Households' Preferences Over Inflation and Monetary Policy Tradeoffs*

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July 2025

Abstract

We document novel facts about US household preferences over inflation and monetary policy tradeoffs. Many households were attentive to news about monetary policy and to interest rates in 2023. The median household perceives the Federal Reserve's inflation objective to be 3 percent, but would prefer it to be lower. Quantifying the tradeoff between inflation and unemployment, we find an average acceptable sacrifice ratio of 0.6, implying that households are likely to find disinflation costly. Average preferences are well represented by a non-linear loss function with near equal weights on inflation and unemployment. These preferences also exhibit sizable demographic heterogeneity.

Keywords: Household Survey, Attention, Inflation Target, Sacrifice Ratio, Dual Mandate

JEL: D12, E52, E58

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*We thank Carola Binder, Connor Brennan, Oli Coibion, Yuriy Gorodnichenko, Christopher Gust, Benjamin Johannsen, Don Kim, Jesper Lindé, David López-Salido, Bob Tetlow, Michael Weber, Francesco Zanetti, and other participants at the MA ReGroup, the MSU brownbag (Federal Reserve Board), 2024 North American Summer Meeting of the Econometric Society, 2024 CEF Conference, ECB, New York Fed, and Bank of Canada Expectations Surveys, Central Banks and the Economy conference, 2024 Theory and Experiments in Monetary Economics, 2024 ECB and Cleveland Fed Inflation: Drivers and Dynamics conference, and 14th ifo Conference on Macroeconomics and Survey Data for their comments and suggestions. We also thank Olivier Armantier, Wilbert van der Klaauw, and other members of the Survey of Consumer Expectations team at the Federal Reserve Bank of New York for including our questions in their survey and their help with drafting the questions. Jose Nino provided excellent research assistance. The views in this paper are those of the authors and do not necessarily reflect those of the Board of Governors of the Federal Reserve System, the Federal Reserve Bank of Cleveland, or its staff.

1. Introduction

Congress has mandated the Federal Reserve to promote maximum employment, stable prices, and moderate long-term interest rates. This mandate does not specify how to weigh these objectives when they are in conflict. It also leaves open the precise definition of each objective, including the inflation objective. Many central banks around the world have similar objectives. One way to establish such prescriptions is through the use of macroeconomic models, especially those that were built in the New-Keynesian tradition. However, the resulting policy prescriptions vary greatly with the assumptions embedded in these models—for example, the slope of the Phillips curve, the degree of competition in the economy, and the form of households' utility function (Woodford, 2003).

Instead of relying on such models to postulate numerical objectives and their relative weighting, in this paper we ask households directly about their preferences over inflation and monetary policy tradeoffs. We designed a special survey with questions regarding attention to news, interest rate expectations, and preferences and attitudes toward monetary policy. The special survey was fielded in two waves in June 2023 and June 2024 as part of the well-established Survey of Consumer Expectations (SCE) of the Federal Reserve Bank of New York.

Our first finding is that households were paying considerable attention to monetary policy at the time of our surveys. About half of respondents reported paying attention to the federal funds rate at least at a quarterly frequency. More than half of respondents reported paying attention to news about the Federal Reserve at least monthly. The frequency of attention to news about the Federal Reserve significantly increases with educational attainment, reported income, for middle-age respondents, and for male respondents.

Second, we elicited the perceived inflation objective of the Federal Reserve, as well as the subjectively *optimal* inflation rate for the American economy. For the former, we find a median response of 3 percent with a fair degree of disagreement. About one-third of the respondents answered 2 percent, the actual objective pursued by the Federal Reserve.[1] Higher income and more numerate respondents reported a lower perceived inflation objective, while female and Latino American respondents reported a higher perceived inflation objective. Households also displayed significant disagreement about the rate of inflation that they subjectively judge optimal for the American economy. About 70 percent thought a positive inflation rate is optimal and the modal response is 2 percent. However, about 30 percent of all respondents replied that they judged deflation to be optimal.[2] The difference in the perceived and subjectively optimal inflation target is 2 percentage points on average. This difference is higher for Latino Americans and female respondents—who report a higher perceived and a lower subjectively optimal inflation objective—and lower for those with higher educational attainment, income, or retired—who report a lower perceived objective and a higher subjectively optimal objective. Additionally, we document that short- and medium-run

[1] See the FOMC's Statement on Longer-Run Goals and Monetary Policy Strategy.

[2] Shiller (1997) and Stantcheva (2024) report reasons for households' aversion to inflation. Hajdini et al. (2025) and Jain et al. (2024) provide evidence of a labor market account of why people dislike inflation. Also, during the inflation surge in 2021–23, Armantier et al. (2022) observe a sizable increase in households expecting deflation for all forecast horizons in the SCE. Households that expect deflation rationalize their forecasts with price mean reversion and generally expect *better* economic outcomes, not worse.

inflation expectations are strongly correlated with the perceived and especially the subjectively optimal inflation objective.

Third, we introduce the concept of the *acceptable* sacrifice ratio: the increase in unemployment that households would find just acceptable to reduce inflation by 1 percentage point. We quantify the willingness to tradeoff inflation and unemployment by letting respondents compare hypothetical scenarios and identifying combinations of inflation and unemployment that lie on their indifference curves. Our analysis reveals that US households place a considerable weight on the employment side of the Federal Reserve's dual mandate. The average acceptable sacrifice ratio across our respondents is about 0.6, meaning that a 1 percentage point reduction in inflation has to be accompanied by less than a 0.6 percentage point rise in the unemployment rate to leave respondents better off overall. That said, there is considerable non-linearity and heterogeneity in the estimated preferences. Households are more willing to accept higher unemployment to reduce inflation when inflation is high or unemployment is low. Respondents identifying as female, Latino or Black, as well as those reporting lower income or education, tend to place a higher weight on low unemployment relative to low inflation.

The acceptable sacrifice ratio quantifies the willingness of respondents to tradeoff inflation for unemployment, which is distinct from the actual tradeoff in the economy or what we call the *necessary* sacrifice ratio—the increase in unemployment necessary to bring down inflation. The existing literature focuses almost exclusively on the latter. The necessary sacrifice ratio is closely linked to the slope of the Phillips curve and has been estimated using macroeconometric models (see, for example, Ball, 1994, Cecchetti and Rich, 2001, and Tetlow, 2022).[3] Our acceptable sacrifice ratios are much lower than the necessary sacrifice ratios estimated in the literature. Our results imply that the utility gain from a reduction in inflation is likely to be lower than the utility loss from the rise in unemployment that is typically necessary for this reduction. In other words, US households are likely to find disinflation costly.

We use the data on the acceptable sacrifice ratio to estimate a flexible, simple loss function that nests the quadratic loss function widely used in the evaluation of monetary policy strategies and New-Keynesian models. The estimated weight on unemployment is about the same, if not larger, as that on inflation, implying a preference for unemployment stabilization that is much stronger than in the standard New-Keynesian model. This finding has important consequences for the conduct of monetary policy. In the standard New-Keynesian model, optimal monetary policy under our survey-implied preferences reduces unemployment fluctuations at least twofold relative to optimal policy under preferences implied by standard model calibrations.

There is an extensive theoretical literature on the optimal rate of inflation and the relative costs of inflation and unemployment fluctuations, so can we expect to gain any insight from our study given that households are likely ignorant of all this theory? Are they capable of taking into account all the general equilibrium forces necessary to properly evaluate the macroeconomic outcomes we present them? Our view is that most households don't know the theory and don't think in terms

[3] In the limit of very small changes, the acceptable sacrifice ratio can be seen as the marginal rate of substitution between inflation and unemployment, while the necessary sacrifice ratio can be seen as the marginal rate of transformation.

of general equilibrium, but that trained macroeconomists can still learn from them. After all, the purpose of the theory is to describe the preferences of the very people who respond to our questions. We provide a way to directly measure these preferences that we hope will inform theory.

The survey was conducted in an elevated inflation environment and some of the results regarding attention and expectations could depend on this environment. Previous research has shown that the formation of inflation expectations depends on the environment and that households are more attentive to inflation developments in a high-inflation environment (see, e.g., Pfajfar and Žakelj, 2014, Cavallo et al., 2017, and Weber et al., 2025). At the same time, such an environment is particularly relevant for monetary policy. However, inflation and interest rate preferences tend to be more stable than their corresponding expectations (Dräger et al., 2022). In addition, our elicitation of the acceptable sacrifice ratio is not linked to a particular time period.

The remainder of this paper is structured as follows. Section 2 provides a review of the literature. We then present our data and survey design in Section 3 and results in Section 4. Section 5 concludes. An appendix contains the full set of survey questions and various robustness checks.

2. Literature Review

Our paper is related to several strands of the literature on inflation expectations that emerged in the last years. There have been few attempts to ask households and firms about their perceptions of the inflation goal and of monetary policy. One such survey that periodically asks about the FOMC's inflation objective is the Survey of Firms' Inflation Expectations (SoFIE) introduced in Candia et al. (2020). In the second quarter of 2023, the mean value from that survey was 3.1 percent with a standard deviation of 1.3 percent, while in the second quarter of 2024, the mean value was 2.4 percent with a standard deviation of 0.6 percent. These values are close to the mean perceived inflation goal in our survey module, while the standard deviation is a bit lower.[4] Binder and Rodrigue (2018) find that 48 percent of the respondents said they knew the FOMC's inflation objective but only half of these respondents said that the objective was 2 percent.[5] Our responses suggest a slightly higher share of households in June 2023 and June 2024 that answered in line with the FOMC's long-run inflation objective.[6] Our aggregate results are broadly similar to those in Afrouzi et al. (2024), who conducted a survey about the optimal and perceived inflation objective in February and March 2024. Relative to their study, we combine our survey with responses from the SCE, in particular those about inflation expectations, and document a strong link between inflation expectations on the one hand, especially at the longer horizon, and perceived and subjectively optimal inflation objectives on the other hand. Their survey—fielded eight months after our first wave—contains a slightly different question about the subjectively optimal inflation, asking respondents to evaluate

[4] In the SoFIE the perceived inflation objective question is asked once a year and its mean response was in the range between 1.7 and 3.7 percent during the 2018–2024 period.

[5] Binder and Skinner (2023) report that 35 percent of households in their survey correctly identify the FOMC's 2 percent inflation objective. Coibion et al. (2022a) also ask a question about the perceived inflation objective—in 2018 the mean perception was 3.4 percent, close to what we find.

[6] Blinder and Krueger (2004) study the public knowledge about fiscal policy issues and the demand for being informed about these issues.

inflation for them personally compared to evaluating it "for the American economy" as in our survey. This difference likely contributed to their finding that consumers prefer even lower rates of inflation than our results suggest.[7]

Binder (2017) shows that most US households have little knowledge about the names or objectives of Federal Reserve policymakers.[8] Carvalho and Nechio (2014) and Dräger et al. (2016) study the knowledge of US consumers about monetary policy by analyzing the comovement of macroeconomic forecasts. Specifically, they assess whether households (and professionals) are forming expectations that are in line with basic principles embedded in the Taylor rule.[9] Furthermore, Andre et al. (2022) measure perceptions about the effects of macroeconomic shocks on unemployment and inflation by providing households and experts with identical information about various shocks, including federal funds rate shocks, and previous realizations of macroeconomic variables. They find that households' perceptions about the effects of monetary policy shocks (and other shocks) exhibit a large degree of heterogeneity and depend on narratives such as supply- and demand-side mechanisms.

