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When the fog clears: the effect of reduced inflation uncertainty on households' financial behaviour

Johannes J. Fischer,[1] Christoph Herler[2] and Philip Schnattinger[3]

Abstract

We study the causal effects of inflation uncertainty on British households' consumption and saving decisions. To separate expected inflation from uncertainty about inflation, we use a representative survey to randomly inform households about the first and/or second moments of forecasters' inflation predictions. Lower inflation uncertainty raises planned spending and expected income, but reduces uncertainty about expected income and interest rates. Higher planned spending is mainly driven by less precautionary saving. In the months following the treatment, households reduce their monthly savings, but report an increase in fixed-return asset holdings. These results are consistent with households attributing inflation to supply-side shocks.

Key words: Inflation expectations, inflation uncertainty, household spending, household finance.

JEL classification: E21, E24, E31, E50.

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(1) Deutsche Bundesbank. Email: johannes.fischer@bundesbank.de
(2) Bank of England. Email: christoph.herler@bankofengland.co.uk
(3) Bank of England. Email: philip.schnattinger@bankofengland.co.uk

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Bank of England, Threadneedle Street, London, EC2R 8AH
Email: enquiries@bankofengland.co.uk

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1 Introduction

This paper investigates the relationship between households' subjective inflation uncertainty and their financial decisions. Uncertainty about inflation stemming from a series of recent economic shocks, combined with elevated saving rates, has raised policymakers' interest in this topic, particularly in the United Kingdom (UK).[1] In theory, the impact of uncertainty about future inflation on current consumption decisions is ambiguous. On the one hand, lower inflation uncertainty implies less uncertainty about real interest rates and future real incomes, which would reduce precautionary saving for risk-averse consumers and increase their planned spending. On the other hand, lower inflation uncertainty is typically associated with lower (expected) inflation, which raises the real interest rate and makes higher consumption spending less affordable.[2] Isolating the effect of inflation uncertainty is therefore important for understanding the transmission of monetary policy. However, separating these two effects is not straightforward because the level of inflation and uncertainty about inflation have been positively correlated in the past.

We study the causal effect of inflation uncertainty on household behaviour by implementing a randomised controlled trial (RCT) in a representative survey of 6,000 British households. To isolate the effect of inflation uncertainty, we closely follow Coibion et al. (2024) and provide different inflation predictions made by professional forecasters to four randomly assigned subgroups of respondents. The first group receives information about average professional forecasts of inflation over the next twelve months, targeting the first moment of households' expectations. The next treatment targets the second moment of households' expectations by providing respondents with information about the dispersion of professional forecasters' expectations,[3] i.e. the difference between the highest and lowest inflation prediction (without any information about the respective levels). The third treatment group receives both pieces of information, and the fourth group does not receive any information treatment and serves as a control group. These information treatments induce exogenous variation in the first and second moments of respondents' inflation expectations. Subsequent questions in the same survey and in a subsample of respondents surveyed again 6 and 12 months after the intervention then allow us to

[1] See Mann (2024), Mann (2025), and Ramsden (2025) for recent speeches by Bank of England Monetary Policy Committee members highlighting the role of uncertainty about inflation for policymaking.

[2] Lower realised inflation has historically been correlated with reduced inflation uncertainty. An explanation for this is that low inflation reduces uncertainty about the monetary policy response (Friedman, 1977; Ball, 1992). Note that less surprising monetary policy activity, improved monetary policy communication, or a lower variance of inflation affecting shocks can be causes of reduced inflation uncertainty. A lower variance of shocks will also reduce the first moment of inflation when downward nominal rigidities exist in the economy.

[3] Throughout this paper, we define inflation uncertainty as a measure of the dispersion of a given household's subjective expected inflation outcomes, which we compute as the interquartile range. Our information treatment targets this moment using the dispersion of inflation expectations across professional forecasters.

identify the causal impact of inflation uncertainty on consumption plans, savings behaviour, expectations about future income, expected interest rates, and long-run inflation expectations and uncertainty.

We implemented the RCT in March 2024, at a time when UK CPI inflation had started to fall from its peak in winter 2022/2023, but still remained above target. Correspondingly, professional forecasters expected lower inflation going forward and the dispersion of their forecasts had come down from its peak. After informing respondents about professional forecasters' expectations, they report a significantly lower expected inflation rate for the subsequent year and become significantly less uncertain about inflation. Moreover, when informing survey participants about forecasters' reduced disagreement about inflation alone (without the first moment), they also expect a lower level of inflation. This suggests that the pass-through from expected inflation to inflation uncertainty (as already observed by Friedman, 1977) also works in the opposite direction: Lower inflation uncertainty leads to lower expected inflation. We also find that households' expectations about the level of inflation are a lot more responsive to the information treatment than their uncertainty about inflation. Nonetheless, the treatments also somewhat reduce uncertainty about 5-year inflation, whereas the expected rate of inflation in 5 years' time remains unchanged. This indicates that respondents' long-run inflation expectations were relatively well anchored at the time of the RCT.

Using this exogenously-induced change in expectations, our RCT provides novel evidence that lower inflation raises expected incomes, boosts planned consumption spending and shifts household savings towards liquid assets with fixed returns. First, we find that lower inflation uncertainty leads to higher planned spending of British households, both nominal and real. This increase in planned spending is most pronounced for the non-hand-to-mouth and the university-educated respondents. Being female, working in the public sector (with presumably more secure employment), and above-median income is associated with a higher, albeit insignificant consumption response to inflation uncertainty. In the subsample of respondents that were surveyed 6 and 12 months after the information treatment we find a positive, but insignificant reaction of realised spending to a decrease in inflation uncertainty. These findings align closely with the nascent literature on the effects of inflation uncertainty (see Georgarakos et al., 2024; Kostyshyna and Petersen, 2024) and illustrate how inflation uncertainty can affect household decision making even in times of disinflation.

We also find that lower inflation uncertainty increases expected incomes by a similar amount as planned spending and reduces income uncertainty, while the perceived risk of job loss remains unchanged. Furthermore, lower expected inflation does not affect expected nominal interest rates, implying that expected real rates rise in response to lower expected inflation. That is, after controlling for inflation uncertainty, respondents

do not expect a change in the monetary policy rate when their inflation expectations change. Lower inflation uncertainty, on the other hand, reduces nominal interest rate expectations, but has no effect on expected real rates. Nonetheless, even after accounting for expected income, income uncertainty, and expected interest rates, lower inflation uncertainty still has a significantly positive impact on planned consumption spending, in line with the direct precautionary motive implied by the standard Euler equation logic.

Second, we also document the effect of inflation uncertainty on the magnitude and composition of savings: Lower inflation uncertainty leads to a decrease in realised monthly savings 6 months after the intervention. Even though monthly savings decrease, we find that households increase their overall balance of savings held in liquid assets with fixed returns. Third, this suggests that households adjust their portfolio composition towards a higher share of savings in liquid assets with fixed returns because an improved inflation outlook improves the risk-return profile of these investments.

Taken together, our findings provide further evidence that households view inflation as a supply-side phenomenon: Lower inflation uncertainty is associated with lower expected inflation and higher expected incomes – symptoms of a positive supply shock. This indicates that subjective inflation uncertainty reflects uncertainty about adverse supply shocks (or the central bank's reaction to them). This salience of supply-driven inflation is perhaps not surprising, given the substantial supply shocks in recent years — most notably those induced by the COVID-19 pandemic and the Russian war against Ukraine.

Literature. Our paper is related to the broad literature investigating the effects of macroeconomic uncertainty (see Bloom, 2009). Much of this literature has focused on the effects of uncertainty on aggregate conditions or firm-level decisions. Using a dynamic stochastic general equilibrium model, Ascari et al. (2023) show that aggregate inflation uncertainty endogenously increases in response to an inflation expectation shock and is associated with reduced consumption. Recent literature has extended this research by analysing the effects of uncertainty on households' decisions (Ben-David et al., 2018; Christelis et al., 2020). To overcome the empirical challenge of identifying exogenous movements in economic uncertainty, Coibion et al. (2024) implement an RCT in a large-scale survey of households. Using forecasts made by professional forecasters as information treatments to induce exogenous variation in households' posterior uncertainty, they find that uncertainty about GDP growth causes households to lower consumption of non-durable goods and services. We extend this literature by using an RCT to disentangle inflation uncertainty from expected inflation and document the causal effects of households' subjective inflation uncertainty. Our findings provide further evidence on the importance of households' inflation expectations (see D'Acunto et al., 2024), particularly their supply-side view of inflation (see Kamdar, 2019; Coibion et al., 2023; Stantcheva,

2024), and how it influences households' spending decisions.

Most closely related to our work is the contemporaneous paper by Georgarakos et al. (2024), who implemented an RCT in September 2023 to study the effect of inflation uncertainty on household behaviour in the euro area, and Kostyshyna and Petersen (2024), who examine the effect of communicating uncertain inflation forecasts on realised household spending in Canada in 2020. Our work differs from their analyses in several ways. Importantly, our experiment was conducted in an environment with but decreasing inflation and declining inflation uncertainty. Our RCT therefore shows the effects on household decisions at a time when both the expected level of inflation and uncertainty about inflation were falling as opposed to rising. Furthermore, differently from Kostyshyna and Petersen (2024), we separately identify the effect of uncertainty about future inflation from the effect of the expected level of inflation. This allows us to document several novel facts about household behaviour. First, lower inflation uncertainty leads an increase in planned spending of UK households even *after* controlling for expected inflation. Second, we find that lower inflation uncertainty leads to lower monthly household savings but higher total holdings of fixed-return assets, different from Georgarakos et al. (2024) and Stantcheva (2024). Third, the response to inflation uncertainty is driven by households' supply-side view of inflation.

Our information treatments allow us to contribute to the growing literature that investigates how economic agents form expectations, and the more established literature on the relationship between the level of inflation and the associated uncertainty (Friedman-Ball). The present paper contributes to this branch of the literature with, to the best of our knowledge, the first investigation of the causal pass-through from households' inflation expectations to their associated uncertainty (and vice versa). In his Nobel prize acceptance speech, Friedman (1977), and later Ball (1992) hypothesised that higher levels of inflation lead to higher inflation uncertainty, because agents are uncertain about the central bank's reaction. Both argued that this uncertainty constitutes a key welfare cost of higher inflation rates, as it diminishes the optimality of agents' economic decision-making. With our experiment, we can estimate the effect of inflation uncertainty on household consumption and thereby quantify this cost of inflation uncertainty, which is otherwise difficult to separate from the cost of inflation.

Finally, our paper is related to the broader literature on household consumption choices. Precautionary saving has been one of the focal points of attention in recent papers studying the effect of heterogeneous agents' consumption decisions on business cycles and the transmission of monetary policy (Challe and Ragot, 2016; Auclert, 2019; Ravn and Sterk, 2021; Kaplan and Violante, 2022; Debortoli and Galí, 2024). Our mechanism offers a new channel, inflation uncertainty, which affects precautionary saving decisions. Consistent with other surveys capturing inflation uncertainty (Binder, 2017), we document that

low-income households, in particular, report high levels of inflation uncertainty.

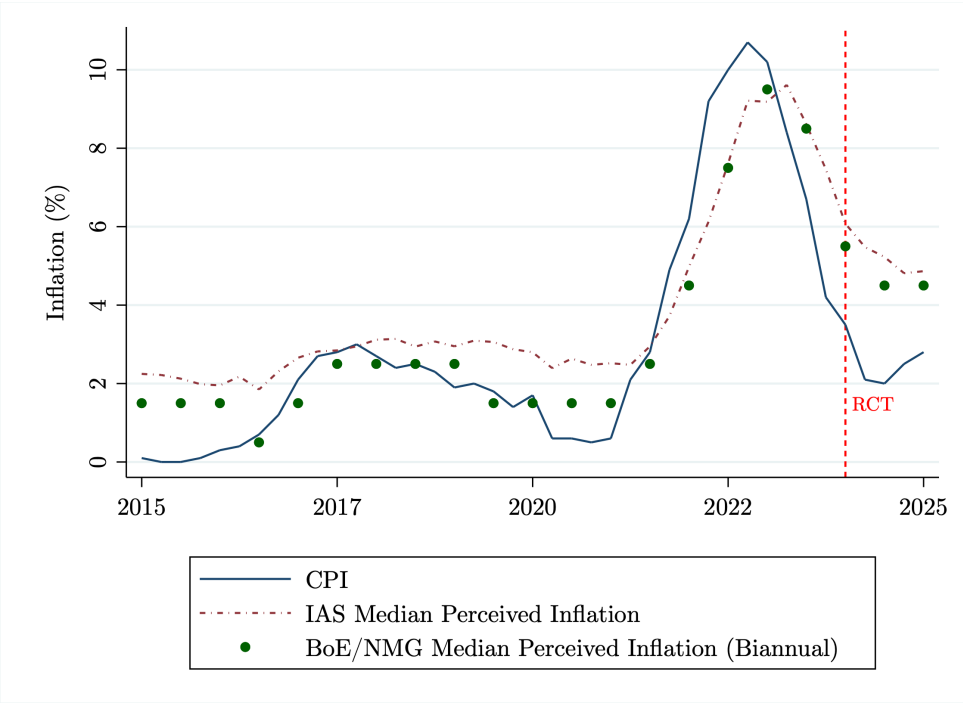
The remainder of the paper is structured as follows: Section 2 lays out the survey and the randomised controlled trial. Section 3 documents the effects of our information treatment on respondents' expectations. Section 4 presents our main results, and Section 5 concludes.

