How Do Households Respond to Expected Inflation? An Investigation of Transmission Mechanisms*

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May 25, 2024

Abstract

We disentangle the channels through which inflation expectations affect household spending. We conduct a survey featuring hypothetical scenarios that generate a controlled increase in inflation expectations. For 74% of households, current spending is unresponsive, typically due to fixed budget plans or irrelevance of inflation expectations. About 20% of households reduce spending, often citing wealth effects, nominal income rigidity, and inflation hedging. Only 6% increase spending due to intertemporal substitution or stockpiling. Respondents who expect other economic variables to deteriorate are more likely to reduce spending. Our findings suggest manipulating inflation expectations to boost consumer spending may not be an effective policy tool.

Keywords: survey, inflation expectations, consumption, mechanisms
JEL Classification: D84, D15, E2, E52, E7

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1 Introduction

In standard economic models, inflation expectations play a key role in the pricing decisions and wage negotiations of firms, and the consumption and savings choices of households. Understanding if these theoretical relationships are empirically supported is particularly important now given the elevated inflation rates in many countries. High inflation has sparked concerns about short- and long-term inflation expectations rising and how agents' actions will respond in turn. For example, if firms set higher prices or households stockpile goods in response to higher expected inflation, higher inflation expectations can be a self-fulfilling prophecy resulting in higher realized inflation. Furthermore, understanding how firms and households will respond to a change in inflation expectations is crucial to discussions about using inflation expectations as a monetary policy tool.[1]

In this paper, we investigate how and why household spending decisions react to higher inflation expectations. Existing economic theory proposes a variety of channels for how consumption may respond to changes in inflation expectations. For instance, intertemporal substitution suggests higher inflation expectations will result in a lower real interest rate (if the nominal interest rate response is sluggish) and, therefore, more consumption today. However, there are other mechanisms that predict current consumption will fall in response to higher expected inflation. For example, higher future inflation will act as a tax on savings and erode wealth, or sticky nominal wages may result in a decrease in real income. Given that there are various mechanisms that have different predictions (which we detail in Section 2), the overall sign of the relationship between expected inflation and current spending is theoretically ambiguous.

Existing work has studied the empirical relationship between inflation expectations and household spending; however, the evidence is mixed in terms of the sign and magnitude of the effect (see Weber et al., 2022 and D'Acunto et al., 2023c for reviews of this literature). Previous studies have estimated the *combined* effect of all mechanisms. Given that several—sometimes contradictory—channels may work simultaneously, and could affect different groups of people in heteroge-

[1]Following the Great Recession and the COVID-19 pandemic, policy rates were constrained by the zero-lower-bound. So, economists and policymakers contemplated stimulating current spending by engineering higher inflation expectations (Coibion et al., 2020; Yellen, 2015).

neous ways, it is not surprising that this literature has produced inconsistent findings. To understand the aggregate effect of inflation expectations on spending, we need to know the *different* transmission mechanisms at work, which channels are empirically important, and if there is response heterogeneity across households. Moreover, existing empirical studies focus on consumption responses to changes in short-term inflation expectations. However, central banks have emphasized the importance of long-term inflation expectations because the "anchoring" of these expectations helps to stabilize realized inflation (Yellen, 2015; Powell et al., 2020; Binder and Kamdar, 2022).

To fill these gaps, we disentangle the channels through which inflation expectations, over short and long horizons, affect households' spending on durable and non-durable goods. To do so, we design a novel survey instrument and run it on representative samples of the US. We have four between-subject treatments differing along two dimensions. Respondents are either asked about durable or non-durable consumption, and either given a hypothetical scenario featuring a temporary increase in their short-term (1-year) inflation expectations or a more permanent increase in their long-term (10-year) inflation expectations.

Our survey instrument has two key innovations. First, we generate a controlled, exogenous hypothetical change in household inflation expectations and estimate the planned change in their *real* consumption. This is achieved by initially soliciting respondents' inflation expectations for (i) the next quarter, (ii) the year following that quarter, and (iii) the decade after that quarter, as well as their consumption plans for the next quarter. Then, respondents report how their consumption plan in the next quarter would change in response to a hypothetical scenario that increases their inflation expectations. In the short-term treatments, respondents increase their 1-year inflation expectations (after the next quarter) by three percentage points while keeping their 10-year inflation expectations unchanged. In the long-term treatments, respondents increase both their 1-year and annual average 10-year inflation expectations (after the next quarter) by three percentage points. In all treatments, we inform subjects that their inflation expectations over the next quarter remain the same; this allows us to detect the *real* consumption change and prevents spending plans from increasing mechanically because of

higher expected inflation.[2]

Recent studies, particularly Colarieti et al. (2024) and Kumar et al. (2023), have affirmed the efficacy of using hypothetical questions in a macroeconomic context. They demonstrate that the responses to hypothetical questions are consistent with those obtained from policy implementations or randomized controlled trials. Moreover, the use of hypothetical scenarios in our study offers notable advantages. It allows us to induce specific changes in inflation expectations (in terms of size and horizon) that are otherwise difficult to generate in naturally occurring settings or information-feeding experiments (Coibion et al. 2023; Armantier et al., 2022). In addition, our hypothetical scenarios guarantee that all respondents obtain the same information and update their inflation expectations by three percentage points while emphasizing that there is no new information about other aspects of the economy.

Our second key innovation is that the survey is designed to identify the different channels underlying the spending response. We integrate several methods to elicit the mechanisms. First, we rely on unstructured text responses: after a respondent provides their updated spending plan, the respondent is prompted to share their main considerations in an open text response box. Second, we use a more structured approach by providing a list of mechanisms to respondents. We ask respondents whether each channel was a consideration in their thought process or not. Finally, to quantify the relative importance of each channel, we ask respondents to rank the considerations that applied to them by allocating a total of 100 points across the mechanisms.

We also ask respondents about their expectations about their household income growth, the federal funds rate, and uncertainty about their financial situation before and after the hypothetical scenario. These questions allow us to evaluate whether these variables are affected by the hypothetical scenario, as well as tailor the channels that are presented to respondents. Our analyses begin with an investigation into these economic beliefs. As in Hajdini et al. (2022) and Jain et al. (2024), we find that in response to an increase in short-term inflation ex-

[2]In survey pre-tests, respondents often stated that they would (mechanically) increase their spending in response to an increase in future expected inflation. That is, even though they planned to purchase the same bundle of goods, they believed they would spend more because inflation would accelerate in the "current" period, captured by the next quarter.

pectations, most households expect their income to remain unchanged, implying a lower real income. However, in long-term treatments, households are significantly more likely to think their income will rise or outpace inflation relative to short-term treatments. While the majority of households do not change their beliefs about the federal funds rate, approximately 40% of households have beliefs consistent with the Taylor rule and expect the Fed to increase interest rates. Households in long-term treatments are significantly more likely to expect a change in the federal funds rate. While approximately 25% believe elevated inflation expectations increase their financial uncertainty, the hypothetical scenario does not change the majority of respondents' sense of financial predictability. Finally, most individuals associate higher expected inflation with a worsening economy, consistent with the findings of Kamdar and Ray (2024) and Binetti et al. (2024).

We then investigate how an increase in inflation expectations changes spending plans. On the extensive margin, we find that most households (63%) do not change their consumption basket. Another 11% say they would maintain their dollar spending but change their consumption bundle. About 20% state that they would decrease spending, and the remaining 6% would increase spending. On the intensive margin, we find that an increase in long-term inflation expectations significantly reduces durable goods spending, while short-term expectations have an inconsequential effect. Notably, spending on non-durable goods is not significantly affected by the increase in long- or short-term inflation expectations. Overall, higher inflation expectations either have no effect or a small negative effect on consumption. This means that trying to raise inflation expectations as a policy tool to increase consumption may be an ineffective approach at best or counterproductive at worst.[3]

Next, we turn to determining the underlying mechanisms driving spending choices. The majority of respondents who did not change their spending plans indicated that they have a fixed budget or that future inflation does not affect their current spending decisions. There is also some evidence that liquidity constraints played a role. For those who decrease spending, primary reasons included wealth

[3]Note that our surveys were conducted in 2023 and early 2024 when inflation was above target and interest rates were high. It is possible that in other economic environments, such as at the zero lower bound, consumption responses could be different.

effects, rigid income concerns, and putting money in assets that provide an inflation hedge. Among the small group of respondents who stated they would increase spending, intertemporal substitution and stockpiling were the main considerations.

Additionally, we analyze the heterogeneity across households in terms of the direction of the spending response. Some of the differences are associated with respondents' demographics, financial situation, and subjective models of the economy. Respondents who have low liquid savings and middle income, are female and middle-aged, and have a stagflationary view of the economy are more likely to decrease current consumption in response to higher expected inflation.

Finally, we conduct three additional surveys as robustness checks. The first, based on over 2,000 responses, assesses how a large change in inflation expectations, specifically a 10 percentage point increase in short-term beliefs, affects durable spending. The second and the third, based on over 1,000 participants, assess the impact of a different timing scheme of the short-term hypothetical scenario. These two treatments mirror the two main short-term treatments regarding the expected increase in inflation over the first year; however, unlike in the baseline, where the average 10-year inflation rate remains constant, the revised treatments maintain an unchanged average inflation rate from years 2 to 10. We find that the extensive margin of consumption adjustments aligns closely with those in the baseline. Along the intensive margin, durable spending significantly decreases in the new treatments. Overall, these additional surveys reinforce the message that increasing inflation expectations is unlikely to boost consumption.

Related Literature. Our paper is closely related to the work investigating how inflation expectations affect household spending using surveys or actual spending data, sometimes combined with hypothetical scenarios or randomized control trials to establish causality. Our main contribution is to provide a comprehensive analysis of the channels through which short- and long-term inflation expectations impact current durable and non-durable spending along both the extensive and intensive margins.

The existing empirical evidence on the effect of inflation expectations on spending is mixed. Evidence for a positive relationship includes Duca-Radu et al. (2021), Vellekoop and Wiederholt, 2019, Binder and Brunet (2022), D'Acunto et al. (2021) for durable spending, Burke and Ozdagli (2020) for durable spending for certain

types of households, D'Acunto et al. (2023b) for high-IQ men, and Coibion et al. (2022) for nondurable spending. Evidence for an insignificant or negative relationship includes Bachmann et al. (2015a), Galashin et al. (2020), Coibion et al. (2022), Coibion et al. (2023) and Andrade et al. (2023) for durable spending; Burke and Ozdagli (2020) and Coibion et al. (2023) for nondurable spending.

Our study suggests that spending responses to changes in inflation expectations exhibit substantial heterogeneity and that a variety of channels are at work. Overall, our findings are more aligned with the second set of results.[4] We find limited evidence of intertemporal substitution. Instead, we find strong evidence in support of channels that lead to no changes in current spending, such as having a fixed budget or inflation expectations being irrelevant to current decisions. These channels are consistent with mental accounting (Thaler, 1999) or hand-to-mouth consumption (Aguiar et al., 2020). Furthermore, we find support for channels that result in a decrease in spending, such as the erosion of savings and nominal income rigidity. These mechanisms are consistent with previous findings that households view inflation as a bad outcome (Kamdar and Ray, 2024; Coibion et al., 2023) due to wealth effects (Schnorpfeil et al., 2023) or the belief that income will not keep up (Shiller, 1996; Stantcheva, 2024).

While other work has focused on the effects of changes in short-term inflation expectations, we also study long-term expectations. This is an important question considering many policymakers emphasize the key role of long-term beliefs in realized inflation (Bernanke, 2007; Draghi, 2014). We find that the negative effect on durable spending is stronger with longer-term increases in inflation expectations.

Our paper also contributes to the literature investigating the relationship between expectations of inflation and other economic variables. We confirm that households often associate higher inflation expectations with (i) expectations of a deteriorating economy (Kamdar and Ray, 2024), (ii) limited pass-through to income expectations over the short horizons (Jain et al., 2024; Hajdini et al., 2022;

[4] Colarieti et al. (2024) emphasizes that hypothetical scenarios typically yield estimates similar to those from RCTs. Our findings for durable goods support previous RCT findings by (Coibion et al., 2023, 2022), showing a decrease in durable goods spending with higher inflation expectations. For non-durable goods spending, we found no significant effect of inflation expectations. This aligns with Coibion et al. (2023) but contrasts with Coibion et al. (2022), who finds a significant positive effect. A possible reason for the difference is that the pandemic has strengthened the perceived negative wealth effect of inflation.

Shiller, 1996; Stantcheva, 2024), and (iii) higher interest rates (Dräger et al., 2016; Carvalho and Nechio, 2014). In addition, we find that the longer the duration of higher expected inflation, the more likely respondents are to expect their income to keep up or exceed inflation and interest rates to rise.

Finally, our methodology builds on the growing literature that uses hypothetical scenarios in surveys to investigate macroeconomic questions, the so-called "vignette" or "strategic survey" approach (see Armantier et al., 2022 for a review). Applications include health-dependent utility and life cycle consumption (Ameriks et al., 2020), consumption theory (Fuster et al., 2021; Christelis et al., 2019; Colarieti et al., 2024), firm decisions, causal effect of hypothetical shocks (e.g., to past inflation, oil supply, or monetary policy) on inflation expectations (Andre et al., 2022; Armantier et al., 2022; Aidala et al., 2023), and labor market responses to future inflation (Pilossoph and Ryngaert, 2022). The strategic survey methodology allows us to design controlled exogenous scenarios that are tailored to address the question of interest but that do not frequently occur in field settings. To the best of our knowledge, we are the first to apply this method to examine the transmission mechanisms between inflation expectations and consumption decisions.

The paper proceeds as follows. Section 2 details the channels through which inflation expectations could affect spending decisions. In Section 3, we discuss the survey design and implementation. Section 4 presents results and Section 5 concludes.

2 Transmission Mechanisms

This section reviews the various channels through which inflation expectations may influence households' current spending decisions. We categorize these channels into "direct" and "indirect" channels. Direct channels operate without any change in expectations of other economic variables. Indirect channels work through households adjusting their expectations of other economic variables, such as household income growth, household financial uncertainty, or interest rates, which, in turn, impact household spending decisions.

We begin with direct channels through which higher inflation expectations increase current spending. First, higher inflation expectations reduce the real in-

terest rate through the Fisher equation, and a lower real interest boosts current spending through the Euler equation. This is the standard *intertemporal substitution* channel. Second, according to the literature on infrequent purchasing, households consume a predetermined, constant quantity of a specific good per unit of time (Robin, 1993; Boizot et al., 2001). Households that anticipate future price increases may begin *stockpiling* goods before prices go further up.

Other mechanisms suggest that an exogenous increase in expected inflation may lead to a decrease in current spending. First, higher future inflation acts as a tax on nominal assets, inducing a negative *savers' wealth effect*. Second, households may engage in *inflation-hedging* by acquiring assets such as real estate that are partially protected from higher inflation, thereby diminishing their consumption spending.

Moreover, there are several reasons why inflation expectations may not affect current spending. First, household borrowing or *liquidity constraints* could curtail the intertemporal substitution effects of increased inflation expectations, akin to how they dampen the efficacy of forward guidance on interest rates (McKay et al., 2016). Additionally, households may operate on a *fixed budget*, adhering strictly to a predetermined plan, e.g., as a result of behavioral mental accounting (Aguiar et al., 2020; Thaler, 1999). These two mechanisms could explain why subjects either purchase the same bundle of goods in response to higher inflation expectations or acquire a different bundle of goods while maintaining constant total dollar spending. Lastly, for some households, future inflation may be *not a consideration* for current consumption choices due to myopia, present biases, or cognitive limitations (see Hajdini, 2023, for incorporating myopia into a New Keynesian model).

Next, we discuss the indirect channels, which require a change in an economic expectation other than inflation. For example, an increase in inflation expectations may be associated with a change in household income growth expectations. Some households may expect, consistent with the classical Phillips curve, that higher future inflation will be correlated with lower unemployment and higher income growth. As a result, some households may anticipate their income to grow at a faster rate than inflation (*flexible income*), and thus increase current spending. Conversely, high expected inflation may be associated with a negative outlook about the economy's future (Volcker, 2011; Kamdar and Ray, 2024). If households believe their income growth rate will not keep pace with inflation, they may per-

ceive higher prices as an erosion of their real purchasing power, leading to a decrease in current spending. We call this mechanism the *rigid income* channel. It is also plausible that individuals may simply assume their income growth rate will remain in line with inflation, thereby keeping their *real income unchanged* and maintaining current consumption. Note that households could increase their current spending even if they expect their income growth rate not to keep up with inflation due to *nominal illusion* (Bachmann et al., 2015a). Finally, any future income growth also implies expected wealth gains for fixed-rate debt holders, as higher inflation erodes the real value of the debt. Consequently, as in Fisher (1933), current spending increases through a *debtor's wealth effect*.

Besides household income, an increase in inflation expectations might induce expectations about other economic variables to change. First, higher future inflation may be associated with increased *uncertainty* about the economy (Friedman, 1977; Ball et al., 1990; Binder, 2017). Thus, individuals may reduce current spending due to precautionary savings motives. Second, households may change their expectations about interest rates. Specifically, as prices are expected to rise further, the central bank may increase interest rates over this period to curtail inflation (as in the traditional Taylor rule). Consequently, households must allocate more funds to service their *variable-rate debt* in the future, leading them to augment their savings and reduce current spending. Finally, for three indirect channels—uncertainty, variable debt, and debtor's wealth effect—we include a reverse counterpart. These mechanisms are contrary to what economists might expect based on theory, but could still be how households think and are included for the sake of completeness. For example, the *uncertainty (reverse)* channel posits that higher expected inflation decreases uncertainty and thus increases spending.

Tables 1 and 2 describe all the channels discussed in this section, divided by whether the mechanism implies a change in spending or not, respectively. The same channels were considered for non-durable goods. The first column lists the terms we will use throughout the paper to refer to the different channels. Column (2) presents how we describe each channel to survey respondents without economic jargon. Column (3) classifies each channel as either direct or indirect.

To understand household spending decisions, it is important to quantify the relative significance of each of these channels. From a theoretical standpoint, the

Table 1: Description of Underlying Channels for Spending Changes

Name	Explanation	Effect
	As prices will rise even more after the next 3 months, ...	
Current Spending: Increase		
Intertemporal Substitution	the return on savings won't be worth as much after the next 3 months, thus, saving over the next 3 months becomes less attractive. So, I will buy more durable goods over the next 3 months.	Direct
Stockpiling	I will buy more durable goods over the next 3 months before prices go up even more.	Direct
Nominal Illusion	my household income will increase further over this period. So, I will buy more durable goods over the next 3 months.	Indirect
Flexible Income	my household income will rise faster than price increases over this period. So, I will buy more durable goods over the next 3 months.	Indirect
Uncertainty (reverse)	my household will face lower financial uncertainty over this period. So, I will buy more durable goods over the next 3 months.	Indirect
Variable Debt (reverse)	the Fed (the central bank of the U.S.) will decrease interest rates over this period. Thus, my household can pay less for our variable rate loans over this period. So, I will buy more durable goods over the next 3 months.	Indirect
Debtor's Wealth Effect	given that my debt payments are fixed and my income will increase further over this period, I will have more money left after paying my fixed debts. So, I will buy more durable goods over the next 3 months.	Indirect
Current Spending: Decrease		
Savers' Wealth Effect	my existing savings over this period won't be worth as much. So, I will buy less durable goods over the next 3 months.	Direct
Inflation Hedge	I will move more money to assets not as affected by rising prices, such as real estate, and buy less durable goods over the next 3 months.	Direct
Rigid Income	my household income will not keep up with the price increases over this period. So, I will buy less durable goods over the next 3 months.	Indirect
Uncertainty	my household will face higher financial uncertainty over this period. So, I will buy less durable goods over the next 3 months.	Indirect
Variable Debt	the Fed (the central bank of the U.S.) will raise interest rates over this period. As a result, my household must pay more for our variable rate loans over this period. So, I will buy less durable goods over the next 3 months to save up for the higher future payments.	Indirect
Debtor's Wealth Effect (reverse)	given that my debt payments are fixed and my household income will decrease over this period, I will have less money left after paying my fixed debts. So, I will buy less durable goods over the next 3 months.	Indirect

Table 2: Description of Underlying Channels for Unchanged Spending

Name	Explanation	Effect
	As prices will rise even more after the next 3 months, ...	
Current Spending: Unchanged, but Bundle Changes		
Liquidity Constraint	I don't have money and cannot borrow to increase my spending over the next 3 months.	Direct
Fixed Budget	I have a fixed budget plan and stick with it.	Direct
Current Spending: Unchanged, and Bundle Unchanged		
Liquidity Constraints	I don't have money and cannot borrow to increase my spending over the next 3 months.	Direct
Fixed Budget	I have a fixed budget plan and stick with it.	Direct
Not a Consideration	When I plan my spending over the next 3 months, the price changes after the next 3 months do not matter.	Direct
Real Income Unchanged	My household income will keep up with price increases over this period. So, I will not change my spending decisions over the next 3 months.	Indirect

relative importance of each channel is often ambiguous. However, in some cases, theory does provide hypotheses regarding if a given channel's importance will vary based on (i) the types of goods under consideration—durable vs. non-durable, and (ii) the duration of the rise in inflation expectations—long-term vs. short-term.

For example, Bachmann et al. (2015a) theoretically illustrates that intertemporal substitution considerations may be stronger for durable goods. Additionally, the inflation hedge channel may be less applicable to durables because they naturally provide a higher degree of inflation hedging. Finally, one would expect liquidity constraints to be a more important consideration for durable good spending because durables tend to be big-ticket items.

Additionally, the strength of some channels may depend on the duration of the increase in expected inflation. In Appendix A, we illustrate this with a simple three-period model. Relative to a change in short-term inflation expectations, a change in long-term inflation expectations leads to a stronger wealth effect, with a more severe erosion of nominal income and wealth. Similarly, the intertemporal substitution effect could also be stronger with changes in long-term inflation expectations. Assuming a sluggish response of the nominal interest rate, higher

future prices imply that current consumption becomes relatively cheaper and encourages current spending. More persistent changes in inflation expectations induce larger changes in future prices relative to current prices, generating a larger effect on current consumption.[5]

Furthermore, changes in inflation expectations may cause people to change their expectations of other economic variables. The effects of these changes may depend on whether the rise in inflation expectations is transitory or persistent. For example, people may be more likely to expect their financial predictability to worsen, their income to keep up with inflation, or changes in nominal interest rates if higher expected inflation is persistent. These beliefs will in turn affect the applicability of the associated indirect channels.

3 Survey Design and Implementation

Our main survey consists of four treatments. Each treatment either asks about spending on durable goods or non-durable goods and services, and the rise in inflation expectations is either short-term (over a year) or long-term (over 10 years). In the following, we abbreviate the treatments to SD (standing for short-term durable), SN (standing for short-term non-durable), LD (standing for long-term durable), and LN (standing for long-term non-durable).

3.1 Survey Structure

Each survey consists of four modules: a pre-hypothetical scenario module, a hypothetical scenario module, a post-hypothetical scenario module, and a demographics module. The pre-hypothetical scenario module obtains respondents' "priors" about expected inflation, (non)durable spending, household income growth, household financial uncertainty, and the federal funds rate. We refer to them as

[5] According to the standard log-linearized New Keynesian Euler equation (Galí, 2015), changes in future prices as formulated in our main short-term treatments do not affect current consumption. If we do not log-linearize (see Appendix A), or relax rational expectations (Woodford, 2019; Thaler and Shefrin, 1981), or introduce uninsurable income risk and borrowing constraints (McKay et al., 2016), then the change in inflation expectations as formulated in our short-term treatments affects current consumption through the Euler equation. We also conduct additional surveys to formulate a stronger change in short-term inflation expectations (see Section 4.7).