Qualitative polls on preferences over inflation and unemployment have been fielded in various forms since 1935 (Fischer and Huizinga, 1982). In most periods households report that inflation is a more serious problem than unemployment.[10] Shiller (1997) studies preferences and opinions regarding inflation in the US, Germany, and Brazil. Concerns about inflation are often related to worries about a decline in the standard of living, and are connected to concerns with respect to national prestige or trust in public institutions. More recently, Stantcheva (2024) revisits the question of why households' dislike inflation and confirms that the predominant reason for their aversion to inflation is the perception that it diminishes their buying power. The fact that inflation concerns outweigh concerns about unemployment, particularly at times when actual inflation is high, is not incompatible with our results, as we estimate substantial non-linearity in our estimated preferences so that the relative concern about inflation increases with the level of inflation. Moreover, Binetti et al. (2024) find that households seem to not perceive large tradeoffs between inflation and unemployment, implying that their perception of the *necessary* sacrifice ratio is low. As a result, they express a strong preference for inflation-reducing policies. While they may not expect large unemployment increases as a result of disinflation, our results indicate that households would care greatly about these increases were they to materialize.

There are some precursors to our analysis of the perceived inflation-unemployment tradeoff. Di Tella et al. (2001) and Wolfers (2003) calculate a necessary sacrifice ratio from time-series corre-

[7] See results from the Bank of England's survey of macroeconomic preferences, reported in Michelacci and Paciello (2024), for a difference in responses to macroeconomic preferences when asked about personal or economy-wide consequences.

[8] Binder (2017) also summarizes the results from a few other surveys that ask about public awareness of central banks (objectives). In Japan, South Africa, and among the Eurozone countries there are still some households that are unaware of central banks and their duties. van der Cruijsen et al. (2015) and Bottone et al. (2021) assess households' knowledge of the ECB's monetary policy objectives and find that their knowledge is "far from perfect." Kumar et al. (2015) document that managers of New Zealand firms are unaware of who the central bankers are in their country and of the central bank's objectives.

[9] Dräger et al. (2016) assess whether the forecasts are also in line with the Fisher equation and the Phillips curve.

[10] Easterly and Fischer (2001) report that particularly lower-income households often report inflation as their top national concern.

lations of life satisfaction indexes with unemployment and inflation in several countries, but notably excluding the United States due to data limitations. Instead of relying on time-series correlations, our survey module aims at directly eliciting preferences through the evaluation of hypothetical scenarios. Despite this difference in methodology, our estimated average sacrifice ratio for American households, at 0.6, is close to the estimates of Di Tella et al. for European countries. Shiller (1997) asks respondents to choose between a high-inflation and a high-unemployment scenario and finds most respondents choose the latter. However, a quarter of his respondents chose the high-inflation scenario despite the fact that it had an annual inflation rate of 214 percent, which points to a significant preference for low unemployment consistent with our findings. Scheve (2004) studies the share of respondents in a number of international surveys who would like the government to prioritize lowering inflation over lowering unemployment and finds large differences across countries and time.[11] In a survey conducted the same year as our second wave, Binetti et al. (2024) present respondents with a series of binary choices between hypothetical scenarios. Their results point to a stronger relative preference for inflation stabilization than what we find. The difference may be attributable to their assumption of linear preferences, associating their question with a time frame "for the next year in the US"—which may tilt the results toward inflation stabilization given the environment in the US in 2024—and very high values for inflation in the scenarios. Indeed, in line with the assumptions in macroeconomic models, we find strong evidence of curvature in utility, implying that the sacrifice ratio increases with the level of inflation. What sets our paper apart from all of these studies is that we do not infer preferences from binary choices, but instead ask respondents to quantify how much of an increase in unemployment they would tolerate to bring down inflation. While cognitively more demanding, this approach yields direct information on indifference curves that are central to the identification of preferences.[12]

Another strand of the literature that has attracted attention utilizes the randomized control trial (RCT) design, where information treatments often convey information about central bank the inflation objective or other relevant information regarding the pursuit (design) of monetary policy, and studies whether this information has an impact on consumer's inflation expectations and their economic decisions. Several studies find that this information can affect both short-run and medium-run inflation expectations (Coibion et al., 2020, Coibion et al., 2022b, Dräger et al., 2024). Using an RCT design, Coibion et al. (2023b) study the effect of different forms of forward guidance on various macroeconomic forecasts, including communication about the FOMC's inflation objective.[13] D'Acunto et al. (2020) show that communication that focuses on policy targets and objectives rather than on the instruments designed to reach such objectives is more effective, particularly for lower-

[11] Qualitative macroeconomic preferences regarding inflation and interest rates have been studied in Michelacci and Paciello (2024) and Dräger et al. (2022).

[12] Building on our methodology, Georgarakos et al. (2025) let respondents in several countries choose the share of consumption they would be willing to give up to reduce business cycle volatility or inflation. From the responses, they calculate acceptable sacrifice ratios that are remarkably close to ours.

[13] Coibion et al. (2020) document large responses of firm expectations in Italy to information about the inflation target. Similarly, Hunziker et al. (2022) show that firms in Switzerland react to information about the inflation objective of the Swiss National Bank.

income households.[14] Several papers in this literature show that the exogenous variation induced by the information treatments in the context of the RCT results in a meaningful impact on their economic choices.[15]

3. Data

The data used in this paper are part of the Survey of Consumer Expectations (SCE), a nationally representative, internet-based survey of a rotating panel of approximately 1,300 household heads each month. This survey is conducted by the Federal Reserve Bank of New York and focuses primarily on expectations about economic outcomes related to inflation, the labor market, and household finance. Among other characteristics, the survey tracks the respondent's age, income, education, homeownership status, employment history, and region; it also tests for a level of numeracy.[16] Since the SCE launched in 2013, it has become one of the most valuable surveys of household macroeconomic expectations next to the Reuters Michigan Surveys of Consumers. Respondents participate in the main survey for up to twelve months, with a roughly equal number rotating in and out of the panel each month.[17] In addition to regular monthly surveys, the SCE occasionally fields ad-hoc "special surveys" to answer specific policy or research questions. Questions studied in this paper were part of such a special survey that was fielded in June 2023 with 2,155 respondents in total and in June 2024 with 1,002 respondents in total. Household heads who participated in this special survey previously participated in the SCE for the full 12-month tenure as part of the regular monthly survey.[18] The economic environment in June 2023 was characterized by historically high inflation and low unemployment as the US economy emerged from the pandemic of the previous years. In June 2024 inflation moderated somewhat, although it remained elevated, while unemployment increased only marginally compared to June 2023. Interest rates were also at the highest levels in decades during the 2023-24 period.

In Figure 1, we compare the 12-month-ahead inflation expectations of respondents in the June SCE special modules to expectations data from the regular SCE survey and Michigan's Survey of Consumers. For both SCE data and the Michigan survey, we include the interquartile (IQR) range, which we computed by using the quartile interpolation method proposed by Cox (2009) and as done by Armantier et al. (2017). We also include realized inflation as measured by the consumer price index (CPI).[19] Overall, our survey modules were fielded when inflation was elevated, but moderating from the high in the middle of 2022. Point forecasts were broadly similar to those observed in the Michigan survey and the regular SCE data. The IQR in the regular SCE was slightly larger than

[14] In addition, D'Acunto et al. (2021a) report that diverse policy committees have a better likelihood that their communication reaches underrepresented groups.

[15] See, e.g., Coibion et al. (2020, 2023a,b, 2024) as well as Kumar et al. (2023).

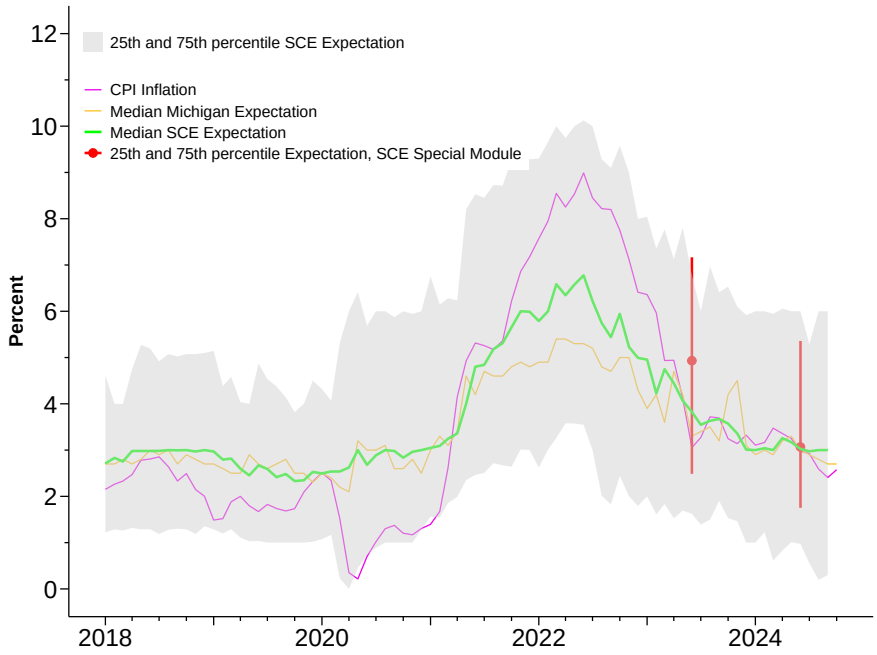
[16] See Appendix B for a description of these variables.

[17] The SCE questionnaire design was subject to extended testing and experimentation between 2006 and 2012; see Armantier et al. (2017).

[18] Note that our participants rotated out of the sample between September 2015 and February 2023. On average they were out of the sample for about 2.6 years for the 2023 wave and 2.8 years for the 2024 wave.

[19] Just as in the Michigan and regular SCE surveys, we do not specify a specific measure of inflation in our questions. Typically, it is assumed that respondents provide answers in terms of CPI inflation.

Figure 1. 12-Months-Ahead Inflation Expectations Comparisons



Note: The chart shows the IQR range of the 12-months-ahead inflation expectation of the monthly SCE survey (shown by the green line and shaded region) and the June 2023 and June 2024 SCE special modules (shown by the red bands). Both ranges use the Cox (2009) quartile interpolation method to compute the 25^{th}, 50^{th}, and 75^{th} percentiles. Michigan's Survey of Consumers (purple line) and headline CPI inflation (orange line) are both monthly series pulled directly from FRED.

those observed in our special modules; thus, we proceed with studying the potential learning effects associated with participating in several (regular) survey waves as well as the effect of the time between the last participation in the survey and our survey waves. While the literature on survey expectations provides evidence of the learning effect for inflation expectations (see, e.g., Kim and Binder, 2023, and Braitsch et al., 2024), we find some learning effects that explain the cross-sectional variation in short-run inflation expectations, as other papers did in the literature, as well as small learning effects on the perceived inflation goal, but no effect on subjectively optimal inflation after controlling for sociodemographic characteristics. The effects on the perceived inflation goal are only marginally significant for those who were "out of sample" for longer than 4 years (25 percent of our sample) and for those who previously participated in a full rotation and at least one special module (6.7 percent of our sample).[20] In addition, we find no evidence that these learning effects explain the cross-sectional heterogeneity in the tradeoff between inflation and unemployment.[21]

The design and wording of our questions follow standard practice in the literature, and staff at the Federal Reserve Bank of New York helped us ensure consistency with the design principles of the SCE. One methodological aspect that sets us apart from other studies is that we ask respondents

[20] These results are available in Appendix Table A2. Those who were "out of sample" for longer than 4 years and for those who previously participated in a full rotation and at least one special module report a lower perceived inflation objective.