2 Data and Survey Design

The survey. We use household-level micro data from the Bank of England's Survey of Household Finances, a biannual online rotating panel survey of households in Great Britain (Anderson et al., 2016). Since 2004, the Bank of England has commissioned NMG Consulting to conduct this survey. Each survey wave contains responses from approximately 6,000 respondents, and survey weights ensure that the data are representative of the British population. The survey consists of several parts, starting with general household characteristics, such as age, education, employment status and household income. Part two contains questions about households' spending and saving decisions over the past twelve months, and the randomised controlled trial. Parts three and four survey households' expected incomes and consumption plans for the subsequent twelve months. If households owe secured or unsecured debts (mortgages or credit debt), they are asked additional questions about their finances and whether they are in financial distress. Households are asked about their macroeconomic expectations in the final part of the survey.

Figure 1 shows that we are implementing the RCT during a disinflationary period. We therefore expect that during the time of the survey, median inflation expectations and inflation uncertainty were on a downward trajectory. This is important, because what we learn from the RCT is conditional on the macroeconomic context (Weber et al., 2025). Our RCT thus informs about the impact of reduced inflation expectations and inflation uncertainty on households' decision-making and expectations. Furthermore, Figure 1 shows that median perceived inflation surveyed in the BoE/NMG survey has closely followed the official inflation numbers published by the ONS in the past but has picked up the decline from the inflation peak in 2023 only with delay. Overall, the BoE/NMG survey and the Bank of England's Inflation Attitude survey yield very similar results with regards to perceived inflation.

Prior expectations. The randomised controlled trial conducted in the second part of the survey first elicits respondents' prior inflation expectations and uncertainty. We ask respondents to assign probabilities to a set of scenarios for the growth rate of prices of goods and services:



Note: This figure displays quarterly year-on-year CPI inflation (solid line), median quarterly perceived inflation from the Bank of England/Ipsos Inflation Attitudes Survey (IAS, dashed-dotted line), and median perceived inflation from the BoE/NMG Survey of Household Finances (circles).

Figure 1: (Perceived) Inflation over Time

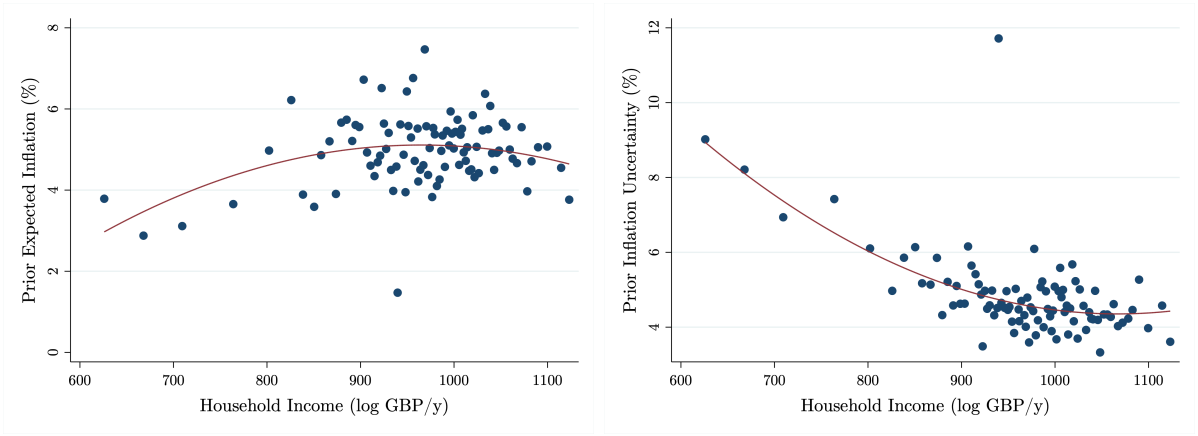
In your view, what would you say is the percentage chance that, ***over the next 12 months****, prices of goods and services . . .*

Please note: The numbers need to add up to 100.

go **up** by 12% or more	_____ percent chance
go **up** by 8% to 12%	_____ percent chance
go **up** by 4% to 8%	_____ percent chance
go **up** by 2% to 4%	_____ percent chance
go **up** by 0% to 2%	_____ percent chance
go **down** by 0% to 2%	_____ percent chance
go **down** by 2% to 4%	_____ percent chance
go **down** by 4% to 8%	_____ percent chance
go **down** by 8% to 12%	_____ percent chance
go **down** by 12% or more	_____ percent chance
TOTAL	100 percent

Based on this question, we compute a measure of expected inflation, uncertainty about inflation, and skewness of expected inflation by fitting a standard scaled beta distribution

over the survey responses.[4] We calculate the median $\hat{\mathbb{E}}_{i,t} med(\pi_{t+12})$, the interquartile range $\hat{\mathbb{E}}_{i,t} IQR(\pi_{t+12})$, and the skewness of this distribution.



(a) Income and Prior Inflation Expectations (b) Income and Prior Inflation Uncertainty

Note: This binned scatterplot shows the relationship between log annual household income during the past 12 months and prior expected inflation (left panel), as well as prior inflation uncertainty (right panel). Observations are weighted using survey weights.

Figure 2: Inflation Expectations & Uncertainty by Income

Table 1 shows that on average, respondents think that inflation over the past twelve months has been 6.13% - substantially higher than the rate of CPI inflation in the month prior to the RCT at 4%.[5] Despite this disparity in level-terms, respondents are clearly aware of the downward trend in inflation and, prior to the treatment, expected inflation to fall by roughly 1pp. to 5.02% over the following twelve months. This fall appears to be most pronounced for low- and high-income households, whereas households in the middle of the income distribution still expect comparatively high inflation realisations (see Figure 2a). Furthermore, there is considerable uncertainty about the path of inflation, with the average respondent's distribution of expected inflation featuring a standard deviation of 3.64. Figure 2b shows that low-income households are particularly uncertain about inflation.

Randomisation. Following the prior elicitation, households answer ten questions about their saving and spending choices over the past twelve months. In the next step, re-

[4]Given that this distribution is only defined in the space between 0 and 1, while the responses given by the respondents are approximately defined for the space [-0.16, 0.16], we shift the answers provided by adding 0.5. We then fit the beta distribution and shift the probability density functions assigned to the space [0.34, 0.66] back to the space [-0.16, 0.16] by subtracting 0.5. Finally, for answers giving adjacent binary positive probability densities, we fit a triangular distribution, and for answers giving singular densities, a uniform distribution. This is a similar procedure to the uncertainty measures computed from probability densities in the Federal Reserve Bank of New York's Survey of Consumer Expectations (Armantier et al., 2017), as well as the approach of Coibion et al. (2023).

[5]The rate of CPI inflation in the 12 months up to January 2024 was 4.20%, released on February 14th, 2024.

spondents are randomly assigned into four equally-sized groups, of which three receive information treatments and one serves as a control group. Table 1 provides descriptive statistics about the survey respondents in the respective treatment groups and in the pooled sample. The average respondent is 51 years of age, lives in a household of average size 2.75 and has an average annual household income of approximately £21,000 per household member. 43% of respondents are full-time employees, 12% are working part-time, and another 4% are self-employed. 28% of respondents have retired, while 3% are unemployed, and 2% are in full-time education. Nearly half of respondents have completed tertiary education. The sample is balanced across treatment groups, apart from the somewhat imperfect randomisation along respondents' age, which means that respondents in the joint treatment arm are slightly older than in the control group. We only consider respondents who are responsible for making financial decisions in the household and drop roughly 14% of respondents who completed the survey in less than 10 minutes.[6]

Information treatment. We conduct the information treatment and the posterior elicitation by referring to the rate of inflation (or deflation) instead of the rate at which *prices of goods and services* are going up (or down). This slight rephrasing of the question, along with the backward-looking saving and spending questions between the prior and posterior elicitation serve to loosen the anchor of the prior.

The first of the four groups is the control group, which is shown the following screen:

> *On the next screen, we would like you to think about the different things that may happen to inflation over the next 12 months. Inflation is the rate at which prices of goods and services increase (Note: deflation means prices are decreasing).*

The remaining three groups receive information treatments and are shown two screens. First, each of these three groups gets shown a descriptive screen similar to the one of the control group:

> *Screen 1: On the next screen, we describe some predictions that professional forecasters have made for inflation in the UK. Inflation is the rate at which prices of goods and services increase (Note: deflation means prices are decreasing). Please review this information carefully – it will only be shown once.*

Following this screen, each treatment group receives a different piece of information. Sim-

[6]We calculate total time spent on the survey excluding the information treatment to avoid biasing the sample as respondents in the control group did not receive an information treatment. 10 minutes corresponds to 58% of the median time spent on the survey.

Table 1: Summary Statistics

	Control Group	Level Treat.	Uncert. Treat.	Joint Treat.	Full Sample	p-val
Age	50.41	50.63	51.11	52.12	51.06	0.06
	(17.13)	(17.16)	(16.71)	(16.92)	(16.99)	
HH Size	2.69	2.68	2.69	2.58	2.66	0.16
	(1.39)	(1.39)	(1.42)	(1.35)	(1.39)	
HH Income (£/y pc)	20,625	20,766	20,578	20,949	20,728	0.93
	(14,425)	(14,436)	(13,904)	(14,166)	(14,230)	
HH Spending (£/y pc)	11,914	12,690	13,304	12,377	12,569	0.53
	(17,724)	(17,636)	(19,532)	(18,615)	(18,387)	
HH Cash Savings (£ pc)	26,504	29,184	26,537	26,147	27,039	0.32
	(53,271)	(56,340)	(52,465)	(50,596)	(53,135)	
Perceived Inflation	6.28	6.01	6.02	6.21	6.13	0.12
	(3.35)	(3.28)	(3.31)	(3.30)	(3.31)	
$\text{med}_{i,t}^{prior}(\pi_{t+12})$	5.14	5.06	4.85	5.03	5.02	0.35
	(4.15)	(4.04)	(4.05)	(3.97)	(4.06)	
$\text{IQR}_{i,t}^{prior}(\pi_{t+12})$	3.52	3.55	3.54	3.49	3.53	0.93
	(2.35)	(2.37)	(2.35)	(2.34)	(2.35)	
Female	0.50	0.49	0.51	0.49	0.50	0.64
Liquid assets	0.67	0.69	0.67	0.66	0.67	0.60
Employment Status						
Full time	0.41	0.45	0.43	0.42	0.43	0.27
Part time	0.13	0.12	0.11	0.13	0.12	0.59
Self-employed	0.05	0.04	0.05	0.04	0.04	0.54
Student	0.03	0.02	0.02	0.02	0.02	0.26
Unemployed	0.04	0.03	0.03	0.03	0.03	0.34
Retired	0.27	0.28	0.28	0.28	0.28	0.91
Not in labour force	0.07	0.07	0.08	0.08	0.08	0.78
Education Status						
GCSE	0.18	0.19	0.18	0.19	0.18	0.78
A-Levels	0.22	0.20	0.22	0.21	0.21	0.57
Degree level+	0.48	0.49	0.49	0.46	0.48	0.54
Vocational	0.12	0.12	0.12	0.13	0.12	0.57
Housing Status						
Outright owner	0.35	0.36	0.36	0.37	0.36	0.72
Mortgagor	0.29	0.31	0.31	0.29	0.30	0.50
Renter	0.36	0.33	0.33	0.33	0.34	0.25
Observations	1,243	1,246	1,266	1,225	4,980	

Note: This table reports summary statistics (mean with standard deviations in parentheses) for the four different treatment groups and the pooled sample along with the test statistic for equality across treatment groups. Perceived inflation refers to respondents' perceived inflation rate over the 12 months prior to the survey. Liquid assets is a dummy variable indicating whether households have liquid assets worth more than half a month's income. Observations are weighted using survey weights.

ilar to Coibion et al. (2024), each treatment consists of a qualitative and a quantitative statement. The qualitative statement provides information about how professional forecasters' expectations have shifted compared to the previous year. The quantitative statement provides numerical information about professional forecasters' expectations about the following year. The first treatment group receives information about professional

forecasters' *level* forecasts:

> *Screen 2.1:* ***Professional forecasters expect lower inflation*** *than one year ago. The average forecast for inflation over the next year is 2 percent.*

The second treatment group receives information about the *dispersion*[7] of professional forecasters' predictions:

> *Screen 2.2:* ***Professional forecasters are less uncertain about inflation*** *than one year ago. The highest forecast for inflation over the next year is 2.1 percentage points higher than the lowest forecast.*

The third treatment group receives information about both the *level* and the *dispersion* of professional forecasters' predictions:

> *Screen 2.3:* ***Professional forecasters expect lower inflation*** *than one year ago. The average forecast for inflation over the next year is 2 percent.* ***Professional forecasters are also less uncertain about inflation*** *than one year ago. The highest forecast for inflation over the next year is 2.1 percentage points higher than the lowest forecast.*

Given the prior beliefs reported in Table 1, these information treatments are equivalent to an anchoring treatment by providing substantially lower and more precise information about future expected inflation.

Posterior Expectations. After the information treatments, we elicit households' posterior inflation expectations by asking the following question:

> *In your view, what would you say is the percentage chance that,* ***over the next 12 months****, . . .*
>
> *Please note: The numbers need to add up to 100.*

[7] In our context, our primary objective is to provide survey participants with true information that directly influences their uncertainty. While forecast dispersion—i.e., disagreement among forecasters—and uncertainty have been shown in studies to be distinct concepts (e.g. Gambetti et al., 2023; Zohar, 2024), they generally exhibit a correlation, including in the specific survey we utilize (Boero et al., 2008). Section 3 shows that our statement succeeds at influencing individual uncertainty.

the rate of inflation will be 12% or higher	_____ percent chance
the rate of inflation will be between 8% and 12%	_____ percent chance
the rate of inflation will be between 4% and 8%	_____ percent chance
the rate of inflation will be between 2% and 4%	_____ percent chance
the rate of inflation will be between 0% and 2%	_____ percent chance
the rate of deflation (opposite of inflation) will be between 0% and 2%	_____ percent chance
the rate of deflation (opposite of inflation) will be between 2% and 4%	_____ percent chance
the rate of deflation (opposite of inflation) will be between 4% and 8%	_____ percent chance
the rate of deflation (opposite of inflation) will be between 8% and 12%	_____ percent chance
the rate of deflation (opposite of inflation) will be 12% or higher	_____ percent chance
TOTAL	100 percent

As before, we compute the median, interquartile range, and skewness of the beta distribution fitted on respondents' answers to the posterior question.

