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Beyond "Looking Through": Monetary Policy Responses and Communication Under Supply-Driven Inflation

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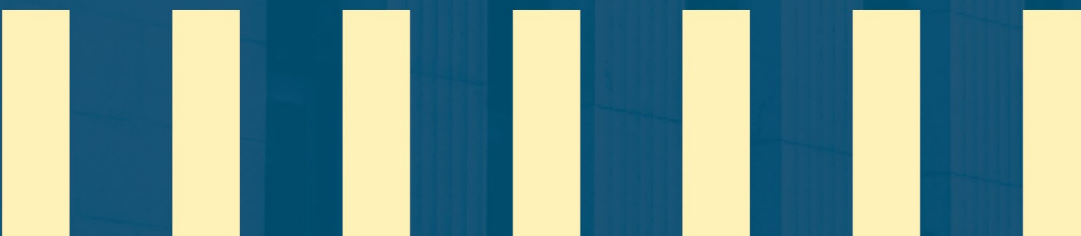
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Beyond “Looking Through”: Monetary Policy Responses and Communication Under Supply-Driven Inflation

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Abstract

Using a controlled macroeconomic experiment, we compare monetary policy rules that differ in how much they look through inflation: a Lean-Against policy that responds strongly to inflation and a Look-Through policy that responds less strongly. We combine each rule with communication protocols that vary the information the central bank releases about its policy response: restricted qualitative information, detailed quantitative information, and detailed quantitative information combined with inflation and output projections. Midway through each session, we raise the persistence of the cost-push shock. Looking through large, persistent shocks raises and prolongs inflation and increases the risk that inflation expectations unanchoring, while responding with tighter policy curbs inflation sooner. Communication matters mainly through projections. Adding detailed quantitative information to qualitative statements has little effect on output gaps, inflation, expectations or forecast errors. Communicating projections reduces inflation and output losses, anchors inflation expectations and lowers forecast errors. Under Look-Through, projections anchor inflation expectations and reduce inflation after the increase in supply shock persistence. Looking through supply-shock-induced inflation is only advisable when the central bank can communicate credible and focal projections to guide expectations.

JEL classifications: C9, D84, E52, E58

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1 Introduction

The traditional prescriptions of monetary policy in response to supply shocks rely critically on the assumption of rational expectations [Woodford, 2004, Galí, 2015]. However, survey-based evidence suggests systematic deviations from rationality [Coibion and Gorodnichenko, 2015]. For instance, adaptive learning can amplify the persistence of shocks in the economy [Evans and Honkapohja, 2001, Hommes, 2021], thereby necessitating a stronger policy response to stabilize inflation [Orphanides and Williams, 2003, Hommes et al., 2019, Mausberger, 2021]. These findings highlight the importance of understanding expectation formation for the design of effective monetary policy. The issue is particularly salient in today’s shock-prone environment, where the use of look-through strategies risks un-anchoring inflation expectations [Walsh, 2022, Bullard et al., 2024].

We design a controlled macroeconomic experiment to assess the resiliency of the inflation targeting framework in a world where supply shocks become larger and more persistent. We compare alternative monetary policy rules that are consistent with the current monetary policy framework of the Bank of Canada but differ in the extent to which supply shocks are looked through: a Lean-Against rule with a strong response to inflation, and a Look-Through rule with a weaker response. Every economy runs for 50 periods under the same strong response to inflation until period 19, when the persistence of cost-push shocks doubles and a large shock arrives. At that point the Look-Through economies switch to the weaker response while the Lean-Against economies retain the strong one, so that the comparison between the two rules is a comparison of responses to the same change in the shock environment. Each interest rate rule is paired with one of three communication protocols, which differ in the type and amount of information the central bank releases: Restricted qualitative information about the policy rule, Detailed quantitative information about the rule, and Detailed+Projections, which adds central bank projections for inflation and output.

Controlled macroeconomic experiments provide a valuable complement to traditional empirical methods and have been applied in the context of the Bank of Canada’s Monetary Policy Framework Renewals in 2016 [Kryvtsov and Petersen, 2019], in 2021 [Kostyshyna et al., 2022] and in 2026 [Briganti et al., 2026]. Such experiments address the limitations of available data by allowing researchers to test counterfactual policy responses under different environments, for example, varying the size and persistence of supply shocks. They can also offer insights into the appropriate conduct of monetary policy as central banks adapt to evolving economic conditions. Importantly, experimental settings enable the isolation of causal effects of policy interventions on inflation expectations—an exercise that is challenging with observational data due to endogeneity and data constraints. Because expectations are elicited directly from participants, the analysis does not rely on any specific assumptions about expectation formation. Instead, experimental data make it possible to study the behavioural mechanisms underlying expectations and their implications for macroeconomic dynamics. In this way, macroeconomic experiments are uniquely suited to examining monetary policy responses to supply shocks and their consequences for the anchoring of

inflation expectations. Macroeconomic experiments let us examine causal effects of different types of monetary policy and communication protocols on participants' inflation expectations directly.

The analysis of the data from our macroeconomic experiments yields several key insights. First, consistent with conventional theory, a more accommodative monetary policy following a large cost-push shock generates higher inflation and more stable output compared with the Lean-Against policy that responds more strongly to inflation. While the immediate effects of the supply shock on inflation and output are similar across both policy regimes, the weaker inflation response under the accommodative policy results in elevated inflation persisting for a longer period.

We find that under the accommodative Look-Through policy, short-term inflation expectations remain elevated for a longer period due to the persistence of high inflation. Moreover, this persistence in inflation and short-term inflation expectations spills over into long-term expectations, with both the magnitude and duration of the spillover exceeding that observed under the Lean-Against policy. Under accommodative policy, the response of long-term expectations to cost-push shocks, inflation and short-term inflation expectations is stronger and more persistent than under Lean-Against policy under Restricted and Detailed communication. These results indicate higher risk that inflation expectations become un-anchored when monetary policy responds weakly to inflation. By contrast, a strong Lean-Against response contains the cost-push episode, preventing inflation from becoming entrenched and mitigating spillovers into long-term expectations. This containment comes with its own risk. In six sessions under Lean-Against, all of them without projections, the deep recession generated by the strong inflation response fed into backward-looking expectations and produced a self-reinforcing deflationary spiral. No such episodes occur under Look-Through. We exclude these sessions from our main estimates, so the inflation advantage we report for Lean-Against holds conditional on the economy not entering a spiral.

The effects of central bank communication depend on the content of what is communicated. Quantitative information about the policy rule produces outcomes that are statistically indistinguishable from qualitative guidance alone, under both monetary policy regimes and across all outcomes we measure. Communication of inflation and output projections, by contrast, substantially improves macroeconomic outcomes, and does so because it is easy to use and credible. Sessions with projections show lower volatility and persistence than sessions without, under either communication regime. By guiding participants' expectations of inflation and output, projections anchor long-term inflation expectations and reduce inflation volatility. Under the accommodative Look-Through policy they bring inflation back to steady state quickly after a large and persistent supply shock, so that inflation dynamics come to resemble those under Lean-Against without the accompanying decline in output. Under Lean-Against projections moderate the recessionary effects. The communication of projections also facilitates strong anchoring of long-term inflation expectations.

Finally, projections computed using the rational expectations solution effectively steer participants' expectations toward rational benchmarks. When participants view the central bank's projections as credible and incorporate them into their forecasts, their expectations become more closely aligned with rational expectations. As a result, the dynamics of the experimental economies are more stable than in scenarios without central bank communication of projections.

We contribute to the literature by explicitly modelling a structural change in the supply shock process and analyzing a rich set of policies, which also explicitly include a well-specified communication strategy. First, we contribute to the understanding of monetary policy in the environment of supply shocks. While there is rich literature on the monetary policy in the economy with demand shocks, the literature on the monetary policy in the economies with supply shocks is limited. [Arifovic et al. \[forthcoming\]](#) studies inflation targeting and price level targeting regimes in the presence of *both* demand and supply shocks. We examine only supply shocks in our study to focus on the environment where prices and output move in the opposite directions creating inflation-output trade-off. The presence of demand shocks which generate divine coincidence introduces different dynamics and considerations for monetary policy.

Our work contributes to a growing literature on the value of transparency in the design of monetary policy. We find that detailed communication about the policy rule has limited benefit for anchoring expectations. [Cornand and M'baye \[2018\]](#) find that communicating the inflation target improves both inflation and output gap expectations when monetary policy pursues flexible inflation targeting with some positive weight on the output gap, while offering little benefit under strict inflation targeting. Our environment likewise features a complex objective, but the object of communication differs: we convey the structure of the policy rule rather than the target itself. That distinction appears to matter. Communicating rule details introduces a layer of complexity that offsets whatever gain the additional target information provides — consistent with [Truong et al. \[2026\]](#), who show that communicating the inflation target together with the structural details of the economy worsens forecast accuracy as participants become cognitively taxed by too much information. Related evidence points in the same direction: [Arifovic and Petersen \[2017\]](#) find no gain from quantitative communication of a state-dependent inflation target in mitigating deflationary episodes at the ZLB, and [Mokhtarzadeh and Petersen \[2020\]](#) and [Kryvtsov and Petersen \[2013, 2021\]](#) document how difficult subjects find it to translate forward-looking policy announcements into inflation and output gap expectations. Macroeconomic projections of inflation and output, by contrast, are considerably more effective at guiding expectations toward the REE — a result our findings reinforce and that is well documented elsewhere [[Mokhtarzadeh and Petersen, 2020](#), [Rholes and Petersen, 2021](#), [Ahrens et al., 2023](#), [Kostyshyna et al., forthcoming](#), [Arifovic et al., forthcoming](#)].

2 The design of a macroeconomic experiment

2.1 Experimental environment

We consider an experimental environment with supply shocks based on a standard three-equation New Keynesian (NK) model commonly used for monetary policy analysis, both in theoretical and experimental studies [Woodford, 2003, Adam, 2007, Pfajfar and Žakelj, 2014, Assenza et al., 2021]. The economy is described by the following equations:

$$\pi_t = \beta \mathbb{E}_t \pi_{t+1} + \kappa x_t + u_t \quad (1)$$

$$x_t = \mathbb{E}_t x_{t+1} - \frac{1}{\sigma} (i_t - i^* - \mathbb{E}_t \pi_{t+1}) \quad (2)$$

$$u_t = \rho_u u_{t-1} + \epsilon_t \quad (3)$$

Here, π_t is inflation, x_t is the output gap, i_t is the nominal interest rate, and i^* is the long-run policy rate. u_t is a cost-push shock that follows an AR(1) process with persistence ρ_u and ϵ_t is a normally distributed white noise process mean zero and variance σ_ϵ^2 .

We estimate parameter values using Canadian data for the period 1996Q1–2025Q1: $\beta = 0.98$, $\sigma = 1.46$, $\rho_u = 0.3$, $\kappa = 0.14$, $\pi^* = 0$, $x^* = 0$, $i^* = 65$, $\sigma_\epsilon^2 = 0.3$.

The central bank uses the following Lean-Against interest-rate rule. This Taylor rule has been used by the Bank of Canada in its projection model Corrigan et al. [2021] and is based on the historical data.

$$i_t = \rho_i i_{t-1} + (1 - \rho_i)(i^* + \phi_\pi \pi_t + \phi_x x_t) \quad (4)$$

Supply shock

The experimental economy evolves over two distinct phases. During the first 18 periods, participants face relatively small and stable supply shocks, intended to replicate conditions similar to the pre-pandemic environment. In period 19, a large positive cost-push shock—approximately three standard deviations of the pre-shock distribution—is introduced. From this point onward, the supply shock also becomes more persistent, with its autocorrelation parameter doubling relative to the pre-shock period to $\rho_u = 0.6$ from $\rho_u = 0.3$. We call periods 1–18 "Low-persistence" and periods 19–50 "High-Persistence" periods. Participants across all treatments are explicitly informed of the change in the persistence of supply shock, both through on-screen instructions and a formal announcement by the experimenter in period 19. The High-Persistence phase allows us studying different the stabilization properties of different monetary policy strategies.

Monetary policy rule

The monetary policy rule employed in the experiment follows the Bank of Canada’s projection model and is calibrated on historical data. The coefficients on inflation $\phi_\pi = 2.2$ and the output gap $\phi_x = 0.3$ align with estimates obtained during periods of demand-driven shocks [Kang et al., 2026]. This specification serves as the Lean-Against policy rule in the experimental design. The persistence in the interest rate rule is $\rho_i = 0.2$.

Following the large cost-push shock in period 19, the central bank can pursue one of two strategies. Under the Lean-Against approach, the policy rule remains unchanged, maintaining the original coefficients on inflation and the output gap. Alternatively, the central bank can adopt a more accommodative Look-Through stance by reducing the response to inflation to $\phi_\pi = 1.2$ from $\phi_\pi = 2.2$ in the Lean-Against rule. Historical evidence from Canadian data suggests that monetary policy has indeed responded less aggressively to inflation during episodes of supply shocks [Kang et al., 2026]. While such an accommodative stance may help stabilize output, it carries the risk of sustaining higher inflation for longer, thereby increasing the likelihood of un-anchoring inflation expectations. We examine these two strategies – Lean-Against ($\phi_\pi = 2.2$) and Look-Through ($\phi_\pi = 1.2$) – in the laboratory to study the implications of these two policies for economic stability and anchoring of inflation expectations.

Communication strategies

The experiment also varies the transparency of monetary policy communication. We consider three approaches that differ in the degree of information provided to participants about the policy framework, its adjustment following the supply shock, and the availability of central bank projections. In the restricted communication treatment, participants are informed only about the functional form of the policy rule, without disclosure of the precise coefficients or the timing of the shift to a more accommodative stance (Restricted communication). In contrast, the detailed communication treatment provides participants with the exact parameter values of the rule, as well as explicit information about the change in the inflation response coefficient during High-Persistence period and its macroeconomic implications under the accommodative policy regime (Detailed communication).

The third communication approach augments the Detailed policy communication with additional disclosure of central bank projections for inflation and output over the subsequent six quarters (Detailed+Projections communication). Prior experimental evidence demonstrates that central bank *macroeconomic* projections can play an important role in shaping expectations [Mokhtarzadeh and Petersen, 2020, Rhoades and Petersen, 2021, Ahrens et al., 2023, Kostyshyna et al., forthcoming, Arifovic et al., forthcoming], whereas forward-guidance in the form of interest rate projections or guarantees do not successfully anchor inflation and output gap expectations [Mokhtarzadeh and Petersen, 2020, Kryvtsov and Petersen, 2021]. In line with conventional practice, the forecasts in our

experiment are generated using the rational expectations (RE) solution. This approach is commonly adopted for several reasons. Most importantly, the central bank’s objective is to stabilize expectations by guiding them toward a well-defined and stable equilibrium, exemplified by the RE solution.

Providing projections based on rational expectations does not imply that participants themselves hold rational expectations. On the contrary, experimental evidence indicates that agents often exhibit non-rational belief formation, with the composition of such beliefs varying across policy environments and evolving over time [Assenza et al., 2021, Pfajfar and Žakelj, 2014, 2016]. Mokhtarzadeh and Petersen [2020] show that projections constructed under the assumption of non-rational expectation may be perceived as more credible, but lead to significantly more heterogeneous and unanchored expectations. Employing RE projections ensures both tractability and clarity, thereby facilitating the implementation of the experimental design while providing participants with a consistent benchmark for expectations.

Table 1 provides a summary of the treatments considered in the macroeconomic experiment, Table 2 summarizes the values of parameters in different treatments.

2.2 Procedures

The experiments were conducted at the Simon Fraser University Experimental Economics Laboratory and McMaster University Decision Science Lab. Each session consisted of seven participants. We conducted eight sessions of each of the six treatments (T1–T6 in Table 1) split equally between laboratories.^{1,2} Participants were inexperienced undergraduate students recruited via SONA.

The experiment lasted 50 periods, with a pre-drawn exogenous shock sequence creating two distinct phases: a stable Low-persistence initial phase (periods 1–18) and a High-Persistence phase (periods 19–50).

Participants’ earnings during the experiment were based on the accuracy of their one- and six-period-ahead inflation and their one-period-ahead output gap and interest rate forecasts. Subject j ’s points in period t depended on the absolute distance between their forecasts made in period

¹Lean-Against-ReducedComm Session 1 and Session 2 ended early after Period 42 due to an incorrect termination period.

²The size of the group can play an important role in driving aggregate dynamics, especially in settings with a high degree of strategic complementarities. Group size can influence aggregate dynamics, especially where strategic complementarities are strong. Hommes et al. [2021] show that in asset pricing experiments with positive feedback (as in our environment at the ELB), increasing the group size from six participants to 90 to 100 participants does not significantly change pricing. In other work, Bao et al. [2020] find that increasing from six to 31–32 participants can speed up extrapolative pricing and deviations from equilibrium predictions. Our decision to keep the group size relatively small likely reduced the coordination on extrapolative expectation models.

$t - 1$ and realized inflation and output in period t as in [Kryvtsov and Petersen, 2021]:

$$Points_{j,t} = 0.3 \left(2^{-.5|\mathbb{E}_{j,t-1}\{\pi_t\}-\pi_t|} + 2^{-.5|\mathbb{E}_{j,t-1+6}\{\pi_{t+5}\}-\pi_{t+5}|} + 2^{-.5|\mathbb{E}_{j,t-1}\{x_t\}-x_t|} + 2^{-.5|\mathbb{E}_{j,t-1}\{i_t\}-i_t|} \right) \quad (5)$$

Participants' total payoffs over all the forecasting periods were converted to Canadian dollars at an exchange rate such that the average earnings of each group exceeded the hourly minimum wage of \$18. This implied an exchange rate of \$0.75 to \$1.05 per point depending on the session.

Participants viewed real-time information about their experimental economy on a computer screen, as shown in Figure 1. The screen displayed five charts tracking shocks, inflation (one- and six-period ahead forecasts against realized inflation), output (with the participant's forecast). Following the introduction of the positive cost-push shock, participants are explicitly informed about this. On the left side of the screen, participants had four input windows to submit their forecasts in basis points. They had 75 seconds to enter forecasts during the first 10 periods and 60 seconds for the remaining periods. If a forecast was not submitted on time, the experiment proceeded to the next round, with zero points awarded for the missed entry. The median forecast was then calculated from submitted forecasts. Participants could enter any number positive, negative, or zero without upper or lower bounds on their forecasts.