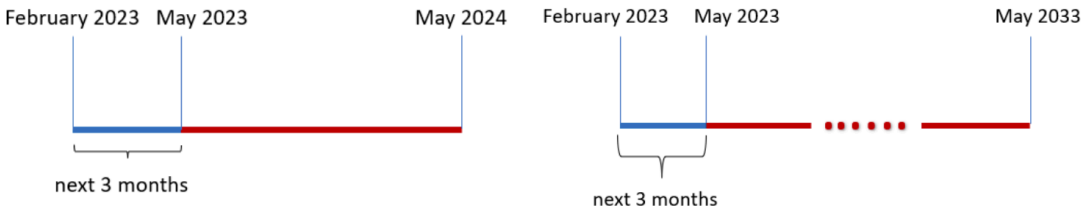
"priors" because the expectations about these variables are elicited before respondents are exposed to the hypothetical scenario. The hypothetical scenario module describes a hypothetical situation where the respondent's inflation expectations are raised for either a short period (1 year) or for a long period (10 years). Then, the post-hypothetical scenario module obtains the respondents' "posteriors" of (non)durable spending, as well as the other aforementioned economic variables. In addition, the post-hypothetical scenario module works towards understanding respondents' changes in (non)durable spending by using an open-text box as well as allowing respondents to select mechanisms from a list consistent with each respondent's posteriors. The final module asks standard demographics questions, as well as cognitive reflection and financial situation questions. The complete survey (for the SD treatment) can be found in Appendix E.

Pre-Hypothetical Scenario Module. We begin the pre-hypothetical scenario module by presenting respondents with a concise and non-technical explanation of price changes in percentages, fostering a common understanding of the concept and mitigating potential misinterpretation of subsequent questions. Then, we elicit respondents' percent price change expectations over the next three months, over the 12 months following the next three months, and the annual average over the 10 years following the next three months. We also ask for a qualitative measurement of their uncertainty over each horizon. These questions are designed to be aligned with established consumer surveys, such as the University of Michigan Survey of Consumers.[6] To ensure that subjects understand the time horizons, we provide exact dates and visual timelines. For example, for surveys fielded in early February 2023, for the 12-month horizon starting in three months, we state that we are interested in the period May 2023 to May 2024 and provide Figure 1a as a visual guide. For the 10-year horizon starting in three months, we state we are interested in the period May 2023 to May 2033 and provide Figure 1b as a reference.[7]

The specific hypothetical scenarios will be discussed in the next subsection. We

[6]Existing consumer surveys ask about either "inflation" or "prices in general," and which approach is more effective is still under debate (Armantier et al., 2017). Our survey asks about the percent change in prices rather than "inflation" to avoid difficulties arising from the annualization of expectations over a three-month interval.

[7]To avoid confusion between cumulative percent changes and average annual percent changes for 10-year horizons, we have several follow-up questions asking whether individuals responded with cumulative rate, and if so, they are asked to correct their answers.



(a) 12-Months (b) 10-Year

Figure 1: Visual Guide Timelines

Notes: Timelines respondents would see in February 2023 to indicate the next three months, the 12-month horizon or the 10-year horizon three months following the next three months.

elicit the respondents' beliefs about a variety of economic outcomes over the 12-month period or the 10-year period (depending on whether they are in a short- or long-term treatment), starting after three months. Specifically, we ask about their expectations for household income growth rate, the federal funds rate, and their ability to predict their household's financial situation. Note that both the federal funds rate and the household financial situation questions follow the phrasing of questions in the Bank of England Inflation Attitude Survey.

Next, depending on the treatment, a respondent would either see a non-technical explanation of durable goods (e.g., cars, electronics, furniture) or non-durable goods and services (e.g., food, gasoline, clothing, haircuts). Respondents report their average monthly spending over the last three months and their expected average monthly spending plan over the next three months. The expected consumption plan over the next three months will serve as our measure of "current" consumption. These survey questions follow the wording from the CentER Internet panel (Coibion et al., 2023).

Hypothetical Scenario Module. The hypothetical scenario asks survey participants to think about a hypothetical situation in which their inflation expectations are higher than estimated in the initial module of the survey. In the short-term treatments, we tell respondents to imagine that they have received credible, new information about future inflation. Thus, they now expect inflation in the year following the next three months to be three percentage points higher than in their initial estimation. The average annual rate of 10-year inflation remains

stable. Alternatively, in the long-term treatments, the three percentage point increase in expected inflation is long-lived. Respondents are asked to imagine that, after the next three months, the expected average annual rate of 10-year inflation also increases by three percentage points. In what follows, we provide the wording used in the short-term scenario:

Now, imagine that you have received some information about future prices from a reliable source that you trust. In response to this new information, you update your expectations on prices as follows:

(1) Over the next 3 months from February 2023 to May 2023, you expect the percentage change in prices to be A% (this is the same as your initial expectation).

(2) Over the 12-month period from May 2023 to May 2024, you expect the percentage change in prices to be (B+3)% (this is 3% higher than your initial expectation).

(3) Over the 10-year period from May 2023 to May 2033, you expect the percentage change in prices per year on average to be C% (this is the same as your initial expectation).

The table below summarizes your initial expectations and updated expectations on future prices:

Expectations on changes in future prices	Over the next 3 months February 2023 to May 2023	Over the 12-month period May 2023 to May 2024	Over the 10-year period May 2023 to May 2033
Initial	A	B	C
Updated	A	B+3	C

There are several items worth noting. First, to ensure that we only directly change respondents' inflation expectations while keeping everything else constant, we clearly explain that in the new scenario, there is no new information about other aspects of the economy. Respondents, however, are free to make any associations they would like. For instance, some may associate higher expected inflation with an increase in expected income or an increase in the federal funds rate. Second, we use blue text to indicate the next three months and red text to indicate horizons after the next three months. This coloring is consistent with the timelines used as visual guides throughout the survey. Third, as we use consumption in the next three months to proxy *current* consumption, we tell subjects that in the alternative scenario, prices in the next three months will remain the same as initially expected. That is, excess price increases occur only after the next three months.

The change in consumption in the next three months can therefore be interpreted as a change in real consumption. Indeed, in our survey, we elicit inflation expectations for the next three months in the pre-hypothetical scenario module and we remind respondents that those are not affected in the hypothetical scenario. This is because, in the process of designing the survey, we found that when we formulated the hypothetical scenario as prices would be higher in the next 12 months, many respondents said that their consumption would increase in the next three months. However, according to their open-text explanation, the increase was mostly mechanical. That is, they thought inflation would already be higher in that three-month period. We then would have to infer whether the change in consumption represented a change in real spending, and to do that, we would have to assume that subjects understand that the price change in the next three months would be a fraction (e.g., 1/4) of the expected price change in the next 12 months. Our design choice minimizes mechanical increases, enabling us to interpret the change in consumption as a change in real spending. Finally, following the description of the hypothetical scenario, respondents must pass a quiz to confirm that they correctly understand the hypothetical scenario.

Post-Hypothetical Scenario Module. The preceding module generates a hypothetical, controlled, and exogenous increase in household inflation expectations. Following that, the post-hypothetical scenario module (i) solicits posterior beliefs about other economic variables including spending, and (ii) examines the underlying mechanisms that drive the changes in household consumption spending. Soliciting posterior beliefs about other economic variables serves a dual purpose. It allows us to investigate whether higher inflation expectations affect respondents' outlook on other economic variables, potentially enhancing our understanding of the relationship between inflation expectations and spending. Furthermore, it allows us to shorten the survey as we can tailor channels presented to respondents.

Specifically, the post-hypothetical scenario module begins with questions on how respondents would update their forecasts about economic variables, including household income growth, household financial uncertainty, the federal funds rate, and the general outlook of the economy. For each question, we provide the respondent with their prior answer and a summary of the hypothetical scenario. As discussed in Section 2, understanding how respondents adjust these

economic expectations—transitioning from their prior to posterior expectations—contributes to our comprehension of the indirect channels through which inflation expectations influence consumption decisions.

As the last posterior, we ask respondents how their household's planned spending in the next three months would change in the new scenario compared with their initial plan.[8] Respondents are first presented with a qualitative question asking whether they expect to purchase the same amount and types of goods. If the answer is no, they then are asked whether their dollar spending will stay the same. If the answer is no, then they respond to the question of whether their spending will increase or decrease. This series of up to three questions allows us to separate respondents into four groups: households that will not change anything about their spending plans, households that will spend the same amount but change their basket of goods, households that will increase their spending, and households that will decrease their spending. The qualitative questions are then followed by a quantitative question, which asks for their estimated spending under the hypothetical scenario.

There may be concerns about if survey respondents understand the hypothetical scenario and whether they are able to respond from the perspective of that setting. In order to ease the burden on survey participants, we paid close attention to the presentation of the material. We developed the survey with feedback from survey design experts at the Center for Survey Research at Indiana University, Bloomington. They provided input on the design of the survey and the phrasing of questions.

In asking for spending plans under a hypothetical scenario, we assume that the responses will be informative of actual behavior if the hypothetical were to arise in reality. While some have raised concerns about the plausibility of this assumption (Diamond and Hausman, 1994), there is growing, recent evidence that using stated choices and actual choices yields similar decisions in settings similar to ours. For instance, Fuster et al. (2021) suggest that when respondents face realistic and relevant hypothetical questions, as is the hypothetical situation in

[8]Respondents are informed that there is no right or wrong answer to survey questions, and we are only interested in their personal and subjective views on their actions in hypothetical scenarios. This information is to avoid participants interpreting the questions as an economics test with correct and incorrect answers.

our survey, their responses are meaningful and informative. In addition, in the context of consumption decisions, Kreiner et al. (2013), Coibion et al. (2023), and D'Acunto et al. (2021) find that reported future spending plans in surveys align with actual spending.

Channel Identification. We use two methods to investigate the mechanisms that guide how and why respondents alter their consumption plans in response to changes in inflation expectations. First, on the same page where we ask respondents how their household planned spending will change in response to the change in inflation expectations, we also ask respondents to write down considerations that played a role in their decision in an open-text response box.

The open-ended question elicits respondents' considerations without priming them with information about any theoretical mechanisms. However, this approach has limitations. Respondents' answers may contain measurement errors due to their unwillingness to exert effort or their inability to fully describe their thought process. This leaves the interpretation and categorization of the responses to researchers' subjective judgment (Andre et al., 2022). Furthermore, even when respondents can describe parts of the underlying mechanism(s) that drove their decisions, the descriptions are often insufficiently detailed to fully understand their views on all mechanisms. That is, we do not know whether and to what extent each mechanism plays a role.

To address these concerns, we complement the first method with a more structured approach. Respondents are shown individual channels sequentially —channels consistent with their previous responses—and asked whether each channel was a consideration in their thought process. Participants are shown all mechanisms that are consistent with their qualitative changes in consumption and their posterior expectations of other economic variables.[9] For instance, respondents who state they would increase spending in the hypothetical scenario will exclusively see the channels that are consistent with an increase in current spending. With regard

[9]It is possible that channels counteracting the direction of consumption changes may also exert influence but are dominated by the principal channels. The rationale for exclusively inquiring about mechanisms consistent with the direction a household says their spending would change is twofold. First, in our pilot study, less than 10% of individuals report having counteracting considerations, and even fewer regard these opposing factors as somewhat significant in their decision-making. Second, assessing channels in both directions would impose large cognitive demands on respondents.

to posterior beliefs, again considering respondents with increased spending, they would be presented with the flexible income channel only if their income growth rate increased by more than the rise in inflation or the nominal illusion channel only if their posterior income growth rose but less than the rise in inflation. This methodology mitigates the cognitive demands on respondents to evaluate all channels while preserving consistency within their survey responses.

Then, for the channels that played a role in a respondent's thought process, we ask the respondent to allocate 100 points across the mechanisms, to capture the extent to which each channel influenced their decision-making. To avoid order effects, the order of the channels is randomized. We include, "Other reasons, as I mentioned in the previous open-text question," at the bottom of the list, in case we omitted a mechanism that a respondent feels is important.

Demographics Module. Next, the demographics module collects basic information about respondents including age, gender, education, working status, marital status, homeownership status, and household income. We also collect information on respondents' financial characteristics and cognitive reflection abilities. For instance, we ask whether respondents have and how much they have in checking, savings, money market accounts, or certificates of deposit. We also ask respondents how much they can borrow from credit cards. Furthermore, we collect respondents' information on various assets and debt holdings. Overall, these questions reveal respondents' liquidity conditions, asset and debt positions which have been shown to matter for how inflation expectations affect consumption (McKay et al., 2016; Doepke and Schneider, 2006). Finally, we ask three cognitive reflection test questions that measure respondents' ability to override incorrect, reflexive answers (Frederick, 2005). The score in this test is positively correlated with other measures of intelligence and behavioral biases (e.g., D'Acunto et al., 2023b show that cognitive skills play a role in shaping inflation expectations and consumption decisions).

3.2 Survey Implementation

We recruited respondents through Dynata, an online sampling company, and conducted the main survey experiments in late February and March 2023. Participants must live in the United States and be at least 18 years old. Dynata provides

a balanced sample that matches the average characteristics of the U.S. population in terms of gender, age, race, and census region. Dynata is a leading online sample provider with more than 62 million panelists who receive compensation in the form of cash and vouchers for completing surveys. As Haaland et al. (2023) discuss, Dynata is a commonly used platform for survey research. Our respondents filled out an online questionnaire written in Qualtrics.

The median completion time for the survey was 19 minutes. Following data collection, we removed 49 incomplete responses and 10 responses with identical IP addresses. Additionally, we evaluated the potential for straight-lining bias in the demographic questions, whereby respondents consistently select the first or last option. We found no respondents displayed such consistent behavior across all questions. Furthermore, we excluded respondents who did not provide relevant reasoning in the open-text box questions. Each open-box response was reviewed, independently, by two co-authors and designated as low, medium, or high quality.[10] We removed responses as long as one of us labeled them as being low quality. Furthermore, two observations with extremely high prior monthly spending ($100,000 and $250,000) were discarded as outliers. We also removed three observations with negative posterior spending. This results in a cleaned sample of 2,003 observations.

Appendix Table B1 presents the demographic and financial characteristics of our survey respondents and compares them with their adult population counterparts sourced from the 2021 American Community Survey. Various characteristics of the respondents in our sample correspond closely with the U.S. adult population. For instance, the female respondents constitute 54% of our sample and 51% of the U.S. population. The proportions of households within different income brackets and regional distributions are also similar to their nationally representative counterparts.

Nevertheless, there are some demographic differences between our sample and the general U.S. adult population. Households in our sample are more likely to have a college degree, be older, be married, and be White. To be able to make statements about the general U.S. adult population and control for these differences, we consistently present weighted statistics in Section 4. The weights applied in our analysis are designed to align the sample with the 2021 American Commu-

[10] Low quality responses were answers such as "4", "very nice", or "searyha<rg."

nity Survey across multiple dimensions, including race, age, gender, marital status, region, household income, and education.[11]

4 Results

This section presents our main survey findings. We begin by examining respondents' prior expectations regarding price changes, outline their planned spending on durable and non-durable goods for the following three months, and further explore their expectations concerning various economic variables. Subsequently, we investigate how households update their economic expectations and planned consumption, in response to a hypothetical increase in expected inflation. We then assess which mechanisms are empirically important. Furthermore, the analysis delves into the relationship between individual characteristics and spending decisions. Finally, we investigate the treatment effects on belief updating, spending behavior, and the choice of underlying mechanisms.

4.1 Prior Expectations

Inflation Expectations. Table 3 provides summary statistics for respondents' prior expectations. In our survey, respondents provided their inflation expectations over three distinct horizons: (i) the coming three months, (ii) the year following the next three months, and (iii) the average, annual inflation rate in the ten years following the next three months. The median expectation for these three periods was 2.5%, 4%, and 2%, respectively. For reference, in March 2023 (when our survey was conducted), the University of Michigan Survey of Consumers reported similar median inflation expectations for comparable time intervals: 3.6% for the next year and 2.9% for the next five years. Respondents expressed notable confidence in their short-term inflation expectations for the immediate three-month period, with 72% of participants being "sure" (57%) or "very sure" (15%) about their forecasts. Confidence levels were also high for price expectations over the year following the next three months, as 69% of respondents felt "sure" (54%) or "very

[11] In our analysis, we employ the numerical iterative method known as raking to compute the weights. The weights vary from 0.11 and 8.00, a range that is reasonable within this context.

sure" (14%) about their forecasts. However, for the ten-year forecast, confidence declined to 26% of respondents being "sure" or "very sure".

We find significant cross-sectional dispersion in inflation expectations. The 90th percentile exceeds 20% for all three horizons (see Appendix Figure C1 for the density distribution of the three inflation expectations forecasts). Due to outliers, which are common in survey-based inflation expectations, we also compute Huber-robust means which are resilient to extreme observations.[12] The Huber-robust means, 3.38%, 4.76%, and 2.46%, are overall comparable to the median values.

Other Economic Expectations. In the pre-hypothetical scenario module, respondents were asked to forecast their average monthly expenditure on either durable or non-durable goods over the next three-months, depending on the treatment. The average values for the expected monthly expenditures on durable and non-durable goods were $536 and $858 (see Table 3 for more details). The observed cross-sectional spending differences are substantial, with a right-skewed distribution. Approximately 10% of respondents anticipated their monthly expenditure to exceed $2,000 in the subsequent three months, and a handful of respondents reported expected monthly consumption to exceed $5,000.[13] The Huber-robust means for durable and non-durable goods were $320 and $763, respectively. The median values were $160 for durable goods and $500 for non-durables. In addition, participants were asked about their confidence in their expenditure projections. A substantial fraction—72% for durable goods and 79% for non-durable goods—articulated strong certainty, qualifying their forecasts as either "sure" or "very sure."

Next, let us consider respondents' expected income growth. We find that under the long-term scenario, respondents, on average, align their anticipated income growth trajectory closely with prevailing inflation expectations (e.g., the Huber means are 2.48% and 2.46% for income growth and inflation expectations, respectively). However, in the short-term scenario, both the Huber-robust mean and

[12] In our computation of the Huber robust mean, we incorporate demographic weights consistent with our approach for other summary statistics and analyses. Drawing from the standard Huber-robust method (as detailed in Hamilton 1992), demographic weights are integrated at two critical junctures.

[13] The density distribution of the expected spending of both durable and non-durable goods over the next three months is plotted in Appendix Figure C2.

median for projected income growth are lower than concurrent inflation expectations (e.g., the Huber means are 3.15% and 4.76% for income growth and inflation expectations, respectively). This suggests households believe income-rigidity is stronger in the short-term than over the long-term, and indeed this difference is significant as we show in Section 4.6 where we discuss treatment effects.

Regarding the federal funds rate, most respondents expect it to remain elevated over both short- and long-term horizons. The median projection for the average federal funds rate over the decade following the immediate three months is 5%. Finally, in regard to financial predictability, a dominant share of the respondents perceive their future financial stability as either moderately or highly unpredictable.

Table 3: Descriptive Statics for Prior Expectations

Expectations for:	N	Mean	St. Dev.	Huber Mean	Huber St. Dev.	Median
(A) *Price Change (%)*						
over the next 3 months	2,003	6.41	13.08	3.38	5.36	2.50
over the 12 months following the next 3 months	2,003	7.83	15.77	4.76	7.64	4.00
over the 10 years following the next 3 months	2,003	6.41	17.63	2.46	5.39	2.00
(B) *Household Spending ($)*						
durable goods per month over the next 3 months	1,001	535.86	1725.25	320.26	465.89	160.00
nondurable goods per month over the next 3 months	1,002	857.59	1117.45	762.50	776.42	500.00
(C) *FFR (%)*						
over the 12 months following the next 3 months	1,008	8.02	16.94	5.46	3.55	5.00
over the 10 years following the next 3 months	995	8.90	19.36	5.634	4.78	5.00
(D) *Income Growth Rate (%)*						
over the 12 months following the next 3 months	1,005	7.58	17.40	3.15	6.79	3.00
over the 10 years following the next 3 months	995	6.79	15.93	2.48	5.32	2.00
(E) *Household Financial Uncertainty*						
over the 12 months following the next 3 months	1,008	0.75	0.44			
over the 10 years following the next 3 months	995	0.88	0.32			

Notes: This table presents moments of various expectations observed prior to the hypothetical scenario module. For "household financial uncertainty," responses indicating perceptions of "very difficult" or "moderately difficult" to predict are classified as one. Regarding expected household income growth rate over the 12 months following a three-month period, we exclude three observations exceeding a value of 5,000 due to their extreme nature. For continuous variables, Huber-robust means are reported to account for potential outliers.

4.2 Effects on Expectations of Other Variables

We now proceed to assess the reaction of household income growth expectations following an increase in inflation expectations in Table 4 Panel A. Only 7% of respondents anticipate their nominal income to fall below their initial expectation. In contrast, 47% of households expect their income would not change in the hy-

pothetical scenario. About 11% would increase their income growth expectations by less than the rise in inflation expectations, while 35% expect their income to keep up with or even exceed the rise in inflation expectations.

With respect to the federal funds rate, 55% of respondents believe it will remain unchanged post-scenario (see Table 4, Panel B). A substantial share of households (39%) expect it to rise, consistent with the Taylor rule. Only a few households (6%) anticipate the federal funds rate to fall.

Next, in Table 4 Panel C, we assess how households' own financial situation predictability changes following the hypothetical scenario. We find that 24% of respondents associate increased future inflation expectations with amplified financial unpredictability for the corresponding period. Yet, for the majority, an increase in future inflation expectations does not affect their perceptions of their own financial stability.

Lastly, we turn to the change in the general economic outlook of respondents under the hypothetical scenario (see Table 4 Panel D). About 40% of the responses echo the stagflationary views of Volcker (2011) and Kamdar and Ray (2024). That is, many respondents correlate heightened inflation expectations with a deteriorating economic environment. The next largest group expects no change in the economic environment, and a minority anticipates an improvement in the economy.

4.3 Effects on Spending

Next, we analyze the effects of the hypothetical scenario on planned spending, considering both the extensive margin (qualitative changes) and the intensive margin (quantitative changes in dollar spending). Table 5 summarizes the results. Pooling all treatments, the majority (74%) expressed that an increase in expected inflation would not affect their dollar spending over the upcoming three months. Approximately 20% would decrease spending, while a mere 6% would increase spending.

Along the intensive margin, in the SD treatment, there is a small average increase in the expenditure on durable goods in the face of increased short-term inflation expectations. All the other treatments see a decrease in average spending. In terms of statistical significance, only the change in spending under the LD

Table 4: Posteriors of Economic Beliefs, by Treatment and Overall

	(1) SD	(2) SN	(3) LD	(4) LN	(5) All
(A) *Household Income Growth*					
Adjust downwards	4.9	10.3	6.7	5.4	6.6
No change	49.0	50.9	39.9	50.4	47.4
Adjust upwards by less than 3	12.0	12.1	10.9	10.7	11.4
Adjust upwards by 3	18.0	17.4	22.2	18.0	18.9
Adjust upwards by more than 3	16.1	9.2	20.4	15.5	15.6
(B) *Federal Funds Rate*					
Adjust upwards	34.9	39.8	43.0	40.2	39.4
No change	61.3	55.3	50.4	52.6	55.0
Adjust downwards	3.8	4.8	6.6	7.2	5.6
(C) *Financial Predictability*					
More difficult	19.4	25.3	23.6	28.6	24.1
As difficult as before	65.6	65.9	65.9	63.7	65.3
Less difficult	15.0	8.8	10.6	7.6	10.6
(D) *General Economic Outlook*					
Improve	25.3	20.7	25.9	22.6	23.7
No change	40.0	33.3	33.2	34.9	35.5
Worsen	34.8	46.0	40.9	42.6	40.8
N	504	504	497	498	2,003

Notes: Following the hypothetical scenario, respondents were asked how their expectations would change for their household income growth rate, the federal funds rate, their household's financial predictability, and the general economic situation in the year following the next quarter (short-term treatments) or on average over the 10 years following the next quarter (long-term treatments). The table reports the percentage of respondents in each scenario that gave each possible response. The last row indicates the number of respondents in each treatment.

treatment is different from zero.[14]

Discussion. One may be concerned that the prevalence of 'no change' consumption responses might be due to respondents' fatigue or low effort in completing the survey. Analysis of various measures—such as the proportion of respondents consistently choosing 'no change' across different questions, changes in this proportion over the duration of the survey, completion times, and word counts in open-ended responses—suggests that these factors do not substantially influence

[14]We conduct a demographics-weighted ordinary least squares regression with robust standard errors. The dependent variable, the change in spending, is regressed on a constant.