Further Questions. In the subsequent sections of the survey we ask respondents about i) their average planned monthly spending on goods and services (and rent, if applicable) over the next twelve months (see Appendix A.9); ii) the distribution of their income growth expectations over the subsequent twelve months (see Appendix A.8), which we use, combined with annualised income over the past twelve months (see Appendix A.1), to compute the level of expected income; iii) their perceived risk of losing their job, which is grouped into four categories, ranging from "very unlikely, my job is very secure" to "almost definite, I do not expect my job to last" (see Appendix A.10); iv) their interest rate expectations in one, two, and five years' time (see Appendix A.11); v) their perception of the inflation rate over the past twelve months (see Appendix A.12); vi) and the distribution of their five-year ahead inflation expectations (see Appendix A.13). Note that the questions referring to interest rate expectations and perceived inflation differ in scale and type: Instead of surveying the distribution of outcomes, they ask respondents to simply select the bucket containing the most likely outcome.

3 Treatment Effects

In this section, we document the response of the first and second moments of households' inflation expectations to our information treatments.

3.1 The Effect of the Information Treatment

We first investigate the effect of our information treatments by testing whether, on average, the treatments significantly affect posterior beliefs. To do so, we regress respondent i's posterior belief on treatment dummies and their prior belief using Huber-robust regressions to account for outliers,

$$\text{med}_{i,t}^{post}(\pi_{t+12}) = a_0 + b_0 \text{med}_{i,t}^{prior}(\pi_{t+12}) + \Sigma_{j=1}^{3} a_j \times \mathbb{I}_{\{i \in Treat\, j\}} + \varepsilon_i, \tag{1}$$

where $\text{med}_{i,t}^{prior}(\pi_{t+12})$ is respondent i's prior expected median inflation, $\text{med}_{i,t}^{post}$ denotes the respective posterior belief, and $I_{\{j \in Treat\, i\}}$ is a dummy indicating that respondent i is in treatment group j. In this specification, the coefficients $\{a_j\}_{j=1}^{3}$ can be interpreted as the difference in expectations of the treatment groups relative to the control group. We proceed analogously with respondents' posterior expected interquartile range $\text{IQR}_{i,t}^{post}(\pi_{t+12})$.

Columns (1) and (2) of Table 2 show that the treatments successfully lower expected inflation and inflation uncertainty relative to the control group. Importantly, informing respondents about lower inflation expectations by professional forecasters reduces their inflation uncertainty. Similarly, informing respondents only about the reduced inflation uncertainty of professional forecasters also leads to a reduction of expected inflation. This suggests that the pass-through from expected inflation to inflation uncertainty is positive, as argued by Friedman (1977), but also works in the opposite direction: Lower inflation uncertainty leads to lower expected inflation.

We then investigate whether respondents update their prior beliefs in response to the treatments by estimating a standard Bayesian belief updating model,

$$\begin{aligned} \text{med}_{i,t}^{post}(\pi_{t+12}) = {} & a_0 + b_0 \text{med}_{i,t}^{prior}(\pi_{t+12}) + \Sigma_{j=1}^{3} a_j \times \mathbb{I}_{\{i \in Treat\, j\}} \\ & + \Sigma_{j=1}^{3} b_j \times \mathbb{I}_{\{i \in Treat\, j\}} \times \text{med}_{i,t}^{prior}(\pi_{t+12}) + \varepsilon_i. \end{aligned} \tag{2}$$

In this specification, the coefficients $\{b_j\}_{j=1}^{3}$ can be interpreted as the weight put on the prior belief by the different treatment groups. This specification therefore captures how respondents form beliefs as a combination of their priors and the information treatment they receive (a Bayesian updating process). In this updating process, we would expect the weight on respondents' prior beliefs to be between 0 and 1. A coefficient of $b_0 = 1$ would indicate that respondents in the control group perceive the two questions as essentially identical. Similarly, a coefficient of $b_j = 1$ would indicate that respondents in the treatment group j put no weight on the new information and full weight on their prior beliefs. On the other hand, a coefficient of $b_0 = 0$ would indicate that respondents in the control group perceive the two questions as completely unrelated, so that their responses are uncorrelated. In the treatment groups, a coefficient of $b_j = 0$ would indicate that

respondents in treatment group j put full weight on the new information and essentially disregard their prior beliefs.

Table 2: Treatment Effects of First and Second Moments of Expected Inflation

	(1) $\text{med}_{i,t}^{post}(\pi_{t+12})$ b/se	(2) $\text{IQR}_{i,t}^{post}(\pi_{t+12})$ b/se	(3) $\text{med}_{i,t}^{post}(\pi_{t+12})$ b/se	(4) $\text{IQR}_{i,t}^{post}(\pi_{t+12})$ b/se
$\text{med}_{i,t}^{prior}(\pi_{t+12})$	0.54***		0.68***	
	(0.01)		(0.02)	
$\text{IQR}_{i,t}^{prior}\pi_{t+12})$		0.92***		0.95***
		(0.01)		(0.01)
Level Treat. $\times\text{med}_{i,t}^{prior}(\pi_{t+12})$			-0.23***	
			(0.02)	
Unc. Treat $\times\text{med}_{i,t}^{prior}(\pi_{t+12})$			-0.08***	
			(0.02)	
Joint Treat. $\times\text{med}_{i,t}^{prior}(\pi_{t+12})$			-0.26***	
			(0.02)	
Level Treat. $\times\text{IQR}_{i,t}^{prior}(\pi_{t+12})$				-0.03*
				(0.01)
Unc. Treat $\times\text{IQR}_{i,t}^{prior}(\pi_{t+12})$				-0.05***
				(0.01)
Joint Treat. $\times\text{IQR}_{i,t}^{prior}(\pi_{t+12})$				-0.03**
				(0.01)
Level Treat.	-0.65***	-0.20***	0.50***	-0.08
	(0.08)	(0.04)	(0.13)	(0.06)
Unc. Treat	-0.20***	-0.17***	0.20	0.06
	(0.08)	(0.04)	(0.13)	(0.06)
Joint Treat.	-0.71***	-0.27***	0.58***	-0.14**
	(0.08)	(0.04)	(0.13)	(0.07)
R^2	0.496	0.853	0.516	0.853
N	4,899	4,828	4,899	4,828

Note: This table reports the results from estimating Equations 1 and 2. All estimates are obtained using a Huber-robust regression with survey weighted data. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

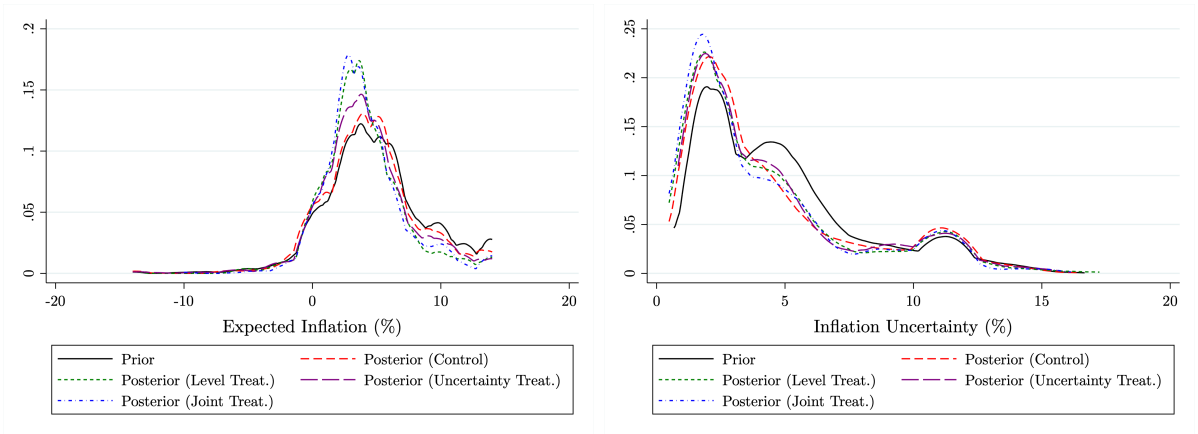
Column (3) of Table 2 shows that respondents in the control group put a weight of 0.68 on the prior belief when forming their posterior inflation expectations. This weight is smaller than 1 because of the difference in wording of the question (prices vs. inflation) and a gap of ten questions between prior and posterior. Furthermore, we find that the 3 treatments generate significant differences in posterior beliefs. Respondents who receive the level treatment put a weight of $b_0 + b_1 = 0.45$ on their prior belief, significantly lower than the control group. Respondents who receive the uncertainty treatment revise their beliefs by a smaller, but still significant degree, putting a weight of $b_0 + b_2 = 0.6$ on their prior belief. Finally, the joint treatment leads to a slightly larger revision than the level treatment alone, reducing the weight put on the posterior by 0.42, but the difference is not statistically significant.

These results confirm and extend the findings of Kostyshyna and Petersen (2024). Consistent with their results, we find that communicating inflation uncertainty on top of

inflation forecasts has little additional significant effect on households' expected inflation. We extend their findings by showing that communicating inflation uncertainty alone does in fact affect households' inflation expectations. The effect of an uncertainty treatment alone is therefore not equal to the difference between the joint and the level treatment (the effect is non-additive). This highlights the importance of providing a pure uncertainty information treatment to isolate the causal effects of inflation uncertainty.

Column (4) of Table 2 shows that respondents' prior uncertainty about inflation is significantly stickier than prior expected inflation. The correlation between prior and posterior beliefs is 0.95 in the control group, despite the difference in wording and a gap of ten questions between prior and posterior. Nonetheless, all three treatments successfully reduce the weight on the prior beliefs, with the uncertainty treatment leading to the largest revision, but the weight put on the prior uncertainty remains high.

In general, our information treatments are successful in generating exogenous movements in households' inflation expectations and uncertainty. However, in the latter case, the posterior remains relatively close to the prior, indicating that respondents perceive the treatments as less informative about the dispersion in potential inflation outcomes than about the central scenario for inflation. That is, the distribution of expected inflation shifted more than it tightened in response to the treatments. Figure 3 visualises this effect by plotting the density of prior inflation expectations and uncertainty along with the posterior belief of the control group and the respective treatment groups. The left panel indicates that the treatments are indeed successful in shifting the mass of the distribution of expected inflation to the left, with most of the updating occurring by respondents with high prior inflation expectations. The right panel indicates a similar, but weaker shift for inflation uncertainty.



(a) Prior & Posterior Inflation Expectations (b) Prior & Posterior Inflation Uncertainty

Note: This figure displays the density of prior and posterior expected inflation (left panel) and inflation uncertainty (right panel) for each treatment group. Observations are weighted using survey weights.

Figure 3: Density Plot of Treatment Effects

We also investigate the effect of our information treatments on respondents' 5-year expectations (inflation between 48 and 60 months ahead). Table 3 shows that the treatment affects posterior beliefs by modifying belief updating rather than through a uniform shift in expectations. Controlling for prior beliefs, the treatments do not significantly change long-run expected inflation, on average, but the level and the joint treatments reduce long-run inflation uncertainty. The unresponsiveness of expected long-run inflation indicates that respondents' long-run inflation expectations were relatively well anchored during the time of the RCT. However, when allowing for heterogeneous updating, the treatments significantly affect how individuals incorporate prior beliefs into their posterior beliefs about both expected inflation and inflation uncertainty. Treated individuals in particular place less weight on their priors, indicating a greater, but heterogeneous reliance on new information.

Table 3: Response of 5-year ahead Inflation Expectations

	(1) $\text{med}_{i,t}(\pi_{t+60})$ b/se	(2) $\text{IQR}_{i,t}(\pi_{t+60})$ b/se	(3) $\text{med}_{i,t}(\pi_{t+60})$ b/se	(4) $\text{IQR}_{i,t}(\pi_{t+60})$ b/se
$\text{med}_{i,t}^{prior}(\pi_{t+12})$	0.54***		0.63***	
	(0.02)		(0.03)	
$\text{IQR}_{i,t}^{prior}(\pi_{t+12})$		0.84***		0.88***
		(0.01)		(0.02)
Level Treat. $\times\text{med}_{i,t}^{prior}(\pi_{t+12})$			-0.15***	
			(0.04)	
Unc. Treat $\times\text{med}_{i,t}^{prior}(\pi_{t+12})$			-0.10**	
			(0.05)	
Joint Treat. $\times\text{med}_{i,t}^{prior}(\pi_{t+12})$			-0.11**	
			(0.04)	
Level Treat. $\times\text{IQR}_{i,t}^{prior}(\pi_{t+12})$				-0.07**
				(0.03)
Unc. Treat $\times\text{IQR}_{i,t}^{prior}(\pi_{t+12})$				-0.02
				(0.03)
Joint Treat. $\times\text{IQR}_{i,t}^{prior}(\pi_{t+12})$				-0.08***
				(0.03)
Level Treat.	-0.03	-0.13*	0.70***	0.16
	(0.13)	(0.08)	(0.21)	(0.13)
Unc. Treat	0.07	-0.07	0.57**	0.03
	(0.12)	(0.08)	(0.24)	(0.12)
Joint Treat.	0.06	-0.18**	0.59***	0.17
	(0.13)	(0.08)	(0.21)	(0.12)
R^2	0.305	0.675	0.308	0.676
N	4,899	4,828	4,899	4,828

Note: This table reports the results from estimating equations (1) and (2) for 5-year expected inflation and inflation uncertainty. All estimates are obtained using a Huber-robust regression with survey weighted data. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

4 Main Results

In this section, we first illustrate the theoretical link between inflation uncertainty and consumption in Section 4.1 before turning to our main empirical results in Section 4.2. We then investigate the main drivers of the response of consumption to inflation uncertainty in Section 4.3.