The experiments were conducted online via Zoom with undergraduate students from Simon Fraser University and McMaster University in Canada, from May to June 2025 and August to September 2026. Participants were recruited through the SONA and ORSEE systems [Greiner, 2015], with sessions for each treatment equally divided between the two institutions. Each session lasted about two hours, including approximately 25 minutes for video instructions and Q&A, 10 minutes for an un-incentivized comprehension quiz, and 10 minutes for four practice rounds with the experimental interface. A web-hosted PDF of the instructions was shared via Zoom at the start of each session and accessible throughout the experiment. Participants could pose questions privately to the experimenters throughout the session via private chat.

Participants at both laboratories received a \$CAD 7 show-up fee plus performance-based earnings designed to average approximately \$36. Payments were made by e-Transfer at the end of the session. Ex post, average total earnings were \$38.25 at SFU (range: \$29–\$41) and \$37.50 at McMaster University (\$28–\$41), inclusive of the show-up fee. These differences are not statistically significant at the 10% level, and we do not find any systematic behavioral differences across the two samples.

3 Experimental results

Figure 2, Figure 3, and Figure 4 plot realized inflation and output alongside average short-term (one-period-ahead) and long-term (six-period-ahead) inflation and output expectations under

the Lean-Against and Look-Through monetary policy regimes with Restricted, Detailed, and Detailed+Projections communication treatments, respectively. Within each treatment, outcomes from individual experimental sessions are shown in different shades of blue, while the red lines represent the outcomes predicted under rational expectations. [Table 3](#) reports summary statistics for each experimental treatment over the Low-persistence period (periods 1–18) and the High-Persistence period (periods 19–50).

3.1 Lean-Against versus Look-Through

We begin by comparing aggregate outcomes and expectations under Lean-Against and Look-Through monetary policies, holding the communication strategy fixed. For each communication approach (Restricted, Detailed, and Detailed+Projections), we estimate:

$$y_{i,t} = a_1 + b_1 D_i^{\text{Look-Through}} + c_1 \text{POST}_t + d_1 D_i^{\text{Look-Through}} \text{POST}_t + \varepsilon_{i,t}, \quad (6)$$

where $y_{i,t}$ is a session-level outcome for session i in period t . Outcomes include output, inflation, median expectations for inflation or output, and absolute inflation or output forecast errors. $D_i^{\text{Look-Through}}$ equals 1 for Look-Through sessions and 0 for Lean-Against sessions. POST_t is a dummy variable that equals 1 for High-Persistence periods $t = 19 - 50$ and 0 for periods $t = 1 - 18$. Coefficient b_1 estimates the difference between the two policies before the shock. Coefficient c_1 estimates how outcomes under Lean-Against change after the transition to more persistent cost-push shocks. Coefficient d_1 estimates how the gap between the two policies changes after the shock. Standard errors are clustered at the session level. The results are presented in [Table 5](#).

Before period 19 the Lean-Against and Look-Through treatments are identical by design: both economies operate under the same monetary policy response to inflation, $\phi_\pi = 2.2$. Under Restricted and Detailed communication, inflation and inflation expectations exhibit similar dynamics, although the output gap is lower in the Look-Through sessions ([Table 5](#)). Under Detailed+Projections the pre-shock economies differ more, with the Look-Through treatment producing higher inflation and lower output and inflation expectations than Lean-Against.

In period 19 a large cost-push shock hits all economies, and the Look-Through treatment switches to a weaker response to inflation, $\phi_\pi = 1.2$, while the Lean-Against treatment continues to respond with $\phi_\pi = 2.2$. Differences between the two treatments emerge from this point on ([Figure 2](#) and [Figure 3](#)).

First, consistent with conventional theory, the more accommodative policy generates higher and more persistent inflation than the Lean-Against policy under both Restricted and Detailed communication. We will focus on the results for Restricted and Detailed communication first. The immediate effects of the shock in period 19 are similar across the two policies, but inflation returns

to steady state in roughly five periods under Lean-Against and roughly ten under Look-Through. This reflects the tighter monetary policy stance under Lean-Against, where interest rates peak at around 800 basis points, compared with about 400 basis points under Look-Through. Inflation is also more volatile under Look-Through than under Lean-Against ([Table 3](#)).

The higher and more persistent inflation dynamics spill over to expectations. Both short-term and long-term inflation expectations are higher, more volatile, and more persistent under the more accommodative policy in the High-Persistence phase. Long-term inflation expectations reach approximately 300 to 400 basis points under Look-Through policy and return to steady state only after about 10 to 12 periods. In contrast, long-term expectations peak at around 250 basis points and are less persistent under Lean-Against, returning to their steady state in fewer than ten periods. [Table 5](#) confirms that the differences in inflation and in short-term and long-term inflation expectations during High-Persistence phase are statistically significant. The accommodative policy therefore carries a greater risk of unanchoring long-term inflation expectations. We discuss risks of unanchoring in greater details below in [subsection 3.4](#).

Against this, the Look-Through policy stabilizes output better than the Lean-Against policy. This result is consistent with the standard intuition that Look-Through preserves the output gap more in the face of cost-push shocks. The stronger response to inflation under Lean-Against generates a deeper recession: under Restricted and Detailed communication the output gap falls to approximately -600 basis points under Lean-Against, compared with about -300 basis points under Look-Through. [Table 5](#) shows a significantly higher (more stable) output gap under Look-Through during High-Persistence phase.

The tighter Lean-Against policy can also generate instability when its strong response to inflation is not supported by the communication of projections. Sessions 2, 3, 5, and 9 in Lean-Against with Restricted communication and sessions 2 and 3 in Lean-Against with Detailed communication exhibit explosive recessionary and deflationary dynamics. In [Figure 2](#) and [Figure 3](#) the time series for these sessions are plotted only to approximately periods 30 to 40, after which the economies enter increasingly unstable negative dynamics. We exclude these sessions from [Table 3](#). The summary statistics that include them, reported in [Table 4](#), show large negative averages for inflation and output.

Why can the Lean-Against policy generate deflationary spirals? Under rational expectations, a negative supply shock lowers inflation and raises output. However, the dynamics in our experimental economies differ from those predicted by rational expectations. Following the large negative supply shock in period 29, inflation declines and the output gap begins to improve, but the output gap remains negative. Because participants form expectations largely through backward-looking rules, such as trend-chasing or constant-gain learning (discussed in [subsection 3.5](#)), the ongoing re-

cessionary and deflationary conditions become embedded in their expectations, further reinforcing the trends. In some Lean-Against sessions, these feedback effects are strong enough to produce persistent deflationary spirals.

The differences between Lean-Against and Look-Through policies are concentrated in the Restricted and Detailed treatments. Under Detailed+Projections communication, where participants receive central bank projections for inflation and output, the two policies produce much more similar dynamics, and [Table 5](#) shows no statistically significant differences in inflation or in short-term or long-term inflation expectations. At the same time, the Look-Through policy continues to provide greater output stability, resulting in a higher average output gap.

These results underscore the important role of credible central bank communication. Under both the Lean-Against and Look-Through policies, the communication of inflation and output projections helps guide expectations and stabilize macroeconomic outcomes. We discuss the role of central bank communication in greater detail in [subsection 3.2](#).

3.2 The role of communication

We now turn to the role of communication. Within each monetary policy regime — Lean-Against or Look-Through — we compare three communication strategies: Reduced communication, Detailed communication about monetary policy rule and its change, and Detailed+Projections, which augments Detailed communication by providing central bank projections of inflation and output.

For each policy regime we estimate

$$y_{i,t} = a_2 + b_2 D_i^{\text{Detailed}} + b_3 D_i^{\text{DetailedProj}} + c_2 \text{POST}_t + d_2 D_i^{\text{Detailed}} \times \text{POST}_t + d_3 D_i^{\text{DetailedProj}} \times \text{POST}_t + \varepsilon_{i,t}, \quad (7)$$

where D_i^{Detailed} and $D_i^{\text{DetailedProj}}$ equal 1 for sessions run under Detailed and Detailed+Projections communication respectively, and 0 otherwise, so that Restricted communication is the omitted category. The outcome variables, the definition of POST_t , and the clustering follow [Equation 6](#). Coefficients b_2 and b_3 measure pre-shock differences from Restricted communication, c_2 measures the post-shock change under Restricted communication, and d_2 and d_3 measure how the gaps between each communication regime and Restricted communication change after the shock. [Table 6](#) reports the results.

Our evidence highlights three main findings regarding the role of central bank communication.

First, Restricted and Detailed policy communication produce remarkably similar outcomes.

Under both communication protocols, the levels and volatility of inflation, output, and inflation and output expectations are comparable (Figure 2, Figure 3, and Table 3). The coefficients on *Detailed* and *Detailed* $\times$ *Post* in Table 6 are not statistically significant for any outcome, including forecast errors, in either the Low-Persistence or the High-Persistence phases. Similarly, volatility in macroeconomic outcomes is comparable across the two communication regimes (Table 3). Telling participants the policy rule, on its own, does not change how the economy behaves relative to qualitative guidance alone.

Second, communicating projections for inflation and output stabilizes participants' expectations for inflation and output and, through them, realized inflation and output (Figure 4 relative to Figure 2 and Figure 3). Treatments that include projections exhibit lower volatility and persistence than treatments without projections (Table 3).

During the Low-Persistence phase, communication that includes projections helps reduce inflation and mitigate recessions by supporting a higher output gap following mild and less persistent supply shocks (Table 6, coefficients on *DetailedProj*). Both short-term and long-term inflation expectations are also lower under the Detailed+Projections regime. Participants also make smaller inflation and output forecast errors.

In the High-Persistence period, the benefits of communicating projections depend on the policy regime. Under Lean-Against, projections help moderate recessions and maintain a higher output gap relative to the Restricted communication regime, at the cost of somewhat higher inflation and inflation expectations. Under Look-Through, projections lower inflation and both short-term and long-term inflation expectations, and reduce output-gap forecast errors and six-period-ahead inflation forecast errors. By guiding participants' expectations of inflation and output, projections help anchor inflation expectations and reduce inflation volatility. Under the more accommodative Look-Through policy, central bank projections facilitate a faster return of inflation to its steady state following the large cost-push shock in Period 19. As a result, inflation dynamics under the Look-Through policy with projections closely resemble those observed under the Lean-Against policy (Figure 4 and Table 3), while avoiding as pronounced a decline in output.

Third, because the projections are computed from the rational expectations equilibrium, communicating them effectively steers participants' expectations toward the rational benchmarks. Participants who treat the central bank's projections as credible and incorporate them into their forecasts form expectations that are closer to the rational expectations path, as illustrated in Figure 4. The resulting inflation and output dynamics track that path more closely than in the treatments without projections (Figure 4 relative to Figure 2 and Figure 3). This is the mechanism behind the anchoring effect described above.

To summarize, communicating salient projections of inflation and output significantly improves macroeconomic stability while detailed information about the policy rule alone does not. Under the tighter Lean-Against policy, projections keep output gap expectations from becoming overly pessimistic, and as a result, recessions following supply shocks are milder than without projections. Under the Look-Through policy, projections reduce inflation and leave long-term inflation expectations better anchored. Projections appear to work by aligning private-sector expectations with the central bank’s objectives, which is valuable even when the policy response to inflation is weak.

3.3 Responsiveness of economic outcomes to the shocks

Next, we ask how strongly experimental economies respond to cost-push shocks, and whether the response differs across policy and communication regimes. We estimate local projections [Jordà, 2005] on session-level data for inflation, output, short-term and long-term expectations.

For each horizon $h = 0, 1, \dots, H = 6$, we estimate

$$y_{i,t+h} = \alpha_i^h + \beta^h \epsilon_t + \gamma^h \epsilon_t D_i^{\text{Look-Through}} + \varepsilon_{i,t+h}, \quad t, t+h \in \mathcal{W}, \quad (8)$$

where $y_{i,t+h}$ is a session-level outcome (inflation, output, median expectation for inflation or output) for session i in period $t+h$; ϵ_t is a cost-push shock innovation from Equation 3 in period t , and α_i^h are session fixed effects. Standard errors are clustered at the session-level. Because ϵ_t is drawn exogenously by the experimenter, no further controls are required for identification. We estimate Equation 8 separately for each treatment and horizon over three windows $\mathcal{W}$: the full sample $t = 1$ to 50, the periods before the large shock $t = 1$ to 18, and the periods from the large shock onward $t = 19$ to 50. Both ϵ_t and $y_{i,t+h}$ are required to fall inside the same window, so no horizon crosses a window boundary. The estimated coefficients $\{\hat{\beta}^h\}_{h=0}^H$ trace the response of the outcome variable to a one-unit innovation (one basis point) at time $t+h$ for horizon $h = 0, \dots, H$ for Lean-Against policy and $\{\hat{\beta}^h + \hat{\gamma}^h\}_{h=0}^H$ – for Look-Through policy.

Figure 5 presents the results for inflation, Figure 7 for output, Figure 6 for one-period-ahead inflation expectations, Figure 8 for one-period-ahead output expectations Figure 9 for six-period-ahead inflation expectations,.

Three findings stand out. First, the more accommodative Look-Through policy leads to a stronger and more persistent propagation of cost-push shocks to inflation than the tighter Lean-Against policy. During the Low-Persistence period ($t = 1$ –18), there are no meaningful differences between the Look-Through and Lean-Against treatments because both implement the same response to inflation ($\phi_\pi = 2.2$). However, from Period 19 onward, the responses differ significantly under Restricted and Detailed communication, with a larger and longer-lived inflation response under the Look-Through rule (bottom panel of Figure 5). One-period-ahead inflation expectations follow the same pattern (Figure 6). Under Detailed+Projections the two policies produce inflation

responses that are not meaningfully different, which is the dynamic counterpart of the finding no statistically significant difference in [Table 5](#).

Second, output responds more sharply to cost-push shocks under Lean-Against than under Look-Through ([Figure 7](#)), and one-period-ahead output expectations do the same ([Figure 8](#)). Here the gap between the two policies is widest under Detailed+Projections, rather than absent as it is for inflation. Projections make the two policies look alike in inflation while leaving the difference in output intact.

Third, we find the most striking effects of communicating projections in the response of *long-term* inflation expectations to cost-push shocks relative to the response in all other variables as illustrated by [Figure 9](#) compared with [Figure 5](#), [Figure 6](#), [Figure 7](#) and [Figure 8](#). The responses of inflation, short-term inflation expectations, output, and one-period-ahead output expectations are broadly similar across communication regimes, and are only occasionally smaller when projections are provided. Long-term inflation expectations, by contrast, are substantially more stable under Detailed+Projections than under either Restricted or Detailed communication ([Figure 9](#)). This finding underscores the important role of accessible and credible central bank projections in anchoring long-term inflation expectations and enhancing macroeconomic stability.

3.4 Anchoring of long-term inflation expectations

The elevated and persistent inflation under more accommodative policy raises the central concern about looking through supply shocks: does the weaker response to inflation put the anchoring of long-term expectations at risk?

There are different approaches to assessing the anchoring of long-term inflation expectations. Following the literature, we focus on two commonly used criteria.³ Under the level criterion, long-term inflation expectations are considered anchored if they remain aligned with the inflation target, which is zero in our economies. Under the sensitivity criterion, long-term inflation expectations are considered anchored if they do not move with realized inflation or short-term inflation expectations. Anchored long-term expectations should not be sensitive to current developments even though inflation and short-term expectations are expected to respond to current shocks.

On the level criterion, long-term inflation expectations stay above target longer under Look-Through than under Lean-Against policy ([Figure 2](#) and [Figure 3](#)). Higher and more persistence realized inflation and short-term expectations carry into six-period-ahead expectations, which are both higher and more persistent under the more accommodative Look-Through policy.

As discussed above, the results from the local projections in [Figure 9](#) illustrate this. On impact,

³(e.g. [Williams \[2022\]](#), [Gurkaynak et al. \[2007\]](#)).

long-term expectations respond less to a cost-push shock under Look-Through than under Lean-Against in all three communication treatments. The ordering reverses at longer horizons under Restricted and Detailed communication: long-term expectations respond more strongly and more persistently Look-Through policy. This pattern suggests a greater risk of un-anchoring inflation expectations when monetary policy is more accommodative, lending support to policymakers' concerns about adopting a look-through approach in the presence of persistent supply shocks.

We further assess the responsiveness of long-term expectations to realized inflation or to short-term inflation expectations using the following specification:

$$E_{i,t+h}\pi^{t+6} = e_i^h + f^h z_t + \varepsilon_{t+h}, \quad h = 0, 1, \dots, 6, \quad (9)$$

where $E_{t+h}\pi^{t+6}$ is six-period-ahead median inflation expectations formed in period $t + h$, and z_t is either realized inflation π_t or the short-term median one-period-ahead inflation expectations formed in period t , $E_t\pi^{t+1}$. e_i^h are session fixed effects. Estimating at successive horizons shows whether the influence of period t inflation, or of period t short-term expectations, persists over the following six periods. Standard errors are clustered at session level. A f^h that differs significantly from zero indicates that long-term expectations are sensitive to economic conditions and not anchored.

Figure 10 and Figure 11 present the results of estimating Equation 9. Under both the Lean-Against and Look-Through monetary policy regimes, long-term inflation expectations respond more strongly to realized inflation and short-term inflation expectations than rational expectations would imply (dashed lines), most sharply on impact at $h = 0$. This sensitivity suggests that long-term inflation expectations are not fully anchored in either Lean-Against or Look-Through monetary policies. Furthermore, long-term inflation expectations exhibit a substantial backward-looking component: the effect of realized inflation in period t persists for approximately five to six periods. This finding is consistent with the evidence we will present in subsection 3.5 that participants forecast using backward-looking rules.

The risk of un-anchored expectations is nonetheless greater under Look-Through, where long-term expectations are more sensitive to both realized inflation and short-term expectations than under Lean-Against. The difference is clearest under Restricted and Detailed communication. Two channels combine to produce it. First, inflation itself responds more strongly and persistently to cost-push shocks under Look-Through policy (subsection 3.3), and, second, fluctuations in realized inflation feed into long-term expectations more strongly under that policy.