Table 5: Spending Response

	(1) SD	(2) SN	(3) LD	(4) LN	(5) All
Extensive Margin (Percentage)					
No Change	70.3	57.4	57.2	66.5	63.2
Same Spending Different Bundle	7.2	11.9	14.7	9.8	10.8
Increase	5.7	5.6	6.7	5.8	6.0
Decrease	16.8	25.0	21.4	17.9	20.0
Intensive Margin (Dollar Spending)					
Prior Spending	533.10	888.46	538.75	831.72	687.39
Spending Change	11.59	-6.40	-44.27**	-16.35	-13.86
Percentage Change	2.17%	-0.72%	-8.22%	-1.97%	-2.02%
N	504	504	497	498	2,003

Notes: After being presented with the hypothetical scenario, respondents indicated potential changes in their spending plan over the subsequent three months. The first part of the table presents the proportion of participants from each treatment group that aligned with each potential qualitative response (extensive margin). Furthermore, participants provided their revised dollar spending plans post-scenario (intensive margin). The second part of the table shows the initial dollar spending, changes in dollar spending, and the percentage changes at the aggregate level. The row "Spending Change" also indicates whether the number is significantly different from zero. The last row indicates the number of respondents in each treatment. ***, **, * denotes statistical significance at 1, 5, and 10 percent levels, respectively.

the findings (see Appendix D for details).

Moreover, we conducted an additional small survey with 203 participants to assess if our approach for asking updated spending biased respondents to select 'no change' in consumption (see Appendix B.3 for details). We split the sample so that half of the respondents saw our original approach, while the others responded to a new method that directly asked respondents to enter a value for what they would spend in the hypothetical scenario. The results confirm our baseline findings. Furthermore, the results indicate that our baseline approach reduces mechanical increases in spending and more accurately captures *real* spending than the alternative method.

While the 'no change' consumption response is prevalent across our representative sample, there may be differences across subgroups. For example, accurate forecasters (Bachmann et al., 2015b; D'Acunto et al., 2021), individuals with high IQ (D'Acunto et al., 2023b), and different age groups may change consumption differentially. We conducted subgroup analyses across these categories (see Ap-

pendix B.2). Overall, the findings are consistent with our main conclusions.

4.4 Underlying Channels

Next, we explore the underlying channels through which inflation expectations affect spending decisions. We separately discuss the four possible consumption responses: no change, same dollar spending but different bundle, decrease, and increase. For each category, we discuss insights from all three channel elicitation methods.

To analyze the open-text entries in the first step, we read each entry and categorize it into a channel. Some responses can easily be mapped into the mechanisms shown in Tables 1 and 2. Some explanations cannot be classified into any proposed mechanism, and we label those "other." Other entries do not clearly explain why their spending responds to higher inflation or contain self-contradictory messages; we classify these as "uninformative". We discuss the results of the classification below and present the details in appendix tables. We also show word clouds of the most commonly used words in the open-text boxes in Figure 2 to get a complementary and objective perspective of the relevant considerations.

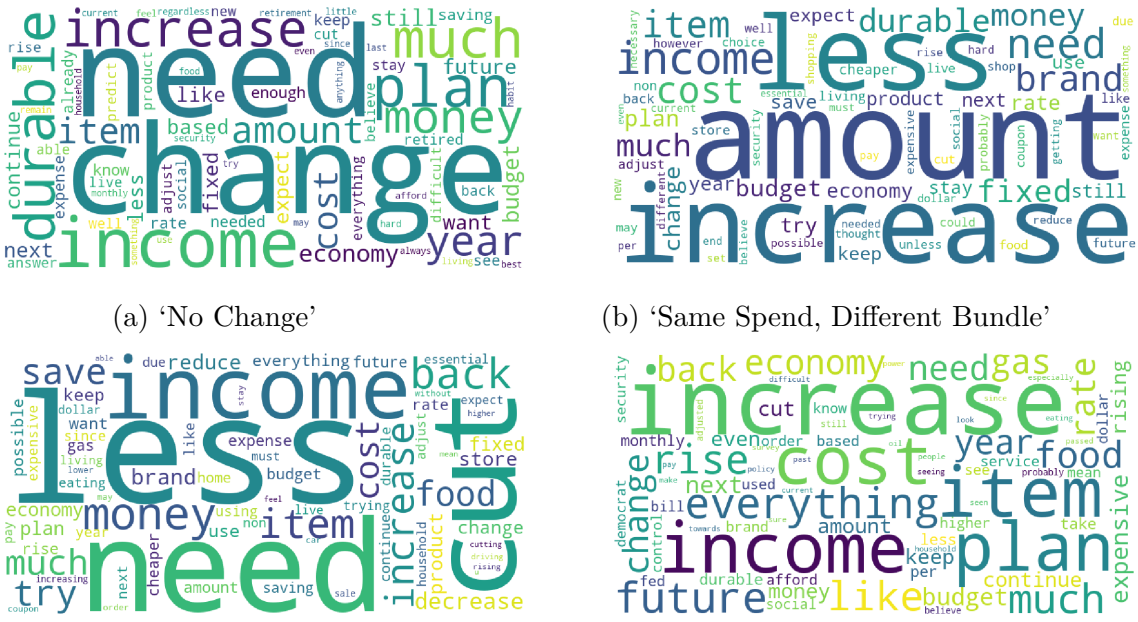
Regarding the second elicitation step, Table 6 presents the fraction of households that select each proposed mechanism as a percent of households in each spending response category. Finally, we report the results of the weights applied to each applicable mechanism. Recall, the last option was "other"; i.e., other reasons they mentioned in the previous open-text question. As we analyzed the open-text input, we tried to match the reasons to our proposed mechanisms. In most situations, we identify only one single listed mechanism; in which case we think it is reasonable to move the weight assigned to "other" to that identified mechanism. Sometimes we identify two listed mechanisms, in which case we split the weights assigned to "other" to the two identified mechanisms equally. We summarize the average weights assigned to each mechanism below and relegate details to the appendix.

Channels for 'No Change' Responses. Table 2 lists four potential mechanisms for why a respondent may not make any change to their current consumption. All of these mechanisms appeared in some open-text responses (see Appendix

Table B11). For example, one respondent wrote, "I have a very good income and buy what I want when I want and inflation does not really effect those decisions," which corresponds to our "not a consideration" channel. Another response read, "Having a budget and sticking to that budget," which is consistent with the "fixed budget" channel. One subject explained, "With the general rise in percentage of my salary and my wife's salary, I don't think we would have much trouble keeping up with the rising costs," and this is close to the "real income unchanged" channel. Among the identified mechanisms in the open-text boxes, the most common explanation is "not a consideration" followed by "fixed budget." Most open text entries in this consumption response category can be identified with our proposed channels. Among the responses that we were unable to classify into our mechanisms, some say they choose not to change anything as a way to deal with uncertainty or their purchases are out of necessity, so there is little room to change. Still, about a third of responses were classified as uninformative, which shows the importance of complementing the open text approach with the proposed mechanisms in our second step of mechanism elicitation.

Figure 2a presents a word cloud of the most commonly used words in the open-text box by respondents who make no changes in spending in the hypothetical scenario. While "change" is a commonly used word, it is unsurprisingly associated with negation (62% of the observations have a negation within the three words before or one word after). "Need" is also frequently used and typically describes how the respondent has to make purchases to meet their current needs and future inflation does not affect this. Words such as "plan", "fixed", "budget", and "habit" are used often and suggest many of the respondents, even before any mechanisms were shown to them, were already thinking about their "fixed budget."

Table 6 shows results from the second elicitation approach. Note that compared with the open-text approach, all proposed mechanisms are selected more often. This is natural as the open-text entry requires more effort, and subjects may not want or be able to explain their rationale. Identifying whether or not a proposed mechanism played a role in one's thinking is an easier task. The two approaches yield results that are broadly consistent with each other. For example, "not a consideration" and "fixed budget" are the most identified reasons according to both the open-text entries and the selection of proposed mechanisms.



(a) 'No Change'

(b) 'Same Spend, Different Bundle'

(c) 'Decrease'

(d) 'Increase'

Figure 2: Word Clouds

Notes: Word clouds of the most commonly used words in the open-text responses of respondents by qualitative change in consumption. Responses are pooled across main treatments. In the text analysis, punctuation was removed, all letters were made lowercase, and all words were lemmatized. Words associated with the hypothetical scenario were dropped such as "price", "inflation", "buy", as well as 179 common stop words.

Finally, the weights put on applicable mechanisms are largely in line with the results in the first two steps (see Appendix Table B12). "Not a consideration" is the most important reason, with an average weight ranging from 35% to 39% across treatments, followed by "fixed budget," with an average weight ranging from 30% to 36%. "Liquidity constraint" is assigned an average weight between 9% and 16%. "Real income unchanged" received an average weight ranging from 4% to 9%. Finally, 8% to 14% of the weight is assigned to "other" mechanisms.

In summary, the reasons most predominately given for not changing consumption were: future inflation is "not a consideration" and having a "fixed budget" plan. This was the case in all mechanism-elicitation approaches. Some households also select "liquidity constraint" from the list of mechanisms, but infrequently mention it in the open-text box and put little weight on it in terms of importance.

Table 6: Fraction (%) of Households that Select Each Mechanism Conditional on Spending Change Category

	SD	SN	LD	LN	All
Panel 1: No Change					
Fixed Budget	66.6	61.4	69.1	63.2	65.3
Not a Consideration	64.6	67.7	66.2	59.7	64.2
Liquidity Constraint	46.8	32.9	53.8	38.1	43.4
Real Income Unchanged	13.1	16.4	21.3	11.7	15.3
N	364	305	310	319	1,298
Panel 2: Same Spending, Different Bundle					
Fixed Budget	73.2	82.7	65.9	75.5	73.4
Liquidity Constraint	48.8	46.6	53.1	59.9	52.4
N	31	52	52	65	200
Panel 3: Decrease					
Savers Wealth Effect	79.2	92.4	79.3	97.5	87.0
Inflation Hedge	68.4	67.3	55.0	64.9	63.6
Rigid Income	45.7	67.2	44.5	63.9	55.3
Uncertainty	26.6	36.6	37.0	52.9	38.1
Variable Debt	22.8	30.1	35.1	49.5	34.3
Debtors Wealth Effect (reverse)	13.3	19.8	9.5	8.6	12.9
N	81	117	105	91	394
Panel 4: Increase					
Intertemporal Substitution	71.2	41.5	76.4	56.1	62.9
Stockpiling	68.8	45.6	75.7	54.3	62.5
Debtors Wealth Effect	33.3	27.1	21.8	53.1	33.6
Flexible Income	5.2	9.4	20.8	48.6	21.4
Nominal Illusion	37.8	21.7	5.9	5.1	17.2
Uncertainty (reverse)	8.4	0.0	6.8	3.9	5.1
Variable Debt (reverse)	1.4	0.0	0.0	5.9	1.8
N	28	30	30	23	111

Notes: The table reports the percent of households in each treatment that selected that a given channel applies to them. Note that respondents could select more than one channel so the columns could add to above 100%. The last row indicates the number of respondents in each treatment that selected 'no change' in spending.

Households rarely indicate, in any context, that they expect their real income to remain unchanged.

Channels for 'Same Spending, Different Bundle' Responses. Table

2 lists two possible mechanisms for this consumption response category: "fixed budget" and "liquidity constraint." Appendix Table B13 shows our classification of open text entries. The most mentioned channel is "fixed budget". For example, one subject wrote, "I would plan on spending the same amount, BUT would be much more choosey about what I spend on, buying generic vs brand products to offset." The percent of open-text explanations that we identified to be consistent with "fixed budget" reasoning ranges from 30% (in treatment SD) to 66% (in treatment LN). Very few households, under 5% in all treatments, discussed "liquidity constraint" considerations. Figure 2b presents the word cloud. Consistent with our reading of the open-text boxes, there are indications that respondents were thinking about their spending plan such as "amount", "budget", and "fixed." The prevalence of the word "increase" is due to respondents discussing the hypothetical increase in expected inflation.

Table 6 presents the results of the second mechanism elicitation approach. "Fixed budget' is the most selected mechanism (selected by 66% to 83% respondents). Also, a large fraction (ranging from 47% in treatment SN to 60% in treatment LD) marked "liquidity constraint", even if only a very small fraction of open text explanations can be interpreted as that channel.

Appendix Table B14 shows the average weights allocated to each mechanism by 'same spending, different bundle' households. The weights confirm that "fixed budget" reasoning is the predominant consideration, with an average weight ranging between 37% for SD and 71% for LN. While many respondents did choose "liquidity constraint" as a consideration, they only attach a small average weight (ranging from 15% for SD and 20% for LN) to it. This is consistent with the open-box explanations which rarely mentioned liquidity constraints.

In summary, households who do not change their spending but would change their consumption basket are mostly driven by the fact they use a "fixed budget". We find this across all mechanism-elicitation approaches. While respondents do select that the "liquidity constraint" channel applies to them, they rarely mention it in the open-text box and put little weight on it in terms of importance.

Channels for Decrease Responses. Table 1 lists six mechanisms for why households may decrease spending. In the open-text entries, we found evidence for all but the "debtor's wealth effect (reverse)" channel (see Appendix Table B15).

The most identifiable channel is "rigid income", consistent with 7-20% of text entries. An example of this is, "Since the price of goods is increasing at a higher rate than I anticipated & my income will not keep pace with that increase in must decrease what I am spending." A small percent alludes to "uncertainty" with comments like, "To cut back on my spending in order to save up for future preference and plan ahead in case of economic situation." The majority of the entries cannot be clearly classified into the proposed mechanisms. Among the "other" mechanisms, the most significant explanation is what we call the "general wealth effect": subjects feel they are poorer and they must spend less or find cheaper options in response to the higher prices. For example, one subject explained, "i will have to buy less products. try to buy cheaper items. use more coupons and shop at dollar stores more." Appendix Table B15 shows that the "general wealth effect" accounts for 36% to 70% of open-text comments. The word cloud in Figure 2c confirms these considerations; words such as "income" and "money" are used frequently.

The result from the second elicitation method is shown in Table 6. Most respondents indicate the "saver's wealth effect" as applicable. "Rigid income" and "inflation hedge" are also selected by a large fraction of respondents. "Variable debt" and "uncertainty" are chosen by many respondents, ranging from a quarter to a half of respondents depending on the treatment. Few respondents choose the "debtors wealth effect (reverse)" channel.

In terms of the average weights allocated to each of the proposed mechanisms (see Appendix Table B16), the most important considerations are "rigid income" and "saver's wealth effect." "Inflation hedge" and "uncertainty" also play a role. Only a small weights are allocated to "variable debt" and "debtor's wealth effect (reverse)."

In summary, households that would decrease their consumption in response to higher expected inflation appear to be motivated by a decrease in their expected real wealth. The decrease in their wealth may be the result of the deterioration of their savings ("savers wealth effect") or concerns about their future income keeping pace with inflation ("rigid income"). While almost never mentioned in the open-text, households did select "inflation hedge" motives from the mechanism list but then put low weight on this channel.

Channels for Increase Responses. Table 1 lists seven mechanisms that

would lead to increasing spending in response to higher inflation expectations. From the text entries, we identify only two such mechanisms, "stockpiling" and "nominal illusion." One respondent wrote, "If prices will go up it makes more sense to buy long-lasting items sooner than later," which can be interpreted as stockpiling (see Appendix Table B17). A large fraction (50%) of subjects did not provide an informative explanation about their decision-making process. Relatedly, Figure 2d shows limited consensus in terms of words used in the open box. Among "other" mechanisms, a substantial fraction is what we labeled as a "mechanical increase." We asked subjects about their plans for spending in the next three months and emphasized that the prices in the next three months are as initially expected; however, some subjects still said something like, "I am expecting gas prices to rise more than 3% and food prices to rise more than 3%, so i adjusted my proposed spending accordingly."

Table 6 shows the result from step two of the mechanism elicitation procedure for 'increase' households. Most select "intertemporal substitution" or "stockpiling." Many also selected "debtor's wealth effect." Across treatments, there is a clear difference in the selection of "nominal illusion" and "flexible income". The former is selected in the short-term treatments, while the latter is chosen more often in the long-term treatments. This difference is significant as we will discuss in Section 4.6.

In terms of average importance of the proposed mechanisms (see Appendix Table B18), "stockpiling" stands out as the most important reason, followed by "intertemporal substitution." "Debtor's wealth effect" and "nominal illusion" play a small role, whereas "flexible income," "uncertainty (reverse)" and "variable debt (reverse)" are barely considered. Note that a large weight is put on "other" mechanisms as explained in the open text, of which most subjects did not provide a clear reasoning.

In summary, only 6% of respondents indicated they would increase current consumption in response to higher expected inflation. The open-text boxes suggest some of these respondents were confused about the timing of the hypothetical and were mechanically increasing their current spending. When presented with options of potential channels respondents mostly noted "stockpiling" and "intertemporal substitution".

4.5 Effects of Individual Characteristics

As we have now shown, the majority of respondents keep their spending the same in light of higher expected inflation, about 20% of households would reduce spending and about 6% of households would increase spending. Next, we investigate whether individual characteristics can account for this heterogeneity. We conduct a logit regression that incorporates various demographic variables and changes in economic beliefs to assess characteristics of the respondents who decrease consumption (the sample size for those who increase consumption is too small for meaningful investigation). The regression results are shown in Table 7.

Table 7: Decrease in Consumption

Education, Race, Sex			*Political Stance*			*Age*		
Var. Name	Coef.	SE	Var. Name	Coef.	SE	Var. Name	Coef.	SE
Cognitive Avg	-0.023	(0.042)	Democrat	-0.038	(0.034)	30 to 55	0.074*	(0.044)
College	-0.017	(0.029)	Prefer not to say	-0.074	(0.055)	55 to 65	0.103**	(0.051)
Female	0.054**	(0.026)	Republican	-0.015	(0.033)	Above 65	0.041	(0.047)
White	-0.033	(0.035)						
Liquid Savings			*Income*			*FFR Change*		
Var. Name	Coef.	SE	Var. Name	Coef.	SE	Var. Name	Coef.	SE
1k to 5k	-0.044	(0.037)	50k to 100k	0.073**	(0.031)	Adjust upwards	0.003	(0.030)
5k to 20k	-0.038	(0.039)	100k to 150k	0.076*	(0.046)	Adjust downwards	0.032	(0.063)
20k to 100k	-0.069	(0.042)	150k to 200k	0.069	(0.058)			
Above 100k	-0.098**	(0.046)	Above 200k	0.079	(0.063)			
Financial Predictability			*Income Growth*			*Economic Outlook*		
Var. Name	Coef.	SE	Var. Name	Coef.	SE	Var. Name	Coef.	SE
More difficult	0.082**	(0.033)	Adjust downwards	0.229***	(0.075)	Improve	-0.014	(0.030)
Less difficult	-0.060*	(0.036)	Adjust upwards <3	0.038	(0.044)	Worsen	0.145***	(0.035)
			Adjust upwards by 3	0.050	(0.041)			
			Adjust upwards >3	0.075*	(0.041)			

Notes: The table reports the marginal effects of a single logit regression, which regresses an indicator for 'decrease' consumption on selected demographic variables, liquid savings, income, and posterior beliefs. The marginal effects are relative to the omitted group (e.g., under 30 in age, less than 1k in liquid savings, under 50k in income, or no change for the economic posteriors). Standard errors are in parenthesis. ***, **, * denotes statistical significance at 1, 5, and 10 percent levels, respectively. The number of observations is 1,998 because some respondents dropped out before completing the questions on liquid savings and income.

Among the demographic variables, we find that two factors, being female and being middle aged, significantly increase the likelihood of decreasing spending in response to higher inflation expectations. Other factors associated with a higher probability to decrease consumption such as lower CRT scores, not having a college degree, and being non-white; however, the coefficients of these variables are not statistically significant.

For the financial variables, we find that higher liquid savings are associated

with a lower likelihood of decreasing spending. Intuitively, households with more liquid savings could tap into savings to cope with higher future inflation and therefore may not need to cut current spending. Regarding income, households with middle incomes are more likely to reduce spending in response to higher inflation expectations relative to households with lower incomes. A possible reason is that low income households are more likely to be only purchasing necessities and are therefore less able to change spending. For high income households, inflation may be irrelevant for their spending decision: as suggested by the open-box comments, they have enough income to buy what they need or want.

Finally, we find that the likelihood of decreasing consumption is strongly associated with changes in economic beliefs. Specifically, individuals tend to decrease consumption if they expect the economy to worsen, their own financial predictability to worsen, or their income to decrease; the coefficients on these three belief terms are large and significant. Also, individuals who expect the general economic outlook to worsen are 15 percentage points more likely to decrease consumption relative to those who expect the economic outlook to stay the same. Overall, these results show that individuals who hold a stagflationary view of the economy are the most likely to reduce consumption in light of higher expected inflation. Note that the change in federal funds rate expectations does not have a significant effect on the likelihood of reducing spending. This may be due to the differential effect of higher interest rates on households that are savers versus debtors.

4.6 Treatment Effects

In this subsection, we examine treatment effects on spending decisions, posterior economic beliefs, and mechanism selection. In particular, we test the treatment effect hypotheses discussed in Section 2. We conduct logit regressions for binary outcomes and ordinary least squares regressions for continuous outcomes on dummy variables for being in the durable treatments and long treatments. We summarize the results below, and more details can be found in Appendix B.5.

Spending. As shown in Table B19, the effects of the two treatment variables on spending changes along the extensive margin are negligible; this is consistent with Table 5, which shows the proportion of households that increase, decrease,

or maintain their dollar spending is similar across all four treatments. Along the intensive margin, the difference in spending changes between durable and non-durable goods treatments is minor and lacks statistical significance. The reduction in household spending is more pronounced in long-term treatments compared to short-term ones, although the difference misses the conventional threshold for statistical significance ($p = 0.179$). The combined effects of the two treatment variables lead to the result that the decline in spending in the LD treatment is significantly different from zero as shown in Table 5.

Posterior Beliefs. Appendix Table B20 shows how the duration of the increase in inflation expectations affects the change in beliefs of other variables. We omit the durable dummy because the type of consumption should not affect economic posteriors. Households in long-term treatments, relative to short-term treatments, are significantly more likely to expect their income to keep up or outpace inflation and the federal funds rate to rise. They also expect higher financial uncertainty and a worse economy, but the difference is not statistically significant.

Channels. Next, we summarize how the treatments affect the selection of channels. We separate the analysis by consumption response categories (pooling 'no change' and 'same spending, different bundle' because they share some common channels). For each response category, we run selected logit regressions, pooling all households who chose that particular response category. Our decision on which channel to focus on and which treatment variable(s) to include in the regression depends on whether there is a clear economic prediction about the effect of the treatment variable on the likelihood of that channel being applicable (more details are in Appendix B.5). For example, for the "saver's wealth effect," it is reasonable to assume that more persistent inflation more significantly erodes the purchasing power of savings, leading to a stronger reduction in spending. It is unclear, however, whether the effect is stronger for durable or non-durable goods; therefore, we include only the dummy variable "long treatment" in the regression for this channel.