4.1 Theoretical Consumption and Saving Response to Inflation Uncertainty

Prior to presenting our main results, we outline the theoretical rationale for why inflation uncertainty plays a critical role in shaping households' saving and consumption decisions. A rational agent's optimal consumption and saving choice in a given period is determined by the intertemporal Euler equation,

$$u'\left(\frac{C_{i,t}}{P_t}\right) = \beta_{i,t}\hat{\mathbb{E}}_{i,t}[R_{t+1}u'\left(\frac{C_{i,t+1}}{P_{t+1}}\right)] \ . \tag{3}$$

$C_{i,t}$ is the nominal consumption spending by agent i at the present time t. P_t is the consumer price index. Then $\frac{C_{i,t}}{P}$ is the real spending by the agent. $\beta_{i,t}$ is a (possibly agent and time-specific) discount factor (see Christelis et al., 2020). For ease of exposition, we assume here that $\beta_{i,t} = \beta$ is constant for all agents, but the controls in our empirics capture these potential differences. R_t is the prevailing interest rate on savings, typically a function of central bank policy. Finally, $\hat{\mathbb{E}}_{i,t}[.]$ denotes the agent's subjective expectations and $u(.)$ denotes a concave utility function.

Consumption response to inflation uncertainty. To capture second moment effects via a polynomial we require at least a second-order expansion. Assuming CRRA utility $u'(\frac{C_{i,t}}{P_t}) = (\frac{C_{i,t}}{P_t})^{-\zeta}$, [8] such a second-order logged-approximation of the Euler equation around a deterministic steady state yields[9],

$$\Delta\mathbb{E}_{i,t}(\hat{C}_{i,t+1}) = \mathbb{E}_{i,t}(\pi_1) + \frac{1}{\zeta R}\mathbb{E}_{i,t}(\hat{R}_{t+1}) + \frac{1}{2}\Sigma_{i,t+1} \ . \tag{4}$$

In equation 4, $\hat{\mathbb{E}}_{i,t}(\pi_{t+1})$ is agent i's expected inflation rate and $\frac{1}{\zeta R}\mathbb{E}_{i,t}(\hat{R}_{t+1})$ is the expected interest rate. $\Sigma_{i,t+1} \approx \frac{\mathbb{E}_{i,t}[\hat{C}^2_{t+1}]}{C^2} - \frac{\mathbb{E}_{i,t}[\hat{P}^2_{t+1}]}{P^2} - \frac{\mathbb{E}_{i,t}[\hat{R}^2_{t+1}]}{\zeta R^2}$ is the uncertainty over next period's nominal consumption $\frac{\mathbb{E}_{i,t}[\hat{C}^2_{t+1}]}{C^2}$, inflation $-\frac{\mathbb{E}_{i,t}[\hat{P}^2_{t+1}]}{P^2}$, and interest rates $-\frac{\mathbb{E}_{i,t}[\hat{R}^2_{t+1}]}{\zeta R^2}$.

Equation 4 states that the growth of expected nominal consumption increases in expected

[8] Our results apply for any other functional utility form which implements agent relative risk aversion. For simplicity we focus on CRRA utility here.

[9] The derivation is shown in Appendix B.

inflation and expected interest rates. As is the case for the uncertainty of real consumption under CRRA utility (see Dynan, 1993; Carroll and Samwick, 1998), the planned growth of consumption increases in the period of increased uncertainty. On the other hand, nominal consumption growth decreases in inflation uncertainty and uncertainty about interest rates.

Equation 4 shows that inflation uncertainty has a direct negative effect on consumption growth. However, the overall impact of inflation uncertainty on consumption growth is unclear: On the one hand, higher inflation uncertainty directly decreases consumption growth via (and likely increases) interest rate uncertainty, which will also decrease consumption growth. On the other hand, inflation uncertainty could lead to higher expected inflation and central bank interest rates. Furthermore, the consequences of monetary policy action could increase consumption uncertainty by decreasing demand and increasing unemployment. The overall effect of inflation uncertainty on consumption is therefore unclear and depends on the mental model that agents have of the economy, with the expected reaction of the monetary policy authority to inflation being of particular importance.

Proposition 1 (Inflation Uncertainty and Consumption)**.** *All else equal, households with higher uncertainty about inflation in a period will plan for lower consumption in that period.*

Proof. Direct implication from equation (4). □

Saving and inflation uncertainty. Proposition 1 states that identical agents, or group of agents with identical properties will reduce how much they plan to consume when they face higher inflation uncertainty in the period for which they are planning this consumption. Naturally, since consumption and savings are two sides of the same coin in a conventional household budget constraint, we can conclude that if two households differ only in the level of inflation uncertainty they experience over a given period, the one facing greater uncertainty will increase its savings during that time.

Corollary 1.1. (Inflation Uncertainty and Savings). *All else equal, households with higher uncertainty about inflation in a period will plan to save more in that period.*

Corollary 1.1 follows directly from $S_{i,t} = Y_{i,t} - C_{i,t}$, where S is the saving of a household in a period and Y is household income.

Cash savings. Next we turn to answering the question in which assets do households invest these additional savings. Particularly if households will hold more money in the form of cash or cash equivalent assets. Note that the return on cash, mostly held in

Bank accounts will be defined by a nominal interest rate i. Inflation will affect the real return on this asset $E(r) = E(i - \pi)$, while inflation uncertainty will affect the riskiness of the return. We assume, for ease of exposition that all other assets, represented by a representative asset, are not affected by inflation and their nominal return will change with the inflation realisation. Our results would also hold when the return on all other assets is affected less than cash holdings by inflation. We assume that returns are log-normally distributed. Denote then the return on cash as,

$$r_{\xi} \sim N(\bar{r}_{\xi}, \sigma_{\xi}(\sigma_u)) \tag{5}$$

and the representative other asset as.

$$r_{-\xi} \sim N(\bar{r}_{-\xi}, \sigma_{-\xi}) \tag{6}$$

Note that the uncertainty of cash holdings increases with inflation uncertainty $\frac{\partial \sigma_{\xi}}{\partial \sigma_u} > 0$, while $\frac{\partial \sigma_{-\xi}}{\partial \sigma_u} = 0$. Hence by definition also the covariance between the two assets $\sigma_{\xi,-\zeta}$ derived to inflation uncertainty is 0, $\frac{\partial \sigma_{\xi,-\xi}}{\partial \sigma_u} = 0$. Now it is well known based on Merton (1969); Samuelson (1969); Campbell and Viceira (2001) that the portfolio choice problem can for a household with constant relative risk aversion ($\frac{C^{1-\zeta}}{1-\zeta}$) can be approximated such that the share of cash holdings in the portfolio Ξ can be solved as,

$$\Xi = \left(\frac{\mathbf{r}_{\xi} - \mathbf{r}_{-\xi} + (\sigma_{\xi} + \sigma_{-\xi} - 2 \cdot \sigma_{\xi,-\xi})/2 + (1-\zeta)\left(\sigma_{\xi,-\xi} - \sigma_{-\xi}\right)}{\zeta(\sigma_{\xi} + \sigma_{-\xi} - 2 \cdot \sigma_{\xi,-\xi})} \right) \tag{7}$$

Proposition 2 (Inflation Uncertainty and Cash Savings)**.** *All else equal, households with higher uncertainty will reduce their share of cash and cash equivalent assets in their asset portfolio.*

Proof. $\frac{\partial \Xi}{\partial \sigma_u} = -\frac{\frac{\partial \sigma_{\xi}}{\partial \sigma_u}}{(2\zeta \frac{\partial \sigma_{\xi}}{\partial \sigma_u})^2} = \frac{1}{4\zeta^2 \frac{\partial \sigma_{\xi}}{\partial \sigma_u}} < 0$ □

To summarise, theory following directly from a conventional individual household's Euler equation and optimal portfolio choice predicts for identical households only differing in their uncertainty about their prediction for future inflation:

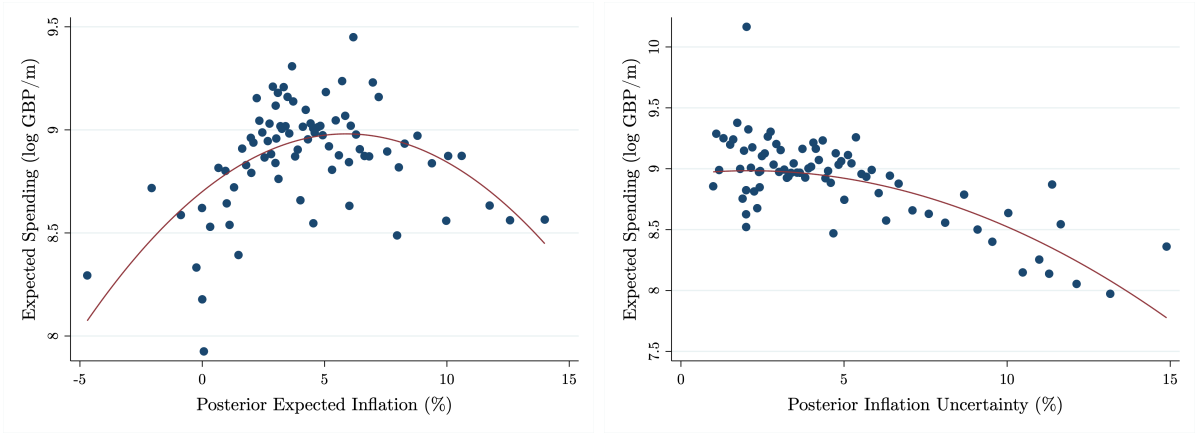
1. Households with higher inflation uncertainty will consume less.
2. Households with higher inflation uncertainty will save more and reduce their debt.
3. Households with higher inflation uncertainty will hold a smaller share of their savings in cash or cash equivalents.

We now turn to an empirical evaluation of the effect of inflation uncertainty in these

predictions.

4.2 Empirical Consumption - Savings Response

Planned consumption spending. Figure 4 shows that the raw correlation between posterior inflation expectations and planned consumption is positive for low to average values of expected inflation, but turns negative for higher levels of expected inflation. The raw correlation between posterior inflation uncertainty and planned consumption, on the other hand, is flat for low values of inflation uncertainty, but becomes negative for medium to high values of inflation uncertainty.



(a) Consumption and Inflation Expectations (b) Consumption and Inflation Uncertainty

Note: This binned scatterplot shows the relationship between log expected monthly household spending and posterior expected inflation (left panel), as well as posterior inflation uncertainty (right panel).

Figure 4: Planned Consumption and Inflation Expectations & Uncertainty

To assess the causal impact of inflation uncertainty, we estimate the response of nominal and real[10] planned consumption spending to changes in inflation uncertainty (measured by the interquartile range). To estimate the response of nominal planned consumption to changes in the interquartile range of expected inflation, we estimate the following regression:

$$\hat{\mathbb{E}}_{i,t}\ln C_{i,t+12} = \alpha_0 + \beta_1 \mathbb{E}_{i,t}^{post} med(\pi_{t+12}) + \beta_2 \hat{\mathbb{E}}_{i,t}^{post} IQR(\pi_{t+12}) + \Gamma \mathbf{X}_{i,t} + \epsilon_i \tag{8}$$

where $\hat{\mathbb{E}}_{i,t}\ln C_{i,t+12}$ is the log of expected, nominal (real) household consumption of respondent i (adjusted for household size) over the next twelve months and $\mathbf{X}_{i,t}$ is a vector containing household-level controls (prior inflation expectations, prior inflation uncertainty, education level, age, sex, household size, liquidity status, log per capita annual consumption over the past year, and perceived inflation over the past 12 months). Follow-

[10] We compute real consumption by deflating planned consumption using the expected price level, thus assuming independence of the two variables.

ing Hajdini et al. (2023), we instrument the posterior inflation expectations and posterior inflation uncertainty using the values predicted by the model in Equation 2.

Table 4: Response of Planned Consumption to Inflation Uncertainty

	(1) $\ln \mathbb{E}_{i,t} C_{i,t+12}$ b/se	(2) $\ln \frac{\mathbb{E}_{i,t} C_{i,t+12}}{\text{med}_{i,t+1}(P_{t+12})}$ b/se
$\text{med}_{i,t}^{post}(\pi_{t+12})$	2.63	1.69
	(1.77)	(1.77)
$\text{IQR}_{i,t}^{post}(\pi_{t+12})$	-15.37**	-15.36**
	(6.93)	(6.93)
F-stat (mean)	33.66	33.66
F-stat (unc)	10.58	10.58
95% CI (mean)	[-0.77, 6.55]	[-1.71, 5.61]
95% CI (unc)	[-32.72, -2.09]	[-32.71, -2.09]
N	2,136	2,136

Note: This table reports the results from estimating equation (8) for nominal (column 1) and real consumption (column 2). F-stat refers to the F-test of coefficients on excluded instruments being equal to zero. 95% CI refers to weak-instrument robust confidence intervals for the respective variable constructed using conditional likelihood estimation, which can extend to positive or negative infinity. We omit intervals that do not contain the point estimate. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

We estimate Equation (8) using the same two-step approach as Coibion et al. (2024): We estimate the (survey-weighted) first stage using a Huber-robust regression to generate the Huber weights. In a second step, we use the resulting weights together with the survey weights in a standard two-stage instrumental variables regression, applying a jackknife procedure to control for any remaining outliers. The resulting coefficient $\hat{\beta}_1$ ($\hat{\beta}_2$) is the causal estimate of the effect of changes in inflation expectations (uncertainty) on planned consumption. We proceed analogously for real consumption. Since our randomised information treatments only lead to a small revision of households' inflation expectations and inflation uncertainty, we also report weak instrument robust 95% confidence bands for each endogenous variable using the L2 test[11] in the lower panel of the table.