Communication changes this picture. Under the Detailed+Projections communication regime, the responsiveness of long-term inflation expectations is substantially weaker than under either Restricted or Detailed communication. When participants view the central bank's projections as credible and incorporate them into their forecasts, long-term inflation expectations become better

anchored: their responses to realized inflation and short-term inflation expectations more closely resemble those implied by rational expectations and dissipate within three to four periods. Interestingly, under the Detailed+Projections regime, long-term inflation expectations are slightly more sensitive to realized inflation under the Lean-Against policy than under the Look-Through policy, although this difference is small and short-lived.

3.5 Heuristics

We classify participants' forecasting behaviour into heuristics following [Kostyshyna et al. \[forthcoming\]](#). For each of the six general models of expectation formation we compute the forecast an agent using that rule would have made. The heuristics and their parameterizations are listed in [Table 7](#).⁴ We then compute, period by period, the absolute deviation between each participant's forecast and the forecast implied by each heuristic, and assign the participant the heuristic with the lowest mean absolute deviation. We run this assignment separately before and after period 19, so that we can see how raising the persistence of shocks changes forecasting behaviour. [Figure 12](#) through [Figure 14](#) report the resulting distributions.

In the Low-Persistence phase, most participants under Restricted and Detailed communication use a constant gain rule, between 54 and 77 percent depending on the variable, with a minority extrapolating recent trends. This is what one would expect early in the experiment, when participants are new to the environment and their own forecast errors are highly salient information to them. After the persistence of the cost-push shocks doubles, the share classified as trend extrapolators rises substantially, and under Restricted communication trend extrapolation becomes the modal rule. The median trend extrapolator also roughly doubles the weight placed on the trend in the High-Persistence phase. [Kryvtsov and Petersen \[2013\]](#) document a similar increase in the share and degree of extrapolation when the persistence of aggregate demand shocks rises.

In the High-Persistence phase, Look-Through pushes more participants toward backward-looking rules, in particular, toward trend chasing, under Restricted and Detailed communication. Unexpectedly, the participants who do extrapolate, however, extrapolate less strongly under Look-Through than under Lean-Against. We attribute this to the relative stability of output gaps, which in turn feed into relatively more stable expectations. More communication consistently reduces the share of trend extrapolators. Under Detailed+Projections, a notable share of participants form ex-ante rational expectations, and others shift toward cognitive discounting and diagnostic expectations. Both of those rules are grounded in fundamentals rather than in past forecast errors or past trends, which is consistent with the evidence in [subsection 3.2](#) that projections guide expectations toward the rational benchmark.

⁴Note that a naïve forecaster who relies solely on last period's outcomes to form their beliefs would be classified as a trend-extrapolator with $\tau = 0$.

4 Conclusion

In this paper, we examine two variants of a flexible inflation-targeting rule in an economy hit by a large cost-push shock that subsequently becomes more persistent. Our findings indicate that a stronger response to inflation under the Lean-Against policy is more effective at stabilizing inflation than the more accommodative Look-Through approach. Following a large cost-push shock, inflation is both higher and more persistent under the Look-Through policy than under the Lean-Against policy. The more accommodative policy also poses a greater risk of un-anchoring long-term inflation expectations, as these expectations respond more strongly to cost-push shocks and take longer to return to their steady state than under the tighter Lean-Against policy.

Central bank communication plays a crucial role in stabilizing the economy and anchoring inflation expectations. Providing Detailed quantitative information about the monetary policy rule does not lead to significant improvements in economic outcomes relative to Restricted communication, which provides only qualitative information. This finding is consistent with the evidence in [Truong et al. \[2026\]](#). By contrast, our results show that providing projections for inflation and output, in addition to detailed information about the monetary policy rule, can effectively steer the economy toward more stable outcomes. Easy-to-use and credible communication helps align participants' expectations more closely with rational benchmarks, thereby improving macroeconomic stability. In particular, a more accommodative Look-Through policy combined with credible projections based on the rational-expectations solution can stabilize inflation without incurring the larger output losses associated with the Lean-Against policy. However, the conditions for successfully implementing a Look-Through strategy appear demanding: such a policy must be accompanied by credible, accessible, and easily interpretable communication that people are willing and able to incorporate into their expectations.

We view the Restricted communication treatment as the most realistic representation of communication conditions in the real world. There is extensive evidence that households and firms possess limited knowledge of inflation and monetary policy, such that interventions based on publicly available information can meaningfully influence their expectations [[Weber et al., 2023](#), [Coibion et al., 2023, 2018, 2020](#)]. Consistently with this evidence, our experiments under Restricted communication reveal the largest and most statistically significant differences between the Look-Through and Lean-Against policies. In this environment, the more accommodative Look-Through policy generates higher and more persistent inflation and inflation expectations, resulting in a greater risk of un-anchoring inflation expectations than under the Lean-Against policy. These findings validate policymakers' concerns about looking through supply-driven inflation and highlight the challenges such an approach poses for maintaining well-anchored inflation expectations.

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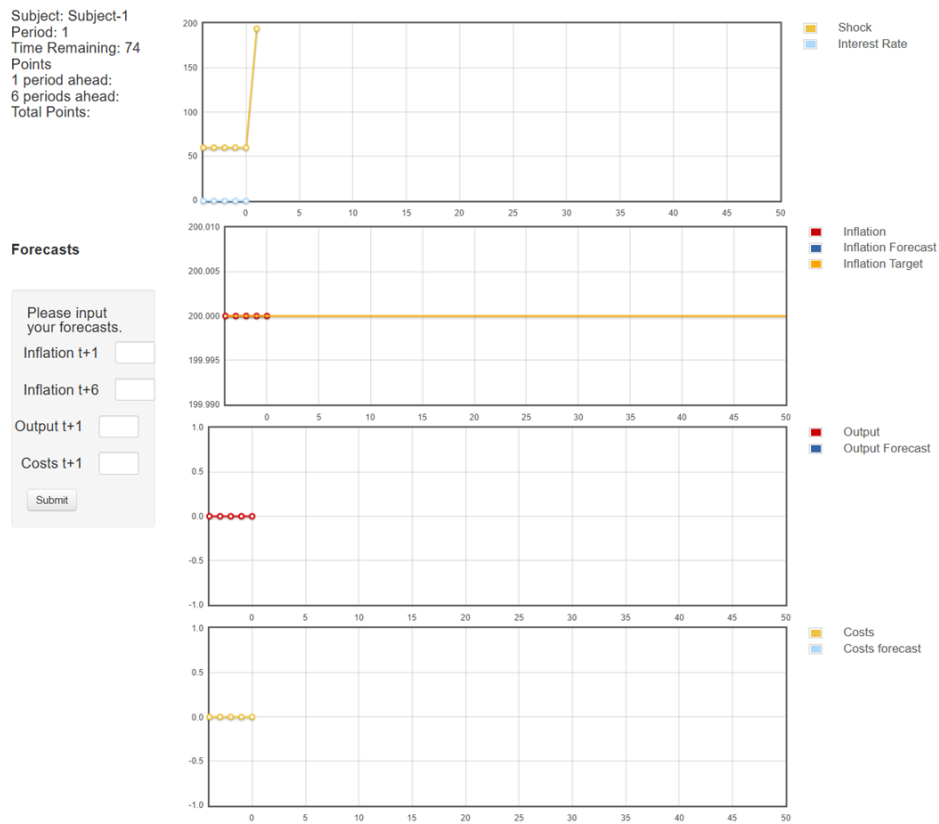
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Figures and Tables

Figure 1: Screenshot of the computer interface during the experiment.



Lean-Against-Restricted Comm Look-Through-Restricted Comm

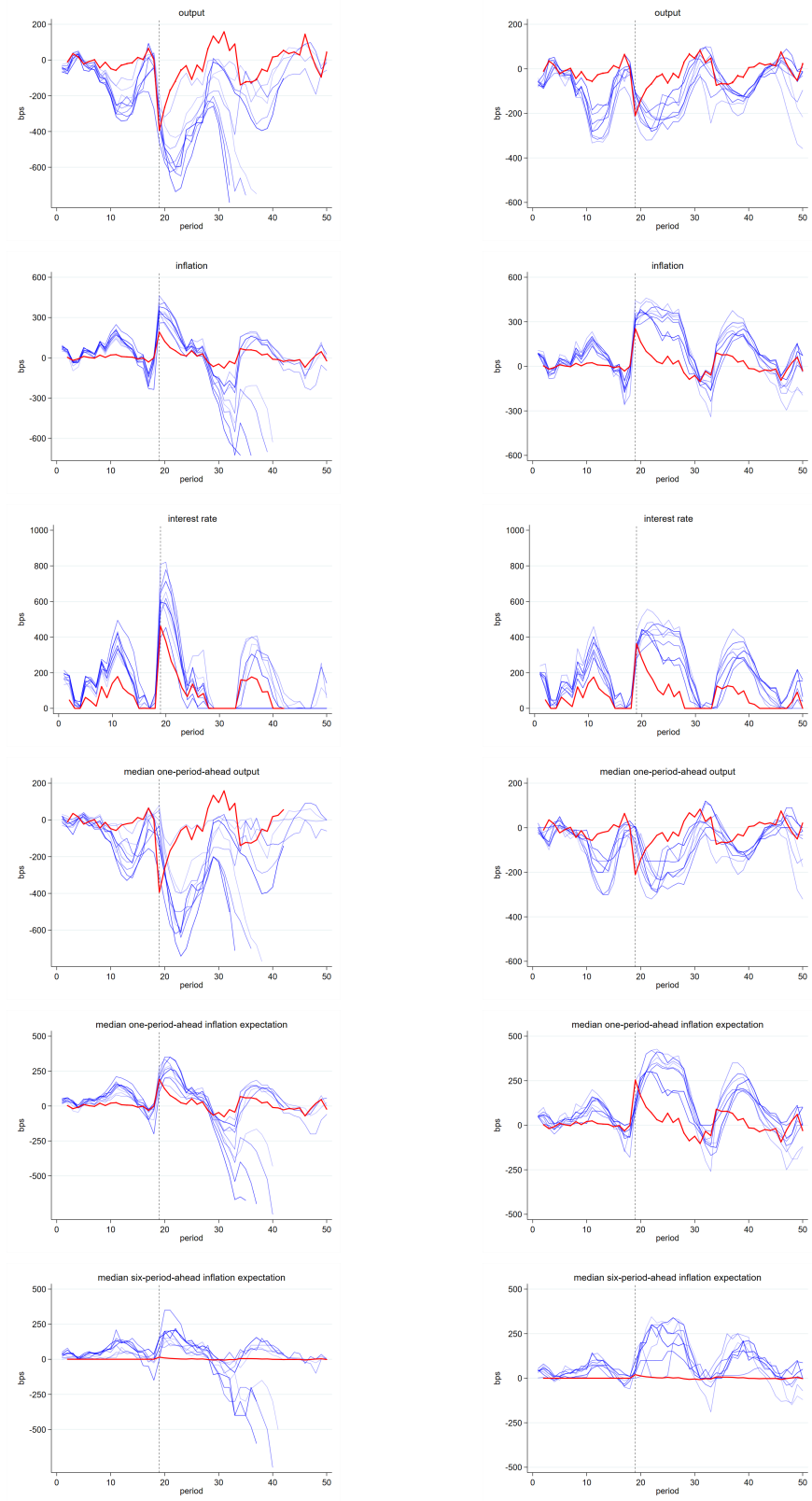


Figure 2: Lean-Against and Look-Through under restricted communication, time series

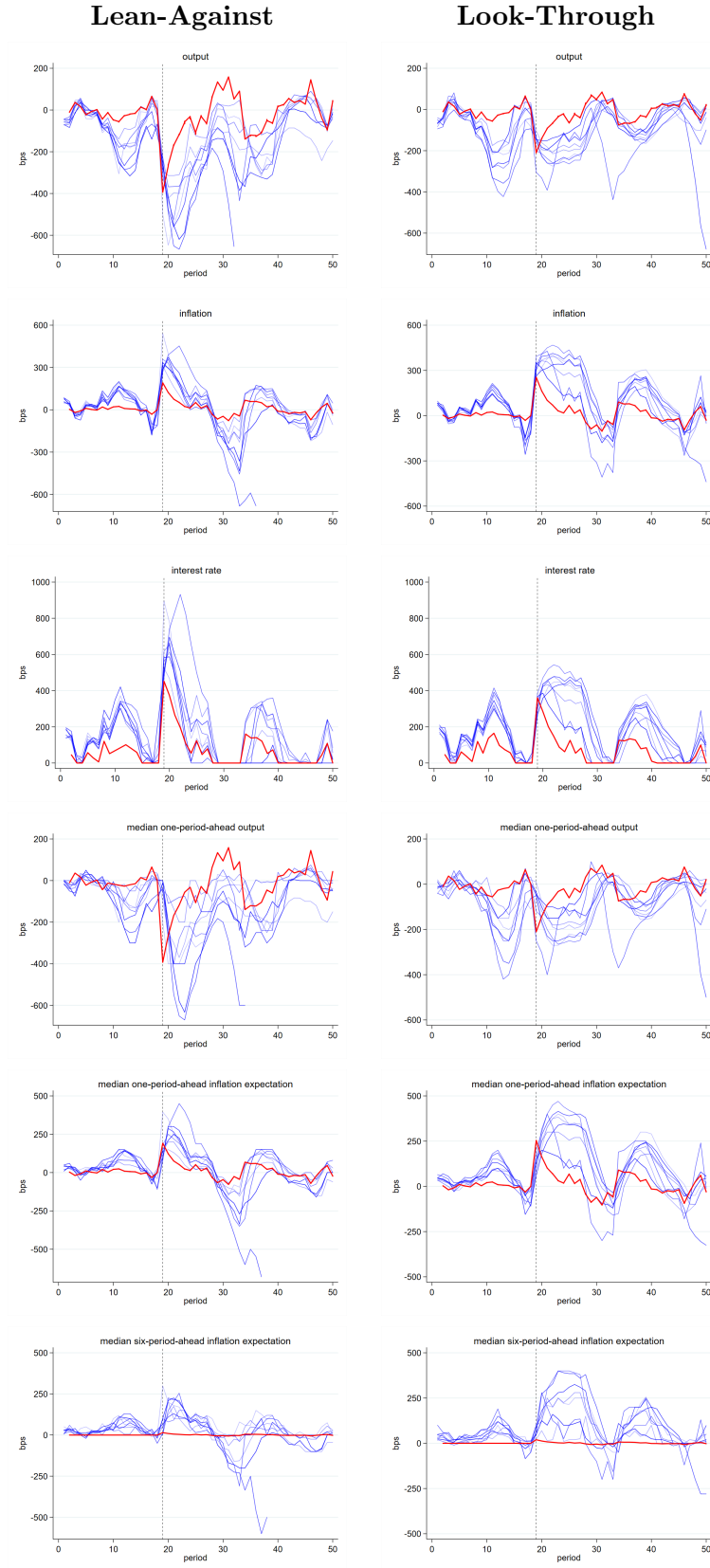


Figure 3: Lean-Against vs. Look-Through under detailed communication, time series

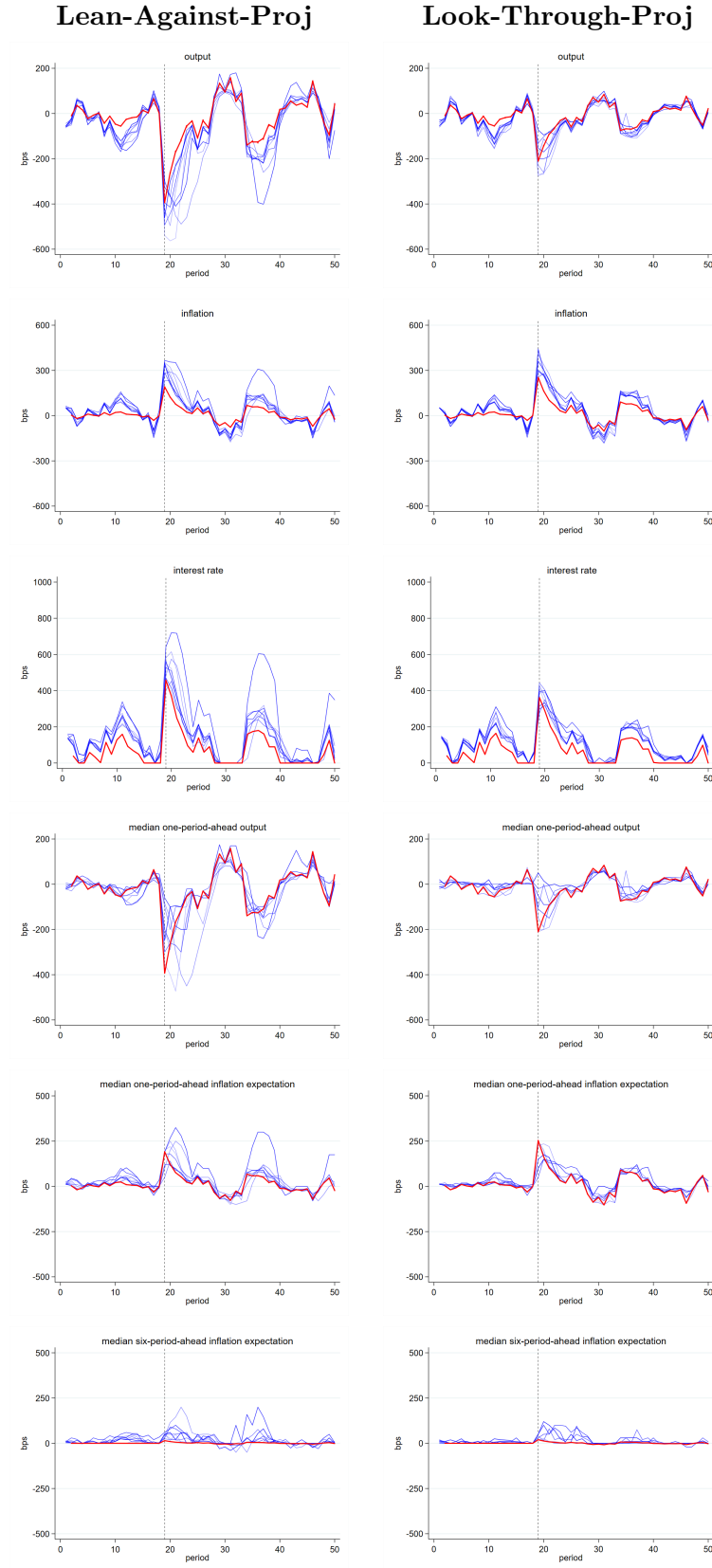


Figure 4: Lean-Against and Look-Through under detailed communication with projections, time series