For the pooled 'no change' and 'same spending, different bundle' responses, we find that being in the durable treatment increases the likelihood of selecting the "liquidity constraint" channel by 1.7 percentage points, relative to the non-durable treatment, although the effect is insignificant.

For the 'decrease' responses (see Appendix Table B21), we find that comparing

the short- and long-term treatments, households are more likely to select "saver's wealth effect", "variable debt", "uncertainty", and less likely to select "rigid income" in the long-term treatment. Comparing the durable and non-durable treatments, households are less likely to select "inflation hedge" in the durable treatment. However, the treatment effects are statistically insignificant except for the effect of the long-term treatment on the channel "variable debt."

For the 'increase' responses (see Appendix Table B22), we find that respondents in the durable treatments are more likely (relative to those in non-durable treatments) to say "intertemporal substitution" or "stockpiling" played a role in their reasoning for increasing consumption. The effect is significant for "intertemporal substitution" (for "stockpiling" the p-value is 0.11). For the three indirect channels, the coefficients on the long-term treatment variable have expected signs, and are statistically significant at the 5% level for "flexible income" and at the 1% level for "nominal illusion." The coefficient on "debtor's wealth effect" is not significant at the 10% level.

4.7 Robustness

In addition to our four main treatments, we conducted three additional treatments on over 3,000 respondents to assess the robustness of our baseline results. The first treatment introduces a larger increase (10 percentage points instead of three) in short-term inflation expectations for durable goods. The second and third treatments modify the formulation of the change in short-term inflation expectations and assess the impacts on durable and nondurable spending. The demographic and financial characteristics of the new treatments are reported in Appendix Table B23. We follow the same data-cleaning process and weighting procedure as in the main treatments. Detailed statistics are available in Appendix Tables B24 through B37. A more comprehensive discussion of these results is provided in Appendix B.6.

Larger Increase in Expected Inflation. When we increase short-term expectations by 10 percentage points (rather than by three), we see similar extensive margin adjustments in consumption to the baseline. That is, 76% do not change spending, 18% decrease, and 6% increase, which is comparable to the main SD treatment with 77%, 17%, and 6%, respectively. However, more households worry

about their income not keeping up with inflation and thus, if they decrease consumption, do so by a larger amount, and are more likely to cite wage rigidity concerns. Overall, a 10 percentage point increase in inflation expectations results in a statistically significant reduction of 3.73% in average durable spending ($p < 0.01$) whereas the change is insignificant in the baseline SD treatment.

Modified Timing of Short-Term Hypothetical. We conducted two additional treatments that modify the formulation of the change in short-term inflation expectations. In our main short-term treatments, the hypothetical scenario increases inflation expectations in the first year after the next three months, and the average inflation in the 10 years after the next three months remains constant. This implies that the cumulative expected inflation in years 2 to 10 will be lower, potentially mitigating the intertemporal substitution effects prompted by higher inflation expectations in the first year. One may be concerned that this could lead to the large fraction of nonpositive reactions observed in our main short-term treatments. To address this concern, we shield the long-term horizon from changes so that the hypothetical scenario involves only an increase in inflation over the upcoming year after the next 3 months, while the inflation rate for the following years—2 through 10—remains unchanged.

Overall, the results are similar to the baseline short-term treatments. The extensive margin adjustments are similar, and the reduction in average spending on durables becomes significant with the new formulation. Combining the robustness checks and the baseline results, we find that more persistent higher inflation expectations tend to reduce spending, specifically that of durables, more significantly.

5 Conclusion

This paper studies how inflation expectations affect spending plans and investigates the empirical importance of different channels. Using a new survey instrument that features hypothetical scenarios and mechanism-elicitation questions, we provide evidence that a majority of households (about 74%) do not alter their current spending following an increase in expected inflation. Respondents say this is due to following a fixed budget plan or that future inflation simply does not affect their current decisions. A minority of households (about 20%) say they would

decrease their spending in response to higher expected inflation, commonly due to saver's wealth effects or nominal income rigidity. Very few households (about 6%) would increase their spending plans, typically citing intertemporal substitution or stockpiling. The average effect of an increase in expected inflation is either insignificant or a significant decrease in spending (depending on the treatment).

We find that the heterogeneity in consumption responses can, in part, be explained by demographic and financial status variables; however, changes in beliefs about other expectations are very important. Respondents who decrease their expectations about their income growth, financial predictability, and the overall economic outlook following higher inflation expectations tend to reduce their spending. Put simply, those who have a stagflationary view of the economy are more likely to cut spending in response to higher expected inflation.

Our empirical results have a variety of implications for policies and for developing more realistic theoretical models. The finding that households tend to keep spending the same or decrease suggests that using inflation expectations as a policy tool to encourage consumer spending could backfire. The fact that households tend to think their income will not keep up with inflation suggests it is important to model nominal wage rigidity in expectations. Additionally, the heterogeneity in belief and consumption responses implies that modeling heterogeneity is important.

Our novel survey methodology can be extended to study related questions. Our surveys were conducted in the post-Covid period under high inflation and rising interest rates; it could be useful to repeat our study in alternative economic environments such as with low inflation or low interest rate settings. While we studied the effect of an increase in expected inflation, it would be instructive to assess alternative settings regarding the direction of the changes in expectations. Another interesting avenue to explore is how the source of higher inflation expectations (e.g., an oil price shock or a monetary policy shock) may affect how households respond. Furthermore, we focus on the effects of changes in inflation expectations; our framework can be adapted to the study of interest rate policies. For instance, it would be instructive to assess how households respond to changes in nominal interest rates and inflation expectations that induce the same change in the real interest rate (Jain and Kostyshyna, 2023; D'Acunto et al., 2023a). Finally, we study household decisions; it would be informative to conduct a similar

study on firms to identify the different channels through which inflation expectations and nominal interest rates affect firm choices.

References

Aguiar, M. A., Bils, M., and Boar, C. (2020). Who Are the Hand-to-Mouth? NBER Working Papers 26643.

Aidala, F., Armantier, O., Kogar, G., Somerville, J., Topa, G., and van der Klaauw, W. (2023). Gas Price Changes and Consumer Inflation Expectations: Experimental Evidence.

Ameriks, J., Briggs, J., Caplin, A., Shapiro, M. D., and Tonetti, C. (2020). Long-Term-Care Utility and Late-in-Life Saving. *Journal of Political Economy*, 128(6):2375–2451.

Andrade, P., Gautier, E., and Mengus, E. (2023). What Matters in Households' Inflation Expectations? *Journal of Monetary Economics*, 138(C):50–68.

Andre, P., Pizzinelli, C., Roth, C., and Wohlfart, J. (2022). Subjective Models of the Macroeconomy: Evidence From Experts and Representative Samples. *Review of Economic Studies*, 89(6):2958–2991.

Armantier, O., Sbordone, A., Topa, G., Van der Klaauw, W., and Williams, J. C. (2022). A New Approach to Assess Inflation Expectations Anchoring Using Strategic Surveys. *Journal of Monetary Economics*, 129:S82–S101.

Armantier, O., Topa, G., Van der Klaauw, W., and Zafar, B. (2017). An Overview of the Survey of Consumer Expectations. *Economic Policy Review*, (23-2):51–72.

Bachmann, R., Berg, T. O., and Sims, E. R. (2015a). Inflation Expectations and Readiness to Spend: Cross-Sectional Evidence. *American Economic Journal: Economic Policy*, 7(1):1–35.

Bachmann, R., Berg, T. O., and Sims, E. R. (2015b). Inflation Expectations and Readiness to Spend: Cross-sectional Evidence. *American Economic Journal: Economic Policy*, 7(1):1–35.

Ball, L., Cecchetti, S. G., and Gordon, R. J. (1990). Inflation and Uncertainty at Short and Long Horizons. *Brookings Papers on Economic Activity*, 1990(1):215–254.

Bernanke, B. (2007). Inflation Expectations and Inflation Forecasting. Technical report, Board of Governors of the Federal Reserve System (US).

Binder, C. and Kamdar, R. (2022). Expected and Realized Inflation in Historical Perspective. *Journal of Economic Perspectives*, 36(3):131–156.

Binder, C. C. (2017). Measuring Uncertainty Based on Rounding: New Method

and Application to Inflation Expectations. *Journal of Monetary Economics*, 90:1–12.

Binder, C. C. and Brunet, G. (2022). Inflation Expectations and Consumption: Evidence from 1951. *Economic Inquiry*, 60(2):954–974.

Binetti, A., Nuzzi, F., and Stantcheva, S. (2024). People's Understanding of Inflation. Technical report.

Boizot, C., Robin, J.-M., and Visser, M. (2001). The Demand for Food Products: An Analysis of Interpurchase Times and Purchased Quantities. *The Economic Journal*, 111(470):391–419.

Burke, M. A. and Ozdagli, A. K. (2020). Household Inflation Expectations and Consumer Spending: Evidence from Panel Data.

Carvalho, C. and Nechio, F. (2014). Do People Understand Monetary Policy? *Journal of Monetary Economics*, 66(C):108–123.

Christelis, D., Georgarakos, D., Jappelli, T., Pistaferri, L., and Van Rooij, M. (2019). Asymmetric Consumption Effects of Transitory Income Shocks. *The Economic Journal*, 129(622):2322–2341.

Coibion, O., Georgarakos, D., Gorodnichenko, Y., and Van Rooij, M. (2023). How Does Consumption Respond to News About Inflation? Field Evidence From a Randomized Control Trial. *American Economic Journal: Macroeconomics*, 15(3):109–152.

Coibion, O., Gorodnichenko, Y., Kumar, S., and Pedemonte, M. (2020). Inflation Expectations as a Policy Tool? *Journal of International Economics*, 124(C).

Coibion, O., Gorodnichenko, Y., and Weber, M. (2022). Monetary Policy Communications and Their Effects on Household Inflation Expectations. *Journal of Political Economy*, 130(6):1537–1584.

Colarieti, R., Mei, P., and Stantcheva, S. (2024). The How and Why of Household Reactions to Income Shocks. Technical report, National Bureau of Economic Research.

D'Acunto, F., Georgarakos, D., Geoff, K., and Weber, M. (2023a). Subjective Models of the Macroeconomy and the Transmission of Monetary Policy.

D'Acunto, F., Hoang, D., Paloviita, M., and Weber, M. (2023b). IQ, Expectations, and Choice. *The Review of Economic Studies*, 90(5):2292–2325.

D'Acunto, F., Hoang, D., and Weber, M. (2021). Managing Households' Expectations with Unconventional Policies. *The Review of Financial Studies*, 35(4):1597–1642.

D'Acunto, F., Malmendier, U., and Weber, M. (2023c). What Do the Data Tell Us About Inflation Expectations? In *Handbook of Economic Expectations*, pages 133–161. Elsevier.

Diamond, P. A. and Hausman, J. A. (1994). Contingent Valuation: Is Some Number Better Than No Number? *Journal of Economic Perspectives*, 8(4):45–64.

Doepke, M. and Schneider, M. (2006). Inflation and the Redistribution of Nominal Wealth. *Journal of Political Economy*, 114(6):1069–1097.

Dräger, L., Lamla, M. J., and Pfajfar, D. (2016). Are Survey Expectations Theory-Consistent? The Role of Central Bank Communication and News. *European Economic Review*, 85(C):84–111.

Draghi, M. (2014). Monetary Policy in the Euro Area, speech by Mario Draghi at the Frankfurt European Banking Congress. *Frankfurt am Main*, 21.

Duca-Radu, I., Kenny, G., and Reuter, A. (2021). Inflation Expectations, Consumption and the Lower Bound: Micro Evidence from a Large Multi-Country Survey. *Journal of Monetary Economics*, 118(C):120–134.

Fisher, I. (1933). The Debt-Deflation Theory of Great Depressions. *Econometrica: Journal of the Econometric Society*, pages 337–357.

Frederick, S. (2005). Cognitive Reflection and Decision Making. *Journal of Economic Perspectives*, 9(4):25–42.

Friedman, M. (1977). Nobel Lecture: Inflation and Unemployment. *Journal of Political Economy*, 85(3):451–472.

Fuster, A., Kaplan, G., and Zafar, B. (2021). What Would You Do with $500? Spending Responses to Gains, Losses, News, and Loans. *The Review of Economic Studies*, 88(4):1760–1795.

Galashin, M., Kanz, M., and Perez-Truglia, R. (2020). Macroeconomic Expectations and Credit Card Spending. Technical report, National Bureau of Economic Research.

Galí, J. (2015). *Monetary Policy, Inflation, and the Business Cycle: An Introduction to the New Keynesian Framework and its Applications*. Princeton University Press.

Haaland, I., Roth, C., and Wohlfart, J. (2023). Designing Information Provision Experiments. *Journal of Economic Literature*, 61(1):3–40.

Hajdini, I. (2023). Mis-specified Forecasts and Myopia in an Estimated New Keynesian Mode.

Hajdini, I., Knotek, E. S., Leer, J., Pedemonte, M., Rich, R. W., and Schoenle, R. (2022). Low Passthrough from Inflation Expectations to Income Growth Expectations: Why People Dislike Inflation.

Hamilton, L. C. (1992). Regression with Graphics: A Second Course in Applied Statistics.

Jain, M. and Kostyshyna, O. (2023). What Do People Think About Interest Rates and Inflation?

Jain, M., Kostyshyna, O., and Zhang, X. (2024). How Do People View Wage and Price Inflation? *Journal of Monetary Economics*.

Kamdar, R. and Ray, W. (2024). Attention-Driven Sentiment and the Business Cycle. Technical report, Center for Applied Economics and Policy Research.

Kreiner, C. T., Lassen, D. D., and Leth-Petersen, S. (2013). Measuring the Accuracy of Survey Responses using Administrative Register Data: Evidence from Denmark. NBER Working Papers 19539.

Kumar, S., Gorodnichenko, Y., and Coibion, O. (2023). The Effect of Macroeconomic Uncertainty on Firm Decisions. *Econometrica*, 91(4):1297–1332.

McKay, A., Nakamura, E., and Steinsson, J. (2016). The Power of Forward Guidance Revisited. *American Economic Review*, 106(10):3133–58.

Pilossoph, L. and Ryngaert, J. (2022). Job Search, Wages, and Inflation. Technical report.

Powell, J. H. et al. (2020). New Economic Challenges and the Fed's Monetary Policy Review: a speech at" Navigating the Decade Ahead: Implications for Monetary Policy," an economic policy symposium sponsored by the Federal Reserve Bank of Kansas City, Jackson Hole, Wyoming, August 27, 2020. Technical report.

Robin, J.-M. (1993). Econometric Analysis of the Short-Run Fluctuations of Households' Purchases. *The Review of Economic Studies*, 60(4):923–934.

Schnorpfeil, P., Weber, M., and Hackethal, A. (2023). Households' Response to the Wealth Effects of Inflation. NBER Working Papers 31672.

Shiller, R. J. (1996). Why Do People Dislike Inflation? Cowles Foundation Discussion Papers 1115, Cowles Foundation for Research in Economics, Yale University.

Stantcheva, S. (2024). Why Do We Dislike Inflation? NBER Working Papers 32300.

Thaler, R. H. (1999). Mental Accounting Matters. *Journal of Behavioral Decision Making*, 12(3):183–206.

Thaler, R. H. and Shefrin, H. M. (1981). An Economic Theory of Self-Control. *Journal of political Economy*, 89(2):392–406.

Vellekoop, N. and Wiederholt, M. (2019). Inflation Expectations and Choices of Households.

Volcker, P. A. (2011). A Little Inflation Can Be A Dangerous Thing. *The New York Times*.

Weber, M., D'Acunto, F., Gorodnichenko, Y., and Coibion, O. (2022). The Subjective Inflation Expectations of Households and Firms: Measurement, Determinants, and Implications. *Journal of Economic Perspectives*, 36(3):157–184.

Woodford, M. (2019). Monetary Policy Analysis When Planning Horizons are Finite. *NBER Macroeconomics Annual*, 33(1):1–50.

Yellen, J. L. (2015). Inflation Dynamics and Monetary Policy. *Speech at the Philip Gamble Memorial Lecture, University of Massachusetts, Amherst, available at http://www. federalreserve. gov/newsevents/speech/yellen20150924a. htm*, 1(2):3.

Appendices for Online Publication

A A Simple Model of Spending and Inflation Expectations

In this Appendix, we outline a simple three-period model to illustrate how changes in short-term and long-term inflation expectations affect spending.

There are three dates, $t = 1, 2, 3$ with changes from period 1 to 2 representing the short term and changes from period 2 to 3 representing the long term. The household has time separable utility in consumption. Let y_t be the nominal income, c_t be the real consumption, p_t be the price level, s_t be the nominal saving, and i_1 and i_2 be the net nominal interest rate from period 1 to 2, and from period 2 to 3, respectively. The household's choice problem is:

$$\max_{c_1,c_2,c_3,s_1,s_2} U(c_1, c_2, c_3) = u(c_1) + \beta u(c_2) + \beta^2 u(c_3)$$

subject to:

$$\begin{aligned} p_1 c_1 + s_1 &= y_1 \\ p_2 c_2 + s_2 &= y_2 + (1 + i_1) s_1 \\ p_3 c_3 &= y_3 + (1 + i_2) s_2 \end{aligned}$$

We can combine the three budget constraints:

$$(1 + i_1)(1 + i_2) p_1 c_1 + (1 + i_2) p_2 c_2 + p_3 c_3 = (1 + i_1)(1 + i_2) y_1 + (1 + i_2) y_2 + y_3$$

Define $R_1 = (1 + i_1)\frac{p_1}{p_2}$ and $R_2 = (1 + i_2)\frac{p_2}{p_3}$. We can rewrite the intertemporal budget constraint in real terms,

$$c_1 + \frac{c_2}{R_1} + \frac{c_3}{R_1 R_2} = \frac{y_1}{p_1} + \frac{y_2}{p_2 R_1} + \frac{y_3}{p_3 R_1 R_2} \tag{1}$$

The Euler equations are

$$\frac{u'(c_1)}{\beta u'(c_2)} = (1 + i_1)\frac{p_1}{p_2} = R_1 \tag{2}$$

$$\frac{u'(c_1)}{\beta^2 u'(c_3)} = (1 + i_1)(1 + i_2)\frac{p_1}{p_3} = (1 + i_1)(1 + i_2)\frac{p_1}{p_2}\frac{p_2}{p_3} = R_1 R_2 \tag{3}$$

The Euler equations capture the intertemporal substitution of time dated consumption. Fixing the nominal interest rate, c_1 is higher relative to c_2 and c_3 if expected inflation $\pi_1 = \frac{p_2}{p_1}$ and/or $\pi_2 = \frac{p_3}{p_2}$ are higher.

Assume $u(c)$ is CRRA; i.e., $u(c) = c^\sigma/\sigma$ with $\sigma < 1$. Then $u'(c) = c^{\sigma-1}$, and

$$c_2 = [\beta(1+i_1)(p_1/p_2)]^{\frac{1}{1-\sigma}} c_1 = (\beta R_1)^{\frac{1}{1-\sigma}} c_1$$
$$c_3 = [\beta^2(1+i_1)(1+i_2)(p_1/p_3)]^{\frac{1}{1-\sigma}} c_1 = (\beta^2 R_1 R_2)^{\frac{1}{1-\sigma}} c_1$$

We can solve c_1 by plugging c_2 and c_3 to the intertemporal budget constraint (1).

We can represent our treatments in the table below.

Appendix Table A1: Price Trajectories in Treatments

Initial Price	*Price in Hypothetical Scenario*		
	Main short-term SD, SN, SD-10	Modified short-term timing SD-separate and SN-separate	Long-term LD and LN
P_1	P_1	P_1	P_1
P_2	γP_2	γP_2	γP_2
P_3	P_3	γP_3	$\gamma^2 P_3$

Note: $\gamma = 1.03$ in all treatments except for SD-10, where $\gamma = 1.1$.

With this model, we now have the following results.

- Fixing the real returns R_1 and R_2, the intertemporal substitution effect (SE) is shut down, so we only have the wealth effect (WE). With fixed nominal income y_2 and y_3, current consumption c_1 decreases with P_2 and P_3.
- Fixing the nominal interest rate i_1 and i_2, there are both substitution and wealth effects related to changes in P_2 and P_3.
  - If $u(c) = ln(c)$ or $\sigma = 0$, then the two effects offset each other, and c_1 does not change in response to changes in P_2 and P_3.
  - If $\sigma > 0$, then SE>WE, and c_1 increases with P_2 and P_3.
  - If $\sigma < 0$, then SE<WE, and c_1 decreases with P_2 and P_3.
- If the net effect is non-zero, then the strength of the effect among the treatments is ranked as: long run > robustness short run > original short run.

B Additional Tables

B.1 Demographics

Table B1 presents the demographic and financial characteristics of our survey respondents and compares them with their adult population counterparts sourced from the 2021 American Community Survey. We also conduct pairwise comparisons of the demographics across different treatments within our main experiments. Out of 72 comparative analyses, 16 exhibited significant differences at the 10% significance level, which are nine more instances than would be statistically anticipated by random variation (see Table B2). This may be due to the fact that the survey firm Dynata did not incorporate stratification based on individual characteristics during the randomization process across treatments. Our analysis controls for these characteristic differences by using demographics-weighted data. We also find that our main results remain unaffected by the re-weighting.

Appendix Table B1: Comparison of Survey Participants and the U.S. Adult Population

	[1] SD	[2] SN	[3] LD	[4] LN	[5] All	[6] U.S. Pop.
Demographics						
Age	60.97	61.37	58.41	59.85	60.15	47.96
White	0.85	0.92	0.89	0.90	0.89	0.64
Female	0.51	0.55	0.56	0.53	0.54	0.51
Has at Least a 4-Year College Degree	0.52	0.53	0.49	0.49	0.51	0.33
Married	0.65	0.63	0.61	0.63	0.63	0.53
Northeast	0.21	0.26	0.21	0.21	0.22	0.18
Midwest	0.18	0.21	0.22	0.26	0.22	0.21
South	0.40	0.38	0.41	0.39	0.39	0.38
West	0.21	0.15	0.15	0.14	0.16	0.23
Financial Characteristics						
Household Income 50k	0.35	0.40	0.43	0.37	0.39	0.39
Household Income 50k–100k	0.36	0.33	0.33	0.31	0.33	0.30
Household Income 100k+	0.29	0.27	0.24	0.31	0.28	0.31
N	504	504	497	498	2003	

Notes: This table compares the characteristics of the survey participants with the average characteristics of the U.S. adult population. For demographics and financial characteristics, comparisons are with the 2021 American Community Survey.

Appendix Table B2: Pairwise Randomization Tests between Treatments

1 = "SD"; 2 = "SN"; 3 = "LD"; 4 = "LN"	[1] v.s. [2]	[1] v.s. [3]	[1] v.s. [4]	[2] v.s. [3]	[2] v.s. [4]	[3] v.s. [4]
Age	0.6800	0.009	0.2669	0.0013	0.1117	0.1413
White alone	0.0007	0.0879	0.0430	0.0913	0.1701	0.7508
Female	0.1856	0.0906	0.4445	0.7091	0.5789	0.3550
Has at Least a 4-Year College Degree	0.8010	0.4328	0.3139	0.3003	0.2082	0.8248
Married	0.4307	0.1226	0.5041	0.4482	0.9064	0.3825
Northeast	0.0373	0.9099	0.9851	0.0498	0.0397	0.9249
Midwest	0.2782	0.1479	0.0036	0.7875	0.0822	0.1434
South	0.5183	0.5698	0.7640	0.2254	0.7311	0.3865
West	0.0067	0.0191	0.0051	0.7205	0.9198	0.6477
Household Income 50k	0.1350	0.0173	0.5042	0.3731	0.4111	0.0877
Household Income 50k–100k	0.3542	0.3673	0.1246	0.9828	0.5405	0.5277
Household Income 100k+	0.4392	0.0833	0.4163	0.3364	0.1132	0.0112

Notes: This table presents the p-values from the pairwise Mann-Whitney U tests of respondents' demographic characteristics across all possible pairs of the four distinct treatment groups. Each treatment is denoted as follows: 'SD' corresponds to the short-term durable treatment, 'SN' corresponds to the short-term non-durable treatment, 'LD' represents the long-term durable treatment, and 'LN' represents the long-term non-durable treatment.

