Inflation Expectations and Firms' Decisions in High Inflation: Evidence from a Randomized Control Trial*

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Abstract

We conducted a survey of Turkish firms, using randomized treatments to provide varied information about inflation in a high-inflation environment. By matching the survey data with administrative firm-level data on employment, sales, credit, and foreign exchange transactions, we explore the impact of exogenous variations in inflation expectations on firms' behavior, borrowing decisions, and expectations. Our findings are summarized in seven facts: (i) information treatments are effective at generating exogenous variation in inflation expectations, even when inflation is high; (ii) the pass-through to firms' own price, wage, and cost expectations is strong, reaching up to 60%; (iii) firms adopt a supply-side interpretation of inflation—lower inflation expectations make them more optimistic; (iv) firms with lower inflation expectations decrease credit demand by approximately 3% for a 1 percentage point decline in expected inflation, shifting from long-term to short-term loans to avoid higher perceived costs; (v) they dollarize their liabilities by increasing their share of FX-denominated debt; (vi) they de-dollarize their assets by decreasing their net foreign currency holdings; and (vii) they increase their real activity, leading to higher employment and sales, and lower inventory.

Keywords: Expectations, Firms, RCT, High inflation, Macroeconomics

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1 Introduction

Inflation expectations are central to macroeconomic dynamics, fundamentally shaping outcomes through their influence on price-setting, wage negotiations, investment, financing decisions, and more.[1] Consequently, understanding the determinants of firms' inflation expectations and their subsequent impact on business behavior is a critical area of economic research. Despite growing attention, empirical evidence remains limited, particularly regarding how these mechanisms operate in the context of high and volatile inflation environments.

This paper is the first to apply a randomized control trial (RCT) framework to investigate how inflation expectations affect firms' pricing, wage-setting, financing, and employment decisions in a high-inflation setting, where the annual inflation rate exceeds 70%. To this end, our study uniquely leverages a combination of a firm-level RCT, rich administrative datasets, and an extreme inflationary environment to provide clean causal evidence on how exogenous changes in inflation expectations influence firms' real and financial decision-making, summarized in seven key facts:

Fact 1 *In a high-inflation setting, information treatments effectively generate exogenous variation in inflation expectations if the setting is also volatile.*

Fact 2 *The pass-through from inflation expectations to firms' own wage, cost, and price expectations is nearly 60%.*

Fact 3 *Lower inflation expectations make firms more optimistic about both their own future performance and the aggregate economic outlook.*

Fact 4 *Firms expecting lower inflation decrease their demand for credit and strategically shift its structure, reducing long-term financing while seeking more short-term debt.*

Fact 5 *Firms with lower inflation expectations dollarize their liabilities by decreasing borrowing in the local currency and increasing foreign currency debt.*

Fact 6 *Firms with lower inflation expectations de-dollarize their assets by decreasing their hold-*

[1] Inflation expectations serve as a critical channel in various economic frameworks, including the Phillips Curve, the Euler equation, Tobin's Q, asset pricing models, and the Taylor Rule.

ings of foreign currency.

Fact 7 *Firms with lower inflation expectations increase employment and sales activity while decreasing inventory holdings in subsequent months.*

This setting offers a unique advantage for causal identification. Studying firm behavior in this environment is particularly insightful because high and volatile inflation leads to a breakdown of the nominal anchor and results in highly dispersed and unanchored firm expectations, a state rarely observed or experimentally manipulated in low-inflation economies. In such a high-stakes environment, expectations are not marginal factors but are central to firms' planning and decision-making. As firms become more informed about the role of inflation through experience, their inflation expectations become inherently more relevant, emerging as one of the primary drivers of their decision-making processes. Consequently, changes in these expectations translate into observable behavioral responses. From the firms' perspective, deviating far from accurate inflation expectations can be costly, as a high and volatile inflation environment makes it much easier to stray from optimal choices. The cost of inattention and the cost of being wrong about future inflation are substantial (Pfäuti, 2023; Bracha and Tang, 2024), compelling firms to pay close attention and making them more likely to act decisively upon changes in their expectations. Moreover, the wide dispersion of expectations allows our information treatments to induce substantial exogenous variation, enabling clean identification of the effects of expectation shifts on a range of firm outcomes.

Yet, while firms exhibit heightened attention and typically know past inflation well, the volatility of underlying trend inflation is so high that external information can still meaningfully shift their dispersed beliefs. This suggests that information rigidities operate differently under volatile inflation—even when attention is elevated—which allows us to capture the real effects of changes in expectations. Our experimental setting therefore enables us to address two core questions: How does firm behavior change when the nominal anchor is lost and expectations become unanchored? And how are the transmission channels linking expectations to real and financial decisions altered under high inflation?

Our empirical design leverages the linkage of five distinct administrative datasets with a firm-level RCT survey to form a comprehensive analytical dataset. We first utilize data from a survey that we designed and conducted as an RCT in May 2024, using the CBRT's firm base. This survey sampled over 1,300 representative manufacturing firms, with information treatments providing forecasts from market professionals and central bank projections, delivered to treated groups. Within the same survey, we subsequently collected firms' economic beliefs, including inflation expectations and quantitative forecasts of their future performance. This design allows us to evaluate how firms respond to publicly available information and assess their attentiveness to various economic news in a high-inflation environment.

To capture firms' dynamic responses to the treatment, we match this survey with the Business Tendency Survey (BTS), which has been collecting monthly data from 1,800 to 2,000 representative manufacturing firms since 2009.[2] Linking responses from the RCT with BTS data enables us to track the evolution of firms' beliefs about past, present, and future economic conditions.[3] More importantly, we match firms' survey responses with administrative datasets, including balance sheet data, foreign currency purchase records, social security records, and credit registry data. This matching enables us to assess the causal impact of exogenous changes in firms' inflation expectations—induced by our treatments—on various firm-level outcomes such as foreign currency purchases, loan amounts and borrowing costs, as well as decisions regarding wages, employment, sales, and purchases.[4] Put simply, we can track post-treatment effects on realized outcomes in the subsequent months, in addition to analyzing firm beliefs and self-reports in the BTS. Finally, the panel structure of the administrative data allows us to examine whether treatment effects persist or fade in the following months.

The study highlights seven key findings. First, we find that information treatments based on

[2]The survey covers administratively registered firms in the Turkish manufacturing sector, with broad sectoral representation and a high response rate, minimizing attrition bias. The RCT survey was administered to the same sample pool as the BTS, achieving a response rate of 65%.

[3]Our survey is quantitatively focused, unlike many surveys that use qualitative questions, which makes it challenging to extract precise expectations (Bachmann et al. (2013); Bachmann and Elstner (2015)).

[4]Matching RCT survey settings with administrative datasets to analyze dynamic impacts is exceptionally rare (Ropele et al., 2022; Delgado et al., 2024); this paper is among the few that accomplish this.

publicly available data significantly influence firms' inflation expectations. When firms' expectations are substantially higher than professional forecasts and central bank projections, highlighting these forecasts leads to a downward adjustment in firms' expectations, on average. Although firms are already informed about past inflation, they still learn from the public information—such as professional forecasts and the CBRT's inflation projections—when it is provided to them. Second, we find that firms with lower inflation, induced by the information treatments, expectations tend to decrease their expectations regarding wages, unit costs, and their own prices, with pass-through rates of 0.58, 0.53, and 0.55, respectively. We show, using a model, that pass-through rates can be high when changes in inflation expectations are persistent, which is more likely in high-inflation environments. Third, reduced (or heightened) inflation expectations also make firms more optimistic (or pessimistic) about not only aggregate economic activity but also their own firm outlook, with a stronger effect observed for the former. Fourth, we show that firms adjust their borrowing based on their perceived real cost of debt. Firms with lowered inflation expectations perceive current borrowing costs as too high and consequently reduce their credit demand: a 1 percentage point (pp) decrease in inflation expectations leads to a 3 percent decrease in credit usage. This adjustment is driven by a strategic shift away from long-term debt—which firms now avoid to prevent locking in unfavorable rates for an extended period—and toward short-term financing. This reflects a "wait-for-cheaper-credit" motive, where firms anticipating lower inflation scale back long-term borrowing and shift their debt composition from long- to short-term, underscoring the refinancing channel documented by Ropele et al. (2022). Conversely, firms with heightened inflation expectations act to lock in what they perceive as favorable rates, increasing their credit demand and shifting their liability structure from short-term to long-term debt. Fifth, we find that shifts in inflation expectations alter the currency composition of firms' debt. Firms that lower their inflation expectations, and thus anticipate less currency depreciation, perceive foreign currency (FX) debt as less risky and relatively cheaper. Consequently, they shift their borrowing away from the local currency and towards FX-denominated debt. This results in a higher share of FX liabilities, providing evidence of liability-side dollarization. Sixth, we observe a corre-

sponding shift on the asset side of firms' balance sheets. Firms that lower their inflation expectations also reduce their outlook for currency depreciation, which weakens their motive to hold foreign currency (FX) as a hedge. Consequently, these firms significantly decrease their FX purchases while increasing their FX sales compared to the control group. This net reduction in their FX holdings provides evidence of asset-side de-dollarization. Finally, these expectation shifts translate into significant real economic decisions. Firms that revise their inflation expectations downward increase both their sales and employment in the months following the treatment. Simultaneously, the diminished inflation outlook weakens their speculative motive to hoard goods. Consequently, they reduce their inventory holdings, choosing to meet rising sales by drawing down existing stock rather than making new purchases.

Overall, this information RCT framework enables us to explore the causal relationship between inflation expectations and firms' economic decisions in a high-inflation environment, providing valuable insights into how expectations shape business behavior in volatile economic conditions. Section-2 provides the literature review. Section-3 outlines the data and provides key descriptive statistics. Section-4 discusses the impact of the treatments on firms' inflation expectations. Section-5 examines how the exogenous variation in inflation expectations influences firms' decisions related to sales, employment, wages, credit usage, and foreign currency purchases, as well as their expectations on wages, sales, and unit costs. Finally, Section-7 concludes.

2 Literature Review

Inflation expectations are assumed to play a crucial role in shaping firms' decisions and outlooks in macroeconomic models. However, estimating their causal impact is challenging due to endogeneity issues. Particularly on the firms' side, the lack of high-quality firm-level surveys limits the studies analyzing the impact of expectations on firm behavior.[5] Gennaioli et al. (2016) document

[5]For studies on the household side, see (Bachmann et al., 2015; Ichiue and Nishiguchi, 2015; D'Acunto et al., 2016; Binder, 2017b; Duca-Radu et al., 2021; Dräger and Nghiem, 2021; Binder and Brunet, 2022; Coibion et al., 2023; Burke and Ozdagli, 2023).

that CFOs' expectations of earnings growth significantly explain both firms' investment plans and their realized investments. Boneva et al. (2016) study the impact of inflation expectations on firms' price-setting behavior. Coibion et al. (2018) show that firms update their beliefs in line with Bayesian models and significantly revise their expectations upon receiving publicly available information on inflation. These expectation shifts, induced by treatments, can lead to substantial changes in firm decisions. For example, Coibion et al. (2020b) demonstrate that firms with higher inflation expectations tend to implement more aggressive price increases, increase credit demand, while simultaneously decreasing employment and investment. Kumar et al. (2023) show that firms with heightened uncertainty about macroeconomic expectations decrease prices, employment, sales, and investment. Ropele et al. (2022) document that heightened inflation expectations have a significant impact on firms' borrowing decisions, leading them to shift their financing from long-term loans with lower interest rates to short-term loans with higher rates. Recently, the literature has explored the pass-through rates of inflation expectations to firms' own selling prices and wages. Rosolia (2024) and Coibion et al. (2018) estimate the pass-through of inflation expectations to firms' own prices to be close to zero, whereas Baumann et al. (2024) estimate it at 30%. Andrade et al. (2022) document the impact of aggregate inflation expectations on firms' own selling prices dynamically and the pass-through rate is estimated around 25%. Savignac et al. (2024) found that firms' inflation expectations do not significantly affect their wage expectations in an RCT setting. Additionally, Hajdini et al. (2023), Buchheim et al. (2024), Baumann et al. (2024) and Abberger et al. (2024) show that the pass-through of inflation expectations to wage expectations is moderate, less than 0.30%.[6]

However, most of these studies focus on stable inflation environments, where firms' decision-making processes are relatively more predictable. In contrast, firm behavior in high-inflation environments can change significantly. For example, Alvarez et al. (2019) explore how firms in Ar-

[6]There are also studies on the effectiveness of policy communication tools. Binder (2017a); Enders et al. (2019); Coibion et al. (2022); Ehrmann et al. (2023); Di Pace et al. (2024) provide evidence that communicating key elements of monetary policy can enhance its perceived credibility and help anchor expectations. For a comprehensive literature review, see D'Acunto et al. (2024).

gentina—a country with a history of elevated inflation—adjust their prices more frequently and become less responsive to monetary policy shocks under such conditions. Yet, evidence from high and volatile inflation settings remains limited.

In this regard, our contribution is threefold. First, we document that our information treatments—based on inflation forecasts from professionals and the Central Bank—are effective in generating exogenous variation in firms' inflation expectations, even in a high-inflation environment (Fact 1). Although attentiveness is generally high under such conditions, there remains room for learning, as firms cannot follow all inflation-related news in a volatile environment. Information treatments can still shift firms' expectations meaningfully, despite their relatively strong prior beliefs. Second, although pass-through rates are generally estimated to be relatively low in the literature, we find that pass-through can become very high when the nominal anchor is lost and firms perceive deviations from the inflation target as persistent (Fact 2). Specifically, we document that the pass-through from aggregate inflation expectations to wage and price expectations is substantial, reaching up to 60%, in sharp contrast to evidence from low-inflation environments. Third, and most importantly, we analyze the causal impact of inflation expectations on firms' decisions regarding sales, employment, inventory holdings, borrowing, and foreign currency holdings, as well as on their forward-looking beliefs, to evaluate the role of inflation expectations in firms' decision-making processes (Fact 3-7). We show that an exogenous decline in inflation expectations leads firms to reduce credit demand but increase sales and employment. This credit contraction is driven by a strategic shift away from long-term debt, as firms seek to avoid locking in what they now perceive as unfavorable real interest rates. While these findings partly align with evidence from low-inflation economies (Coibion et al., 2020b; Ropele et al., 2022), important distinctions in magnitudes and mechanisms emerge due to the markedly different economic context, which we elaborate on in subsequent sections.

3 Data Description and Conducting the Survey

3.1 Survey Design

We design our RCT survey in line with the Business Tendency Survey (BTS), which is a unique firm-level data, administered by the CBRT. The BTS collects data through monthly surveys of a representative sample of 1,800 to 2,200 manufacturing firms. The regular survey employs a "check-box" format, prompting firms to provide their general business expectations, as well as their projections and actual outcomes for various firm-specific metrics, including capacity utilization, orders, and inventories. Firms indicate whether each economic indicator has increased, decreased, or remained unchanged over the past three months and share their expectations for these indicators over the next three months. Additionally, the survey requests firms to provide their annual inflation expectations in numerical terms for the end of the upcoming twelve-month period. The dataset covers the period from January 2009 to September 2024. Although the BTS does not collect detailed demographic information about respondents, a recent survey conducted by the CBRT indicates that 80% of the respondents are managers or C-suite executives, suggesting that the vast majority are decision-makers within their firms.[7]

Following the implementation of the May 2024 BTS, we initiated our randomized control trial (RCT) with these firms just two days later, allowing a seven-day window for survey completion while emphasizing that participation was voluntary. As a result, we received responses from 1,200 firms (a response rate of nearly 65%) and the descriptive statistics are documented in Table-1. The survey's administration by the CBRT ensures its reliability, and the sample is representative of the entire manufacturing sector. Respondents are divided into five random sub-groups, each receiving different information treatments, alongside a control group that does not receive any additional information. The treatments consist of publicly available information, focusing on

[7] To the extent that some respondents are not decision-makers, this would bias our estimates toward finding no effect on decisions. Since we do find strong effects on decisions, we interpret this as consistent with the notion that respondents are, by and large, decision-makers. In fact, our findings likely represent a lower bound, as some respondents are presumably non-decision-makers.

forecasts from professionals and the CBRT. Detailed descriptions of the information treatments are provided in the next section. The primary objective of this approach is to generate exogenous variation in inflation expectations, enabling us to analyze the causal impact of these expectations on relevant economic outcomes. Additionally, examining the relative effectiveness of various types of information allows for insights into the efficacy of different communication strategies.

Following the information treatments, firms are asked to provide their distribution of inflation expectations for the next 12 months. Respondents indicate their best estimate, as well as optimistic and pessimistic forecasts. Specifically, all respondents—regardless of treatment status—are presented with the following prompt:

"What is your expectation for the Consumer Price Index (CPI) inflation rate at the end of the next 12 months? In other words, how much do you think the general level of consumer prices will increase over the next 12 months? Additionally, what are your lowest (most optimistic) and highest (most pessimistic) inflation rate estimates at the end of the next 12 months?"
At the end of the next 12 months, my annual (CPI) inflation estimate is: ..... %
My lowest (most optimistic) inflation (CPI) estimate is: ..... %
My highest (most pessimistic) inflation (CPI) estimate is: ..... %

These questions allow us to capture both the central expectation and the perceived range of uncertainty. Using these point forecasts, we can fit a triangular distribution to quantify the post-treatment mean[8] and uncertainty regarding inflation (Kumar et al., 2023; Coibion et al., 2024). Furthermore, post-treatment questions are designed to assess how the information treatments influenced respondents' expectations and plans, relative to the untreated control group. Additionally, since the dataset can be matched with various administrative datasets, we are able to incorporate realized outcome variables—such as credit usage, borrowing costs, foreign currency purchases, employment, and sales—as post-treatment variables in the months following the treatment.

[8]Throughout the paper, we use expected inflation as the mean of the triangular distribution, which is calculated as the average of the three point forecasts provided. These distributional questions allow us to gauge the uncertainty surrounding their forecasts. However, since these distributional questions are not included in the BTS data, we cannot observe firms' priors concerning the second moment of inflation expectations.

The mean inflation expectation is 58%, while the real (domestic) sale growth expectation is 4.4% (see Table-1). Moreover, expectations are highly dispersed: the 10th percentile expects 28.9% inflation, while the 90th percentile expects 89.4% inflation for the next 12 months. Similarly, the 10th–90th percentile range for sales growth expectations spans from -15.6% to 36.0%. Additionally, this wide dispersion in future expectations contrasts with firms' strong knowledge of the past. Their perceived inflation rate for the past 12 months averaged 75.8%, very close to the official rate of 75%, indicating that they are well-informed about past inflation.[9] Overall, firms' inflation expectations (58%) are significantly higher than those of professional forecasters (35%) but considerably lower than households' expectations (78%), as illustrated in Figure-1. The firms' expectations are not only dispersed regarding aggregate inflation but regarding their own sales growth expectations as well. This high degree of cross-sectional variation in the data allows for a clean identification of the information treatment effects.

Before introducing the RCT setting, we first analyze the determinants of inflation expectations. Specifically, we regress prior inflation expectations on a range of firm characteristics, including size, sales, credit usage, exporter status, sector, and the firm's location. We then assess the extent to which each factor contributes to the variation in inflation expectations. Table-C1 shows that firm size, age, leverage ratio, and future economic expectations are significant predictors of inflation expectations. On average, larger, older, and exporting firms tend to have lower inflation expectations. Higher leverage is associated with higher inflation expectations, possibly indicating that firms with elevated expectations are more likely to increase debt, anticipating that inflation will erode the real value of their liabilities.[10] Moreover, inflation expectations are tightly linked to firms' other beliefs. We find a strong negative correlation with optimism: firms that are more op-

[9]This finding contrasts with evidence from low-inflation environments, where firm managers tend to be less knowledgeable about recent aggregate inflation and monetary policy, as shown in Candia et al. (2024). In high-inflation settings, however, increased attention to inflation may lead to greater awareness, as suggested by Korenok et al. (2022) and Pfauti (2024). See Pfajfar and Roberts (2022) to see how attention changes the elasticity of inflation to economic conditions.

[10]Recently, Schnorpfeil et al. (2023) documented that in Germany, fewer than 10% of households are aware of the debt-erosion effects of inflation. Firms, however, may possess greater awareness of inflation's impacts, as they tend to have more accurate expectations and perceptions compared to households. Furthermore, in high-inflation environments, firms are likely to be better informed about the potential consequences of inflation.

timistic about both the aggregate economy and their own future production volume consistently report lower inflation expectations. This suggests that firms may hold a "supply-side" view, where strong economic activity is associated with easing price pressures, a relationship we later explore causally. Lastly, inflation expectations are positively correlated with nominal variables, such as firms' expectations for their own sales prices and unit costs. Substantial sectoral heterogeneity in producer price inflation, driven by differences in production costs, is also partially reflected in these beliefs. While a firm's sector or location should not, in theory, affect its aggregate inflation forecast, local differences in costs may influence expectations, a finding aligning with Andrade et al. (2022).

3.2 Balance Sheet, Credit Registry, Employment, Sales and Foreign Exchange Transactions Data

We utilize a variety of administrative datasets in addition to the BTS and survey data. Our analysis is based on five primary data sources: individual firm-level monthly flow credit data from the Banking Regulation and Supervision Agency, monthly credit stock data from the Credit Registry of the Turkish Banking Association, annual firm balance sheets, income statements, and monthly sales data from the Revenue Administration, and monthly employment and wage data from the Social Security Institution.[11] Additionally, we incorporate firm-level data on monthly foreign exchange (FX) market transactions collected from banks operating in Türkiye, which provides high-frequency data on all FX transactions carried out by non-financial firms. Our analysis integrates these diverse datasets, sourced from various organizations, into a comprehensive dataset. This integration is achieved using unique firm IDs, ensuring that the datasets are exclusive to individual firms and consistent across all sources.

[11]The data provided by these institutions are processed by the CBRT using unique firm IDs to ensure consistency across datasets. Moreover, firm balance sheets, income statements, and employment data can be accessed at the Entrepreneur Information System (EIS) laboratory of the Ministry of Industry and Technology. It is important to note that the EIS includes data for the entire population of firms in Türkiye, excluding those in the public and financial sectors. The dataset does not contain information on unregistered firms.

The Balance Sheet and Income Statement data provided by the Revenue Administration covers the entire population of Turkish firms, including both incorporated and unlimited entities operating in Türkiye.[12] This comprehensive dataset includes annual balance sheets and income statements, prepared in accordance with Turkey's Tax Procedure Law, spanning from 2009 to the most recent available year, 2023. It allows for detailed observation of sub-items related to assets and liabilities, as well as key indicators such as firm leverage and liquidity, shedding light on firms' financial constraints. Additionally, the Revenue Administration supplies the data on firm-to-firm transactions, specifically for invoice values exceeding 5000 TL, which is approximately 150 dollars in 2024. This dataset provides granular information on transactions between domestic firms. By aggregating the detailed monthly sales data from firm-to-firm transactions, we calculate each firm's total monthly sales.

The second and third data sources, collectively referred to as the Credit Registry, are compiled from two distinct government entities. Firm-bank-level monthly credit stock data is provided by the Turkish Banking Association, offering detailed insights into firm-bank relationships, including loan maturity and currency denomination. In addition, firm-level flow credit data is obtained from the Credit Registry of the Banking Regulation and Supervision Agency. This dataset includes firm-bank-level monthly flow credit amounts, interest rates, maturity, and currency denomination. Non-performing loans (NPLs) and non-cash loans are excluded, and the analysis is restricted to active cash loans only. Lastly, for the analysis of credit flows, we focus on loans denominated in Turkish Lira. For the analysis of outstanding credit stocks, however, our data includes credits of all currency denominations.

As the fourth data source, the Social Security Institution (SSI) in Türkiye provides monthly matched employer-employee data, offering detailed wage information for individuals across firms adhering to the balance sheet principle. Average wages are calculated by dividing the total monthly

[12] Incorporated firms are required to submit balance sheets and income statements in accordance with Turkey's Tax Procedure Law. Unlimited firms, which operate under the personal income tax regime, are only required to submit these reports if they exceed a specified size threshold. The annual control variables derived from the balance sheet and income statement are based on data from the year 2023.

wages paid by firms by the number of their employees. Monthly employment figures are derived by counting the total number of individuals employed by each firm during a specific month.

Lastly, data on spot foreign exchange (FX) market transactions is sourced from banks operating in Türkiye. This dataset offers high-frequency (daily) information on all spot FX buying and selling transactions conducted by firms. Starting in June 2024, firms in Türkiye are required to exchange 30% of their export revenues with the central bank, down from the previous rate of 40%. For this analysis, export revenue sales have been excluded, focusing instead on the effects of firms' inflation expectations on other net currency purchases and sales. Additionally, firms with foreign currency loans but insufficient foreign currency positions may engage in currency purchases. To account for this, the analysis includes firms' foreign currency loans over the past year and their foreign currency positions as control variables when examining currency purchases and sales.

4 Effects of Information Treatments on Expectations

The information RCT is designed to influence firms' inflation expectations by delivering targeted, publicly available data. To control for firms' past behavior and belief heterogeneity, the survey first asks about past changes in aggregate prices, main product prices, and salaries. The question regarding product prices, for example, was phrased as follows: "By what percentage have your main product prices changed over the past 12 months?". These baseline questions are collected before the treatments are administered.

Each group in the sample is then randomly given a publicly available piece of data regarding professional forecasts of inflation, the CBRT's forecasts for 2024 and 2025, or the CBRT's inflation target.[13] Each group receives one of the following statements:

Treatment 1: *"According to the results of the Market Participants Survey for May 2024: The participants' expectation for the Consumer Price Index (CPI) 12 months from now is 33.21%. In*

[13]Each group consists of approximately 250 observations. The selection of firms into treatment is random. See Table-B1 for further details. Questions about price and wage changes over the past 12 months are asked before the treatment, while all other questions are asked post-treatment.

other words, professionals expect general prices to increase by 33.21% over the next 12 months."

Treatment 2: *"According to the Central Bank of the Republic of Turkey's Inflation Report for May 2024: The Central Bank predicts that annual inflation will be 38% by the end of 2024. In other words, the Central Bank expects general prices to increase by 38% in 2024."*

Treatment 3: *"According to the Central Bank of the Republic of Turkey's Inflation Report for May 2024: The Central Bank predicts that annual inflation will be 14% by the end of 2025. In other words, the Central Bank expects general prices to increase by 14% in 2025."*

Treatment 4: *"Within the framework of the inflation targeting regime, the Central Bank's inflation target is 5%. In other words, the Central Bank aims for the general price level to rise by approximately 5% annually in the medium term."*

Following the information treatment (while the control group receives no such statement), respondents are asked a series of post-treatment questions. These include their quantitative expectations for aggregate inflation, producer price inflation, salary growth, unit cost growth, employment changes, price growth for the firm's main product, and both domestic and export sales. For example, firms are asked: "Compared to today, in what direction and by what percentage do you expect the prices of your main products to change over the next 12 months?" (see Appendix-A for the questionnaire). These post-treatment responses allow us to measure the immediate impact of the information treatments on firm expectations. We then track actual firm outcomes—such as borrowing, hiring, and FX transactions—using matched administrative data in the months following the survey.

We begin by assessing the average impact of the information treatments on firms' inflation expectations. To do so, we regress the change in individual inflation expectations across each wave, measured as the difference from their pre-treatment expectations (derived from firms' responses in the BTS survey conducted just a few days prior to our RCT survey), on treatment dummies, along with firm-level controls and sector-province fixed effects. Table-2 shows that the largest average treatment effect occurs for the group provided with professional forecasts. On average, this group reports inflation expectations that are 6 percentage points (pp) lower after the treatment,

with producer price inflation nearly 2 pp lower compared to the control group. Given the magnitude of these observed differences and the standard deviations within groups, the experiment has sufficient statistical power to detect treatment effects of this size (Figure-B3). Figure-2 shows the distribution of inflation expectations before and after the treatment for each group, while Figure-3 visually illustrates the level effect and change in slope, where the fitted lines for the treatment groups fall below that of the control group. The average treatment effect remains significant when analyzing post-treatment expectations one month after the RCT survey but disappears after two months. All types of information work similarly on average, including the information on the official inflation target of 5%—a stark contrast to the realized annual inflation of 75%.[14] The persistence of the impact is similar across groups, with the effect diminishing after two months.[15] This suggests that in a high-inflation environment, while information RCTs can successfully generate exogenous changes in expectations, the effects fade within two months—similar to the findings in Coibion et al. (2020b), although in their case, inflation was low and around 2%.

After documenting the average treatment effect, the key to assessing how inflation expectations affect firm-level variables in this setting is identifying variation in inflation expectations at the firm level. The RCT design includes information treatments that provide firms with data on professional inflation forecasts, the official inflation target, and the CBRT's projections, thereby creating exogenous variation in expectations. To evaluate the impact of these information treatments on expectations, we estimate the following model, following Kumar et al. (2023):

$$\text{Post}_i^{mean} = \alpha_0 + \beta_0 \text{Prior}_i + \sum_{j=1}^{4} \beta_j \times I\{i \in \text{Treat } j\} \times \text{Prior}_i + \sum_{j=1}^{4} \alpha_j \times I\{i \in \text{Treat } j\} + \gamma X_i + \varepsilon_i, \quad (1)$$

where i denotes the respondent in the firm, Prior_i denotes the firm's prior (pre-treatment) in-

[14] The CBRT officially adopted inflation targeting as the primary monetary policy framework in 2006. Trust in the central bank might be an important mediating factor in how firms respond to information treatments; however, due to the sensitivity of the issue, this information was not collected.

[15] The effects on decision-making persist for a longer period, extending up to four months. This persistence may stem from firms adjusting their plans in response to the treatment and continuing to follow those plans even as they gradually forget the specific information that initially influenced their decisions. While the constant influx of new data in a high-inflation environment may cause the initial informational impact to fade, the resulting behavioral changes are more durable due to firms' commitment to a chosen course of action.

flation expectation, and Post_i^{mean} refers to the firm's posterior (post-treatment) inflation expectation, calculated as the average of its minimum, midpoint, and maximum expectations. The indicator variable $I\{i \in \text{Treat } j\}$ takes the value 1 if respondent i belongs to treatment group j. Since the control group is excluded from the indicator set, α_j and β_j capture treatment effects relative to the control group. X_i represents control variables such as firm age, size (measured by employment), sector, region, exporter status, and leverage. Including these controls only affects the precision of the estimates, as treatment assignment is random (Coibion et al., 2023). To handle outliers, we employ Huber-robust regressions (Coibion et al., 2024). Huber-robust regressions reduce the influence of outliers, with some extreme outliers receiving a weight of zero.

With this specification, which is widely used in the literature, it is possible to assess the effectiveness of information treatments within a Bayesian learning framework by regressing the posterior belief on the prior belief. The coefficient β_0 captures the strength of the prior and is expected to be 1 for the control group, as no new information is provided, while α_0 is expected to be 0. In theory, since the treatments provide publicly available information, under the full-information rational expectations hypothesis, even treated groups are not expected to update their priors upon receiving the information, and $\beta_0 + \beta_j$ should equal 1. However, for the control group, the slope coefficient is estimated to be 0.81, which may reflect noise in respondents' answers and some mean reversion in their responses (Coibion et al., 2023). Lastly, the coefficients α_j capture level effects and can be either positive or negative, depending on how the signal compares to the initial belief.

Fact 1: ***In a high-inflation setting, information treatments effectively generate exogenous variation in inflation expectations if the setting is also volatile.***

The treatments are successful in generating significant exogenous variation in firms' inflation expectations, as shown in Table-3, for both CPI and PPI inflation, with very similar estimated coefficients. The negative interaction term captures the strength of the information provided to the treatment groups. In a Bayesian learning framework, this implies that the treatments reduce

the weight of priors and agents put some weights to the signals (treatments) received. As a result, treated groups significantly revise their beliefs compared to the control group, by assigning a lower weight to their priors. Consequently, the coefficients on prior beliefs, $\beta_0 + \beta_j$, for these treatments range between 0.53 and 0.69.[16] Figure-3 and Figure-4 illustrate the effectiveness of the information treatments: the former shows how inflation expectations shift immediately after treatment for each group relative to the control, while the latter plots prior versus posterior expectations against the 45-degree line, which serves as a benchmark under which public information has no effect and posteriors equal priors.[17] Providing firms with information about professional inflation forecasts, CBRT's inflation forecasts, and the official inflation target significantly influences their aggregate inflation expectations. The strongest effect is observed in the first group, which received information on market participants' expectations, with an estimated β_1 of -0.29. Information about CBRT's one-year-ahead forecasts is similarly effective, though forecasts for two years ahead are less impactful, as indicated by an estimated β_3 of -0.12, suggesting that longer-term forecasts are less effective in reducing next 12-month inflation expectations. Information about the official 5% target also works, though its impact is smaller compared to the first two treatments. This is reasonable, as the official target has not been met since it was first announced in 2006. Moreover, Table-4 shows that the impact does not vanish immediately after the treatment. It remains particularly significant one month after the treatment but becomes insignificant by the second month. Overall, these treatments serve as effective instruments for identifying the causal impact of inflation expectations on firms' outcomes, utilizing the matched datasets mentioned earlier, along with macroeconomic and firm-level expectations.

[16] When the control variables are excluded, the results remain consistent, as expected under successful randomization of the treatment and control groups (see Table H1). Additionally, Table H2 presents results after excluding non-updaters in the treatment group—defined as firms with an absolute change between prior and posterior expectations of less than 1 percentage point—showing that the estimated effects become even more pronounced in this restricted sample.

[17] Figure-C1 displays the impact is similar for producer price inflation expectations.

Theory and Estimates from the literature

We can use the following Kalman gain to understand the treatment effect, based on the inattention literature (see Appendix-I for further details about the model):

$$K = \frac{\text{Var}(\pi_t \mid S_i)}{\text{Var}(\pi_t \mid S_i) + \sigma_\omega^2} = \frac{k \cdot \dfrac{\sigma_\epsilon^2}{1-\rho^2}}{k \cdot \dfrac{\sigma_\epsilon^2}{1-\rho^2} + \sigma_\omega^2}.$$

Here, σ_ϵ is the volatility of the inflation process, ρ its persistence, k a proxy for attention, and σ_ω the noise of the signal. Normally, if agents are fully attentive and have full information ($k = 0$), the Kalman gain (and hence the treatment effect) is zero. Or, if agents only know the underlying stochastic process but not the state of the economy ($k = 1$), the gain equals the unconditional variance of the true inflation process. Yet, although there are informative signals about inflation, agents learn from only a subset of available Gaussian signals because tracking all signals or news is costly. Thus, there is a trade-off between the cost of processing information and the benefits it provides; observing more signals reduces k, reflecting greater attentiveness.

A high and volatile inflation environment can influence the learning process through several channels. First, the benefit of paying attention to inflation rises when inflation is high, so forecast uncertainty should decline in high-inflation periods (Weber et al., 2025). However, in a volatile and possibly de-anchored environment, the number of inflation-related signals to track increases, raising cognitive costs. As a result, uncertainty does not fall as much as the benefit channel alone would suggest. Indeed, disagreement about inflation tends to be larger during periods of high inflation (Figure-D7). Thus, attention remains imperfect—k does not fall to zero—leaving room for treatments to have an effect.

Second, the persistence of inflation, ρ, is an important component of treatment effectiveness; Weber et al. (2025) empirically show that persistence increases with the level of inflation, further enhancing the impact of information treatments by pushing K up. This is further validated by our own evidence, shown in Figure-I1, which demonstrates that inflation persistence rises during

periods of inflation spikes—when attention is also elevated—and that there is a significant positive correlation between the level and persistence of inflation. Third, the volatility of the inflation process, σ_ϵ, is crucial for treatment effectiveness, and it rises with the level of inflation in Türkiye, implying that the treatment effect can be large. This likely explains the near-zero treatment effect found for Uruguay in Weber et al. (2025), where inflation remained around 8–10% with little variation, compared to the Turkish setting, where inflation surged to 75% and then declined to 35% within two years amid high volatility. Thus, when both the level and volatility of inflation are high, the treatment effect can be sizable.

Fourth, the noise of the signal, σ_ω, is the final key factor. Because our information is provided by the Central Bank—one of the most reputable institutions in Türkiye—it is unlikely that signal noise would nullify the treatment effect. Taken together, these factors suggest that in a high and volatile inflation environment, there is substantial scope for treatment effectiveness.

The theoretical predictions line up well with our empirical results. The treatment effect in Equation-1 can be written as the ratio $\frac{\beta_j}{\beta_0}$, i.e. the scaled change in slope, which quantifies the degree of firms' inattention. This measure reflects the relative change in the slope of the relationship between prior and posterior inflation expectations for the treatment groups compared to the control group. Weber et al. (2025) show that when inflation is near 9%, the scaled change in slope lies between 0 and –0.15, implying that agents pay close attention to inflation. When inflation is below 5%, the slope ranges from –0.40 to –0.90, indicating much lower attentiveness. A simple fit through the existing estimates suggests that once the inflation rate exceeds 10%, the scaled slope should be statistically indistinguishable from zero. However, this is an out-of-sample extrapolation. Existing RCTs have only studied attention in settings where inflation, even when high, was relatively stable. The upper bound from this literature comes from Uruguay, where inflation averaged 8%.