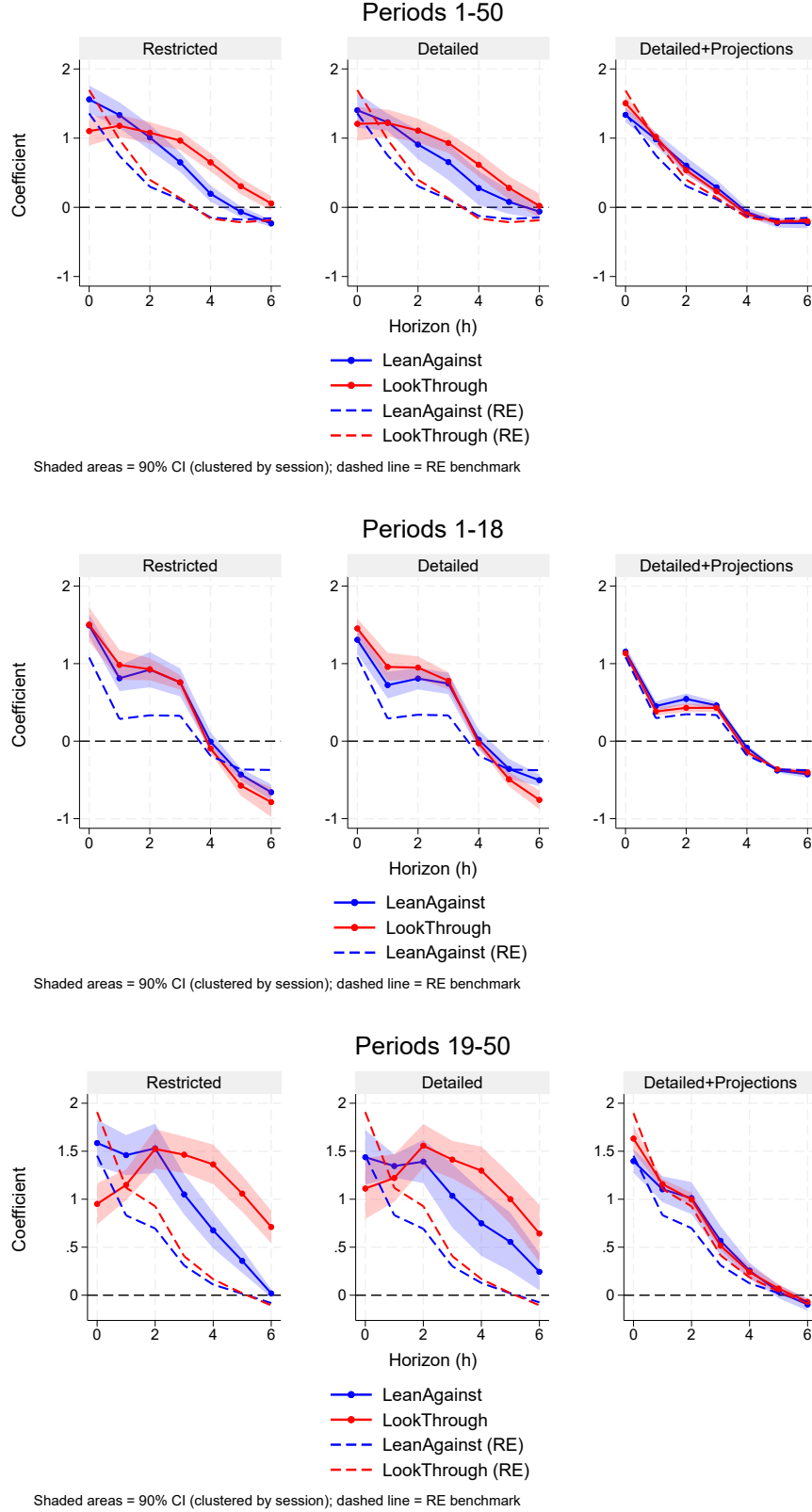


Figure 5: Results of the local projections estimations for **inflation** with 90-% confidence interval.

Notes: This figure presents the results of estimations of Equation 8 for inflation for all periods, periods 1–18 and 19–20. Outlier sessions are excluded from the computations presented in this figure: treatment Lean-Against-Detailed Comm sessions 2 and 3, treatment Lean-Against-Restricted Comm sessions 2, 3, 5 and 9.

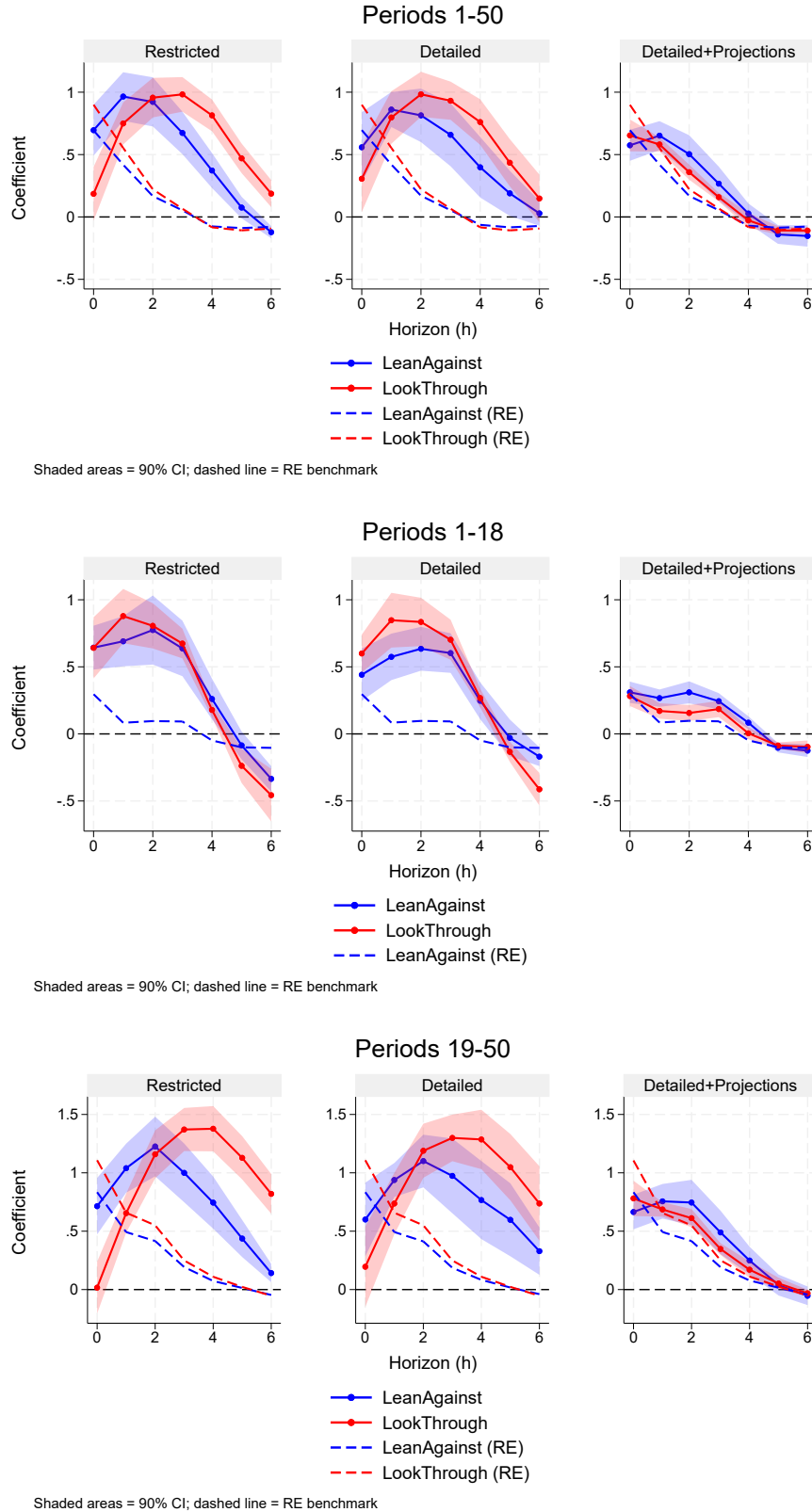


Figure 6: Results of the local projections estimations for **short-term inflation expectations** with 90-% confidence interval.

Notes: This figure presents the results of estimations of Equation 8 for short-term inflation expectations (1-period-ahead) for all periods, periods 1–18 and 19–20. Outlier sessions are excluded from the computations presented in this figure: treatment Lean-Against-Detailed Comm sessions 2 and 3, treatment Lean-Against-Restricted Comm sessions 2, 3, 5 and 9.

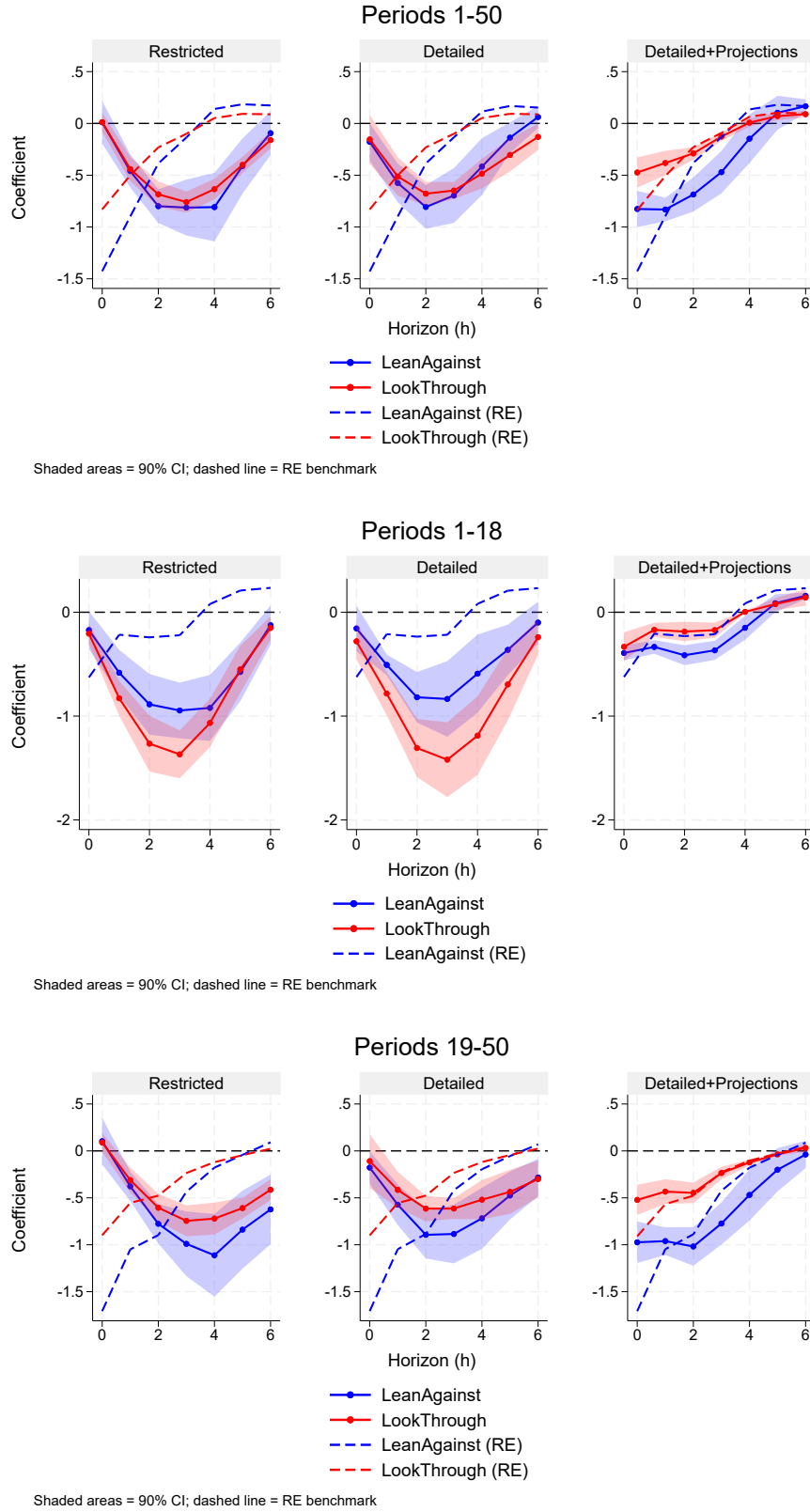
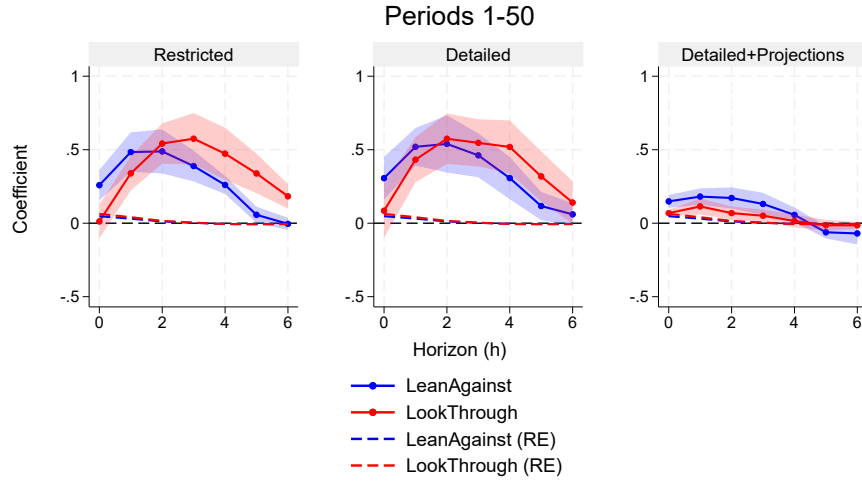
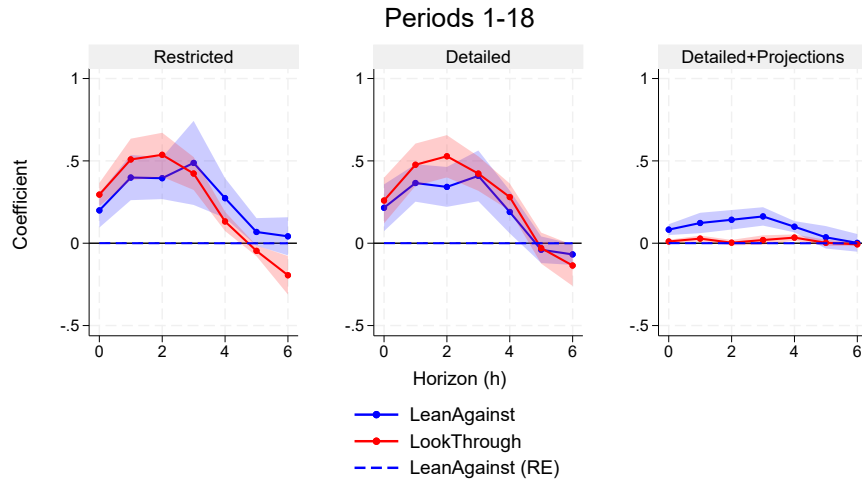


Figure 8: Results of the local projections estimations for **1-period-ahead output expectations** with 90-% confidence interval.

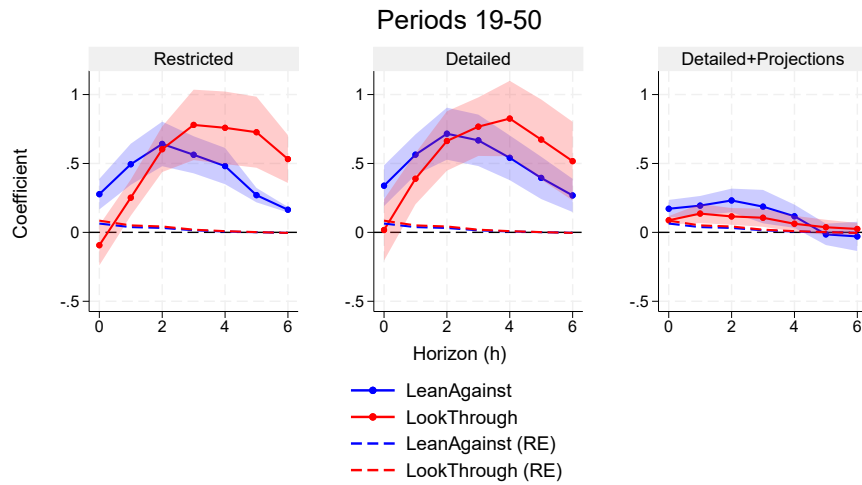
Notes: This figure presents the results of estimations of Equation 8 for 1-period-ahead output expectations for all periods, periods 1–18 and 19–20. Outlier sessions are excluded from the computations presented in this figure: treatment Lean-Against-Detailed Comm sessions 2 and 3, treatment Lean-Against-Restricted Comm sessions 2, 3, 5 and 9.



Shaded areas = 90% CI; dashed line = RE benchmark



Shaded areas = 90% CI; dashed line = RE benchmark



Shaded areas = 90% CI; dashed line = RE benchmark

Figure 9: Results of the local projections estimations for **long-term inflation expectations** with 95-% confidence interval.

Notes: This figure presents the results of estimations of Equation 8 for long-term inflation expectations (6-period-ahead) for all periods, periods 1–18 and 19–20. Outlier sessions are excluded from the computations presented in this figure: treatment Lean-Against-Detailed Comm sessions 2 and 3, treatment Lean-Against-Restricted Comm sessions 2, 3, 5 and 9.