[21] See Appendix Table A4.

to state a macroeconomic scenario that would make them indifferent to a second scenario. We can use this information to estimate preferences over inflation and unemployment.

Respondents saw the questions analyzed here in the same order as in this paper: First, they were asked about their attention to macroeconomic information, then about their perceived and subjectively optimal inflation objective, and finally about the acceptable tradeoff between inflation and unemployment. In addition, they were asked a number of other questions that are not part of this paper. These additional questions concerned interest rate expectations, confidence in the Federal Reserve's achieving its objectives, concerns about inflation and unemployment, and preferences over interest rates relative to inflation and unemployment.[22] The full set of questions that we included in the special survey is available in Appendix D.

4. Results

We begin by studying the determinants of attention to various macroeconomic news and news about the Federal Reserve. We then investigate preferences over inflation and views of the optimal level of inflation. Finally, we quantify the tradeoff between stabilizing unemployment and inflation, and illustrate the importance of our results for monetary policy design.

4.1. Attention to News about Federal Reserve and Macroeconomy

In this paper, we ask households directly about their preferences over aggregate inflation and unemployment, which are potentially difficult macroeconomic concepts for at least some households. Our questions are central to the mission of the Federal Reserve, but not necessarily central to all households when making economic decisions. A natural concern about our approach is therefore that households are not equipped to answer such complex questions because they are not paying attention to macroeconomic aggregates or monetary policy. To alleviate this concern, we elicit the frequency of attention paid to different macroeconomic variables, interest rates, and policy news. We find that in the first wave of our survey, conducted in the high-inflation environment of 2023, households paid considerable attention to the macroeconomy and monetary policy.[23] Here, we present a subset of the results (see Appendix C for the full set of results).

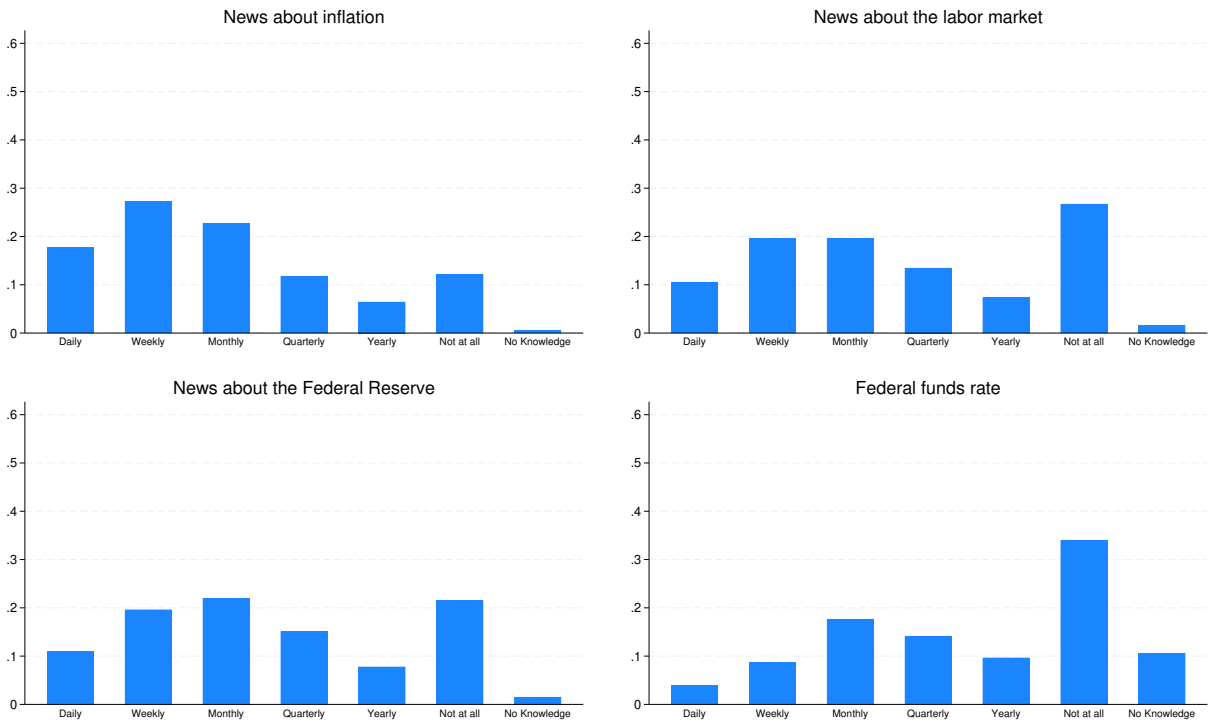
We asked respondents, "How often do you pay attention to the following": followed by a list of pieces of information, including the "federal funds rate," "news about the Federal Reserve," "news about the labor market," and "news about inflation," among others. For each item, respondents could choose whether they paid attention to it "Daily," "Weekly," "Monthly," "Quarterly", "Yearly," or "Not at all." They could also select "I don't know what this is."

Figure 2 displays the frequency of attention to the four mentioned pieces of macroeconomic information. The top left panel shows the attention paid to news about inflation. A full 69 percent of respondents indicated that they paid attention to news about inflation at least monthly, and only

[22] While the responses on this last topic did not allow for firm conclusions, they indicated that there is no strong relationship between a preference for lower interest rates and preferences over inflation and unemployment outcomes.

[23] We only elicited attention in the first survey wave in June 2023.

Figure 2. Attention to Inflation, the Labor Market, and Monetary Policy.



Note: Shares of total survey responses to Question 1: "How often do you pay attention to the following: [...]". Distributions are weighted by sample weights. This set of questions was only fielded in the June 2023 wave with $N = 2119$ respondents.

13 percent indicated that they did not pay attention to news about inflation at all. This high level of attention is consistent with the idea that households are more attentive to inflation developments in a high-inflation environment, as was the case in 2023. The top right panel shows attention paid to news about the labor market. The levels of attention are lower than for inflation but still high: 50 percent of respondents reported paying attention to news about the labor market at least monthly.

The lower two panels show attention paid to news about the Federal Reserve and its main policy instrument, the federal funds rate, respectively. Only 10 percent of respondents were not aware of what the federal funds rate is and only 1 percent of households had no knowledge about the Federal Reserve; 79 percent of households reported paying some attention to news about the Federal Reserve, and about 55 percent of households paid some attention to the federal funds rate. This finding is in contrast to previous research that indicates that households may not be aware of the policy rate or the institution that sets it (Binder, 2017).

Looking at the intensive margin of attention, we find that households pay attention to monetary policy quite frequently. About 31 percent of households heard news about the Federal Reserve at least weekly and 12 percent reported paying attention to the federal funds rate at least weekly. While perhaps surprising, the magnitudes of attention we report are in line with some previous findings in the literature. For example, Coibion et al. (2023c) report that the share of people who

had heard news about monetary policy in the last week fluctuated between 26 and 34 percent over time in 2020.[24]

Observable demographic characteristics explain some of the variation in levels of attention. In the appendix, we document that attention to macroeconomic information, including to monetary policy, significantly increases with educational attainment and reported income. Younger and female respondents generally tend to pay less attention to macroeconomic information. These patterns match those documented in the inflation expectations literature that studies which households forecast more accurately, consistent with a link between attention and forecast accuracy.[25]

4.2. Perceived Inflation Objective and Subjectively Optimal Inflation

We now describe respondents' perception of the Federal Reserve's inflation objective as well as their subjective assessment of the optimal rate of inflation. These objects matter for monetary policy for several reasons. First, we show that both the perceived and the subjectively optimal inflation objective influence households' inflation expectations. Second, respondents' views of the perceived objective give a sense of the credibility of the Federal Reserve's actual inflation objective of 2 percent. Third, the subjectively optimal inflation rate reveals to what extent the Federal Reserve's inflation objective is aligned with households' stated preferences. Finally, our survey allows us to study the demographic determinants of these views.

Prior to seeing our questions, respondents were already asked about their inflation expectations at different horizons. We then asked them: "What do you think is the annual rate of inflation that the Federal Reserve is trying to achieve on average [over the five-year period starting five years from now]?" After that, we asked them about their subjective view of the optimal inflation objective: "Now we would like you to think of the rate of inflation that would be best for the American economy [over the five-year period starting five years from now]. What do you think is this rate of inflation?"[26] The specification to think of what is best "for the American economy," not for respondents personally, is important. From a household perspective, lower prices are always preferable to higher prices, but that is not the case for the economy as a whole.

When asked about the perceived inflation objective of the FOMC over the long run (for the period between 5 and 10 years from the time of the survey), the median response was 3 percent

[24] It is possible that the high levels of attention among respondents are caused in part by the fact that our sample consists of people who already participated in the regular SCE for 12 months, making them more informed than the general population. Kim and Binder (2023) find evidence for this "learning-through-survey" effect. However, many respondents took the regular survey several years before participating in our module, and we find no correlation between the level of attention and the time since taking the regular survey for these questions.

[25] Some of the earlier contributions include Jonung (1981), Bryan and Venkatu (2001), and Pfajfar and Santoro (2009). These papers show higher levels of both perceived and expected inflation for women, low education, and low-income groups, with a u-shaped effect of age where young and old respondents have higher expectations than middle-age respondents (Malmendier and Nagel, 2016), a robust finding across different countries and time spans.

[26] The bracketed term specifying the time horizon for the subjectively optimal inflation objective was not present in our first survey wave. We made the question more precise in response to concerns that respondents, in particular those who preferred deflation over inflation, may have thought about the short run when answering the question, rather than the medium to long run. If our concern were relevant, we would have expected that the specification of the time frame in the question would have reduced the share of respondents preferring deflation over inflation. However, this share actually increased somewhat in the second wave.

Table 1: Perceived and Subjectively Optimal Inflation Objectives

	2023 wave			2024 wave		
	perceived	optimal	difference	perceived	optimal	difference
median	3	.82	2	2.5	2	1
mean	3.2	.84	2.2	3.1	.69	2.1
sd	1.6	1.6	2.3	1.9	2.7	2.8
skewness	1.2	.46	.89	2.3	-.8	1
min	0	-3.3	-8	0	-5	-8
max	12	10	14	13	10	15
N	1927	2017	1934	930	929	899

Note: "Perceived objective" refers to Question 3: "What do you think is the annual rate of inflation that the Federal Reserve is trying to achieve on average [over the five-year period starting five years from now]?" ($N = 2857$) "Optimal objective" refers to Question 7: "Now we would like you to think of the rate of inflation that would be best for the American economy [over the five-year period starting five years from now]. What do you think is this rate of inflation?" ($N = 2946$; an additional 122 respondent chose the answer "The rate of inflation does not matter for the American economy.") For respondents who answered that deflation would be optimal in the first survey wave, the optimal rate of deflation is predicted using the Tobit regression in Column (5) of Table A6. "Difference" is the difference between Columns (2) and (1) and between (6) and (5). All statistics are computed using Huber (1964) and sample weights.