In stark contrast, the Turkish setting features both a much higher inflation level and significantly greater volatility. In Türkiye, where inflation recently exceeded 70%, we find scaled slopes between –0.15 and –0.35, depending on the treatment. Thus, even in a high-inflation environ-

ment, where the cost of inattention is large, firms are not fully attentive. Because inflation is so volatile, firms lack full confidence in their own forecasts—even though they are well informed about past inflation—and continue to learn from public information, which exhibits much greater variation in this environment than in more stable ones. The constant stream of news, combined with limited cognitive capacity, makes it hard to process every data point. In short, when macro fundamentals move rapidly and unpredictably, there is simply too much to track for firms to generate fully accurate forecasts on their own.

When information comes from a reputable source such as the central bank, the perceived signal precision is high (i.e., low σ_ω), resulting in a large Kalman gain and a sizable treatment effect. This volatile environment allows the treatments to remain effective in generating exogenous variation in expectations, with the scaled change in slope being larger than anticipated by Weber et al. (2025) due to the heightened volatility. After documenting the impact of our treatments on inflation expectations, we proceed to analyze the causal effect of exogenous variation on firms' outcome variables and their expectations.

5 Causal Impact on Firms' Decisions and Expectations

We can now assess the impact of exogenous variation in the first moment of inflation expectations, induced by the treatments, on firms' outcomes, decisions, and expectations. First, we estimate the effect on firm-level expectations, decisions and realized outcomes using the following regression model (Kumar et al., 2023):

$$\mathrm{Y}_i^{t+h} = \beta_1 \mathrm{Post}_i^{mean} + \beta_2 \mathrm{Prior}_i + \gamma X_i + \delta_s + \phi_p + \varepsilon_i^{t+h}, \tag{2}$$

where Y_i^{t+h} represents the quantitative expectations for firm i's wages, unit costs, and own prices over the next 12 months, as well as realized outcome variables such as credit amount, credit cost, foreign currency purchases, employment, wages, purchases of goods and sales. Quantitative ex-

pectations are collected during the RCT survey, while the realized outcome variables are tracked over a horizon h, ranging from the time of the RCT survey (zero months = t) up to 4 months post-treatment. Post_i^{mean} is the posterior mean inflation expectation of firm i (measured right after the information treatment) and Prior_i denotes the prior inflation expectation of firm i (obtained from the May BTS). X_i is the vector of firm-level control variables. We begin with analyzing the pass-through of inflation expectations on wage, price, and unit cost expectations. When the outcome variable is expectations, X_i includes firm age, size (measured by employment), leverage, exporter status, and prior inflation expectations for price and wage growth (measured just before the information treatment). δ_s and ϕ_p are sector and province fixed effects, respectively. We control for sector and province fixed effects to account for unobserved heterogeneity that could influence how inflation expectations affect firms. Sector fixed effects help capture industry-specific inflation sensitivities, as different sectors may experience varying input costs, pricing power, and exposure to macroeconomic conditions. Similarly, province fixed effects control for regional differences in inflationary pressures, such as local economic conditions, wage growth, or price dynamics, which may vary across regions. By including these fixed effects, we can better isolate the effect of inflation expectations on firm outcomes, removing the influence of sector- and region-specific factors.

Following Kumar et al. (2023), we instrument for the posterior belief about the expected inflation using the treatment dummies and their interactions with firms' priors as follows:

$$\begin{aligned} \text{Post}_i^{mean} = \alpha_0 + \sum_{j=1}^{4} \beta_j \times I\{i \in \text{Treat } j\} \times \text{Prior}_i \\ + \sum_{j=1}^{4} \alpha_j \times I\{i \in \text{Treat } j\} + \varepsilon_i, \end{aligned} \tag{3}$$

The aim is to generate exogenous variation in inflation expectations to identify the causal impact of these expectations on firms' economic expectations and outcome variables. The instrument leverages both the average effect of treatments on expectations and the slope effect on priors through the interaction term. As discussed earlier, we run a Huber regression for the first stage

and use Huber weights to control for outliers, and also apply a jackknife procedure similar to the one used in Coibion et al. (2024).

The important point to mention here is that β_1 in Equation (2) captures the direct effect of inflation expectations on the outcome variable. However, it is likely that firms also revise other beliefs and expectations—such as associating higher inflation with weaker economic outcomes, adjusting their interest rate expectations, or updating currency expectations—depending on how they interpret the information (Andre et al., 2022). Since the inflation process is not isolated, purely exogenous, and disconnected from other macroeconomic dynamics, it is plausible that firms simultaneously update multiple expectations. If these additional changes also influence the outcome variable, then the coefficient β_1 reflects the *total effect* of inflation expectations, operating through multiple channels. Accordingly, all results in the following sections should be interpreted with this broader perspective in mind.

The results from the baseline estimation are presented in Table-5. Before proceeding with the analysis, it is important to note that the information treatments generate substantial variation in the first stage, with the first-stage Kleibergen-Paap (KP) Wald statistic for inflation forecasts ranging between 25 and 50. These F-statistics are comparable to those reported by Coibion et al. (2023) and other studies, despite the very different context. Thus, even in a high-inflation setting the RCT method successfully creates strong exogenous variation in inflation expectations, enabling the identification of their causal effects on firms' expectations, borrowing behavior, and real outcomes.

5.1 Firms' Expectations and Pass-Through

Fact 2: ***The pass-through from inflation expectations to firms' own wage, cost, and price expectations is nearly 60%.***

Table-5 shows that firms' aggregate inflation expectations have a highly significant impact on their own expectations for wages, unit costs, and prices. Specifically, a 1 percentage point (pp) decrease

in inflation expectations leads to a 0.58 pp decline in wage growth expectations, a 0.53 pp decline in unit cost growth expectations, and a 0.55 pp decline in expected price growth over the next 12 months.

The strength of this pass-through from aggregate inflation expectation to price expectations, which is 60%, is substantially higher than the estimated levels of 0.10-0.30 found in low-inflation environments (Abberger et al., 2024; Baumann et al., 2024; Coibion et al., 2020b), while other studies document a pass-through rate near zero (Coibion et al., 2018; Rosolia, 2024). Our findings also contrast with the weak link between wage and price expectations observed by Savignac et al. (2024) in a low-inflation context. This evidence shows that while pass-through is nearly non-existent or incomplete in low-inflation environments, it likely increases as inflation rises: in an environment of very high inflation, around 70%, the pass-through rate from aggregate inflation expectations to firms' wage and price growth expectations becomes nearly 60%.[18]

Moreover, the pass-through rates to wage and price expectations are very similar in magnitude. This is consistent with the strong correlation between wages and prices documented in Figure-D4, a relationship typically much weaker in low-inflation contexts (Savignac et al., 2024; Gautier et al., 2025). In Türkiye, firms with higher price growth expectations also tend to expect higher wage and unit cost growth. Similarly, their perceptions of past wage growth strongly correlate with their perceptions of past price growth. One possible explanation is that, although Türkiye does not have a formal wage indexation system, the minimum wage is highly binding—approximately 40% of the workforce earns wages close to the minimum. As a result, the minimum wage serves as a de facto benchmark for broader wage-setting. Since it is negotiated annually between the government and labor unions, realized and expected inflation—as well as the cost of living—play a central role in those negotiations. Consequently, firms likely associate higher inflation expectations with correspondingly higher future wage growth.

The high pass-through rates observed in a high-inflation environment are consistent with

[18]This is consistent with aggregate time-series evidence from Galı and Gertler (1999), which documents the significant role of future inflation in price-setting over the period 1960-1997, during which the average inflation rate was 4.7%.

standard Calvo pricing models (Werning, 2022; Abberger et al., 2024) (see Appendix-J for model details). In this framework, the pass-through from aggregate inflation expectations to inflation can be expressed as:

$$\mathrm{PT}(\rho,\theta) = \frac{1-\theta}{1-\beta\theta\rho} \tag{4}$$

where ρ is the perceived persistence of inflation, θ is the Calvo price stickiness parameter, and the resulting pass-through rate takes a value between 0 and 1. As illustrated in Figure-J1, this pass-through rate increases as prices become more flexible (a lower θ), and in the fully flexible limit ($\theta = 0$), it reaches one as all firms can continuously adjust prices one-for-one with their expectations. In contrast, the pass-through rate is zero if prices are fully sticky ($\theta = 1$), representing the opposite extreme.

Two key factors, both linked to the level of inflation, drive this mechanism. First, as empirically demonstrated by Alvarez et al. (2019), the frequency of price adjustments increases with inflation, meaning that prices become more flexible in high-inflation environments. Our own findings in Figure-D5 corroborate this, showing that firms with higher inflation expectations plan to update their prices more frequently and anticipate larger price increases for their main product over the next 12 months. A second factor is the perceived persistence of the inflation process. As documented by Weber et al. (2025), perceived persistence rises with the level of inflation, increasing from about 0.3 when inflation is near 0% to roughly 0.9 when inflation is around 9%. Similarly, in our analysis (Figure-I1), perceived persistence ranges from 0.1 to 0.8 across a wide interval of inflation levels between 10% and 70%, with a significant positive correlation between the two. In a high-inflation environment, a higher perceived persistence—combined with more flexible price setting—implies larger pass-through rates from aggregate inflation expectations to a firm's own price expectations. This helps explain why our estimates exceed those reported in the low-inflation literature. Indeed, Equation (4) shows that with a standard Calvo stickiness parameter ($\theta = 0.75$), raising the perceived persistence parameter from 0.3 to 0.8 boosts the pass-through rate from around 30% to nearly 60%, which is a sizable change. This shows the importance of an-

choring expectations in an economy. When firms believe that deviations from the central bank's inflation target are not temporary anomalies but long-lasting shifts, their behaviour changes fundamentally. Confronted with the prospect of persistently rising costs, a firm will act pre-emptively and decisively, incorporating a much larger share of its long-term inflation forecast into future price adjustments.[19]

While this stylized model provides a clear explanation, it is important to recognize the complexities of a real-world economy. The model does not account for dynamic responses from monetary authorities (who might raise rates to fight inflation), endogenous feedback loops in marginal costs (where higher wage demands could further fuel inflation), or strategic pricing interactions among direct competitors. Additionally, firms' responses might vary depending on the size of the shock or prevailing economic conditions, offering a richer but more complex perspective. Nevertheless, the simplified model provides an essential first-order explanation of the underlying dynamics, though these additional considerations would undoubtedly alter the precise numerical pass-through rates calculated in our simplified exercise.

Ultimately, this analysis underscores the critical importance of maintaining a credible monetary policy anchor. When expectations are well-anchored, the economy acts as a shock absorber: idiosyncratic beliefs at the firm level tend to be temporary and exert minimal influence on aggregate inflation. Conversely, when expectations become de-anchored, idiosyncratic changes in firms' inflation expectations may significantly affect their pricing and wage-setting behavior, potentially exacerbating overall inflation. This vulnerability creates the risk of self-fulfilling inflation dynamics, where the collective belief that inflation will remain high becomes the very reason it persists. Thus, the cost of losing the inflation anchor is not merely higher inflation, but a fundamental loss of economic resilience. Therefore, managing inflation expectations in a high-inflation

[19]The results align with recent behavioral literature (Enke and Graeber, 2023; Enke et al., 2024), which suggests that decision-makers who are less uncertain about the optimality of their choices tend to make more elastic decisions. In our context, firms operating in a high-inflation environment are less likely to doubt their near-term expectations after observing significant changes in expected inflation. As a result, the pass-through rates are higher, indicating that firms with greater confidence in their expectations make more elastic adjustments to firm-level decisions. In short, because firms in high-inflation environments are acutely aware of the costs of not adjusting prices and wages, they are more likely to act on their expectations when adjusting their prices and wages.

environment is crucial for controlling inflationary pressures. The cost of losing the inflation anchor is particularly high in such environments due to elevated pass-through rates, a weakened nominal anchor, and firms' perception that deviations from the inflation target are likely to persist. This perceived persistence substantially amplifies the pass-through rates, as demonstrated in Figure-J1. Yet, this is not the only cost of elevated inflation; it also adversely affects firms' future economic outlook.

Fact 3: ***Lower inflation expectations make firms more optimistic about both their own future performance and the aggregate economic outlook.***

Another important aspect is how firms link inflation expectations to their views on the economic outlook. The evidence is mixed: Coibion et al. (2018) show that in New Zealand, firms interpret business cycles as demand-driven and thus become more optimistic with higher inflation, similar to professionals' views (Candia et al., 2020). Evidence from Coibion et al. (2020b) suggests that this relationship may be state-dependent: Italian firms tend to associate higher inflation with weaker economic activity during normal times, similar to households' views, reflecting pessimism and a supply-side view of the economy. However, they perceive higher inflation more positively during zero lower bound periods, when it is linked to increased economic activity and optimism.

As a contribution to this literature, our findings indicate that in high-inflation environments, firms with lowered inflation expectations adopt more optimistic views of the broader economic outlook and expect a higher aggregate economic activity. The economic outlook expectations, reported in Panel-B of Table-5, are qualitative and categorized as 0 for optimism, 1 for neutrality, and 2 for pessimism. The impact is sizable: a one-standard-deviation decline in inflation expectations (20 pp) is associated with a 0.48-point decline in pessimism regarding aggregate economic activity on this scale. Consequently, a two-standard-deviation decrease in expectations would shift a firm's outlook from neutral to optimistic regarding overall economic activity. To place this result in context, Coibion et al. (2020b) ask a similar question about general economic conditions on a scale from -1 (worse) to +1 (better) and find that a 1 percentage point increase in inflation

expectations leads to a 0.23-point shift toward pessimism. However, in their low-inflation setting, the standard deviation of expectations is only 1.2 percentage points. This implies that approximately a 3.5-standard-deviation increase in inflation expectations (equivalent to a 4.3 pp rise) would move a firm's outlook from neutral to pessimistic in their sample, a finding that is directionally consistent with our own.

The pessimism likely stems from the challenges firms face in such contexts, where uncertainty about future costs and revenues complicates planning for investments, pricing, wage-setting, and contracts. Firms may also anticipate that inflation reduces consumers' purchasing power, leading to weaker demand.[20] By contrast, when inflation expectations decline, uncertainty falls and the future becomes more predictable, fostering optimism. This suggests that a disinflationary process, if accompanied by well-anchored expectations, may not necessarily generate a pessimistic economic outlook and could potentially contribute to more favorable "soft landing" scenarios, as observed in many countries during the post-COVID period.

In addition to their adverse impact on aggregate economic expectations, inflation expectations also significantly influence firms' outlooks on their own business prospects, albeit to a lesser extent. Specifically, a one-standard-deviation decline in inflation expectations (equivalent to a 20 pp fall) corresponds to a 0.28-point increase in optimism about their own business activity. This finding aligns with the broader literature, such as Roth and Wohlfart (2020), which show that individuals who update their macroeconomic outlook tend to extrapolate these expectations to their personal economic circumstances. To clarify the comparison with the literature, in our case, the magnitude of the estimate for firms' own business conditions is nearly 40% smaller than the estimate for the general economic outlook, which is similar to the findings in Coibion et al. (2020b), where the estimate for own conditions is about 30% smaller than that for the general economic outlook. This suggests that while firms do extrapolate their macroeconomic outlook to their own business conditions, the extrapolation is partial rather than complete in both settings. In both set-

[20] Wages cannot keep up with inflation due to their stickiness (income effect), and Schnorpfeil et al. (2023) document that households are aware of the nominal asset erosion effects of inflation (wealth effect).

tings, a change in inflation expectations from the information treatment is perceived as a supply shock to the economy and the firm (Coibion et al., 2020a).

Furthermore, a one-standard-deviation decrease in inflation expectations leads to a 0.24-point decline in firms' expectations of tighter credit conditions, even after controlling for their prior borrowing cost expectations.[21] The descriptive evidence presented in Figure-D7 aligns with this causal impact, indicating that firms with lower inflation expectations tend to exhibit greater optimism about both the broader economic outlook and their own firm's prospects, while also anticipating higher sales growth both in domestic and international markets.

Our findings imply a symmetry: just as lower inflation expectations are linked to greater optimism, raising those expectations can foster pessimism. Although the average treatment effect is negative—meaning that, on average, the treatment reduces firms' inflation expectations—we also observe a significant increase in expectations for a sizable share of firms. In fact, nearly 40% of treated firms increase their expectations. This variation allows us to capture the linear impact of changes in both directions. In Appendix-G, we document that the effect of inflation expectations on firm behavior is indeed symmetric: the estimated magnitudes are highly similar for firms that increased their inflation expectations and those that decreased them following the treatment. Throughout the following sections, the same logic applies—that is, the effects are not driven solely by downward revisions in expectations (i.e., the average effect in the first-stage results), but are present in both directions.

Overall, this supply-side perspective aligns with the positive impact of expectations on firms' real outcomes, as demonstrated in the next section. The optimistic expectations of firms with lower inflation expectations were actually realized in the months following the treatment. This evidence paints a consistent picture: firms with lower inflation expectations become more optimistic about the economy and their own firm's prospects.

[21] When firms expect inflation to rise, they may foresee tighter lending conditions from banks, as lenders respond to the risks posed by higher inflation—such as diminished real returns on loans, potential economic instability, and higher default rates.

5.2 Borrowing Behavior of Firms

Since we can match the firms in the RCT survey with credit registry data, we are able to analyze their borrowing behavior before and after the treatment, and capture the dynamic causal effects. If firms adopt a supply-side view of the economy, then an exogenous change in inflation expectations can influence borrowing decisions through different channels, as discussed in Ropele et al. (2022):

1. Working capital channel: Lower inflation expectations (i.e., a more optimistic outlook) may increase planned employment, raising the demand for short-term credit to cover wage bills.
2. Investment demand channel: Lower inflation expectations can lead firms to increase investment as uncertainty decreases and firms become more optimistic about future prospects, boosting demand for long-term credit.
3. Precautionary reallocation channel: Firms with higher inflation expectations may shift to short-term debt to better manage cash flow shocks in uncertain economic conditions. If expectations fall and perceived uncertainty declines, the incentive for very short maturities weakens, potentially tilting the mix toward longer debt.
4. Refinancing channel: To avoid locking in current rates before slowing inflation decreases future nominal interest rates, firms may delay long-term financing and instead rely more heavily on short-term loans.

The relative strength of these channels determines whether firms lengthen or shorten maturities, and whether total borrowing rises or falls, after the information treatments. Using data from the credit registry, social security, and foreign exchange transaction administrative datasets, we adopt the following empirical approach. Let Y_i^{t+h} denote the outcome variable for firm i at time $t+h$. To assess the impact of inflation expectations formed before the treatment period, we regress these economic outcomes on pre-treatment inflation expectations, as specified in Equation (2).[22]

[22] This specification can be viewed as a local projection (LP-IV), in line with Jorda (2005), as we estimate the causal effect of an exogenous change in inflation expectations at time t on each outcome variable at time $t+h$.

The set of controls X_i includes firm-level characteristics such as firm age, size (measured by employment), sector, region, exporter status, and leverage, all measured in the pre-treatment period (April 2024). In addition, we include pre-treatment values of the outcome variable to account for firms' baseline exposure and systematic heterogeneity. Specifically, for credit market outcomes, we control for annual total credit and the weighted average credit score; for foreign exchange outcomes, we control for annual total foreign currency purchases and sales. These variables help capture firms' prior financial behavior and expectations, allowing us to interpret the estimated coefficients as the causal response to exogenous changes in inflation expectations. Specifically, controlling for baseline heterogeneity makes firms with different initial levels of exposure more comparable in terms of their response to the treatment, enabling a cleaner identification of the causal effect. This approach sharpens identification by absorbing predictable variation in outcomes and anchoring the analysis around exogenous variation introduced by the information treatment. All outcome variables are measured as the log difference between the post-treatment and pre-treatment periods, i.e., $\log\left(\frac{y_i^{t+h}}{y_i^{t-1}}\right)$. We instrument inflation expectations at time t with the randomized information treatment administered in the same period, as formalized in Equation (3).

Fact 4: ***Firms expecting lower inflation decrease their demand for credit and strategically shift its structure, reducing long-term financing while seeking more short-term debt.***

Table-6 shows that firms with lower inflation expectations demand less credit: a 1 percentage point decrease in inflation expectations leads to nearly a 3 percent decline in new credit usage and a 1 percentage point decline in the credit utilization rate—the ratio of used credit to total approved credit lines—within two months of the treatment. This decline in total credit is accompanied by a clear shift in the composition of borrowing: while long-term credit decreases significantly, short-term credit increases.

This pattern suggests that neither the precautionary reallocation channel—where decreasing uncertainty leads firms to lengthen maturities without decreasing overall borrowing (Kumar et al.,

2023)—nor the investment delay channel—which would imply an increase in long-term borrowing due to more motivation for investment plans under lower uncertainty (Bloom, 2009)—are driving the results. The working capital channel could explain an increase in short-term credit if firms increase employment (which is typically financed via short-term borrowing), but it would also predict an increase in total borrowing (Coibion et al., 2020b), which we do not observe.

Instead, the evidence is more consistent with a refinancing channel. Firms with lower inflation expectations—induced by the treatment—may anticipate declining nominal interest rates or fear that lower inflation will increase the real value of fixed-rate debt, which accounts for most of their liabilities. If firms expect policy easing in response to falling inflation, it is rational to delay long-term borrowing rather than locking in higher current rates. Alternatively, if firms believe that policy will remain tight, then lower inflation implies a heavier real burden of existing nominal liabilities, again making long-term borrowing less attractive. In both cases, the motivation to lock in current rates weakens when inflation expectations fall. As a result, firms with lower expectations prefer to postpone long-term borrowing, shifting toward shorter maturities.[23] Moreover, firms were not expecting a rapid decline in interest rates at the time of the experiment: annual inflation stood at 75%, and their 12-month-ahead expectations were nearly 60%. Meanwhile, the policy rate had been raised to 50% in March 2024 and was expected to remain at that level until inflation fell meaningfully. In that environment, the lock-in incentive is strong for firms with rising expectations, while the opposite holds for firms whose expectations decline—which is the case for most treated firms in our setting. Consistent with this mechanism, Table-6 shows that firms with reduced inflation expectations decrease their borrowing by cutting back on long-term credit. At the same time, their average borrowing costs rise: a 1 percentage point decline in inflation expectations leads to a 3.7 basis point increase in average interest rates, driven by a shift toward costlier short-term debt. This suggests that firms are willing to borrow less when their inflation expecta-

[23]The reverse logic applies as well: if firms expect a rapid tightening of monetary policy to tame inflation, locking in current rates through long-term borrowing is advantageous before financing becomes more expensive. Or, if they believe policy will remain accommodative despite rising inflation, then higher inflation will erode the real value of nominal debt, again motivating firms to secure current rates.

tions fall, but as they delay long-term borrowing, they must rely more on short-term financing, which carries higher rates—especially in an environment with an inverted yield curve.

The compositional shift from long-term to short-term credit is both economically and statistically significant. A 1 percentage point decline in inflation expectations reduces new long-term credit by 4.7 percent within the first month, while new short-term credit increases by nearly 2.7 percent relative to the control group, as shown in Table-7, and these effects persist for approximately three months. These opposing shifts in quantity are mirrored by corresponding price movements, providing strong evidence of a demand-driven mechanism: concurrently, the cost of long-term borrowing declines by about 3 basis points due to reduced demand, while the higher demand for short-term borrowing raises its cost by a similar amount. However, because firms shift away from cheaper long-term credit toward more expensive short-term credit, the average weighted cost of borrowing actually increases. On average, long-term financing is 4 percentage points cheaper than short-term borrowing, with an average cost of 48% compared to 52% for short-term debt as of May 2024.

A key concern is whether supply-side forces respond to changes in firms' behavior. If credit supply remains unchanged, simultaneity concerns are mitigated, allowing us to attribute the observed credit changes to firms' actions and their demand for credit. Table-E1 shows that firms' total credit lines remain constant following the treatment, supporting the interpretation that the changes in credit usage reflect demand shifts and banks do not respond to changes in firms' behavior. This absence of supply-side adjustments strengthens our identification strategy, indicating that the observed changes in credit behavior stem from shifts in firm-side demand rather than credit supply constraints. Consequently, any differences in credit behavior between the treatment and control groups can be attributed to variation in firms' demand for financing induced by the treatment. The shifts in quantities and prices must come from the demand side—specifically, firms cutting back on long-term credit and relying more on short-term loans as they lower their inflation expectations.

Overall, since total new credit decreases (Table-6), this rules out the working capital channel as

the primary driver. Instead, the evidence points decisively to a refinancing channel, where firms strategically shorten their debt maturity to avoid locking in what they now perceive as unfavorable real rates. Yet, this shortening of maturity is not limited to newly issued loans. We also examine changes in outstanding credit stocks. Table-8 shows that a 1 percentage point decline in inflation expectations leads to a 3.8 percent decline in total outstanding credit within two months of the treatment. Specifically, long-term outstanding credit declines by 8.3 percent in the first month and 4.1 percent in the second month—both statistically significant. In contrast, short-term outstanding credit increases by 2.6 percent and 2.1 percent in the first and second months, respectively, with the effects becoming statistically insignificant at longer horizons. These patterns in outstanding credit are consistent with those observed for credit flows, reinforcing the conclusion that firms shift toward shorter maturities in response to lower inflation expectations. Also, the magnitudes observed in outstanding credit are sizable, which may be due to the relatively short average maturity of loans (around 18 months)—meaning a significant portion of the stock comes due each month. Firms may actively accelerate deleveraging by allowing existing long-term debt to mature or by pre-paying it once lower inflation expectations make current fixed rates appear unattractive. Given that the average loan maturity in Turkey is already short, even a temporary slowdown in new long-term borrowing, combined with natural amortization and targeted prepayments, can result in a substantial decline in outstanding credit.

There are few directly comparable studies in the literature. Ropele et al. (2022) document no change in total outstanding loans following an increase in firms' inflation expectations, but they observe a rise in average borrowing costs driven by a reallocation of debt from long-term to short-term maturities. In contrast, we find that lower inflation expectations lead to a decline in total credit usage, while average borrowing costs also rise—driven by a shift toward more expensive short-term credit. Specifically, Ropele et al. (2022) show that a 1 percentage point increase in inflation expectations results in a 3 percent increase in short-term outstanding loans and a 2 percent decline in long-term outstanding loans within six months of the treatment. These effects intensify over time, reaching a 7.7 percent increase in short-term loans and a 4.4 percent decline

in long-term loans after six quarters—evidence of a substantial reduction in debt maturity. While they also document that firms engage in some refinancing by taking on new long-term loans to lock in rates, the overall use of long-term debt declines significantly with higher expectations.

By contrast, our results point to the opposite pattern. We find that a 1 percentage point decline in inflation expectations leads to a 3.9 percent decrease in new long-term credit and a 3.3 percent increase in new short-term credit, along with a 4.1 percent decline in outstanding long-term credit and a 2.1 percent increase in outstanding short-term credit. This consistent directional shift in both flow and stock measures indicates a clear movement from long- to short-term borrowing, motivated by a desire to delay locking in current rates in anticipation of lower future inflation. Although the institutional settings differ, the magnitudes are comparable. Unlike Ropele et al. (2022), however, we find no evidence of reallocation from short- to long-term debt in response to declining inflation expectations; in fact, the opposite occurs in our high-inflation context.

Moreover, Ropele et al. (2022) highlight a strong supply-side response: a 1 percentage point increase in inflation expectations leads to a 1.4 percentage point reduction in granted credit lines, claiming that the actions of firms with heightened expectations make them less credit-worthy to the banks. In contrast, we observe no change in total credit lines following the treatment, allowing us to rule out supply-side effects as a confounding factor in our estimation, as discussed previously. Furthermore, although Ropele et al. (2022) find a decline in the total amount of credit lines granted, there is no change in total outstanding loan usage for firms with higher inflation expectations. So, for firms experiencing a 1 percentage point increase in inflation expectations, they document a 0.6 percentage point rise in the credit utilization rate within one year. Similarly, Coibion et al. (2020b) report that a 1 percentage point increase in inflation expectations raises the utilization rate by 1 percentage point after three months. Our estimates align closely in magnitude but reflect the opposite direction and a quicker response: a 1 percentage point decline in inflation expectations leads to a 1.3 percentage point decline after one month and a 1 percentage point decline after two months, with the effects becoming statistically insignificant thereafter. However, in their case, the rise in utilization may reflect a shrinking denominator—i.e., a reduced

credit line—whereas in our case, it stems entirely from reduced credit usage, as credit lines remain largely unchanged following the treatment.

In short, when firms lower their inflation expectations, the demand for new long-term credit falls, pushing long-term rates slightly down. At the same time, they rely more on short-term loans, which carry higher nominal rates due to the inverted yield curve. The resulting portfolio shift therefore raises the average cost of borrowing, even though overall credit demand declines. Firms with lower inflation expectations are willing to accept this higher average rate because they expect future nominal rates to fall along with inflation, so they prefer shorter maturities that can be refinanced quickly at those lower rates rather than locking in today's comparatively expensive long-term contracts. Maintaining flexibility outweighs the short-run increase in average interest costs. In effect, lower inflation expectations weaken the "lock-in" motive and strengthen a "wait-for-cheaper-credit" motive, leading firms to shorten debt maturities despite a temporary uptick in borrowing costs, while also reducing both their outstanding debt and new borrowing compared to firms with higher expectations.

It is also important to note that many firms in our sample revise their inflation expectations upward. These firms lengthen the maturity of their debt, shifting from short- to long-term financing. The logic is straightforward: if inflation or nominal rates rise, today's already-high rates will look relatively cheap in real terms (debt erosion effect of inflation), so locking them in now is advantageous. By contrast, firms that lower their inflation expectations shorten maturities, positioning themselves to refinance at what they expect will be lower future rates.[24] In short, firms' beliefs about future inflation determine the direction of their maturity adjustment: higher expected inflation leads to longer maturities, while lower expected inflation leads to shorter ones. Nonetheless, maturity is only one dimension of the debt structure. As discussed in the next section, the currency composition of borrowing also changes in response to inflation expectations.

[24] As shown in Appendix-G, we argue that the effect is symmetric in both directions, even though the average treatment effect on inflation expectations is negative.

Fact 5: ***Firms with lower inflation expectations dollarize their liabilities by decreasing borrowing in the local currency and increasing foreign currency debt.***

The overall decline in total credit is driven by the decline in lira-denominated outstanding credit, while we observe an increase in FX-denominated credit. As shown in Table-8, firms with a 1 percentage point lower inflation expectations decrease Turkish Lira denominated credits by 5.8 percent one month after and by 3.4 within three months after treatment. At the same time, these firms increase their FX denominated credits by 1.8 percent one month after and by 1.1 percent 3 within three months after the treatment, indicating liability side dollarization.

The firms with lower inflation expectations may anticipate declining domestic interest rates in the near future, making lira-denominated borrowing less appealing due to expected refinancing costs. At the same time, they may expect a slower depreciation of the lira, increasing the appeal of FX-denominated credit. Indeed, during the disinflationary period in Turkey in 2025, we observe a notable increase in the share of FX borrowing as firms revised their inflation expectations downward.

To make this more intuitive, the logic also applies in the opposite direction: firms with higher inflation expectations perceive borrowing in lira as relatively cheaper than borrowing in foreign currencies due to the debt-erosion effects of domestic inflation. Firms anticipating higher inflation are likely to lock in current fixed rates on lira-denominated credit, expecting that inflation will reduce the real value of their nominal lira debt over time. Conversely, FX borrowing becomes less attractive, as its real cost increases if the domestic currency depreciates. Consequently, we observe a shift in the composition of liabilities toward lira-denominated credit. This behavior may also reflect the expected pass-through between inflation and currency depreciation: if firms anticipate significant currency depreciation alongside higher inflation, they view FX-denominated credit as even more expensive.[25] For firms with lower inflation expectations, the expected depreciation is weaker, making FX borrowing more appealing relative to the control group.

[25] Delgado et al. (2024) show the significance of pass-through from nominal exchange rates to inflation expectations.

Such currency-composition dynamics matter particularly in emerging markets where dollarization is high (in Turkey, roughly 50% of corporate debt is FX-denominated). The interaction between inflation and currency expectations can influence both sides of the balance sheet. So far, we have shown how inflation expectations affect the liability side. In the next section, we turn to the asset side, using data on firms' FX transactions.

Fact 6: ***Firms with lower inflation expectations de-dollarize their assets by decreasing their holdings of foreign currency.***

Turning to the asset side, we examine how changes in inflation expectations influence firms' liquidity management and the currency composition of their financial assets. By linking firm-level data with high-frequency foreign exchange transaction records, we find that firms with lower inflation expectations increase their foreign currency sales while simultaneously reducing their foreign currency purchases in the FX market. These firms tend to decrease their net FX holdings, likely because they anticipate a slower pace of nominal exchange rate depreciation. As shown in Table-9, the effects are substantial: a 1 percentage point decline in inflation expectations leads to a 2.5 percent decrease in foreign currency purchases and a 2.9 percent increase in foreign currency sales. These effects persist for up to three months, after which treated firms are no longer statistically distinguishable from control firms.

Conversely, firms with higher inflation expectations increase their net FX holdings. This behavior provides causal evidence for a well-documented risk management strategy in emerging markets, where firms accumulate foreign currency—such as U.S. dollars—to hedge against inflation risk in the domestic currency (Allayannis and Ofek, 2001). To our knowledge, this is the first causal evidence from a randomized control trial demonstrating how firms' inflation expectations influence their portfolio management decisions in an emerging market context.

Overall, the results demonstrate that nearly all effects remain significant up to the fourth month following the treatment. While the effects on decisions persist, our findings in the previous section indicate that the effects on expectations diminish substantially within two months.

This divergence may arise because firms revise their plans in response to the treatment and then adhere to those plans, even as they gradually forget or update the specific information that initially shaped their expectations.

5.3 Firm Performance and Real Outcome

Finally, we evaluate the impact of firms' inflation expectations on real outcome variables. We estimate Equation-(2) using a set of controls that incorporates expectations of various economic variables while utilizing the information treatment at time t as an instrument for the inflation expectations observed at that same time. Specifically, we incorporate the firm's outlook on sector conditions for the next three months, anticipated firm-specific employment growth during the same period, and expectations regarding production volume. These controls are derived from time $t-1$, which corresponds to the pre-treatment month of April 2024. In addition, we account for the annual leverage ratio, current employment levels, and the capacity utilization ratio. Furthermore, when the outcome pertains to employment, wages, sales, or purchases, the vector of controls also includes the previous year's annual data for these variables.

Fact 7: ***Firms with lower inflation expectations increase employment and sales activity while decreasing inventory holdings in subsequent months.***

We find that an exogenous decline in firms' inflation expectations has significant and positive effects on their real sales and employment, as documented in Table-10. This is consistent with the finding from Fact-3 that firms adopt a more optimistic outlook as their inflation expectations fall, making them more motivated to increase employment and production. The impact is sizable: a 1 percentage point decline in inflation expectations corresponds to a 1.2% increase in employment, a 0.7% increase in new hires, and a 2% increase in sales within the two months following the treatment. This is also reflected in firms' relationships with their customer (downstream) firms, as shown in Table-10: a 1 percentage point decline in inflation expectations leads to a 1.3% in-

crease in the number of customers. These findings causally link the more optimistic outlooks documented earlier to tangible, positive impacts on firms' real business activities.[26]

The estimates reported in the literature are broadly comparable, but the effects vary depending on the setting. Coibion et al. (2018) show that among New Zealand firms with high prior expectations who were treated with the Reserve Bank of New Zealand's inflation-target information, a 1.2 percentage point decline in inflation expectations leads to an almost 3 percent reduction in both investment and employment. Baumann et al. (2024), using an RCT conducted in the Euro Area, document that a 1 percentage point increase in inflation expectations leads to a 0.3 percentage point (planned) increase in employment in the relatively high-inflation environment of 2023. Both studies are consistent with a demand-side view of firms. However, while the New Zealand study was conducted in a low-inflation environment (below 2%), the Euro Area experiment took place in 2023, when inflation was around 7%. Thus, despite the difference in inflation environments, the interpretations are similar.

Using a sample of Italian firms, Coibion et al. (2020b) find the opposite pattern and longer-lasting effects: a 1 percentage point rise in inflation expectations lowers employment by 0.7 percent after 12 months and reduces sales by nearly 2 percent after 24 months when the economy is away from the zero lower bound—supporting a supply-side view of the economy. However, if the economy is at the zero lower bound, the signs reverse for some outcomes, such as employment.

