Economic Association [publisher], Inter-university Consortium for Political and Social Research [distributor], `https://doi.org/10.3886/E169301V1` .

McCracken, Michael W., and Serena Ng. 2015. "FRED-MD: A Monthly Database for Macroeconomic Research." Federal Reserve Bank of St. Louis.

Miranda-Agrippino, Silvia, and Giovanni Ricco. 2020. "Data and Code for: The Transmission of Monetary Policy Shocks." American Economic Association [publisher], Inter-university Consortium for Political and Social Research [distributor], `https://doi.org/10.3886/E116841V1` .

Miranda-Agrippino, Silvia, and Giovanni Ricco. 2021. "The Transmission of Monetary Policy Shocks." *American Economic Journal: Macroeconomics*, 13(3): 74–107.

Paul, Pascal. 2020. "The Time-Varying Effect of Monetary Policy on Asset Prices." *Review of Economics and Statistics*, 102(4): 690–704.

Romer, Christina D, and David H Romer. 2004. "A new measure of monetary shocks: Derivation and implications." *American Economic Review*, 94(4): 1055–1084.

Rossi, Barbara, and Tatevik Sekhposyan. 2016. "Forecast Rationality Tests in the Presence of Instabilities, with Applications to Federal Reserve and Survey Forecasts." *Journal of Applied Econometrics*, 31(3): 507–532.

Zakrajsek, Egon, Kurt F Lewis, and Giovanni Favara. 2016. "Updating the Recession Risk and the Excess Bond Premium." *FEDS Notes*, 06.