Table 4 shows the estimated effect of inflation uncertainty on expected nominal (real) consumption (see Table C.2 in the Appendix for the full results including controls). We find a positive but insignificant effect of expected inflation on planned spending. However, we find a significantly negative effect of inflation uncertainty on nominal and real consumption, even after controlling for expected inflation and a potentially weak instrument (see the 95% confidence bands in the lower panel of the table). Our information

[11] In particular, we use the LC2sls test provided by Sun (2018).

Table 5: Heterogeneous Responsiveness of Planned Consumption

	(1) $\ln \hat{\mathbb{E}}_{i,t} C_{i,t+12}$	(2) $\ln \hat{\mathbb{E}}_{i,t} C_{i,t+12}$	(3) $\ln \hat{\mathbb{E}}_{i,t} C_{i,t+12}$
Male $\times \text{IQR}_{i,t}^{post}(\pi_{t+12})$	-5.99		
	(7.72)		
Female $\times \text{IQR}_{i,t}^{post}(\pi_{t+12})$	-9.44		
	(6.89)		
HtM $\times \text{IQR}_{i,t}^{post}(\pi_{t+12})$		5.70	
		(16.77)	
Non-HtM $\times \text{IQR}_{i,t}^{post}(\pi_{t+12})$		-12.78**	
		(6.44)	
No Mortgage $\times \text{IQR}_{i,t}^{post}(\pi_{t+12})$			-7.45
			(7.07)
Mortgage $\times \text{IQR}_{i,t}^{post}(\pi_{t+12})$			36.92
			(32.49)
p-value for equality	0.66	0.24	0.14
R^2	0.71	0.70	0.57
N	2,118	2,118	2,118
	(4) $\ln \hat{\mathbb{E}}_{i,t} C_{i,t+12}$	(5) $\ln \hat{\mathbb{E}}_{i,t} C_{i,t+12}$	(6) $\ln \hat{\mathbb{E}}_{i,t} C_{i,t+12}$
Private Sector $\times \text{IQR}_{i,t}^{post}(\pi_{t+12})$	-4.84		
	(8.72)		
Public Sector $\times \text{IQR}_{i,t}^{post}(\pi_{t+12})$	-10.38		
	(7.08)		
No University Educ. $\times \text{IQR}_{i,t}^{post}(\pi_{t+12})$		-1.13	
		(16.21)	
University Educ. $\times \text{IQR}_{i,t}^{post}(\pi_{t+12})$		-10.75*	
		(6.07)	
Low Income $\times \text{IQR}_{i,t}^{post}(\pi_{t+12})$			-3.91
			(8.13)
High Income $\times \text{IQR}_{i,t}^{post}(\pi_{t+12})$			-6.96
			(7.75)
p-value for equality	0.52	0.53	0.73
R^2	0.71	0.71	0.72
N	2,118	2,118	2,087

Note: Hand-to-mouth (HtM) indicates whether a household holds less than half a month's income in liquid assets. Private and Public Sector indicates the sector of the respondent's employer, serving as a proxy for job stability. High Income indicates whether a household's income lies above the median income of our sample (adjusted for household size). *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

treatment, therefore, increased planned spending by reducing inflation uncertainty. This result is significant even when accounting for a potentially weak instrument, as the weak-instrument robust confidence intervals in the lower panel show. However, the effect of uncertainty on spending is estimated quite imprecisely, covering effects that range from relatively small to very severe. Nonetheless, these results are robust to controlling for the skewness of prior inflation expectations (see columns 3 & 4 of Table C.3). The estimated response of planned consumption is slightly larger when using the mean and the standard

deviation of respondents' inflation expectations instead of the median and the interquartile range (see Table C.4). Furthermore, using log uncertainty as uncertainty measure (see columns 1 & 2 of Table C.3) shows that a 1 percent decrease in uncertainty increases planned consumption spending by approximately 0.57 percent, which is significant at the 10% threshold and quantitatively very close to the findings of Georgarakos et al. (2024).

Finally, Table 5 shows that we only find significant effects for non-hand-to-mouth respondents[12] and university-educated respondents. This effect is consistent with previous findings of a more pronounced responsiveness of households with a higher level of education and less financial constraints. However, given the larger uncertainty around these estimates, we cannot reject the null hypothesis that there is no significant heterogeneity between respondents. Being female, working in the public sector (with presumably more secure employment), and having above median income are associated with a higher, albeit insignificant consumption response to inflation uncertainty.

Table 6: Response of Realised Consumption to Inflation Uncertainty

	(1) $\ln C_{i,t+6}$ b/se	(2) $\ln C_{i,t+12}$ b/se
$\text{med}_{i,t}^{post}(\pi_{t+12})$	-3.96	-6.50**
	(3.44)	(3.08)
$\text{IQR}_{i,t}^{post}(\pi_{t+12})$	-10.82	6.40
	(13.00)	(15.79)
$\text{med}_{i,t}^{prior}(\pi_{t+12})$	-0.04	1.53
	(1.46)	(1.36)
$\text{IQR}_{i,t}^{prior}(\pi_{t+12})$	8.44	-5.29
	(10.33)	(12.74)
F-stat (mean)	12.76	14.49
F-stat (unc)	2.58	2.31
95% CI (mean)	[-16.62, 227.56]	[-244.71, -0.60]
95% CI (unc)	$[-\infty, 83.00]$	[-33.119, ∞]
R^2	0.38	0.38
N	979	920

Note: This table reports the results from estimating equation (8) for realised consumption 6 months (column 1) and 12 months (column 2) after the information treatment. F-stat refers to the F-test of coefficients on excluded instruments being equal to zero. 95% CI refers to weak-instrument robust confidence intervals for the respective variable constructed using conditional likelihood estimation, which can extend to positive or negative infinity. We omit intervals that do not contain the point estimate. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

[12]Households are classified as hand-to-mouth if they hold less than half a month's income in liquid assets.

Realised spending. Approximately 2,300 (2,100) participants of the March 2024 survey wave were surveyed again 6 (12) months later. Using participants' reported consumption levels in these subsequent survey waves we estimate the effect of inflation uncertainty on realised consumption. Table 6 shows that lower inflation uncertainty increases respondents' reported consumption 6 months after the intervention albeit insignificantly so. This insignificant consumption response is likely due to the significantly smaller sample size and a generally short-lived effect of the information treatment (similar to, e.g., Coibion et al., 2024; Georgarakos et al., 2024). After 12 months the impact of inflation uncertainty on consumption flips sign but is still insignificant, while the impact of expected inflation on consumption has turned significantly negative, reflecting households' supply-side view of inflation.

Realised savings. In September 2024 and March 2025 respondents were also asked a qualitative question whether their monthly savings had decreased a lot / a little, remain unchanged, or increased a little / a lot (see Appendix A.3). We transform the responses into a dummy variable indicating whether households report an increase of monthly savings or not and estimate its response to inflation uncertainty using a linear probability model. Table 7 shows that a decrease in inflation uncertainty significantly lowers the likelihood that households increase their monthly savings 6 months after the intervention. This finding mirrors the behaviour of euro area households (Georgarakos et al., 2024)[13] but differs from the self reported reaction of U.S. households to inflation uncertainty documented by Stantcheva (2024). The effect is even bigger 12 months after the intervention but no longer significant.

Portfolio choice. Finally, survey respondents were also asked whether their holdings in liquid assets with fixed returns have increased over the past year.[14] Table 8 shows that lower inflation uncertainty makes it significantly more likely that households report larger balances of cash savings (liquid assets with fixed returns) 6 months after the intervention, while the response is insignificant after 12 months. We find a similar, albeit less significant response of reported holdings in liquid assets with fixed rates of return in pounds (see Table C.5). Our results also indicate that lower expected inflation also increases the likelihood that respondents report having increased their holdings in liquid assets with fixed rates of return. Finally, we find that lower inflation uncertainty leads to an increase

[13] Georgarakos et al. (2024) do not consider households' monthly savings explicitly, but report a reduction in durable goods purchases and no effect on spending on non-durables and services, thus implying that overall spending is reduced in response to higher inflation uncertainty.

[14] Respondents are asked to consider the amount of savings in bank/building society accounts or bonds, cash ISAs, and NS&I account/bonds, but to exclude pensions or investments linked to the stock market (see Appendix A.4). In the UK, saving bonds are savings accounts offered by banks and building societies. NS&I (National Savings and Investments) is a state-owned savings bank offering saving products that are backed by HM Treasury.

Table 7: Response of Savings to Inflation Uncertainty

	(1) $\Pr(Savings_{i,t+6} = \{little/lot\, higher\})$ b/se	(2) $\Pr(Savings_{i,t+12} = \{little/lot\, higher\})$ b/se
$\text{med}_{i,t}^{post}(\pi_{t+12})$	0.86	-0.82
	(1.17)	(1.71)
$\text{IQR}_{i,t}^{post}(\pi_{t+12})$	12.23**	17.28
	(5.47)	(19.15)
$\text{med}_{i,t}^{prior}(\pi_{t+12})$	-0.74	-0.52
	(0.52)	(0.77)
$\text{IQR}_{i,t}^{prior}(\pi_{t+12})$	-10.44**	-13.69
	(4.18)	(14.36)
F-stat (mean)	18.96	15.14
F-stat (unc)	5.02	0.65
95% CI (mean)	[-1.38, 4.13]	$[-\infty, \infty]$
95% CI (unc)	[3.37, 35.59]	$[-\infty, \infty]$
R^2	-0.117	-0.553
N	1,019	890

Note: This table reports the results from estimating equation (8) for the likelihood that respondents report higher monthly savings 6 (12) months after the information treatment. F-stat refers to the F-test of coefficients on excluded instruments being equal to zero. 95% CI refers to weak-instrument robust confidence intervals for the respective variable constructed using conditional likelihood estimation, which can extend to positive or negative infinity. We omit intervals that do not contain the point estimate. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

households' consumer debt, albeit insignificantly so (see Table C.6). This suggests that households, while decreasing their monthly savings, adjust their portfolio composition towards a higher share of savings in liquid assets with fixed returns. As the information treatment lowers the expected rate of inflation and the uncertainty around inflation, the expected real rate of return on these assets increases while the associated risk decreases, so that a shift into this asset class is consistent with the behaviour of an investor with CRRA utility facing the cash asset becoming riskier compared to other assets. In this our findings differ from Georgarakos et al. (2024), who find that households report an increase in the share of relatively safer and more liquid assets in their portfolio in response to higher uncertainty about inflation and reduce the relative amount in riskier and illiquid assets.[15]

4.3 Drivers

This section explores the main drivers behind the negative relationship between inflation uncertainty and planned household spending. We first estimate the response of log expected nominal (real) income using the same empirical strategy as in the previous section.

[15] Georgarakos et al. (2024) find that two months after the intervention, the average share of households' portfolios in savings accounts and bonds increases by 23 percentage points in response to a doubling of inflation uncertainty.

Table 8: Response of Cash Deposits to Inflation Uncertainty

	(1) $\Pr(Cash_{i,t+6} = \{little/lot\, higher\})$ b/se	(2) $\Pr(Cash_{i,t+12} = \{little/lot\, higher\})$ b/se
$\text{med}_{i,t}^{post}(\pi_{t+12})$	-9.43***	-15.77***
	(3.26)	(4.56)
$\text{IQR}_{i,t}^{post}(\pi_{t+12})$	-17.90**	2.36
	(7.96)	(23.92)
$\text{med}_{i,t}^{prior}(\pi_{t+12})$	4.18***	5.80***
	(1.57)	(1.88)
$\text{IQR}_{i,t}^{prior}(\pi_{t+12})$	12.43**	-3.35
	(6.08)	(18.27)
F-stat (mean)	16.10	11.72
F-stat (unc)	8.58	1.36
95% CI (mean)	[-16.64, -3.18]	$[-\infty, \infty]$
95% CI (unc)	[-40.16, -5.01]	$[-\infty, \infty]$
R^2	-0.063	0.005
N	881	761

Note: This table reports the results from estimating equation (8) for the likelihood that respondents report higher cash deposits 6 (12) months after the information treatment. F-stat refers to the F-test of coefficients on excluded instruments being equal to zero. 95% CI refers to weak-instrument robust confidence intervals for the respective variable constructed using conditional likelihood estimation, which can extend to positive or negative infinity. We omit intervals that do not contain the point estimate. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Table 9: Response of Expected Income to Inflation Uncertainty