A key advantage of our setting is the ability to track outcomes at a monthly frequency, which reveals a much more transient dynamic. In our case, a 1 percentage point decline in inflation expectations leads to a 2 percent increase in sales within two months of the survey, but the effect becomes statistically insignificant thereafter. For employment, the increase reaches 1.2 percent after four months. Thus, while the short-run magnitudes are comparable to those found in Italy—at least in periods away from the zero lower bound—the effects in Türkiye are far less persistent. A likely reason is Türkiye's highly volatile macroeconomic environment: firms are continually bom-

[26] For Fact 3, Table-5 presents the causal impact of inflation expectations on the economic outlook, while Figure D7 provides descriptive evidence.

barded with fresh signals—policy shifts, exchange rate fluctuations, and price shocks—so the informational value of the original treatment decays quickly. A constant flow of new signals quickly erodes the informational value of the original treatment. The treatment generates a sizeable gap relative to the control group for the first four months, but that difference is no longer statistically significant thereafter.

Moreover, as shown in Table-11, the impact on nominal wages is negative—approximately 0.6 percent—two months after the treatment, which coincides with the mid-year wage adjustment period. This is consistent with the pass-through rates from inflation expectations to wage expectations discussed in the previous section. For wages, pass-through estimates in the literature typically range from 10–30% (Savignac et al., 2024; Buchheim et al., 2024; Baumann et al., 2024; Abberger et al., 2024). To the best of our knowledge, only Coibion et al. (2020b) have examined realized pass-through, and they find that one year after treatment, wages are not statistically different in treated firms compared to the control group. In contrast, we find a pass-through rate of nearly 60%, and the observed wage changes align with expectations, suggesting that firms' expectations were in fact realized.

The positive impact of inflation expectations on firms' purchases indicates that a 1 percentage point decline in expectations results in a 1 percent decline in a firm's purchasing activity from upstream (supplier) firms, as documented in Table-10. Consistent with this, we observe a 1 percent decline in the number of suppliers as well. At first glance, this impulse to decline purchases while simultaneously increasing sales and employment seems contradictory. However, this behavior is consistent with a forward-looking inventory management. When firms anticipate a slower increase in future input prices, they have less incentive to front-load purchases to build up inventory or lock in current costs. The absence of upward cost pressure reduces the urgency to accumulate inputs, even as firms draw more heavily on existing inventories to meet higher sales expectations in an improved economic environment. For firms with heightened inflation expectations, the opposite logic applies: they increase inventories in anticipation of rising input costs, using front-loaded purchases as a cost-hedging strategy. Despite expecting weaker demand, they accu-

mulate inputs to mitigate future cost pressures. This forward-buying response to expected price increases explains the positive impact on purchases for firms with higher inflation expectations, even as these firms pull back on hiring and sales in anticipation of a weaker economic outlook.

Lastly, Appendix-K shows that a standard New Keynesian model augmented with firm-level inflation expectation shocks can qualitatively replicate Facts 3–7. Although the model operates in general equilibrium while our empirical exercise isolates firm-level responses, this simple framework nevertheless reproduces the directional patterns we observe in the data. In the model, a negative inflation expectation shock is interpreted as a positive supply shock, resulting in higher sales and employment alongside lower prices and nominal wages—consistent with our empirical findings. At the same time, such a shock causes firms to perceive long-term interest rates as relatively more expensive, given that the longer end of the yield curve is more sensitive to shifts in inflation expectations. This perception leads firms to substitute away from long-term toward short-term borrowing within a CES framework for loan maturities. The mechanism is driven by expectations of future monetary easing—consistent with a Taylor rule—making it optimal to postpone long-term borrowing either to avoid locking in currently high rates or to reduce the real cost of debt in a lower-inflation environment. Furthermore, under the assumption that uncovered interest parity holds and the real cost of foreign borrowing is unchanged, firms respond to negative inflation expectation shocks by increasing FX-denominated borrowing relative to TL-denominated debt. This occurs because they expect the relative cost of TL borrowing to rise. In sum, while our empirical evidence demonstrates how an exogenous shift in inflation expectations affects firm behavior, a standard New Keynesian framework with inflation expectation shocks can account for the observed responses both in direction and in underlying mechanisms.

In sum, our findings document how inflation expectations affect real activity. On the one hand, firms respond to lower inflation expectations with an immediate increase in employment and sales. On the other hand, they simultaneously engage in forward-looking behavior: wage growth slows in line with expectations, and purchases and inventories decline despite heightened sales. This reflects firms' belief that price growth will be weaker, reducing their incentive to

hedge against future cost pressures by stockpiling inputs. Conversely, firms with higher inflation expectations increase input purchases and accumulate inventories—even as sales decline—as a hedging strategy against anticipated cost increases.

6 Robustness Analysis

In this section, we systematically assess the robustness of the baseline results obtained in the previous section through various complementary econometric approaches. These robustness analyses include alternative IV methodologies, explicit controls for uncertainty, alternative uncertainty measures, sample selection strategies, and longer horizon comparisons. Below, we discuss the rationale, methodology, and detailed interpretations for each robustness check, summarizing their collective implications for our main findings.

Initially, we employ a simplified IV method known as the Wald (1940) estimator, directly utilizing the random treatment assignment indicator as an instrument for posterior inflation expectations. Intuitively, the first stage of this approach captures how firms' inflation expectations shift as a direct consequence of random treatment assignment. By isolating this exogenous variation, the second-stage estimates reflect how these induced changes in inflation expectations causally influence firm behaviors. Specifically, the Wald estimator provides a causal estimate derived as the ratio of the intent-to-treat (ITT) effect—capturing the direct impact of treatment assignment on firm outcomes—to the first-stage effect, representing the impact of treatment assignment on inflation expectations. The results obtained using this Wald estimator reaffirm our baseline findings, demonstrating that firms significantly adjust borrowing behaviors, credit compositions, and foreign currency activities in response to elevated inflation expectations. The consistency of these results, detailed in Tables F1 to F6, demonstrates robustness to the functional form and maintains economic meaningfulness, despite minor variations in coefficient magnitudes.

We then extend our robustness analysis to disentangle the distinct impacts of inflation expectations and associated uncertainty by simultaneously instrumenting both measures using treat-

ment assignment as the sole source of exogenous variation. In the first stage, we explicitly show how treatment assignment affects both the mean level of inflation expectations and the uncertainty surrounding these forecasts, as reflected by the dispersion in firms' posterior subjective distributions. Notably, the first-stage relationship for uncertainty is relatively weak, suggesting limited explanatory power of the treatment in influencing subjective uncertainty. Consequently, the second-stage results summarized in Tables-F7 to -F12 reflect predominantly the causal influence of mean inflation expectations. Indeed, the coefficients associated with mean inflation expectations remain statistically significant and economically substantial, whereas uncertainty-related coefficients typically appear insignificant or negligible. This indicates that firms predominantly respond to changes in the first moment of their inflation expectations rather than fluctuations in uncertainty. Such evidence underscores the critical role of clear and credible policy signals concerning future inflation.

Further, we adopt an alternative measure of inflation uncertainty based on firms' rounding behavior in reported inflation forecasts, following the methodology proposed by Binder (2017b). The intuition behind this proxy is that greater forecast uncertainty results in less precise (more rounded) reported expectations. Since we did not measure prior uncertainty explicitly in the RCT, we obtained this proxy uncertainty measure from firms' rounding behavior. Instrumenting both mean inflation expectations and this rounding-based uncertainty measure with treatment assignment, our first-stage regression captures how treatment influences both the level and precision of firms' inflation forecasts. Once the estimated uncertainty is obtained, we follow the methodology by Kumar et al. (2023). Given the weak first-stage results for rounding-based uncertainty, we focus primarily on the robust first-stage and second-stage relationships involving mean inflation expectations. The second-stage estimates, reported in Tables-F13 to -F18, robustly confirm that shifts in mean inflation expectations exert significant, economically meaningful effects on firm decisions. Conversely, rounding-based uncertainty measures remain statistically insignificant and economically insubstantial, further confirming that uncertainty does not independently drive firms' economic decisions.

Additionally, we reassess the robustness of our baseline estimates by restricting the analysis to firms actively engaged in borrowing and foreign currency trading. By excluding firms with imputed zero credit flows, this approach aims to verify that our main findings are not driven by imputation choices. Results from this active-only subsample, as detailed in Tables-F19 and -F20, remain highly consistent with our main analysis. Lower inflation expectations continue to significantly decrease total and long-term borrowing, increase short-term borrowing, and influence foreign currency trading behaviors. This robustness to sample selection bolsters confidence in our empirical findings, suggesting genuine behavioral responses rather than methodological artifacts.

Finally, we extend the robustness analysis by comparing outcomes over a broader pre- and post-treatment horizon using a difference-in-differences framework. By comparing credit and foreign currency activities during the four-month post-treatment window (June–September) against the pre-treatment period (January–April), this approach controls for firm-specific, time-invariant heterogeneity and general temporal trends. The results in Table-F21 robustly support our baseline conclusions. Lower inflation expectations remain associated with declining total credit flows, altered credit composition favoring short-term credit, reduced long-term borrowing, increasing borrowing costs due to the compositional shift in the debt structure, and decreased foreign currency holding. The sustained significance across a longer observational window indicates the economic durability and causal validity of the observed behavioral adjustments.

7 Conclusion

Using an information-RCT, we create exogenous variation in firms' inflation expectations in a high-inflation environment and causally document their effects on firms' decisions. We show how these expectations affect firms' own price, wage, and cost expectations, borrowing behavior, and real outcomes.

First, firms learn from publicly available information—including professional forecasts and

Central Bank projections—highlighting the importance of communication in shaping firms' inflation expectations. Second, pass-through from inflation expectations to prices is significant when the nominal anchor is lost. In a de-anchored regime, firms perceive deviations from the inflation target as highly persistent, leading them to incorporate changes in inflation expectations into their own price, wage, and cost expectations. Firms with lower inflation expectations anticipate reduced cost pressures: they expect to pay lower wages, face lower unit costs, and charge lower prices.

Third, changes in inflation expectations translate into concrete behavioral adjustments. On the financial side, we observe a decline in borrowing volumes and a shift from long-term to short-term credit, resulting in a higher average borrowing cost despite reduced overall demand. This maturity shortening reflects firms' reluctance to lock in currently high rates, consistent with expectations of future monetary easing. On the real side, firms with lower inflation expectations expand employment and sales—consistent with a supply-side interpretation of inflation—while simultaneously reducing input purchases and inventories. This forward-looking behavior suggests that firms expect milder input-price growth and therefore have less incentive to front-load purchases as a hedge against future cost increases. In short, our findings collectively display a coherent picture of firms operating with a supply-side view in a high-inflation economy: lower inflation expectations are perceived as good news, leading firms to become optimistic (Fact 3), expand real activity (Fact 7), and recalibrate their financial strategies to position for a more stable future (Facts 4, 5, 6).

Overall, our study highlights three takeaways: (i) communication matters—firms learn from professional forecasts and central-bank projections; (ii) anchoring matters—when the nominal anchor is lost, pass-through rises and expectations disperse, making deviations from the target more persistent as firms transmit them more strongly to their own price, wage, and cost expectations; and (iii) expectations matter—firms' inflation expectations are first-order drivers of decision-making across financing, FX transactions, employment, sales, and input purchases.

Table 1: Descriptive statistics by treatment status

	Control		Treat #1		Treat #2		Treat #3		Treat #4		Full sample		Manufacturing firms	
Variable	mean	sd	mean	sd	mean	sd	mean	sd	mean	sd	mean	sd	mean	sd
Net Sales (billion TL)	1.31	3.41	1.34	3.91	1.57	4.24	1.47	3.92	1.32	3.85	1.41	4.18	1.67	5.15
Assets (billion TL)	1.21	2.88	1.36	4.31	1.31	4.27	1.32	3.44	1.31	3.62	1.30	3.95	1.82	4.99
Capital (K) (billion TL)	0.25	0.72	0.34	0.42	0.27	0.91	0.23	0.71	0.21	0.62	0.26	0.76	0.32	0.89
Exports (billion TL)	0.41	0.19	0.45	0.24	0.46	0.31	0.52	0.27	0.48	0.29	0.47	0.21	1.17	4.09
Net Profit (billion TL)	0.81	0.17	0.87	0.34	0.88	0.29	0.88	0.27	0.89	0.30	0.87	0.29	0.89	1.81
Age	22.85	12.42	22.55	11.36	22.90	12.71	23.44	12.09	22.71	12.86	22.89	12.97	23.14	16.51
Number of Employees	615.17	910.86	637.65	842.25	624.49	886.26	662.75	851.02	621.67	798.04	632.18	874.21	649.83	1330.41
Prior Expectations														
CPI (implied mean)	58.63	18.23	62.48	18.73	59.14	16.65	58.61	17.82	59.31	17.56	59.55	17.56	-	-
PPI (implied mean)	58.45	20.09	60.28	20.05	57.91	18.81	58.99	20.18	57.25	18.82	58.19	19.29	-	-
Production Capacity Utilization	68.62	19.75	69.81	19.27	69.38	19.47	69.29	20.65	69.47	21.51	69.29	21.51	-	-
Posterior Expectations (RCT)														
CPI (posterior mean)	58.79	21.24	51.73	20.65	53.66	19.41	51.27	19.99	55.77	20.01	54.52	20.44	-	-
PPI (posterior mean)	55.66	28.18	50.52	22.12	51.84	18.09	49.18	19.69	52.15	19.79	51.93	19.79	-	-
Wage Expectations	41.82	19.22	38.22	19.31	37.62	21.09	38.25	18.84	39.94	18.99	39.19	19.04	-	-
Unit Cost Expectations	40.93	25.85	37.68	19.92	39.26	21.67	37.71	22.02	38.67	20.83	38.95	22.26	-	-
Price Expectations	33.86	21.12	30.88	20.56	30.81	20.96	30.12	22.36	32.19	21.12	31.75	21.41	-	-
No of obs	303		257		274		291		271		1,396		129,041	

Notes: The table provides descriptive statistics for various firm characteristics of the survey participants. The sample is randomly selected and reflects the population of firms accurately. The sample is representative of the population of firms in terms of key variables such as employment, sales, assets, capital, age and other relevant characteristics. Assignment to treatment and control groups is based on stratified random sampling by sector, employment, and prior inflation expectations. The manufacturing firm column represents the entire universe of economically active manufacturing firms, in accordance with Turkey's Tax Procedure Law, are required to maintain balance sheet and income statements (The BTS is a subset drawn from this larger universe of firms).

Table 2: Expectation Formation Process

	Outcome: Forecast Revision					
	Treatment		One Month after Treatment		Two Months after Treatment	
	(1) CPI	(2) PPI	(3) CPI	(4) PPI	(5) CPI	(6) PPI
T1 (SPF expectations)	-6.14***	-1.91***	-0.72***	-0.63***	-0.97	0.08
	(1.31)	(0.92)	(0.26)	(0.27)	(1.05)	(1.06)
T2 (CBRT 1-y ahead forecast)	-3.08***	-2.12***	-0.74***	-0.62***	0.16	0.56
	(1.24)	(0.87)	(0.29)	(0.28)	(1.02)	(1.03)
T3 (CBRT 2-y ahead forecast)	-4.75***	-3.79***	-0.67***	-0.59***	-0.62	-0.53
	(1.21)	(1.01)	(0.28)	(0.26)	(0.99)	(1.01)
T4 (Inflation Target)	-2.89***	-1.87***	-0.55***	-0.51**	0.68	0.86
	(1.22)	(0.91)	(0.27)	(0.27)	(1.03)	(1.04)
Firm Controls	✓	✓	✓	✓	✓	✓
Sector FE	✓	✓	✓	✓	✓	✓
Province FE	✓	✓	✓	✓	✓	✓
R-Squared	0.58	0.56	0.28	0.26	0.17	0.18
Observations	1,181	1,181	1,160	1,160	1,151	1,151

Notes: The table presents the estimation results for the average treatment effect on both CPI and PPI expectations across each treatment group. The forecast revision is defined as the difference between posterior and prior inflation expectations ($\text{Posterior}_i - \text{Prior}_i$), measured immediately after the treatment, one month after the treatment, and two months after the treatment. Prior inflation expectations are based on May BTS firm data, while the posterior expectations are represented by the RCT survey in the first two columns, BTS June firm expectations for one month after the treatment, and BTS July firm expectations for two months after the treatment in the final two columns. Notably, the effect disappears two months after the treatment. All regressions are estimated using the Huber robust method to account for outliers and influential observations. Robust standard errors are reported in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Table 3: Treatment Effects on Expectations

	CPI		PPI	
	(1) mean	(2) best	(3) mean	(4) best
Revisions in beliefs immediately after treatment				
Prior Mean	0.815***	0.830***	0.820***	0.856***
	(0.041)	(0.040)	(0.038)	(0.030)
Prior mean × T1	-0.287***	-0.312***	-0.403***	-0.439***
	(0.059)	(0.059)	(0.064)	(0.060)
Prior mean × T2	-0.240***	-0.297***	-0.303***	-0.325***
	(0.065)	(0.066)	(0.059)	(0.055)
Prior mean × T3	-0.117*	-0.128**	-0.233***	-0.244***
	(0.064)	(0.067)	(0.060)	(0.060)
Prior mean × T4	-0.141**	-0.150***	-0.200***	-0.220***
	(0.062)	(0.064)	(0.063)	(0.063)
T1 (SPF expectations)	9.939***	10.104***	10.334***	12.395***
	(3.479)	(3.439)	(3.668)	(3.489)
T2 (CBRT 1-y ahead forecast)	10.187***	10.232***	10.757***	11.828***
	(3.774)	(3.742)	(3.398)	(3.168)
T3 (CBRT 2-y ahead forecast)	0.662	11.586***	8.140**	10.330***
	(3.685)	(3.747)	(3.419)	(3.442)
T4 (Inflation Target)	7.100*	10.389***	10.323***	9.294***
	(3.705)	(3.773)	(3.492)	(3.499)
Firm Controls	✓	✓	✓	✓
Sector FE	✓	✓	✓	✓
Province FE	✓	✓	✓	✓
R-squared	0.72	0.76	0.73	0.75
Observations	1,183	1,183	1,192	1,192

Notes (Fact-1): The table reports estimation results for Equation-(1). The dependent variable, (Posterior$_i$), refers to CPI in Columns (1)-(2), and to PPI in Columns (3)-(4). Mean and standard deviations are calculated based on triangular distributions. Four different treatments are applied. The mean and the standard deviation of prior inflation expectations are 58% and 18, respectively. All regressions are estimated using the Huber robust method to account for outliers and influential observations. Robust standard errors are reported in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Table 4: Treatment Effects on Expectations after one and two months

	One Month after Treatment		Two Months after Treatment	
	CPI	PPI	CPI	PPI
Prior mean	0.59***	0.62***	0.65***	0.68***
	(0.05)	(0.04)	(0.02)	(0.02)
Prior mean × T1	-0.08***	-0.12***	-0.02	0.03
	(0.04)	(0.05)	(0.03)	(0.02)
Prior mean × T2	-0.11***	-0.13***	-0.01	0.03
	(0.05)	(0.05)	(0.03)	(0.03)
Prior mean × T3	-0.13***	-0.14***	0.01	-0.04
	(0.07)	(0.05)	(0.02)	(0.03)
Prior mean × T4	-0.06	-0.05	0.01	-0.03
	(0.07)	(0.06)	(0.02)	(0.03)
T1 (SPF expectations)	-7.14***	-6.10***	1.23	-1.21
	(3.41)	(3.06)	(1.58)	(1.71)
T2 (CBRT 1-y ahead forecast)	-6.31***	-6.92***	0.69	-1.01
	(3.11)	(3.06)	(1.67)	(1.66)
T3 (CBRT 2-y ahead forecast)	-8.96***	-5.99***	-0.59	1.29
	(3.54)	(2.97)	(1.48)	(1.73)
T4 (Inflation Target)	-3.42	-2.51	0.69	1.65
	(4.06)	(3.17)	(1.64)	(1.82)
Firm Controls	✓	✓	✓	✓
Sector FE	✓	✓	✓	✓
Province FE	✓	✓	✓	✓
R-squared	0.71	0.68	0.66	0.67
Observations	1,160	1,160	1,151	1,151

Notes (Fact-1): The table presents the estimation results for Equation (1) one month and two months following the treatment. The posterior and prior are both represent the mean expectations for CPI and PPI. The firm-level controls include firm age, leverage, employment, and exporter status. Four different treatments are applied. The mean and the standard deviation of prior inflation expectations are 58% and 18, respectively. All regressions are estimated using the Huber robust method to account for outliers and influential observations. Robust standard errors are reported in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Table 5: Inflation Expectation Pass-Through to Firms' Wage, Unit Cost, Price Expectations and External Outlook

	Panel A: Pass-through to Wage, Cost, and Pricing Expectations		
	(1) Wage Expectations	(2) Unit Cost Expectations	(3) Price Expectations
Posterior Mean	0.582**	0.535***	0.551***
	(0.250)	(0.189)	(0.182)
Prior Perception	0.249***	0.104***	0.309***
	(0.046)	(0.029)	(0.031)
First Stage F-stat (KP Wald)	50.17	49.91	48.96
R-squared	0.25	0.32	0.30
Observations	1,189	1,187	1,183
	Panel B: Pass-through to Business Outlook and Credit Sentiment		
	(4) Firm Own Bussiness Expectations	(5) Economic Expectations	(6) Credit Conditions Expectations
Posterior Mean	0.014***	0.024***	0.012***
	(0.003)	(0.002)	(0.002)
Prior Perception	0.230***	0.263***	0.166***
	(0.032)	(0.030)	(0.039)
First Stage F-stat (KP Wald)	49.91	50.25	50.53
R-squared	0.12	0.17	0.10
Observations	1,173	1,187	1,169
Firm Controls	✓	✓	✓
Sector FE	✓	✓	✓
Province FE	✓	✓	✓

Notes (Fact-2 and 3): The table reports estimation results for Equation-(2). In Panel A, the dependent variables are wage, unit cost, and price expectations (in percent). In Panel B, dependent variables are qualitative expectations coded such that 1 = optimist, 2 = neutral, and 3 = pessimistic. All specifications include firm controls (age, leverage, employment, and exporter status), sector and province fixed effects. In each regression, we apply Huber regression in the first stage to account for outliers and influential observations and employ the jackknife procedure in the second stage. Heteroskedasticity robust standard errors are reported in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Table 6: Effects of Inflation Expectations on Credit (Flow) , Borrowing Cost and Credit Utilization Rate

	(1) $y_{i,t+1}$	(2) $y_{i,t+2}$	(3) $y_{i,t+3}$	(4) $y_{i,t+4}$
Panel A: Effect on Credit				
Posterior Mean	0.024*	0.029**	0.014**	0.012
	(0.013)	(0.011)	(0.007)	(0.009)
First Stage F-stat (KP Wald)	39.25	40.33	41.12	41.12
R-squared	0.02	0.03	0.03	0.02
Observations	1,159	1,161	1,160	1,160
Panel B: Effect on Borrowing Cost				
Posterior Mean	-0.037**	-0.018	-0.003***	-0.004***
	(0.016)	(0.015)	(0.001)	(0.002)
First Stage F-stat (KP Wald)	23.01	21.51	21.88	16.75
R-squared	0.10	0.04	0.08	0.09
Observations	569	543	514	550
Panel C: Effect on Credit Utilization Rate				
Posterior Mean	0.013***	0.010***	0.001	0.001
	(0.002)	(0.002)	(0.001)	(0.001)
First Stage F-stat (KP Wald)	42.09	45.69	44.34	45.93
R-squared	0.12	0.12	0.11	0.13
Observations	1,167	1,163	1,164	1,159
Firm Controls	✓	✓	✓	✓
Sector FE	✓	✓	✓	✓
Province FE	✓	✓	✓	✓

Notes (Fact-4): The table reports estimation results for Equation-(2). In Panel A, the dependent variable is defined as $y_{it+h} = \log\left(\frac{cr_{i,t+h}}{cr_{i,t-1}}\right)$, where $cr_{i,t+h}$ represents the flow credit amount at time $t+h$. In Panel B, the dependent variable is the weighted average interest rate charged on flow credits at time $t+h$, $y_{it+h} = r_{i,t+h}$. In Panel C, the dependent variable is the credit utilization rate, defined as the ratio of total credit used to the total credit line at time $t+h$, $y_{i,t+h} = \frac{cr_{i,t+h}}{c.linei,t+h}$. The credit utilization rate is measured on a scale from 0 to 1. The pre-RCT means for the control group are 12% for credit flow growth, approximately 50.9% for borrowing costs (based on the exponentiated log mean of 3.93), and 79% for the credit utilization rate. In each regression, we apply Huber regression in the first stage to account for outliers and influential observations and employ the jackknife procedure in the second stage. Heteroskedasticity robust standard errors are reported in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Table 7: Effects of Inflation Expectations on Short-Term and Long-Term Borrowing (Flow)

	(1) $y_{i,t+1}$	(2) $y_{i,t+2}$	(3) $y_{i,t+3}$	(4) $y_{i,t+4}$
	Panel A: Effect on Long-term Credit			
Posterior Mean	0.047***	0.039***	0.028***	0.002
	(0.005)	(0.005)	(0.004)	(0.002)
R-squared	0.26	0.27	0.24	0.22
First Stage F-stat (KP Wald)	42.40	40.19	40.64	39.82
Observations	1,165	1,163	1,162	1,166
	Panel B: Effect on Short-term Credit			
Posterior Mean	-0.027***	-0.033***	-0.001	-0.003
	(0.004)	(0.003)	(0.001)	(0.003)
R-squared	0.19	0.17	0.18	0.17
First Stage F-stat (KP Wald)	41.68	42.64	45.11	39.19
Observations	1,169	1,168	1,163	1,161
	Panel C: Effect on Long-term Borrowing Cost			
Posterior Mean	0.028*	0.017*	0.029**	0.024
	(0.016)	(0.009)	(0.014)	(0.020)
R-squared	0.12	0.12	0.11	0.13
First Stage F-stat (KP Wald)	12.15	12.09	11.42	12.56
Observations	235	234	217	238
	Panel D: Effect on Short-term Borrowing Cost			
Posterior Mean	-0.028***	-0.032***	-0.053**	-0.013
	(0.007)	(0.008)	(0.023)	(0.020)
R-squared	0.12	0.12	0.11	0.13
First Stage F-stat (KP Wald)	15.25	14.71	14.26	13.95
Observations	293	283	257	300
Firm Controls	✓	✓	✓	✓
Sector FE	✓	✓	✓	✓
Province FE	✓	✓	✓	✓

Notes (Fact-4): This table presents the estimation results for Equation-(2). In Panel A and B, the dependent variable is defined as $y_{it+h} = \log\left(\frac{cr_{i,t+h}}{cr_{i,t-1}}\right)$, where $cr_{i,t+h}$ represents the long-term and short-term flow credit amount at time $t+h$, respectively. In Panel C and D, the dependent variable is the weighted average interest rate charged on flow long-term and short-term credits at time $t+h$, $y_{it+h} = r_{i,t+h}$. The pre-RCT means for the control group are 12% for long-term credit growth, 8% for short-term credit growth, approximately 55.3% for long-term borrowing costs (based on the exponentiated log mean of 4.01), and approximately 46.5% for short-term borrowing costs (based on the exponentiated log mean of 3.84). In each regression, we apply Huber regression in the first stage to account for outliers and influential observations and employ the jackknife procedure in the second stage. Heteroskedasticity robust standard errors are reported in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Table 8: Effects of Inflation Expectations on Outstanding Credit Composition

	(1) $y_{i,t+1}$	(2) $y_{i,t+2}$	(3) $y_{i,t+3}$	(4) $y_{i,t+4}$
	Panel A: Effect on Total Outstanding Credit			
Posterior Mean	0.030***	0.038***	0.008**	0.001
	(0.009)	(0.008)	(0.003)	(0.002)
R-squared	0.06	0.05	0.05	0.03
First Stage F-stat (KP Wald)	38.75	39.26	38.10	37.35
Observations	1,165	1,167	1,162	1,163
	Panel B: Effect on Long-term Outstanding Credit			
Posterior Mean	0.033***	0.041***	0.015	0.021
	(0.013)	(0.012)	(0.017)	(0.019)
R-squared	0.05	0.07	0.06	0.06
First Stage F-stat (KP Wald)	37.85	36.52	39.87	49.89
Observations	1,162	1,160	1,161	1,165
	Panel C: Effect on Short-term Outstanding Credit			
Posterior Mean	-0.026***	-0.021***	-0.001	-0.002*
	(0.007)	(0.006)	(0.002)	(0.001)
R-squared	0.04	0.03	0.02	0.06
First Stage F-stat (KP Wald)	39.40	42.07	40.30	44.65
Observations	1,168	1,162	1,162	1,164
	Panel D: Effect on TL Denominated Outstanding Credit			
Posterior Mean	0.038***	0.012	0.034***	0.015
	(0.013)	(0.009)	(0.013)	(0.014)
R-squared	0.05	0.05	0.07	0.06
First Stage F-stat (KP Wald)	39.67	37.63	44.31	43.19
Observations	1,164	1,161	1,171	1,165
	Panel E: Effect on FX Denominated Outstanding Credit			
Posterior Mean	-0.018***	-0.019***	-0.011***	0.006
	(0.006)	(0.004)	(0.003)	(0.005)
R-squared	0.05	0.05	0.05	0.04
First Stage F-stat (KP Wald)	46.02	43.34	45.89	39.45
Observations	1,169	1,168	1,158	1,160
Firm Controls	✓	✓	✓	✓
Sector FE	✓	✓	✓	✓
Province FE	✓	✓	✓	✓

Notes (Fact-4 and 5): This table presents the estimation results for Equation-(2). In each panel, the dependent variable is defined as $y_{it+h} = \log\left(\frac{X_{i,t+h}}{X_{i,t-1}}\right)$, where $X_{i,t+h}$ represents the total outstanding credit amount in Panel A, long-term credits in Panel B, short-term credits in Panel C, TL-denominated credits in Panel D, and foreign currency-denominated credits in Panel E, respectively, all at time $t+h$. The pre-RCT means for the control group are 8% for total credit growth, 9% for long-term credit growth, 6% for short-term credit growth, 8% for TL-denominated credit growth, and 5% for FX-denominated credit growth.In each regression, we apply Huber regression in the first stage to account for outliers and influential observations and employ the jackknife procedure in the second stage. Heteroskedasticity robust standard errors are reported in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Table 9: Effect of Inflation Expectations on Foreign Currency Trading Behavior

	(1) $y_{i,t+1}$	(2) $y_{i,t+2}$	(3) $y_{i,t+3}$	(4) $y_{i,t+4}$
Panel A: Effect on Foreign Currency Purchases				
Posterior Mean	0.025^{***}	0.026^{**}	0.023^{*}	0.020
	(0.008)	(0.014)	(0.014)	(0.016)
R-squared	0.08	0.07	0.07	0.08
Panel B: Effect on Foreign Currency Selling				
Posterior Mean	-0.029^{***}	-0.031^{**}	-0.028^{***}	-0.029
	(0.011)	(0.015)	(0.015)	(0.019)
R-squared	0.09	0.09	0.08	0.11
Firm Controls	✓	✓	✓	✓
Sector FE	✓	✓	✓	✓
Province FE	✓	✓	✓	✓
First Stage F-stat (KP Wald)	57.77	55.41	55.49	50.58
Observations	1,167	1,163	1,164	1,159

Notes (Fact 6): The table reports estimation results for Equation-(2). In Panels A and B, the dependent variables are $y_{it+h} = \log\left(\frac{s_{i,t+h}}{s_{i,t-1}}\right)$ and $y_i = \log\left(\frac{b_{i,t+h}}{b_{i,t-1}}\right)$, where $s_{i,t+h}$ and $b_{i,t+h}$ correspond to the purchasing and selling of foreign currency at time $t+h$, respectively. The pre-RCT means for the control group are 9% for foreign currency purchases and 12% for foreign currency sales.. In each regression, we apply Huber regression in the first stage to account for outliers and influential observations and employ the jackknife procedure in the second stage. Heteroskedasticity robust standard errors are reported in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Table 10: Effects of Inflation Expectations on Real Outcomes

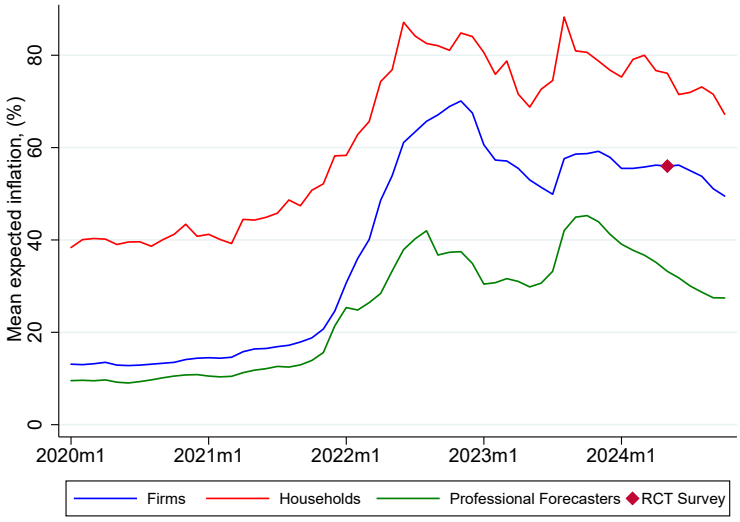
	(1) $y_{i,t+1}$	(2) $y_{i,t+2}$	(3) $y_{i,t+3}$	(4) $y_{i,t+4}$
Panel A: Effect on Sales				
Posterior Mean	-0.011^{**}	-0.021^{*}	-0.010	-0.009
	(0.006)	(0.010)	(0.015)	(0.010)
R-squared	0.07	0.11	0.09	0.08
Panel B: Effect on Number of Customers				
Posterior Mean	-0.013^{***}	-0.013^{***}	-0.014^{***}	-0.013^{***}
	(0.003)	(0.003)	(0.003)	(0.003)
R-squared	0.44	0.36	0.47	0.29
Panel C: Effect on Purchases				
Posterior Mean	0.004^{*}	0.010^{***}	0.009^{***}	0.005
	(0.002)	(0.003)	(0.003)	(0.003)
R-squared	0.18	0.15	0.16	0.15
Panel D: Effect on Number of Suppliers				
Posterior Mean	0.007^{**}	0.010^{***}	0.008^{**}	0.008^{*}
	(0.003)	(0.004)	(0.004)	(0.005)
R-squared	0.55	0.54	0.48	0.55
Firm Controls	✓	✓	✓	✓
Sector FE	✓	✓	✓	✓
Province FE	✓	✓	✓	✓
First Stage F-stat (KP Wald)	53.18	53.56	51.61	52.58
Observations	1,159	1,159	1,158	1,157

Notes (Fact 7): This table presents the estimation results for Equation-(2). The dependent variable in Panels A, B, C and D is defined as $y_{it+h} = \log\left(\frac{X_{i,t+h}}{X_{i,t-1}}\right)$, where $X_{i,t+h}$ denotes sales, number of buyers, purchases and number of sellers at time $t+h$, respectively. The pre-RCT means for the control group are 14% for sales growth, 11% for customer growth, 16% for purchase growth, and 18% for supplier growth. In each regression, we apply Huber regression in the first stage to account for outliers and influential observations and employ the jackknife procedure in the second stage. Heteroskedasticity robust standard errors are reported in parentheses. ***p<0.01, **p<0.05, *p<0.1.

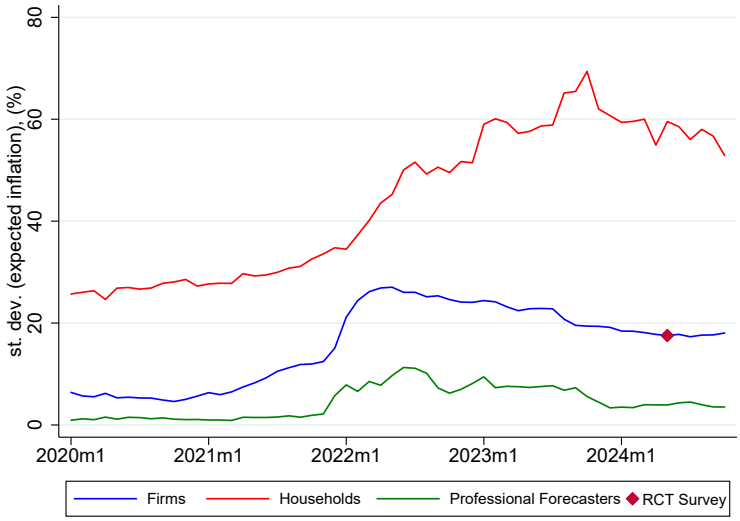
Table 11: Effects of Inflation Expectations on Employment, New Hirings and Wages

	(1) $y_{i,t+1}$	(2) $y_{i,t+2}$	(3) $y_{i,t+3}$	(4) $y_{i,t+4}$
Panel A: Effect on Employment				
Posterior Mean	-0.012^{***}	-0.011^{***}	-0.012^{***}	-0.010^{***}
	(0.004)	(0.004)	(0.004)	(0.004)
R-squared	0.08	0.06	0.06	0.07
Panel B: Effect on New Hirings				
Posterior Mean	-0.007^{**}	-0.002	-0.005	-0.008^{**}
	(0.003)	(0.004)	(0.004)	(0.004)
R-squared	0.06	0.05	0.06	0.05
Panel C: Effect on Wages				
Posterior Mean	0.005	0.006^{**}	0.009^{*}	0.006
	(0.005)	(0.003)	(0.005)	(0.005)
R-squared	0.05	0.04	0.05	0.05
Firm Controls	✓	✓	✓	✓
Sector FE	✓	✓	✓	✓
Province FE	✓	✓	✓	✓
First Stage F-stat (KP Wald)	53.18	53.56	51.61	52.58
Observations	1,159	1,159	1,158	1,157

Notes (Fact 7): This table presents the estimation results for Equation-(2). The dependent variable in Panels A, B and C is defined as $y_{it+h} = \log\left(\frac{X_{i,t+h}}{X_{i,t-1}}\right)$, where $X_{i,t+h}$ denotes employment, number of new hirings and wages at time $t+h$, respectively. The pre-RCT means for the control group are –9% for employment growth, –14% for new hirings, and 18% for wage growth. In each regression, we apply Huber regression in the first stage to account for outliers and influential observations and employ the jackknife procedure in the second stage. Heteroskedasticity robust standard errors are reported in parentheses. ***p<0.01, **p<0.05, *p<0.1.