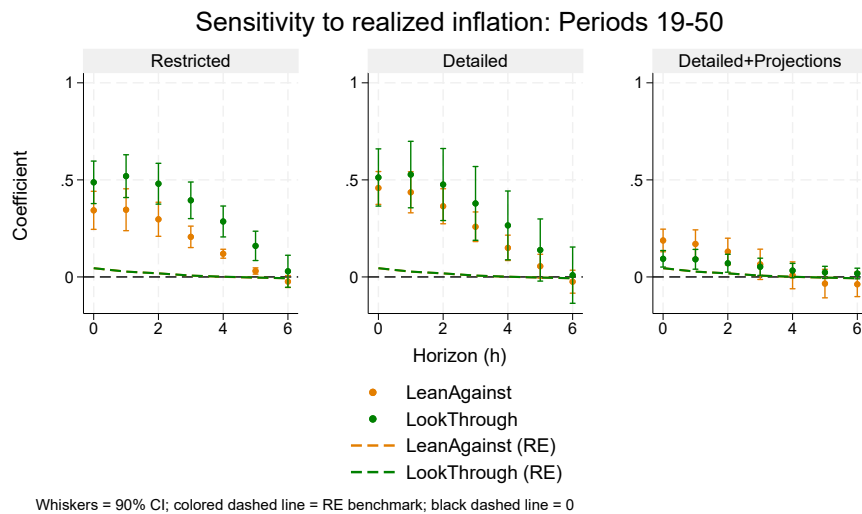
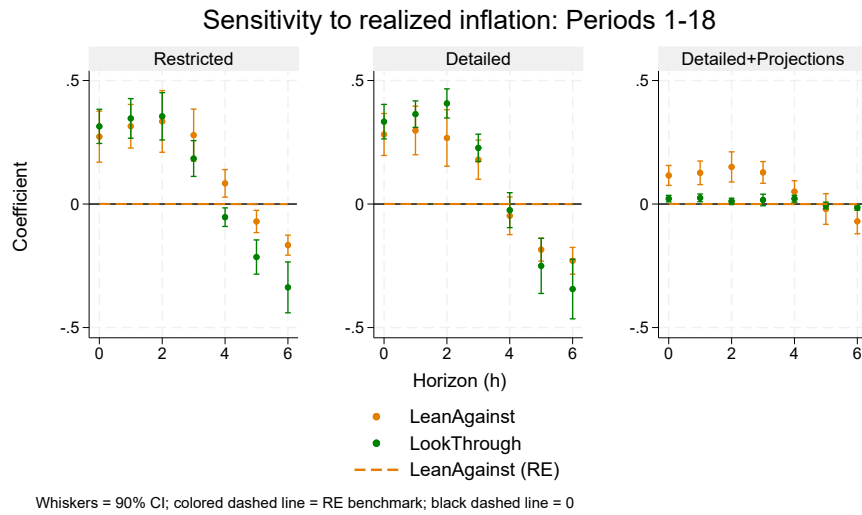
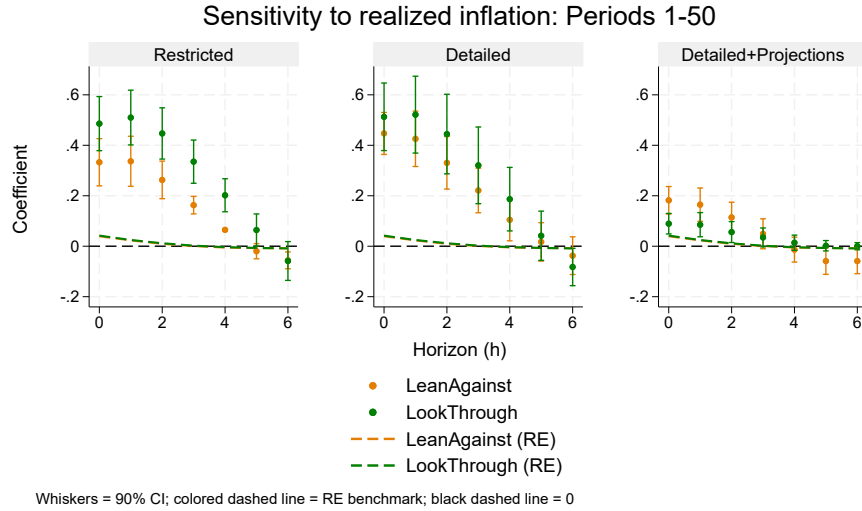


Figure 10: Results of regressions of long-term inflation expectations on realized inflation

. Notes: This figure presents the results of estimations of Equation 9 for long-term inflation expectations (6-period-ahead) on realized inflation for all periods, periods 1–18 and 19–20. Outlier sessions are excluded from the computations presented in this figure: treatment Lean-Against-Detailed Comm sessions 2 and 3, treatment Lean-Against-Restricted Comm sessions 2, 3, 5 and 9.

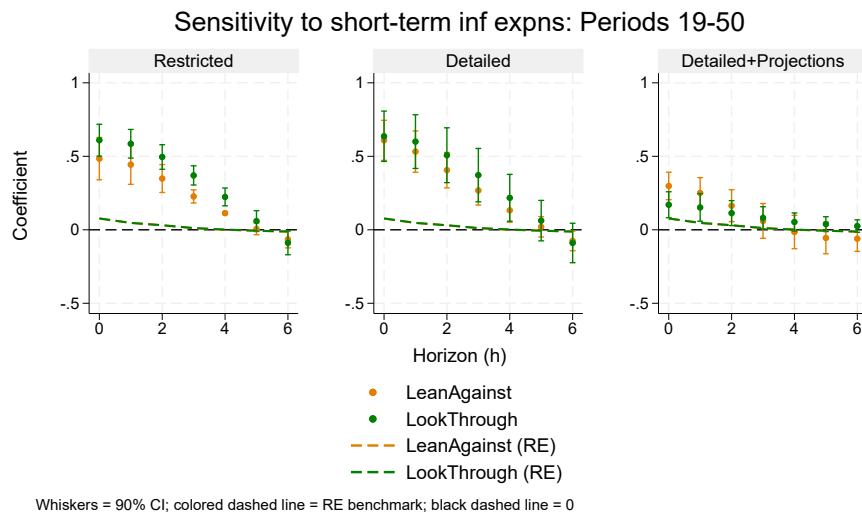
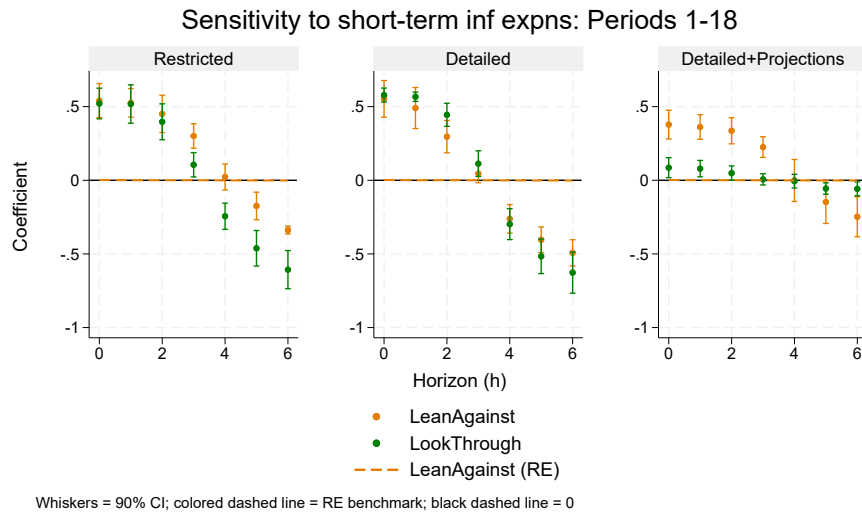
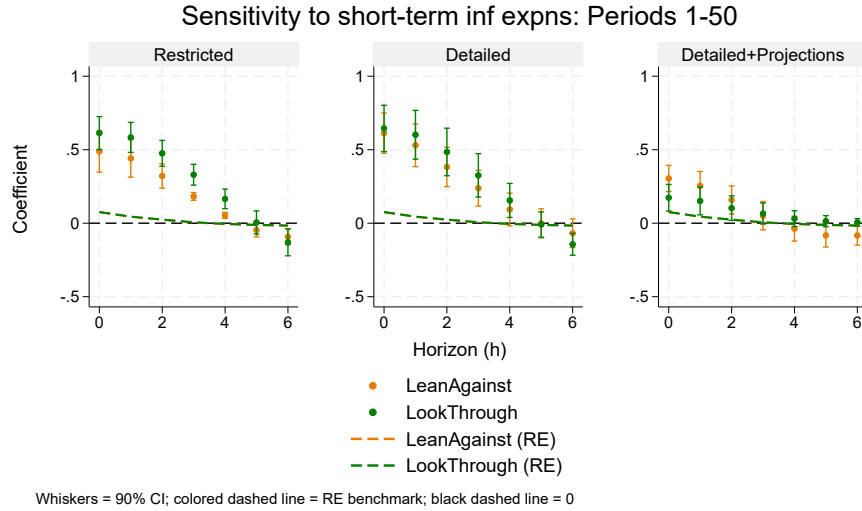


Figure 11: Results of the regressions of long-term inflation expectations on short-term inflation expectations.

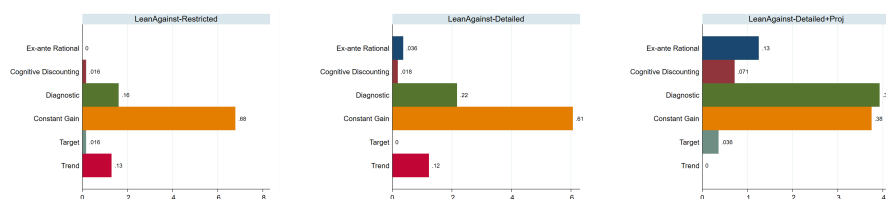
Notes: This figure presents the results of estimations of Equation 9 for long-term inflation expectations (6-period-ahead) on short-term expectations (1-period-ahead) for all periods, periods 1–18 and 19–20. Outlier sessions are excluded from the computations presented in this figure: treatment Lean-Against-Detailed Comm sessions 2 and 3, treatment Lean-Against-Restricted Comm sessions 2, 3, 5 and 9.

Table 1: Summary of experimental treatments

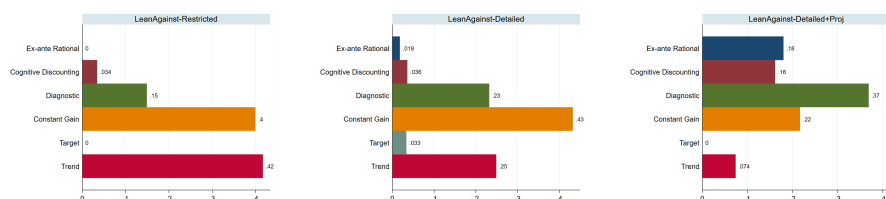
	Communication strategies		
Monetary policy	A. Restricted	B. Detailed	C. Detailed + Projections
1. Lean-Against $\phi_\pi = 2.2$, $t = 1 - 50$	T1: Lean-Against +Restricted Comm	T3: Lean-Against + Detailed Comm	T5: Lean-Against +Detailed Comm + Projections
2. Look-Through $\phi_\pi = 2.2$ for $t = 1 - 18$ $\phi_\pi = 1.2$ for $t = 19 - 50$	T2: Look-Through +Restricted Comm	T4: Look-Through + Detailed Comm	T6: Look-Through + Detailed Comm + Projections

Lean-Against Treatments

Low Persistence Shocks

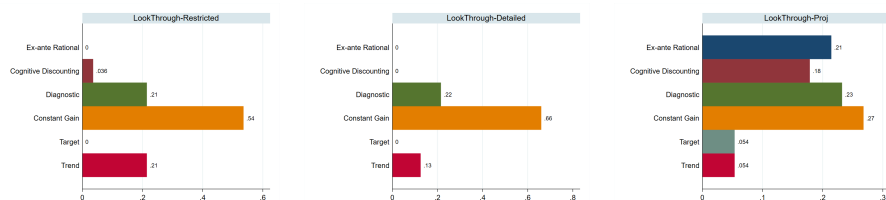


High Persistence Shocks

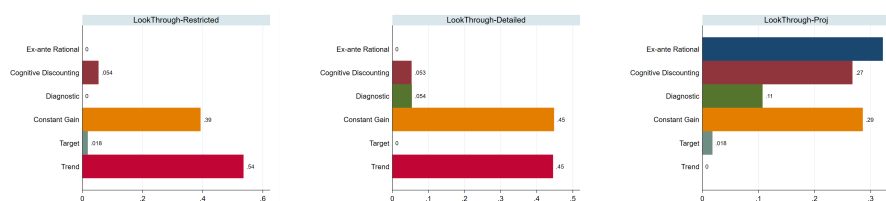


Look-Through Treatments

Low Persistence Shocks



High Persistence Shocks



Distribution of trend-extrapolation

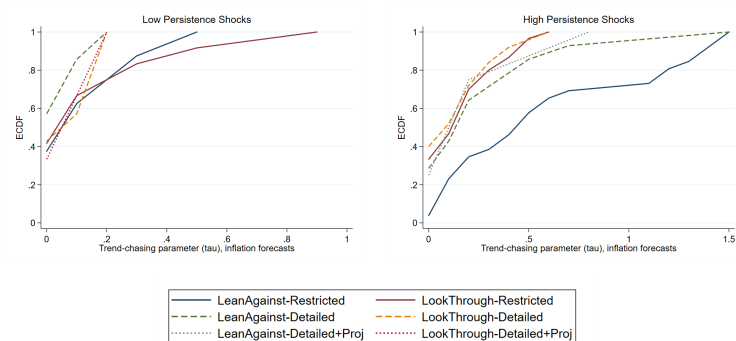
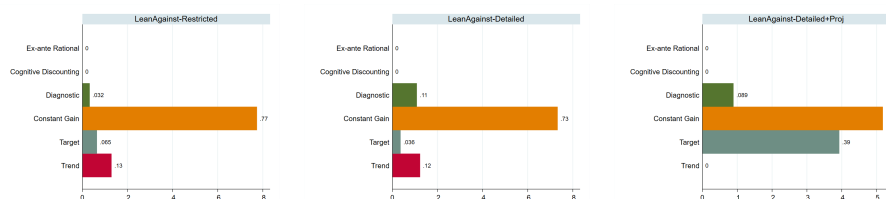


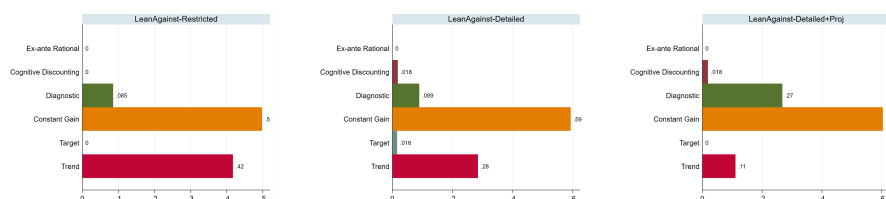
Figure 12: One-period-ahead inflation expectations

Lean-Against Treatments

Low Persistence Shocks

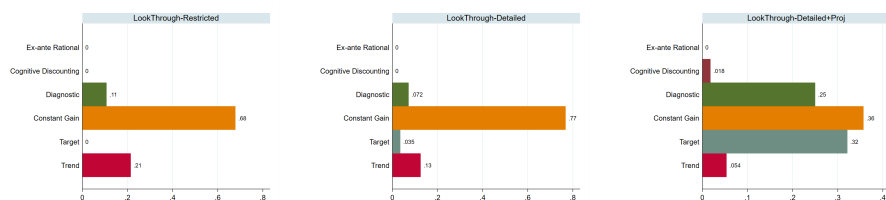


High Persistence Shocks

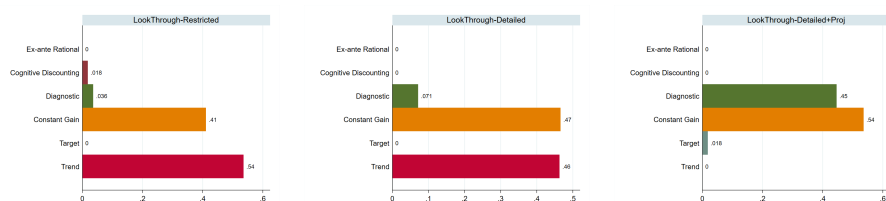


Look-Through Treatments

Low Persistence Shocks



High Persistence Shocks



Distribution of trend-extrapolation

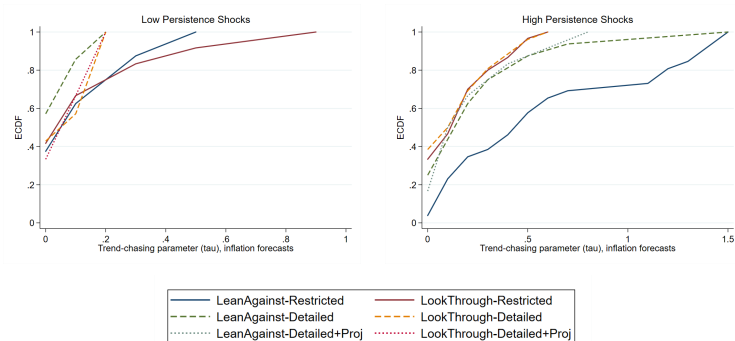
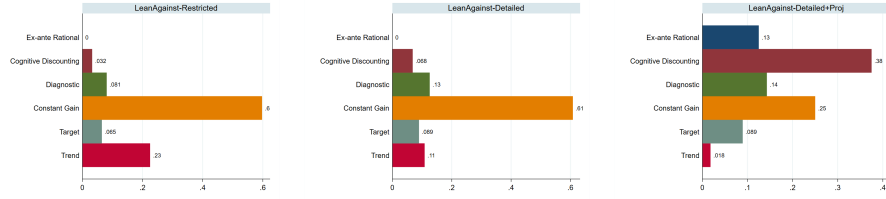


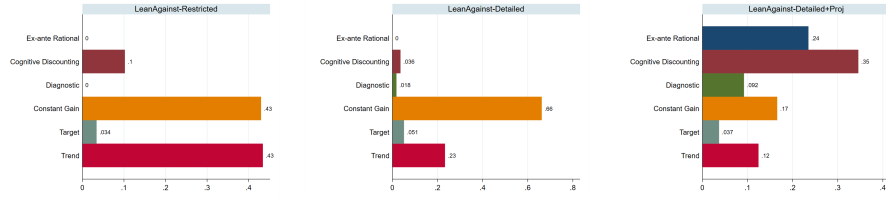
Figure 13: Six-period-ahead inflation expectations