B.2 Subgroup Analysis

B.2.1 Spending Responses for Reasonable Inflation Forecasters

In this section, we explore the spending behaviors of individuals identified as "reasonable" inflation forecasters in the sense that they have more accurate inflation perceptions or expectations. To define this group, we focus on a series of criteria, applying each independently: (i) individuals whose absolute error in perceiving inflation for the past year, specifically for March 2023, is below the median of our sample; (ii) those whose absolute forecast error for price changes between March 2023 and May 2023 falls below the sample's median forecast error; (iii) forecasters whose inflation expectations for the year following the next three months are lower than the sample's median; and (iv) those whose inflation expectations for the decade following the next three months also sit below the sample's median.

The results of show that a substantial majority of reasonable forecasters maintained their initial spending levels, as in the entire sample. Moreover, we find no significant positive changes in any spending categories. However, it is worth noting that the magnitude of the increase in spending for the SD treatment is larger than in the whole sample, albeit still insignificant.

Appendix Table B3: Spending Response for Responses with Absolute Error in Perceiving Inflation Below the Median

	(1) SD	(2) SN	(3) LD	(4) LN
Extensive Margin (Percentage)				
No Change	72.5	60.7	65.6	60.2
Same Spending Different Bundle	4.3	7.7	6.7	9.9
Increase	4.2	2.0	5.7	2.9
Decrease	19.1	29.7	21.9	27.0
Intensive Margin (Dollar Spending)				
Prior Spending	550.67	995.32	530.47	938.68
Spending Change	46.42	-17.36	-17.97	-49.00***
Percentage Change	8.43%	-1.74%	-3.39%	-5.22%
N	177	238	244	229

Notes: After being presented with the hypothetical scenario, respondents indicated potential changes in their spending plan over the subsequent three months. The table presents the proportion of participants from each treatment group that aligned with each potential response (extensive margin). Furthermore, participants provided their revised dollar spending plans post-scenario (intensive margin). The table additionally shows the initial spending plans, changes in these plans, and the percentage changes at an aggregate level. The row of "Spending Change" also indicates whether the number is significantly different from zero. ***, **, * denotes statistical significance at 1, 5, and 10 percent levels, respectively. The last row indicates the number of respondents in each treatment.

Appendix Table B5: Spending Response for Responses with Short-Term Inflation Expectations Below the Median

	(1) SD	(2) SN	(3) LD	(4) LN
Extensive Margin (Percentage)				
No Change	76.1	66.0	62.3	66.1
Same Spending Different Bundle	4.2	11.7	16.5	9.1
Decrease	12.2	20.0	15.9	16.5
Increase	7.5	2.3	5.2	8.4
Intensive Margin (Dollar Spending)				
Prior Spending	536.55	859.00	529.90	779.12
Spending Change	59.08	-11.42	-39.03*	-1.71
Percentage Change	11.01%	-1.32%	-7.37%	-0.22%
N	250	286	275	268

Notes: After being presented with the hypothetical scenario, respondents indicated potential changes in their spending plan over the subsequent three months. The table presents the proportion of participants from each treatment group that aligned with each potential response (extensive margin). Furthermore, participants provided their revised dollar spending plans post-scenario (intensive margin). The table additionally shows the initial spending plans, changes in these plans, and the percentage changes at an aggregate level. The row of "Spending Change" also indicates whether the number is significantly different from zero. ***, **, * denotes statistical significance at 1, 5, and 10 percent levels, respectively. The last row indicates the number of respondents in each treatment.

Appendix Table B4: Spending Response for Responses with Absolute Forecast Error for Price Changes over the Next 3 Months Below the Median

	(1) SD	(2) SN	(3) LD	(4) LN
Extensive Margin (Percentage)				
No Change	78.1	63.4	64.9	66.6
Same Spending Different Bundle	5.3	12.1	13.1	9.7
Increase	4.6	3.0	4.5	5.9
Decrease	12.0	21.5	17.6	17.8
Intensive Margin (Dollar Spending)				
Prior Spending	517.02	855.01	467.74	959.29
Spending Change	41.90	-25.88***	-21.48*	-38.31**
Percentage Change	8.43%	-1.74%	-3.39%	-5.22%
N	294	299	305	285

Notes: After being presented with the hypothetical scenario, respondents indicated potential changes in their spending plan over the subsequent three months. The table presents the proportion of participants from each treatment group that aligned with each potential response (extensive margin). Furthermore, participants provided their revised dollar spending plans post-scenario (intensive margin). The table additionally shows the initial spending plans, changes in these plans, and the percentage changes at an aggregate level. The row of "Spending Change" also indicates whether the number is significantly different from zero. ***, **, * denotes statistical significance at 1, 5, and 10 percent levels, respectively. The last row indicates the number of respondents in each treatment.

Appendix Table B6: Spending Response for Responses with Long-Term Inflation Expectations Below the Median

	(1) SD	(2) SN	(3) LD	(4) LN
Extensive Margin (Percentage)				
No Change	75.8	60.6	64.2	69.4
Same Spending Different Bundle	6.7	12.9	15.4	11.7
Increase	6.3	2.0	3.1	5.3
Decrease	11.2	24.5	17.3	13.6
Intensive Margin (Dollar Spending)				
Prior Spending	459.70	834.32	346.38	710.85
Spending Change	36.99	-43.16**	-21.27***	-0.98
Percentage Change	8.04%	-5.17%	-6.14%	-0.14%
N	250	286	275	268

Notes: After being presented with the hypothetical scenario, respondents indicated potential changes in their spending plan over the subsequent three months. The table presents the proportion of participants from each treatment group that aligned with each potential response (extensive margin). Furthermore, participants provided their revised dollar spending plans post-scenario (intensive margin). The table additionally shows the initial spending plans, changes in these plans, and the percentage changes at an aggregate level. The row of "Spending Change" also indicates whether the number is significantly different from zero. ***, **, * denotes statistical significance at 1, 5, and 10 percent levels, respectively. The last row indicates the number of respondents in each treatment.

B.2.2 Spending Responses for Different Age Groups

In this section, we investigate whether there is heterogeneity across age groups. For instance, older survey participants might respond to higher inflation differently from younger respondents as their needs and time frames may differ. We present an analysis of spending responses, comparing two age groups: respondents younger than 55 and respondents 55 and over.

We show the consumption response categories for respondents who are younger than 55 and 55 and over. The results are still consistent with our main observations. For instance, 76% of participants aged 55 and older chose not to modify their spending levels, compared to 70% of those younger than 55.

Appendix Table B7: Spending Response (55 and Over)

	(1) SD	(2) SN	(3) LD	(4) LN
Extensive Margin (Percentage)				
No Change	73.2	60.2	70.7	62.7
Same Spending Different Bundle	6.0	7.9	9.7	11.2
Increase	3.4	4.5	5.0	3.3
Decrease	17.5	27.4	14.7	22.8
Intensive Margin (Dollar Spending)				
Prior Spending	585.84	910.69	486.33	1005.71
Spending Change	-37.62**	-15.79	-31.72	-47.83*
Percentage Change	-6.42%	-1.73%	-6.52%	-4.76%
N	385	404	358	373

Notes: After being presented with the hypothetical scenario, respondents indicated potential changes in their spending plan over the subsequent three months. The table presents the proportion of participants from each treatment group that aligned with each potential response (extensive margin), for respondents who are 55 or older. The last row indicates the number of respondents in each treatment. Weighting over demographic characteristics is not applied.

Appendix Table B8: Spending Response (Younger than 55)

	(1) SD	(2) SN	(3) LD	(4) LN
Extensive Margin (Percentage)				
No Change	67.9	53.4	45.2	70.4
Same Spending Different Bundle	8.3	17.7	19.1	8.3
Increase	7.6	7.3	8.3	8.3
Decrease	16.2	21.6	27.4	12.9
Intensive Margin (Dollar Spending)				
Prior Spending	490.78	855.84	585.46	653.41
Spending Change	51.08	7.36	-55.45**	15.90
Percentage Change	10.41%	0.86%	-9.47%	2.43%
N	119	100	139	125

Notes: After being presented with the hypothetical scenario, respondents indicated potential changes in their spending plan over the subsequent three months. The table presents the proportion of participants from each treatment group that aligned with each potential response (extensive margin), for respondents who are younger than 55. The last row indicates the number of respondents in each treatment. Weighting over demographic characteristics is not applied.

B.2.3 Spending Responses for Different CRT Score Groups

D'Acunto et al. (2023b) suggests that individuals with lower IQ scores, who tend to have less precise quantitative expectations about inflation, are generally less inclined to modify their purchasing plans in light of changes in inflation. To investigate this, we utilized cognitive reflection test scores to proxy IQ and categorized the participants into two groups: high CRT score individuals (those who correctly answered two or three questions) and low CRT score individuals (those who correctly answered at most one question). Most of the high-CRT group chose not to adjust their spending, consistent with the sample as a whole. However, we do observe a significant reduction in spending for high CRT respondents across all four treatments.

Appendix Table B9: Spending Response (High CRT Score Respondents)

	(1) SD	(2) SN	(3) LD	(4) LN
Extensive Margin (Percentage)				
No Change	76.2	72.4	69.6	76.3
Same Spending Different Bundle	1.5	6.2	6.4	5.8
Increase	3.2	2.4	3.9	5.3
Decrease	19.1	19.1	20.1	12.5
Intensive Margin (Dollar Spending)				
Prior Spending	405.67	1217.80	509.62	1159.03
Spending Change	-28.33**	-43.83***	-29.18*	-12.81*
Percentage Change	-6.98%	-3.60%	-5.73%	-1.11%
N	55	131	112	136

Notes: After being presented with the hypothetical scenario, respondents indicated potential changes in their spending plan over the subsequent three months. The table presents the proportion of participants from each treatment group that aligned with each potential response (extensive margin), for respondents who answered two or three (out of three) CRT questions correctly. The last row indicates the number of respondents in each treatment. Weighting over demographic characteristics is not applied.

Appendix Table B10: Spending Response (Low CRT Score Respondents)

	(1) SD	(2) SN	(3) LD	(4) LN
Extensive Margin (Percentage)				
No Change	68.5	53.0	54.8	63.8
Same Spending Different Bundle	8.9	13.6	16.3	10.8
Increase	6.4	6.6	7.3	5.9
Decrease	16.1	26.8	21.6	19.4
Intensive Margin (Dollar Spending)				
Prior Spending	570.26	790.49	544.40	741.84
Spending Change	23.23	4.73	-47.20**	-17.32
Percentage Change	4.07%	0.60%	-8.67%	-2.33%
N	349	373	385	362

Notes: After being presented with the hypothetical scenario, respondents indicated potential changes in their spending plan over the subsequent three months. The table presents the proportion of participants from each treatment group that aligned with each potential response (extensive margin), for respondents who answered none or one (out of three) CRT questions correctly. The last row indicates the number of respondents in each treatment. Weighting over demographic characteristics is not applied.

B.3 Additional Surveys to Test "Stay the Same" Bias

Survey Design and Implementation. We conducted two additional abbreviated SD treatments to test the "stay the same" bias. The survey adhered to the original design until the section where respondents were prompted for their spending plan in the hypothetical scenario. At this point, respondents were randomized into two versions. The two surveys differ in the way to ask updated spending plans and respondents were randomly allocated to either of them. In one survey, we retained our original approach; in the other, we directly solicit revised spending figures. The question posed was: *"Earlier, we asked you about your spending plan on durable goods over the next 3 months. You told us that you plan to spend $X on average per month. In response to the change in your expectations about future prices after the next 3 months (see table below for a recap), how much do you now plan to spend on average per month on durable goods over the next 3 months? You may change your plan or keep it the same."* Following the collection of updated spending plans, we engaged respondents with open-ended questions, as in our main surveys, concluding with a selection of demographic inquiries. We recruited about 100 respondents for each survey via Prolific in February 2024.

Results. Without demographic adjustments (note the purpose of the two surveys is to identify the "stay the same" bias), the original method resulted in 75% of participants opting to 'buy the same type and amount' (76/102), 8% choosing 'the same spending, different bundle' (8/102), 6% indicating an 'increase' (6/102), and 12% a 'decrease' (12/102). In contrast, using the new approach, 67% of respondents maintained their spending level (68/101), 22% increased their spending (22/101), and 11% reduced their spending (11/101). Notice that the majority of respondents kept their spending constant across both methodologies, albeit with a slightly lower proportion with the new method.

While the incidence of spending increases was higher with the new approach, half of the observed increases under the new method were attributed to respondents mechanically adjusting their spending, as inferred from open-ended responses. Along the intensive margins, we found that with the new method, the average spending increase was $2, compared to a $4 increase observed with the original method. This suggests that although the new method identified a larger group of respondents inclined to increase spending, the overall magnitude of change was similar across methods. Taken together, our primary conclusion—that higher future inflation expectations are unlikely to trigger increased spending—remains robust.

B.4 Channels

This section provides the supplementary tables for the channel analysis. Discussion of these tables can be found in Section 4.4.

Appendix Table B11: Households Whose Open-Text Is Consistent with Each Listed Mechanism as a Percent of 'No Change' Households

	(1) SD	(2) SN	(3) LD	(4) LN	(5) All
Fixed Budget	13.9	20.2	14.9	33.1	20.5
Not a Consideration	39.4	44.3	45.8	45.3	43.4
Liquidity Constraint	1.9	3.4	0.9	1.1	1.7
Real Income Unchanged	1.2	3.3	2.8	3.1	2.5
Other	8.5	5.3	9.3	4.5	7.0
Uninformative	40.5	32.6	32.1	26.8	33.3
N	364	305	310	319	1,298

Notes: The table reports the percent of households whose open-text explanation is consistent with a given proposed channel. Note that the explanation could be classified into more than one channel so the columns could add to more than 100%. The last row indicates the number of respondents in each treatment that selected 'no change' in spending.

Appendix Table B12: Weights on Proposed Mechanisms: Average of 'No Change' Households

	(1) SD	(2) SN	(3) LD	(4) LN	(5) All
Fixed Budget	29.5	33.4	35.9	36.2	33.6
Not a Consideration	36.1	38.9	34.6	36.2	36.3
Liquidity Constraint	16.4	8.5	15.3	13.3	13.8
Real Income Unchanged	4.0	9.2	6.1	6.7	6.2
Other	13.9	10.0	8.0	7.6	10.1
N	364	305	310	319	1,298

Notes: The table reports the weights (in %) put on proposed mechanisms averaged across households. If the respondent selects "Other reasons as explained in the open text" and if the open text is identified to be consistent with a proposed mechanism, then we transfer the weight of that to the identified mechanism. Sometimes we identify two proposed mechanisms, in which case we split the weight equally between the two mechanisms. The numbers in each column add up to 100%.

Appendix Table B13: Households Whose Open-Text Is Consistent with Each Proposed Mechanism as a Percent of 'Same Spending, Different Bundle' Households

	(1) SD	(2) SN	(3) LD	(4) LN	(5) All
Fixed Budget	29.8	50.9	31.0	65.6	43.5
Liquidity Constraint	5.0	4.1	1.4	0.9	2.6
Other	28.4	3.8	18.9	5.0	13.9
Uninformative	41.3	42.0	49.2	29.4	41.5
N	31	52	52	65	200

Notes: The table reports the percent of households whose open-text explanation is consistent with a given listed channel. Note that the explanation could be classified into more than one channel so the columns could add to more than 100%. The last row indicates the number of respondents in each scenario that selected 'same spending, different bundle' in spending.

Appendix Table B14: Weights on Proposed Mechanisms: Average of 'Same Spending, Different Bundle' Households

	(1) SD	(2) SN	(3) LD	(4) LN	(5) All
Fixed Budget	36.7	65.4	55.3	70.5	57.8
Liquidity Constraint	14.7	15.9	18.9	20.1	17.7
Other	48.7	18.6	25.8	9.4	24.5
N	31	52	52	65	200

Notes: The table reports the weights (in %) put on proposed mechanisms averaged across households. If the respondent selects "Other reasons as explained in the open text" and if the open text is identified to be consistent with a proposed mechanism, then we transfer the weight of that to the identified mechanism. Sometimes we identify two proposed mechanisms, in which case we split the weight equally between the two mechanisms. The numbers in each column add up to 100%.

Appendix Table B15: Households Whose Open-Text Is Consistent with Each Proposed Mechanism as a Percent of 'Decrease' Households

	(1) SD	(2) SN	(3) LD	(4) LN	(5) All
Savers Wealth Effect	0.0	0.0	1.4	0.0	0.4
Rigid Income	12.5	10.1	19.6	7.1	12.6
Variable Debt	0.0	0.3	0.0	0.0	0.1
Inflation Hedge	0.9	0.0	0.0	1.3	0.5
Uncertainty	7.1	0.8	2.4	2.8	3.1
Debtor's Wealth Effect(Reverse)	0.0	0.0	0.0	0.0	0.0
Other	42.9	58.7	47.3	76.8	56.1
Uninformative	36.6	30.1	29.3	12.1	27.2
Other(General Wealth Effect)	39.5	55.8	35.5	69.1	49.6
N	81	117	105	91	394

Notes: The table reports the percent of households whose open-text explanation is consistent with a given proposed channel. Note that the explanation could be classified into more than one channel so the columns could add to more than 100%. The last row indicates the number of respondents in each treatment that selected 'decrease' in spending.

Appendix Table B16: Weights on Proposed Mechanisms: Average of 'Decrease' Households

	(1) SD	(2) SN	(3) LD	(4) LN	(5) All
Savers Wealth Effect	20.6	24.9	23.3	20.5	22.5
Rigid Income	16.7	28.8	18.1	27.2	22.7
Variable Debt	4.1	6.9	7.9	14.4	8.3
Inflation Hedge	25.2	9.2	10.4	10.6	13.5
Uncertainty	10.8	13.2	13.9	16.8	13.7
Debtors Wealth Effect (reverse)	3.7	6.5	2.7	1.8	3.7
Other	18.8	10.4	23.8	8.7	15.6
N	81	117	105	91	394

Notes: The table reports the weights (in %) put on proposed mechanisms averaged across households. If the respondent selects "Other reasons as explained in the open text" and if the open text is identified to be consistent with a proposed mechanism, then we transfer the weight of that to the identified mechanism. Sometimes we identify two proposed mechanisms, in which case we split the weight equally between the two mechanisms. The numbers in each column add up to 100%.

Appendix Table B17: Households Whose Open-Text Is Consistent with Each Listed Mechanism as a Percent of 'Increase' Households

	(1) SD	(2) SN	(3) LD	(4) LN	(5) All
Intertemporal Substitution	0.0	0.0	0.0	0.0	0.0
Stockpiling	18.0	0.0	1.8	3.3	6.0
Debtors Wealth Effect	0.0	0.0	0.0	0.0	0.0
Flexible Income	0.0	0.0	0.0	0.0	0.0
Nominal Illusion	0.0	18.5	0.6	0.0	3.9
Uncertainty (reverse)	0.0	0.0	0.0	0.0	0.0
Variable Debt (reverse)	0.0	0.0	0.0	0.0	0.0
Other	30.3	46.5	52.2	31.6	40.3
Uninformative	51.7	35.0	45.3	65.2	49.8
N	28	30	30	23	111

Notes: The table reports the percent of households whose open-text explanation is consistent with a given proposed channel. Note that the explanation could be classified into more than one channel so the columns could add to more than 100%. The last row indicates the number of respondents in each treatment that selected 'increase' in spending.

Appendix Table B18: Weights on Proposed Mechanisms: Average of 'Increase' Households

	(1) SD	(2) SN	(3) LD	(4) LN	(5) All
Intertemporal Substitution	21.5	7.5	17.2	8.9	14.3
Stockpiling	25.4	21.8	32.9	14.6	24.1
Debtors Wealth Effect	5.8	7.6	6.7	5.9	6.5
Flexible Income	0.9	1.9	2.7	16.7	5.6
Nominal Illusion	4.4	27.8	1.5	1.4	7.5
Uncertainty (reverse)	5.7	0.0	2.4	0.8	2.4
Variable Debt (reverse)	0.4	0.0	0.0	3.0	0.8
Other	35.8	33.3	36.8	48.7	38.8
N	28	30	30	23	111

Notes: The table reports the weights (in %) put on proposed mechanisms averaged across households. If the respondent selects "Other reasons as explained in the open text" and if the open text is identified to be consistent with a proposed mechanism, then we transfer the weight of that to the identified mechanism. Sometimes we identify two proposed mechanisms, in which case we split the weight equally between the two mechanisms. The numbers in each column add up to 100%.

B.5 Treatment Effect

In this section, we provide more details for the treatment effect analysis to supplement the summary in Section 4.6.

Spending. We begin by examining the differences in spending behavior across treatments along the extensive margin. The first two columns of Table B19 show how the likelihood of decreasing or increasing spending depends on the two treatment variables, respectively. We observe a negligible difference in spending changes when contrasting durable versus non-durable goods and comparing long-term with short-term treatments. The results are consistent with those in Table 5, which shows the proportion of households that increase, decrease, or maintain their dollar spending is similar across all four treatments.

Next, we explore the differential impact of treatments on spending, with findings presented in the final column of Table B19. The difference in spending changes between durable and non-durable goods treatments is minor and lacks statistical significance. The reduction in household spending is more pronounced in long-term treatments compared to short-term ones, although the difference misses the conventional threshold for statistical significance ($p = 0.179$). Recall that Table 5 demonstrates that the long-term, durable treatment did have a decline in consumption spending that was significantly different from zero; however, the other treatments did not see a significant change in spending. To summarize the results in Tables 5 and B19, we find no significant difference between treatments, but the decline in spending in the long-term, durable treatment is significantly different from zero.

Posterior beliefs. Table B20 shows how the duration of the increase in inflation expectations affects the probability that respondents expect their income growth to keep up with or exceed inflation, the federal funds rate to increase, their financial uncertainty to increase, and the economy to worsen. Households in long-term treatments, relative to short-term treatments, are significantly more likely to expect their income to keep up or outpace inflation. Also, households in the long-term treatments are significantly more likely to expect the federal funds rate to rise. Households in the long-term treatments also expect higher financial uncertainty and a worse economy, but the difference is not statistically significant at the 10% level. Note we do not investigate the differences in posteriors across surveys in which we ask about durable vs non-durable consumption, as this should not affect individuals' economic posteriors.

Channels for 'no change' and 'same spending, different bundle' responses. The channels proposed for 'no change' and 'same spending, different bundle' responses are "liquidity constraint", "fixed budget", "not a consideration", and "real income unchanged." Only for the "liquidity constraint" channel is there a clear way in which the applicability of the channel may vary across treatments. Namely, liquidity constraints are likely to be more important for durables,

which tend to be big-ticket items, than for non-durables. We run a logit regression where the dependent variable is the indicator of households selecting "liquidity constraints," pooling the 1,498 households who chose 'no change' and 'same spending, different bundle' responses. Indeed, being in the durable treatment increases the likelihood of selecting this channel by 1.7 percentage points, relative to the non-durable treatment, although the effect is insignificant.