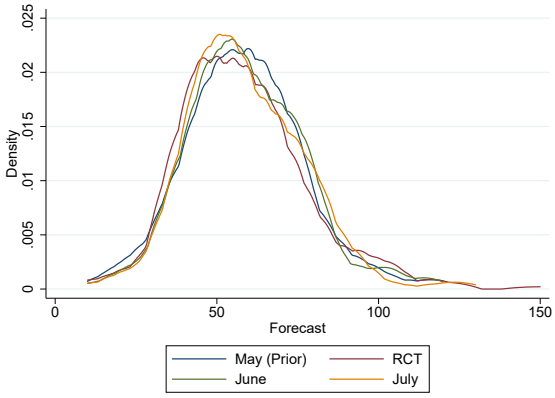
(a) Mean Expected Inflation



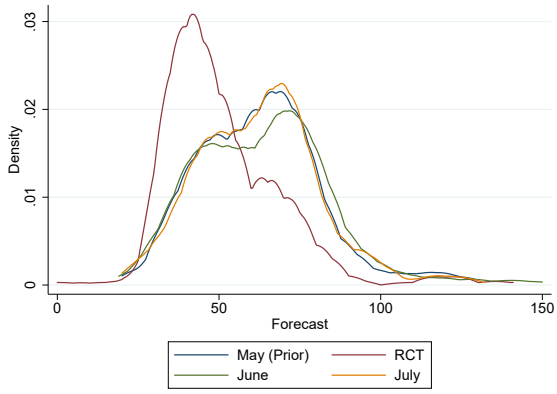
(b) Disagreement in Expected Inflation

Figure 1: One-Year-Ahead Inflation Expectations of Households, Firms, and Professionals

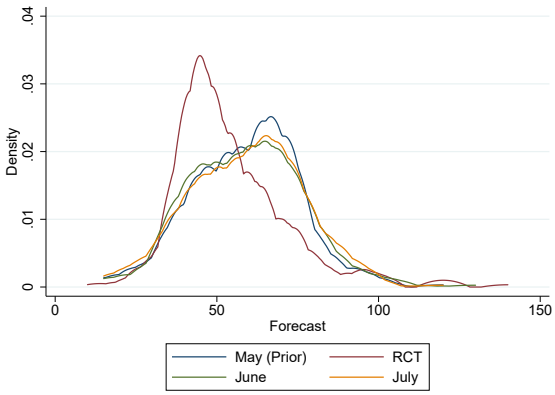
Notes: The figure presents the time series of one-year-ahead inflation expectations for households, firms, and professionals. The term "RCT survey" refers to the survey conducted in May 2024, with the prior expected inflation in the survey represented by a red diamond in the graph.



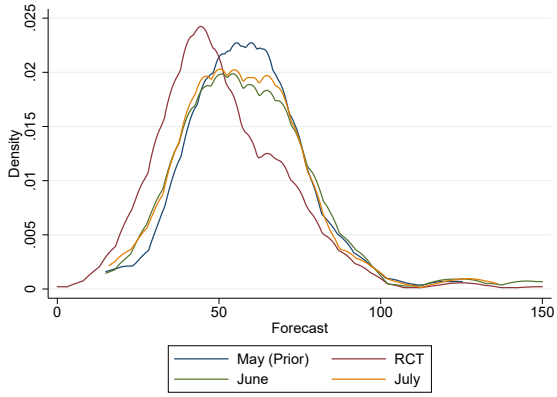
(a) Control



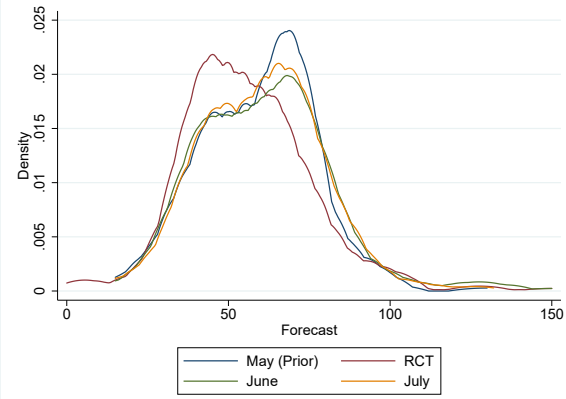
(b) Treatment #1



(c) Treatment #2



(d) Treatment #3



(e) Treatment #4

Figure 2: CPI Forecast

Notes: "RCT survey" refers to the survey conducted in May 2024. "BTS surveys" are conducted regularly by the CBRT, and we retrieved prior expectations from the May edition. The forecasts represent inflation (CPI) expectations for the next 12 months. Kernel densities of inflation expectations are displayed for each treatment group.

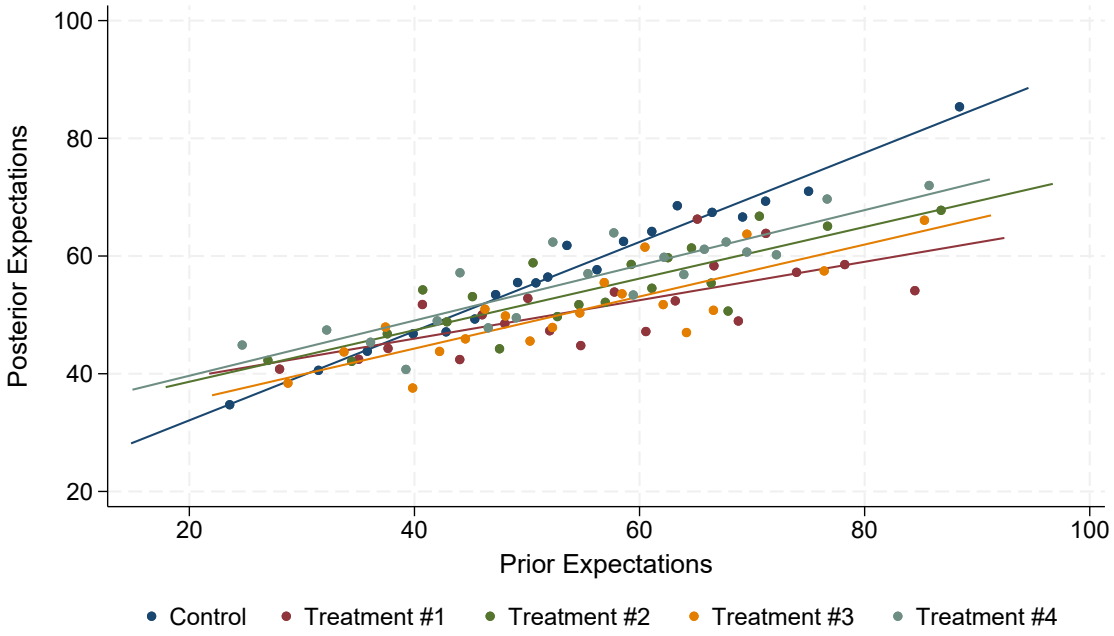
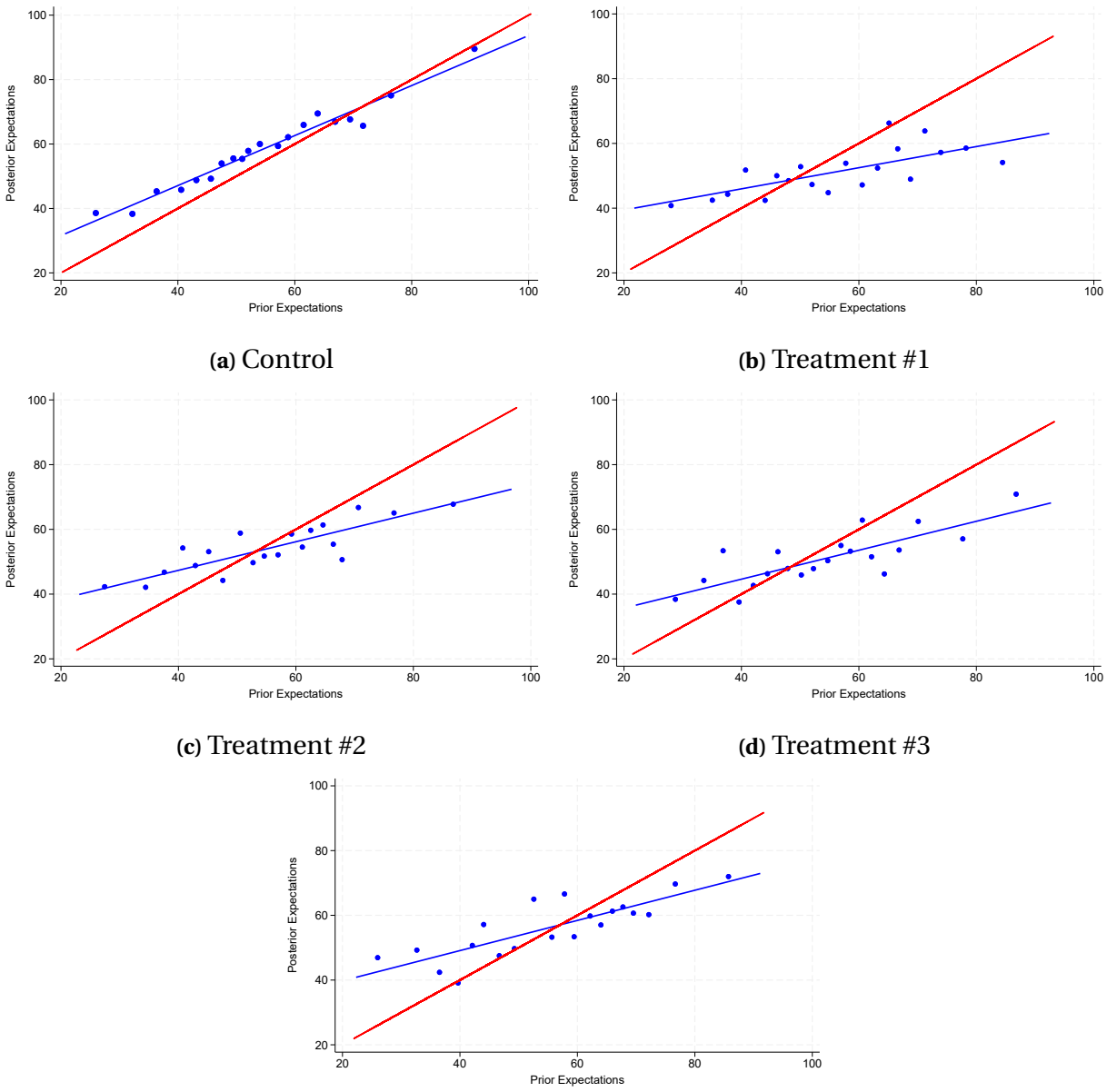


Figure 3: Response of Inflation Expectations by Treatment Type

Notes: Each panel presents a scatterplot of post-treatment inflation expectations and pre-treatment inflation expectations, both are implied mean from the reported expectation distribution of firms, by treatment group. The relationship is estimated using the covariate-adjusted binscatter approach of Cattaneo et al. (2024), controlling for firm size (employment), firm age, exporter status, leverage, and sector and province fixed effects.



(a) Control

(b) Treatment #1

(c) Treatment #2

(d) Treatment #3

(e) Treatment #4

Figure 4: Relationship between Prior and Posterior CPI Beliefs for Control/Treatment Groups

Notes: Each panel presents a scatterplot of post-treatment inflation expectations and pre-treatment inflation expectations, both are implied mean from the reported expectation distribution of firms, by treatment group. The relationship is estimated using the covariate-adjusted binscatter approach of Cattaneo et al. (2024), controlling for firm size (employment), firm age, exporter status, leverage, and sector and province fixed effects. The blue line is the 45-degree line. The red line is the fitted line.

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Appendix - A - BTS and RCT Detailed Questionnaire

BTS Detailed Questionnaire

The BTS (Business Tendency Survey) collects data through monthly surveys of a representative sample of 1,800 to 2,200 manufacturing firms, since 2007. The questions from the BTS translated from Turkish are provided below:

Question 1: The production volume of your company over the last three month: Increased, Stayed the same, Decreased.

Question 2: The total amount of your currently registered orders: Above normal, Normal for the season, Below normal.

Question 3: The amount of your currently registered export orders: Above normal, Normal for the season, Below normal.

Question 4: The level of your current finished goods inventory: Above normal, Normal for the season, Below normal.

Question 5: Your production volume expectation for the next three months: It will increase, It will remain the same, It will decrease.

Question 6: Your sales price expectation for the next three months: It will increase, It will remain the same, It will decrease.

Question 7: Your total employment expectation for the next three months: It will increase, It will remain the same, It will decrease.

Question 8: The total amount of orders you received in the last three months: Increased, Stayed the same, Decreased.

Question 9: Your total order quantity expectation for the next three months: It will increase, It will remain the same, It will decrease.

Question 10: The amount of export orders you received in the last three months: Increased, Stayed the same, Decreased.

Question 11: Your export order quantity expectation for the next three months: It will increase,

It will remain the same, It will decrease.

Question 12: Your capacity utilization rate (Please indicate the actual capacity utilization as a percentage of physical capacity at present.)

Question 13: The amount of your currently registered domestic market orders: Above normal, Normal for the season, Below normal.

Question 14: The amount of domestic market orders you received in the last three months: Increased, Stayed the same, Decreased.

Question 15: Your domestic market order quantity expectation for the next three months: It will increase, It will remain the same, It will decrease.

Question 16: Your domestic market sales price expectation for the next three months: It will increase, It will remain the same, It will decrease.

Question 17: Compared to the past twelve months, your expectation for fixed capital investment expenditures in the next twelve months: It will increase, It will remain the same, It will decrease.

Question 18: Your average unit cost over the last three months: Increased, Stayed the same, Decreased.

Question 19: Your expectation for the average unit cost in the next three months: It will increase, It will remain the same, It will decrease.

Question 20: Your annual inflation expectation at the end of the next twelve-month period (Please specify as a percentage): (CPI:...) (PPI:...)

Question 21 :Your expectation for the short-term Turkish Lira interest rate in the upcoming three-month period: It will increase, It will remain the same, It will decrease.

Question 22: Your opinion on the general trend in your industry compared to a month ago: More optimistic, The same, More pessimistic.

RCT-Survey Detailed Questionnaire

The survey, designed with an information RCT structure, was conducted in May 2024 using the official digital system utilized by the Business Tendency Survey.

Question 1: In the past 12 months:

Q1.1 What percentage do you think prices have changed? (Annual CPI inflation rate)

Q1.2 What percentage have your main product prices changed?

Q1.3 What percentage have your company employees' salaries changed?

(After the first question, we provide treatment information to each of the treatment groups.)

- **Group 1 (control)**: No information is provided.
- **Group 2**: *"According to the results of the Market Participants Survey for May 2024: The participants' expectation for the Consumer Price Index (CPI) 12 months from now is 33.21%. In other words, professionals expect general prices to increase by 33.21% over the next 12 months."*
- **Group 3**: *"According to the Central Bank of the Republic of Turkey's Inflation Report for May 2024: The Central Bank predicts that annual inflation will be 38% by the end of 2024. In other words, the Central Bank expects general prices to increase by 38% in 2024."*
- **Group 4**: *"According to the Central Bank of the Republic of Turkey's Inflation Report for May 2024: The Central Bank predicts that annual inflation will be 14% by the end of 2025. In other words, the Central Bank expects general prices to increase by 14% in 2025."*
- **Group 5**: *"Within the framework of the inflation targeting regime, the Central Bank's inflation target is 5%. In other words, the Central Bank aims for the general price level to rise by approximately 5% annually in the medium term."*

Question 2: What is your expectation for the Consumer Price Index (CPI) inflation rate at the end of the next 12 months? In other words, how much do you think the general level of consumer prices will increase over the next 12 months? Additionally, what are your lowest (optimistic) and highest (pessimistic) inflation rate estimates at the end of the next 12 months? (Please specify as a

percentage.)

Q2.1 At the end of the next 12 months, my annual (CPI) inflation estimate is:

Q2.2 My lowest (most optimistic) inflation (CPI) estimate is:

Q2.3 My highest (most pessimistic) inflation (CPI) estimate is:

Question 3: What is your expectation for the Producer Price Index (PPI) inflation rate at the end of the next 12 months? In other words, how much do you think the general level of producer prices will increase over the next 12 months? Additionally, what are your lowest (optimistic) and highest (pessimistic) inflation rate estimates at the end of the next 12 months? (Please specify as a percentage.)

Q3.1 At the end of the next 12 months, my annual (PPI) inflation estimate is:

Q3.2 My lowest (most optimistic) inflation (PPI) estimate is:

Q3.3 My highest (most pessimistic) inflation (PPI) estimate is:

Question 4: Compared to today, in what direction and by what percentage (%) do you expect the salaries of company employees to change by the end of the next 12-month period?

Question 5: Compared to today, in what direction and by what percentage (%) do you expect your company's unit cost to change by the end of the next 12-month period?

Question 6: Compared to today, in what direction and by what percentage (%) do you expect your company's employment to change by the end of the next 12-month period?

Question 7: Compared to today, in what direction and by what percentage (%) do you expect the prices of your main products to change by the end of the next 12-month period?

Question 8: Compared to today, disregarding price effects, in what direction and by what percentage (%) do you expect the quantity of export orders to change in real terms by the end of the next 12-month period?

Question 9: Compared to today, disregarding price effects, in what direction and by what percentage (%) do you expect the quantity of domestic market orders to change in real terms by the end of the next 12-month period?

Question 10: How many times do you plan to change your main product prices in the next 12-

month period?

Question 11: Compared to today, how difficult do you think it will be to obtain credit conditions or secure a new loan in the next 12-month period? (Easier, The same, Harder)

Question 12: Compared to today, your expectation for the general trend of your company in the next 12-month period: (Much more optimistic, more optimistic, the same, more pessimistic, much more pessimistic)

Question 13: Compared to today, your expectation for the general trend of the country's economy in the next 12-month period: (Much more optimistic, more optimistic, the same, more pessimistic, much more pessimistic)

Question 14: Compared to today, in what direction do you plan to change your profit margin in the next 12-month period? (I will decrease it, It will remain the same, I will increase it)

Appendix - B - Assignment into Treatment and Power Analysis

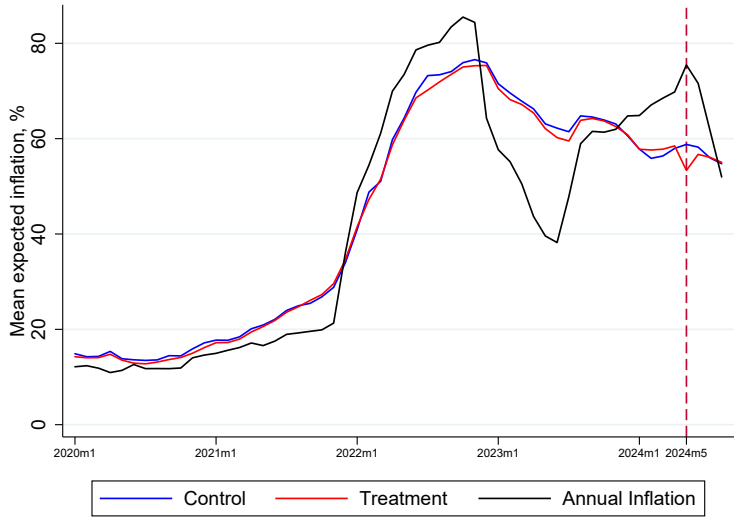
Assignment into Treatment

We categorized the firms in the sample based on three self-reported dimensions: two-digit sectoral classification, number of employees, and sales. Using these dimensions, we divided the sample into five distinct groups. To ensure balanced treatment assignment, we stratified the randomization process across these dimensions. This method reduces potential biases by maintaining comparability between the treatment and control groups. To ensure that the selection of firms into treatment and control groups was genuinely random, we performed a regression analysis using a dummy variable indicating whether a firm was treated as the dependent variable. The independent variables included observable firm characteristics, such as age, size (log of the number of employees), export share (exports as a percentage of total sales), profit margin (ratio of net profits to sales), leverage ratio (total debt-to-total assets), along with sector and province fixed effects. The regression results, presented in Table-B1, reveal that none of the observable characteristics are statistically significantly correlated with being assigned to the treatment group. Additionally, the constant term remains consistent across specifications, ranging between 0.77 and 0.79. This indicates that, on average, approximately 80% of firms were treated, and this proportion does not change when controlling for firm characteristics. These findings confirm that the treatment of firms was randomly assigned, adhering to the proportions targeted in the survey. Figure-B1 illustrates how inflation expectations for the control group and treatment group overlap before the treatment.

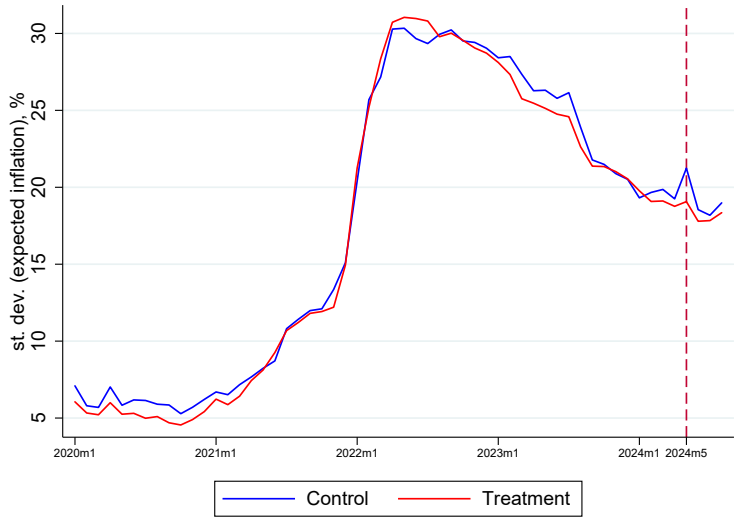
Table B1: Assignment into Treatment

	Dependent Variable: Treatment dummy				
	(1)	(2)	(3)	(4)	(5)
Number of Employees	0.006	0.005	0.005	0.006	0.002
	(0.008)	(0.008)	(0.009)	(0.009)	(0.009)
Age		0.009	0.009	0.010	0.013
		(0.019)	(0.018)	(0.019)	(0.021)
Export Share			-0.001	-0.002	-0.002
			(0.002)	(0.002)	(0.002)
Profit Margin			0.009	0.014	0.015
			(0.038)	(0.039)	(0.036)
Leverage			0.002	0.001	0.001
			(0.004)	(0.005)	(0.006)
Constant	0.771***	0.784***	0.793***	0.791***	0.792***
	(0.046)	(0.071)	(0.069)	(0.062)	(0.059)
Sector FE				✓	✓
Province FE					✓
R-squared	0.0004	0.0006	0.0006	0.0007	0.0009
Observations	1,390	1,390	1,390	1,390	1,390
p-value (F-stat)	1.000	0.782	0.924	1.0000	0.964

Notes: The table presents results from a linear regression where the dependent variable is binary, set to 1 if a firm is treated and 0 otherwise. Since group assignment (treatment or control) is fixed and cannot change after the initial assignment, all regressors represent averages over the survey period. The p-value (F-statistic) indicates the probability that all non-constant regressors have zero coefficients. *** p<0.01, ** p<0.05, * p<0.1



(a) Mean Expected Inflation



(b) Disagreement in Expected Inflation

Figure B1: Time Series of Inflation Expectations

Notes: The figure displays the time series of inflation expectations for both the treatment and control groups, along with the actual inflation reported by the Turkish Statistical Institute (TURKSTAT).

Power Analysis

To evaluate whether our experimental design has sufficient statistical power to detect meaningful treatment effects, we conduct a power analysis based on the observed distribution of inflation expectations across treatment and control groups.

The control group consists of 303 firms with a mean posterior CPI inflation expectation of 59.43 and a standard deviation of 17.93. The treatment group pools four randomly assigned subgroups (total $N = 1{,}093$), yielding a weighted mean of 53.76 and a pooled standard deviation of 18.79. The observed difference of 5.67 percentage points represents a moderate treatment effect relative to the variability of the outcome.

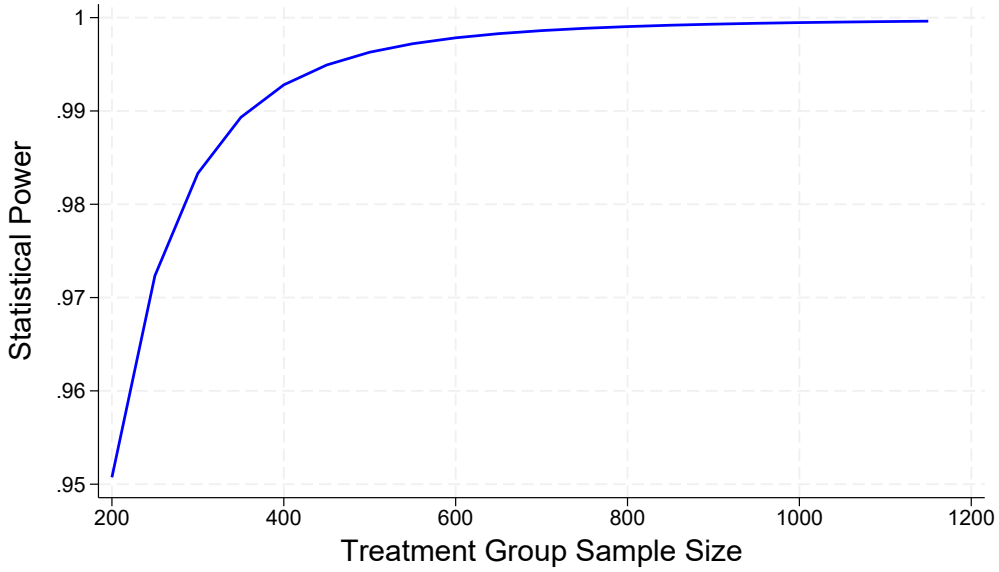


Figure B2: Power Curve for Detecting Treatment Effects on Inflation Expectations

Notes: Statistical power to detect a 5.67 percentage point difference in inflation expectations between treatment and control groups, assuming group-specific standard deviations of 18.79 (treatment) and 17.93 (control). The control group sample size is fixed at 303; treatment group size varies along the horizontal axis.

Figure-B2 presents the statistical power to detect this treatment effect as a function of the treatment group sample size, holding the control group size fixed at 303. The calculations are based on a two-sample comparison of means with unequal variances, using the observed means and standard deviations from the experiment. The significance level is set at $\alpha = 0.05$. The figure shows that power exceeds 95% even at 200 treated observations and approaches 100% at the

realized treatment group size of 1,093.

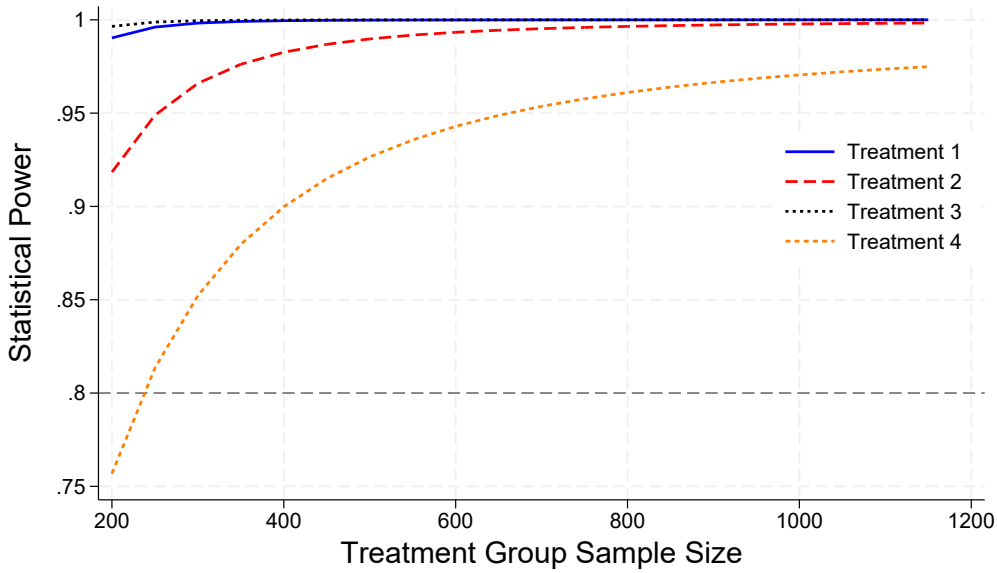


Figure B3: Power Curve for Detecting Treatment Effects on Inflation Expectations, by Treatment Groups

This figure displays statistical power curves for each treatment group compared to the control group, based on observed differences in posterior inflation expectations. Power is computed using a two-sample comparison of means assuming unequal variances. The control group sample size is fixed at 303 observations, and group-specific standard deviations are used for each treatment arm. Power is calculated at a 5% significance level ($\alpha = 0.05$), and treatment group sizes vary along the horizontal axis.

Figure-B3 presents statistical power curves for each individual treatment group compared to the control group, based on the observed means and standard deviations. Treatments 1, 2, and 3 exhibit high power, reaching or exceeding 95% at sample sizes close to their observed values, reflecting larger effect sizes relative to the control group. In contrast, Treatment 4 shows a more gradual increase in power, crossing the conventional 80% threshold at approximately 240 observations. This is consistent with the fact that Treatment 4 conveys the Central Bank's inflation target and has the weakest impact on inflation expectations among all treatment groups. Overall, the figure confirms that the experimental design provides sufficient statistical power to detect moderate effects across all treatment arms, particularly at the realized sample sizes.

These results suggest that the sample size in our experiment is sufficiently large to detect treatment effects of the observed magnitude with high probability. The design is therefore expected to provide adequate statistical power for analyzing the impact of information treatments on infla-

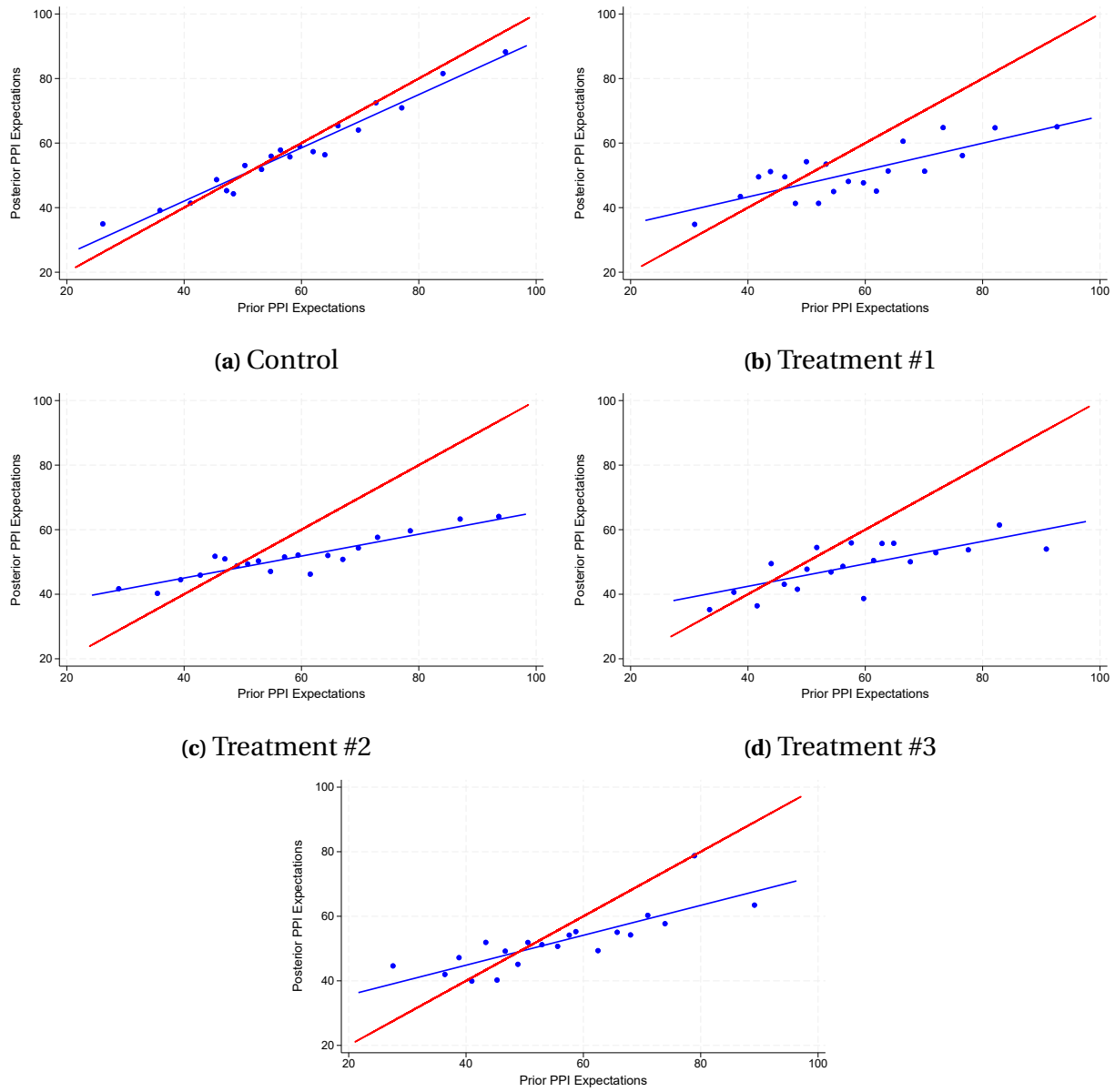
tion expectations.