	(1) $\ln \text{med}_{i,t}(Y_{i,t+12})$ b/se	(2) $\ln \frac{\text{med}_{i,t}(Y_{i,t+12})}{\text{med}_{i,t}(P_{t+12})}$ b/se	(3) $\text{IQR}_{i,t}(\Delta y_{i,t+12})$ b/se	(4) $\frac{\mathbb{E}_{i,t}C_{i,t+12}}{\text{med}_{i,t}(Y_{i,t+12})}$ b/se
$\text{med}_{i,t}^{post}(\pi_{t+12})$	-3.01	-4.16**	-0.13**	3.45
	(2.06)	(2.07)	(0.05)	(2.47)
$\text{IQR}_{i,t}^{post}(\pi_{t+12})$	-20.23**	-20.63**	1.47***	2.80
	(8.22)	(8.25)	(0.17)	(8.07)
F-stat (mean)	44.96	45.03	39.27	32.34
F-stat (unc)	9.76	9.76	15.84	8.18
95% CI (mean)	[-7.55, 0.93]	[-8.72, -0.21]	[-0.23, -0.03]	[-1.27, 8.91]
95% CI (unc)	[-40.80, -4.49]	[-41.29, -4.84]	[1.19, 1.91]	[-15.02, 20.63]
N	2,562	2,563	2,589	2,107

Note: This table reports the results from estimating equation (8) for nominal (columns 1 and 2) and real income (columns 3 and 4) using two measures of inflation expectations and uncertainty: the mean and standard deviation of expected inflation (columns 1 and 3), as well as the median and interquartile range of expected inflation (columns 2 and 4). F-stat refers to the F-test of coefficients on excluded instruments being equal to zero. 95% CI refers to weak-instrument robust confidence intervals for the respective variable constructed using conditional likelihood estimation. These intervals can extend to positive or negative infinity. We omit intervals that do not contain the point estimate. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Columns 1 & 2 of Table 9 show that lower expected inflation does not appear to significantly raise expected nominal income over the following 12 months. However, expected real incomes rise significantly (consistent with Hajdini et al., 2023). Lower inflation un-

certainty, on the other hand, leads to significantly higher expected income, even after controlling for expected inflation, both in nominal and in real terms. Expected incomes rise by a roughly similar magnitude as planned spending, so that the expected consumption-to-income ratio remains unchanged (column 4 of Table 9). Furthermore, column 3 of Table 9 shows that lower inflation uncertainty leads to significantly lower income growth uncertainty. Lower inflation uncertainty also lowers the likelihood that households expect to lose their own job or expect an increase in the aggregate unemployment rate, but is statistically insignificant (see Table C.9). However, an increase in the expected rate of inflation makes it significantly more likely that respondents expect an increase in the aggregate unemployment rate.

Table C.8 shows that lower expected inflation does not affect expected nominal interest rates, implying rising expected real rates in response to lower expected inflation. Lower inflation uncertainty, on the other hand, reduces nominal interest rate expectations, but has no effect on expected real rates.

However, neither higher expected incomes nor lower expected interest rates can (fully) explain the effect of lower inflation uncertainty on consumption: Lower inflation uncertainty leads to higher planned consumption even when controlling for expected incomes, income uncertainty (as a proxy for consumption uncertainty following Christelis et al., 2020), and expected interest rates (see Table 10).

Taken together, these results indicate that the positive effect of lower inflation uncertainty on consumption is a composite of the direct effect and the indirect effect via potential lower interest rate uncertainty (the variable of Equation 4 we cannot control for). This direct positive effect of lower inflation uncertainty on planned consumption and expected income combined with the positive correlation between expected inflation and inflation uncertainty is consistent with a supply-side view of inflation, where reduced inflation uncertainty is due to reduced uncertainty about adverse supply shocks, or the central bank's reaction to them. A reduced subjective risk of adverse supply shocks lowers inflation expectations as well as inflation uncertainty (and potentially interest rate uncertainty), thus reducing precautionary saving motives. In the absence of this precautionary saving channel households would be expected to smooth over this increase in expected income.

This supply-side view of inflation has recently been documented, for example by Kamdar (2019) and Coibion et al. (2023). Our results show that this interpretation extends not only to the level of expected inflation, but also to inflation uncertainty. This salience of supply-driven inflation is perhaps not surprising or unreasonable if households learn based on past experience (e.g. Malmendier and Nagel, 2016), given the substantial supply shocks in recent years — most notably those induced by the COVID-19 pandemic and the Russian war against Ukraine.

Table 10: Response of Consumption to Inflation Uncertainty (Controlling for Income, Income Uncertainty and Interest Rate Expectations)

	(1) $\ln \mathbb{E}_{i,t} C_{i,t+12}$ b/se	(2) $\ln \frac{\mathbb{E}_{i,t} C_{i,t+12}}{\text{med}_{i,}(P_{t+12})}$ b/se
$\text{med}_{i,t}^{post}(\pi_{t+12})$	3.41	2.43
	(2.46)	(2.37)
$\text{IQR}_{i,t}^{post}(\pi_{t+12})$	-32.34**	-31.06**
	(16.15)	(15.42)
$\ln \text{med}_{i,t}(Y_{i,t+12})$	0.10***	
	(0.02)	
$\ln \frac{\text{med}_{i,t}(Y_{i,t+12})}{\text{med}_{i,t}(P_{t+12})}$		0.10***
		(0.02)
$\text{IQR}_{i,t}(\Delta y_{i,t+12})$	9.32*	8.97*
	(4.80)	(4.60)
$\mathbb{E}_{i,t} i_{t+12}$	2.44*	2.35*
	(1.32)	(1.28)
F-stat (mean)	29.02	29.63
F-stat (unc)	4.32	4.45
95% CI (mean)	[-0.58, 19.01]	[-1.41, 13.96]
95% CI (unc)	[-186.86, -1.43]	[-146.88, -1.53]
R^2	0.59	0.60
N	1,999	1,999

Note: This table reports the results from estimating equation (8) for (real) planned consumption to controlling for expected (real) income, income uncertainty, and expected interest rates. F-stat refers to the F-test of coefficients on excluded instruments being equal to zero. 95% CI refers to weak-instrument robust confidence intervals for the respective variable constructed using conditional likelihood estimation. These intervals can extend to positive or negative infinity. We omit intervals that do not contain the point estimate. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

5 Conclusion

In this paper, we investigate the causal effect of inflation uncertainty on household behaviour using a randomised controlled trial in a population-representative survey of British households. By providing different subsets of respondents with varying information about professional forecasters' inflation predictions, we induce exogenous variation in households' expected level of inflation and inflation uncertainty. This approach allows us to overcome the inherent correlation between the first and second moments of inflation expectations, enabling us to isolate the causal impact of inflation uncertainty.

Our main finding is that lower inflation uncertainty leads to significantly higher planned spending by households, both in nominal and real terms. This result is robust to different

measures of uncertainty and holds even when accounting for the potential weakness of our instruments. Remarkably, this positive effect occurs even though lower inflation uncertainty is correlated with lower expected inflation, which in theory would encourage households to spend less in the present.

The primary driver behind this positive effect on planned spending is that households' inflation uncertainty reflects uncertainty about adverse supply shocks, or uncertainty about the central bank's reaction to them, in the spirit of the Friedman-Ball hypothesis. Lower inflation uncertainty significantly reduced households' income uncertainty, leading to a decrease in precautionary saving. This result is consistent with households attributing inflation uncertainty to supply-side shocks in the economy. If, instead, households interpreted falling inflation uncertainty as reflecting demand-side shocks, we would expect to see a negative effect on expected inflation and expected income.

Our results offer important insights for policymakers. We show that inflation uncertainty has a significant welfare cost for households that is distinct from the level of inflation. This cost primarily operates through a precautionary saving channel, as uncertainty about inflation affects households' consumption plans. We also find evidence that households perceive reduced inflation uncertainty as an indicator of fewer adverse supply shocks, which lowers their perceived income risk. This suggests that by reducing inflation uncertainty, central banks can lower households' precautionary saving motives and stimulate consumption. However, the stickiness of inflation uncertainty (even in the controlled environment of an RCT) relative to the expected level of inflation suggests that it is more challenging to influence households' uncertainty about inflation. This underscores the importance of central bank communication in shaping households' expectations and decisions.

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Online Appendix for "When the Fog Clears: The Effect of Reduced Inflation Uncertainty on Households' Financial Behaviour"

Johannes J. Fischer Christoph Herler Philip Schnattinger

23rd June 2025

Contents

A Survey Questions

A.1 Past Income

Please state the **total annual income** of **each adult in your household**, before anything is deducted for tax, National Insurance, pension schemes etc. For items of joint income, allocate it to whichever member of the household would pay tax on that income.

Enter a zero if no income is earned by that person.

Please remember all the answers you provide are confidential and please try to be as accurate as possible, entering an amount in pounds without any decimals (you **do not** need to use all the nine spaces for digits).

[Respondents are shown each of the following rows based on the number of adults other than the survey respondent in the household.]

Yourself	£ [OPEN NUMERIC BOX] Don't know Prefer not to state
Partner/other main earner	£ [OPEN NUMERIC BOX] Don't know Prefer not to state
For all **other** adults in the household, the total of their **annual** incomes	£ [OPEN NUMERIC BOX] Don't know Prefer not to state

[Sum of components is displayed to respondents at the bottom of the page. Warning message appears if total annual household income $\leq$ *£*$1,000$ *or* $\geq$ *£*$200,000$*.]*

You have entered:
Total annual household income = £__

This means:
Total monthly household income = £__
Total weekly household income = £__

Please edit the figures if this is not correct.

A.2 Prior Inflation Expectations

Before survey respondents are asked to assign probabilities to their expected outcomes for inflation and incomes, they receive the following instruction:

> Before moving on to the next section, we will ask you to think about the percentage chance of something happening in the future. Your answers can range from 0 to 100, where 0 means there is absolutely no chance, and 100 means that it is absolutely certain.
>
> For example, numbers like:
>
> 3 and 5 percent may indicate "almost no chance"
> 17 percent or so may mean "not much chance"
> 48 or 53 percent may be "pretty even chance"
> 82 percent or so may mean a "very good chance"
> 95 or 98 percent may be "almost certain".

Households are then asked to assign probabilities to their expected realisations of inflation over the next twelve months. This allows us to elicit the distribution of their inflation expectations prior to receiving any treatment.

We would like you to think about the different things that may happen to prices of goods and services **over the next 12 months**.

In your view, what would you say is the percentage chance that, **over the next 12 months**, prices of goods and services ...

Please note: The numbers need to add up to 100.

go **up** by 12% or more	_____ percent chance
go **up** by 8% to 12%	_____ percent chance
go **up** by 4% to 8%	_____ percent chance
go **up** by 2% to 4%	_____ percent chance
go **up** by 0% to 2%	_____ percent chance
go **down** by 0% to 2%	_____ percent chance
go **down** by 2% to 4%	_____ percent chance
go **down** by 4% to 8%	_____ percent chance
go **down** by 8% to 12%	_____ percent chance
go **down** by 12% or more	_____ percent chance
TOTAL	100 percent

[ERROR MESSAGE if sum not equal to 100] Your total adds up to __ percent. Please change the numbers in the table so they add up to 100.

A.3 Change in Monthly Savings

The next question is about how your household's **monthly savings** have changed in recent months.

Over the **last 12 months**, would you say that you have saved more or less than usual from your monthly household income?

Saved a lot more than usual
Saved a little more than usual
Saved about the same as usual
Saved a little less than usual
Saved a lot less than usual
Don't know
Prefer not to say

A.4 Change in Cash Deposits

Following the elicitation of their prior distribution of expected inflation, households are asked a set of backward-looking questions about their saving and consumption behaviour over the past year.

You mentioned that the amount you (and all other members of your household) currently have in total, saved up in **cash savings** is £__. How has this amount changed compared with **twelve months ago**?

Increased a lot
Increased a little
Stayed the same
Decreased a little
Decreased a lot
Don't know
Prefer not to state

A.5 Past Consumption

How much did your household spend on **average per month** on **everything** over the **last** 12 months?

Please **include** all your spending on goods and services [*IF TENURE = RENT* including rent], but **exclude** money put into savings or used to repay mortgages, overdrafts, credit cards and other loans.

Please try to be as accurate as possible, entering an amount in pounds without any decimals (you do not need to use all the nine spaces for digits).

£ [OPEN NUMERIC BOX] **per month**
Don't know
Prefer not to state

If households respond with "Don't know" or "Prefer not to state" to the numerical question, they receive a follow-up question asking them to provide a range of their monthly spending over the past year.

Using the following ranges, how much did your household spend **on average per month** on **everything** over the **last** 12 months?

Please **include** all your spending on goods and services [*IF TENURE = RENT* including rent], but **exclude** money put into savings or used to repay mortgages, overdrafts, credit cards and other loans.

<drop-down menu>
None
£1 – £249
£250 - £449
£450 - £649
£650 - £749
£750 - £949
£950 - £1,149
£1,150 - £1,349
£1,350 - £1,549
£1,550 - £1,749
£1,750 - £1,999
£2,000 - £2,249
£2,250 - £2,499
£2,500 - £2,749
£2,750 - £2,999
£3,000 - £3,499
£3,500 - £3,999
£4,000 - £4,499
£4,500 - £4,999
£5,000 - £5,499
£5,500 - £5,999
£6,000 - £6,999
£7,000 - £7,999
£8,000 - £8,999
£9,000 - £9,999
£10,000 or more
Don't know
Prefer not to say

A.6 Information Treatment

Households are then randomly assigned into four groups, of which one is a control group that does not receive an information treatment. Following this treatment, households are asked to assign probabilities to their expected realisations of inflation and income over the next twelve months to compute their posterior distributions.