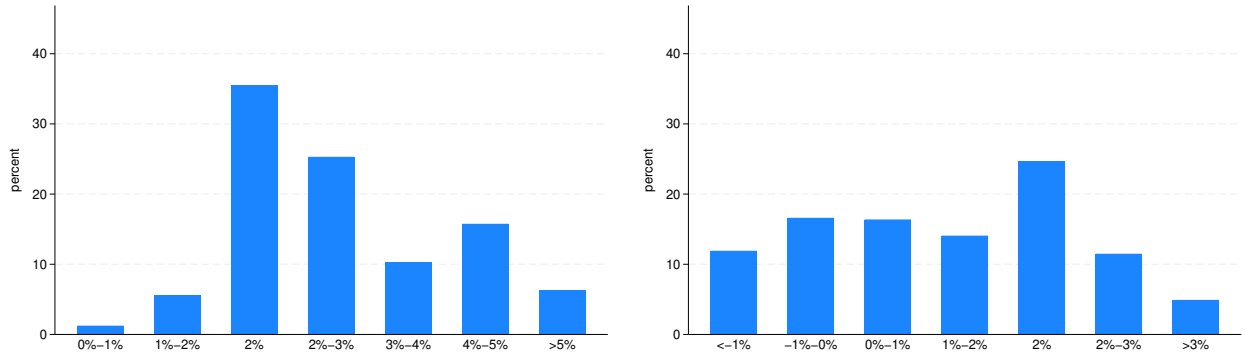
in June 2023 and 2.5 percent in June 2024 with the mean in both surveys just above 3 percent. Summary statistics are reported in Table 1. As can be seen in the left panel of Figure 3, there is substantial disagreement among these responses, where only about one-third of the respondents reported the actual inflation objective, 2 percent, as set by the FOMC. This panel also shows that a substantial share of respondents perceive that the Federal Reserve is pursuing an inflation objective of above 5 percent.[27]

In addition to the perceived inflation objective of the FOMC, we asked participants about their subjective view of the rate of inflation that would be best for the American economy. The median subjectively optimal inflation objective is 0.82 percent in June 2023 with a mean of 0.84 and 2 percent in June 2024 with a mean of 0.69, as shown in columns (2) and (5) of Table 1. Mean answers for subjectively optimal inflation are notably lower than the FOMC's inflation objective. Across the two waves, about 30 percent of households indicated that they believe deflation is optimal for the American economy. This response may reflect a personal finance perspective, with respondents believing it would be optimal if the "price level" returned to its pre-inflation surge level. It is also possible that these households believe it is optimal for the central bank to pursue average inflation targeting or price level targeting, where past inflation influences the "optimal" inflation rate in the present and future. Remarkably, as shown in the right panel of Figure 3, the median response to this question is 2 percent, although about a third of the respondents think that inflation should be between 0 and 2 percent. The distribution of the subjectively optimal inflation is quite dispersed.

We then study the difference between perceived and optimal objective. As a first step, Columns (3) and (6) of Table 1 report the difference between the perceived and optimal goal for the first and

[27] Ehrmann et al. (2017) present evidence that consumers' attitudes like optimism and pessimism regarding the economic outlook also influence the level of inflation expectations and other answers in the survey. D'Acunto et al. (2022) and D'Acunto et al. (2021b) note that daily grocery shopping experiences and observation of gasoline prices influence beliefs about inflation. It is possible that a higher perceived long-run inflation objective may be a product of "visibly" higher inflation in June 2023 and June 2024.

Figure 3. Distribution of Perceived and Subjectively Optimal Inflation Objectives



(a) Perceived objective.

(b) Subjectively optimal inflation.

Note: "Perceived objective" refers to Question 3: "What do you think is the annual rate of inflation that the Federal Reserve is trying to achieve on average [over the five-year period starting five years from now]?" ($N = 2857$) "Optimal objective" refers to Question 7: "Now we would like you to think of the rate of inflation that would be best for the American economy [over the five-year period starting five years from now]. What do you think is this rate of inflation?" ($N = 2946$; an additional 122 respondent chose the answer "The rate of inflation does not matter for the American economy.") The 2% bin contains responses of exactly 2 percent. Bins above 2% exclude the lower bound of the bin range, while bins below 2% exclude the upper bound of the bin range. All distributions are weighted using Huber (1964) and sample weights.

second wave, respectively. The mean difference between the perceived and optimal goal is about 2 percentage points. These results show that there exists a sizable difference between the perceived and optimal objective.

Afrouzi et al. (2024) also conducted a survey about the optimal and perceived inflation objective nine months after our first wave. One important difference is that our question for optimal inflation explicitly asks about the inflation that is "best for the American economy," while their question asks what rate of inflation "would you prefer." They also find that a significant share of consumers prefer deflation and their mean values for subjectively optimal inflation are meaningfully lower than ours and close to 0. While both questions are interesting, it is important to consider these differences when interpreting the results, as the sociodemographic determinants of these two measures are quite different.[28] Our results are also consistent with Coibion et al. (2022a), whose 2018 survey contains a question about the perceived inflation objective. The similarity in these results indicates that the perceived and subjectively optimal inflation objective are relatively stable over time, at least in recent years.

[28]See Michelacci and Paciello (2024) and Dräger et al. (2022) for the importance of distinguishing between "best for the American economy" and "best for you and your family" when asking about macroeconomic preferences. Consumers tend to think differently about inflation when specifying "for the economy," implying some understanding of benefits of positive but low inflation. In fact, one would expect lower average responses for inflation preferences when asking about "best for you and your family" compared to asking about "best for the American economy." Afrouzi et al. (2024) indeed find lower mean values for subjectively optimal inflation.

Table 2: Determinants of Inflation Expectations and Objectives

	(1) perceived objective	(2) optimal objective	(3) difference	(4) 2-year exp.	(5) 1-year exp.
2-year exp.					0.81***
					(0.01)
perceived objective				0.40***	0.10***
				(0.04)	(0.02)
optimal objective	0.04**			0.46***	0.03*
	(0.02)			(0.04)	(0.02)
income	-0.01**	0.03***	-0.03***	-0.06***	-0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
education	-0.03**	0.16***	-0.16***	0.02	0.06***
	(0.01)	(0.02)	(0.02)	(0.04)	(0.02)
high numeracy	-0.42***	-0.12	-0.38**	0.33	-0.02
	(0.09)	(0.10)	(0.15)	(0.24)	(0.13)
homeowner	0.16*	0.65***	-0.02	0.67***	-0.36***
	(0.09)	(0.10)	(0.15)	(0.23)	(0.12)
unemployed	-0.20	0.15	-0.71*	-0.62	0.08
	(0.16)	(0.34)	(0.40)	(0.59)	(0.38)
business owner	-0.03	-0.54**	0.48	0.18	0.36*
	(0.14)	(0.23)	(0.31)	(0.51)	(0.21)
student	-0.16	0.10	-0.66	-1.99**	0.85**
	(0.24)	(0.50)	(0.42)	(0.80)	(0.37)
retired	-0.22**	0.44***	-0.50***	0.49*	0.08
	(0.11)	(0.13)	(0.17)	(0.28)	(0.15)
under 35	-0.09	-0.64***	0.32*	0.35	-0.11
	(0.10)	(0.12)	(0.17)	(0.26)	(0.13)
over 55	-0.03	0.68***	-0.64***	-0.21	0.03
	(0.10)	(0.12)	(0.17)	(0.26)	(0.14)
female	0.24***	-0.73***	0.87***	0.00	-0.19*
	(0.07)	(0.09)	(0.12)	(0.18)	(0.10)
Latino	0.47***	-0.46***	0.60**	0.38	0.19
	(0.15)	(0.18)	(0.29)	(0.46)	(0.25)
Black	0.05	-1.21***	0.68***	-0.40	-0.07
	(0.15)	(0.16)	(0.25)	(0.35)	(0.18)
Native	-0.24	1.68***	-1.51***	0.44	-0.03
	(0.20)	(0.25)	(0.40)	(0.55)	(0.23)
Asian	-0.08	0.89***	-1.05***	-0.28	0.11
	(0.11)	(0.16)	(0.14)	(0.35)	(0.18)
Pacific	1.18***	0.27	0.31	-0.40	0.78
	(0.28)	(0.72)	(0.81)	(0.82)	(0.65)
other race	-0.08	-0.57*	0.03	0.04	-0.02
	(0.18)	(0.33)	(0.41)	(0.66)	(0.32)
2024 wave	-0.29***	-0.57***	-0.12	-0.11	-0.57***
	(0.07)	(0.12)	(0.13)	(0.19)	(0.10)
Constant	3.77***	-1.78***	5.05***	0.57	0.34
	(0.23)	(0.26)	(0.37)	(0.61)	(0.31)
Observations	2706	2919	2832	2872	2811
R^2	0.101	0.251	0.171	0.427	0.874

Note: "Perceived objective" refers to Question 3: "What do you think is the annual rate of inflation that the Federal Reserve is trying to achieve on average [over the five-year period starting five years from now]?" "Optimal objective" refers to Question 7: "Now we would like you to think of the rate of inflation that would be best for the American economy [over the five-year period starting five years from now]. What do you think is this rate of inflation?" "Difference" is the difference between perceived and optimal objective. "1-year exp." is the expectation for the rate of inflation between the time of the survey and one year from the survey date. "2-year exp." is the expectation for the average annual rate of inflation between the time of the survey and two years from the survey date. Robust standard errors in parentheses. Each regression is weighted using Huber (1964) and sample weights. *** p<0.01, ** p<0.05, and * p<0.1.

To better understand the determinants of the perceived and subjectively optimal inflation objective and its difference, we study whether socioeconomic characteristics and attention to news about monetary policy and the macroeconomy can explain perceptions and preferences regarding inflation. We further look at their correlation with inflation expectations. Results are reported in Table 2. The determinants of the perceived inflation objective are reported in Column (1). We observe that households with higher income and higher educational attainment tend to report a lower perceived inflation objective. However, homeowners and female respondents report a higher inflation objective, similar to a phenomenon that has been extensively documented for inflation expectations (see, e.g., Jonung, 1981, Bryan and Venkatu, 2001, or Pfajfar and Santoro, 2009). Somewhat surprisingly, respondents who are retired or over 65 years of age report lower values for the perceived inflation objective, possibly due to higher exposure to the news about the actual inflation rate via COLA adjustments of Social Security payments. The optimal and perceived inflation objectives are positively correlated. A 1 percentage point higher subjectively optimal inflation objective predicts a 0.04 percentage point higher perceived inflation objective. In the June 2024 wave, consumers reported about a 0.3 percentage point lower perceived objective on average than in the June 2023 wave, possibly indicating a positive correlation of the perceived objective with current inflation.[29]

The determinants of the subjectively optimal inflation objective are detailed in Column (2) of Table 2. Our set of explanatory variables explains a higher share of cross-sectional variation in the reported subjectively optimal inflation objective than in the perceived inflation objective. Homeowners, more educated, and higher-income households report higher values for the subjectively optimal inflation objective. When homeowners have a fixed-rate mortgage—the majority of mortgages in the US—it is in their interest to have higher inflation realizations, because the real value of their debt decreases with high inflation. This result also suggests that, despite the question asking explicitly for the optimal inflation objective for the American economy, some respondents may be influenced by their personal interest. To evaluate the two conjectures regarding why consumers think deflation may be optimal, the difference across income and education may indicate that it is more likely that consumers who prefer deflation have in mind the return to the pre-pandemic price level than the optimality of average inflation targeting, which is a sophisticated concept that may resonate better with more educated and higher-income consumers. In addition, female consumers report lower subjectively optimal inflation. A higher perceived objective and a lower optimal objective for female participants is in line with the evidence on negative correlation between expectations and preferences for inflation observed in the data (Dräger et al., 2022). Native Americans and Asian Americans have higher subjectively optimal inflation, while Latino Americans and Black Americans have lower subjectively optimal inflation than Caucasian Americans. Subjectively optimal inflation also has a strong correlation with age: Younger households seem to have a strong aversion to inflation, reporting low values of subjectively optimal inflation, while older households report significantly higher values—closer to the FOMC's inflation objective— especially

[29] In the first survey wave we can also assess the role of exposure to news. Results are reported in Table A6. We find that the frequency of attention to news is not correlated with the perceived inflation objective, including the frequency of attention paid to news about the Federal Reserve. In addition, in this table we can see that those who think deflation is optimal have more than 1 percentage point higher perceptions of the FOMC's inflation objective.

when we take into account the effects of both age and a retirement indicator.[30] Interestingly, the second wave respondents, when inflation was significantly lower, report a more than 0.5 percentage point lower subjectively optimal inflation. This result may be an additional signal that consumers think in terms of "price level" as discussed above.[31]

The difference between the perceived and subjectively optimal inflation objective is shown in Column (3). The difference between the perceived and subjectively optimal inflation objective negatively correlates with educational attainment, income, older, and retired consumers and positively with female and younger respondents.