Appendix - C - Determinants of Inflation Expectations

Table C1: Determinants of Inflation Expectations

	CPI			PPI		
	All Sample	Large Firms	SMEs	All Sample	Large Firms	SMEs
Sales	-0.09***	-0.04**	-0.10***	-0.07**	-0.04**	-0.12***
	(0.03)	(0.02)	(0.04)	(0.04)	(0.02)	(0.05)
Number of Employees	-0.30***	-0.22***	-0.80**	-0.33***	-0.44***	-0.53***
	(0.07)	(0.09)	(0.11)	(0.08)	(0.11)	(0.14)
Capacity Utilization	0.03***	0.02**	0.04***	0.04**	0.03***	0.05***
	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)
Age	-1.03***	-1.90***	-0.85***	-1.13***	-1.73***	-0.79***
	(0.18)	(0.30)	(0.25)	(0.22)	(0.38)	(0.29)
Exporter	-0.23**	-0.45**	-0.20**	-0.21**	-0.81***	-0.19**
	(0.11)	(0.19)	(0.10)	(0.10)	(0.16)	(0.09)
Return on Assets	0.04***	0.03***	0.05***	0.05***	0.04**	0.05***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)
Leverage	0.09***	0.07***	0.10***	0.07***	0.05***	0.09***
	(0.02)	(0.02)	(0.03)	(0.01)	(0.01)	(0.02)
Economic Expectation						
Optimistic	-0.49***	-0.59***	-0.41***	-0.69***	-0.67***	-0.74***
	(0.06)	(0.10)	(0.08)	(0.08)	(0.13)	(0.10)
Pessimistic	1.87***	2.00***	1.57***	2.02***	2.30***	1.64***
	(0.06)	(0.09)	(0.07)	(0.07)	(0.12)	(0.09)
Sales Price Expectation						
Increase	0.69***	0.56***	0.70***	1.05***	0.89***	1.09***
	(0.05)	(0.08)	(0.07)	(0.07)	(0.11)	(0.09)
Decrease	-0.30***	-0.20**	-0.42***	-0.35***	-0.18**	-0.38***
	(0.09)	(0.10)	(0.12)	(0.12)	(0.08)	(0.12)
Unit Cost Expectation						
Increase	0.55***	0.56***	0.50***	0.79***	0.87***	0.67***
	(0.05)	(0.07)	(0.06)	(0.06)	(0.10)	(0.08)
Decrease	-0.21*	-0.02	-0.30**	-0.33**	-0.15	-0.36**
	(0.11)	(0.16)	(0.14)	(0.13)	(0.21)	(0.17)
Production Volume Expectation						
Increase	-0.45***	-0.40***	-0.45***	-0.58***	-0.38***	-0.64***
	(0.05)	(0.07)	(0.06)	(0.06)	(0.10)	(0.08)
Decrease	0.66***	0.73***	0.63***	0.71***	0.82***	0.61***
	(0.06)	(0.10)	(0.08)	(0.08)	(0.13)	(0.10)
Firm FE	✓	✓	✓	✓	✓	✓
Sector x Year-Month FE	✓	✓	✓	✓	✓	✓
Year-Month FE	✓	✓	✓	✓	✓	✓
Province FE	✓	✓	✓	✓	✓	✓
R-squared	0.78	0.78	0.79	0.75	0.75	0.76
Observations	239,114	104,700	134,114	239,114	104,700	134,114

Notes: Entries represent coefficient estimates and standard errors from estimating the regression $y_{it} = \beta_0 + \Gamma X_{it} + \Pi Z_{i,t} + \alpha_i + \delta_{s,t} + \lambda_t + \phi_p + \varepsilon_{i,t}$, where the dependent variable y_{it} is the expectation for the annual consumer price index (CPI) at the end of the upcoming 12-month period, X_{it} represents firm-specific characteristics for firm i at year-month t, and $Z_{i,t}$ includes the firm's expectations about the overall economy, sales price, unit cost, and production volume over the next three months. The terms α_i, $\delta_{s,t}$, λ_t, and ϕ_p denote the firm, sector × year-month, year-month, and province fixed effects, respectively. Standard errors, clustered by firm, in parentheses. The sample covers all available BTS data, from 2009M1 to 2024M9. CPI and PPI expectations are reported separately. ***p<0.01, **p<0.05, *p<0.1.



(a) Control

(b) Treatment #1

(c) Treatment #2

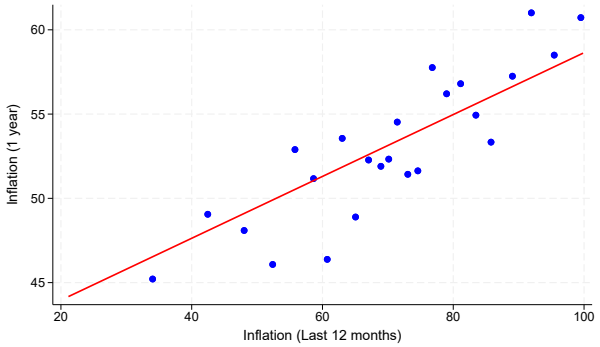
(d) Treatment #3

(e) Treatment #4

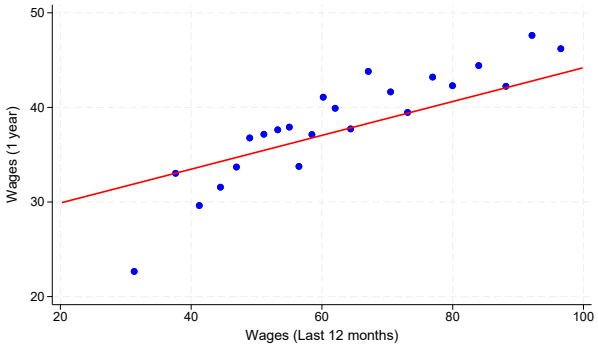
Figure C1: Relationship between Prior and Posterior PPI Beliefs for Control/Treatment Groups

Notes: Each panel presents a scatterplot of post-treatment PPI inflation expectations and pre-treatment PPI inflation expectations, both are implied mean from the reported expectation distribution of firms, by treatment group. The relationship is estimated conditional on controls for firm size (measured by employment), firm age, exporter status, leverage, as well as sector and province fixed effects. The blue line is the 45-degree line. The red line is the fitted line.

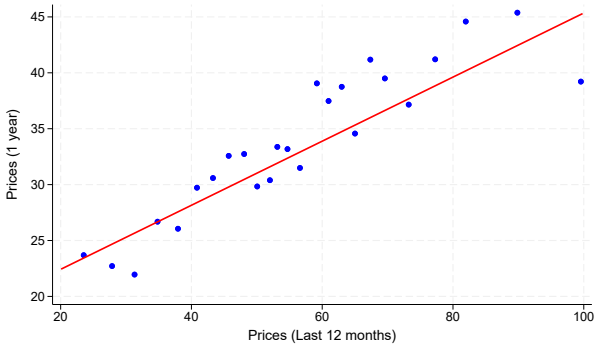
Appendix - D- Correlation of Firms' Perceptions and Expectations



(a) Perceived and Expected Inflation



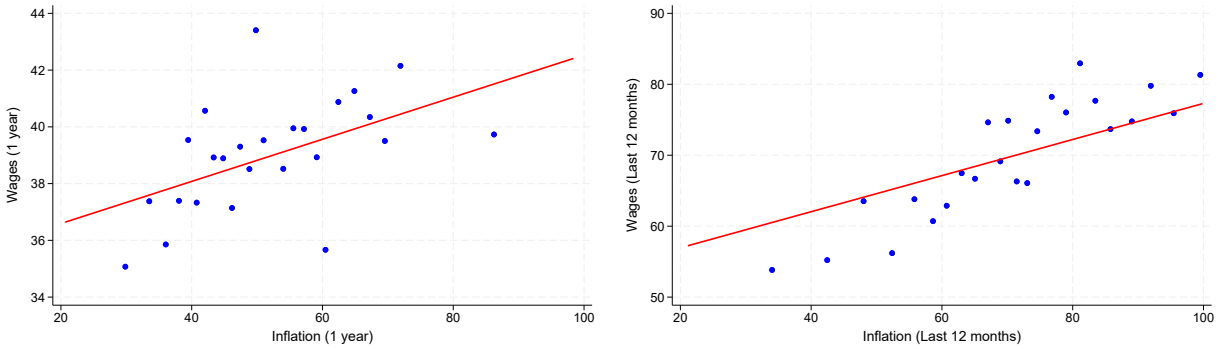
(b) Perceived and Expected Wages



(c) Perceived and Expected Prices

Figure D1: Correlation of Perceived and Expected Inflation, Wages and Prices

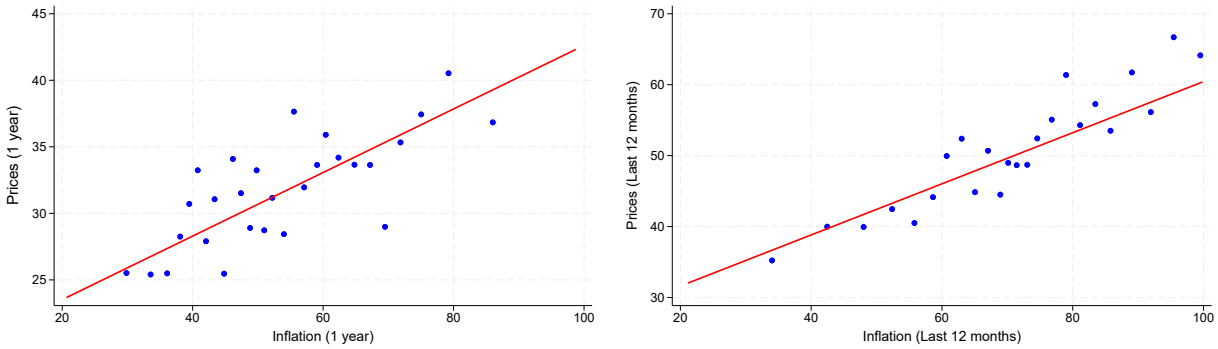
Notes: The figure plots firms' perceptions of inflation over the past 12 months against their expectations of inflation for the next 12 months (Panel A). Similarly, it presents firms' perceptions of wage growth over the last 12 months compared to their expectations of wage growth for the next 12 months (Panel B), as well as firms' perceptions of prices over the past 12 months against their expectations of prices for the next 12 months (Panel C). The relationships are estimated conditional on controls for firm size (measured by employment), firm age, exporter status, leverage, as well as sector and province fixed effects.



(a) Inflation and Wage Expectations **(b)** Inflation and Wage Perceptions

Figure D2: Correlations of Firms' Inflation and Wage Expectations-Perceptions

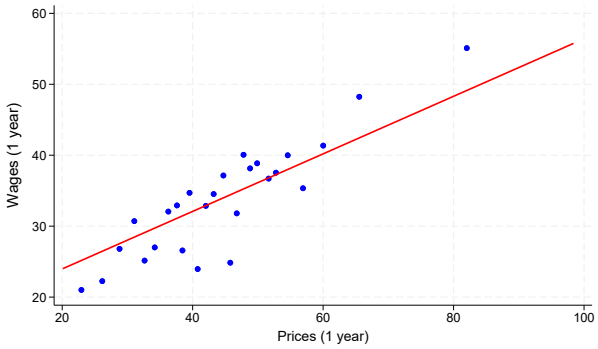
Notes: The figure plots firm-level expectations (Panel A) and perceptions (Panel B) for wage growth and inflation. The relationships are estimated conditional on controls for firm size (measured by employment), firm age, exporter status, leverage, as well as sector and province fixed effects.



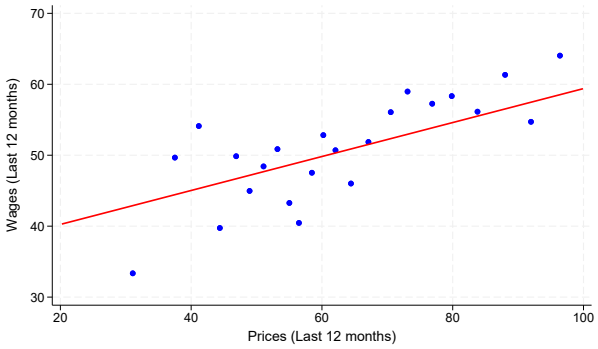
(a) Inflation and Price Expectations **(b)** Inflation and Price Perceptions

Figure D3: Correlations of Firms' Inflation and Price Expectations-Perceptions

Notes: The figure plots firm-level expectations (Panel A) and perceptions (Panel B) for price and inflation. The relationships are estimated conditional on controls for firm size (measured by employment), firm age, exporter status, leverage, as well as sector and province fixed effects.



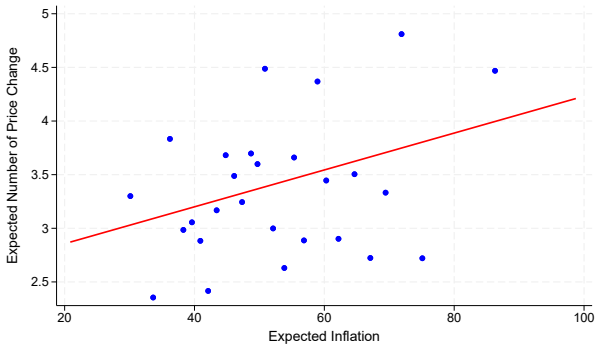
(a) Price and Wage Expectations



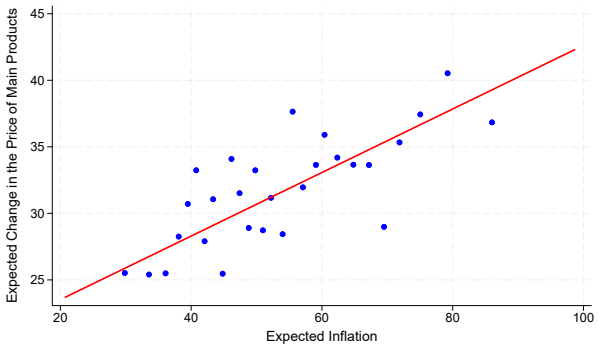
(b) Price and Wage Perceptions

Figure D4: Correlations of Firms' Price and Wage Expectations-Perceptions

Notes: The figure plots firm-level expectations (Panel A) and perceptions (Panel B) for wages and prices. The relationships are estimated conditional on controls for firm size (measured by employment), firm age, exporter status, leverage, as well as sector and province fixed effects.



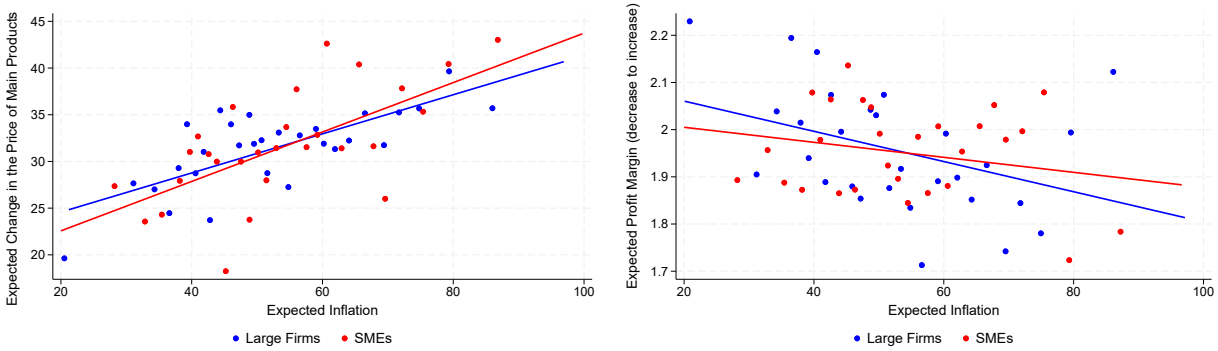
(a) Expected Number of Price Changes and Expected Inflation



(b) Expected Price change and Expected Inflation

Figure D5: Expected Change in the Prices of Main Products and Expected Inflation

Notes: The figure plots firm-level expectations (Panel A) and perceptions (Panel B) for wages and prices. The relationships are estimated conditional on controls for firm size (measured by employment), firm age, exporter status, leverage, as well as sector and province fixed effects.

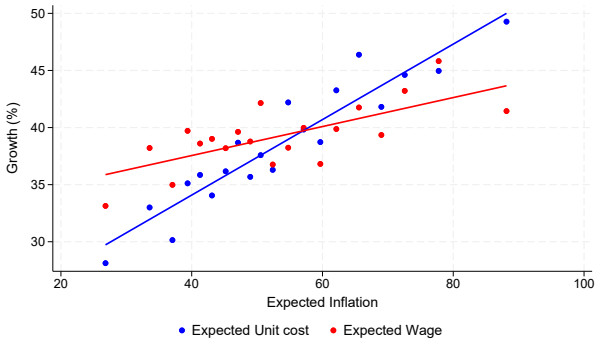


(a) Expected Number of Price Changes and Expected Inflation, by firm size

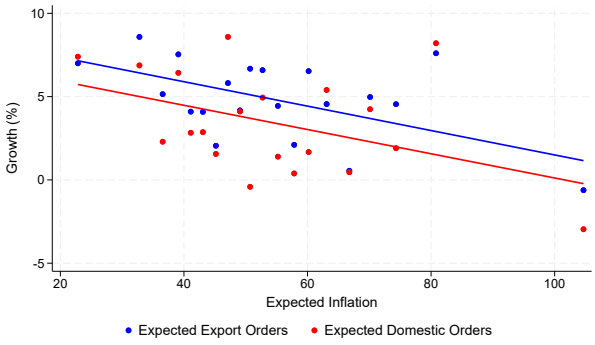
(b) Expected Profit Margin and Expected Inflation, by firm size

Figure D6: Expected Change in the Prices of Main Products and Profit Margin, by firm size

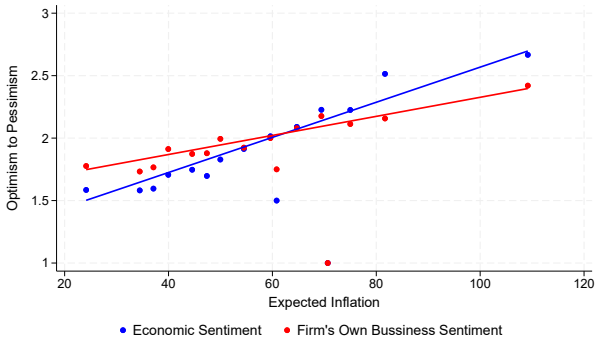
Notes: The figure plots firm-level expectations for expected change in the prices of the main products and profit margin. In Panel b, the scale for expected profit margins is defined as 1 for a decrease, 2 for remaining constant, and 3 for an increase. The relationships are estimated conditional on controls for firm size (measured by employment), firm age, exporter status, leverage, as well as sector and province fixed effects.



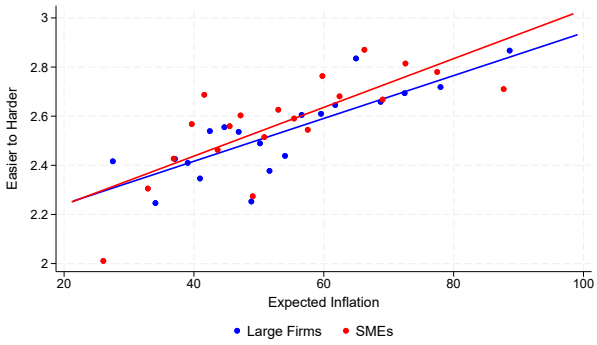
(a) Expected Wage and Unit Cost



(b) Expected Export and Domestic Orders



(c) Expected Firms' Economic and Own Business Outlook



(d) Expected Financial Conditions, by firm size

Figure D7: Firms' Inflation Expectations and Economic Indicator Expectations

Notes: The figure plots binscatter of firms' pricing expectations for the next 12 months against their expectations of inflation for the next 12 months. In Panel c, the scale for pessimism ranges from 1 to 3, where 1 represents optimism and 3 represents pessimism. In panel d, the scale for financial conditions ranges from 1 to 3, where 1 represents easier and 3 represents harder. The relationships are estimated conditional on controls for firm size (measured by employment), firm age, exporter status, leverage, as well as sector and province fixed effects.

Appendix - E - Placebo Test: Stability of Credit Supply

To assess whether credit availability changed in after the RCT, we implement a placebo analysis using firm-level data on total credit lines. In particular, we examine whether firms' credit lines evolved differentially across treated and control groups following the RCT.

We construct a panel dataset consisting of two periods for each firm: a pre-treatment baseline ($t = 0$, April) and a post-treatment period defined as $t = h \in \{1,2,3,4\}$, corresponding to the first four months after the RCT. We estimate the following difference-in-differences specification for each horizon h, as well as for the full panel that pools all post-treatment observations:

$$y_{i,t+h} = \alpha + \beta_1 \cdot \text{Post}_t + \beta_2 \cdot \text{Treatment}_i + \beta_3 \cdot (\text{Post}_t \times \text{Treatment}_i) + \mathbf{X}_i'\gamma + \delta_s + \phi_p + \varepsilon_{it}$$

where $y_{i,t+h}$ denotes the log total credit line of firm i at time $t+h$; Post_t is an indicator equal to 1 in the post-treatment period and 0 otherwise; Treatment_i equals 1 if the firm was assigned to any treatment group; $\mathbf{X}_i$ is a vector of firm-level controls; and ϕ_p and δ_s denote province and sector fixed effects, respectively. The coefficient β_3 captures the differential change in credit lines for treated firms relative to control firms after the RCT.

The results of this exercise are reported in Table E1. Column (1) pools all post-treatment horizons ($h = 0$ to 4) into a single specification. Columns (2) through (5) estimate the model separately for each horizon. Across all specifications, the interaction term Post × Treatment is statistically insignificant and economically small, indicating that credit lines remained stable and did not changed after RCT. These results provide clear evidence that there were no systematic shifts in credit supply following the RCT.

Table E1: Difference-in-Differences Estimates of Credit Line Stability

	Dependent Variable: $y_{i,t+h}$				
	(1)	(2)	(3)	(4)	(5)
	Pooling Sample	$h = 1$	$h = 2$	$h = 3$	$h = 4$
Post	-0.0003	-0.0006	-0.0004	-0.0002	-0.0001
	(0.0003)	(0.0004)	(0.0004)	(0.0004)	(0.0004)
Treatment	-0.0199	-0.0199	-0.0199	-0.0199	-0.0199
	(0.0291)	(0.0292)	(0.0292)	(0.0292)	(0.0292)
Post × Treatment	0.0010	0.0008	0.0010	0.0015	0.0009
	(0.0007)	(0.0009)	(0.0009)	(0.0009)	(0.0009)
Observations	7,010	2,804	2,804	2,804	2,804
R-squared	0.0248	0.0249	0.0249	0.0249	0.0249

Notes: This table reports estimates from difference-in-differences regressions assessing whether total credit lines changed differentially for treated versus control firms following the RCT. The dependent variable is the log of total credit line. Column (1) pools all post-treatment months $h = 1$ to 4, while Columns (2) to (5) present results separately for each month h. The variable *Post* is an indicator equal to one for the post-treatment period; *Treatment* equals one if the firm is assigned to any treatment group; and *Post* × *Treatment* is the interaction term capturing differential post-treatment changes for treated firms. Standard errors, clustered at the firm level, are reported in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Appendix - F - Robustness Check for the Results

F1 Wald Estimator

As a robustness exercise, we estimate a simplified instrumental variables model in the spirit of a Wald (1940) estimator by excluding treatment-prior interactions from the first stage. Specifically, we use treatment group assignment indicators as instruments for posterior inflation expectations, while directly controlling for firms' prior expectations in the second stage:

$$\mathrm{Y}_i^{t+h} = \beta_1 \mathrm{Post}_i^{mean} + \beta_2 \mathrm{Prior}_i + \gamma X_i + \delta_s + \phi_p + \varepsilon_i^{t+h}, \tag{F1}$$

$$\mathrm{Post}_i^{mean} = \alpha_0 + \sum_{j=1}^{4} \alpha_j \times I\{i \in \text{Treat } j\} + \varepsilon_i. \tag{F2}$$

In this setting, the coefficient β_1 can be interpreted as a Wald estimator of the causal effect of inflation expectations on the outcome variable. Formally, the Wald estimator of the effect of inflation expectations on firm outcomes is calculated as the ratio of the intent-to-treat and first-stage effects:

$$\beta_1^{\text{Wald}} = \frac{\psi^{\text{ITT}}}{\psi^{\text{FS}}} = \frac{\mathbb{E}[\mathrm{Y}_i^{t+h} \mid \text{Treat}] - \mathbb{E}[\mathrm{Y}_i^{t+h} \mid \text{Control}]}{\mathbb{E}[\mathrm{Post}_i^{mean} \mid \text{Treat}] - \mathbb{E}[\mathrm{Post}_i^{mean} \mid \text{Control}]}.$$

where "Treat" refers to assignment to any treatment group, and "Control" denotes firms that received no information intervention.ψ^{ITT} denotes the intent-to-treat effect, i.e., the average difference in outcomes between treated and control firms. ψ^{FS} denotes the first-stage effect, i.e., the average difference in posterior inflation expectations between treated and control firms. The Wald estimator β_1^{Wald} thus captures the marginal effect of a treatment-induced change in inflation expectations on firm behavior, net of prior beliefs and firm characteristics.

Table F1: Effects of Inflation Expectations on Credit (Flow) , Borrowing Cost and Credit Utilization Rate

	(1) $y_{i,t+1}$	(2) $y_{i,t+2}$	(3) $y_{i,t+3}$	(4) $y_{i,t+4}$
Panel A: Effect on Credit				
Posterior Mean	0.024*	0.029**	0.014**	0.012
	(0.013)	(0.011)	(0.007)	(0.009)
First Stage F-stat (KP Wald)	13.70	14.41	13.79	13.80
R-squared	0.03	0.03	0.05	0.04
Observations	1,159	1,161	1,160	1,160
Panel B: Effect on Borrowing Cost				
Posterior Mean	-0.037**	-0.018	-0.003***	-0.003***
	(0.016)	(0.015)	(0.001)	(0.001)
First Stage F-stat (KP Wald)	10.15	9.22	8.69	9.82
R-squared	0.10	0.04	0.08	0.09
Observations	569	543	514	550
Panel C: Effect on Credit Utilization Rate				
Posterior Mean	0.009***	0.011***	0.003	0.002
	(0.002)	(0.002)	(0.001)	(0.001)
First Stage F-stat (KP Wald)	14.03	13.95	13.97	13.70
R-squared	0.08	0.08	0.09	0.10
Observations	1,167	1,163	1,164	1,159
Firm Controls	✓	✓	✓	✓
Sector FE	✓	✓	✓	✓
Province FE	✓	✓	✓	✓

Notes: The table reports estimation results for Equation-(F1). In Panel A, the dependent variable is defined as $y_{it+h} = \log\left(\frac{cr_{i,t+h}}{cr_{i,t-1}}\right)$, where $cr_{i,t+h}$ represents the flow credit amount at time $t+h$. In Panel B, the dependent variable is the weighted average interest rate charged on flow credits at time $t+h$, $y_{it+h} = r_{i,t+h}$. In Panel C, the dependent variable is the credit utilization rate, defined as the ratio of total credit used to the total credit line at time $t+h$, $y_{i,t+h} = \frac{cr_{i,t+h}}{c.linei,t+h}$. In each regression, we apply Huber regression in the first stage to account for outliers and influential observations and employ the jackknife procedure in the second stage. Heteroskedasticity robust standard errors are reported in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Table F2: Effects of Inflation Expectations on Short-Term and Long-Term Borrowing (Flow)

	(1) $y_{i,t+1}$	(2) $y_{i,t+2}$	(3) $y_{i,t+3}$	(4) $y_{i,t+4}$
	Panel A: Effect on Long-term Credit			
Posterior Mean	0.045***	0.030***	0.026***	0.003
	(0.008)	(0.007)	(0.007)	(0.002)
R-squared	0.27	0.26	0.24	-0.19
First Stage F-stat (KP Wald)	14.18	13.91	14.19	13.98
Observations	1,178	1,170	1,177	1,173
	Panel B: Effect on Short-term Credit			
Posterior Mean	-0.025***	-0.028***	-0.001	-0.003
	(0.006)	(0.005)	(0.002)	(0.002)
R-squared	0.25	0.29	-0.24	0.19
First Stage F-stat (KP Wald)	14.05	14.12	14.08	14.12
Observations	1,168	1,170	1,168	1,170
	Panel C: Effect on Long-term Borrowing Cost			
Posterior Mean	0.038	0.049**	0.018	0.047
	(0.027)	(0.020)	(0.028)	(0.050)
R-squared	0.06	0.05	0.08	0.10
First Stage F-stat (KP Wald)	2.32	2.33	2.02	2.12
Observations	219	220	212	221
	Panel D: Effect on Short-term Borrowing Cost			
Posterior Mean	-0.034***	-0.028**	-0.063**	-0.051
	(0.008)	(0.012)	(0.027)	(0.031)
R-squared	0.02	0.02	0.03	0.04
First Stage F-stat (KP Wald)	4.98	4.86	3.21	4.49
Observations	290	289	248	282
Firm Controls	✓	✓	✓	✓
Sector FE	✓	✓	✓	✓
Province FE	✓	✓	✓	✓

Notes: This table presents the estimation results for Equation-(F1). In Panel A and B, the dependent variable is defined as $y_{it+h} = \log\left(\frac{cr_{i,t+h}}{cr_{i,t-1}}\right)$, where $cr_{i,t+h}$ represents the long-term and short-term flow credit amount at time $t+h$, respectively. In Panel C and D, the dependent variable is the weighted average interest rate charged on flow long-term and short-term credits at time $t+h$, $y_{it+h} = r_{i,t+h}$. In each regression, we apply Huber regression in the first stage to account for outliers and influential observations and employ the jackknife procedure in the second stage. Heteroskedasticity robust standard errors are reported in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Table F3: Effects of Inflation Expectations on Outstanding Credit Composition

	(1) $y_{i,t+1}$	(2) $y_{i,t+2}$	(3) $y_{i,t+3}$	(4) $y_{i,t+4}$
Panel A: Effect on Total Outstanding Credit				
Posterior Mean	0.054***	0.045***	0.010*	0.004
	(0.015)	(0.014)	(0.005)	(0.003)
First Stage F-stat (KP Wald)	14.58	14.58	14.45	14.84
R-squared	0.04	0.04	0.05	0.04
Observations	1,172	1,172	1,170	1,176
Panel B: Effect on Long-term Outstanding Credit				
Posterior Mean	0.093***	0.042**	0.009	0.011
	(0.021)	(0.019)	(0.014)	(0.016)
First Stage F-stat (KP Wald)	13.29	13.99	13.99	14.08
R-squared	0.03	0.07	0.07	0.08
Observations	1,168	1,173	1,173	1,175
Panel C: Effect on Short-term Outstanding Credit				
Posterior Mean	-0.022**	-0.027***	-0.004	-0.005
	(0.010)	(0.009)	(0.006)	(0.0010)
First Stage F-stat (KP Wald)	14.20	14.49	14.11	14.62
R-squared	0.05	0.02	0.01	0.01
Observations	1,173	1,171	1,169	1,175
Panel D: Effect on TL-denominated Outstanding Credit				
Posterior Mean	0.044**	0.025	0.040**	0.005
	(0.019)	(0.022)	(0.016)	(0.012)
First Stage F-stat (KP Wald)	14.16	14.46	13.48	14.22
R-squared	0.05	0.04	0.07	0.06
Observations	1,173	1,177	1,169	1,175
Panel E: Effect on FX-denominated Outstanding Credit				
Posterior Mean	-0.026***	-0.016**	-0.014**	-0.006
	(0.010)	(0.007)	(0.005)	(0.009)
First Stage F-stat (KP Wald)	14.30	14.30	14.35	14.28
R-squared	0.05	0.06	0.03	0.02
Observations	1,174	1,174	1,175	1,173
Firm Controls	✓	✓	✓	✓
Sector FE	✓	✓	✓	✓
Province FE	✓	✓	✓	✓

Notes: This table presents the estimation results for Equation-(F1). The dependent variable is defined as $y_{it+h} = \log\left(\frac{X_{i,t+h}}{X_{i,t-1}}\right)$, where $X_{i,t+h}$ denotes the outstanding credit stock at time $t+h$ by credit type: total (Panel A), long-term (Panel B), short-term (Panel C), TL-denominated (Panel D), and FX-denominated (Panel E). All specifications include firm controls, sector and province fixed effects. Huber regression is used in the first stage and the jackknife procedure in the second. Robust standard errors in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Table F4: Effect of Inflation Expectations on Foreign Currency Transactions

	(1) $y_{i,t+1}$	(2) $y_{i,t+2}$	(3) $y_{i,t+3}$	(4) $y_{i,t+4}$
Panel A: Effect on Foreign Currency Purchases				
Posterior Mean	0.014**	0.015*	0.017*	0.015*
	(0.008)	(0.008)	(0.009)	(0.009)
R-squared	0.04	0.05	0.05	0.06
Panel B: Effect on Foreign Currency Selling				
Posterior Mean	-0.021**	-0.021*	-0.020	-0.021
	(0.010)	(0.012)	(0.014)	(0.013)
R-squared	0.07	0.07	0.06	0.07
Firm Controls	✓	✓	✓	✓
Sector FE	✓	✓	✓	✓
Province FE	✓	✓	✓	✓
First Stage F-stat (KP Wald)	13.76	13.33	11.81	11.15
Observations	1,167	1,163	1,164	1,159

Notes: The table reports estimation results for Equation-(F1). In Panels A and B, the dependent variables are $y_{it+h} = \log\left(\frac{s_{i,t+h}}{s_{i,t-1}}\right)$ and $y_i = \log\left(\frac{b_{i,t+h}}{b_{i,t-1}}\right)$, where $s_{i,t+h}$ and $b_{i,t+h}$ correspond to the purchasing and selling of foreign currency at time $t+h$, respectively. In each regression, we apply Huber regression in the first stage to account for outliers and influential observations and employ the jackknife procedure in the second stage. Heteroskedasticity robust standard errors are reported in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Table F5: Effects of Inflation Expectations on Real Outcomes

	(1) $y_{i,t+1}$	(2) $y_{i,t+2}$	(3) $y_{i,t+3}$	(4) $y_{i,t+4}$
Panel A: Effect on Sales				
Posterior Mean	-0.022^{*}	-0.025^{*}	-0.029^{**}	-0.018
	(0.014)	(0.013)	(0.013)	(0.013)
R-squared	0.02	0.03	0.02	0.02
Panel B: Effect on Number of Buyers				
Posterior Mean	-0.012^{*}	-0.016^{**}	-0.013^{*}	-0.012^{*}
	(0.007)	(0.007)	(0.007)	(0.007)
R-squared	0.08	0.06	0.06	0.04
Panel C: Effect on Purchases				
Posterior Mean	0.002	0.010	0.004	0.014^{*}
	(0.006)	(0.007)	(0.007)	(0.007)
R-squared	0.03	0.02	0.02	0.03
Panel D: Effect on Number of Sellers				
Posterior Mean	0.010	0.012	0.010^{*}	0.012^{**}
	(0.010)	(0.008)	(0.006)	(0.006)
R-squared	0.10	0.09	0.11	0.10
Firm Controls	✓	✓	✓	✓
Sector FE	✓	✓	✓	✓
Province FE	✓	✓	✓	✓
First Stage F-stat (KP Wald)	12.61	13.46	13.45	13.49
Observations	1,159	1,159	1,158	1,157

Notes: This table presents the estimation results for Equation-(F1). The dependent variable in Panels A, B, C and D is defined as $y_{it+h} = \log\left(\frac{X_{i,t+h}}{X_{i,t-1}}\right)$, where $X_{i,t+h}$ denotes sales, number of buyers, purchases and number of sellers at time $t+h$, respectively. In each regression, we apply Huber regression in the first stage to account for outliers and influential observations and employ the jackknife procedure in the second stage. Heteroskedasticity robust standard errors are reported in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Table F6: Effects of Inflation Expectations on Employment, New Hirings and Wages

	(1) $y_{i,t+1}$	(2) $y_{i,t+2}$	(3) $y_{i,t+3}$	(4) $y_{i,t+4}$
Panel A: Effect on Employment				
Posterior Mean	−0.012	−0.010*	−0.013*	−0.012
	(0.010)	(0.006)	(0.007)	(0.010)
R-squared	0.024	0.021	0.021	0.022
Panel B: Effect on New Hirings				
Posterior Mean	−0.005	−0.010	−0.016*	−0.015
	(0.010)	(0.011)	(0.010)	(0.011)
R-squared	0.020	0.030	0.020	0.030
Panel C: Effect on Wages				
Posterior Mean	0.002	0.002	0.002**	0.001
	(0.001)	(0.001)	(0.001)	(0.002)
R-squared	0.010	0.020	0.020	0.020
Firm Controls	✓	✓	✓	✓
Sector FE	✓	✓	✓	✓
Province FE	✓	✓	✓	✓
First Stage F-stat (KP Wald)	12.61	13.46	13.45	13.49
Observations	1,159	1,159	1,158	1,157

Notes: This table presents the estimation results for Equation-(F1). The dependent variable in Panels A, B and C is defined as $y_{it+h} = \log\left(\frac{X_{i,t+h}}{X_{i,t-1}}\right)$, where $X_{i,t+h}$ denotes employment, number of new hirings and wages at time $t+h$, respectively. In each regression, we apply Huber regression in the first stage to account for outliers and influential observations and employ the jackknife procedure in the second stage. Heteroskedasticity robust standard errors are reported in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Wald Estimator adding Uncertainty

Table F7: Effects of Inflation Expectations and Uncertainty on Credit, Borrowing Cost, and Credit Utilization Rate

	(1) $y_{i,t+1}$	(2) $y_{i,t+2}$	(3) $y_{i,t+3}$	(4) $y_{i,t+4}$
Panel A: Effect on Credit				
Posterior Mean	0.009	0.039**	0.018	0.015
	(0.021)	(0.018)	(0.015)	(0.018)
Posterior Uncertainty	0.040	0.198	0.091	0.208
	(0.239)	(0.206)	(0.204)	(0.206)
First Stage F-stat (KP Wald): Mean	14.54	14.57	13.62	14.46
First Stage F-stat (KP Wald): Uncertainty	3.09	3.11	3.02	3.08
R-squared	0.02	0.03	0.04	0.04
Observations	1,169	1,170	1,159	1,168
Panel B: Effect on Borrowing Cost				
Posterior Mean	-0.028**	-0.012	-0.009**	-0.003
	(0.015)	(0.018)	(0.004)	(0.006)
Posterior Uncertainty	-0.172	-0.092	-0.006	-0.001
	(0.318)	(0.253)	(0.021)	(0.021)
First Stage F-stat (KP Wald): Mean	10.05	8.75	7.92	9.46
First Stage F-stat (KP Wald): Uncertainty	2.37	2.21	2.04	2.25
R-squared	0.01	0.02	0.02	0.04
Observations	565	540	508	547
Panel C: Effect on Credit Utilization Rate				
Posterior Mean	0.008***	0.009**	0.006	0.005
	(0.003)	(0.004)	(0.005)	(0.007)
Posterior Uncertainty	0.015	0.008	-0.005	0.009
	(0.035)	(0.032)	(0.017)	(0.018)
First Stage F-stat (KP Wald): Mean	13.91	13.90	13.92	13.62
First Stage F-stat (KP Wald): Uncertainty	3.11	3.01	2.99	3.02
R-squared	0.08	0.08	0.09	0.10
Observations	1,167	1,163	1,164	1,159
Firm Controls	✓	✓	✓	✓
Sector FE	✓	✓	✓	✓
Province FE	✓	✓	✓	✓