Group	Statement for Screen
1	Screen 1: On the next screen, we would like you to think about the different things that may happen to inflation over the next 12 months. Inflation is the rate at which prices of goods and services increase (Note: deflation means prices are decreasing). No additional screen
2	Screen 1: On the next screen, we describe some predictions that professional forecasters have made for inflation in the UK. Inflation is the rate at which prices of goods and services increase (Note: deflation means prices are decreasing). Please review this information carefully – it will only be shown once. Screen 2.1: **Professional forecasters expect lower inflation** than one year ago. The average forecast for inflation over the next year is 2 percent.
3	Screen 1: On the next screen, we describe some predictions that professional forecasters have made for inflation in the UK. Inflation is the rate at which prices of goods and services increase (Note: deflation means prices are decreasing). Please review this information carefully – it will only be shown once. Screen 2.2: **Professional forecasters are less uncertain** about inflation than one year ago. The highest forecast for inflation over the next year is 2.1 percentage points higher than the lowest forecast.
4	Screen 1: On the next screen, we describe some predictions that professional forecasters have made for inflation in the UK. Inflation is the rate at which prices of goods and services increase (Note: deflation means prices are decreasing). Please review this information carefully – it will only be shown once. Screen 2.3: **Professional forecasters expect lower inflation** than one year ago. The average forecast for inflation over the next year is 2 percent. **Professional forecasters are also less uncertain about inflation** than one year ago. The highest forecast for inflation over the next year is 2.1 percentage points higher than the lowest forecast.

A.7 Posterior Inflation Expectations

In your view, what would you say is the percentage chance that, **over the next 12 months**, ...

Please note: The numbers need to add up to 100.

the rate of inflation will be 12% or higher	_____ percent chance
the rate of inflation will be between 8% and 12%	_____ percent chance
the rate of inflation will be between 4% and 8%	_____ percent chance
the rate of inflation will be between 2% and 4%	_____ percent chance
the rate of inflation will be between 0% and 2%	_____ percent chance
the rate of deflation (opposite of inflation) will be between 0% and 2%	_____ percent chance
the rate of deflation (opposite of inflation) will be between 2% and 4%	_____ percent chance
the rate of deflation (opposite of inflation) will be between 4% and 8%	_____ percent chance
the rate of deflation (opposite of inflation) will be between 8% and 12%	_____ percent chance
the rate of deflation (opposite of inflation) will be 12% or higher	_____ percent chance
TOTAL	100 percent

[ERROR MESSAGE if sum not equal to 100] Your total adds up to __ percent. Please change the numbers in the table so they add up to 100.

A.8 Income Expectations

Households are asked the following question about their expected distribution of income growth expectations over the next 12 months, following receipt of the treatment:

> We would still like you to think about your **total annual household income**, before anything is deducted for tax, National Insurance, pension schemes, etc. **over the next 12 months**. We realise that the following question may take a little more effort.
>
> In your view, what would you say is the percentage chance that **over the next 12 months**, your **total annual household income**, before anything is deducted for tax, National Insurance, pension schemes etc., will ...
>
> Please note: The numbers need to add up to 100.

go **up** by 12% or more	_____ percent chance
go **up** by 8% to 12%	_____ percent chance
go **up** by 4% to 8%	_____ percent chance
go **up** by 2% to 4%	_____ percent chance
go **up** by 0% to 2%	_____ percent chance
go **down** by 0% to 2%	_____ percent chance
go **down** by 2% to 4%	_____ percent chance
go **down** by 4% to 8%	_____ percent chance
go **down** by 8% to 12%	_____ percent chance
go **down** by 12% or more	_____ percent chance
TOTAL	100 percent

[ERROR MESSAGE if sum not equal to 100] Your total adds up to __ percent. Please change the numbers in the table so they add up to 100.

From the answers to this question, we compute the first and second moments of respondents' subjective distributions about their household's income growth. We again compute both the mean and the median expected income growth as well as the standard deviation and interquartile range of income growth expectations.

A.9 Consumption Expectations

Households are then asked a set of forward-looking questions about their expected consumption behaviour over the next year. The forward-looking consumption question (stated below) is used to calculate households' expected change in spending.

> How much do you expect your household to spend **on average per month** on **everything** over the **next** 12 months?
>
> Please **include** all your spending on goods and services [*IF TENURE = RENT* including rent], but **exclude** money put into savings or used to repay mortgages, overdrafts, credit cards and other loans.
>
> Please try to be as accurate as possible, entering an amount in pounds without any decimals (you do not need to use all the nine spaces for digits).
>
> £ [OPEN NUMERIC BOX] **per month**
> Don't know
> Prefer not to state

A.10 Job Loss Risk

The following question asks households who are working full-time or part-time about their perceived risk of job loss:

> To the best of your knowledge, what would you say is the likelihood that you will lose your job during the next 12 months?

Very unlikely, my job is very secure
Unlikely, but there is a chance I will lose my job
Quite likely, my job is not very secure
Almost definite, I do not expect my job to last
Don't know
Prefer not to state

A.11 Interest Rates

The final part of the survey asks households about their macroeconomic expectations, including interest rates, their distribution about expected inflation five years from now, and their perceptions of inflation over the past twelve months. To compute households' expectations about interest rates, we use the following question:

The level of interest rates set by the Bank of England (Bank Rate) was 5.25% on 4 March, when this survey opened. At what level do you expect that interest rate to be in each of the following time periods?

Rows	
One year from now	<drop-down menu>
Two years from now	<drop-down menu>
Five years from now	<drop-down menu>

<drop-down menu>
10% or more
9 to 9.9%
8 to 8.9%
7 to 7.9%
6 to 6.9%
5 to 5.9%
4 to 4.9%
3 to 3.9%
2 to 2.9%
1 to 1.9%
0 to 0.99%
0%
0 to -0.99%
-1% or less
Don't know

From the responses to this question, we impute values of 10.5% if respondents said that they expect Bank Rate to be "10% or more", and -1.5% if they expect Bank Rate to be "-1% or less". We impute the respective mid-points of the other banded response options, excluding "Don't know".

A.12 Perceived Inflation

To obtain households' perceived inflation rates over the past 12 months, we ask the following question:

> Which of these options best describes how prices in the shops have changed over the last 12 months?

Gone down
Not changed
Up by 1% or less
Gone up by 1% but less than 2%
Gone up by 2% but less than 3%
Gone up by 3% but less than 4%
Gone up by 4% but less than 5%
Gone up by 5% but less than 6%
Gone up by 6% but less than 7%
Gone up by 7% but less than 8%
Gone up by 8% but less than 9%
Gone up by 9% but less than 10%
Gone up by 10% or more
Don't know

Note that this question asks about how prices in shops have changed instead of prices of goods and services, and that the response scale differs from the distributional inflation questions described earlier. From the response options, we impute values of -0.5% if respondents said that prices have "gone down", 0% if they have "not changed", and 10.5% if prices have "gone up by 10% or more. We use the respective mid-points of the response bands for the other options, excluding "Don't know".

A.13 5-year Inflation Expectations

To obtain households' expectations about inflation five years from now, we ask the following question:

> And in your view, what would you say is the percentage chance that over the **12-month period between March 2028** and **March 2029**, prices of goods and services ...
>
> Please note: The numbers need to add up to 100.

go **up** by 12% or more	_____ percent chance
go **up** by 8% to 12%	_____ percent chance
go **up** by 4% to 8%	_____ percent chance
go **up** by 2% to 4%	_____ percent chance
go **up** by 0% to 2%	_____ percent chance
go **down** by 0% to 2%	_____ percent chance
go **down** by 2% to 4%	_____ percent chance
go **down** by 4% to 8%	_____ percent chance
go **down** by 8% to 12%	_____ percent chance
go **down** by 12% or more	_____ percent chance
TOTAL	100 percent

> *[ERROR MESSAGE if sum not equal to 100]* Your total adds up to __ percent. Please change the numbers in the table so they add up to 100.

From the answers to this question, we compute the first and second moments of respondents' subjective distributions about 5-year ahead inflation. We again compute both the mean and the median expected inflation rate as well as the standard deviation and interquartile range of inflation expectations.

B Second Order Approximation to the Euler Equation

We can approximate nominal consumption growth to a second order with a Taylor series as:

$$
\begin{aligned}
(\frac{C_{i,t}}{P_t})^{-\zeta} &= \beta \mathbb{E}_{i,t}[R_{t+1}(\frac{C_{i,t+1}}{P_{t+1}})^{-\zeta}], \\
-\zeta \log(C_{i,t}) &= -\zeta \log(P_{i,t}) + \log(\beta) + \log(\mathbb{E}_{i,t}[R_{t+1}(\frac{C_{t+1}}{P_{t+1}})^{-\zeta}]) \\
&= -\zeta \log(C) - \zeta \frac{\hat{P}_t}{P} + \zeta \frac{\mathbb{E}_{i,t}[\hat{P}_{t+1}]}{P} + \frac{\mathbb{E}_{i,t}[\hat{R}_{t+1}]}{R} - \zeta \frac{\mathbb{E}_{i,t}[\hat{C}_{t+1}]}{C} \\
&\quad + \zeta \frac{\hat{P}_t^2}{2P^2} - \zeta \frac{\mathbb{E}_{i,t}[\hat{P}_{t+1}^2]}{2P^2} - \frac{\mathbb{E}_{i,t}[\hat{R}_{t+1}^2]}{2R^2} + \zeta \frac{\mathbb{E}_{i,t}[\hat{C}_{t+1}^2]}{2C^2} + \Xi_{x,2}.
\end{aligned}
$$

Approximating $\log(C_{i,t}^{-\zeta})$ yields $\frac{-\zeta \hat{C}_{i,t}}{C} - \zeta \log(C)$, which, after reordering terms and omitting the error term $\Xi_{x,2}$, leads to equation 4. To derive this expression, we rearrange the terms as follows. First, we rewrite the equation in terms of the expected change in future consumption relative to current nominal consumption, $\Delta \mathbb{E}_{i,t}(\hat{C}_{i,t+1}) = \frac{\hat{C}_{i,t+1} - \hat{C}_{i,t}}{C}$. Next, we group current and future price levels, which can be summarized in terms of expected inflation: $\mathbb{E}_{i,t}(\pi_t) = \mathbb{E}_{i,t}\left(\frac{\hat{P}_{t+1} - \hat{P}_t}{P}\right)$. For simplicity, we further assume the current price level is in steady state, $\hat{P}_t = 0$.

Each forward-looking variable Y_{t+1} is made up of the state of the current variable Y_t, a predictable component based on the current state X_t and an unpredictable component $\epsilon_{y,t}$. Hence, $Y_{t+1} = E_t(f(Y_{t+1}|X_t) + \epsilon_{y,t+1})$. The unpredictable component is mean 0. Thus the expectation of any two forward-looking variables is either a variance summarizing uncertainty or a covariance between the uncertain component of two forward-looking variables. Finally, we summarize the variances of next period's real consumption, real interest rates, and prices $\Sigma_{i,t+1} = \frac{\mathbb{E}_{i,t}[\hat{C}_{t+1}^2]}{C^2} - \frac{\mathbb{E}_{i,t}[\hat{P}_{t+1}^2]}{P^2} - \frac{\mathbb{E}_{i,t}[\hat{R}_{t+1}^2]}{\zeta R^2}$. Collecting terms yields,

$$
\Delta \mathbb{E}_{i,t}(\hat{C}_{i,t+1}) = \mathbb{E}_{i,t}(\pi_{t+1}) + \frac{1}{\zeta R} \mathbb{E}_{i,t}(\hat{R}_{t+1}) + \frac{1}{2} \Sigma_{i,t+1} \ . \tag{9}
$$

C Robustness

Table C.1: Treatment Effects by Quartile

	(1) $\text{med}_{i,t}^{post}(\pi_{t+12})$ Q_1 (b/se)	(2) $\text{med}_{i,t}^{post}(\pi_{t+12})$ Q_2 (b/se)	(3) $\text{med}_{i,t}^{post}(\pi_{t+12})$ Q_3 (b/se)
$\hat{\mathbb{E}}_{i,t}^{prior} med(\pi_{t+12})$	0.57***	0.65***	0.71***
	(0.02)	(0.02)	(0.02)
Level Treat. $\times \text{med}_{i,t}^{prior}(\pi_{t+12})$	-0.20***	-0.20***	-0.17***
	(0.03)	(0.02)	(0.03)
Unc. Treat $\times \text{med}_{i,t}^{prior}(\pi_{t+12})$	-0.10***	-0.03	-0.05*
	(0.03)	(0.02)	(0.03)
Joint Treat. $\times \text{med}_{i,t}^{prior}(\pi_{t+12})$	-0.22***	-0.21***	-0.11***
	(0.03)	(0.03)	(0.03)
Level Treat.	0.48***	0.45***	0.30*
	(0.15)	(0.10)	(0.18)
Unc. Treat	0.32***	-0.03	0.09
	(0.10)	(0.12)	(0.17)
Joint Treat.	0.66***	0.40***	-0.01
	(0.12)	(0.11)	(0.15)
Pseudo-R^2	0.167	0.201	0.223
N	4,958	4,958	4,958
	(3) $\text{IQR}_{i,t}^{post}(\pi_{t+12})$ Q_1 (b/se)	(4) $\text{IQR}_{i,t}^{post}(\pi_{t+12})$ Q_2 (b/se)	(5) $\text{IQR}_{i,t}^{post}(\pi_{t+12})$ Q_3 (b/se)
$\text{IQR}_{i,t}^{prior}(\pi_{t+12})$	0.63***	0.94***	1.02***
	(0.04)	(0.02)	(0.03)
Level Treat. $\times \text{IQR}_{i,t}^{prior}(\pi_{t+12})$	0.06	-0.06**	-0.03
	(0.05)	(0.03)	(0.04)
Unc. Treat $\times \text{IQR}_{i,t}^{prior}(\pi_{t+12})$	0.07	-0.05**	-0.04
	(0.05)	(0.03)	(0.03)
Joint Treat. $\times \text{IQR}_{i,t}^{prior}(\pi_{t+12})$	0.03	-0.07**	-0.04
	(0.06)	(0.03)	(0.03)
Level Treat.	-0.49***	-0.00	0.00
	(0.11)	(0.06)	(0.17)
Unc. Treat	-0.40**	0.01	0.04
	(0.16)	(0.05)	(0.17)
Joint Treat.	-0.52***	0.02	-0.07
	(0.16)	(0.08)	(0.17)
Pseudo-R^2	0.260	0.471	0.560
N	4,958	4,958	4,958