Is there a correlation between households' perceived and subjectively optimal inflation objectives and their inflation expectations? Yes, as shown in Column (5) for one-year-ahead inflation expectations and in Column (4) for two-years-ahead inflation expectations. Starting with the latter, a 1 percentage point increase in the perceived or subjectively optimal inflation objective predicts about a 0.4 percentage point increase in two-year inflation expectations. After controlling for the optimal and perceived inflation objective, two-years-ahead inflation expectations are negatively correlated with income and for students and positively with homeownership and for retirees. There is no significant difference among expectations between the first and second survey wave.

The cross-section of one-year-ahead inflation expectations can be explained in a similar way, as shown in Column (5). The direct effect of a 1 percentage point increase in the perceived or subjectively optimal inflation objective is 0.1 and 0.03 percentage points, respectively. But these short-term expectations depend strongly on longer-term expectations: The coefficient on two-year expectations is about 0.8. Combining this number with the effects of inflation objectives in Column (5), the total effect of a 1 percentage point increase in either the perceived or the subjectively optimal inflation objective is again about 0.4 percentage point. After controlling for the optimal and perceived inflation objective, educational attainment, and student status is positively correlated with short-run inflation expectations while indicators for homeownership and female consumers are negatively correlated with one-year-ahead inflation expectations. In line with professional forecasts and prevailing levels of inflation, one-year-ahead inflation expectations are lower in the June 2024 wave than in the June 2023 wave.

In Table A6, we also study the determinants of five-years-ahead inflation expectations for the June 2023 wave, where the correlation with subjectively optimal inflation is even stronger. The subjectively optimal inflation objective has a much higher correlation than perceived objective for five-years-ahead inflation expectations, where a 1 percentage point increase in subjectively optimal inflation is associated with an 88 basis points increase in medium-run inflation expectations. This high correlation is a good sign from the perspective of anchoring of these expectations. However, five-years-ahead inflation expectations would also ideally coincide with the perceived inflation objective

[30] Note that demographic determinants of subjectively optimal inflation depend on the exact wording of the question asked (personal vs. for the American economy). For example, the correlations between socioeconomic variables and subjectively optimal inflation in Afrouzi et al. (2024) are quite different than those report in this paper.

[31] This result is somewhat different than the summary statistics would suggest in Table 1. In fact, if we did not consider Huber weights the effect of the 2024 wave would become insignificant, suggesting that the demographic structure of "outliers" may be different across the two waves. Additionally, in the June 2023 wave subjectively optimal inflation negatively correlates with the frequency of news about the Federal Reserve reported, as shown in Table A6.

and not just with subjectively optimal inflation. These results indicate that there is still room for improvement there, as medium-run expectations do not coincide with both the optimal and the perceived inflation objective. Furthermore, one could also see benefits in reducing the heterogeneity of these perceptions, potentially through effective communication.[32]

4.3. Quantifying the Tradeoff Between Inflation and Unemployment

The Federal Reserve Act mandates that the Federal Reserve conduct monetary policy "so as to promote effectively the goals of maximum employment, stable prices, and moderate long-term interest rates." The act leaves it up to policymakers to decide how much weight to assign to each of these objectives. Several other central banks have similar legislative objectives, though some impose hierarchy over the objectives. In macroeconomic models, the weights assigned to the objectives are chosen so as to maximize household utility, for which several functional and parametric assumptions are made. Instead of relying on a model, we ask US households directly about their relative preference for inflation and unemployment. Our findings are the first direct evidence of the subjective relative weighting of the Federal Reserve's objectives by the people it serves.[33]

The relative preference over inflation and unemployment is paramount for monetary policy because of the tradeoff between these two objectives: A reduction in inflation through tighter monetary policy is widely thought to engender an increase in unemployment through a Phillips curve-type relationship. In New-Keynesian models, optimal monetary policy minimizes a loss function representing household preferences for stable inflation and efficient resource utilization, subject to a Phillips curve. While much research has been devoted to the empirics of the Phillips curve, much less has been devoted to the empirics of macroeconomic preferences.

We ask respondents to quantify their relative preference for inflation and unemployment stabilization, independent of current economic circumstances. We do so in two steps.

In the first step, respondents are presented two hypothetical scenarios. In Scenario A, inflation π_{Ai} is low but unemployment u_{Ai} is high. In Scenario B, inflation π_{Bi} is high but unemployment u_{Bi} is low. Respondents see the following text, where the numbers are examples: "Now think about how inflation and unemployment affect you and your family personally. Think of two hypothetical scenarios. In Scenario A, the rate of inflation is 2%, but the unemployment rate is 8%. In Scenario B, the rate of inflation is 8%, but the unemployment rate is 5%." The actual combination of numbers shown to each respondent is drawn at random from a set of possible combinations.[34] In addition to

[32]Unlike the short-run inflation expectations, attention to news about inflation and the Federal Reserve are significantly correlated with medium-run inflation expectations. Those respondents who reported a higher frequency of hearing news about the Federal Reserve have lower inflation expectations and those who report hearing inflation news have higher inflation expectations.

[33]In a separate question (see question 10 in Appendix D) we also ask about the tradeoff between interest rates, unemployment, and inflation. The results suggest that consumers consider interest rate preferences as separate and do not necessarily take them into account when thinking about unemployment and inflation.

[34]In the first survey wave, Scenario A has 10 percent unemployment and 0, 2, or 4 percent inflation with equal probability; Scenario B has 10 percent inflation and 3, 5, or 7 percent unemployment with equal probability (and independent of the draw for Scenario B). In the second survey wave, Scenario A has 8 percent unemployment and 0, 2, 4, or 6 percent inflation with equal probability; Scenario B has 8 percent inflation and 3, 5, 7, or 9 percent unemployment with equal probability (and independent of the draw for Scenario B).

the text, the scenarios are also presented to respondents in the form of a table, and accompanied by the question: "Which scenario would be better for you and your family?" This first step is similar to the question studied in Shiller (1997) and Binetti et al. (2024) except that we do not specify a time period. For us, the goal of this step is to prepare them for the next step by getting them used to comparing scenarios involving inflation and unemployment. A summary of responses to this first step is provided in the appendix.

In the second step, we ask respondents: "What rate of unemployment would make Scenario A equally good or bad for you and your family as Scenario B?" With the information about the values for inflation and unemployment in both scenarios still on the screen, they have to enter a new value $\underline{u}_{Ai}$ of the unemployment rate in Scenario A. Because this question is cognitively demanding, every respondent is presented with a verification prompt. Suppose, continuing the example above, that a respondent had entered 9 percent in the second step. They would then see the prompt: "Just to make sure, you are saying that when the rate of inflation is 2% and the unemployment rate is 9%, this is just as good or bad for you and your family as when the rate of inflation is 10% and the unemployment rate is 5%?" They then have the opportunity to revise their answer. This second step is novel and allows us to better identify the perceived tradeoff between inflation and unemployment. While previous research suggested that consumers often implicitly keep their nominal wages fixed when answering certain questions about the cost of inflation (Shiller, 1997 and Stantcheva, 2024) and/or labor market preferences, note that our questions ask for a tradeoff between inflation and unemployment and are deliberately designed to stimulate the thinking about labor market implications of high inflation "for you and your family." Our results suggest that the respondents did not hold nominal wages fixed when answering these questions, as then they would exert a preference that would be primarily concerned with eroding their purchasing power.[35] At the same time, we did not instruct the respondents how to think about the costs of high inflation and the cost of high unemployment or to hold anything fixed when answering this question, as we did not want to impose any particular channel through which inflation and unemployment may affect the respondents. We are asking them for their assessment of how two different macroeconomic situations would affect them and their preferences over these two macroeconomic situations.

Thus, we elicit a value $\underline{u}_{Ai}$ such that respondents are indifferent between the two scenarios. Assuming a utility function $U_i(\pi, u)$ capturing preferences over inflation and unemployment, we define:

$$U_i(\pi_{Ai}, \underline{u}_{Ai}) = U_i\left(\pi_{Bi}, u_{Bi}\right). \tag{1}$$

[35]The bias that would emerge if respondents were thinking that their nominal income is unchanged when answering this question would tend to increase the sacrifice ratios. First, we know that when respondents answer questions about inflation preferences for "you and your family" we tend to receive low responses, even lower than when respondents answer questions about inflation preferences for "the American economy." Second, let's entertain two possible preferences regarding the unemployment rate: (i) if the respondents believed their nominal income is fixed then it should not matter what the level of the unemployment rate is in the economy and thus their answers would be similarly distributed across different randomizations implemented in our question—something that we reject based on the analysis in the paper—or (ii) as the vast majority of respondents in our survey understand that a higher unemployment rate tends to push inflation lower, they could exert a preference for higher unemployment to make it more likely that their purchasing power is maintained, consistent with the answers regarding preference for lower inflation. The latter option results in high acceptable sacrifice ratios, as they prioritize inflation stabilization and in stark contrast to our results that a sizable weight is placed on the unemployment part of the mandate.

Effectively, respondents are offered a reduction in inflation from π_{Bi} to π_{Ai} and are asked to name an increase in the unemployment rate from u_{Bi} to $\underline{u}_{Ai}$ that would be just acceptable to preserve their overall utility. From these responses, we can compute the "acceptable sacrifice ratio" for each respondent as

$$S_i = \frac{\underline{u}_{Ai} - u_{Bi}}{\pi_{Bi} - \pi_{Ai}}. \tag{2}$$

The sacrifice ratio is the increase in the unemployment rate *acceptable* to reduce inflation by 1 percentage point. Most existing studies of the sacrifice ratio instead capture the increase in unemployment that is *necessary* to reduce inflation by 1 percentage point.[36] These two concepts complement each other: The acceptable sacrifice ratio represents the (marginal) rate of substitution between the inflation and unemployment objectives, while the necessary sacrifice ratio represents the (marginal) rate of transformation between the two. When the acceptable sacrifice ratio is greater than the necessary sacrifice ratio, households will tend to perceive disinflation as beneficial, while if it is smaller, then households will tend to perceive disinflation as costly.