Notes: This table reports the estimation results for Equation-(F1). In Panel A, the dependent variable is defined as $y_{it+h} = \log\left(\frac{cr_{i,t+h}}{cr_{i,t-1}}\right)$, where $cr_{i,t+h}$ is the flow credit amount. In Panel B, the dependent variable is the weighted average interest rate on flow credits at time $t+h$, $y_{it+h} = r_{i,t+h}$. In Panel C, the dependent variable is the credit utilization rate, defined as $y_{it+h} = \frac{cr_{i,t+h}}{creditline_{i,t+h}}$. We apply Huber regression in the first stage to account for outliers and use a jackknife procedure in the second stage. Posterior uncertainty represents the coefficient on the uncertainty measure. Heteroskedasticity-robust standard errors are reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table F8: Effects of Inflation Expectations and Uncertainty on Short-Term and Long-Term Borrowing (Flow)

	(1) $y_{i,t+1}$	(2) $y_{i,t+2}$	(3) $y_{i,t+3}$	(4) $y_{i,t+4}$
Panel A: Effect on Long-term Credit				
Posterior Mean	0.045***	0.032***	0.024***	0.002
	(0.009)	(0.008)	(0.007)	(0.002)
Posterior Uncertainty	-0.141	-0.011	0.024	0.020
	(0.121)	(0.089)	(0.087)	(0.027)
First Stage F-stat: Mean	15.28	15.28	14.67	14.94
First Stage F-stat: Uncertainty	2.63	2.63	2.59	2.60
R-squared	0.15	0.26	0.23	0.18
Observations	1,176	1,176	1,173	1,175
Panel B: Effect on Short-term Credit				
Posterior Mean	-0.030***	-0.027***	-0.001	-0.003
	(0.007)	(0.006)	(0.002)	(0.002)
Posterior Uncertainty	0.096	-0.038	-0.023	-0.011
	(0.086)	(0.067)	(0.027)	(0.028)
First Stage F-stat: Mean	14.66	14.74	14.52	14.68
First Stage F-stat: Uncertainty	2.62	2.94	2.61	2.65
R-squared	0.19	0.27	0.15	0.16
Observations	1,173	1,176	1,171	1,174
Panel C: Effect on Long-term Borrowing Cost				
Posterior Mean	0.022	0.046***	0.078	0.002
	(0.062)	(0.014)	(0.059)	(0.054)
Posterior Uncertainty	0.924	0.195	0.594	0.170
	(1.014)	(0.126)	(0.643)	(0.242)
First Stage F-stat: Mean	3.43	3.27	2.32	2.51
First Stage F-stat: Uncertainty	1.37	1.21	0.64	1.32
R-squared	0.05	0.06	0.06	0.04
Observations	244	215	208	224
Panel D: Effect on Short-term Borrowing Cost				
Posterior Mean	-0.063**	-0.012	-0.059*	-0.033
	(0.030)	(0.014)	(0.032)	(0.040)
Posterior Uncertainty	-0.217	-0.105	-0.031	-0.399
	(0.260)	(0.117)	(0.248)	(0.523)
First Stage F-stat: Mean	4.25	4.45	3.71	4.07
First Stage F-stat: Uncertainty	1.35	1.42	1.22	1.29
R-squared	0.056	0.023	0.046	0.064
Observations	271	280	245	261
Firm Controls	✓	✓	✓	✓
Sector FE	✓	✓	✓	✓
Province FE	✓	✓	✓	✓

Notes: This table reports the estimation results for Equation-(F1). In Panels A and B, the dependent variable is defined as $y_{it+h} = \log\left(\frac{cr_{i,t+h}}{cr_{i,t-1}}\right)$, where $cr_{i,t+h}$ represents the long-term and short-term flow credit amount at time $t+h$, respectively. In Panels C and D, the dependent variable is the weighted average interest rate charged on flow long-term and short-term credits at time $t+h$, $y_{it+h} = r_{i,t+h}$. Posterior uncertainty rows report the coefficients on uncertainty measures. Each regression includes firm-level controls, sector and province fixed effects. Huber regression is used in the first stage to address outliers, and the jackknife procedure is employed in the second stage. Heteroskedasticity-robust standard errors are reported in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Table F9: Effects of Inflation Expectations on Outstanding Credit Composition

	(1) $y_{i,t+1}$	(2) $y_{i,t+2}$	(3) $y_{i,t+3}$	(4) $y_{i,t+4}$
Panel A: Effect on Total Outstanding Credit				
Posterior Mean	0.045**	0.047***	0.012*	0.001
	(0.018)	(0.014)	(0.006)	(0.009)
Posterior Uncertainty	-0.318	-0.047	-0.063	-0.001
	(0.250)	(0.167)	(0.068)	(0.001)
First Stage F-stat: Mean	14.35	14.47	14.42	14.51
First Stage F-stat: Uncertainty	2.39	3.07	2.99	3.07
R-squared	0.02	0.01	0.03	0.03
Observations	1,171	1,175	1,174	1,179
Panel B: Effect on Long-term Outstanding Credit				
Posterior Mean	0.078***	0.029	0.011	0.019
	(0.028)	(0.024)	(0.020)	(0.022)
Posterior Uncertainty	0.624	0.370	-0.001	-0.001
	(0.424)	(0.286)	(0.001)	(0.001)
First Stage F-stat: Mean	14.82	14.86	14.62	14.86
First Stage F-stat: Uncertainty	2.07	2.65	2.30	2.64
R-squared	0.03	0.02	0.02	0.05
Observations	1,172	1,174	1,173	1,174
Panel C: Effect on Short-term Outstanding Credit				
Posterior Mean	-0.027**	-0.022*	-0.004	-0.003
	(0.012)	(0.012)	(0.003)	(0.002)
Posterior Uncertainty	0.207	0.279	-0.033	-0.025
	(0.153)	(0.174)	(0.034)	(0.027)
First Stage F-stat: Mean	14.51	14.48	14.78	14.85
First Stage F-stat: Uncertainty	2.62	2.12	2.98	3.08
R-squared	0.02	0.05	0.04	0.04
Observations	1,171	1,170	1,172	1,179
Panel D: Effect on TL-denominated Outstanding Credit				
Posterior Mean	0.058**	0.023	0.030*	0.012
	(0.027)	(0.019)	(0.017)	(0.014)
Posterior Uncertainty	0.009	0.008	0.008	0.006
	(0.350)	(0.211)	(0.204)	(0.232)
First Stage F-stat: Mean	13.47	13.75	13.70	14.07
First Stage F-stat: Uncertainty	2.20	2.99	2.95	2.99
R-squared	0.04	0.05	0.07	0.05
Observations	1,170	1,176	1,175	1,177
Panel E: Effect on FX-denominated Outstanding Credit				
Posterior Mean	-0.017	-0.015*	-0.014**	-0.011
	(0.012)	(0.009)	(0.006)	(0.010)
Posterior Uncertainty	0.114	0.048	0.079	0.042
	(0.137)	(0.107)	(0.073)	(0.065)
First Stage F-stat: Mean	14.67	14.36	13.86	14.67
First Stage F-stat: Uncertainty	2.85	2.76	2.80	2.85
R-squared	0.05	0.03	0.02	0.03
Observations	1,177	1,175	1,176	1,177
Firm Controls	✓	✓	✓	✓
Sector FE	✓	✓	✓	✓
Province FE	✓	✓	✓	✓

Notes: This table presents the estimation results for Equation-(F1). The dependent variable is defined as $y_{it+h} = \log\left(\frac{X_{i,t+h}}{X_{i,t-1}}\right)$, where $X_{i,t+h}$ denotes the outstanding credit stock at time $t+h$ by credit type: total (Panel A), long-term (B), short-term (C), TL-denominated (D), and FX-denominated (E). Posterior uncertainty refers to the uncertainty component of inflation expectations. All regressions include firm-level controls, sector and province fixed effects. The first stage applies Huber regression to mitigate outliers; the second stage uses jackknife estimation. Heteroskedasticity robust standard errors are in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Table F10: Effect of Inflation Expectations and Uncertainty on Foreign Currency Transactions

	(1) $y_{i,t+1}$	(2) $y_{i,t+2}$	(3) $y_{i,t+3}$	(4) $y_{i,t+4}$
Panel A: Effect on Foreign Currency Purchases				
Posterior Mean	0.019**	0.017*	0.019	0.020
	(0.008)	(0.009)	(0.012)	(0.015)
Posterior Uncertainty	0.018	0.044	0.017	0.023
	(0.054)	(0.056)	(0.056)	(0.048)
R-squared	0.04	0.05	0.05	0.06
Observations	1,167	1,163	1,164	1,159
Panel B: Effect on Foreign Currency Selling				
Posterior Mean	-0.002	-0.002	-0.011*	-0.012*
	(0.007)	(0.008)	(0.006)	(0.007)
Posterior Uncertainty	0.119	0.095	0.053	0.082
	(0.074)	(0.077)	(0.066)	(0.068)
R-squared	0.07	0.06	0.06	0.07
First Stage F-stat (KP Wald): Mean	12.76	12.33	12.15	11.79
First Stage F-stat (KP Wald): Uncertainty	2.81	2.71	2.53	2.41
Observations	1,167	1,163	1,164	1,159

Notes: The table reports estimation results for Equation-(F1). In Panels A and B, the dependent variables are $y_{it+h} = \log\left(\frac{s_{i,t+h}}{s_{i,t-1}}\right)$ and $y_i = \log\left(\frac{b_{i,t+h}}{b_{i,t-1}}\right)$, where $s_{i,t+h}$ and $b_{i,t+h}$ correspond to the purchasing and selling of foreign currency at time $t+h$, respectively. In each regression, we apply Huber regression in the first stage to account for outliers and influential observations and employ the jackknife procedure in the second stage. Heteroskedasticity robust standard errors are reported in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Table F11: Effects of Inflation Expectations on Real Outcomes

	(1) $y_{i,t+1}$	(2) $y_{i,t+2}$	(3) $y_{i,t+3}$	(4) $y_{i,t+4}$
Panel A: Effect on Sales				
Posterior Mean	-0.017^{**}	-0.019^{*}	-0.026^{*}	-0.021
	(0.008)	(0.010)	(0.014)	(0.015)
Posterior Uncertainty	0.067	0.017	0.004	0.105
	(0.158)	(0.153)	(0.156)	(0.171)
Panel B: Effect on Number of Buyers				
Posterior Mean	-0.019^{**}	-0.018^{**}	-0.017^{**}	-0.003
	(0.008)	(0.008)	(0.008)	(0.007)
Posterior Uncertainty	0.012	0.029	0.022	0.057
	(0.082)	(0.084)	(0.088)	(0.095)
R-squared	0.05	0.04	0.03	0.04
Panel C: Effect on Purchases				
Posterior Mean	0.003	0.007	0.015^{*}	0.016^{*}
	(0.007)	(0.007)	(0.008)	(0.008)
Posterior Uncertainty	-0.057	-0.094	-0.076	-0.111
	(0.095)	(0.099)	(0.102)	(0.100)
R-squared	0.05	0.05	0.04	0.05
Panel D: Effect on Number of Sellers				
Posterior Mean	0.013	0.014	0.012	0.013^{*}
	(0.010)	(0.010)	(0.008)	(0.007)
Posterior Uncertainty	0.062	0.090	0.085	0.079
	(0.120)	(0.126)	(0.124)	(0.120)
R-squared	0.07	0.08	0.07	0.09
Firm Controls	✓	✓	✓	✓
Sector FE	✓	✓	✓	✓
Province FE	✓	✓	✓	✓
First Stage F-stat (KP Wald): Mean	12.69	12.71	12.66	12.54
First Stage F-stat (KP Wald): Uncertainty	2.24	2.48	2.36	2.29
Observations	1,159	1,159	1,158	1,157

Notes: This table presents the estimation results for Equation-(F1). The dependent variable in Panels A, B, C and D is defined as $y_{it+h} = \log\left(\frac{X_{i,t+h}}{X_{i,t-1}}\right)$, where $X_{i,t+h}$ denotes sales, number of buyers, purchases and number of sellers at time $t+h$, respectively. In each regression, we apply Huber regression in the first stage to account for outliers and influential observations and employ the jackknife procedure in the second stage. Heteroskedasticity robust standard errors are reported in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Table F12: Effects of Inflation Expectations on Employment, New Hirings and Wages

	(1) $y_{i,t+1}$	(2) $y_{i,t+2}$	(3) $y_{i,t+3}$	(4) $y_{i,t+4}$
Panel A: Effect on Employment				
Posterior Mean	−0.014	−0.017*	−0.016*	−0.013
	(0.010)	(0.010)	(0.010)	(0.011)
Posterior Uncertainty	−0.083	−0.052	−0.064	−0.071
	(0.129)	(0.134)	(0.135)	(0.132)
R-squared	0.05	0.04	0.04	0.05
Panel B: Effect on New Hirings				
Posterior Mean	−0.012	−0.015	−0.017*	−0.012
	(0.012)	(0.011)	(0.010)	(0.012)
Posterior Uncertainty	0.192	0.092	0.122	0.076
	(0.131)	(0.160)	(0.161)	(0.132)
R-squared	0.04	0.04	0.03	0.04
Panel C: Effect on Wages				
Posterior Mean	0.001	0.003	0.005***	0.003*
	(0.001)	(0.002)	(0.002)	(0.002)
Posterior Uncertainty	0.005	−0.010	−0.014	−0.001
	(0.019)	(0.018)	(0.019)	(0.020)
R-squared	0.03	0.02	0.02	0.02
Firm Controls	✓	✓	✓	✓
Sector FE	✓	✓	✓	✓
Province FE	✓	✓	✓	✓
First Stage F-stat (KP Wald): Mean	12.69	12.71	12.66	12.54
First Stage F-stat (KP Wald): Uncertainty	2.24	2.48	2.36	2.29
Observations	1,159	1,159	1,158	1,157

Notes: This table presents the estimation results for Equation-(F1). The dependent variable in Panels A, B and C is defined as $y_{it+h} = \log\left(\frac{X_{i,t+h}}{X_{i,t-1}}\right)$, where $X_{i,t+h}$ denotes employment, number of new hirings and wages at time $t+h$, respectively. In each regression, we apply Huber regression in the first stage to account for outliers and influential observations and employ the jackknife procedure in the second stage. Heteroskedasticity robust standard errors are reported in parentheses. ***p<0.01, **p<0.05, *p<0.1.

F2 Measuring Inflation Uncertainty from Rounding Behavior and Controlling Uncertainty

We implement the rounding-based method developed by Binder (2017b) to construct a micro-level proxy for inflation uncertainty from firms' point forecasts. The key insight underlying this method is that respondents who are more uncertain about their forecasts tend to report round numbers (e.g., multiples of 5), while more confident respondents are more likely to report non-round numbers. This phenomenon is referred to as the "Round Numbers Suggest Round Interpretations" principle.

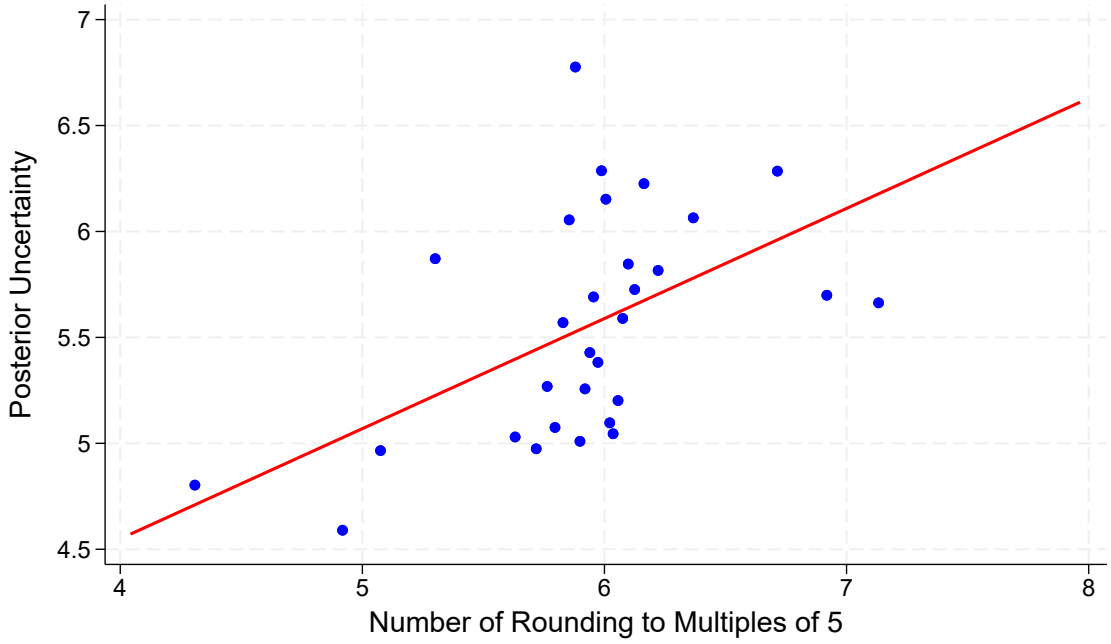


Figure F1: Correlation between the Posterior Uncertainty and Rounding Behavior
Notes: Posterior uncertainty is measured using firm-level responses from the RCT, based on a triangular distribution constructed from firms' reported minimum, maximum, and best expectations. The red line represents the fitted values from a regression of posterior uncertainty on the number of responses rounded to multiples of 5, controlling for sector and province fixed effects, as well as firm-level characteristics (Cattaneo et al., 2024). The slope coefficient of the fitted line is 0.4 and statistically significant.

Figure F1 provides supporting evidence for this approach in our setting. The figure plots the relationship between the frequency of rounding to multiples of 5 and a benchmark measure of posterior uncertainty, which is derived from firms' subjective density forecasts under a triangu-

lar distribution assumption using their reported minimum, maximum, and modal expectations. We observe a clear positive correlation: firms that round more frequently tend to have higher uncertainty. The fitted line in the figure comes from a regression of posterior uncertainty on the rounding frequency, controlling for sector and province fixed effects, as well as firm-level covariates. The slope of this relationship is 0.4 and statistically significant, providing validation that rounding behavior is a meaningful proxy for underlying uncertainty in inflation expectations.

Formally, suppose that each firm i at time t has a subjective belief about future inflation characterized by a distribution with mean f_{it} and variance v_{it}. Firms are assumed to fall into two latent types: type-l (low uncertainty) and type-h (high uncertainty). Type-h firms report rounded responses from a coarse set S^h (e.g., multiples of 5), while type-l firms report from a finer set S^l (e.g., all integers), where $S^h \subset S^l$. We observe the reported forecast R_{it}, which is the rounded version of f_{it} to the nearest element in S^τ for firms of type $\tau \in \{l, h\}$.

Let ϕ_t^l and ϕ_t^h denote the probability mass functions (pmfs) of responses from low- and high-uncertainty types, respectively. These are obtained by discretizing the underlying continuous density functions $p_l(x)$ and $p_h(x)$ for f_{it} among type-l and type-h firms:

$$\phi_t^l(j) = \mathbb{P}(R_{it} = j \mid i \text{ is type } l) = \int_{f_{\min}^l(j)}^{f_{\max}^l(j)} p_l(x)dx, \quad j \in S^l, \tag{F3}$$

$$\phi_t^h(j) = \mathbb{P}(R_{it} = j \mid i \text{ is type } h) = \int_{f_{\min}^h(j)}^{f_{\max}^h(j)} p_h(x)dx, \quad j \in S^h, \tag{F4}$$

where $f_{\min}^\tau(j)$ and $f_{\max}^\tau(j)$ define the range of values that would be rounded to j for type τ respondents.

At each time t, the overall distribution of observed responses ϕ_t is a mixture of the two types:

$$\phi_t = \lambda_t \phi_t^h + (1 - \lambda_t)\phi_t^l,$$

where λ_t is the proportion of type-h firms. Since the type of each firm is unobserved, λ_t and the

parameters of ϕ_t^h and ϕ_t^l are estimated via maximum likelihood.

We then compute the firm-level uncertainty proxy ζ_{it}, which is the posterior probability that firm i is type h given its response R_{it}:

$$\zeta_{it} = \begin{cases} 0, & \text{if } R_{it} \notin S^h \\ \frac{\lambda_t \phi_t^h(R_{it})}{\lambda_t \phi_t^h(R_{it}) + (1-\lambda_t)\phi_t^l(R_{it})}, & \text{if } R_{it} \in S^h \end{cases}$$

This firm-level measure ζ_{it} provides a continuous proxy for subjective uncertainty, where higher values indicate a greater likelihood of being a high-uncertainty type. Because it relies only on observed point forecasts and not on density responses, it can be applied to pre-existing survey data without the need for additional elicitation. This makes it particularly useful in settings where only point forecasts are available.

After constructing the firm-level inflation uncertainty measure based on rounding behavior (as described above), we extend our main empirical specification to jointly examine the effects of both the level (mean) and uncertainty of expectations on firm outcomes. The second-stage equation is:

$$\mathrm{Y}_i^{t+h} = \beta_1 \mathrm{Post}_i^{mean} + \beta_2 \mathrm{Post}_i^{unc} + \beta_3 \mathrm{Prior}_i + \beta_4 \mathrm{Prior}_i^{unc} + \gamma X_i + \delta_s + \phi_p + \varepsilon_i^{t+h}, \tag{F5}$$

where Post_i^{mean} and Post_i^{unc} denote the posterior (post-treatment) inflation expectation and its associated uncertainty for firm i, respectively, while Prior_i and Prior_i^{unc} denote the pre-treatment (May BTS) expectation and uncertainty. X_i includes firm-level controls, and δ_s and ϕ_p are sector and province fixed effects.

To address the potential endogeneity of firms' posterior expectations and uncertainty, we employ a two-stage least squares (2SLS) strategy. The first-stage equations are as follows:

$$\text{Post}_i^{mean} = \alpha_0 + \sum_{j=1}^{4} \beta_j \times I\{i \in \text{Treat } j\} \times \text{Prior}_i + \sum_{j=1}^{4} \beta_j \times I\{i \in \text{Treat } j\} \times \text{Prior}_i^{unc} + \sum_{j=1}^{4} \alpha_j \times I\{i \in \text{Treat } j\} + \varepsilon_i, \tag{F6}$$

$$\text{Post}_i^{unc} = \alpha_0 + \sum_{j=1}^{4} \beta_j \times I\{i \in \text{Treat } j\} \times \text{Prior}_i + \sum_{j=1}^{4} \beta_j \times I\{i \in \text{Treat } j\} \times \text{Prior}_i^{unc} + \sum_{j=1}^{4} \alpha_j \times I\{i \in \text{Treat } j\} + \varepsilon_i. \tag{F7}$$

This specification allows us to isolate the causal impact of treatment-induced changes not only in inflation expectations but also in subjective uncertainty. By including both the level and the uncertainty of expectations, we account for potentially distinct behavioral channels—such as precautionary adjustments driven by uncertainty versus anticipatory responses driven by the expected path of inflation.

Table F13: Effects of Inflation Expectations and Uncertainty on Credit, Borrowing Cost, and Credit Utilization Rate

	(1) $y_{i,t+1}$	(2) $y_{i,t+2}$	(3) $y_{i,t+3}$	(4) $y_{i,t+4}$
Panel A: Effect on Credit				
Posterior Mean	0.023***	0.038***	0.008	0.009
	(0.009)	(0.007)	(0.006)	(0.007)
Posterior Uncertainty	0.292	0.331	0.098	1.304
	(1.746)	(1.423)	(1.614)	(1.429)
First Stage F-stat (KP Wald): Mean	35.83	34.12	35.80	35.80
First Stage F-stat (KP Wald): Uncertainty	2.15	1.95	1.88	2.18
R-squared	0.02	0.03	0.01	0.03
Observations	1,163	1,162	1,164	1,164
Panel B: Effect on Borrowing Cost				
Posterior Mean	-0.047***	-0.012	-0.004***	-0.002**
	(0.013)	(0.014)	(0.001)	(0.001)
Posterior Uncertainty	2.099	2.006	-0.007	-0.145
	(1.822)	(2.492)	(0.179)	(0.173)
First Stage F-stat (KP Wald): Mean	24.32	17.49	22.60	20.39
First Stage F-stat (KP Wald): Uncertainty	2.26	1.29	1.25	1.21
R-squared	0.10	0.08	0.07	0.06
Observations	567	538	499	559
Panel C: Effect on Credit Utilization Rate				
Posterior Mean	0.012**	0.017***	0.006	0.005
	(0.005)	(0.006)	(0.007)	(0.008)
Posterior Uncertainty	0.210	0.334	0.114	0.128
	(1.602)	(1.451)	(1.385)	(1.309)
First Stage F-stat (KP Wald): Mean	34.88	35.10	34.73	35.25
First Stage F-stat (KP Wald): Uncertainty	2.12	2.03	1.90	2.15
R-squared	0.06	0.05	0.04	0.06
Observations	1,161	1,164	1,160	1,159
Firm Controls	✓	✓	✓	✓
Sector FE	✓	✓	✓	✓
Province FE	✓	✓	✓	✓

Notes: This table reports the estimation results for Equation (F5). In Panel A, the dependent variable is defined as $y_{it+h} = \log\left(\frac{cr_{i,t+h}}{cr_{i,t-1}}\right)$, where $cr_{i,t+h}$ is the flow credit amount. In Panel B, the dependent variable is the weighted average interest rate on flow credits at time $t+h$, $y_{it+h} = r_{i,t+h}$. In Panel C, the dependent variable is the credit utilization rate, defined as $y_{it+h} = \frac{cr_{i,t+h}}{creditline_{i,t+h}}$. We apply Huber regression in the first stage to account for outliers and use a jackknife procedure in the second stage. Posterior uncertainty represents the coefficient on the uncertainty measure. Heteroskedasticity-robust standard errors are reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table F14: Effects of Inflation Expectations and Uncertainty on Short-Term and Long-Term Borrowing (Flow)

	(1) $y_{i,t+1}$	(2) $y_{i,t+2}$	(3) $y_{i,t+3}$	(4) $y_{i,t+4}$
Panel A: Effect on Long-term Credits				
Posterior Mean	0.032***	0.028***	0.032***	0.001
	(0.004)	(0.003)	(0.003)	(0.001)
Posterior Uncertainty	1.139	0.954	0.538	0.319
	(0.871)	(0.793)	(0.697)	(0.206)
First Stage F-stat: Mean	35.51	37.36	37.24	37.12
First Stage F-stat: Uncertainty	1.75	1.80	1.83	2.35
R-squared	0.21	0.21	0.22	0.14
Observations	1,161	1,167	1,166	1,167
Panel B: Effect on Short-term Credits				
Posterior Mean	-0.029***	-0.023***	-0.004	-0.007
	(0.003)	(0.002)	(0.003)	(0.005)
Posterior Uncertainty	0.373	0.270	-0.035	0.190
	(0.598)	(0.491)	(0.186)	(0.217)
First Stage F-stat: Mean	36.60	37.40	36.36	36.97
First Stage F-stat: Uncertainty	2.23	2.06	2.09	1.78
R-squared	0.18	0.27	0.17	0.15
Observations	1,170	1,172	1,168	1,172
Panel C: Effect on Long-term Borrowing Cost				
Posterior Mean	0.037***	0.017**	0.032***	0.015
	(0.009)	(0.007)	(0.011)	(0.014)
Posterior Uncertainty	-0.401	0.764	0.930	-3.908
	(1.088)	(0.884)	(1.270)	(2.546)
First Stage F-stat: Mean	9.75	8.69	9.61	9.78
First Stage F-stat: Uncertainty	1.22	1.14	1.17	1.38
R-squared	0.07	0.04	0.06	0.05
Observations	232	223	227	244
Panel D: Effect on Short-term Borrowing Cost				
Posterior Mean	-0.018***	-0.017***	-0.032**	-0.006
	(0.005)	(0.004)	(0.014)	(0.012)
Posterior Uncertainty	0.756	0.120	-1.002	0.001
	(0.803)	(0.556)	(1.736)	(1.291)
First Stage F-stat: Mean	10.01	12.70	9.10	11.98
First Stage F-stat: Uncertainty	1.10	1.26	1.76	2.41
R-squared	0.03	0.07	0.06	0.04
Observations	289	288	250	293
Firm Controls	✓	✓	✓	✓
Sector FE	✓	✓	✓	✓
Province FE	✓	✓	✓	✓

Notes: This table reports the estimation results for Equation (F5). In Panels A and B, the dependent variable is defined as $y_{it+h} = \log\left(\frac{cr_{i,t+h}}{cr_{i,t-1}}\right)$, where $cr_{i,t+h}$ represents the long-term and short-term flow credit amount at time $t+h$, respectively. In Panels C and D, the dependent variable is the weighted average interest rate charged on flow long-term and short-term credits at time $t+h$, $y_{it+h} = r_{i,t+h}$. Posterior uncertainty rows report the coefficients on uncertainty measures. Each regression includes firm-level controls, sector and province fixed effects. Huber regression is used in the first stage to address outliers, and the jackknife procedure is employed in the second stage. Heteroskedasticity-robust standard errors are reported in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Table F15: Effects of Inflation Expectations on Outstanding Credit Composition

	(1) $y_{i,t+1}$	(2) $y_{i,t+2}$	(3) $y_{i,t+3}$	(4) $y_{i,t+4}$
Panel A: Effect on Total Outstanding Credit				
Posterior Mean	0.043***	0.022***	0.006***	0.005
	(0.007)	(0.006)	(0.002)	(0.006)
Posterior Uncertainty	-0.685	-0.335	0.452	-0.007
	(1.280)	(1.203)	(0.487)	(0.006)
First Stage F-stat (KP Wald): Mean	32.62	36.25	34.53	35.43
First Stage F-stat (KP Wald): Uncertainty	2.28	2.12	2.22	1.81
R-squared	0.05	0.04	0.01	0.03
Observations	1,163	1,167	1,166	1,169
Panel B: Effect on Long-term Outstanding Credit				
Posterior Mean	0.047***	0.041***	0.011	0.010
	(0.010)	(0.009)	(0.009)	(0.012)
Posterior Uncertainty	0.017	0.695	0.024	0.006*
	(1.919)	(1.780)	(0.452)	(0.003)
First Stage F-stat (KP Wald): Mean	34.81	35.01	34.85	34.06
First Stage F-stat (KP Wald): Uncertainty	2.27	2.35	2.05	2.23
R-squared	0.07	0.06	0.06	0.05
Observations	1,166	1,167	1,168	1,164
Panel C: Effect on Short-term Outstanding Credit				
Posterior Mean	-0.015***	-0.012***	-0.002	-0.002**
	(0.005)	(0.004)	(0.001)	(0.001)
Posterior Uncertainty	-0.019	-0.054	-0.023	-0.048**
	(0.106)	(0.084)	(0.025)	(0.021)
First Stage F-stat (KP Wald): Mean	36.28	37.40	36.44	34.91
First Stage F-stat (KP Wald): Uncertainty	1.77	2.53	1.87	2.59
R-squared	0.04	0.01	0.01	0.02
Observations	1,163	1,170	1,164	1,162
Panel D: Effect on TL-denominated Outstanding Credit				
Posterior Mean	0.037***	0.012	0.039***	0.014
	(0.009)	(0.008)	(0.007)	(0.010)
Posterior Uncertainty	1.667	0.001	-0.280	-0.001
	(1.734)	(0.001)	(1.372)	(0.001)
First Stage F-stat (KP Wald): Mean	36.44	35.74	34.15	35.84
First Stage F-stat (KP Wald): Uncertainty	1.99	2.12	2.31	2.34
R-squared	0.02	0.06	0.07	0.04
Observations	1,169	1,166	1,166	1,164
Panel E: Effect on FX-denominated Outstanding Credit				
Posterior Mean	-0.020***	-0.018***	-0.009***	-0.002
	(0.005)	(0.003)	(0.003)	(0.004)
Posterior Uncertainty	1.133	-0.585	0.061	0.002
	(1.077)	(0.687)	(0.545)	(0.003)
First Stage F-stat (KP Wald): Mean	35.03	34.54	35.88	34.51
First Stage F-stat (KP Wald): Uncertainty	1.73	2.23	1.96	1.75
R-squared	0.01	0.03	0.05	0.02
Observations	1,169	1,167	1,168	1,164
Firm Controls	✓	✓	✓	✓
Sector FE	✓	✓	✓	✓
Province FE	✓	✓	✓	✓

Notes: This table presents the estimation results for Equation-(F5). The dependent variable is defined as $y_{it+h} = \log\left(\frac{X_{i,t+h}}{X_{i,t-1}}\right)$, where $X_{i,t+h}$ represents total outstanding credit stock (Panel A), long-term (B), short-term (C), TL-denominated (D), and FX-denominated (E). Posterior uncertainty reflects the subjective uncertainty of firms' inflation expectations. The estimation uses Huber regression in the first stage and jackknife in the second stage. Heteroskedasticity-robust standard errors are in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Table F16: Effect of Inflation Expectations and Uncertainty on Foreign Currency Transactions

	(1) $y_{i,t+1}$	(2) $y_{i,t+2}$	(3) $y_{i,t+3}$	(4) $y_{i,t+4}$
Panel A: Effect on Foreign Currency Purchases				
Posterior Mean	0.013***	0.014**	0.014*	0.013
	(0.005)	(0.007)	(0.008)	(0.009)
Posterior Uncertainty	0.318	0.290	0.602	0.691
	(0.384)	(0.398)	(0.426)	(0.427)
R-squared	0.09	0.10	0.11	0.10
Observations	1,167	1,163	1,164	1,159
Panel B: Effect on Foreign Currency Selling				
Posterior Mean	-0.019**	-0.018*	-0.017*	-0.018
	(0.010)	(0.011)	(0.010)	(0.012)
Posterior Uncertainty	-0.482	-0.441	-0.417	0.120
	(0.361)	(0.348)	(0.358)	(0.355)
R-squared	0.07	0.09	0.08	0.09
Firm Controls	✓	✓	✓	✓
Sector FE	✓	✓	✓	✓
Province FE	✓	✓	✓	✓
First Stage F-stat (KP Wald): Mean	38.89	38.63	37.32	36.96
First Stage F-stat (KP Wald): Uncertainty	2.02	2.01	1.99	1.99
Observations	1,167	1,163	1,164	1,159

Notes: The table reports estimation results for Equation (F5). In Panels A and B, the dependent variables are $y_{it+h} = \log\left(\frac{s_{i,t+h}}{s_{i,t-1}}\right)$ and $y_{it+h} = \log\left(\frac{b_{i,t+h}}{b_{i,t-1}}\right)$, where $s_{i,t+h}$ and $b_{i,t+h}$ correspond to the purchase and sale of foreign currency at time $t+h$, respectively. In each regression, we apply Huber regression in the first stage to address outliers and influential observations and employ the jackknife procedure in the second stage. Heteroskedasticity-robust standard errors are in parentheses. ****p<0.01, **p<0.05, *p<0.1.*

Table F17: Effects of Inflation Expectations on Real Outcomes

	(1) $y_{i,t+1}$	(2) $y_{i,t+2}$	(3) $y_{i,t+3}$	(4) $y_{i,t+4}$
Panel A: Effect on Sales				
Posterior Mean	-0.030^{***}	-0.027^{***}	-0.031^{***}	-0.025^{***}
	(0.008)	(0.007)	(0.007)	(0.007)
Posterior Uncertainty	0.012	0.017	0.018	0.022^{*}
	(0.014)	(0.015)	(0.013)	(0.013)
R-squared	0.08	0.07	0.08	0.07
Panel B: Effect on Number of Buyers				
Posterior Mean	-0.016^{***}	-0.016^{***}	-0.016^{***}	-0.014^{***}
	(0.004)	(0.004)	(0.004)	(0.004)
Posterior Uncertainty	-0.013^{*}	0.016^{**}	-0.014^{*}	0.014^{*}
	(0.008)	(0.008)	(0.008)	(0.007)
R-squared	0.06	0.05	0.04	0.05
Panel C: Effect on Purchases				
Posterior Mean	0.002	0.005^{*}	0.006^{**}	0.003
	(0.003)	(0.003)	(0.003)	(0.003)
Posterior Uncertainty	0.087	0.024	0.062	0.037
	(0.072)	(0.098)	(0.066)	(0.092)
R-squared	0.08	0.07	0.07	0.06
Panel D: Effect on Number of Sellers				
Posterior Mean	0.014^{***}	0.016^{***}	0.016^{***}	0.018^{***}
	(0.005)	(0.005)	(0.005)	(0.005)
Posterior Uncertainty	0.019^{**}	0.019^{**}	0.017^{*}	0.015^{*}
	(0.009)	(0.009)	(0.009)	(0.009)
R-squared	0.07	0.09	0.10	0.11
Firm Controls	✓	✓	✓	✓
Sector FE	✓	✓	✓	✓
Province FE	✓	✓	✓	✓
First Stage F-stat (KP Wald): Mean	36.53	36.92	35.70	35.98
First Stage F-stat (KP Wald): Uncertainty	2.35	1.88	1.99	2.37
Observations	1,159	1,159	1,158	1,157

Notes: This table presents the estimation results for Equation-(F5). The dependent variable in Panels A, B, C and D is defined as $y_{it+h} = \log\left(\frac{X_{i,t+h}}{X_{i,t-1}}\right)$, where $X_{i,t+h}$ denotes sales, number of buyers, purchases and number of sellers at time $t+h$, respectively. In each regression, we apply Huber regression in the first stage to account for outliers and influential observations and employ the jackknife procedure in the second stage. Heteroskedasticity robust standard errors are reported in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Table F18: Effects of Inflation Expectations on Employment, New Hirings and Wages

	(1) $y_{i,t+1}$	(2) $y_{i,t+2}$	(3) $y_{i,t+3}$	(4) $y_{i,t+4}$
Panel A: Effect on Employment				
Posterior Mean	-0.024^{**}	-0.022^{**}	-0.022^{*}	-0.022
	(0.012)	(0.010)	(0.012)	(0.015)
Posterior Uncertainty	-0.457	-0.510	-0.519	-0.428
	(0.601)	(0.712)	(0.710)	(0.788)
R-squared	0.05	0.04	0.04	0.05
Panel B: Effect on New Hirings				
Posterior Mean	-0.003	-0.008	-0.002	-0.013^{**}
	(0.005)	(0.005)	(0.005)	(0.006)
Posterior Uncertainty	0.097	-0.847	-0.333	-0.409
	(0.921)	(1.024)	(1.016)	(1.050)
R-squared	0.03	0.01	0.03	0.04
Panel C: Effect on Wages				
Posterior Mean	0.001	0.001	0.004^{**}	0.002^{**}
	(0.001)	(0.001)	(0.002)	(0.001)
Posterior Uncertainty	0.105	0.065	0.045	0.043
	(0.150)	(0.123)	(0.125)	(0.142)
R-squared	0.06	0.05	0.06	0.05
Firm Controls	✓	✓	✓	✓
Sector FE	✓	✓	✓	✓
Province FE	✓	✓	✓	✓
First Stage F-stat (KP Wald): Mean	36.53	36.92	35.70	35.98
First Stage F-stat (KP Wald): Uncertainty	2.35	1.88	1.99	2.37
Observations	1,159	1,159	1,158	1,157

Notes: This table presents the estimation results for Equation-(F5). The dependent variable in Panels A, B and C is defined as $y_{it+h} = \log\left(\frac{X_{i,t+h}}{X_{i,t-1}}\right)$, where $X_{i,t+h}$ denotes employment, number of new hirings and wages at time $t+h$, respectively. In each regression, we apply Huber regression in the first stage to account for outliers and influential observations and employ the jackknife procedure in the second stage. Heteroskedasticity robust standard errors are reported in parentheses. ***p<0.01, **p<0.05, *p<0.1.