Lean-Against Treatments

Low Persistence Shocks

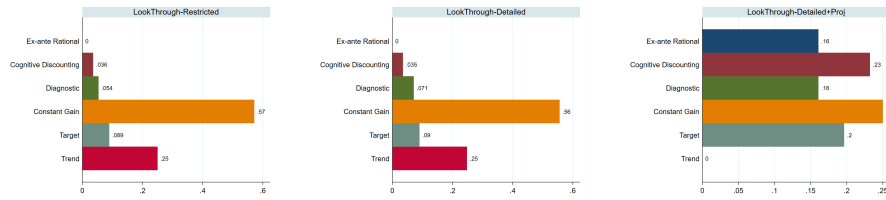


High Persistence Shocks

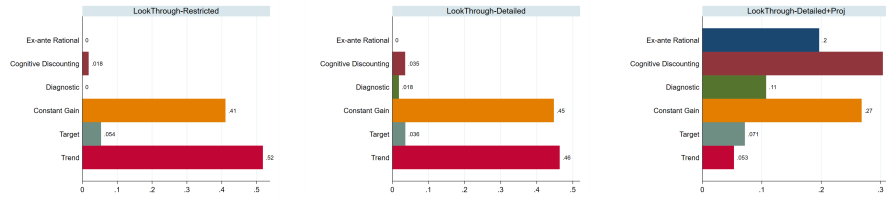


Look-Through Treatments

Low Persistence Shocks



High Persistence Shocks



Distribution of trend-extrapolation

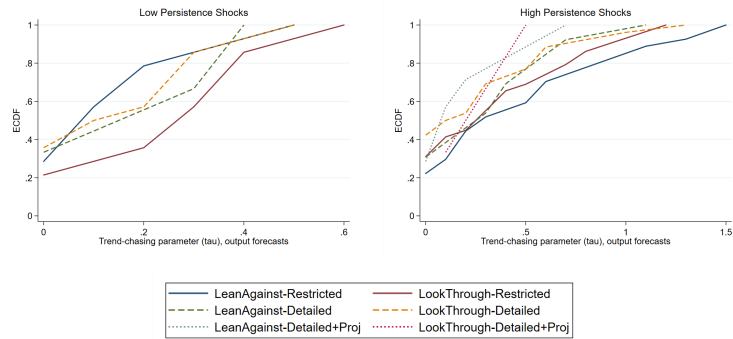


Figure 14: One-period-ahead output expectations

Table 2: Treatment parameterization

Monetary Policy Treatment		Communication Treatment	Sessions	Subjects	Low Persistence Phase (Periods 1-18)			High Persistence Phase (Periods 19-50)		
					ρ_u	ϕ_π	ϕ_x	ρ_u	ϕ_π	ϕ_x
Lean-Against	Lean-Against for $t = 1 - 50$	Restricted Comm.	9	7	0.3	2.2	0.3	0.6	2.2	0.3
		Detailed Comm.	8	7	0.3	2.2	0.3	0.6	2.2	0.3
		Extended Comm.	8	7	0.3	2.2	0.3	0.6	2.2	0.3
Look-Through	Lean-Against for $t = 1 - 18$ Look-Through for $t = 19 - 50$	Restricted Comm.	8	7	0.3	2.2	0.3	0.6	1.2	0.3
		Detailed Comm.	8	7	0.3	2.2	0.3	0.6	1.2	0.3
		Extended Comm.	8	7	0.3	2.2	0.3	0.6	1.2	0.3

Table 3: Summary statistics by treatment, excluding outlier sessions

Monetary policy Communication	Lean-Against, t=1-50			Look-Through t=19-50		
	Restricted	Detailed	Detailed + Projection	Restricted	Detailed	Detailed + Projection
<i>Panel A: Subperiods 1–18</i>						
Inflation	62.34 (107.26)	51.56 (101.24)	37.75 (86.36)	49.30 (106.62)	50.21 (101.82)	35.25 (95.32)
AR(1) Coefficient	0.459	0.419	0.426	0.452	0.449	0.417
Output	-83.42 (102.50)	-78.74 (100.80)	-51.72 (104.94)	-98.70 (97.88)	-96.36 (108.96)	-31.63 (66.02)
Output t+1 Expectation	-9.46 (167.77)	-37.59 (89.63)	-19.24 (115.56)	-60.37 (105.01)	-53.40 (121.38)	1.06 (75.90)
Median Inflation t+1 Expectation	53.51 (64.01)	42.00 (58.50)	23.97 (40.65)	42.48 (63.36)	42.67 (59.34)	18.52 (44.12)
AR(1) Coefficient	0.523	0.441	0.433	0.454	0.464	0.426
Median Inflation t+6 Expectation	43.49 (44.41)	34.84 (39.81)	13.94 (16.16)	36.62 (37.91)	36.73 (38.96)	5.30 (8.97)
AR(1) Coefficient	0.433	0.335	0.425	0.476	0.396	0.325
Absolute Inflation Forecast Error	87.24 (92.86)	81.43 (94.38)	65.59 (76.47)	92.20 (105.25)	85.47 (97.13)	69.84 (104.37)
Absolute Output Forecast Error	135.45 (181.99)	102.93 (106.45)	87.23 (139.89)	92.63 (77.08)	97.71 (92.50)	66.66 (78.27)
<i>Dispersion of Individual Responses (mean, SD across sessions)</i>						
Inflation t+1 Expectation Dispersion	58.11 (14.99)	58.24 (12.16)	40.07 (8.67)	66.60 (13.45)	57.34 (17.04)	38.73 (8.33)
Inflation t+6 Expectation Dispersion	62.86 (23.70)	64.51 (19.50)	36.82 (18.94)	67.86 (14.36)	59.78 (16.76)	24.23 (10.35)
Output t+1 Expectation Dispersion	101.71 (29.91)	86.01 (20.08)	61.04 (13.12)	90.92 (30.07)	98.32 (27.80)	50.95 (11.82)
Observations	645	797	1064	1064	1056	1064
<i>Panel B: Subperiods 19–50</i>						
Inflation	23.05 (152.36)	9.37 (151.49)	29.98 (107.77)	120.07 (181.02)	105.78 (191.03)	28.49 (108.41)
AR(1) Coefficient	0.873	0.896	0.812	0.918	0.901	0.795
Output	-174.17 (173.28)	-149.32 (158.15)	-65.74 (157.54)	-94.23 (98.82)	-97.93 (109.23)	-20.20 (66.28)
Output t+1 Expectation	-48.77 (572.37)	-103.87 (157.97)	3.98 (1004.54)	-70.37 (116.27)	-74.61 (273.07)	1.63 (85.18)
Median Inflation t+1 Expectation	38.16 (123.77)	21.92 (125.51)	30.12 (81.01)	126.92 (162.30)	113.10 (169.36)	22.94 (64.93)
AR(1) Coefficient	0.909	0.961	0.878	0.919	0.915	0.843
Median Inflation t+6 Expectation	52.66 (72.79)	24.19 (88.02)	16.96 (35.48)	101.75 (112.66)	93.60 (124.04)	10.16 (22.52)
AR(1) Coefficient	0.893	0.866	0.598	0.835	0.772	0.659
Absolute Inflation t+1 Forecast Error	97.12 (89.39)	86.75 (72.44)	155.08 (2987.62)	99.91 (111.22)	96.21 (77.47)	69.65 (57.44)
Absolute Output t+1 Forecast Error	184.25 (557.81)	104.78 (100.03)	124.10 (1010.01)	73.61 (75.67)	81.99 (260.87)	54.34 (67.53)
<i>Dispersion of Individual Responses (mean, SD across sessions)</i>						
Inflation t+1 Expectation Dispersion	95.81 (27.58)	99.05 (46.15)	75.56 (50.20)	93.61 (29.99)	86.96 (28.14)	67.87 (12.45)
Inflation t+6 Expectation Dispersion	118.59 (35.10)	121.88 (30.42)	81.43 (65.71)	168.34 (42.08)	140.77 (28.16)	47.32 (19.19)
Output t+1 Expectation Dispersion	184.72 (54.00)	140.47 (36.06)	105.27 (40.40)	88.60 (29.63)	86.39 (43.91)	57.79 (13.76)
Observations	1006	1300	1680	1736	1730	1735

Notes: Each cell reports the mean, with the standard deviation in parentheses. Absolute inflation and output forecast errors are computed as $abs(E_t\pi_{t+1} - \pi_{t+1})$ and $abs(E_tx_{t+1} - x_{t+1})$. AR(1) coefficient is a mean-group estimate: for each session in the treatment, the variable is regressed (with a constant) on its own first lag for each subperiod, and the reported value is the average of the session-level slope estimates. Dispersion rows report the mean and standard deviation, across sessions, of each session's average interquartile range (across subperiods in the panel) of individual subject responses within a subperiod. Outlier sessions are excluded from the computations presented in this table: treatment Lean-Against-Detailed Comm sessions 2 and 3, treatment Lean-Against-Restricted Comm sessions 2, 3, 5 and 9.

Table 4: Summary Statistics by Treatment

Communication	Lean-Against t=1-50			Look-Through t=19-50		
	Restricted	Detailed	Detailed + Projection	Restricted	Detailed	Detailed + Projection
<i>Panel A: Subperiods 1-18</i>						
Inflation	39.33 (86.56)	35.82 (74.81)	22.19 (56.28)	34.08 (86.19)	35.20 (81.20)	16.79 (53.28)
AR(1) Coefficient	0.225	0.195	0.120	0.234	0.226	0.070
Output	-94.15 (102.47)	-72.28 (87.03)	-32.11 (62.55)	-96.00 (99.33)	-92.30 (109.75)	-22.85 (53.85)
Output t+1 Expectation	-42.94 (146.48)	-38.86 (87.51)	-10.32 (102.44)	-61.47 (102.43)	-51.99 (119.78)	6.55 (68.55)
Median Inflation t+1 Expectation	43.11 (60.48)	36.55 (49.52)	16.83 (25.00)	38.09 (60.74)	38.37 (57.00)	9.97 (18.32)
AR(1) Coefficient	0.421	0.361	0.157	0.519	0.504	0.054
Median Inflation t+6 Expectation	39.41 (44.46)	32.40 (33.09)	12.25 (14.65)	35.58 (37.24)	34.96 (38.71)	3.85 (6.04)
AR(1) Coefficient	0.442	0.420	0.323	0.623	0.517	-0.045
Absolute Inflation t+1 Forecast Error	85.11 (92.92)	76.41 (87.65)	62.17 (75.33)	83.20 (94.53)	76.99 (88.84)	67.13 (104.67)
Absolute Output t+1 Forecast Error	110.20 (131.60)	89.20 (83.78)	78.53 (131.85)	88.48 (72.46)	94.64 (90.49)	64.04 (77.16)
<i>Dispersion of Individual Responses (mean, SD across sessions)</i>						
Inflation t+1 Expectation Dispersion	50.49 (11.64)	48.76 (8.81)	37.43 (8.22)	57.17 (11.55)	50.62 (13.97)	33.95 (7.52)
Inflation t+6 Expectation Dispersion	56.54 (16.20)	56.98 (12.53)	34.25 (18.34)	63.05 (14.95)	56.74 (15.39)	20.11 (9.50)
Output t+1 Expectation Dispersion	92.59 (23.07)	74.74 (14.27)	46.30 (11.02)	86.53 (31.59)	91.45 (25.47)	43.74 (9.16)
Observations	1115	995	1008	1008	1000	1008
<i>Panel B: Subperiods 19-50</i>						
Inflation	-4596.72 (25823.28)	-781.79 (5178.81)	39.27 (117.84)	126.43 (181.90)	112.44 (191.77)	39.09 (122.56)
AR(1) Coefficient	0.772	0.896	0.879	0.909	0.898	0.886
Output	-9331.20 (50919.99)	-1798.37 (10631.82)	-76.67 (166.85)	-95.89 (98.00)	-100.15 (108.68)	-25.50 (72.51)
Output t+1 Expectation	-6554.92 (37624.35)	-1324.44 (8222.49)	-1.95 (989.35)	-69.44 (117.29)	-74.73 (269.97)	-1.48 (88.22)
Median Inflation t+1 Expectation	-3375.18 (19080.01)	-556.62 (3765.41)	34.07 (83.10)	126.75 (160.06)	113.31 (166.89)	27.61 (70.33)
AR(1) Coefficient	0.763	0.892	0.851	0.898	0.895	0.870
Median Inflation t+6 Expectation	-3616.06 (21436.66)	-571.99 (4039.60)	17.84 (35.30)	100.29 (111.46)	92.81 (122.27)	10.82 (22.58)
AR(1) Coefficient	0.718	0.807	0.612	0.824	0.749	0.748
Absolute Inflation t+1 Forecast Error	2870.94 (17349.05)	464.38 (2628.04)	154.15 (2937.41)	104.89 (115.85)	100.76 (82.70)	71.23 (59.19)
Absolute Output t+1 Forecast Error	5679.25 (32231.54)	893.02 (5347.34)	128.09 (993.81)	76.64 (78.86)	84.27 (257.67)	56.26 (68.89)
<i>Dispersion of Individual Responses (mean, SD across sessions)</i>						
Inflation t+1 Expectation Dispersion	1360.63 (2513.97)	346.92 (691.01)	75.86 (48.66)	98.07 (30.06)	89.82 (28.94)	69.64 (12.84)
Inflation t+6 Expectation Dispersion	3628.71 (8692.41)	620.86 (1399.95)	81.44 (64.49)	167.91 (41.92)	139.96 (27.62)	48.92 (18.47)
Output t+1 Expectation Dispersion	2212.13 (3700.24)	526.34 (1094.23)	112.35 (40.71)	91.15 (29.55)	90.62 (44.13)	61.64 (14.39)
Observations	1880	1777	1736	1792	1786	1791

Notes: Each cell reports the mean, with the standard deviation in parentheses. Absolute inflation and output forecast errors are computed as $abs(E_t\pi_{t+1} - \pi_{t+1})$ and $abs(E_tx_{t+1} - x_{t+1})$. AR(1) coefficient is a mean-group estimate: for each session in the treatment, the variable is regressed (with a constant) on its own first lag for each subperiod, and the reported value is the average of the session-level slope estimates. Dispersion rows report the mean and standard deviation, across sessions, of each session's average interquartile range (across subperiods in the panel) of individual subject responses within a subperiod.

Table 5: Effects of Look-Through, by Communication Protocol

	Output Gap			Inflation		
	(1) Restricted	(2) Detailed	(3) Detailed+Proj	(4) Restricted	(5) Detailed	(6) Detailed+Proj
Look-Through	-23.511* (13.36)	-27.163 (16.95)	9.264*** (3.07)	-11.290 (8.88)	0.441 (3.05)	-5.403 (3.49)
POST	-110.813*** (26.85)	-88.272*** (9.06)	-44.558*** (6.42)	-10.386 (9.04)	-15.748 (14.51)	17.072** (7.66)
Look-Through X POST	110.926*** (27.70)	80.312*** (11.45)	41.898*** (7.12)	102.736*** (15.35)	94.172*** (20.55)	5.246 (7.90)
Constant	-72.489*** (10.17)	-65.170*** (9.89)	-32.111*** (2.69)	45.367*** (7.26)	34.073*** (2.28)	22.194*** (3.02)
Observations	642	697	792	642	697	792
χ^2	36.49	115.8	49.39	68.10	32.11	143.3

	Med. Expected Output Gap $t+1$			Med. Expected Inflation $t+1$			Med. Expected Inflation $t+6$		
	(1) Restricted	(2) Detailed	(3) Detailed+Proj	(4) Restricted	(5) Detailed	(6) Detailed+Proj	(7) Restricted	(8) Detailed	(9) Detailed+Proj
Look-Through	-29.869** (11.68)	-27.801 (19.26)	8.201** (3.34)	-8.143 (10.36)	3.811 (4.22)	-6.861* (3.78)	-4.611 (11.79)	3.819 (5.91)	-8.396*** (2.92)
POST	-95.067*** (30.21)	-68.787*** (13.86)	-28.419*** (7.07)	-2.368 (7.00)	-9.168 (14.13)	17.358** (7.81)	16.331*** (4.87)	-5.335 (14.47)	5.501 (3.92)
Look-Through X POST	81.749*** (30.85)	49.472*** (15.44)	19.713*** (7.60)	91.024*** (14.65)	84.832*** (20.44)	0.287 (8.08)	48.379*** (11.60)	63.677*** (20.49)	1.461 (4.48)
Constant	-41.894*** (8.35)	-40.220*** (12.73)	-10.000*** (2.55)	46.233*** (8.67)	34.172*** (2.32)	16.833*** (3.35)	40.194*** (10.83)	31.028*** (3.17)	12.250*** (2.64)
Observations	642	697	792	642	697	792	642	697	792
χ^2	43.12	51.42	29.82	58.39	33.69	77.87	49.36	16.89	27.43

	Output Gap Forecast Errors $t+1$			Expected Inflation Forecast Errors $t+1$			Expected Inflation Forecast $t+6$		
	(1) Restricted	(2) Detailed	(3) Detailed+Proj	(4) Restricted	(5) Detailed	(6) Detailed+Proj	(7) Restricted	(8) Detailed	(9) Detailed+Proj
Look-Through	-0.537 (9.58)	1.117 (5.21)	4.956 (3.79)	-30.036 (22.02)	5.635 (9.00)	-14.483*** (4.62)	49.425*** (15.55)	42.755*** (15.59)	2.303 (6.21)
POST	14.986*** (1.41)	14.263* (7.39)	91.637 (86.95)	73.587** (29.19)	23.478** (9.22)	49.305 (38.01)	44.635*** (10.43)	33.578*** (6.50)	41.507 (35.00)
Look-Through X POST	6.710* (3.60)	9.553 (8.57)	-87.547 (87.03)	-85.427*** (29.82)	-33.842*** (12.94)	-57.072 (38.37)	-8.272 (24.45)	-4.921 (15.11)	-42.702 (35.25)
Constant	83.736*** (7.56)	75.728*** (3.78)	62.170*** (1.96)	118.513*** (20.90)	88.997*** (4.39)	78.528*** (2.17)	126.266*** (11.18)	126.895*** (12.37)	93.379*** (5.66)
Observations	4360	4770	5430	4360	4770	5430	3911	4282	4870
χ^2	172.8	33.87	23.07	16.21	8.063	20.90	32.59	35.90	4.829