Table 3: Summary Statistics for the Acceptable Sacrifice Ratio

	all values		non-negative values	
	all 2023	all 2024	2023	2024
median	.38	.25	.5	.5
mean	.38	.25	.59	.71
sd	.57	.83	.45	.6
skewness	.49	.29	.99	1.4
min	-1.2	-3.5	0	0
max	3.7	4.5	3.7	3.8
N	2070	980	1647	671

Note: The acceptable sacrifice ratio is computed as $S_i = \frac{\underline{u}_{Ai} - u_{Bi}}{\pi_{Bi} - \pi_{Ai}}$ where $u_{Bi}, \pi_{Ai}, \pi_{Bi}$ are values shown to the respondent and $\underline{u}_{Ai}$ is the answer to Question 9: "What rate of unemployment would make Scenario A equally good or bad for you and your family as Scenario B?" Statistics use Huber (1964) and sample weights.

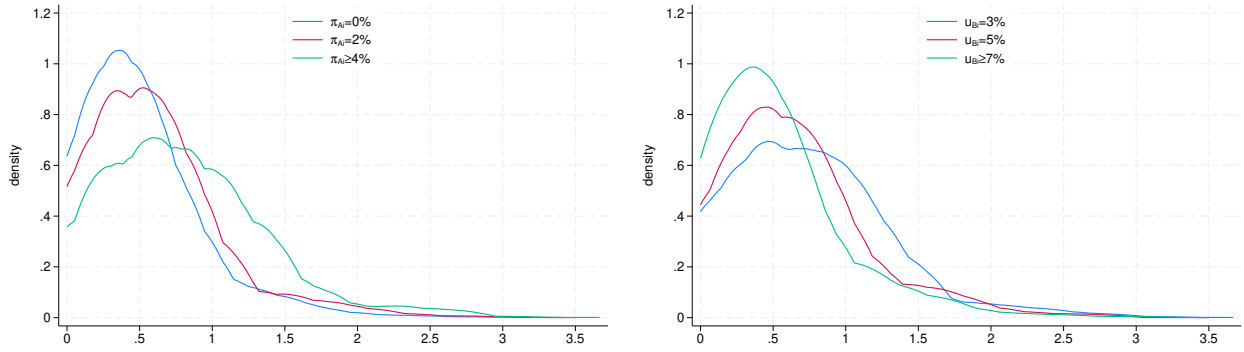
Table 3 contains summary statistics for the acceptable sacrifice ratio. Columns (1) and (2) show all responses from the 2023 and 2024 survey waves, respectively. Medians and means are very close together, while a standard deviation of more than 0.5 points to sizable heterogeneity in preferences among US households. The distribution is skewed to the right: There exists a tail of "hawks" in the population, i.e., consumers who prefer inflation stabilization even when it leads to large increases in unemployment. We also note that the answers of about a fifth of respondents yield negative acceptable sacrifice ratios. At face value, this would imply that these respondents either prefer high inflation to low inflation, or high unemployment to low unemployment. While it is possible that some people may at least locally prefer high inflation or unemployment, it is also possible that these respondents do not view the tradeoff between inflation or unemployment as relevant or that they

[36] See, for example, Ball (1994), Cecchetti and Rich (2001), and Tetlow (2022) for empirical estimates of the necessary sacrifice ratio.

misunderstood the question.[37] We therefore exclude these responses in the subsequent analysis. Columns (3) and (4) show the result of this truncation: The distributions shift somewhat to the right and the skewness becomes somewhat more pronounced.[38]

The main takeaway from this table is that most of the mass of the distribution is to the left of the necessary sacrifice ratios estimated in the literature. The average acceptable sacrifice ratio across the two waves is between 0.6 and 0.7 percentage point of unemployment per percentage point of inflation. Tetlow (2022) finds that the modal necessary sacrifice ratio across 40 models is 3.5, with a mean across models of 8.1, higher than nearly all our survey responses for the acceptable sacrifice ratio.[39] In other words, the preferences of most US households lean heavily toward the employment side of the dual mandate. The typical increase in unemployment necessary to reduce inflation would leave households worse off at least for some time. Our measure of the acceptable sacrifice ratio is in line with indirect evidence for European countries based on life satisfaction indexes (Di Tella et al., 2001) and in line with the evidence in Georgarakos et al. (2025).

Figure 4. Distribution of the Acceptable Sacrifice Ratio



(a) By inflation rate π_{Ai}.

(b) By unemployment rate u_{Bi}.

Note: The acceptable sacrifice ratio is computed as $S_i = \frac{\underline{u}_{Ai} - u_{Bi}}{\pi_{Bi} - \pi_{Ai}}$ where $u_{Bi}, \pi_{Ai}, \pi_{Bi}$ are values shown to the respondent and $\underline{u}_{Ai}$ is the answer to Question 9: "What rate of unemployment would make Scenario A equally good or bad for you and your family as Scenario B?" Densities shown have been obtained with a kernel density smoother using Huber (1964) and sample weights.

[37] One may, for example, think that some business owners may find their financial situation improved when unemployment rises. But our data do not support this idea. The best demographic predictors of the sacrifice ratio being positive are high education or numeracy, being a student, below 35 or indeed a business owner.

[38] We have done extensive analysis of whether any "anchoring" behavior due to the design of our questions influenced the acceptable sacrifice ratios. In particular, we used the values from the first part of the questions, resulting in acceptable sacrifice ratios that were larger than those that we report in this section. We also excluded those answers that stated in the first part of the question that the two scenarios are "about the same". In this case, the acceptable sacrifice ratio is a bit smaller, but qualitatively very similar to those reported in this section. These results, together with the distribution of responses in Figure 5, point to little evidence for "anchoring effects." In addition, using a different question, Georgarakos et al. (2025) obtain acceptable sacrifice ratios very similar to ours.

[39] The sacrifice ratios are estimated in GDP space and converted into unemployment space using an Okun's law coefficient of two. Note also that the time frame of the reduction in inflation and the increase in unemployment matters. For example, a temporary reduction in inflation by 1 percentage point will necessitate a smaller cost than a permanent one. The acceptable sacrifice ratio does not have a time dimension associated with it, as we compare two different economic situations that respondents identified as being on the same indifference curve. Our comparison with the literature can only be approximate.

Figure 4 shows the distribution of S_i, segmented by two key attributes of the scenarios presented to respondents. All the distributions are unimodal and exhibit right skewness, with most responses concentrated at values of S_i below one. In the left panel (Figure 4a), the distribution is segmented by the lower inflation rate π_{Ai} in Scenario A, which respondents compare to the higher inflation rate in Scenario B. A higher value of π_{Ai} thus corresponds to a smaller reduction in inflation from the same initial level. As π_{Ai} increases, the peaks of the distributions shift rightward, and the distributions broaden, indicating greater heterogeneity in preferences at higher levels of inflation but also a greater average willingness to reduce inflation. These patterns imply that respondents view reductions of inflation as more valuable when inflation is high, consistent with increasing marginal disutility of inflation, i.e., $\frac{\partial^2 U}{\partial \pi^2} < 0$.

In the right panel (Figure 4b), the distribution of S_i is segmented by the unemployment rate u_{Bi} in the high-inflation Scenario B. For any given increase in unemployment to reduce inflation, a higher value of u_{Bi} corresponds to a larger overall level of the unemployment rate. As u_{Bi} increases, the peaks of the distributions shift leftward, and the overall spread narrows, indicating a greater concentration of responses at lower values of S_i. This pattern suggests that respondents are less willing to tolerate large increases in unemployment when the initial unemployment rate is already high, consistent with increasing marginal disutility of unemployment, i.e., $\frac{\partial^2 U}{\partial u^2} < 0$.

Table 4 establishes some determinants of the heterogeneity of the acceptable sacrifice ratio among respondents. The first two columns show the two survey waves separately, controlling for the randomized values π_{Ai} and u_{Bi}. The third and fourth columns pool the waves and the fourth column includes dummy variables for each possible combination of randomized values. The coefficients on π_{Ai} and u_{Bi} confirm the findings from Figure 4: S_i depends positively on π_{Ai} and negatively on u_{Bi}, consistent with increasing marginal disutility from inflation and increasing marginal disutility from unemployment.

Furthermore, the table establishes several significant demographic determinants of the relative preference for inflation and unemployment. A higher education level predicts a larger S_i, i.e., a stronger preference for low inflation, as does high numeracy. The unemployed and those with lower income tend to place less relative importance on inflation relative to unemployment, consistent with the predictions of Gornemann et al. (2021). Earlier in our survey, we asked respondents whether they agreed with the statement that "the risk of becoming unemployed is giving my family and me cause for concern at the moment." Respondents who have such "unemployment concerns" tend to have a lower S_i, i.e., a stronger preference for a low unemployment rate.[40] This result suggests that households' individual unemployment risk influences their preferences over aggregate unemployment outcomes.

Additionally, there are some differences in acceptable sacrifice ratios by ethnicity. In particular, Latino and Black or African American households tend to have a stronger preference for low unemployment relative to stable inflation compared to Caucasian Americans, though not always significant. Finally, the age of the respondent also matters. We find that older respondents tend to have a lower sacrifice ratio than younger ones, and the magnitude of the effect is quite strong. This

[40] Appendix B describes the construction of the regressors "inflation concern" and "unemployment concerns".

Table 4: Determinants of the Acceptable Sacrifice Ratio

	(1) 2023 wave	(2) 2024 wave	(3) both waves	(4) both waves
π_{Ai}	0.067***	0.088***		
	(0.008)	(0.011)		
u_{Bi}	-0.057***	-0.044***		
	(0.008)	(0.011)		
perceived target	-0.003	-0.003	-0.003	-0.003
	(0.003)	(0.005)	(0.003)	(0.002)
optimal target	0.008*	0.003	0.006	0.004
	(0.005)	(0.004)	(0.004)	(0.002)
inflation concerns	0.040	0.041	0.038	0.026
	(0.028)	(0.048)	(0.025)	(0.022)
unemployment concerns	-0.045	-0.067	-0.075***	-0.045*
	(0.032)	(0.048)	(0.028)	(0.025)
income	0.003	0.003	0.003	0.003*
	(0.003)	(0.004)	(0.002)	(0.002)
education	0.013**	-0.001	0.010*	0.012**
	(0.006)	(0.010)	(0.006)	(0.005)
high numeracy	0.040	0.111**	0.052*	0.050*
	(0.034)	(0.051)	(0.031)	(0.027)
homeowner	0.014	0.020	0.012	0.021
	(0.031)	(0.048)	(0.028)	(0.024)
unemployed	-0.083	-0.047	-0.017	-0.085
	(0.079)	(0.072)	(0.062)	(0.054)
business owner	0.057	-0.030	0.045	0.061
	(0.082)	(0.109)	(0.069)	(0.064)
student	-0.044	0.040	-0.015	0.043
	(0.099)	(0.131)	(0.078)	(0.070)
retired	-0.007	-0.012	0.005	0.004
	(0.038)	(0.058)	(0.034)	(0.029)
under 35	0.161***	0.069	0.179***	0.104***
	(0.039)	(0.061)	(0.035)	(0.031)
over 55	-0.114***	-0.197***	-0.125***	-0.136***
	(0.034)	(0.058)	(0.031)	(0.027)
female	-0.036	-0.063	-0.055**	-0.035*
	(0.028)	(0.044)	(0.025)	(0.021)
latino	-0.082	-0.119	-0.076	-0.071
	(0.061)	(0.082)	(0.057)	(0.051)
black	-0.028	-0.042	-0.029	-0.057*
	(0.038)	(0.073)	(0.039)	(0.032)
native	0.043	-0.109	0.052	0.023
	(0.105)	(0.181)	(0.088)	(0.088)
asian	-0.007	0.082	0.021	-0.008
	(0.057)	(0.101)	(0.056)	(0.048)
pacific	-0.034	0.069	0.036	0.049
	(0.147)	(0.202)	(0.111)	(0.107)
other race	0.204*	0.251**	0.218**	0.168**
	(0.111)	(0.120)	(0.106)	(0.071)
Scenario dummies	No	No	No	Yes
Observations	1568	630	2205	2188
R^2	0.183	0.233	0.090	0.385