F3 Active Borrowing Sample

Table-F19 and Table-F20 present the estimation results for firms actively engaged in borrowing and foreign currency trading, including both buying and selling activities, across one, two, three, and four months after the treatment. It is important to highlight that, in Tables 6 and 7, we modify the analysis to focus on the causal effect of exogenous variations in inflation expectations on firms' credit behavior and foreign currency trading decisions. Specifically, for firms that do not take any credit, their flow credit amounts are imputed as zero, thereby allowing us to observe the causal impact of inflation expectations on credit flows for all firms in the survey. This approach offers a more comprehensive understanding of the effects by accounting for both firms that engage in credit markets and those that do not, while controlling for financial constraints through leverage and the total flow credits from the previous year. Similarly, firms' decisions to engage in foreign currency trading are also treated as endogenous choices, which are controlled for by including variables for foreign currency credits and foreign currency positions. By accounting for these factors, we aim to isolate the impact of inflation expectations on firms' financial behavior, while recognizing that firms' participation in these markets is conditional on their individual circumstances and financial strategies.

Crucially, we do not impose a similar imputation of zero for interest rates. Unlike credit flows, interest rates are exogenously determined by the credit suppliers, i.e., the banks, and are thus outside the direct control of the firms. As a result, setting interest rates to zero for non-participating firms would be misleading. This is why the sample size is smaller when the outcome is the interest rate in Table-6 and Table-7. Therefore, to assess the robustness of the imputation and provide concrete evidence, we present results exclusively for firms that are actively taking credit or engaging in foreign currency trading one, two, three, and four months after the treatment in Table-F19 and Table-F20.

Table F19: Effects of Inflation Expectations on Flow Credits (Firms with Active Borrowing Sample)

	(1) y^i_{t+1}	(2) y^i_{t+2}	(3) y^i_{t+3}	(4) y^i_{t+4}
Panel A: Effect on Credit				
Posterior Mean	0.032^{***}	0.037^{***}	0.028^{*}	0.022
	(0.012)	(0.015)	(0.016)	(0.015)
First Stage F-stat (KP Wald)	20.63	20.62	20.63	20.63
R-Squared	0.10	0.11	0.11	0.15
Observations	595	567	534	582
Panel B: Effect Long-term Credit				
Posterior Mean	0.035^{***}	0.041^{**}	0.032^{**}	0.030
	(0.012)	(0.016)	(0.015)	(0.019)
First Stage F-stat (KP Wald)	20.56	17.38	18.89	21.31
R-Squared	0.12	0.15	0.09	0.10
Observations	271	254	251	261
Panel C: Effect Short-term Credit				
Posterior Mean	-0.024^{***}	-0.028^{***}	-0.025^{**}	-0.003
	(0.009)	(0.011)	(0.012)	(0.019)
First Stage F-stat (KP Wald)	10.92	11.47	10.85	13.12
R-Squared	0.05	0.08	0.04	0.03
Observations	324	313	283	321
Firm Controls	✓	✓	✓	✓
Sector FE	✓	✓	✓	✓
Province FE	✓	✓	✓	✓

Notes: The table reports estimation results for Equation-(2) for firms that have taken credit at time $t+h$. The dependent variable in Panels A, B, and C is defined as $y_{it+h} = \log\left(\frac{X_{i,t+h}}{X_{i,t-1}}\right)$, where $X_{i,t+h}$ denotes total flow credits, long-term flow credits, and short-term flow credits at time $t+h$, respectively. In each regression, we apply Huber regression in the first stage to account for outliers and influential observations and employ the jackknife procedure in the second stage. Heteroskedasticity robust standard errors are reported in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Table F20: Effects of Inflation Expectations on Foreign Currency Trading (Firms with Active Trading Sample)

	(1) y^i_{t+1}	(2) y^i_{t+2}	(3) y^i_{t+3}	(4) y^i_{t+4}
Panel A: Effect on Foreign Currency Purchases				
Posterior Mean	0.042**	0.044*	0.038*	0.035
	(0.020)	(0.024)	(0.022)	(0.028)
First Stage F-stat (KP Wald)	39.82	35.03	38.93	38.96
R-Squared	0.51	0.59	0.61	0.63
Observations	809	782	794	809
Panel B: Effect on Foreign Currency Selling				
Posterior Mean	−0.049**	−0.052	−0.044	−0.041
	(0.021)	(0.025)	(0.029)	(0.032)
First Stage F-stat (KP Wald)	42.85	41.39	41.21	43.76
R-Squared	0.38	0.39	0.25	0.19
Observations	878	876	874	881
Firm Controls	✓	✓	✓	✓
Sector FE	✓	✓	✓	✓
Province FE	✓	✓	✓	✓

Notes: The table presents estimation results for Equation-(2) for firms that buy or sell foreign currency at time $t+h$. In Panels A and B, the dependent variables are defined as $y_{it+h} = \log\left(\frac{s_{i,t+h}}{s_{i,t-1}}\right)$ and $y_i = \log\left(\frac{b_{i,t+h}}{b_{i,t-1}}\right)$, where $s_{i,t+h}$ and $b_{i,t+h}$ represent the sale and purchase of foreign currency at time $t+h$, respectively. In each regression, we apply Huber regression in the first stage to account for outliers and influential observations and employ the jackknife procedure in the second stage. Heteroskedasticity robust standard errors are reported in parentheses. ***p<0.01, **p<0.05, *p<0.1.

To ensure the robustness of our findings further, we extend the analysis using data from the flow credit registry and foreign exchange buying/selling administrative datasets. This robustness check allows us to verify the consistency of the results within the data. The empirical strategy we adopt involves comparing the pre-treatment and post-treatment outcomes of firms. Spesifically, let $y_{i,post}$ represent the total outcome variable for firm i over the four-month period following the treatment, and let $y_{i,pre}$ represent the total outcome variable over the four months prior to the treatment. For this analysis, we define the pre-treatment period as January, February, March, and April, during which we sum the credit amounts and foreign currency trading activity (both buying and selling) to obtain the pre-treatment outcome. The post-treatment period is defined as June,

July, August, and September, for which we similarly aggregate the credit and foreign currency activity to determine the post-treatment outcome. In the case of interest rates, instead of summing, we calculate the weighted average for both the pre-treatment and post-treatment periods.

By utilizing this pre-post treatment comparison, we ensure that we capture the dynamic changes in firms' behavior, which are directly influenced by the treatment. This approach also allows us to assess the impact of inflation expectations on a broad set of firms that are given the survey, thereby maximizing the sample size and ensuring that our estimates are representative. Finally, we regress the difference in pre-treatment and post-treatment outcomes on inflation expectations that were formed prior to the treatment, enabling us to isolate the effect of anticipated inflation on firms' decisions to take credit or engage in foreign currency trading:

$$(y_{i,post} - y_{i,pre}) = \beta_1 \text{Post}_i^{mean} + \beta_2 \text{Prior}_i + \gamma X_i + \delta_s + \phi_p + \varepsilon_i, \tag{F8}$$

where the set of controls, X_i, includes firm-level characteristics such as firm age, size (measured by employment), sector, region, exporter status, and leverage, all measured in the pre-treatment period (April 2024). The vector of controls also includes the previous year's total annual credits and the weighted average credit score when the outcome pertains to credit market performance, as well as the firm's foreign currency position, total foreign currency buying, and selling activities from the previous calendar year when the outcome involves foreign exchange transactions. δ_s and ϕ_p are sector and province fixed effects, respectively. We again utilize the information treatment at time t as an instrument for the inflation expectations that follow at time t, as shown in Equation-(3).

Table F21: Effects of Inflation Expectations on Flow Credits and Foreign Currency Trading: Pre- and Post-Treatment (4-Month Window)

	(1) Coefficient (Std. error)	(2) First Stage F-Stat (KP Wald)	(3) R-Squared	(4) Observations
FX Purchases	0.041^{***} (0.013)	39.21	0.05	1,067
FX Selling	-0.033^{***} (0.012)	47.41	0.07	1,169
Flow Credit	0.039^{***} (0.009)	37.38	0.14	975
Long-Term Credit	0.034^{***} (0.0011)	36.09	0.08	724
Short-Term Credit	-0.024^{**} (0.013)	38.66	0.12	823
Borrowing Cost	-0.042^{***} (0.014)	37.38	0.22	975
Long-term Borrowing Cost	0.031^{***} (0.010)	36.09	0.04	724
Short-term Borrowing Cost	-0.022^{***} (0.008)	38.66	0.21	823

Notes: The table presents estimation results for Equation (F8). Each outcome variable is defined as the log difference between the post-treatment and pre-treatment periods (i.e., $\log(y_{i,\text{post}}) - \log(y_{i,\text{pre}})$), except when the outcome variable is the borrowing cost, in which case the outcome is the weighted average interest rate for the post-treatment period. In each regression, we apply Huber regression in the first stage to account for outliers and influential observations and employ the jackknife procedure in the second stage. Heteroskedasticity robust standard errors are reported in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Appendix - G - Symmetry Across Expectations

To examine the symmetry of firms' responses to inflation expectation shocks, we exploit the quasi-random variation generated by the information treatments, which led to both upward and downward revisions in inflation expectations. The balanced baseline characteristics across the "expectations increased" and "expectations decreased" groups (Table-G1) ensure comparability, allowing us to interpret any differential responses as causal effects stemming from the direction of the expectation change.

Symmetry in this context implies that firms adjust their behavior in line with the direction of the expectation shock and the sign of the estimated coefficient. That is, if an increase in expectations raises an outcome (a positive coefficient), then a decrease in expectations should lower it by approximately similar magnitude—and vice versa for negative coefficients. Our results demonstrate a strong degree of such symmetry. For example, increases in expectations lead to higher long-term credit utilization and lower short-term borrowing, while decreases in expectations result in comparable changes in the opposite direction (Table-G2). In FX markets, expectation increases boost purchases and reduce sales, and expectation decreases generate symmetric effects (Table-G4). The composition of outstanding credit also shifts in a symmetric fashion: both TL and FX-denominated credit components respond consistently across expectation directions (Table-G3). Real outcomes such as sales, employment, and new hirings also exhibit symmetry—decreasing when expectations rise and increasing when expectations fall, consistent with negative coefficients across both groups (Tables G5 and G6). Overall, the evidence suggests that firm decisions respond not only to the level of expectations but also to their directional shifts, in a way that is consistent and symmetric across behavioral margins.

Table G1: Descriptive Statistics by Expectations Treatment Group

	Control		Expectations Increased		Expectations Decreased	
Variable	Mean	SD	Mean	SD	Mean	SD
Net Sales (billion TL)	1.31	3.41	1.33	3.67	1.52	4.41
Assets (billion TL)	1.21	2.88	1.36	2.65	1.45	3.85
Capital (K) (billion TL)	0.25	0.72	0.23	0.71	0.28	0.95
Exports (billion TL)	0.41	0.19	0.45	0.26	0.46	0.32
Net Profit (billion TL)	0.81	0.17	0.76	0.19	0.85	0.31
Age	22.85	12.42	24.66	13.06	23.09	12.94
Number of Employees	615.17	910.86	648.55	1157.24	663.41	1177.52
Prior Expectations						
CPI (implied mean)	58.63	18.23	58.21	19.29	59.65	17.48
PPI (implied mean)	58.45	20.09	58.96	21.04	59.42	19.01
Production Capacity Utilization	68.62	19.75	69.71	20.58	69.59	20.65
No. of observations	303		366		694	

Notes: This table presents descriptive statistics for firms assigned to the control group and the two treatment groups based on the direction of inflation expectation revisions. Variables are expressed in billion Turkish Lira (TL) where applicable. Standard deviations are reported in the adjacent columns. CPI and PPI refer to the Consumer and Producer Price Index expectations, respectively.

Table G2: Effects of Inflation Expectations on Credit (Flow) and Credit Utilization Rate: Symmetry Across Expectations

	Expectations Increased				Expectations Decreased			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	$y_{i,t+1}$	$y_{i,t+2}$	$y_{i,t+3}$	$y_{i,t+4}$	$y_{i,t+1}$	$y_{i,t+2}$	$y_{i,t+3}$	$y_{i,t+4}$
Panel A: Effect on Credit								
Posterior Mean	0.026*	0.028***	0.017	0.018*	0.027***	0.035***	0.012	0.015
	(0.014)	(0.010)	(0.011)	(0.010)	(0.010)	(0.008)	(0.009)	(0.010)
R-squared	0.02	0.02	0.01	0.02	0.03	0.04	0.02	0.03
Observations	653	653	653	653	845	845	845	845
Panel B: Effect on Credit Utilization								
Posterior Mean	0.010***	0.006***	0.005	0.004	0.008***	0.007***	0.004	0.005
	(0.002)	(0.002)	(0.003)	(0.005)	(0.002)	(0.002)	(0.003)	(0.006)
R-squared	0.03	0.07	0.05	0.04	0.04	0.05	0.03	0.04
Observations	653	653	653	653	845	845	845	845
Panel C: Effect on Long-term Credit								
Posterior Mean	0.034***	0.027***	0.033***	0.007	0.042***	0.037***	0.034***	0.005
	(0.006)	(0.005)	(0.004)	(0.005)	(0.005)	(0.004)	(0.004)	(0.004)
R-squared	0.29	0.27	0.29	0.23	0.30	0.25	0.23	0.19
Observations	653	653	653	653	845	845	845	845
Panel D: Effect on Short-term Credit								
Posterior Mean	-0.024***	-0.025***	0.002	-0.001	-0.030***	-0.024***	-0.005	-0.002
	(0.003)	(0.004)	(0.001)	(0.001)	(0.003)	(0.003)	(0.004)	(0.003)
R-squared	0.28	0.31	0.23	0.24	0.25	0.28	0.26	0.24
Observations	653	653	653	653	845	845	845	845

Notes (Fact-4): The table reports estimation results for Equation-(2). Columns (1)–(4) report results for the sub-sample of firms whose inflation expectations increased post-treatment, while columns (5)–(8) correspond to those whose expectations decreased. In each case, the analysis is conducted using a split sample that includes the respective treated group (firms with increased or decreased expectations) and the control group. In Panel A, the dependent variable is defined as $y_{it+h} = \log\left(\frac{cr_{i,t+h}}{cr_{i,t-1}}\right)$, where $cr_{i,t+h}$ represents the flow credit amount at time $t+h$. In Panel B, the dependent variable is the credit utilization rate, defined as the ratio of total credit used to the total credit line at time $t+h$, $y_{i,t+h} = \frac{cr_{i,t+h}}{c.linei,t+h}$. In Panel C and D, the dependent variable is defined as $y_{it+h} = \log\left(\frac{cr_{i,t+h}}{cr_{i,t-1}}\right)$, where $cr_{i,t+h}$ represents the long-term and short-term flow credit amount at time $t+h$, respectively. In each regression, we apply Huber regression in the first stage to account for outliers and influential observations and employ the jackknife procedure in the second stage. Heteroskedasticity robust standard errors are reported in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Table G3: Effects of Inflation Expectations on Outstanding Credit Composition: Symmetry Across Expectations

	Expectations Increased				Expectations Decreased			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	$y_{i,t+1}$	$y_{i,t+2}$	$y_{i,t+3}$	$y_{i,t+4}$	$y_{i,t+1}$	$y_{i,t+2}$	$y_{i,t+3}$	$y_{i,t+4}$
Panel A: Effect on Outstanding Credits								
Posterior Mean	0.028**	0.031***	0.007*	0.004	0.044***	0.026***	0.009***	0.007
	(0.011)	(0.008)	(0.004)	(0.007)	(0.009)	(0.007)	(0.003)	(0.005)
R-squared	0.06	0.08	0.04	0.04	0.063	0.059	0.045	0.036
Observations	753	753	753	753	845	845	845	845
Panel B: Effect on Long-term Outstanding Credits								
Posterior Mean	0.036**	0.053***	0.019	0.024	0.054***	0.048***	0.009	0.012
	(0.015)	(0.012)	(0.015)	(0.017)	(0.011)	(0.010)	(0.006)	(0.011)
R-squared	0.08	0.04	0.07	0.06	0.08	0.06	0.08	0.08
Observations	653	653	653	653	845	845	845	845
Panel C: Effect on Short-term Outstanding Credits								
Posterior Mean	-0.013	-0.004	-0.002	-0.004***	-0.020***	-0.021***	-0.004***	-0.003***
	(0.008)	(0.006)	(0.002)	(0.001)	(0.006)	(0.005)	(0.001)	(0.001)
R-squared	0.05	0.03	0.04	0.07	0.04	0.04	0.05	0.06
Observations	653	653	653	653	845	845	845	845
Panel D: Effect on TL-denominated Outstanding Credits								
Posterior Mean	0.037***	0.019	0.026***	0.018	0.035***	0.018	0.042***	0.021
	(0.012)	(0.014)	(0.010)	(0.013)	(0.010)	(0.012)	(0.008)	(0.015)
R-squared	0.07	0.06	0.07	0.04	0.06	0.06	0.06	0.07
Observations	653	653	653	653	845	845	845	845
Panel E: Effect on FX-denominated Outstanding Credits								
Posterior Mean	-0.025***	-0.011**	-0.007*	-0.003	-0.023***	-0.015***	-0.011***	-0.001
	(0.007)	(0.005)	(0.004)	(0.003)	(0.005)	(0.004)	(0.003)	(0.003)
R-squared	0.02	0.06	0.03	0.04	0.04	0.06	0.04	0.05
Observations	653	653	653	653	845	845	845	845

Notes (Fact-4): This table presents the estimation results for Equation-(2). Columns (1)–(4) report results for the subsample of firms whose inflation expectations increased post-treatment, while columns (5)–(8) correspond to those whose expectations decreased. In each case, the analysis is conducted using a split sample that includes the respective treated group (firms with increased or decreased expectations) and the control group. In Panel A and B, the dependent variable is defined as $y_{it+h} = \log\left(\frac{cr_{i,t+h}}{cr_{i,t-1}}\right)$, where $cr_{i,t+h}$ represents the long-term and short-term flow credit amount at time $t+h$, respectively. In Panel C and D, the dependent variable is the weighted average interest rate charged on flow long-term and short-term credits at time $t+h$, $y_{it+h} = r_{i,t+h}$. In each regression, we apply Huber regression in the first stage to account for outliers and influential observations and employ the jackknife procedure in the second stage. Heteroskedasticity robust standard errors are reported in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Table G4: Effect of Inflation Expectations on Foreign Currency Trading Behavior: Symmetry Across Expectations

	Expectations Increased				Expectations Decreased			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	$y_{i,t+1}$	$y_{i,t+2}$	$y_{i,t+3}$	$y_{i,t+4}$	$y_{i,t+1}$	$y_{i,t+2}$	$y_{i,t+3}$	$y_{i,t+4}$
Panel A: Effect on Foreign Currency Purchases								
Posterior Mean	0.022**	0.028**	0.019	0.022	0.026***	0.028**	0.023	0.022
	(0.010)	(0.015)	(0.014)	(0.017)	(0.009)	(0.013)	(0.015)	(0.018)
R-squared	0.08	0.07	0.08	0.08	0.08	0.09	0.09	0.08
Observations	653	653	653	653	845	845	845	845
Panel B: Effect on Foreign Currency Sales								
Posterior Mean	-0.023**	-0.024*	-0.027**	-0.030	-0.026**	-0.028**	-0.032**	-0.025
	(0.010)	(0.014)	(0.012)	(0.022)	(0.012)	(0.014)	(0.016)	(0.019)
R-squared	0.10	0.09	0.10	0.09	0.09	0.10	0.09	0.09
Observations	653	653	653	653	845	845	845	845

Notes (Fact 6): The table reports estimation results for Equation-(2). Columns (1)–(4) report results for the subsample of firms whose inflation expectations increased post-treatment, while columns (5)–(8) correspond to those whose expectations decreased. In each case, the analysis is conducted using a split sample that includes the respective treated group (firms with increased or decreased expectations) and the control group. In Panels A and B, the dependent variables are $y_{it+h} = \log\left(\frac{s_{i,t+h}}{s_{i,t-1}}\right)$ and $y_i = \log\left(\frac{b_{i,t+h}}{b_{i,t-1}}\right)$, where $s_{i,t+h}$ and $b_{i,t+h}$ correspond to the purchasing and selling of foreign currency at time $t+h$, respectively. In each regression, we apply Huber regression in the first stage to account for outliers and influential observations and employ the jackknife procedure in the second stage. Heteroskedasticity robust standard errors are reported in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Table G5: Effects of Inflation Expectations on Real Outcomes: Symmetry Across Expectations

	Expectations Increased				Expectations Decreased			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	$y_{i,t+1}$	$y_{i,t+2}$	$y_{i,t+3}$	$y_{i,t+4}$	$y_{i,t+1}$	$y_{i,t+2}$	$y_{i,t+3}$	$y_{i,t+4}$
Panel A: Effect on Sales								
Posterior Mean	-0.026***	-0.027***	-0.028***	-0.025***	-0.021***	-0.023***	-0.031***	-0.026***
	(0.007)	(0.007)	(0.007)	(0.007)	(0.008)	(0.007)	(0.008)	(0.008)
R-squared	0.01	0.01	0.02	0.01	0.02	0.02	0.01	0.02
Observations	644	645	645	645	836	838	836	836
Panel B: Effect on Number of Buyers								
Posterior Mean	-0.012***	-0.011***	-0.011***	-0.010***	-0.012***	-0.012***	-0.014***	-0.012***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
R-squared	0.01	0.02	0.01	0.01	0.02	0.02	0.01	0.02
Observations	645	645	645	645	838	839	839	838
Panel C: Effect on Purchases								
Posterior Mean	0.002	0.006**	0.008**	0.007*	0.001	0.007*	0.009**	0.003
	(0.004)	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
R-squared	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01
Observations	643	642	642	642	835	835	835	
Panel D: Effect on Number of Sellers								
Posterior Mean	0.016***	0.017***	0.018***	0.018***	0.010**	0.010*	0.009*	0.010**
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
R-squared	0.02	0.02	0.01	0.01	0.01	0.02	0.01	0.01
Observations	643	642	642	642	835	835	835	834

Notes (Fact 7): This table presents the estimation results for Equation-(2). Columns (1)–(4) report results for the subsample of firms whose inflation expectations increased post-treatment, while columns (5)–(8) correspond to those whose expectations decreased. In each case, the analysis is conducted using a split sample that includes the respective treated group (firms with increased or decreased expectations) and the control group. The dependent variable in Panels A, B, C and D is defined as $y_{it+h} = \log\left(\frac{X_{i,t+h}}{X_{i,t-1}}\right)$, where $X_{i,t+h}$ denotes sales, number of buyers, purchases and number of sellers at time $t+h$, respectively. In each regression, we apply Huber regression in the first stage to account for outliers and influential observations and employ the jackknife procedure in the second stage. Heteroskedasticity robust standard errors are reported in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Table G6: Effects of Inflation Expectations on Employment, New Hirings and Wages: Symmetry Across Expectations

	Expectations Increased				Expectations Decreased			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	$y_{i,t+1}$	$y_{i,t+2}$	$y_{i,t+3}$	$y_{i,t+4}$	$y_{i,t+1}$	$y_{i,t+2}$	$y_{i,t+3}$	$y_{i,t+4}$
Panel A: Effect on Employment								
Posterior Mean	-0.019***	-0.017***	-0.017***	-0.018***	-0.024***	-0.025***	-0.024***	-0.024***
	(0.005)	(0.005)	(0.005)	(0.005)	(0.006)	(0.006)	(0.006)	(0.006)
R-squared	0.01	0.02	0.01	0.01	0.03	0.02	0.02	0.02
Observations	646	646	646	646	835	835	834	834
Panel B: Effect on New Hirings								
Posterior Mean	-0.010**	-0.008	-0.006	-0.010**	-0.009*	-0.018***	-0.010	-0.015**
	(0.005)	(0.005)	(0.005)	(0.005)	(0.006)	(0.006)	(0.006)	(0.006)
R-squared	0.02	0.01	0.01	0.02	0.01	0.02	0.01	0.01
Observations	587	617	598	598	766	787	779	773
Panel C: Effect on Wages								
Posterior Mean	0.001	0.002**	0.003***	0.002	0.002*	0.002**	0.002**	0.001
	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
R-squared	0.01	0.02	0.01	0.01	0.02	0.01	0.02	0.01
Observations	645	645	645	645	833	832	832	831

Notes (Fact 7): This table presents the estimation results for Equation-(2). Columns (1)–(4) report results for the subsample of firms whose inflation expectations increased post-treatment, while columns (5)–(8) correspond to those whose expectations decreased. In each case, the analysis is conducted using a split sample that includes the respective treated group (firms with increased or decreased expectations) and the control group. The dependent variable in Panels A, B and C is defined as $y_{it+h} = \log\left(\frac{X_{i,t+h}}{X_{i,t-1}}\right)$, where $X_{i,t+h}$ denotes employment, number of new hirings and wages at time $t+h$, respectively. In each regression, we apply Huber regression in the first stage to account for outliers and influential observations and employ the jackknife procedure in the second stage. Heteroskedasticity robust standard errors are reported in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Appendix - H - Additional Tables and Figures

Table H1: Treatment Effects on Expectations (without fixed effects and firm controls)

	CPI		PPI	
	(1) mean	(2) best	(3) mean	(4) best
Revisions in beliefs immediately after treatment				
Prior Mean	0.826***	0.834***	0.827***	0.831***
	(0.041)	(0.040)	(0.036)	(0.041)
Prior mean × T1	-0.293***	-0.323***	-0.394***	-0.424***
	(0.060)	(0.059)	(0.064)	(0.060)
Prior mean × T2	-0.250***	-0.269***	-0.307***	-0.378***
	(0.065)	(0.066)	(0.059)	(0.057)
Prior mean × T3	-0.150**	-0.160**	-0.237***	-0.286***
	(0.064)	(0.066)	(0.060)	(0.060)
Prior mean × T4	-0.167***	-0.171***	-0.212***	-0.240***
	(0.062)	(0.063)	(0.061)	(0.058)
T1 (SPF expectations)	10.231***	10.425***	10.765***	12.420***
	(3.520)	(3.377)	(3.657)	(4.057)
T2 (CBRT 1-y ahead forecast)	10.697***	10.667***	10.794***	10.529***
	(3.708)	(3.710)	(3.345)	(3.838)
T3 (CBRT 2-y ahead forecast)	2.492	2.328	8.408**	10.435***
	(3.643)	(3.688)	(3.442)	(3.847)
T4 (Inflation Target)	8.678**	7.407**	10.959***	11.464***
	(3.616)	(3.706)	(3.422)	(3.896)
Observations	1,182	1,182	1,193	1,176
R-squared	0.69	0.71	0.68	0.72

Notes (Fact-1): The table reports estimation results for Equation-(1), excluding fixed effects and firm controls. The dependent variable, (Posterior$_i$), refers to CPI in Columns (1)-(2), and to PPI in Columns (3)-(4). Mean is calculated based on triangular distribution, and best refers to the midpoint CPI expectation. Four different treatments are applied. The mean and the standard deviation of prior inflation expectations are 58% and 18, respectively. All regressions are estimated using the Huber robust method to account for outliers and influential observations. Robust standard errors are reported in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Table H2: Treatment Effects on Expectations (Excluding non-updaters from the treatment group)

	CPI		PPI	
	(1) mean	(2) best	(3) mean	(4) best
Revisions in beliefs immediately after treatment				
Prior Mean	0.810***	0.830***	0.818***	0.856***
	(0.041)	(0.040)	(0.038)	(0.031)
Prior mean × T1	-0.302***	-0.326***	-0.423***	-0.460***
	(0.059)	(0.060)	(0.064)	(0.060)
Prior mean × T2	-0.262***	-0.314***	-0.327***	-0.345***
	(0.067)	(0.067)	(0.061)	(0.057)
Prior mean × T3	-0.125*	-0.149***	-0.254***	-0.286***
	(0.066)	(0.068)	(0.061)	(0.061)
Prior mean × T4	-0.151**	-0.159***	-0.216***	-0.237***
	(0.063)	(0.064)	(0.064)	(0.064)
T1 (SPF expectations)	10.710***	10.801***	10.572***	12.671***
	(3.510)	(3.498)	(3.675)	(3.488)
T2 (CBRT 1-y ahead forecast)	11.315***	11.142***	10.732***	11.650***
	(3.874)	(3.847)	(3.480)	(3.234)
T3 (CBRT 2-y ahead forecast)	1.086	11.818***	9.237***	10.544***
	(3.794)	(3.859)	(3.496)	(3.509)
T4 (Inflation Target)	7.468**	7.730**	11.110***	10.166***
	(3.739)	(3.807)	(3.555)	(3.562)
Firm Controls	✓	✓	✓	✓
Sector FE	✓	✓	✓	✓
Province FE	✓	✓	✓	✓
Observations	1,149	1,149	1,160	1,160
R-squared	0.71	0.70	0.72	0.74

Notes (Fact-1): The table reports estimation results for Equation-(1). The sample is restricted by excluding firms in the treatment group that did not revise their expectations following the treatment. The dependent variable, (Posterior$_i$), refers to CPI in Columns (1)-(2), and to PPI in Columns (3)-(4). Mean is calculated based on triangular distribution, and best refers to the midpoint CPI expectation. The firm-level controls include firm age, leverage, employment, and exporter status. Four different treatments are applied. The mean and the standard deviation of prior inflation expectations are 58% and 18, respectively. All regressions are estimated using the Huber robust method to account for outliers and influential observations. Robust standard errors are reported in parentheses. ***p<0.01, **p<0.05, *p<0.1.

Appendix - I - Effectiveness of the Treatment (Fact 1)

In a high-inflation environment, where agents are generally attentive and well informed about past inflation, their learning process can differ markedly from that in a low-inflation setting. To examine how various factors shape the effectiveness of our information treatment, we start with a standard Bayesian-learning framework and assume the following inflation process:

$$\pi_t = \rho\,\pi_{t-1} + \epsilon_t, \quad \epsilon_t \sim N(0, \sigma_\epsilon^2).$$

where the unconditional variance is $\mathrm{Var}(\pi_t) = \frac{\sigma_\epsilon^2}{1-\rho^2}$ if the process is stationary. Suppose the agent receives a noisy signal at time t:

$$s_t = \pi_t + \omega_t, \quad \omega_t \sim N(0, \sigma_\omega^2),$$

and holds a prior forecast $\hat{\pi}$ with variance $\mathrm{Var}(\pi_t)$ as agent knows the underlying process. Bayesian updating then implies:

$$\hat{\pi}_{t|t} = \hat{\pi} + K\big(s_t - \hat{\pi}\big) = (1-K)\,\hat{\pi} + K\,s_t,$$

where the optimal Kalman gain, K, is[27]

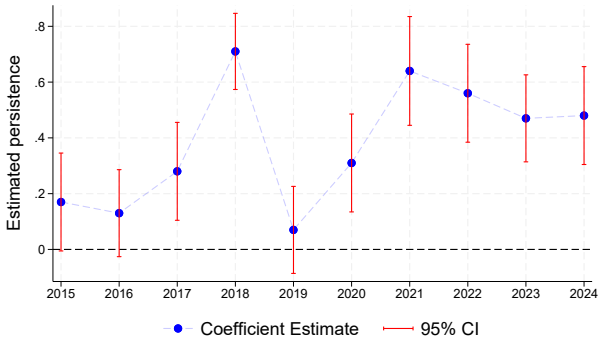
$$K = \frac{\mathrm{Var}(\pi_t)}{\mathrm{Var}(\pi_t) + \sigma_\omega^2} = \frac{\frac{\sigma_\epsilon^2}{1-\rho^2}}{\frac{\sigma_\epsilon^2}{1-\rho^2} + \sigma_\omega^2}.$$

Following Weber et al. (2025), three elements determine the magnitude of the Kalman gain—and thus the effectiveness of any information treatment: (i) the agent's prior uncertainty about inflation, (ii) the perceived noise of the signal, and (iii) the persistence of the underlying inflation process. A higher prior variance, a more persistent process, or a more precise (lower-noise) signal each raises the weight that agents place on new information. In a high-inflation environment

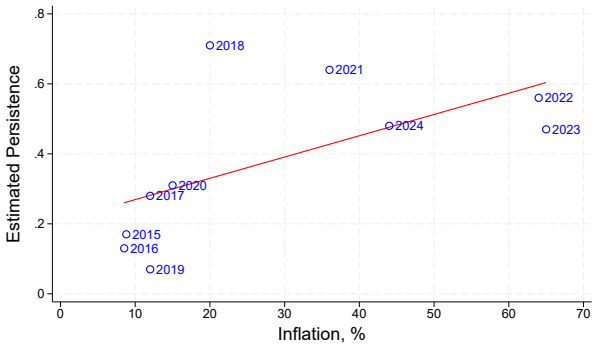
[27] Optimal K on the new signal s_t arises from minimizing the mean squared error of the forecast, $\mathscr{L}(\hat{\pi}_{t|t}) = \mathbb{E}\big[(\pi_t - \hat{\pi}_{t|t})^2 \mid s_t\big]$.

such as Türkiye's, prior uncertainty is elevated, expectations are highly dispersed and deanchored. This lack of a firm anchor, in turn, contributes to greater persistence in the inflation process itself. The persistence of the inflation process tends to be greater in high-inflation environments, as documented by Weber et al. (2025). Both of these dynamics—higher fundamental uncertainty and greater persistence—push the Kalman gain upward. Moreover, when the signal originates from a credible source—the central bank in our experiment—agents perceive its noise to be low, which further increases the gain. Taken together, these channels predict a large treatment effect in high-inflation settings, consistent with our empirical findings.