Channels for 'decrease' responses. Next, we run logit regressions to analyze how the probability of choosing each channel for decrease responses is affected by the treatment variables.[15] For each channel, we include either the long-term treatment or the durable treatment as a regressor, depending on whether there is a plausible economic prediction about the effect of the treatment variable on the likelihood of that channel being applicable.

The importance of the three indirect channels, "rigid income," "variable debt" and "uncertainty," may vary based on the duration of higher inflation so we include a dummy variable for the long-term treatment. However, the type of good is unlikely to affect the applicability of these channels so we omit the durable good dummy. "Saver's wealth" is a direct channel. It is reasonable to assume that more persistent inflation more significantly erodes the purchasing power of savings, leading to a stronger reduction in spending. It is unclear, however, whether the effect is stronger for durable or non-durable goods; therefore, we include only the dummy variable "long treatment" in the regression for this channel. Finally, the "inflation hedge" is a direct channel and it depends clearly on the type of spending: one expects a stronger decrease response for non-durable goods because they provide a weaker hedge against inflation relative to durable goods. In contrast, it is not clear how the persistence of higher inflation expectations affects the strength of the "inflation hedge" channel. On the one hand, one would want to invest in assets such as real estate to hedge more persistent inflation. On the other hand, the mortgage rate and financial uncertainty may be higher, which tends to reduce the probability of investing in real estate. The overall effect of the long-term treatment on the strength of the inflation hedge channel is therefore not clear. For this reason, in the regression analysis of this channel, we include only the dummy variable for the durable treatment.

We collect the results in Table B21. Comparing the short and long-term treatments, households are more likely to select "saver's wealth effect", "variable debt", "uncertainty", and less likely to select "rigid income" in the long-term treatment. Comparing the durable and non-durable treatments, households are less likely to select "inflation hedge" in the durable treatment. However, the treatment effects

[15]For this analysis, we omit the last channel, "debtor's wealth effect (reverse)," because it was included in the survey for symmetry and completeness instead of clear economic considerations. Further, this channel was selected very rarely.

are statistically insignificant except for the effect of the long-term treatment on the channel "variable debt."

Channels for 'increase' responses. Next, we test treatment effects on the probability that a household indicating an increase in spending selects a channel as being applicable. There are two direct channels, "intertemporal substitution" and "stockpiling." Economic models suggest that these effects may be stronger for durable goods relative to non-durable goods (Bachmann et al., 2015a), and for long duration of the increase in expected inflation relative to short duration (see Appendix A). There are three indirect channels functioning through the induced changes in expectations in other economic variables.[16] Intuitively, the "debtor's wealth effect" may be stronger in the long-term treatment as persistent inflation results in a lower real value of fixed nominal debts. The "Flexible income" channel may be stronger in the long-term treatment because income is more likely to account for inflation if it is more persistent. Related to this, the "nominal illusion" channel should be weaker in the long-term treatment (this channel only applies if the increase in income falls short of the increase in inflation). To test these conjectures, we run separate logit regressions to see how the probability of choosing each channel depends on two dummy variables to indicate whether the respondent (i) was asked about durable or non-durable goods and (ii) was in the long or short-term treatment.

The results are shown in Table B22. Consistent with these conjectures, respondents who are asked about spending on durable goods are more likely (relative to those asked about non-durable goods) to say "intertemporal substitution" or "stockpiling" played a role in their reasoning for increasing consumption. The effect is significant for "intertemporal substitution" (for "stockpiling" the p-value is 0.11). For the three indirect channels, the coefficients on the long-term treatment variable have expected signs, and are statistically significant at 5% level for "flexible income" and at the 1% level for "nominal illusion." The coefficient on "debtor's wealth effect" is not significant at the 10% level.

[16] We omit the analysis of two channels, "uncertainty (reverse)" and "variable debt (reverse)," which are included for symmetry and completeness, not based on clear economic considerations. These channels were almost never selected.

Appendix Table B19: Consumption Change: Treatment Effects

	(1) Decrease	(2) Increase	(3) Dollar Change
Durable Treatment	-0.022	0.005	-5.774
	(0.028)	(0.018)	(24.935)
Long Treatment	-0.009	0.006	-34.319
	(0.028)	(0.018)	(25.517)
N	2,003	2,003	2,003

Notes: The table reports treatment effects, captured by the two dummy treatment variables "durable treatment" and "long treatment," on consumption responses. The first two columns report the marginal effects of logit regressions where the regressands are the indicators of a decrease in spending and an increase in spending, respectively. The last column reports the result from an OLS regression with the dollar change in consumption as the regressand. Robust standard errors are in parenthesis. ***, **, * denotes statistical significance at 1, 5, and 10 percent levels, respectively.

Appendix Table B20: Posterior Economic Beliefs: Treatment Effects

	(1) Income Keep Up	(2) FFR Increase	(3) Higher Uncertainty	(4) Worse Economy
Long Treatment	0.072**	0.026*	0.041	0.020
	(0.036)	(0.014)	(0.030)	(0.034)
N	2,003	2,003	2,003	2,003

Notes: The table reports the marginal effects of a logit regression which regresses the indicators of posterior beliefs on a constant and a dummy variable for "long treatment." The dependent variable of the first regression, "income keep up" is equal to 1 if the household expects their income will keep up with inflation, i.e., the growth rate is equal to or higher than 3 percentage points following the hypothetical scenario. Robust standard errors are in parenthesis. ***, **, * denotes statistical significance at 1, 5 and 10 percent levels, respectively.

Appendix Table B21: Channels for 'Decrease' Responses: Treatment Effects

	(1) Saver's Wealth	(2) Rigid Income	(3) Variable Debt	(4) Inflation Hedge	(5) Uncertainty
Long Treatment	0.013	-0.041	0.150**		0.123
	(0.067)	(0.080)	(0.071)		(0.075)
Durable Treatment				-0.052	
				(0.071)	
N	394	394	394	394	394

Notes: The table reports the marginal effects of logit regressions which regress the indicators of households selecting each of the five channels for decreasing consumption response on the dummy variables "durable treatment" and "long treatment." All respondents who choose to decrease spending were presented the two direct channels, "variable debt" and "inflation hedge." The three indirect channels were presented only if the respondent's expectation about a relevant economic variable was consistent with the channel (for example, "rigid income" was shown if the respondent indicated an increase in income growth lower than the change in inflation rate). Robust standard errors are in parenthesis. ***, **, * denotes statistical significance at 1, 5 and 10 percent levels, respectively.

Appendix Table B22: Channels for 'Increase' Responses: Treatment Effects

	(1) Intertemporal	(2) Stockpiling	(3) Debtor's WE	(4) Flexible Income	(5) Illusion
Durable Treatment	0.250*	0.225			
	(0.137)	(0.139)			
Long Treatment	0.100	0.081	0.057	0.274**	-0.229***
	(0.133)	(0.135)	(0.151)	(0.136)	(0.082)
N	111	111	111	111	111

Notes:The table reports the marginal effects of logit regressions which regress the indicators of households selecting each of the five channels for increasing consumption response on the dummy variables "durable treatment" and "long treatment." All respondents who choose to increase spending were presented the first two (direct) channels. The last three (indirect) channels were presented only if the respondent's expectation about a relevant economic variable was consistent with the channel (for example, "flexible income" was shown if the respondent indicated an increase in income growth equal or higher than the change in inflation rate). Robust standard errors are in parenthesis. ***, **, * denotes statistical significance at 1, 5 and 10 percent levels, respectively.

B.6 Robustness Check: SD-10, SD-Separate and SN-Separate

In this section, we provide supplementary tables for the robustness treatments to support the discussion in Section 4.7. Table B23 shows the demographic and financial characteristics of the survey respondents in the robustness treatments versus the main treatments.

Appendix Table B23: Comparison of Survey Participants and the U.S. Adult Population

	Main treatments	SD-10	SD/SN-separate	U.S. Pop.
Demographics				
Age	60.15	60.29	38.14	47.96
White	0.89	0.84	0.66	0.64
Female	0.54	0.54	0.49	0.51
Has at Least a 4-Year College Degree	0.51	0.52	0.58	0.33
Married	0.63	0.57	0.48	0.53
Northeast	0.22	0.20	0.16	0.18
Midwest	0.22	0.22	0.19	0.21
South	0.39	0.38	0.39	0.38
West	0.16	0.21	0.24	0.23
Financial Characteristics				
Household Income $\leq$ 50k	0.39	0.41	0.36	0.39
Household Income 50k-100k	0.33	0.33	0.34	0.30
Household Income 100k+	0.28	0.25	0.30	0.31
N	2003	2005	994	

Notes: This table compares the characteristics of the survey participants with the average characteristics of the U.S. adult population. For demographics and financial characteristics, comparisons are with the 2021 American Community Survey.

Our survey shows that in response to higher inflation expectations, the majority of households do not change their spending, a small fraction reduces spending, and only a very small fraction increases spending. In addition to our four main treatments, we conducted three more treatments on over 3,000 respondents to assess the robustness of this result. The first treatment introduces a larger increase (10 percentage increase instead of three) in short-term inflation expectations for durable goods. The second and third treatments modify the formulation of the change in short-term inflation expectations. We follow the same data-cleaning process and weighting procedure as for our main treatments, and all statistics reported are weighted.

B.6.1 SD-10

The first additional treatment modifies the original SD treatment by changing the hypothetical scenario such that inflation expectations for the year following the next three months were increased by 10 percentage points instead of three. The

goal is to address the concern that the three percentage point change in inflation expectations in the main treatments could be perceived as small, especially given recent high inflation, and drive respondent inaction in spending changes. We choose to amplify the shock for the SD treatment because central banks, when intending to influence inflation expectations as a policy intervention, are more likely to adjust short-term rather than long-term expectations. Furthermore, as discussed in Section 2, durable goods tend to be more sensitive to changes in inflation expectations than non-durable goods. We label this new treatment SD-10, standing for short-term, durable, 10 percentage point change. This treatment was conducted through Dynata in early December 2023. Treatment SD-10 has also a much larger sample size than our main treatments, with over 2,005 observations after data cleaning. This could also address the concern that the initial sample size per treatment may have been insufficient to reveal significant differences.

Prior Expectations. Table B24 reports prior expectations for the SD-10 treatment. Compared with our main survey conducted in March 2023, inflation expectations over the next three months and the year following the next three months are lower in SD-10 treatment, which was conducted in December 2023. This is unsurprising given realized inflation fell between the surveys. The median expectation for the next three months, the year following the next three months, and the average annual inflation rate in the ten years following the next three months was 1.5%, 3%, and 2%, respectively. For reference, in December 2023, the University of Michigan Survey of Consumers reported similar inflation expectations for comparable time intervals: 3.1% for the next year and 2.8% on average for the next five years. We also find a decrease in the federal funds rate expectations in the SD-10 treatment relative to the main sessions, revealing that respondents expect lower interest rates. For durable goods spending, household income growth rate, and financial uncertainty, there are no significant differences between the samples.

Effects of Inflation Expectations on Other Expectations. Table B25 reports posterior economic beliefs for the SD-10 treatment as well as the short-term treatments in our main experiment (SD and SN) for comparison.[17] Regarding income growth, a smaller fraction, 24.0%, of respondents expect their income growth to keep up or surpass the inflation rate in the SD-10 treatment, compared to 30.4% in the SD and SN treatments (at a significance level of $p = 0.022$). Regarding the federal funds rate, a larger share, 9.9%, of respondents expect the central bank to lower it in the SD-10 treatment, compared to 4.3% in the SD and SN treatments (at a significance level of $p < 0.01$). The effects on financial predictability and general economic outlook in the SD-10 treatment are similar to those in the SD and SN treatments.

[17]For posterior economic expectations, we pool SD and SN as the comparison group because the type of goods is irrelevant for them.

Effects of Inflation Expectations on Spending and Underlying Channels. Table B26 examines the effects of the hypothetical scenario on planned spending for the SD-10 treatment and compares it with the SD treatment. The extensive margin results are similar. Namely, the fraction of subjects who keep the same spending, decrease, and increase are respectively 76%, 18%, and 6% in the SD-10 treatment versus 77%, 17%, and 6% in the SD treatment. Regarding the amount of dollar spending, a 10 percentage point increase in inflation expectations results in a statistically significant reduction of 3.73% in average durable spending ($p < 0.01$) whereas the change is insignificant in the SD treatment.

Turning to the channels, Tables B27 to B30 report the likelihood of each mechanism being selected as relevant to the respondent's reasoning. For subjects in the SD-10 treatment who did not change their spending, considerations such as "fixed budget," "not a consideration," and "liquidity constraint" are chosen with a similar frequency as in the SD treatment. For respondents who indicated decreased spending, nearly all mechanisms, except for "inflation hedge" and "debtors wealth effect (reverse)," saw an increase in their selection from the SD to the SD-10 treatment. The largest increase was in the "rigid income" channel, from 45.7% to 62.6%. Amplified concerns about rigid income may explain the more pronounced drop in spending in the SD-10 treatment. For subjects who increased their spending, we observe similar selections for the "intertemporal substitution" and "stockpiling" channels between the SD and SD-10 treatments. There is a significant decrease in the likelihood of selecting the "nominal illusion" channel (from 37.8% in the SD treatment to 18.0% in the SD-10 treatment).

In summary, the results from treatment SD-10 reinforce our key findings from the main experiment. It is unlikely that current spending rises with higher inflation expectations. If anything, the SD-10 treatment shows that the average spending is likely to decrease in response to a larger increase in inflation expectations because more respondents believe that their income will not keep pace with rising prices.

Appendix Table B24: Descriptive Statics for Prior Expectations in SD-10

Expectations for:	N	Mean	St. Dev.	Huber Mean	Huber St. Dev.	Median
(A) *Price Change (%)*						
over the next 3 months	2,003	5.20	12.24	2.19	4.62	1.50
over the 12 months following the next 3 months	2,004	6.44	14.41	3.23	6.50	3.00
over the 10 years following the next 3 months	2,002	5.29	12.32	2.48	4.54	2.00
(B) *Household Spending ($)*						
durable goods per month over the next 3 months	2,005	679.65	2174.68	259.40	490.51	167.00
(C) *FFR (%)*						
over the 12 months following the next 3 months	2,005	7.41	12.02	4.96	3.29	5.00
(D) *Income Growth Rate (%)*						
over the 12 months following the next 3 months	2,005	6.81	16.86	3.46	6.87	3.00
(E) *Household Financial Uncertainty*						
over the 12 months following the next 3 months	2,005	0.80	0.40			

Notes: This table presents moments of various expectations observed prior to the hypothetical scenario module. For "household financial uncertainty," responses indicating perceptions of "very difficult" or "moderately difficult" to predict are classified as one. Regarding price expectations, we exclude we omit two, one, and three subjects, respectively, for different time periods, whose expected price changes exceed 200%. For continuous variables, Huber-robust means are reported to account for potential outliers.

Appendix Table B25: Posteriors of Economic Beliefs, by Treatment

	(1) SD-10	(2) SD+SN
(A) *Household Income Growth*		
Adjust downwards	7.8	7.6
No change	53.3	50.0
Adjust upwards by less than 10 (3)	15.0	12.1
Adjust upwards by 10 (3)	13.4	17.7
Adjust upwards by more than 10 (3)	10.6	12.7
(B) *Federal Funds Rate*		
Adjust upwards	33.0	37.4
No change	57.2	58.3
Adjust downwards	9.9	4.3
(C) *Financial Predictability*		
More difficult	24.1	22.4
As difficult as before	65.8	65.8
Less difficult	10.2	11.9
(D) *General Economic Outlook*		
Improve	21.5	23.0
No change	39.1	36.7
Worsen	39.4	40.4
N	2,005	1,008

Notes: Following the hypothetical scenario, respondents were asked how their expectations would change for their household income growth rate, the federal funds rate, their household's financial predictability, and the general economic situation in the year following the next quarter. Note that in the SD-10 treatment, the income growth rate comparisons are set against a 10 percentage point benchmark, in contrast to the 3 percentage point benchmark used in our main experiments. The table reports the percentage of respondents in each scenario that gave each possible response. The last row indicates the number of respondents in each treatment.

Appendix Table B26: Spending Response

	(1) SD-10	(2) SD
Extensive Margin (Percentage)		
No Change	66.2	70.3
Same Spending Different Bundle	10.2	7.2
Increase	5.9	5.7
Decrease	17.6	16.8
Intensive Margin (Dollar Spending)		
Prior Spending	679.64	533.10
Spending Change	-25.38***	11.59
Percentage Change	-3.73%	2.17%
N	2,005	504

Notes: After being presented with the hypothetical scenario, respondents indicated potential changes in their spending plan over the subsequent three months. The first part of the table presents the proportion of participants from each treatment group that aligned with each potential response (extensive margin). Furthermore, participants provided their revised spending plans post-scenario (intensive margin). The second part of the table shows the initial spending plans, changes in these plans, and the percentage changes at the aggregate level. The row "Spending Change" also indicates whether the number is significantly different from zero. The last row indicates the number of respondents in each treatment. ***, **, * denotes statistical significance at 1, 5, and 10 percent levels, respectively.

Appendix Table B27: Households that Select Each Mechanism as a Percent of 'No Change' Households

	(1) SD-10	(2) SD
Fixed Budget	64.4	66.6
Not a Consideration	69.2	64.6
Liquidity Constraint	44.1	46.8
Real Income Unchanged	8.8	13.1
N	1,413	364

Notes: The table reports the percent of households in each treatment that selected that a given channel applies to them. Note that respondents could select more than one channel so the columns could add to more than 100%. The last row indicates the number of respondents in each treatment that selected 'no change' in spending.

Appendix Table B28: Households that Select Each Mechanism as a Percent of 'Same Spending, Different Bundle' Households

	(1) SD-10	(2) SD
Fixed Budget	65.1	73.2
Liquidity Constraint	62.4	48.8
N	158	31

Notes: The table reports the percent of households in each treatment that selected that a given channel applies to them. Note that respondents could select more than one channel so the columns could add to more than 100%. The last row indicates the number of respondents in each treatment that selected 'same spending, different bundle' in spending.

Appendix Table B29: Households that Select Each Mechanism as a Percent of 'Decrease' Households

	(1) SD-10	(2) SD
Savers Wealth Effect	84.5	79.2
Rigid Income	62.6	45.7
Variable Debt	31.5	22.8
Inflation Hedge	50.3	68.4
Uncertainty	31.4	26.6
Debtors Wealth Effect (reverse)	11.6	13.3
N	331	81

Notes: The table reports the percent of households in each treatment that selected that a given channel applies to them. Note that respondents could select more than one channel so the columns could add to more than 100%. The last row indicates the number of respondents in each treatment that selected 'decrease' in spending.

Appendix Table B30: Households that Select Each Mechanism as a Percent of 'Increase' Households

	(1) SD-10	(2) SD
Intertemporal Substitution	65.0	71.2
Stockpiling	74.4	68.8
Debtors Wealth Effect	36.7	33.3
Flexible Income	8.2	5.2
Nominal Illusion	18.0	37.8
Uncertainty (reverse)	2.4	8.4
Variable Debt (reverse)	8.1	1.4
N	103	28

Notes: The table reports the percent of households in each treatment that selected that a given channel applies to them. Note that respondents could select more than one channel so the columns could add to more than 100%. The last row indicates the number of respondents in each treatment that selected 'increase' in spending.

B.6.2 SD-separate and SN-separate

We conducted two additional treatments that modify the formulation of the change in short-term inflation expectations. In our main short-term treatments, we formulate the hypothetical scenario as higher inflation in the first year after the next three months, and the average inflation in the 10 years after the next three months remains constant. This implies that the cumulative expected inflation in years 2 to 10 will be lower, potentially mitigating the intertemporal substitution effects prompted by higher inflation expectations in the first year. One may be concerned that this could lead to the large fraction of nonpositive reactions observed in our main short-term treatments. To address this concern, we shield the long-term horizon from changes so that the hypothetical scenario involves only an increase in inflation over the upcoming year after the next 3 months, while the inflation rate for the following years—2 through 10—remains unchanged. We label the new treatments SD/SN-separate. Participants were recruited via Prolific in late March 2024. After cleaning, the SD-separate and SN-separate treatments consist of 494 and 500 respondents, respectively.

Prior Expectations. Table B31 presents prior expectations for the SD-separate and SN-separate treatments. The prior expectations are consistent with our main short-term treatments conducted through Dynata in early 2023. The consistency of priors across the two platforms supports the reliability of these platforms in economic research. The forecasts for aggregate variables like inflation and the federal funds rate exhibit less variability than those from earlier Dynata sam-

ples, which may be a result of decreasing realized inflation and less economic uncertainty.

Effects of Inflation Expectations on Other Expectations. Table B32 details the posterior economic beliefs for both the modified and main short-term treatments for comparison. A larger proportion of respondents in the new treatments anticipate a reduction in the federal funds rate in the hypothetical scenario compared to the SD and SN treatments (13.5% versus 4.8% with $p < 0.01$). Additionally, more participants in the modified treatments perceive that higher inflation is associated with a poorer economic outlook than the main treatments (59.1% versus 46.0% with $p < 0.01$). The difference in the posterior beliefs could be attributed to the survey implementation dates, between which disinflation occurred.

Effects of Inflation Expectations on Spending and Underlying Channels. Table B33 shows the impacts on planned spending in the SD/SN-separate treatments versus the SD/SN treatments. Tables B34 through B37 display the likelihood of participants citing each mechanism as relevant to their decision-making. The proportions of respondents who report unchanged, increased or decreased dollar spending are similar between the modified and main treatments. The average dollar spending change in the SD/SN-separate treatments tends to be negative, with significantly negative responses in the SD-separate treatment. Regarding the channels, the likelihood of each mechanism being selected as relevant to the respondent's reasoning is largely similar across the SD/SN-separate and SD/SN treatments. A somewhat surprising result is that the likelihood of the intertemporal substitution mechanism being relevant is lower in the new treatments compared to the main treatments ($p < 0.1$); this result should be taken with a grain of salt because of the small sample sizes.

In summary, the modified formulation of changes in short-term inflation expectations yields largely similar responses in spending to the formulation in our main treatments. The extensive margins are very close, and the reduction in the average dollar spending on durables becomes significant with the new formulation. Combining the results from the SD, SD-separate and LD treatments, our study shows that more persistent higher inflation expectations tends to reduce consumption spending more significantly.

Appendix Table B31: Descriptive Statics for Prior Expectations SD-separate and SN-separate

Expectations for:	N	Mean	St. Dev.	Huber Mean	Huber St. Dev.	Median
(A) *Price Change (%)*						
over the next 3 months	994	2.64	5.44	1.34	1.82	1.00
over the 12 months following the next 3 months	994	4.24	7.69	2.92	3.37	3.00
over the 10 years following the next 3 months	994	3.46	7.01	2.12	2.12	2.22
(B) *Household Spending ($)*						
durable goods per month over the next 3 months	494	704.72	2855.39	237.68	636.66	200
nondurable goods per month over the next 3 months	500	1100.68	1174.9	833.31	741.98	750
(C) *FFR (%)*						
over the 12 months following the next 3 months	994	5.55	3.13	5.34	1.34	5.33
(D) *Income Growth Rate (%)*						
over the 12 months following the next 3 months	994	7.70	26.80	3.43	6.72	3.00
(E) *Household Financial Uncertainty*						
over the 12 months following the next 3 months	994	0.70	0.46			

Notes: This table presents moments of various expectations observed prior to the hypothetical scenario module. For "household financial uncertainty," responses indicating perceptions of "very difficult" or "moderately difficult" to predict are classified as one. For continuous variables, Huber-robust means are reported to account for potential outliers.