Note: Linear regressions of the acceptable sacrifice ratio $S_i = \frac{\underline{u}_{Ai} - u_{Bi}}{\pi_{Bi} - \pi_{Ai}}$ where $u_{Bi}, \pi_{Ai}, \pi_{Bi}$ are values shown to the respondent and $\underline{u}_{Ai}$ is the answer to Question 9: "What rate of unemployment would make Scenario A equally good or bad for you and your family as Scenario B?" as described in Section 4.3. Negative values of S_i are excluded. Column (3) includes dummies for each possible combination of scenarios shown to respondents. Robust standard errors are in parentheses. Regressions are weighted using sample and Huber weights. *** p<0.01, ** p<0.05, and * p<0.1.

finding may be surprising, as one could expect that older respondents depend less on income from employment and therefore may be willing to accept more unemployment to bring down inflation

than younger respondents.[41] However, the opposite is the case. There are several possible explanations of this result: First, it could be that younger people overweight the recent experience of high inflation in their memory while older people can recall more episodes of both high inflation and high unemployment and thus weigh them more equally. Second, it could also be that older people tend to hold more assets than younger people, so that recent high returns on savings have partially offset the erosion of purchasing power by high inflation. Third, it could be that older respondents are worried about the employment opportunities of their children and grandchildren.

We now proceed to estimate a simple functional form for the preference function. We express the preference as a loss function of the form

$$-U_i(\pi, u) = (\pi - \pi_i^*)^\rho + \lambda(u - u_i^*)^\rho. \tag{3}$$

This form of a loss function has a long history in monetary economics. In the analysis of standard New-Keynesian models, the expected utility of the representative household is approximated by a quadratic loss function of the form above with $\rho = 2$, summed and discounted over time.[42] The weight λ depends on the model parameters but is typically small. The optimal level of inflation is typically $\pi_i^* = 0$ because stable prices imply no price dispersion or adjustment costs in the models. The optimal or "natural" rate of unemployment can be time-varying and represents the efficient level of resource utilization. However, from an individual perspective, a lower unemployment rate is always preferable, all else equal.

We estimate parameters of the loss function via non-linear least squares, by re-arranging the relation (1) to the following form:

$$\underline{u}_{Ai} = u_i^* + \left| |u_{Bi} - u_i^*|^\rho + \frac{|\pi_B - \pi_i^*|^\rho - |\pi_{Ai} - \pi_i^*|^\rho}{\lambda} \right|^{1/\rho} + \varepsilon_i. \tag{4}$$

Table 5 shows results for several variations of this estimation. In Columns (1) and (2), the curvature is restricted to be quadratic ($\rho = 2$). The value of u^* is set to zero, implying that people always prefer lower unemployment for their personal situation. The estimates for the relative weight on unemployment λ in Columns (1) and (2) are around one. These values are an order of magnitude larger than what a standard New-Keynesian model implies, consistent with the relatively low sacrifice ratios discussed above.[43] In Column (1), the optimal inflation rate is set to the FOMC's inflation objective of $\pi_i^* = 2$ percent, while in Column (2) this parameter is estimated. The resulting estimate, at $\pi_i^* = 1.52$ percent, is not significantly different from 2 percent.[44] In Column (3), we additionally estimate the curvature ρ which turns out to be very close to quadratic. In Column (4),

[41] Shiller (1997) indeed finds that older people are slightly more inflation averse and tend to choose more often scenarios that have lower inflation.

[42] See Debortoli et al. (2018) for a discussion of loss functions in New-Keynesian models and an overview of the underlying literature. See also Campolmi and Gnocchi (2016) for optimal policy in a model with unemployment.

[43] For example, under Woodford (2003) calibration, and by using Okun's law, the annualized value of λ equals 0.05. See the next section for details.

[44] Note that the FOMC's inflation objective is specified in terms of PCE price inflation and not CPI price inflation that is a typically assumed response in US surveys. CPI price inflation is on average about a quarter percentage point higher than PCE price inflation.

we also allow the optimal unemployment rate to differ from zero. The resulting estimated value of u^* is 3.02 percent, significantly above zero. At the same time, the weight on unemployment λ is somewhat higher, and the curvature ρ somewhat lower, than in the previous columns. At face value, this preference function implies a preference for higher unemployment when unemployment is below 3.02 percent, but this is an outcome only of the assumed functional form, as there are no data in the estimation sample with an unemployment rate smaller than 3 percent.

Across the first four specifications, the fit of the regression measured by R^2 is similar. The reason is that all right-hand-side variables in Equation (4) vary only with the randomization of the scenarios, while the left-hand-side variable is a response that has substantial heterogeneity. A regression simply fitting dummy variables for each realization of the randomization achieves a similar R^2 as well.

Table 5: Loss Functions Fitted to Survey Responses

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
λ	1.049***	1.183***	1.178***	1.807***	1.571***	1.515***	2.360***
	(0.03)	(0.13)	(0.12)	(0.16)	(0.06)	(0.05)	(0.11)
π^*	2	1.524***	1.591***	1.901***	(optimal)	(optimal)	(optimal)
		(0.44)	(0.42)	(0.27)			
ρ	2	2	1.954***	1.537***	2	1.727***	1.265***
			(0.12)	(0.15)		(0.07)	(0.05)
u^*	0	0	0	3.021***	0	0	3.872***
				(0.48)			(0.12)
R^2	0.157	0.157	0.158	0.160	0.061	0.073	0.091
N	1946	1946	1946	1946	1811	1811	1811

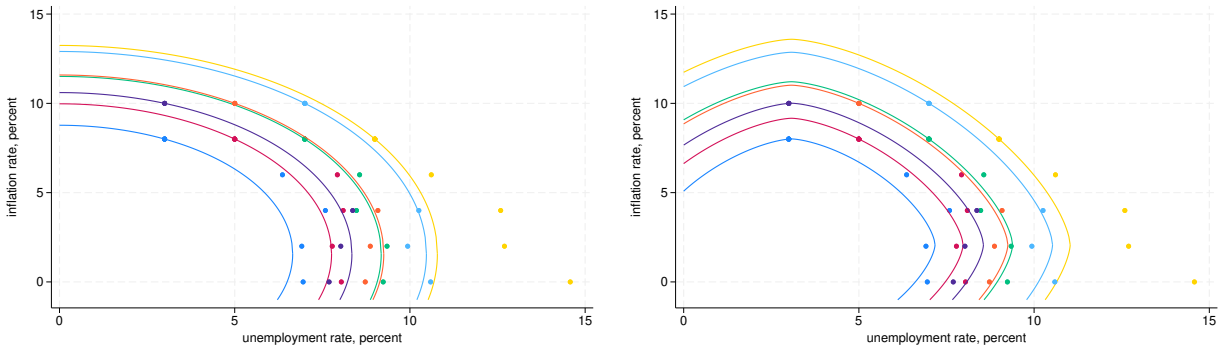
Note: Non-linear least squares regression of $\underline{u}_{Ai}$, the answer to Question 9: "What rate of unemployment would make Scenario A equally good or bad for you and your family as Scenario B?" Robust standard errors in parentheses. Where no standard error is given, the values are fixed, not estimated. For regressions where π^* is labeled "(optimal)" π_i^*, is given, for each respondent i, by their answer to what rate of inflation would be best for the American economy (Question 7). All regressions use sample weights and Huber weights. Huber weights are computed using a linear regression of $\underline{u}_{Ai}$ on scenario dummies and the square root of sample weights. *** p<0.01, ** p<0.05, and * p<0.1.

The parameter π^* represents the rate of inflation that minimizes the loss function from Equation (3). An alternative is to identify it with the optimal inflation objective that we elicited in one of the previous survey questions. The concept used in that question is not exactly the same: There, we asked what rate of inflation would be best for the American economy, while here we ask respondents about their personal situation. Nevertheless, it is interesting to use the responses as they provide heterogeneity in the explanatory variables. Specifications using these responses are estimated in Columns (5)–(7). The estimates of λ in Columns (5) and (6) are very similar at about 1.5. This similarity results from the fact that the curvature ρ in Column (6) is estimated to be close to quadratic. These two specifications yield estimates that are quite similar to those in Columns (2) and (3) where π^* is estimated. When the optimal unemployment rate u^* is added to the estimation in Column (7), the estimated curvature lessens and the relative weight on unemployment rises considerably. However, it should be noted that the overall fit of the loss function is better in the first four columns when π^* is not identified with the subjectively optimal inflation objective for the

economy. We note that our estimates of a value of λ around one are in line with the preferences assumed by Federal Reserve Board staff in their optimal monetary policy simulations.[45]

The estimates can be visualized by plotting indifference curves representing the utility function. The left panel of Figure 5 does so for the point estimates of the specification in Column (2) of Table 5, i.e., using a quadratic utility function with u^* fixed at zero, with an estimated weight on unemployment $\lambda = 1.18$ and an estimated optimal inflation rate $\pi^* = 1.52$ percent.

Figure 5. Indifference Curves of Fitted Loss Function



Note: The left panel corresponds to Column (2) in Table 5 and the right panel corresponds to Column (4). Each line is an indifference curve from the fitted model. Dots with values of inflation above seven percent represent values for Scenario B shown to respondents. For each of these scenarios, dots of the same color with values of inflation below seven percent represent values for Scenario A, where inflation is given and unemployment is the mean (weighted by sample and Huber weights) survey responses to Question 9: "What rate of unemployment would make Scenario A equally good or bad for you and your family as Scenario B?" Each possible combination of randomized values for Scenarios A and B is represented by a different color for the dots.

The fit of the loss function to the average responses (visualized with colored dots) is good. The curvature of the loss function implies state-dependency of the sacrifice ratio: The same reduction in inflation is worth a larger increase in unemployment when inflation is high or if unemployment is low.

The right panel of Figure 5 provides a visualization for point estimates in Column (4) in Table 5, where all parameters are simultaneously estimated. Here we can observe more pronounced "kinks" around the estimated optimal inflation π^* and optimal unemployment u^*, due to the lower curvature parameter of about 1.5. The two specifications shown in the figure and table share the same two features that are necessary to fit the data: state-dependent marginal rates of substitution between inflation and unemployment, implying state-dependent sacrifice ratios; and a substantial weight on unemployment relative to inflation.