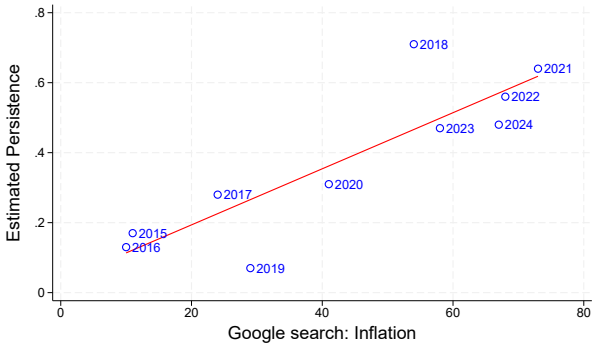
Figure-I1 provides empirical evidence consistent with these mechanisms. Panel (a) shows that the estimated persistence of inflation expectations—captured by the responsiveness of one-year-ahead expectations to lagged CPI inflation—has increased over time, particularly during periods of higher inflation. This dynamic is further illustrated in Panel (b), where the estimated persistence is strongly positively associated with the actual inflation rate, confirming that firms perceive inflation as more persistent during periods of high inflation. Panel (c) demonstrates a similar positive relationship between inflation persistence and information salience, as proxied by Google search intensity for "inflation" in Turkey. Together, these results suggest that in high-inflation environments, firms perceive inflation as more persistent and are more responsive to relevant information—consistent with a higher Kalman gain and stronger treatment effects.



(a) Time Variation in Inflation Persistence Estimates



(b) Inflation Persistence vs. Inflation Rate



(c) Inflation Persistence vs. Google Search Intensity

Figure I1: Estimated Inflation Expectation Persistence Over Time

Notes: Panel (a) displays annual estimates of the perceived persistence of inflation, obtained by regressing firms' one-year-ahead inflation expectations on the lagged CPI inflation rate over the previous 12 months, interacted with year dummies. The estimation uses the full BTS panel and includes firm fixed effects, sector-by-quarter fixed effects, and province fixed effects. Standard errors, clustered at the firm level, are shown in red as 95% confidence intervals. These yearly coefficients capture how the responsiveness of firms' expectations to past inflation evolves over time, allowing us to assess whether expectations have become more anchored—i.e., less sensitive to recent inflation—or more reactive across different inflation regimes. This approach facilitates a clearer interpretation of how firms form expectations in varying inflationary environments, such as periods of low versus high inflation. Panel (b) shows the relationship between the estimated inflation persistence coefficients and the contemporaneous 12-month CPI inflation rate across years. Panel (c) plots the same persistence coefficients against the Google Trends search index for "inflation" in Turkey, averaged over the corresponding periods.

While illustrative, the single-signal model assumes that all agents process the same information. Following recent work such as Weber et al. (2025) and Maćkowiak et al. (2023), and the broader rational-inattention literature, we enrich the framework by positing a set of available inflation signals $S = \{s_{1t}, s_{2t}, ..., s_{Nt}\}$. Because acquiring and processing data are costly, agents do not track every signal.

Consequently, agent i's forecast is the rational expectation of inflation conditional on the sub-

set of signals she chooses to follow,

$$\hat{\pi}_{i,t} = E[\pi_t \mid S_i].$$

The agent's subjective uncertainty before our intervention is the variance of inflation conditional on their knowledge, $\text{Var}(\pi_t \mid S_i)$. In this case, the Kalman gain is:

$$K_i = \frac{\text{Var}(\pi_t \mid S_i)}{\text{Var}(\pi_t \mid S_i) + \sigma_\omega^2} = \frac{k_i \cdot \frac{\sigma_\epsilon^2}{1-\rho^2}}{k_i \cdot \frac{\sigma_\epsilon^2}{1-\rho^2} + \sigma_\omega^2}.$$

where $\text{Var}(\pi_t \mid S_i) = k_i \text{Var}(\pi_t) = k_i \cdot \frac{\sigma_\epsilon^2}{1-\rho^2}$ with $k_i < 1$. Here, $k_i \in [0,1]$ is a measure of the agent's inattention or remaining uncertainty. The simple model above corresponds to the special case where $k_i = 1$. By incurring cognitive costs to process signals, agents learn more about inflation and reduce their uncertainty, leading to a $k_i < 1$. As long as S_i is not fully informative of inflation, $\text{Var}(\pi_t \mid S_i) > 0$, then there is room for learning and agents assign positive weight to new signals.

Each agent i endogenously chooses a specific information set, $S_i \subset S$, balancing the accuracy gains against cognitive costs. Weber et al. (2025) show that the optimal strategy is to acquire just enough information for subjective uncertainty to equal the marginal cost–benefit ratio. In a high-inflation environment, the benefits of accurate forecasting are substantial, incentivizing agents to process more signals. However, the costs may also be higher, as the set of signals required to stay fully informed can be much larger and more complex than in a low-inflation economy. This implies that agents—each with different cognitive capacities and benefits from forecasting accurately—will form different prior beliefs based on the unique set of signals they track, leading to the high dispersion in expectations shown in Figure-B1.

Within this framework, an information treatment is an intervention in which the researcher supplies a particular signal, s_p, to an agent. The effectiveness of this treatment is therefore not uniform; it is relative to the agent's pre-existing information set, S_i. This new piece of information is then added to the agent's existing information set. The agent's updated, or posterior, forecast

becomes:

$$\hat{\pi}_{i,t|p} = E[\pi_t \mid S_i \cup \{s_p\}].$$

The impact of the treatment depends on whether the provided information is novel. If the information in s_p was already part of the agent's information set S_i (or highly correlated with it), the treatment provides no new information, and the belief update will be zero. Conversely, if the signal is genuinely new, it should lead to a significant belief update. In our experiment, nearly 15% of agents do not change their posterior after receiving the signal, a finding consistent with these individuals already possessing the information provided.

Moreover, the theory can be linked to the empirical literature as discussed in the main text. Weber et al. (2025) use the following regression to estimate the treatment effect.

$$\text{Posterior}_i = \alpha + \beta \text{Prior}_i + \theta I_i + \gamma I_i * \text{Prior}_i + \epsilon_i$$

where Posterior $_i$ and Prior $_i$ are the respondent's posterior and prior about the variable of interest, and I_i is an indicator variable for assignment to the treatment group. The treatment effect is estimated as $-\hat{\gamma}/\hat{\beta}$, i.e., the scaled parameter.

Appendix - J - Pass-through in High Inflation (Fact-2)

This section derives the pass-through from a shock to firms' inflation expectations to their own prices, following (Werning, 2022). We assume that firms form their expectations about future aggregate inflation based on a perceived understanding of its dynamics. Specifically, firms believe that the aggregate inflation rate, π_t, follows an AR(1) process around a known long-run inflation anchor, $\bar{\pi}$:

$$\pi_t = (1-\rho_P)\bar{\pi} + \rho_P \pi_{t-1} + \xi_t \tag{J1}$$

where there is a non-zero long-run inflation target ($\bar{\pi}$). Here, ρ_P is the perceived persistence parameter of inflation deviations from the target $\bar{\pi}$. In an anchored regime, firms perceive ρ_P to be low. They believe that any deviation of inflation from $\bar{\pi}$ is highly transitory and will quickly revert to the target. Yet, in a de-anchored regime, firms perceive ρ_P to be high. They believe that deviations of inflation from $\bar{\pi}$ are persistent and will linger for a considerable period. The term ξ_t represents shocks to inflation as perceived by the firms. Based on this process , a firm's one-period-ahead expectation of aggregate inflation, formed at time t after observing π_t, is:

$$E_t^{\text{firm}}[\pi_{t+1}] = (1-\rho_P)\bar{\pi} + \rho_P \pi_t \tag{J2}$$

We now define the core "expectation shock" variable, ε_t, as the deviation of firms' own one-period-ahead inflation expectation from the long-run target $\bar{\pi}$:

$$\varepsilon_t \equiv E_t^{\text{firm}}[\pi_{t+1}] - \bar{\pi} \tag{J3}$$

Substituting (J2) into (J3):

$$\begin{aligned}\varepsilon_t &= \left[(1-\rho_P)\bar{\pi} + \rho_P \pi_t\right] - \bar{\pi} \\ &= \bar{\pi} - \rho_P \bar{\pi} + \rho_P \pi_t - \bar{\pi} \\ \varepsilon_t &= \rho_P(\pi_t - \bar{\pi})\end{aligned}$$

This shows that the current expectation deviation ε_t is directly proportional to the current deviation of actual inflation (as observed by firms at time t) from its target, scaled by the perceived persistence ρ_P. If $\rho_P = 1$, then this is the benchmark setting in (Werning, 2022), where the expectations changed to a new level and this level becomes the new anchor. When there is a one-time shift, that is permanent and firms expect future aggregate inflation to be anchored at this new level.

The identity $\varepsilon_t = \rho_P(\pi_t - \bar{\pi})$ implies that the dynamics of the expectation shock must be consistent with the firm's perceived dynamics of inflation. To see this, note that the firm's perceived law of motion for inflation deviations (from Eq. J1) can be combined with the lagged identity $\varepsilon_{t-1} = \rho_P(\pi_{t-1} - \bar{\pi})$. This yields:

$$\varepsilon_t = \rho_P(\pi_t - \bar{\pi}) = \rho_P\left(\rho_P(\pi_{t-1} - \bar{\pi}) + \xi_t\right) = \rho_P \varepsilon_{t-1} + \rho_P \xi_t$$

This shows that for the firm's beliefs to be internally consistent, its expectation shock ε_t must also follow an AR(1) process with a persistence parameter equal to its perceived inflation persistence, ρ_P. We therefore model the shock as:

$$\varepsilon_t = \rho \varepsilon_{t-1} + u_t \tag{J4}$$

where the persistence is set to $\rho \equiv \rho_P$, and the innovation u_t is proportional to the perceived inflation shock, $u_t = \rho_P \xi_t$. This setup ensures that the dynamics of the expectation shock directly

mirror how firms perceive the persistence of underlying inflation.

Firms operate under Calvo-type price stickiness: a fraction $1-\theta$ of firms can reset their price each period, while a fraction θ keep their prices unchanged. A firm i resetting its log price $p^*_{i,t}$ at time t considers expected future nominal marginal costs and expected future aggregate price levels/inflation. The standard log-linearized optimal reset price relative to the previous period's average price level P_{t-1} is:

$$p^*_t - P_{t-1} = \sum_{j=0}^{\infty} (\beta\theta)^j E^{\text{firm}}_t[(1-\beta\theta)mc_{t+j} + \pi_{t+j+1}] \tag{J5}$$

Here, β is the firm's discount factor, and mc_{t+j} is the real marginal cost in period $t+j$. From (J3), $E^{\text{firm}}_t[\pi_{t+j+1}] = \bar{\pi} + E_t[\varepsilon_{t+j}]$. From (J4), $E_t[\varepsilon_{t+j}] = \rho^j \varepsilon_t$. So, $E^{\text{firm}}_t[\pi_{t+j+1}] = \bar{\pi} + \rho^j \varepsilon_t$.

Substitute this into the optimal reset price equation:

$$\begin{aligned} p^*_t - P_{t-1} &= \sum_{j=0}^{\infty} (\beta\theta)^j E^{\text{firm}}_t[(1-\beta\theta)mc_{t+j} + \bar{\pi} + \rho^j \varepsilon_t] \\ &= (1-\beta\theta)\sum_{j=0}^{\infty} (\beta\theta)^j E_t[mc_{t+j}] + \bar{\pi}\sum_{j=0}^{\infty} (\beta\theta)^j + \varepsilon_t \sum_{j=0}^{\infty} (\beta\theta\rho)^j \end{aligned}$$

Using the geometric sum formulas $\sum_{j=0}^{\infty} x^j = \frac{1}{1-x}$:

$$p^*_t - P_{t-1} = (1-\beta\theta)\sum_{j=0}^{\infty} (\beta\theta)^j E_t[mc_{t+j}] + \frac{\bar{\pi}}{1-\beta\theta} + \frac{1}{1-\beta\theta\rho}\varepsilon_t \quad (1) \tag{J6}$$

Here, we can observe the pass-through to optimal reset price, PT^{reset}. This measures how a price resetting firm responds to a 1 unit shock in ε_t, holding other expectations constant.

$$\text{PT}^{\text{reset}}(\rho,\theta) = \frac{\partial(p^*_t - P_{t-1})}{\partial \varepsilon_t} = \frac{1}{1-\beta\theta\rho}$$

Now, we can focus on the pass-through to aggregate inflation. Aggregate inflation $\pi_t = P_t - P_{t-1}$

is given by the Calvo aggregation:

$$\pi_t = (1-\theta)(p_t^* - P_{t-1})$$

So, the pass-through from aggregate inflation expectation to average prices

$$\mathrm{PT}(\rho,\theta) = \frac{1-\theta}{1-\beta\theta\rho}$$

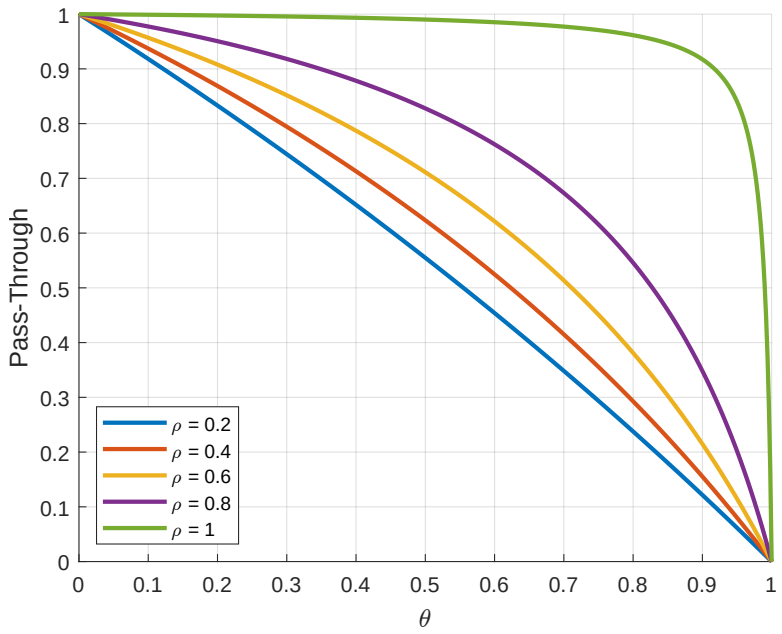


Figure J1: Pass-through rates by persistence

Notes: θ stands for the Calvo parameter, and the pass-through rates are documented for different levels of perceived inflation persistence. A higher persistence and a lower degree of price stickiness mean higher pass-through rates. In high-inflation settings, price stickiness is typically lower, and perceived persistence of inflation is higher.

Figure-J1 illustrates that in an economy where firms perceive expectation deviations as more persistent and where prices are more flexible (characteristic of de-anchored, high-inflation environments), a shock to inflation expectations translates into a much larger immediate increase in actual inflation. We can compare two stylized regimes using a quarterly model with $\beta = 0.99$. We assume a quarterly model with a discount factor $\beta = 0.99$. An "Anchored Economy" represents

a low and stable inflation environment. Weber et al. (2025) document that the perceived persistence of inflation decreases with lower inflation. So, we can set $\rho_L = 0.3$ to represent a low perceived persistence of expectation deviations, as this reflects firms' belief that inflation will return to its target without much persistence. In this stable economy, prices are also relatively sticky; we assume they change on average once a year, which corresponds to $\theta_L = 0.75$. A "De-anchored Economy" is the opposite: a high and volatile inflation environment. Here, the perceived persistence of expectation deviations is much higher, so we let $\rho_H = 0.7$. We also set $\theta_H = 0.50$, since prices are more flexible; this corresponds to prices changing on average every six months, reflecting firms' adaptation to a high-inflation environment. In this case, as Figure-J1 shows, the pass-through rates are 32% for the anchored (low-inflation) regime and 77% for the de-anchored (high-inflation) regime. Firms, believing their forecast deviations are persistent, plan to incorporate a larger portion of this belief into their price-setting. This simple exercise shows that pass-through rates are significantly different between low- and high-inflation environments due to differences in both the perceived persistence of the inflation process and the stickiness in firms' price setting. This model has demonstrated, within a stylized New Keynesian framework, how the anchoring of inflation expectations critically shapes the economy's response to idiosyncratic firm-level belief shocks about future inflation.

Real-world economies feature richer dynamics, including active monetary policy responses, endogenous marginal cost movements, and more complex strategic interactions in price setting. These factors would likely modulate the pass-through magnitudes calculated here. However, the qualitative insight—that de-anchoring, by increasing the perceived persistence of expectation shocks and potentially the frequency of price changes, magnifies both the immediate and the cumulative inflationary impact of such shocks—is robust. Moreover, non-linearities inherent in state-dependent pricing models could also lead to pass-through rates that vary with the size of the shock or the state of the economy, offering a richer but more complex picture than the constant coefficients derived here. Overall, this analysis underscores the importance of maintaining well-anchored inflation expectations. When expectations become unanchored, the economy becomes

more vulnerable to self-fulfilling belief dynamics, and idiosyncratic shocks can have disproportionately large and persistent effects on aggregate inflation.

Appendix - K - Model with a Debt Structure (Fact 3-7)

This appendix details the structure of the New Keynesian model used to analyze the macroeconomic effects of firm-level inflation expectation shocks. The economy consists of a representative household, a continuum of monopolistically competitive intermediate-goods firms, a perfectly competitive final-goods firm, and a central bank. The model is specified in a closed-economy setting, with a single exogenous shock driving business cycle fluctuations.

The economy is populated by a representative household that maximizes its expected lifetime utility. The household features external habit formation in consumption, captured by the term ηC_{t-1}, and derives utility from consumption C_t and disutility from labor N_t. The objective function is given by:

$$\max_{\{C_t, N_t, B_{t+1}\}} E_0 \sum_{t=0}^{\infty} \beta^t \left[\frac{(C_t - \eta C_{t-1})^{1-\sigma}}{1-\sigma} - \frac{\chi}{1+\upsilon} N_t^{1+\upsilon} \right], \tag{K1}$$

where β is the discount factor, η is the habit persistence parameter, σ is the coefficient of relative risk aversion, and υ is the inverse Frisch elasticity of labor supply. The household's decisions are subject to the nominal budget constraint:

$$P_t C_t + Q_t B_{t+1} = W_t N_t + B_t - T_t + \Pi_t. \tag{K2}$$

Here, P_t is the price level, W_t is the nominal wage, Π_t are profits, T_t are lump-sum taxes, and $Q_t = 1/R_t$ is the price of a one-period bond.

The production side consists of a continuum of monopolistically competitive firms producing differentiated goods $Y_t(k)$ with a linear production technology using labor as the sole input, $Y_t(k) = N_t(k)$. A key feature of the model is a working capital channel: we assume firms must finance their wage bill, $W_t N_t$, via within-period borrowing (Christiano et al., 2005). This introduces the cost of financing directly into the firm's marginal cost. The real marginal cost of producing one

additional unit, $\widehat{mc}_t$, is the sum of the real wage, $\hat{w}_t$, and the real cost of financing that wage:

$$\widehat{mc}_t = \hat{w}_t + r_{ss} \cdot \hat{R}^{\text{debt}}_{\text{eff},t}. \tag{K3}$$

where the real wage, $\hat{w}_t$, is derived from log-linearizing the household's labor supply condition, and the financing cost component is scaled by the steady-state net real interest rate, $r_{ss} = 1/\beta - 1$. The effective nominal borrowing cost, $\hat{R}^{\text{debt}}_{\text{eff},t}$, is a weighted average of available rates.

A firm k that can reset its price chooses an optimal price $P^*_t(k)$ to maximize the expected present value of its nominal profits. The optimization problem is:

$$\max_{P^*_t(k)} E_t \sum_{j=0}^{\infty} (\beta\theta)^j \frac{u'(C_{t+j})}{u'(C_t)} \left[\frac{P^*_t(k)}{P_{t+j}} Y_{t+j}(k) - MC_{t+j} Y_{t+j}(k) \right] \tag{K4}$$

subject to the demand curve $Y_{t+j}(k) = (P^*_t(k)/P_{t+j})^{-\epsilon} Y_{t+j}$. Here, θ is the Calvo probability of not resetting the price, and MC_{t+j} is the real marginal cost.

Aggregating the log-linearized first-order condition from this problem yields the New Keynesian Phillips Curve (NKPC). We model the firm's expectation shock, $\varepsilon_{f,t}$, as an information shock that affects its subjective expectation of future inflation, $E^f_t[\pi_{t+1}] = E_t[\pi_{t+1}] + \varepsilon_{f,t}$. This shock enters the firm's price-setting problem, leading to the following NKPC specification:

$$\hat{\pi}_{agg,t} - \gamma \hat{\pi}_{agg,t-1} = \beta E_t(\hat{\pi}_{agg,t+1} + \varepsilon_{f,t}) + \kappa \widehat{mc}_t. \tag{K5}$$

The slope parameter $\kappa = (1-\theta)(1-\beta\theta)/\theta$, and $\widehat{mc}_t$ is the full marginal cost from Eq. (K3). While κ is standard, the working capital channel makes $\widehat{mc}_t$ more sensitive to output fluctuations, effectively steepening the Phillips Curve's slope with respect to output. The shock process is $\varepsilon_{f,t} = \rho_f \varepsilon_{f,t-1} + \nu_{f,t}$.

The firm's total demand for working capital is its nominal wage bill, $D_t = W_t N_t$. To meet this demand, we model the firm's financing decisions using a nested CES cost-minimization framework. In the first stage, the firm chooses its optimal mix of domestic (TL) and foreign currency

(FX) financing. In the second stage, within its TL financing, it chooses the optimal maturity structure (short-term vs. long-term).

Maturity Choice

We begin with the inner layer of the decision: how a firm constructs a composite of TL financing services, $D_{TL,t}$, from short-term debt, $D_{S,t}$, and long-term debt, $D_{L,t}$. We assume the firm combines these two instruments via a CES aggregator with an elasticity of substitution $\sigma_M > 0$:

$$D_{TL,t} = \left[(s_{S,ss})^{\frac{1}{\sigma_M}} (D_{S,t})^{\frac{\sigma_M - 1}{\sigma_M}} + (1 - s_{S,ss})^{\frac{1}{\sigma_M}} (D_{L,t})^{\frac{\sigma_M - 1}{\sigma_M}} \right]^{\frac{\sigma_M}{\sigma_M - 1}} \tag{K6}$$

where $s_{S,ss}$ is the steady-state share of short-term debt in the TL portfolio. The firm's objective is to assemble the required amount of $D_{TL,t}$ by choosing the mix of $D_{S,t}$ and $D_{L,t}$ that minimizes the total expected real cost. A key assumption is that the perceived real cost of long-term debt is more sensitive to expected inflation due to its longer duration. Under the expectations hypothesis of the term structure, the long-term interest rate $\hat{R}_{L,t}$ (maturity N) is the average of expected future short-term rates:

$$\hat{R}_{L,t} = \frac{1}{N} \sum_{j=0}^{N-1} E_t \hat{R}_{t+j}. \tag{K7}$$

The formal optimization problem is:

$$\min_{D_{S,t}, D_{L,t}} \left\{ \underbrace{(R_t - E_t^f [\hat{\pi}_{agg,t+1}])}_{\text{Real Cost of ST Debt}} D_{S,t} + \underbrace{(R_{L,t} - \psi_L E_t^f [\hat{\pi}_{agg,t+1}])}_{\text{Real Cost of LT Debt}} D_{L,t} \right\}$$

subject to the CES constraint above. The parameter $\psi_L > 1$ is a structural parameter reflecting the greater inflation sensitivity of long-term debt. The assumption that $\psi_L > 1$ captures the well-documented empirical fact that long-term nominal rates are more sensitive to inflation expectations than short-term rates due to factors like duration and inflation risk premia (e.g., Gürkaynak et al. (2005)).

The first-order condition for this standard cost-minimization problem yields the optimal relative demand for the two debt types:

$$\frac{D_{L,t}}{D_{S,t}} = \left(\frac{1-s_{S,ss}}{s_{S,ss}}\right)\left(\frac{R_t - E_t^f[\hat{\pi}_{agg,t+1}]}{R_{L,t} - \psi_L E_t^f[\hat{\pi}_{agg,t+1}]}\right)^{\sigma_M} \tag{K8}$$

To derive the final rule for our log-linear model, we take the log of this expression. Let $\hat{x}$ denote log-deviations from the non-stochastic steady state.

$$\hat{d}_{L,t} - \hat{d}_{S,t} = \sigma_M \left[\log(R_t - E_t^f[\hat{\pi}_{agg,t+1}]) - \log(R_{L,t} - \psi_L E_t^f[\hat{\pi}_{agg,t+1}])\right] \tag{K9}$$

We linearize the log terms using the approximation $\log(X-Y) \approx \log(X_{ss}) + \hat{x} - Y/X_{ss}$ for a variable Y that is zero in steady state. In our case, $X_{ss} = R_{ss}$ (the gross steady-state nominal rate) and the expectation terms are zero. This yields:

$$\hat{d}_{L,t} - \hat{d}_{S,t} \approx \sigma_M \left[\left(\hat{R}_t - \frac{E_t^f[\hat{\pi}_{agg,t+1}]}{R_{ss}}\right) - \left(\hat{R}_{L,t} - \frac{\psi_L E_t^f[\hat{\pi}_{agg,t+1}]}{R_{ss}}\right)\right] \tag{K10}$$

$$= -\sigma_M \left[(\hat{R}_{L,t} - \hat{R}_t) - \frac{(\psi_L - 1)}{R_{ss}} E_t^f[\hat{\pi}_{agg,t+1}]\right] \tag{K11}$$

This equation provides the microfounded relationship for the optimal relative quantities of debt. Incorporating the definition of the firm's subjective inflation expectation, $E_t^f[\pi_{t+1}] = E_t[\pi_{t+1}] + \varepsilon_{f,t}$, we arrive at the share of long-term debt:

$$\hat{s}_t = (1-s_{L,ss})\sigma_M \left[-(\hat{R}_{L,t} - \hat{R}_t) + \frac{(\psi_L - 1)}{R_{ss}}(E_t\hat{\pi}_{agg,t+1} + \varepsilon_{f,t})\right]. \tag{K12}$$

It is important to note that our framework models the firm's choice over the composition of its newly issued debt (a flow) in each period, rather than the evolution of its total outstanding debt (a stock). An intuitive way to think about this is to imagine the firm's financing as a portfolio of overlapping loans. Each quarter, a slice of its old financing matures, and it must secure new

financing to cover its current wage bill. The variable $\hat{s}_t$ in our model represents the share of this new slice of financing that is taken out as long-term debt. For example, if a firm responds to an inflation shock at time t by increasing $\hat{s}_t$, it means it is locking in today's rates for a portion of its current financing needs for the next N quarters. If the shock persists into period t+1, the firm will again choose a high $\hat{s}_{t+1}$ for the new slice of financing it needs at that time. This "flow-based" approach allows us to tractably analyze the firm's strategic financing decisions at the margin in response to new information, abstracting from the immense complexity of tracking the entire vintage structure of a firm's outstanding debt balance sheet. While a model with debt as a state variable would be richer, this framework correctly captures the core incentive: when firms expect higher inflation, they have a clear motive to make their current financing decisions more long-term in nature.

Currency Choice

The firm chooses its mix of the TL financing composite, $D_{TL,t}$, and FX financing, $D_{FX,t}$, to meet its total working capital needs, D_t. This choice is governed by a CES aggregator with an elasticity of substitution $\sigma_C > 0$:

$$D_t = \left[(\xi_{ss})^{\frac{1}{\sigma_C}} (D_{TL,t})^{\frac{\sigma_C - 1}{\sigma_C}} + (1 - \xi_{ss})^{\frac{1}{\sigma_C}} (D_{FX,t})^{\frac{\sigma_C - 1}{\sigma_C}} \right]^{\frac{\sigma_C}{\sigma_C - 1}} \tag{K13}$$

where ξ_{ss} is the steady-state share of TL-denominated debt.

The firm's objective is to minimize its total real financing cost, given by $r_{TL,t} D_{TL,t} + r_{FX,t} D_{FX,t}$, where $r_{TL,t}$ and $r_{FX,t}$ are the real cost indices of each financing composite. We make the simplifying assumption that the real cost of FX debt is constant ($\hat{r}_{FX,t} = 0$), which would hold under Uncovered Interest Parity (UIP) with stable foreign conditions. While shocks to inflation expectations could in principle affect exchange rate expectations and violate this condition, we abstract from this channel since we do not have evidence on exchange rate pass-through.

The first-order condition from this cost-minimization problem sets the ratio of quantities

equal to the inverse ratio of their real costs, leading to the optimal relative demand for TL versus FX financing:

$$\frac{D_{TL,t}}{D_{FX,t}} = \left(\frac{\xi_{ss}}{1-\xi_{ss}}\right)\left(\frac{r_{FX,t}}{r_{TL,t}}\right)^{\sigma_C} \tag{K14}$$

Log-linearizing this expression and applying the assumption that $\hat{r}_{FX,t} = 0$ yields:

$$\hat{d}_{TL,t} - \hat{d}_{FX,t} = -\sigma_C \hat{r}_{TL,t} \tag{K15}$$

This equation shows that the firm's optimal mix of currencies is determined by the real cost of the TL financing composite. Its log-linearized form is a weighted average of the expected real costs of its components:

$$\hat{r}_{TL,t} \approx s_{S,ss}\left(\hat{R}_t - \frac{E_t^f[\hat{\pi}_{agg,t+1}]}{R_{ss}}\right) + (1-s_{S,ss})\left(\hat{R}_{L,t} - \frac{\psi_L E_t^f[\hat{\pi}_{agg,t+1}]}{R_{ss}}\right)$$

A positive inflation expectation shock, $\varepsilon_{f,t}$, increases $E_t^f[\hat{\pi}_{agg,t+1}]$, which lowers the perceived real cost index $\hat{r}_{TL,t}$. As shown above, a fall in $\hat{r}_{TL,t}$ makes TL financing more attractive, causing firms to increase their share of TL debt, $\hat{\xi}_t$.

The log-deviation of the share of TL debt, $\hat{\xi}_t$, is directly proportional to this optimal relative demand shift:

$$\hat{\xi}_t \approx (1-\xi_{ss})(\hat{d}_{TL,t} - \hat{d}_{FX,t}) = -(1-\xi_{ss})\sigma_C \hat{r}_{TL,t}. \tag{K16}$$

This equation provides the microfounded basis for the currency share decision in our model, showing how inflation expectations, by altering the relative cost of financing, induce firms to shift their currency mix.

The system is closed by the central bank, which sets the short-term nominal interest rate $\hat{R}_t$ according to a standard Taylor-type rule with an interest rate smoothing component:

$$\hat{R}_t = \rho_R \hat{R}_{t-1} + (1-\rho_R)\big(\phi_\pi \hat{\pi}_{agg,t} + \phi_y \hat{y}_t\big). \tag{K17}$$

Here, $\rho_R \in [0,1)$ is the smoothing parameter. The full system of log-linearized equations determines the rational expectations equilibrium of the economy.

Model Dynamics and Stylized Facts

The model's response to a positive firm inflation expectations shock ($\nu_{f,t} > 0$) generates dynamics consistent with the stylized facts.

- **Fact 2 (Higher wage, cost, price expectations):** The shock $\varepsilon_{f,t}$ enters the NKPC as an expected inflation term, directly increasing current inflation $\hat{\pi}_{agg,t}$. This leads to higher nominal wages ($\widehat{nom_w}_t$) and a higher price level. The firm's marginal cost ($\widehat{mc}_t$) also rises due to the policy response feeding through the working capital channel.
- **Fact 3 (Increased pessimism):** The rise in inflation prompts monetary tightening. Higher policy rates dampen aggregate demand via the IS curve and directly raise firms' costs via the working capital channel, both contributing to a decline in output $\hat{y}_t$, which we interpret as economic pessimism.
- **Fact 4 (Increased credit usage with compositional shift to long-term borrowing):** Total nominal credit demand (D_t) may rise if the inflationary effect on the nominal wage bill outweighs the contractionary effect on real output. Concurrently, the shock lowers the perceived real cost of long-term debt more than short-term debt, causing firms to shift their financing composition towards longer maturities ($\hat{s}_t$ increases).
- **Fact 5 (More borrowing in LC, less in foreign currency):** The expectation shock lowers the overall real cost index of TL financing ($\hat{r}_{TL,t}$) relative to the stable cost of FX financing. This induces a substitution towards TL debt, increasing its share ($\hat{\xi}_t$ rises).
- **Fact 6 (Increased foreign currency holdings):** This fact is the mirror image of Fact 5. The same logic that makes FX liabilities unattractive (due to their stable real cost when domestic inflation is expected to rise) makes FX *assets* or earnings attractive as a hedge against the

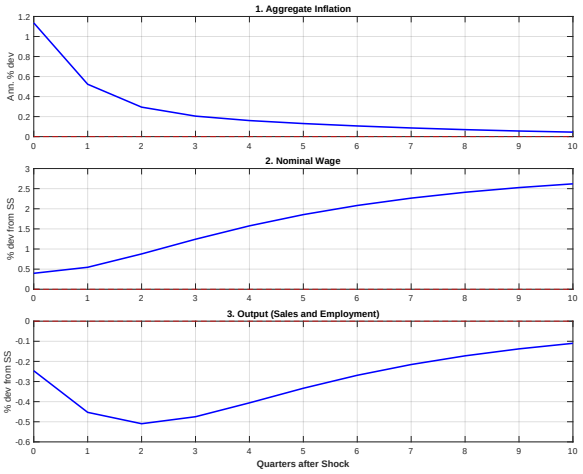
expected erosion of domestic currency's purchasing power. While not explicitly modeled, this is a direct qualitative implication.

- **Fact 7 (Lower growth in sales and employment):** The fall in aggregate output $\hat{y}_t$ (Fact 2) directly translates to lower employment ($\hat{n}_t = \hat{y}_t$) and lower real sales. The model does not feature inventories, yet it is possible to show upward pressure on inventory when firms expect prices to rise. This is consistent with a cost-hedging motive where firms accumulate inputs in anticipation of higher future prices.

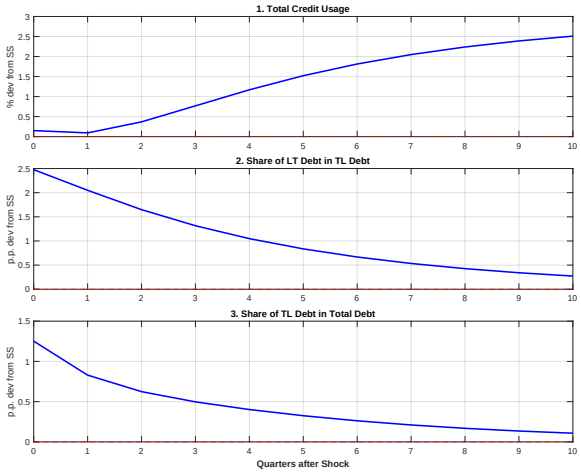
Table K1: Model Calibration

Parameter	Value	Description	Source
A. Household Preferences			
β	0.99	Subjective discount factor	Real rate of 4%
σ	1.0	Risk aversion	Standard
υ	1.0	Inverse Frisch elasticity	Standard
η	0.50	Habit persistence parameter	Standard
B. Firm Technology & Pricing			
ϵ	6.0	Elasticity of substitution btw. goods	SS markup of 20%
θ	0.50	Calvo: price stickiness	Price change every 6 months
γ	0.0	Indexation	No indexation
C. Debt Structure			
$s_{L,ss}$	0.50	SS share of Long-Term debt in TL portfolio	Data
σ_M	6.0	Elasticity of substitution (ST vs. LT debt)	Calibrated
ψ_L	1.5	Inflation sensitivity of LT debt	Duration/risk premium
ξ_{ss}	0.60	SS share of TL debt in total portfolio	Data
σ_C	2.0	Elasticity of substitution (TL vs. FX debt)	Calibrated
D. Monetary Policy & Shocks			
ϕ_π	1.10	response to inflation	Weak response
ϕ_y	0.25	response to output gap	Standard
ρ_R	0.70	interest rate smoothing	Standard
ρ_f	0.80	Persistence of expectation shock ($\varepsilon_{f,t}$)	Standard

Notes: Parameters are calibrated at a quarterly frequency. SS denotes steady state.



(a) Prices, wages, and sales (Facts 1, 2, & 6)



(b) Debt structure (Facts 3, 4, & 6)

Figure K1: Responses to Firms' Inflation Expectations Shock

Notes: Impulse responses to a one-standard-deviation firm inflation-expectations shock $\varepsilon_{f,t}$. Horizontal axis displays quarters after the shock; vertical axis represents percent deviations from the steady state. See Appendix-K for model equations and calibration.