Table 6: Effects of Communication Protocols, by Monetary Policy Regime

	Output Gap		Inflation	
	(1)	(2)	(3)	(4)
Detailed	7.406 (13.99)	3.667 (16.00)	-11.302 (7.51)	0.437 (5.41)
DetailedProj	40.378*** (10.39)	73.153*** (8.62)	-23.172*** (7.77)	-17.285*** (5.32)
POST	-110.046*** (26.22)	0.113 (6.69)	-10.139 (8.92)	92.349*** (12.17)
Detailed X POST	21.632 (27.71)	-8.073 (9.61)	-5.597 (16.92)	-13.926 (18.80)
DetailedProj X POST	65.108** (27.02)	-2.774 (7.35)	27.279** (11.72)	-70.032*** (12.32)
Constant	-72.489*** (10.04)	-96.000*** (8.50)	45.367*** (7.17)	34.076*** (5.03)
Observations	931	1200	931	1200
χ^2	168.8	102.0	29.76	509.6

	Med. Expected Output Gap $t + 1$		Med. Expected Inflation $t + 1$		Med. Expected Inflation $t + 6$	
	(5)	(6)	(7)	(8)	(9)	(10)
Detailed	1.715 (15.05)	3.743 (16.33)	-12.098 (8.86)	-0.108 (6.56)	-9.173 (11.15)	-0.736 (6.70)
DetailedProj	31.894*** (8.63)	69.965*** (8.29)	-29.400*** (9.19)	-28.118*** (5.83)	-27.944** (11.01)	-31.729*** (4.73)
POST	-94.869*** (29.74)	-13.318** (6.11)	-1.671 (7.10)	88.656*** (12.63)	16.485*** (4.79)	64.710*** (10.33)
Detailed X POST	25.998 (32.75)	-5.997 (9.06)	-7.442 (15.68)	-12.992 (19.26)	-21.814 (15.11)	-6.367 (17.62)
DetailedProj X POST	66.316** (30.56)	4.613 (6.70)	19.018* (10.54)	-71.011*** (12.80)	-10.983* (6.18)	-57.747*** (10.55)
Constant	-41.894*** (8.25)	-71.764*** (8.01)	46.233*** (8.56)	38.090*** (5.57)	40.194*** (10.69)	35.583*** (4.57)
Observations	931	1200	931	1200	931	1200
χ^2	59.45	139.0	34.98	512.2	39.97	171.4

	Output Gap Forecast Errors $t + 1$		Expected Inflation Forecast Errors $t + 1$		Expected Inflation Forecast $t + 6$	
	(11)	(12)	(13)	(14)	(15)	(16)
Detailed	-7.994 (8.36)	-6.355 (6.76)	-29.518 (21.10)	6.124 (10.30)	0.635 (16.49)	-6.051 (14.16)
DetailedProj	-21.552*** (7.72)	-16.073** (6.60)	-39.982* (20.76)	-24.433*** (7.93)	-32.893*** (12.38)	-80.009*** (10.91)
POST	15.140*** (1.38)	21.695*** (3.25)	73.767** (29.11)	-11.840** (5.98)	44.653*** (10.13)	36.363* (21.70)
Detailed X POST	-0.899 (7.43)	2.121 (5.37)	-50.262* (30.51)	1.495 (10.76)	-11.067 (12.00)	-7.726 (25.53)
DetailedProj X POST	76.496 (86.52)	-17.604*** (4.91)	-24.574 (47.60)	4.070 (7.94)	-3.146 (36.27)	-37.552* (22.09)
Constant	83.722*** (7.47)	83.199*** (5.77)	118.510*** (20.65)	88.477*** (6.82)	126.272*** (11.03)	175.690*** (10.61)
Observations	6356	8204	6356	8204	5697	7366
χ^2	143.2	118.4	79.72	26.66	70.65	127.7

Table 7: Models of expectations as functions of exogenous or historical data

M1	Rational	$E_{i,t}g_{t+1} = f(i_{t-1}, r_{t-1}^n, \epsilon_t)$
		$E_{i,t}g_{t+6} = f(i_{t-1}, r_{t-1}^n, \epsilon_t)$
M2	Cognitive Discounting	$E_{i,t}g_{t+1} = \alpha f(i_{t-1}, r_{t-1}^n, \epsilon_t)$
		$E_{i,t}g_{t+6} = \alpha f(i_{t-1}, r_{t-1}^n, \epsilon_t)$
M3	Constant Gain	$E_{i,t}g_{t+1} = E_{i,t-1}g_t - \gamma(E_{i,t-2}g_{t-1} - g_{t-1})$
		$E_{i,t}g_{t+6} = E_{i,t-1}g_{t+5} - \gamma(E_{i,t-7}g_{t-1} - g_{t-1})$
M4	Steady State/Target	$E_{i,t}g_{t+1} = 0$
		$E_{i,t}g_{t+6} = 0$
M5	Trend Chasing	$E_{i,t}g_{t+1} = g_{t-1} + \tau(g_{t-1} - g_{t-2})$
		$E_{i,t}g_{t+6} = g_{t-1} + \tau(g_{t-1} - g_{t-2})$
M6	Naive if $\tau = 0$	$E_{i,t}g_{t+1} = g_{t-1}$
	in trend chasing	$E_{i,t}g_{t+6} = g_{t-1}$

g denotes one-period ahead inflation and output gap forecasts and six-period ahead inflation forecasts.

$\alpha \in [0.1, 0.9]$, γ and $\tau \in [0, 1.5]$ in increments of 0.1.

Appendix

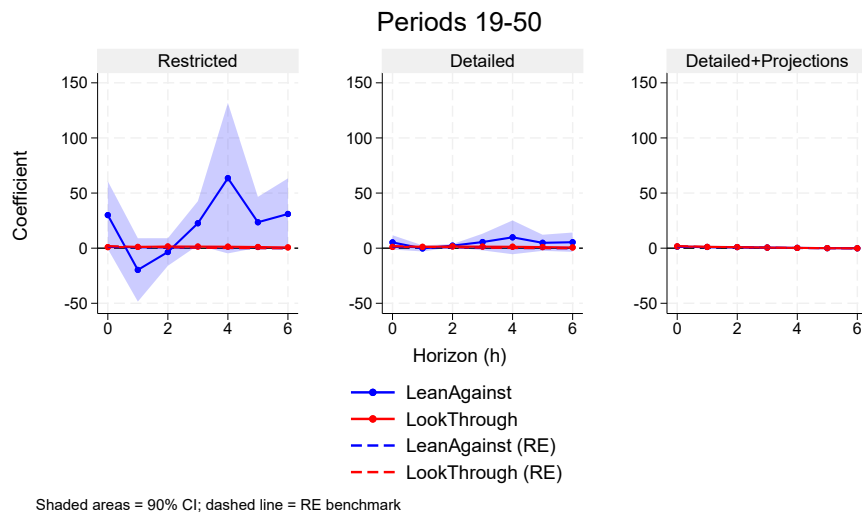
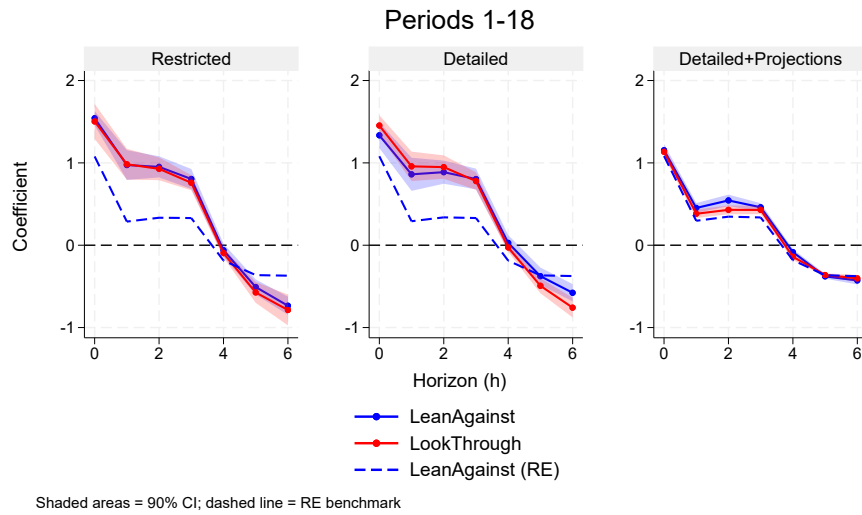
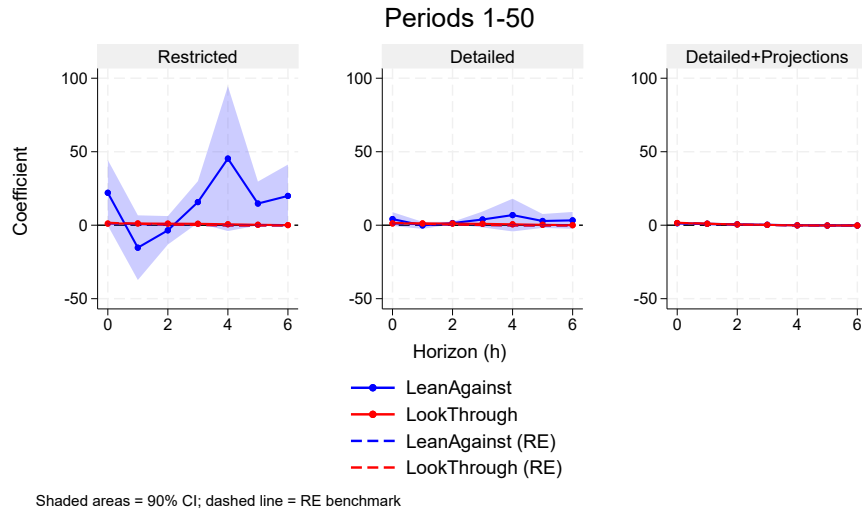


Figure A1: Results of the local projections estimations for **inflation**.

Notes: This figure presents the results of estimations of Equation 8 for inflation for all periods, periods 1–18 and 19–20, all sessions.

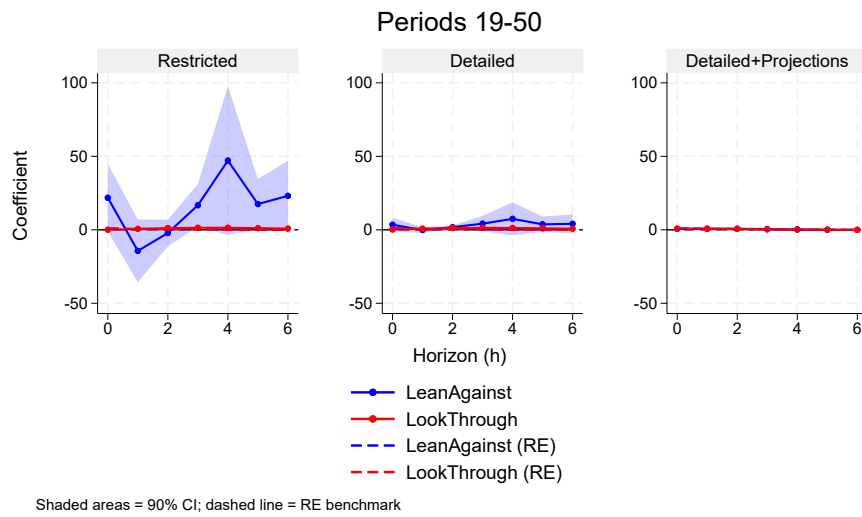
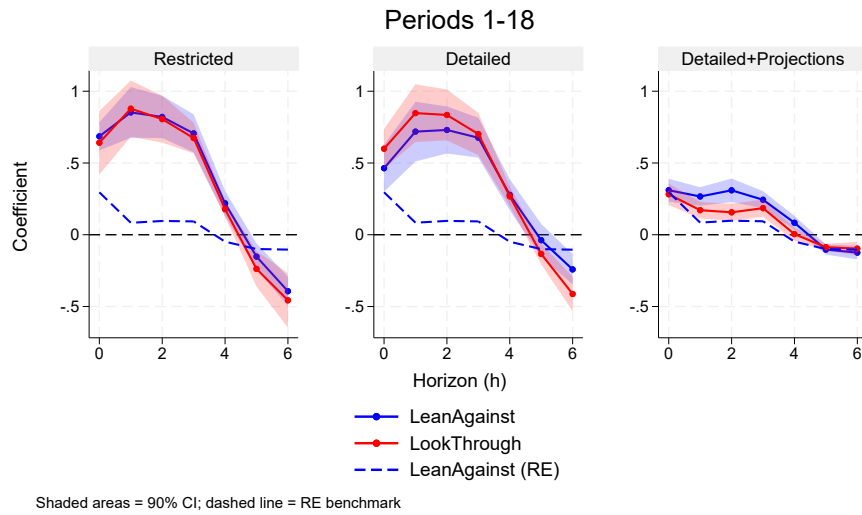
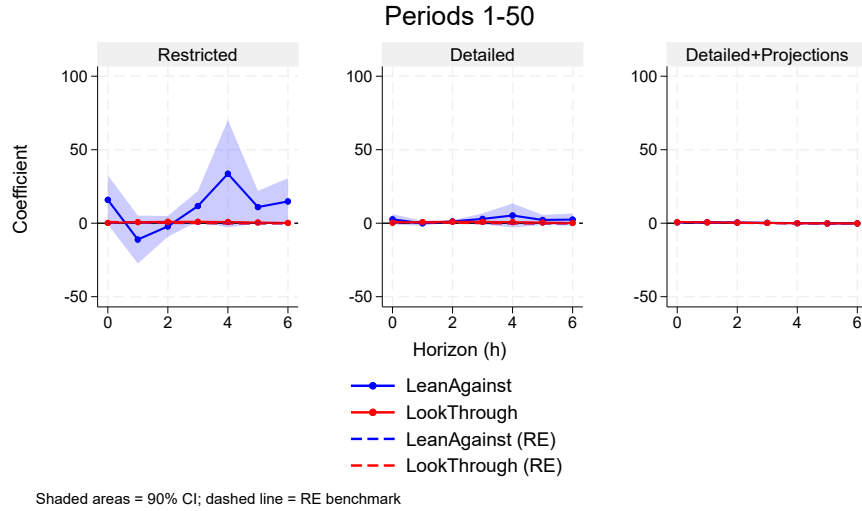


Figure A2: Results of the local projections estimations for short-term inflation expectations.
Notes: This figure presents the results of estimations of Equation 8 for short-term inflation expectations (1-period-ahead) for all periods, periods 1–18 and 19–20, all sessions.

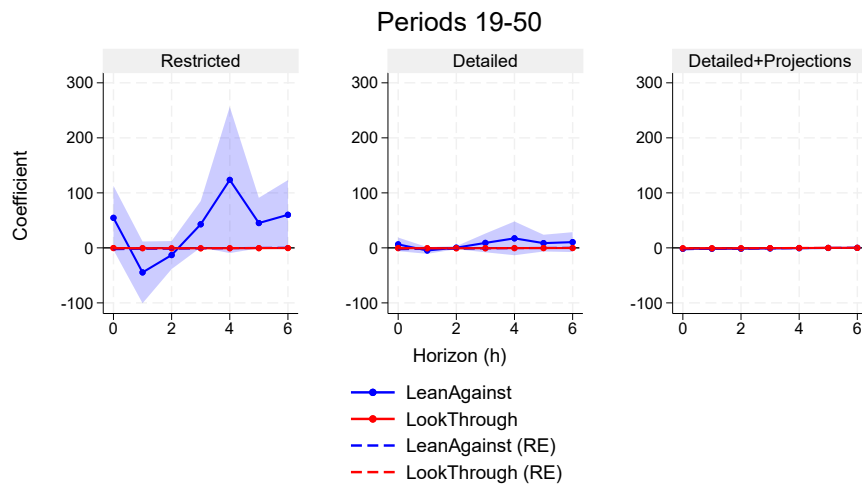
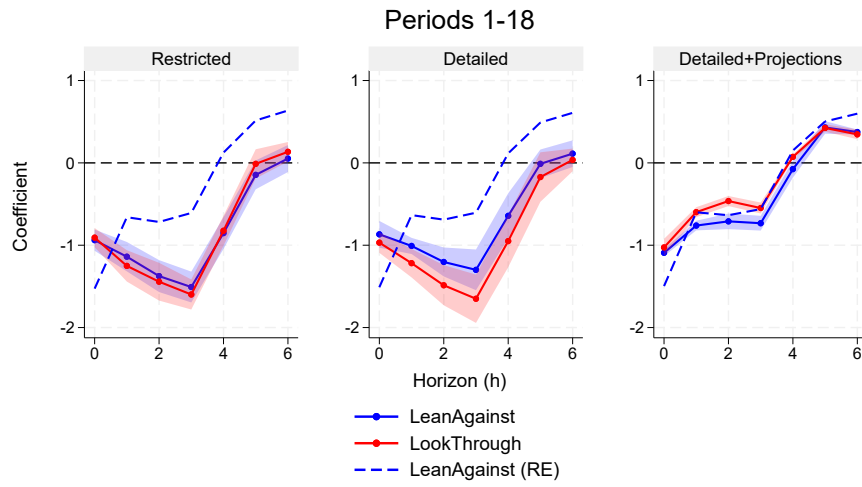
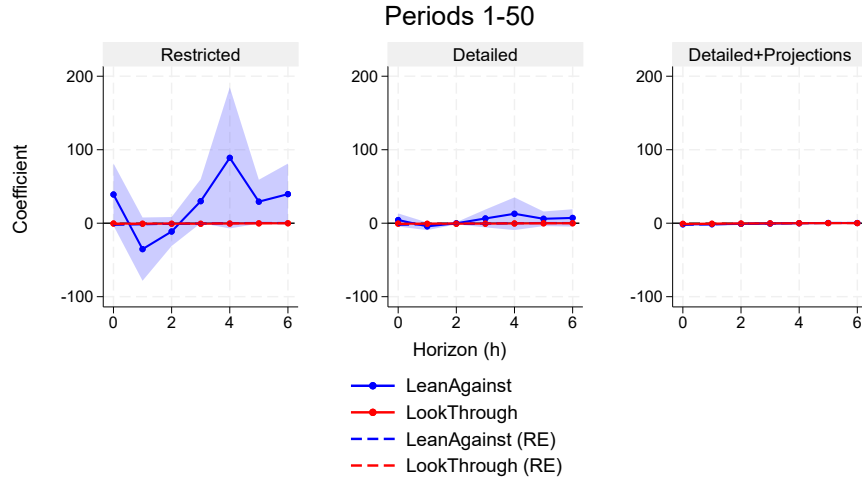


Figure A3: Results of the local projections estimations for **output**.

Notes: This figure presents the results of estimations of Equation 8 for output for all periods, periods 1–18 and 19–20, all sessions.