Note: This table reports the results from estimating Equations 1 and 2 for the first, second, and third quartile of the disdistribution of the respective outcome variable. All estimates are obtained using survey weighted data (without Huber weights). *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Table C.2: Consumption Response to Inflation Uncertainty

	(1) $\ln \mathbb{E}_{i,t} C_{i,t+12}$ b/se	(2) $\ln \frac{\mathbb{E}_{i,t} C_{i,t+12}}{\text{med}_{i,t+1}(P_{t+12})}$ b/se
$\text{med}_{i,t}^{post}(\pi_{t+12})$	2.63	1.69
	(1.77)	(1.77)
$\text{IQR}_{i,t}^{post}(\pi_{t+12})$	-15.37**	-15.36**
	(6.93)	(6.93)
$\text{med}_{i,t}^{prior}(\pi_{t+12})$	-1.44	-1.44
	(0.92)	(0.92)
$\text{IQR}_{i,t}^{prior}(\pi_{t+12})$	12.60**	12.60**
	(5.92)	(5.92)
$\ln C_{i,t}$	0.76***	0.76***
	(0.02)	(0.02)
Female	1.69	1.69
	(2.10)	(2.10)
Perceived Inflation	0.36	0.35
	(0.40)	(0.40)
Liquidity Status	1.28	1.29
	(3.05)	(3.05)
GCSE level	0.00	0.00
	(.)	(.)
A level	-3.69	-3.69
	(3.59)	(3.59)
Degree level+	4.33	4.33
	(2.68)	(2.68)
Vocational/no formal qualification	-7.55**	-7.54**
	(3.68)	(3.68)
Mortgagor	-5.08*	-5.08*
	(2.96)	(2.96)
Renter	-1.98	-1.98
	(2.68)	(2.68)
Working	0.00	0.00
	(.)	(.)
Retired	0.21	0.22
	(2.80)	(2.80)
Not Working	-7.64*	-7.64*
	(4.09)	(4.09)
Age (log)	-6.20	-6.21
	(6.77)	(6.77)
F-stat (mean)	33.66	33.66
F-stat (unc)	10.58	10.58
95% CI (mean)	[-0.77, 6.55]	[-1.71, 5.61]
95% CI (unc)	[-32.72, -2.09]	[-32.71, -2.09]
R^2	0.68	0.68
N	2,136	2,136

Note: This table reports the results from estimating model (8) for nominal (column 1) and real consumption (column 2). F-stat refers to the F-test of coefficients on excluded instruments being equal to zero. 95% CI refers to weak-instrument robust confidence intervals for the respective variable constructed using conditional likelihood estimation., which can extend to positive or negative infinity. We omit intervals that do not contain the point estimate. Perceived inflation refers to the perceived inflation rate over the previous year. Liquid assets is a dummy variable indicating whether households have liquid assets worth more than a half month's income. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Table C.3: Response of Expected Spending to Inflation Uncertainty - Robustness

	(1) $\ln \mathbb{E}_{i,t} C_{i,t+12}$ b/se	(2) $\ln \frac{\mathbb{E}_{i,t} C_{i,t+12}}{\text{med}_{i,t+1}(P_{t+12})}$ b/se	(3) $\ln \mathbb{E}_{i,t} C_{i,t+12}$ b/se	(4) $\ln \frac{\mathbb{E}_{i,t} C_{i,t+12}}{\text{med}_{i,t+1}(P_{t+12})}$ b/se
$\text{med}_{i,t}^{post}(\pi_{t+12})$	5.42**	4.47	2.19	1.25
	(2.73)	(2.73)	(1.76)	(1.76)
$\ln \text{IQR}_{i,t}^{post}(\pi_{t+12})$	-0.57*	-0.57*		
	(0.33)	(0.33)		
$\text{IQR}_{i,t}^{post}(\pi_{t+12})$			-16.65**	-16.64**
			(6.96)	(6.96)
$\text{skew}_{i,t}(\pi_{t+12})$			-15.03	-15.12
			(13.69)	(13.69)
F-stat (mean)	26.84	26.84	32.57	32.57
F-stat (unc)	12.87	12.87	9.68	9.68
95% CI (mean)	[0.20, 13.85]	[-0.74, 12.90]	[-1.19, 6.08]	[-2.13, 5.14]
95% CI (unc)	[-1.60, 0.07]	[-1.60, 0.07]	[-34.07, -3.32]	[-34.06, -3.32]
R^2	0.69	0.69	0.66	0.66
N	2,115	2,115	2,136	2,136

Note: This table reports the results from estimating equation (8) for (real) planned consumption to log inflation uncertainty (columns 1 - 2) and controlling for the skewness of expected income (columns 3 - 4). F-stat refers to the F-test of coefficients on excluded instruments being equal to zero. 95% CI refers to weak-instrument robust confidence intervals for the respective variable constructed using conditional likelihood estimation. These intervals can extend to positive or negative infinity. We omit intervals that do not contain the point estimate. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Table C.4: Response of Expected Spending to Inflation Uncertainty - Alternative Expectations

	(1) $\ln \mathbb{E}_{i,t} C_{i,t+12}$ b/se	(2) $\ln \frac{\mathbb{E}_{i,t} C_{i,t+12}}{\mathbb{E}_{i,t} P_{t+12}}$ b/se
$\mathbb{E}_{i,t}^{post} \pi_{t+12}$	1.97	1.02
	(1.61)	(1.61)
$\sigma_{i,t}^{post}(\pi_{t+12})$	-20.40**	-20.40**
	(8.82)	(8.82)
F-stat (mean)	33.61	33.61
F-stat (unc)	10.20	10.20
95% CI (mean)	[-1.12, 5.53]	[-2.07, 4.59]
95% CI (unc)	[-42.47, -3.53]	[-42.47, -3.53]
R^2	0.69	0.69
N	2,126	2,126

Note: This table reports the results from estimating equation (8) for (real) planned consumption, using the average and standard deviation of expectations instead of the median and interquartile range. F-stat refers to the F-test of coefficients on excluded instruments being equal to zero. 95% CI refers to weak-instrument robust confidence intervals for the respective variable constructed using conditional likelihood estimation. These intervals can extend to positive or negative infinity. We omit intervals that do not contain the point estimate. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Table C.5: Response of Realised Cash Deposits to Inflation Uncertainty - Quantitative Question

	(1) $\ln Cash_{i,t+6}$ b/se	(2) $\ln Cash_{i,t+12}$ b/se
$\text{med}_{i,t}^{post}(\pi_{t+12})$	-8.20	4.24
	(6.95)	(11.05)
$\text{IQR}_{i,t}^{post}(\pi_{t+12})$	-49.17*	19.47
	(25.29)	(32.52)
$\text{med}_{i,t}^{prior}(\pi_{t+12})$	-0.63	-6.54
	(3.31)	(4.86)
$\text{IQR}_{i,t}^{prior}(\pi_{t+12})$	35.37*	-13.48
	(19.59)	(24.76)
F-stat (mean)	18.66	7.88
F-stat (unc)	6.28	1.81
95% CI (mean)	[-19.45, 21.45]	[-866.51, 907.54]
95% CI (unc)	[-172.07, -8.21]	$[-\infty, \infty]$
R^2	0.480	0.526
N	852	739

Note: This table reports the results from estimating equation (8) for realised cash deposits 6 (12) months after the information treatment. F-stat refers to the F-test of coefficients on excluded instruments being equal to zero. 95% CI refers to weak-instrument robust confidence intervals for the respective variable constructed using conditional likelihood estimation. These intervals can extend to positive or negative infinity. We omit intervals that do not contain the point estimate. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Table C.6: Response of Realised Unsecured Debt to Inflation Uncertainty

	(1) $\ln Debt_{i,t+6}$ b/se	(2) $\ln Debt_{i,t+12}$ b/se
$\text{med}_{i,t}^{post}(\pi_{t+12})$	-0.11*	-0.09
	(0.06)	(0.16)
$\text{IQR}_{i,t}^{post}(\pi_{t+12})$	-0.39	-0.24
	(0.43)	(0.35)
$\text{med}_{i,t}^{prior}(\pi_{t+12})$	0.04	0.02
	(0.03)	(0.05)
$\text{IQR}_{i,t}^{prior}(\pi_{t+12})$	0.30	0.21
	(0.34)	(0.27)
F-stat (mean)	17.69	6.13
F-stat (unc)	1.22	3.30
95% CI (mean)	$[-\infty, \infty]$	$[-\infty, \infty]$
95% CI (unc)	$[-\infty, \infty]$	$[-\infty, \infty]$
R^2	0.19	0.19
N	573	430

Note: This table reports the results from estimating equation (8) for realised unsecured consumer debt 6 (12) months after the information treatment. F-stat refers to the F-test of coefficients on excluded instruments being equal to zero. 95% CI refers to weak-instrument robust confidence intervals for the respective variable constructed using conditional likelihood estimation. These intervals can extend to positive or negative infinity. We omit intervals that do not contain the point estimate. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Table C.7: Response of Expected Income to Inflation Uncertainty - Robustness

	(1) $\ln \text{med}_{i,t}(Y_{i,t+12})$ b/se	(2) $\ln \frac{\text{med}_{i,t}(Y_{i,t+12})}{\text{med}_{i,t}(P_{t+12})}$ b/se	(3) $\ln \text{med}_{i,t}(Y_{i,t+12})$ b/se	(4) $\ln \frac{\text{med}_{i,t}(Y_{i,t+12})}{\text{med}_{i,t}(P_{t+12})}$ b/se
$\text{med}_{i,t}^{post}(\pi_{t+12})$	1.72	0.75	-2.84	-3.87*
	(2.75)	(2.78)	(2.05)	(2.04)
$\ln \text{IQR}_{i,t}^{post}(\pi_{t+12})$	-1.00***	-1.04***		
	(0.37)	(0.38)		
$\text{IQR}_{i,t}^{post}(\pi_{t+12})$			-20.05***	-20.00**
			(7.77)	(7.77)
$\text{skew}_{i,t}(\pi_{t+12})$			-20.99	-20.88
			(14.84)	(14.84)
F-stat (mean)	42.20	42.44	44.44	44.44
F-stat (unc)	14.19	14.11	10.57	10.57
95% CI (mean)	[-3.55, 7.81]	[-4.58, 6.89]	[-7.36, 1.08]	[-8.38, 0.05]
95% CI (unc)	[-1.94, -0.29]	[-1.20, -0.31]	[-39.51, -5.17]	[-39.46, -5.13]
R^2	0.22	0.20	0.30	0.30
N	2,595	2,596	2,566	2,566

Note: This table reports the results from estimating equation (8) for (real) expected income to log inflation uncertainty (columns 1 - 2) and controlling for the skewness of expected income (columns 3 - 4). F-stat refers to the F-test of coefficients on excluded instruments being equal to zero. 95% CI refers to weak-instrument robust confidence intervals for the respective variable constructed using conditional likelihood estimation. These intervals can extend to positive or negative infinity. We omit intervals that do not contain the point estimate. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Table C.8: Response of Interest Rate Expectations

	(1) $\mathbb{E}_{i,t} i_{t+12}$ b/se	(2) $\mathbb{E}_{i,t} i_{t+12} - \text{med}_{i,t}(\pi_{t+12})$ b/se
$\text{med}_{i,t}^{post}(\pi_{t+12})$	0.08	-1.06***
	(0.06)	(0.08)
$\text{IQR}_{i,t}^{post}(\pi_{t+12})$	0.52**	0.17
	(0.21)	(0.28)
F-stat (mean)	27.00	35.42
F-stat (unc)	9.33	9.57
95% CI (mean)	[-0.04, 0.22]	[-1.21, -0.91]
95% CI (unc)	[0.18, 1.12]	[-0.36, 0.79]
R^2	-0.034	0.576
N	2,511	2,646

Note: This table reports the results from estimating equation (8) for expected (real) interest rates. F-stat refers to the F-test of coefficients on excluded instruments being equal to zero. 95% CI refers to weak-instrument robust confidence intervals for the respective variable constructed using conditional likelihood estimation. These intervals can extend to positive or negative infinity. We omit intervals that do not contain the point estimate. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Table C.9: Response of Unemployment Likelihood to Uncertainty about Inflation

	(1) $\Pr(JobLoss_{i,t+12} = \{(very)\, likely\})$ b/se	(2) $\Pr(Unemploymentrate_{t+12} = \{little/lot\, higher\})$ b/se
$\text{med}_{i,t}^{post}(\pi_{t+12})$	-0.32	5.28**
	(1.53)	(2.19)
$\text{IQR}_{i,t}^{post}(\pi_{t+12})$	2.02	1.93
	(7.01)	(7.90)
F-stat (mean)	9.33	33.15
F-stat (unc)	1.72	7.03
95% CI (mean)	[-∞, ∞]	[1.49, 9.75]
95% CI (unc)	[-∞, ∞]	[-11.73, 23.04]
R^2	0.03	0.07
N	1,172	2,404

Note: This table reports the results from estimating equation (8) for perceived risk of job loss (column (1) and an increase in the aggregate unemployment rate (column (2)). F-stat refers to the F-test of coefficients on excluded instruments being equal to zero. 95% CI refers to weak-instrument robust confidence intervals for the respective variable constructed using conditional likelihood estimation. These intervals can extend to positive or negative infinity. We omit intervals that do not contain the point estimate. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.