Appendix Table B32: Posteriors of Economic Beliefs, by Treatment

	(1) SD-separate	(2) SN-separate	(3) SD	(4) SN
(A) *Household Income Growth*				
Adjust downwards	9.6	12.0	4.9	10.3
No change	59.1	51.3	49.0	50.9
Adjust upwards by less than 3	10.0	11.7	12.0	12.1
Adjust upwards by 3	14.6	16.0	18.0	17.4
Adjust upwards by more than 3	6.7	9.0	16.1	9.2
(B) *Federal Funds Rate*				
Adjust upwards	35.7	38.3	34.9	39.8
No change	50.8	52.5	61.3	55.3
Adjust downwards	13.5	9.3	3.8	4.8
(C) *Financial Predictability*				
More difficult	24.2	17.4	19.4	25.3
As difficult as before	63.5	72.8	65.6	65.9
Less difficult	12.3	9.8	15.0	8.8
(D) *General Economic Outlook*				
Improve	17.7	16.0	25.3	20.7
No change	23.2	28.4	40.0	33.3
Worsen	59.1	55.6	34.8	46.0
N	409	500	504	504

Notes: Following the hypothetical scenario, respondents were asked how their expectations would change for their household income growth rate, the federal funds rate, their household's financial predictability, and the general economic situation in the year following the next quarter. Note that in the SD-10 treatment, the income growth rate comparisons are set against a 10 percentage point benchmark, in contrast to the 3 percentage point benchmark used in our main experiments. The table reports the percentage of respondents in each scenario that gave each possible response. The last row indicates the number of respondents in each treatment.

Appendix Table B33: Spending Response

	(1) SD-separate	(2) SN-separate	(3) SD	(4) SN
Extensive Margin (Percentage)				
No Change	67.2	62.1	70.3	57.4
Same Spending Different Bundle	7.4	8.5	7.2	11.9
Increase	4.3	5.4	5.7	5.6
Decrease	21.1	24.0	16.8	25.0
Intensive Margin (Dollar Spending)				
Prior Spending	704.72	1100.68	533.10	888.46
Spending Change	-27.08**	-24.89	11.59	-6.40
Percentage Change	-3.84%	-2.25%	2.17%	-0.72%
N	494	500	504	504

Notes: After being presented with the hypothetical scenario, respondents indicated potential changes in their spending plan over the subsequent three months. The first part of the table presents the proportion of participants from each treatment group that aligned with each potential response (extensive margin). Furthermore, participants provided their revised spending plans post-scenario (intensive margin). The second part of the table shows the initial spending plans, changes in these plans, and the percentage changes at the aggregate level. The row "Spending Change" also indicates whether the number is significantly different from zero. The last row indicates the number of respondents in each treatment. ***, **, * denotes statistical significance at 1, 5, and 10 percent levels, respectively.

Appendix Table B34: Households that Select Each Mechanism as a Percent of 'No Change' Households

	(1) SD-separate	(2) SN-separate	(3) SD	(4) SN
Fixed Budget	78.7	66.3	66.6	61.4
Not a Consideration	57.1	65.8	64.6	67.7
Liquidity Constraint	49.1	37.2	46.8	32.9
Real Income Unchanged	11.8	11.5	13.1	16.4
N	326	317	364	305

Notes: The table reports the percent of households in each treatment that selected that a given channel applies to them. Note that respondents could select more than one channel so the columns could add to more than 100%. The last row indicates the number of respondents in each treatment that selected 'no change' in spending.

Appendix Table B35: Households that Select Each Mechanism as a Percent of 'Same Spending, Different Bundle' Households

	(1) SD-separate	(2) SN-separate	(3) SD	(4) SN
Fixed Budget	81.8	79.3	73.2	82.7
Liquidity Constraint	39.8	54.2	48.8	46.6
N	30	49	31	52

Notes: The table reports the percent of households in each treatment that selected that a given channel applies to them. Note that respondents could select more than one channel so the columns could add to more than 100%. The last row indicates the number of respondents in each treatment that selected 'same spending, different bundle' in spending.

Appendix Table B36: Households that Select Each Mechanism as a Percent of 'Decrease' Households

	(1) SD-separate	(2) SN-separate	(3) SD	(4) SN
Savers Wealth Effect	90.8	92.3	79.2	92.4
Rigid Income	76.1	65.0	45.7	67.2
Variable Debt	24.3	32.0	22.8	30.1
Inflation Hedge	54.3	30.3	68.4	67.3
Uncertainty	30.0	26.0	26.6	36.6
Debtors Wealth Effect (reverse)	11.5	21.3	13.3	19.8
N	111	111	81	117

Notes: The table reports the percent of households in each treatment that selected that a given channel applies to them. Note that respondents could select more than one channel so the columns could add to more than 100%. The last row indicates the number of respondents in each treatment that selected 'decrease' in spending.

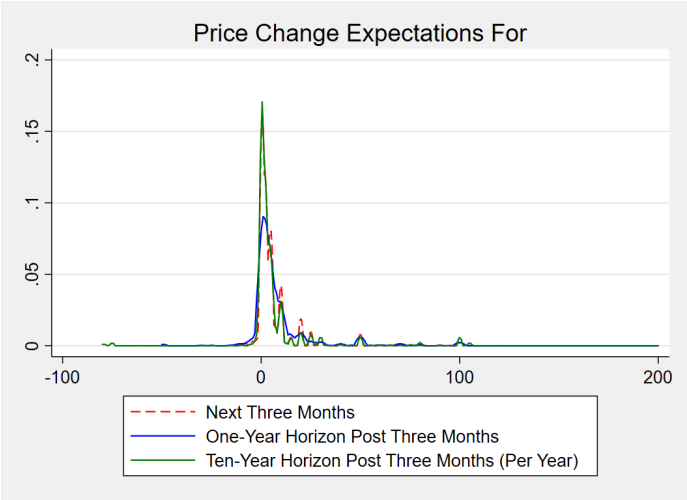
Appendix Table B37: Households that Select Each Mechanism as a Percent of 'Increase' Households

	(1) SD-separate	(2) SN-separate	(3) SD	(4) SN
Intertemporal Substitution	43.6	25.8	71.2	41.4
Stockpiling	57.4	20.3	68.8	45.6
Debtors Wealth Effect	28.6	13.4	33.3	27.1
Flexible Income	1.9	3.7	5.2	9.4
Nominal Illusion	26.7	7.7	37.8	21.7
Uncertainty (reverse)	15.8	5.8	8.4	0.0
Variable Debt (reverse)	9.3	2.0	1.4	0.0
N	27	23	28	30

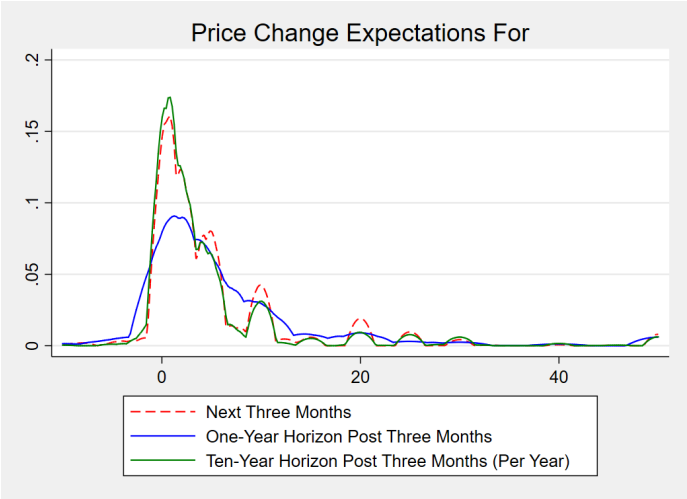
Notes: The table reports the percent of households in each treatment that selected that a given channel applies to them. Note that respondents could select more than one channel so the columns could add to more than 100%. The last row indicates the number of respondents in each treatment that selected 'increase' in spending.

C Additional Figures

Appendix Figure C1: Density Distribution of Prior Price Change Expectations



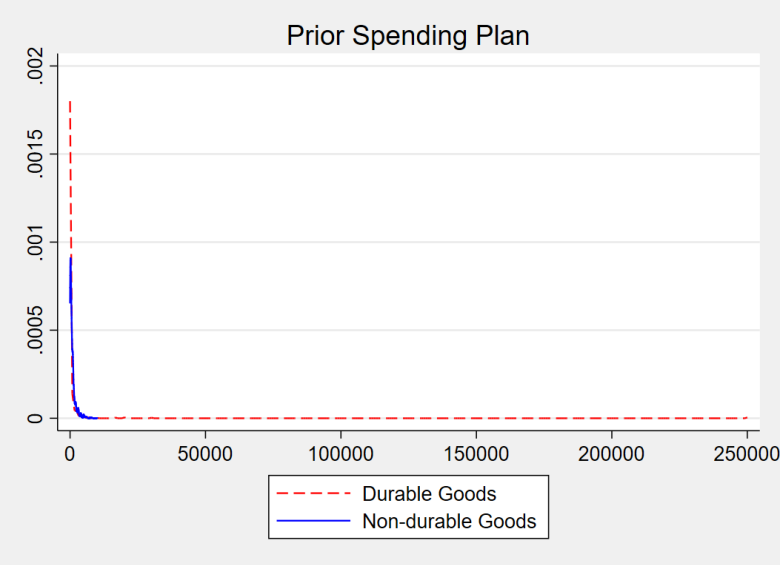
(a)



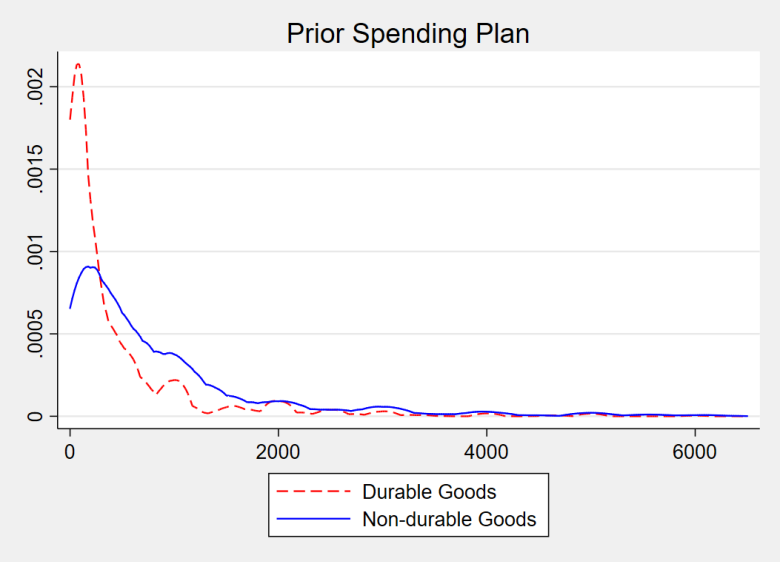
(b)

Notes: Figure (a) plots the density distributions of expected price changes across three distinct time horizons: the next three months, one year after the next three months, and a ten-year annualized forecast following the initial three months. Figure (b) restricts the range to between -10% and 50%. For both plots, densities are computed using the Epanechnikov kernel.

Appendix Figure C2: Density Distribution of Prior Spending Expectations

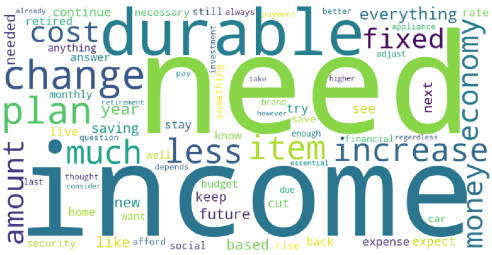


(a)



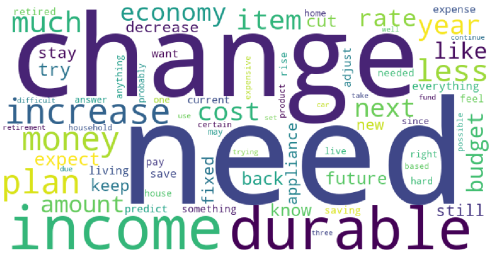
(b)

Notes: Figure (a) plots the density distributions of expected spending plans on durable and non-durable goods for the next three months. Figure (b) restricts the data range between 0 and 6500, which corresponds to the 99th percentile. For both plots, densities are computed using the Epanechnikov kernel.



(a) SD

(b) SN



(c) LD

(d) LN

Appendix Figure C3: Word Clouds by Treatments

Notes: For each treatment, word clouds of the most commonly used words in the open-text responses are reported. In the text analysis, punctuation was removed, all letters were made lowercase, and all words were lemmatized. Words associated with the hypothetical scenario were dropped such as "price", "inflation", "buy", as well as 179 common stop words.

D Attention Check for No Change Responses

First, the share of respondents that select no change in their economic posteriors varies by question. For example, 35% of respondents stated there would be no change in their economic outlook, while 65% of respondents said the predictability of their household financial situation would not change (see Table 4 Panels C and D). Second, the percent of respondents selecting no change in various economic beliefs does not increase as the survey unfolds over time, indicating that they do not choose the option because of fatigue.

Most compellingly, engagement metrics—such as survey completion time and word count in open-ended responses—do not significantly differ between those reporting 'no change' in consumption and those indicating changes. Specifically, respondents indicating 'no change' in consumption spent an average of 1,420 seconds, only 119 seconds less than the time spent by those signaling a change of any type, and this difference is not significant. In addition, this difference would overestimate the difference in effort because those who indicate that their spending would increase or decrease must respond to a few more questions in the survey: they must give a new spending number and often read and respond to more channels than those who indicate a 'no change' consumption response (although it was very unlikely that a subject would expect this at the point when they provided their consumption changes; that is, they could not intentionally choose 'no change' to reduce their response time). The comparison between 'no change' and 'same spending different bundle' captures the difference in effort level in a more meaningful way. The response duration for the 'same spending, different bundle' group is 1,415 seconds, nearly identical to the 'no change' group. Finally, we examine the word counts in the open-ended responses. The word counts are similar across the consumption response groups, averaging 20.6 for respondents who make no change and 20.4 for respondents who make any change.

E Survey Instrument for Durable Short-Term Treatment

[welcome page]

Thank you for agreeing to participate in our research. We are researchers at Indiana University, and we want to learn about your current economic beliefs and your outlook for the future.

This survey takes about 18 minutes.

Most of the questions in this survey have no right or wrong answers - we are interested in your views and opinions. Your responses are confidential, and it helps us a great deal if you respond as carefully as possible. De-identified data may be shared with the research community to advance scholarly knowledge.

If you have any questions, you may contact the researchers at Indiana University, Kelin Lu at kl14@iu.edu, Professor Daniela Puzzello at dpuzzell@indiana.edu, or Professor Rupal Kamdar at rkamdar@iu.edu. For questions about your rights as a study participant, contact the Indiana University Human Subjects Office at 800-696-2949 or irb@iu.edu (reference study 14161). Thank you for your participation.

Please select "Next>>" to continue.

----------Page Break----------

The following questions ask you about your perceptions and expectations about price changes in general. For instance, a 2% increase in prices over a certain period means that a typical bundle of goods and services, which cost $100 at the beginning of a period, costs $102 at the end of the period. **These questions have no right or wrong answers** - we are interested in your views and opinions.

----------Page Break----------

The next set of questions ask about your beliefs about what will happen to prices in general over the next 3 months from February 2023 to May 2023.

Q1-1
Over the next 3 months from February 2023 to May 2023, do you think prices in general will go up or down? Please give your best guess.

o Go up
o Stay the same
o Go down

Q1-2
By what percent do you think prices in general will go up or down over the next 3 months? Please give your best guess.

Notes: Please enter a negative number if you think prices will go down and a positive number if you think prices will go up. Please enter "0" if you think prices will stay the same.

----------Page Break----------

Display This Question: If Q1-1 != Stay the same

Q1-2-2 Would that be ${Q1-2/ChoiceTextEntryValue} percent over the next 3 months, or is that the annual rate?

o I reported the price change over the next 3 months
o I was thinking about the annual price change rate

----------Page Break----------

Display This Question: If Q1-1 != Stay the same & Q1-2-2 = I was thinking about the annual price change rate

Q1-2-3 If ${Q1-2/ChoiceTextEntryValue} percent is the annual rate, what is the percentage over the next 3 months?

o $e{ q://QID440/ChoiceTextEntryValue * 0.25}% (that is ${Q1-2/ChoiceTextEntryValue}%/4)
o Other, please specify the percentage below

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Display This Question: If Q1-2-2 = I was thinking about the annual price change rate & Q1-2-3 = $e{ q://QID440/ChoiceTextEntryValue * 0.25}% (that is ${q://QID440/ChoiceTextEntryValue}%/4)

Q1-3.1 So, you expect the price change over the next 3 months to be $e{ q://QID440/ChoiceTextEntryValue * 0.25}%. Please retype this number below to pass the validation check.

Display This Question: If Q1-2-2 = I reported the price change over the next 3 months Or Q1-1 = Stay the same

Q1-3.2 So, you expect the price change over the next 3 months to be ${Q1-2/ChoiceTextEntryValue}%. Please retype this number below to pass the validation check.

Display This Question: If Q1-2-2 = I was thinking about the annual price change rate & Q1-2-3 != $e{ q://QID440/ChoiceTextEntryValue * 0.25}% (that is ${q://QID440/ChoiceTextEntryValue}%/4)

Q1-4 So, you expect the price change over the next 3 months to be ${Q1-2-3/ChoiceTextEntryValue/3}%. Please retype this number below to pass the validation check.

----------Page Break----------

Q1-5 How sure are you of your expectations for changes in prices over the next 3 months?

o Very sure (1)
o Somewhat sure (3)
o Somewhat unsure (4)
o Very unsure (12)

----------Page Break----------

Now we would like you to think about prices in general further into the future.

Q2-1 Now think about the period from May 2023 to May 2024 (from now on, we will use the red color to denote the time period after the next 3 months). Do you think prices in general will go up or down during this time period? Please give your best guess.

o Go up
o Stay the same
o Go down

Q2-2 By what percent do you think prices in general will go up or down over this period from May 2023 to May 2024? Please give your best guess.

Notes: Please enter a negative number if you think prices will go down and a positive number if you think prices will go up. Please enter "0" if you think prices will stay the same.

Q2-3 How sure are you of your expectations for changes in prices over this period?

o Very sure
o Somewhat sure
o Somewhat unsure
o Very unsure

----------Page Break----------

Q3-1 Now think about the 10-year period from May 2023 to May 2033. Do you think prices in general will go up or down during this time period? Please give your best guess.

o Go up
o Stay the same
o Go down

Q3-2 By what percent **per year** do you think prices in general will go up or down on average over this 10-year period from May 2023 to May 2033? Please think about the change **per year** on average. Please give your best guess.

Notes: Please enter a negative number if you think prices on average will go down and a positive number if you think prices on average will go up. Please enter "0" if you think prices on average will stay the same.

----------Page Break----------

Display This Question: If Q3-1 != Stay the same

Q3-2-2 Would that be ${Q3-2/ChoiceTextEntryValue} percent per year, or is that the total value over this 10-year period from May 2023 to May 2033?

o Percent per year
o Total value over the 10-year period

----------Page Break----------

Display This Question: If Q3-1 != Stay the same & Q3-2-2 = Total value over the 10-year period

Q3-2-3 If ${Q3-2/ChoiceTextEntryValue} is the total over this 10-year period, about what percent per year would that be?
o $e{ q://QID445/ChoiceTextEntryValue * 0.10}% per year (that is ${Q3-2/ChoiceTextEntryValue}%/10)
o Other, please specify
----------Page Break----------

Display This Question: If Q3-2-3 = $e{ q://QID445/ChoiceTextEntryValue * 0.10}% <u>per year</u> (that is ${q://QID445/ChoiceTextEntryValue}%/10)

Q3-3.1 So, you expect the price change over this 10-year period to be $e{ q://QID445/ChoiceTextEntryValue * 0.10}% per year. Please retype this number below to pass the validation check.

Display This Question:If Q3-2-2 = Total value over the 10-year period & Q3-2-3 = Other, please specify

Q3-3.2 So, you expect the price change over this 10-year period to be ${Q3-2-3/ChoiceTextEntryValue/3}% per year. Please retype this number below to pass the validation check.

Display This Question: If Q3-2-2 = Percent per year Or If Q3-1 = Stay the same

Q3-4 So, you expect the price change over this 10-year period to be ${Q3-2/ChoiceTextEntryValue}% per year. Please retype this number below to pass the validation check.
----------Page Break----------

Q3-5 How sure are you of your expectations for changes in prices over this 10-year period?
o Very sure
o Somewhat sure
o Somewhat unsure
o Very unsure
----------Page Break----------

The following questions ask about expectations of your economic well-being and your economic outlook in general over the 12-month period from May 2023 to May 2024. These questions have no right or wrong answers - we are interested in your views and opinions.
----------Page Break----------

Q1 **Household total income** is the total income of all members of your household from all sources before taxes and deductions. **By household**, we mean everyone who usually lives in your primary residence (including yourself), excluding non-relatives (e.g., roommates and renters).

Over the 12-month period from May 2023 to May 2024, by what percent do you think your household total income will go up/down? Please give your best guess.
Notes: Please enter a negative number if you think your income will go down and a positive number if you think your income will go up. Please enter "0" if you think your income will stay the same.
----------Page Break----------

Q2 The Fed (central bank) sets the **Federal Funds Rate**, which in turn affects the commercial interest rates on mortgages, bank loans, savings, and so on. It is currently around 4.3%.

Over the 12-month period from May 2023 to May 2024, what do you think the federal funds rate will be on average? Your best guess is fine.

----------Page Break----------

Q3 Currently, how difficult is it for you to predict your household's financial situation over the 12-month period from May 2023 to May 2024?

o very difficult to predict
o moderately difficult to predict
o not difficult at all to predict

----------Page Break----------

The next set of questions ask about your household's spending on durable goods.

Recall: by **household** we mean everyone who usually lives in your primary residence (including yourself), **excluding** those as non-relatives (e.g., roommates and renters).

Durable goods are goods that last in time, including, for instance, cars, electronics, kitchen appliances, furniture, house maintenance, jewelry, etc. Please exclude rent, money saved or invested, and real estate investments like home purchases.

The purchases of durable goods could vary from month to month. While answering the next two questions, please think about your household's **average monthly** spending.

----------Page Break----------

Q0 What was your household's average monthly spending on durable goods in the last 3 months?

Recall: **Durable goods** are goods that last in time, including, for instance, cars, electronics, kitchen appliances, furniture, house maintenance, jewelry, etc. (please **exclude** money saved or invested, rent, and real estate investments like home purchases). Please enter a number in dollars ($) greater than or equal to 0.

----------Page Break----------

Q0-1 Would $${Q0/ChoiceGroup/AllChoicesTextEntry} be your monthly spending, or is it the total spending over the last 3 months?

o Monthly spending
o Total spending

----------Page Break----------

Q1 Now looking ahead, what do you think your household’s average monthly spending on durable goods will be over the next 3 months from February 2023 to May 2023? Please enter a number in dollars ($) greater than or equal to 0.

----------Page Break----------

Q1-2 Would $${Q1/ChoiceGroup/AllChoicesTextEntry} be your monthly spending, or is it the total spending over this 3 months period?

o Monthly spending
o Total spending

----------Page Break----------

Display This Question: If Q1-2 = Monthly spending

Q1-3 So, you plan to spend on average $${Q1/ChoiceGroup/AllChoicesTextEntry} per month on durable goods. Please retype this number below to pass the validation check.

Display This Question: If Q1-2 = Total spending

Q1-4 So, you plan to spend on average $$e{ round(q://QID457/ChoiceGroup/AllChoicesTextEntry / 3) } per month on durable goods (that is $${Q1/ChoiceGroup/AllChoicesTextEntry}/3). Please retype this number below to pass the validation check.