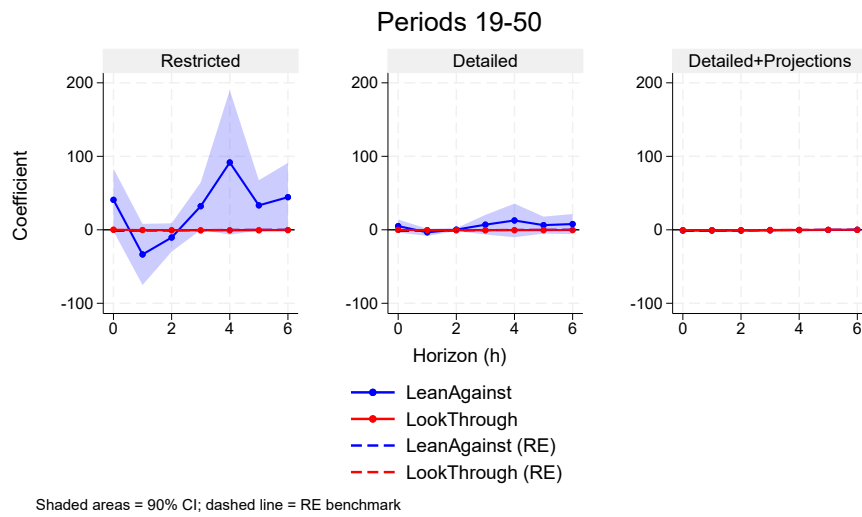
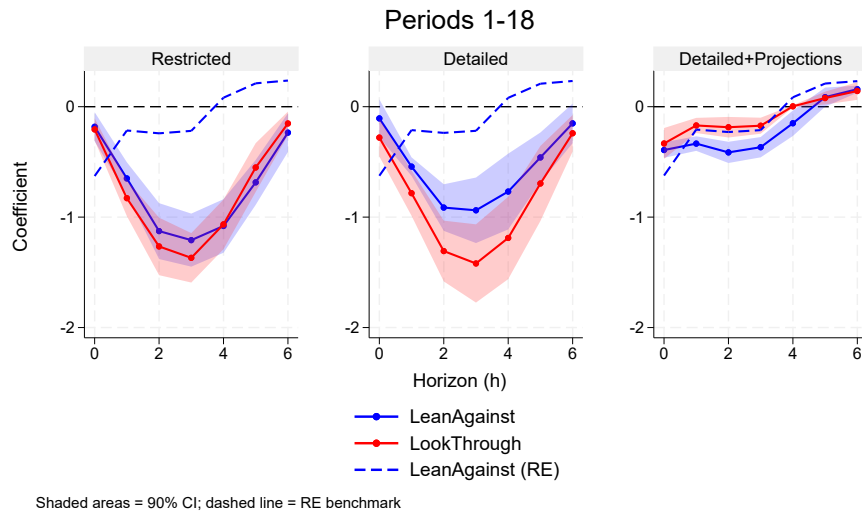
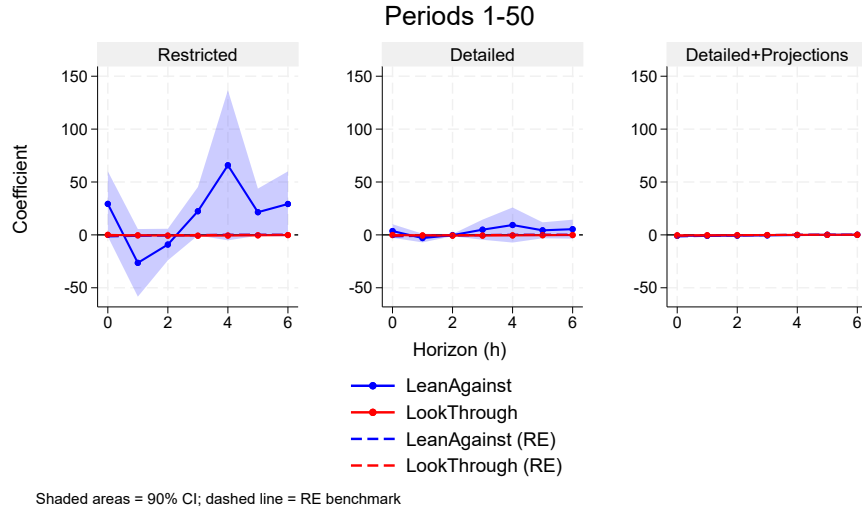


Figure A4: Results of the local projections estimations for 1-period-ahead output expectations.
Notes: This figure presents the results of estimations of Equation 8 for 1-period-ahead output expectations for all periods, periods 1–18 and 19–20, all sessions.

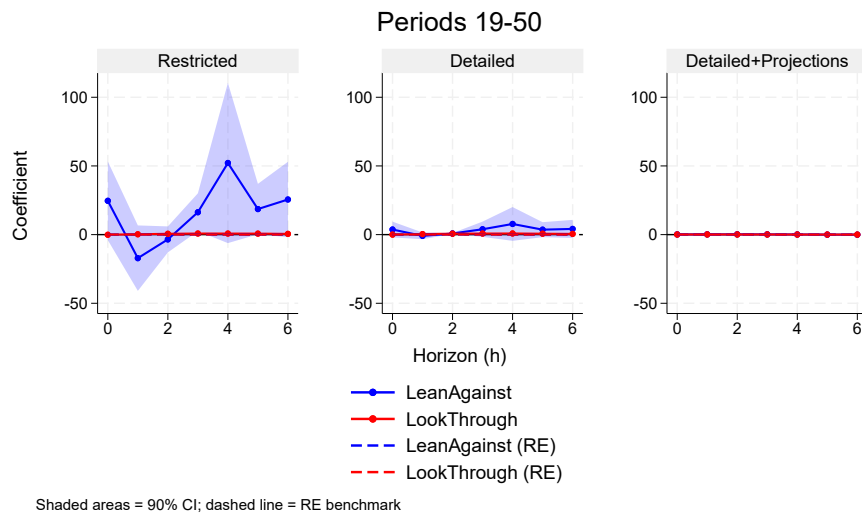
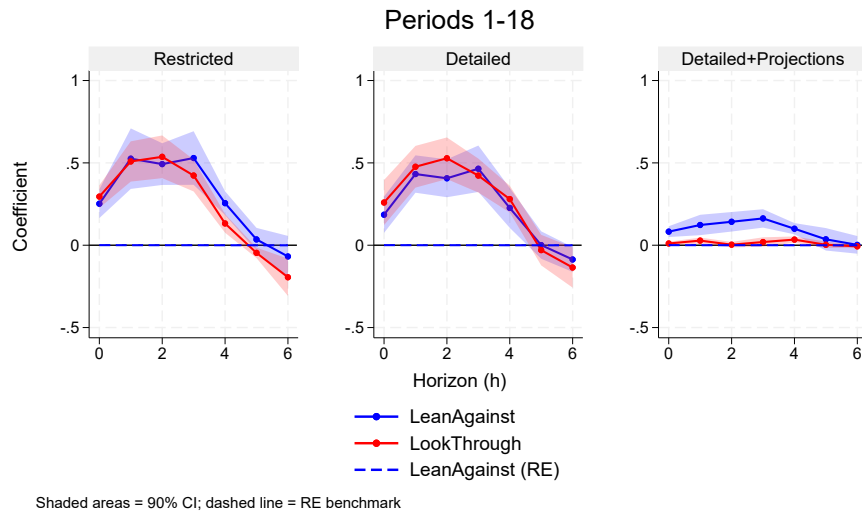
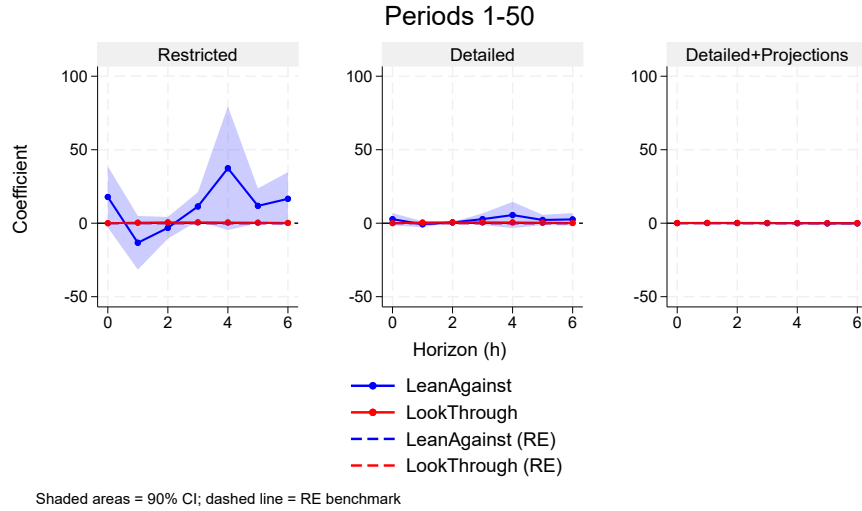


Figure A5: Results of the local projections estimations for long-term inflation expectations.
Notes: This figure presents the results of estimations of Equation 8 for long-term inflation expectations (6-period-ahead) for all periods, periods 1-18 and 19-20, all sessions.

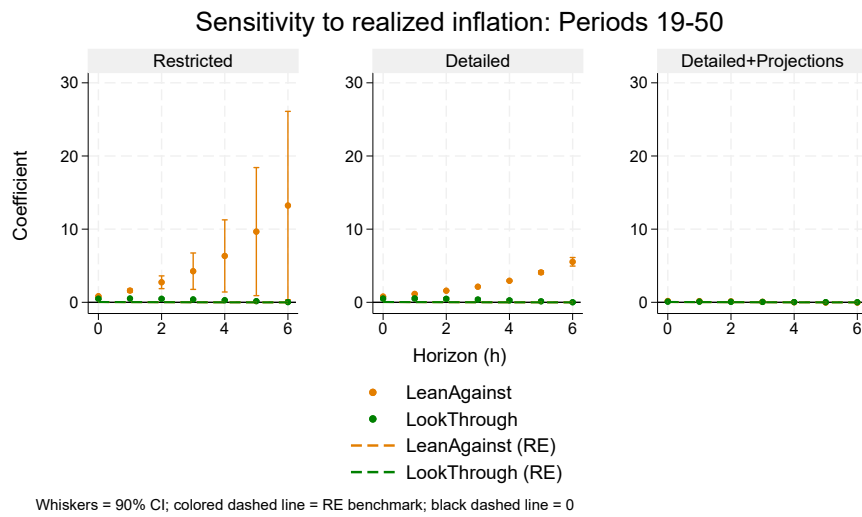
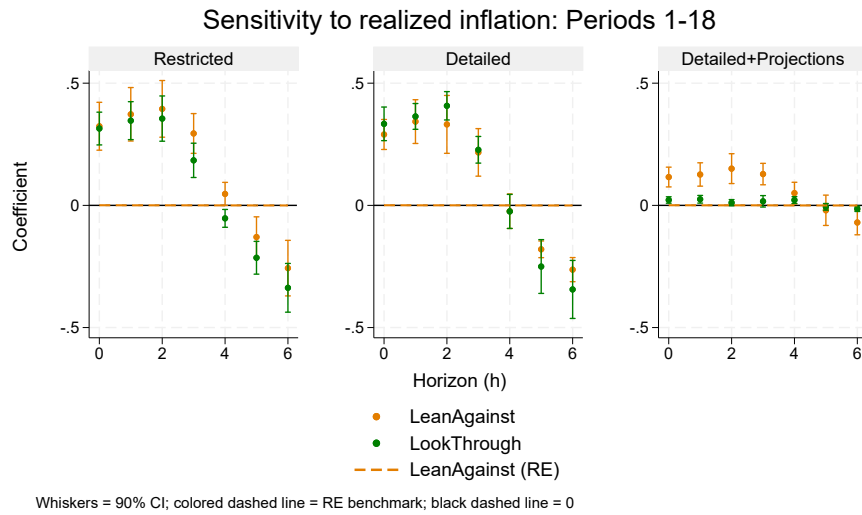
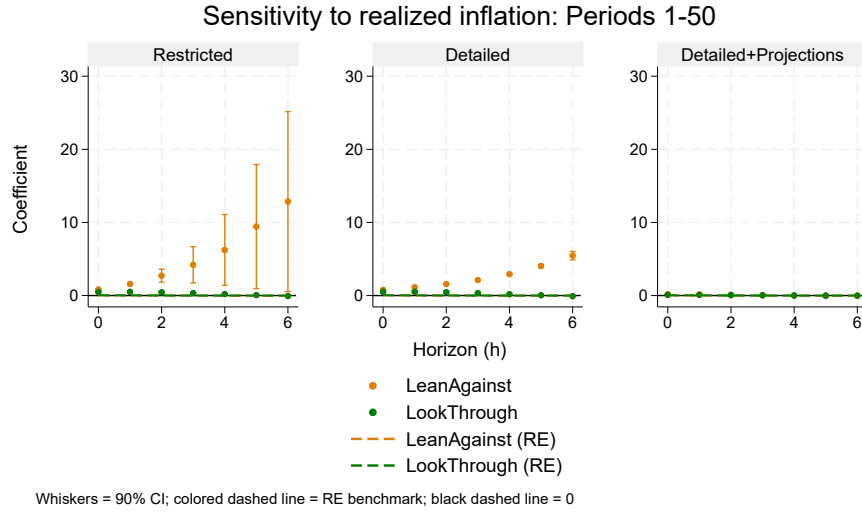


Figure A6: Results of regressions of long-term inflation expectations on realized inflation
Notes: This figure presents the results of estimations of [Equation 9](#) for long-term inflation expectations (6-period-ahead) on realized inflation for all periods, periods 1–18 and 19–20, all sessions.

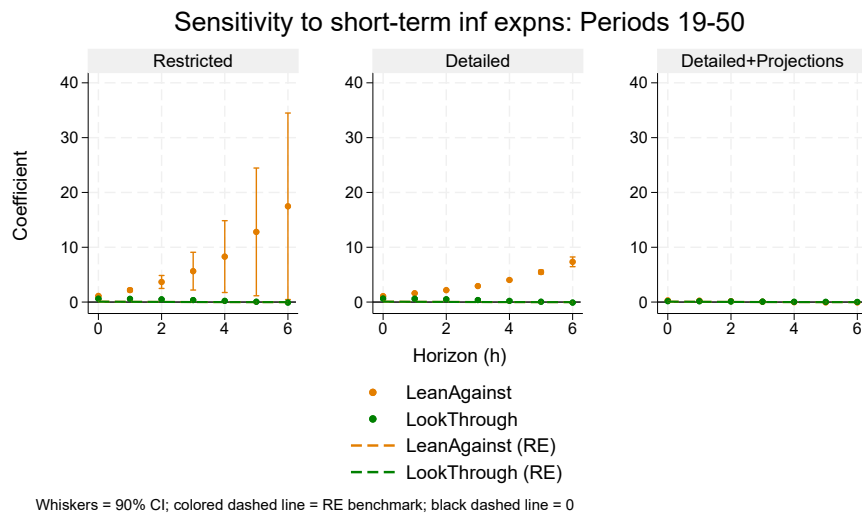
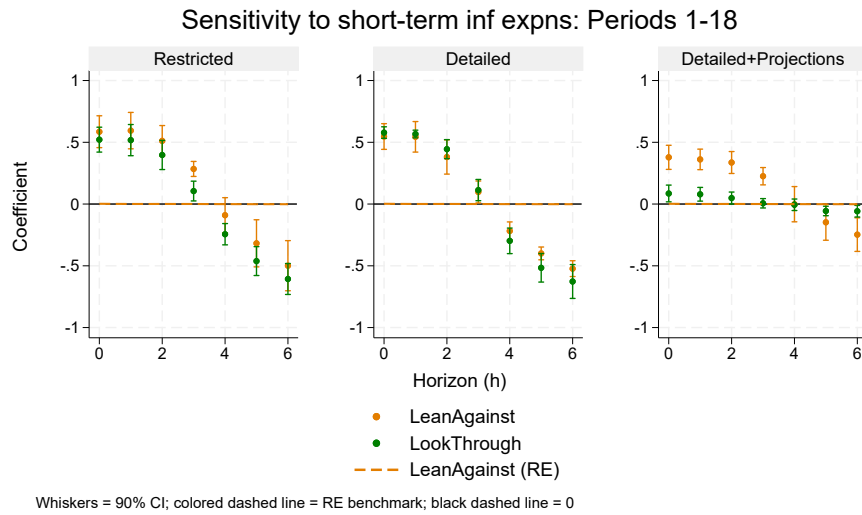
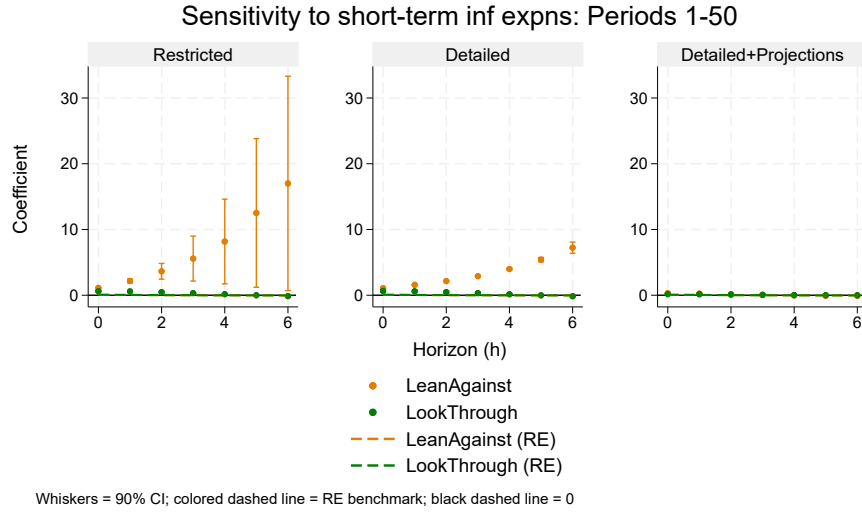


Figure A7: Results of the regressions of long-term inflation expectations on short-term inflation expectations.

Notes: This figure presents the results of estimations of Equation 9 for long-term inflation expectations (6-period-ahead) on short-term expectations (1-period-ahead) for all periods, periods 1–18 and 19–20, all sessions .