Q1-5
o Monthly spending on durable goods (in $)

----------Page Break----------

How sure are you of your expectations for spending on durable goods over this period?
o Very sure
o Somewhat sure
o Somewhat unsure
o Very unsure

----------Page Break----------

Now, imagine that you have received some information about future prices from a reliable source that you trust. In response to this new information, you update your expectations on prices as follows:

(1) Over the next 3 months from February 2023 to May 2023, you expect the percentage change in prices to be **${Q1-4/ChoiceTextEntryValue}%** (this is the **same** as your initial expectation).
(2) Over the 12-month period from May 2023 to May 2024, you expect the percentage change in prices to be **$e{ ${Q2-2/ChoiceTextEntryValue/1}+3}%** (this is **3%** higher than your initial expectation).
(3) Over the 10-year period from May 2023 to May 2033, you expect the percentage change in prices per year on average to be **${Q3-4/ChoiceTextEntryValue}%** (this is the **same** as your initial expectation).

The table below summarizes your initial expectations and updated expectations on future prices.

Recap:

Expectations on changes in future prices	Over the next 3 months February 2023 to May 2023	Over the 12 month period May 2023 - May 2024	Over the 10 year period May 2023 - May 2033
Initial	*${q://QID313/ChoiceTextEntryValue}%*	${q://QID42/ChoiceTextEntryValue}%	${q://QID46/ChoiceTextEntryValue}% per year
Updated	***${q://QID313/ChoiceTextEntryValue}%***	***$e{ ${q://QID42/ChoiceTextEntryValue/1}+3}%***	**${q://QID46/ChoiceTextEntryValue}% per year**

Please answer the following three questions to check your understanding of your updated expectations. After receiving information from a reliable source, you expect prices over the next 3 months from February 2023 to May 2023, to change by ____ percent.

- o $e{ ${Q1-4/ChoiceTextEntryValue/1}-3}
- o $e{ ${Q1-4/ChoiceTextEntryValue/1}-1}
- o $e{ ${Q1-4/ChoiceTextEntryValue/1}+0}
- o $e{ ${Q1-4/ChoiceTextEntryValue/1}+1}
- o $e{ ${Q1-4/ChoiceTextEntryValue/1}+3}

After receiving information from a reliable source, you expect prices over the 12-month period from May 2023 to May 2024, to change by ____ percent.

- o $e{ ${Q2-2/ChoiceTextEntryValue/1}-3}
- o $e{ ${Q2-2/ChoiceTextEntryValue/1}-1}
- o $e{ ${Q2-2/ChoiceTextEntryValue/1}+0}
- o $e{ ${Q2-2/ChoiceTextEntryValue/1}+1}
- o $e{ ${Q2-2/ChoiceTextEntryValue/1}+3}

After receiving information from a reliable source, you expect prices over the 10-year period from May 2023 to May 2033, to change by ____ percent per year on average.

- o $e{ ${Q3-4/ChoiceTextEntryValue/1}-3}
- o $e{ ${Q3-4/ChoiceTextEntryValue/1}-1}
- o $e{ ${Q3-4/ChoiceTextEntryValue/1}+0}
- o $e{ ${Q3-4/ChoiceTextEntryValue/1}+1}
- o $e{ ${Q3-4/ChoiceTextEntryValue/1}+3}

Next we ask how you would adjust your expectations about your economic well-being and economic outlook over the period from May 2023 to May 2024, in response to the change in your price expectations over the same period. These questions have no right or wrong answers - we are interested in your views and opinions.

----------Page Break----------

Q1 Earlier, you expected your household income to change by ${Q1/ChoiceTextEntryValue}% over the period from May 2023 to May 2024.

In response to the change in your price expectations over the same period (see table below for a recap), how will you adjust your expectations about how much your household income would change?

o Adjust upwards by more than 3%
o Adjust upwards by 3%
o Adjust upwards by less than 3%
o No change
o Adjust downwards by less than 3%
o Adjust downwards by 3%
o Adjust downwards by more than 3%

【Add recap table here】

----------Page Break----------

Q2 Earlier, you expected the average federal funds rates over the period from May 2023 to May 2024, to be ${Q2/ChoiceTextEntryValue}%.

In response to the change in your price expectations over the same period (see table below for a recap), how will you adjust your expectation on the average Federal Funds Rate?

Recall. The Fed (central bank) sets the Federal Funds Rate, which in turn affects the commercial interest rates on mortgages, bank loans, savings, and so on.
o Adjust upwards
o No change
o Adjust downwards

【Add recap table here】

----------Page Break----------

Q3 Earlier, you thought the future financial situation of your household over the period from May 2023 to May 2024, was ${Q3/ChoiceGroup/SelectedChoices}.

In response to the change in your price expectations over the same period (see table below for a recap), you think that predicting the future financial situation of your household becomes
o More difficult
o As difficult as before
o Less difficult

【Add recap table here】

----------Page Break----------

Q4 **In response to the change in your price expectations over the period from May 2023 to May 2024** (see table below for a recap), do you think the outlook for the U.S. economy will improve or worsen over the same period?
o Improve
o No change
o Worsen

【Add recap table here】

----------Page Break----------

Now you have updated your expectations about future prices (as well as expectations about your economic well-being and outlook) after the next 3 months, i.e., over the period from May 2023 to May 2024.

Next, we ask in response to these adjustments, whether and how you will adjust your plans for durable goods spending over the next 3 months, i.e., over the period from February 2023 to May 2023.

These questions have no right or wrong answers - we are interested in your views and opinions.

----------Page Break----------

Q0 Earlier, we asked you about your spending plan on durable goods over the next 3 months.

In response to the change in your expectations about future prices after the next 3 months (see table below for a recap), do you still plan to buy the same type and same amount of durable goods over the next 3 months as in your previous plan?

o I would buy the same type and same amount of durable goods as previously planned
o I would buy different amounts and/or different types of durable goods from previously planned

【Add recap table here】

----------Page Break----------

Display This Question: If Q0 = I would buy different amounts and/or different types of durable goods from previously planned

Q1 You just indicated that, in response to the change in your expectations about future prices after the next three months, you would **not** buy the same type and same amount of durable goods over the next 3 months.

Now think about your dollar spending. Will you change your dollar spending on durable goods over the next 3 months? For your reference, previously you planned to spend on average **$ ${Q1-5/ChoiceGroup/AllChoicesTextEntry}** per month on durable goods over the next 3 months.

o I plan to spend the same dollar amount as previously planned
o I plan to change my dollar spending

【Add recap table here】

----------Page Break----------

Display This Question:Does the following consideration apply to you when making this adjustment?

Q1 You just indicated that, in response to the change in your expectations about future prices after the next three months, you would not buy the same type and same amount of durable goods over the next 3 months.

Now think about your dollar spending. Will you change your dollar spending on durable goods over the next 3 months? For your reference, previously you planned to spend on average $ ${Q1-5/ChoiceGroup/AllChoicesTextEntry} per month on durable goods over the next 3 months.

o I plan to spend the same dollar amount as previously planned

o I plan to change my dollar spending

【Add recap table here】

----------Page Break----------

Display This Question: If Q0 = I would buy different amounts and/or different types of durable goods from previously planned & Q1 = I plan to change my dollar spending

Q1-2 You just indicated that you will change your dollar spending on durable goods over the next 3 months in response to the change in your expectations about future prices after the next 3 months. Do you plan to increase or decrease your spending on durable goods?

o Increase
o Decrease

【Add recap table here】

----------Page Break----------

Display This Question:Does the following consideration apply to you when making this adjustment? & Q1 = I plan to change my dollar spending

To be more accurate, what is your new plan for the household's average monthly spending on durable goods over the next 3 months? Your best guess is fine. For your reference, your previous plan was tospend $ ${Q1-5/ChoiceGroup/AllChoicesTextEntry} per month on durable goods.

Please enter a dollar ($) value greater than or equal to 0.

【Add recap table here】

----------Page Break----------

Q2 We would like to know your thought process in answering the previous question on your new spending plan. What are your considerations in giving the previous answer?

Your response is valuable for this research project. Therefore, **please take your time to respond carefully and in several sentences if needed. Not answering might cause you to be disqualified.**

----------Page Break----------

Increase Channel Display If Q1-2 = Increase

Display This Question: If Q1-2 = Increase

A1 In response to the change in your expectations about future prices after the next 3 months (see table below for a recap), you plan to increase your average monthly dollar spending on durable goods over the next 3 months.

Does the following consideration apply to you when making this adjustment?

"As prices will rise even more after the next 3 months, the return on savings won't be worth as much after the next 3 months, thus saving over the next 3 months becomes less attractive. So, I will buy more durable goods over the next 3 months."

o This consideration applies to me
o This consideration does not apply to me

【Add recap table here】

----------Page Break----------

Display This Question: If Q1-2 = Increase

A2 In response to the change in your expectations about future prices after the next 3 months (see table below for a recap), you plan to increase your average monthly dollar spending on durable goods over the next 3 months.

Does the following consideration apply to you when making this adjustment?

"As prices will rise even more after the next 3 months, I will buy more durable goods over the next 3 months before prices go up even more."

o This consideration applies to me
o This consideration does not apply to me

【Add recap table here】

----------Page Break----------

Display This Question: If Q1-2 = Increase
And If Q1 = Adjust upwards by more than 3% Or Q1 = Adjust upwards by less than 3% Or Q1 = Adjust upwards by 3%

A3 In response to the change in your expectations about future prices after the next 3 months (see table below for a recap), you plan to increase your average monthly dollar spending on durable goods over the next 3 months.

Does the following consideration apply to you when making this adjustment?

"As prices will rise even more after the next 3 months, given that my debt payments are fixed and my income will increase further over this period, I will have more money left after paying my fixed debts. So, I will buy more durable goods over the next 3 months."

o This consideration applies to me
o This consideration does not apply to me

【Add recap table here】

----------Page Break----------

Display This Question: If Q1-2 = Increase And If Q1 = Adjust upwards by more than 3%

A4 In response to the change in your expectations about future prices after the next 3 months (see table below for a recap), you plan to increase your average monthly dollar spending on durable goods over the next 3 months.

Does the following consideration apply to you when making this adjustment?

"As prices will rise even more after the next 3 months, my household income will rise faster than price increases over this period. So, I will buy more durable goods over the next 3 months."

o This consideration applies to me
o This consideration does not apply to me

【Add recap table here】

----------Page Break----------

Display This Question: If Q1-2 = Increase
And If Q1 = Adjust upwards by less than 3% Or Q1 = Adjust upwards by 3%

A5 In response to the change in your expectations about future prices after the next 3 months (see table below for a recap), you plan to increase your average monthly dollar spending on durable goods over the next 3 months.

Does the following consideration apply to you when making this adjustment?

"As prices will rise even more after the next 3 months, my household income will increase further over this period. So, I will buy more durable goods over the next 3 months."

o This consideration applies to me
o This consideration does not apply to me

【Add recap table here】

----------Page Break----------

Display This Question: If Q1-2 = Increase And If Q3 = Less difficult

A6 In response to the change in your expectations about future prices after the next 3 months (see table below for a recap), you plan to increase your average monthly dollar spending on durable goods over the next 3 months.

Does the following consideration apply to you when making this adjustment?

"As prices will rise even more after the next 3 months, my household will face lower financial uncertainty over this period. So, I will buy more durable goods over the next 3 months."

o This consideration applies to me
o This consideration does not apply to me

【Add recap table here】

----------Page Break----------

Display This Question: If Q1-2 = Increase And If Q2 = Adjust downwards

A7 In response to the change in your expectations about future prices after the next 3 months (see table below for a recap), you plan to increase your average monthly dollar spending on durable goods over the next 3 months.

Does the following consideration apply to you when making this adjustment?

"As prices will rise even more after the next 3 months, the Fed (the central bank of the U.S.) will decrease interest rates over this period. Thus, my household can pay less for our variable rate loans over this period. So, I will buy more durable goods over the next 3 months."

o This consideration applies to me
o This consideration does not apply to me

【Add recap table here】

----------Page Break----------

Display This Question: If Q1-2 = Increase

A_all In response to the change in your expectations about future prices after the next 3 months (see table below for a recap), you plan to increase your average monthly dollar spending on durable goods over the next 3 months.

You indicated earlier that the following considerations apply to you. Please allocate 100 points in the table below indicating how much of a reason was for each listed reason. Note that 0 means not a reason at all, 100 means the only reason, and the points in the column should sum to 100.

As prices will rise even more after the next 3 months,

Display This Choice: If A1 = This consideration applies to me

..... the return on savings won't be worth as much after the next 3 months, thus, saving over the next 3 months becomes less attractive. So, I will buy more durable goods over the next 3 months. : _____

Display This Choice: If A2 = This consideration applies to me

..... I will buy more durable goods over the next 3 months before prices go up even more. : _____

Display This Choice: If A3 = This consideration applies to me

..... given that my debt payments are fixed and my income will increase further over this period, I will have more money left after paying my fixed debts. So, I will buy more durable goods over the next 3 months. : _____

Display This Choice: If A4 = This consideration applies to me

..... my household income will rise faster than price increases over this period. So, I will buy more durable goods over the next 3 months. : _____

Display This Choice: If A5 = This consideration applies to me

..... my household income will increase further over this period. So, I will buy more durable goods over the next 3 months. : _____

Display This Choice: If A7 = This consideration applies to me

..... the Fed (the central bank of the U.S.) will decrease interest rates over this period. Thus, my household can pay less for our variable rate loans over this period. So, I will buy more durable goods over the next 3 months. : _____

Display This Choice: If A6 = This consideration applies to me

..... my household will face lower financial uncertainty over this period. So, I will buy more durable goods over the next 3 months. : _____

Other reasons as I mentioned in the previous open-text question. : _____

Total : _____

【Add recap table here】

----------Page Break----------

Decrease Channel Display If Q1-2 = Increase

Display This Question: If Q1-2 = Decrease

B1 In response to the change in your expectations about future prices after the next 3 months (see table below for a recap), you plan to decrease your average monthly dollar spending on durable goods over the next 3 months.

Does the following consideration apply to you when making this adjustment?

"As prices will rise even more after the next 3 months, my existing savings over this period won't be worth as much. So, I will buy less durable goods over the next 3 months."

o This consideration applies to me
o This consideration does not apply to me

【Add recap table here】

----------Page Break----------

Display This Question: If Q1-2 = Decrease And Q1 != Adjust upwards by more than 3% And Q1 != Adjust upwards by 3%

B2 In response to the change in your expectations about future prices after the next 3 months (see table below for a recap), you plan to decrease your average monthly dollar spending on durable goods over the next 3 months.

Does the following consideration apply to you when making this adjustment?

"As prices will rise even more after the next 3 months, my household income will not keep up with the price increases over this period. So, I will buy less durable goods over the next 3 months."

o This consideration applies to me
o This consideration does not apply to me

【Add recap table here】

----------Page Break----------

Display This Question: If Q2 = Adjust upwards And Q1-2 = Decrease

B3 In response to the change in your expectations about future prices after the next 3 months (see table below for a recap), you plan to decrease your average monthly dollar spending on durable goods over the next 3 months.

Does the following consideration apply to you when making this adjustment?

"As prices will rise even more after the next 3 months, the Fed (the central bank of the U.S.) will raise interest rates over this period. As a result, my household must pay more for our variable rate loans over this period. So, I will buy less durable goods over the next 3 months to save up for the higher future payments."

o This consideration applies to me
o This consideration does not apply to me

【Add recap table here】

----------Page Break----------

Display This Question: If Q1-2 = Decrease

B4 In response to the change in your expectations about future prices after the next 3 months (see table below for a recap), you plan to decrease your average monthly dollar spending on durable goods over the next 3 months.

Does the following consideration apply to you when making this adjustment?

"As prices will rise even more after the next 3 months, I will move more money to assets not as affected by rising prices, such as real estate, and buy less durable goods over the next 3 months."

o This consideration applies to me
o This consideration does not apply to me

【Add recap table here】

----------Page Break----------

Display This Question: If Q1-2 = Decrease And Q3 = More difficult

B5 In response to the change in your expectations about future prices after the next 3 months (see table below for a recap), you plan to decrease your average monthly dollar spending on durable goods over the next 3 months.

Does the following consideration apply to you when making this adjustment?

"As prices will rise even more after the next 3 months, my household will face higher financial uncertainty over this period. So, I will buy less durable goods over the next 3 months."

o This consideration applies to me
o This consideration does not apply to me

【Add recap table here】

----------Page Break----------

Display This Question:
If Q1-2 = Decrease
And If Q1 = Adjust downwards by less than 3% Or Q1 = Adjust downwards by 3% Or Q1 = Adjust downwards by more than 3%

B6 In response to the change in your expectations about future prices after the next 3 months (see table below for a recap), you plan to decrease your average monthly dollar spending on durable goods over the next 3 months.

Does the following consideration apply to you when making this adjustment?

"As prices will rise even more after the next 3 months, given that my debt payments are fixed and my household income will decrease over this period, I will have less money left after paying my fixed debts. So, I will buy less durable goods over the next 3 months."

o This consideration applies to me
o This consideration does not apply to me

【Add recap table here】

----------Page Break----------

Display This Question: If Q1-2 = Decrease

B_all In response to the change in your expectations about future prices after the next 3 months (see table below for a recap), you plan to decrease your average monthly dollar spending on durable goods over the next 3 months.

You indicated earlier that the following considerations apply to you. Please allocate 100 points in the table below indicating how much of a reason was for each listed consideration. Note that 0 means not a reason at all, 100 means the only reason, and the points in the column should sum to 100.

As prices will rise even more after the next 3 months .....
Display This Choice: If B1 = This consideration applies to me
..... my existing savings over this period won't be worth as much. So, I will buy less durable goods over the next 3 months. : _____
Display This Choice: If B2 = This consideration applies to me
..... my household income will not keep up with the price increases over this period. So, I will buy less durable goods over the next 3 months. : _____
Display This Choice: If B3 = This consideration applies to me
..... the Fed (the central bank of the U.S.) will raise interest rates over this period. As a result, my household must pay more for our variable rate loans over this period. So, I will buy less durable goods over the next 3 months to save up for the higher future payments. : _____
Display This Choice: If B4 = This consideration applies to me
..... I will move more money to assets not as affected by rising prices, such as real estate, and buy less durable goods over the next 3 months. : _____
Display This Choice: If B5 = This consideration applies to me

..... my household will face higher financial uncertainty over this period. So, I will buy less durable goods over the next 3 months. : _____

Display This Choice: If B6 = This consideration applies to me

..... given that my debt payments are fixed and my household income will decrease over this period, I will have less money left after paying my fixed debts. So, I will buy less durable goods over the next 3 months. : _____

Other reasons as I mentioned in the previous open-text question. : _____

Total : _____

【Add recap table here】

----------Page Break----------

Same Dollar Amount Different Bundle Channel Display If Q1 = I plan to spend the same dollar amount as previously planned

Display This Question: If Q1 = I plan to spend the same dollar amount as previously planned

C1 In response to the change in your expectations about future prices after the next 3 months (see table below for a recap), you plan not to buy the same type and/or same amount of durable goods but spend the same dollar amount on durable goods over the next 3 months.

Does the following consideration apply to you when making this adjustment?

"I have a fixed budget plan and stick with it."

o This consideration applies to me
o This consideration does not apply to me

【Add recap table here】

----------Page Break----------

Display This Question: If Q1 = I plan to spend the same dollar amount as previously planned

C2 In response to the change in your expectations about future prices after the next 3 months (see table below for a recap), you plan not to buy the same type and/or same amount of durable goods but spend the same dollar amount on durable goods over the next 3 months.

Does the following consideration apply to you when making this adjustment?

"I don't have money and cannot borrow to increase my spending."

o This consideration applies to me
o This consideration does not apply to me

【Add recap table here】

----------Page Break----------

Display This Question: If Q1 = I plan to spend the same dollar amount as previously planned

C_all In response to the change in your expectations about future prices after the next 3 months (see table below for a recap), you plan not to buy the same type and/or same amount of durable goods but spend the same dollar amount on durable goods over the next 3 months.

You indicated earlier that the following considerations apply to you. Please allocate 100 points in the table below indicating how much of a reason was for each listed consideration. Note that 0 means not a reason at all, 100 means the only reason, and the points in the column should sum to 100.

Display This Choice: If C1 = This consideration applies to me
I have a fixed budget plan and stick with it. : _____ (16)
Display This Choice: If C2 = This consideration applies to me
I don't have money and cannot borrow to increase my spending over the next 3 months. : _____ (18)
Other reasons as I mentioned in the previous open-text question. : _____ (19)
Total : _____
【Add recap table here】

----------Page Break----------

No Change Channel Display If Q1 = I would buy the same type and same amount of durable goods as previously planned

Display This Question: If Q0 = I would buy the same type and same amount of durable goods as previously planned

D1 In response to the change in your expectations about future prices after the next 3 months (see table below for a recap), you plan to buy the same type and same amount of durable goods over the next 3 months.

Does the following consideration apply to you when you decide not to change your spending plan?

"I have a fixed budget plan and stick with it."
o This consideration applies to me
o This consideration does not apply to me

【Add recap table here】

----------Page Break----------

Display This Question: If Q0 = I would buy the same type and same amount of durable goods as previously planned

D2 In response to the change in your expectations about future prices after the next 3 months (see table below for a recap), you plan to buy the same type and same amount of durable goods over the next 3 months.

Does the following consideration apply to you when you decide not to change your spending plan?

"When I plan my spending decisions over the next 3 months, price changes after the next 3 months do not matter."

o This consideration applies to me
o This consideration does not apply to me

【Add recap table here】

----------Page Break----------

Display This Question: If Q0 = I would buy the same type and same amount of durable goods as previously planned

D3 In response to the change in your expectations about future prices after the next 3 months (see table below for a recap), you plan to buy the same type and same amount of durable goods over the next three months.

Does the following consideration apply to you when you decide not to change your spending plan?

"I don't have money and cannot borrow to increase my spending over the next three months."
o This consideration applies to me
o This consideration does not apply to me

【Add recap table here】

----------Page Break----------

Display This Question :If Q0 = I would buy the same type and same amount of durable goods as previously planned And Q1 = Adjust upwards by 3%

D4 In response to the change in your expectations about future prices after the next 3 months (see table below for a recap), you plan to buy the same type and same amount of durable goods over the next three months.

Does the following consideration apply to you when you decide not to change your spending plan?

"My household income will keep up with price increases over this period. So, I will not change my spending decisions over the next 3 months"
o This consideration applies to me
o This consideration does not apply to me

【Add recap table here】

----------Page Break----------

Display This Question: If Q0 = I would buy the same type and same amount of durable goods as previously planned

D_all In response to the change in your expectations about future prices after the next 3 months (see table below for a recap), you plan to buy the same type and same amount of durable goods over the next 3 months.

You indicated earlier that the following considerations apply to you. Please allocate 100 points in the table below indicating how much of a reason was for each listed consideration. Note that 0 means not a reason at all, 100 means the only reason, and the points in the column should sum to 100.

Display This Choice: If D1 = This consideration applies to me
I have a fixed budget plan and stick with it. : _____
Display This Choice: If D2 = This consideration applies to me
When I plan my spending over the next 3 months, the price changes after the next 3 months do not matter : _____
Display This Choice: If D3 = This consideration applies to me
I don't have money and cannot borrow to increase my spending over the next 3 months. : _____ (18)
Display This Choice: If D4 = This consideration applies to me
My household income will keep up with price increases over this period. So, I will not change my spending decisions over the next 3 months : _____ (20)
Other reasons as I mentioned in the previous open-text question. : _____ (19)
Total : _____

【Add recap table here】

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[Demographic Sections]

【Other questions to elicit other background variable, financial constraints, cognitive reflection test, etc.】