In Tables A7 and A8 we provide results for each wave separately. Overall, the results are qualitatively very similar. In the 2024 wave we find somewhat smaller values for λ and ρ in most estimations compared to the 2023 wave. We further test the assumption about u^* in the main table. In Table A9 we report estimates when in columns (1)-(3) and (5)-(6) we assume $u^* = 4.2$—

[45]These simulations are regularly shown in the Tealbook, or its predecessor the Bluebook. For example, see page 121 of the December 2019 Tealbook A, which is currently the most recent publicly available Tealbook.

the median Summary of Economic Projections value in June 2023. Under this assumption for u^*, the estimates of λ are even higher. We also explore heterogeneity across demographic group. Because age displayed the strongest correlation with perceived acceptable sacrifice ratios, we also focus on age in this exercise. In Table A10 we report estimates for those above 55 years of age and in Table A11 we report estimates for those below 35 years of age. Estimates for λ are smaller for younger respondents, consistent with the results for acceptable sacrifice ratios in Table 3. In addition, we also find slightly lower estimates of ρ for younger respondents.

4.4. Importance for Monetary Policy Design

We close this section with an illustration of the importance of our results for monetary policy. We take the simplest and most widely known model of monetary policy, the standard New-Keynesian model, and solve for optimal monetary policy under discretion with a loss function as in Equation (3). Under discretion, the policymaker at time t minimizes this loss function subject to a Phillips curve tradeoff:

$$\min_{\pi_t, u_t} (\pi_t - \pi^*)^2 + \lambda (u_t - u_t^*)^2$$

$$\text{s.t. } \pi_t - \pi^* = \beta (E_t \pi_{t+1} - \pi^*) + \kappa (u_t - u_t^*) + e_t. \tag{5}$$

The quadratic form of the loss function comes from a second-order approximation to the social welfare function. The supply (e.g., mark-up) shock e_t follows an AR(1) process with autocorrelation ρ_e.[46] The model is usually expressed as relating inflation to an output gap, but we write it directly in terms of the unemployment gap $u_t - u_t^*$ by appealing to a simple Okun's law relationship, where the unemployment gap is two times the unemployment gap. Alternatively, one could use a model that explicitly models unemployment and a labor force participation decision as, for example, in Campolmi and Gnocchi (2016). Even then, the optimal relative weight on inflation stabilization in the central bank's loss function in that model is similar to that in this simpler model.[47]

In this simple model, future expectations are taken as given by the discretionary policymaker at time t, making this problem easy to solve. The solution implies the following optimal tradeoff between inflation and unemployment stabilization:

$$\frac{1}{\kappa} = -\frac{1}{\lambda} \frac{\pi_t - \pi^*}{u_t - u_t^*}. \tag{6}$$

The left-hand side of this expression is the necessary sacrifice ratio: the increase in current-period unemployment necessary to reduce inflation by a marginal unit equals $1/\kappa$, the slope of the Phillips curve. The right-hand side is the (marginal) acceptable sacrifice ratio: the increase in unemployment that would be just tolerable to reduce inflation by a marginal unit. It is the inverse slope of an indifference curve in Figure 5. The acceptable sacrifice ratio is larger the smaller the preference for unemployment stabilization, λ. At the optimum, households are indifferent to a marginal reduction

[46] The nominal interest rate implementing the optimal policy can be backed out from an IS equation.
[47] See the discussion in their online appendix around the loss function derived in their equation 5.38.

in inflation along the Phillips curve: Their acceptable sacrifice ratio should equal the necessary sacrifice ratio.

Solving for the equilibrium using the Phillips curve yields:

$$\pi_t - \pi^* = \frac{\lambda}{(1-\beta\rho_e)\,\lambda + \kappa^2} e_t \tag{7}$$

$$u_t - u_t^* = \frac{-\kappa}{(1-\beta\rho_e)\,\lambda + \kappa^2} e_t. \tag{8}$$

Table 6 calculates the standard deviations of inflation and the unemployment gap under optimal discretionary policy, for different parameterizations of the simple New-Keynesian model. The first column uses a standard quarterly calibration from Woodford (2003) (see also Adam and Billi (2006)) while the other two columns use higher values for β and ρ_e (which make λ less important) and use lower and upper bounds for the value of κ found in the literature. As in Debortoli et al. (2018), inflation is expressed in annualized rates. The relative weight on unemployment stabilization that is implied by the model through household preferences and other structural relationships implies $\lambda = 8\kappa/\theta$, where we set $\theta = 7.7$—a standard value for the elasticity of substitution between varieties of the consumption good.[48] Alternatively, we consider $\lambda = 1$ in line with the results from our survey module.

Table 6: Importance of the Unemployment Stabilization Preference for Optimal Policy

	(1)		(2)		(3)	
κ	0.048		0.005		0.300	
β	0.991		0.995		0.995	
ρ_e	0		0.8		0.8	
λ	0.050	1	0.005	1	0.358	1
$\sigma(\pi_t - \pi^*)/\sigma(e_t)$	0.96	1.00	4.79	4.90	2.20	3.40
$\sigma(u_t - u_t^*)/\sigma(e_t)$	0.92	0.05	4.61	0.02	1.84	1.02

Note: The table shows the standard deviations of inflation $\pi_t - \pi^*$ and the unemployment gap $u_t - u_t^*$ under optimal discretionary policy in the textbook New-Keynesian model, and relative to the standard deviation of supply (mark-up) shocks e_t. For each parameterization, the relative weight on unemployment stabilization λ is set to either its model-implied value or to one in accordance with the results from our survey module. Inflation is expressed in annualized quarterly rates.

Economic outcomes under optimal monetary policy using the preferences implied by our results are very different from those using model-implied preferences. For the parameters in Column (1), the model-implied preferences lead to sizable volatility in unemployment of 0.92 (expressed relative to the standard deviation of the supply shock e_t). By contrast, when policymakers place equal weights on unemployment and inflation, they reduce the unemployment rate volatility to 0.05, more than eighteenfold. When the Phillips curve is even flatter, as in Column (2), this discrepancy is even larger because a stronger preference for stabilizing unemployment can now be accommodated

[48] Appendix A provides the translation from the original representation of the model with the output gap and in quarterly inflation rates to the one here and the implied scaling of the parameters λ and κ.

at lower costs in terms of inflation volatility. At the other extreme, with a very steep Phillips curve such as the one thought to have prevailed in the 1970s, as in Column (3), a reduction in unemployment entails a higher cost of inflation and the model-implied weight on unemployment is larger at $\lambda = 0.358$. As a result, going from the model-implied preferences to the preferences consistent with our survey, the central bank reduces unemployment volatility by less than in the other cases, from 1.84 to 1.02, while accepting a large rise in inflation volatility.

This exercise shows that the policy prescriptions from the textbook New-Keynesian model are inconsistent with people's actual preferences. While there has been no direct empirical evidence of this until now, many researchers have been skeptical of the very high weight on inflation stabilization implied by this model. Debortoli et al. (2018) show that when nominal wage rigidities are added to the standard model so that price and wage inflation are welfare-relevant while the loss function is constrained to depend only on price inflation and a measure of slack, the optimal weight on the latter can become quite sizable. In fact, their optimized weight on the output gap is about one, which can be translated into a weight λ on unemployment of about four. Our survey responses imply that the weight is likely lower than that but still large.

5. Conclusion

In this paper, we have documented novel facts about the preferences of US households for monetary policy. The use of special modules in the Survey of Consumer Expectations of the Federal Reserve Bank of New York gave us access to a representative sample of about 2,000 US households in June 2023 and about 1,000 in June 2024.

We have shown that households are surprisingly attentive to US monetary policy: Over half of respondents reported paying attention to news about the Federal Reserve and the federal funds rate at least once per quarter. The median household perceives the Federal Reserve's inflation objective to be 3 percent with considerable disagreement. About one-third of respondents answered 2 percent, in line with the actual goal of the Federal Reserve. However, when asked about the rate of inflation that would be best for the American economy, the response is much lower. In fact, about 30 percent of households think that deflation is optimal. On average, this subjectively optimal inflation rate is about 1 percent. Among those who think positive inflation is optimal, the median response is 2 percent. As predicted by theory, inflation expectations are significantly cross-sectionally correlated with either version of the inflation objective. Finally, we elicit respondents' relative preferences for stable inflation and low unemployment. Our analysis reveals that US households place a large weight on the employment side of the Federal Reserve's dual mandate. Necessary sacrifice ratios estimated in the literature exceed the values that most US households would find acceptable. That said, there is considerable heterogeneity in the weight households place on inflation stabilization. When we estimate a simple loss function on our responses, the estimated weight on unemployment stabilization exceeds the values implied by standard New-Keynesian models by an order of magnitude, which has important consequences for the conduct of monetary policy in these models.

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Appendix A. Conversion of the New-Keyensian model to unemployment space and annualized inflation rates

In the textbook New-Keynesian model as presented in Woodford (2003), inflation is expressed in quarterly rates π_t^q and the efficiency of resource utilization is expressed through the output gap $y_t - y_t^*$.

$$\min_{\pi_t^q, y_t} \left(\pi_t^q - \pi^{q*}\right)^2 + \overline{\lambda}\left(y_t - y_t^*\right)^2$$

$$\text{s.t. } \pi_t^q - \pi^{q*} = \beta\left(E_t\pi_{t+1}^q - \pi^{q*}\right) + \kappa\left(y_t - y_t^*\right) + \overline{e}_t. \tag{9}$$

We express the model first in annualized inflation rates $\pi_t = 4\pi_t^q$:

$$\min_{\pi_t, y_t} \left(\pi_t - \pi^*\right)^2 + 16\overline{\lambda}\left(y_t - y_t^*\right)^2$$

$$\text{s.t. } \pi_t - \pi^* = \beta\left(E_t\pi_{t+1} - \pi^*\right) + 4\kappa\left(y_t - y_t^*\right) + 4\overline{e}_t. \tag{10}$$

Next, we use a simple Okun's law relationship $y_t - y_t^q st = 2\left(u_t - u_t^*\right)$ to express the model in terms of the unemployment gap:

$$\min_{\pi_t, u_t} \left(\pi_t - \pi^*\right)^2 + 64\overline{\lambda}\left(u_t - u_t^*\right)^2$$

$$\text{s.t. } \pi_t - \pi^* = \beta\left(E_t\pi_{t+1} - \pi^*\right) + 8\kappa\left(u_t - u_t^*\right) + 8\overline{e}_t. \tag{11}$$

The formulation of the model in the main text is obtained by setting $\lambda = 64\overline{\lambda}$, $\kappa = 8\overline{\kappa}$ and $e_t = 8\overline{e}_t$. The theoretical welfare weight $\overline{\lambda}$ implied by the model is $\overline{\lambda} = \overline{\kappa}/\theta$ so that $\lambda = 8\kappa/\theta$.

The calibration in Woodford (2003) features a slope of the Phillips curve of 0.024 in output gap space and for annualized inflation rates. It therefore corresponds to $\kappa = 0.048$ in Columns (1) and (2) of Table 6. Columns (3) and (4) assume a value of κ close to zero, while Columns (5) and (6) assume the uppermost value of ranges for the slope of the Phillips curve (relating annualized inflation rates to unemployment gaps) that we could find in the literature.

Appendix B. Description of variables used in regressions on demographic characteristics

Here, we document the exact definition of some of the variables used in the regressions in this paper.

Income refers to pre-tax household income during the past month. In the SCE, it is elicited in brackets. We convert this information into a single numerical variable using the mid-point of

the bracket in multiples of $10,000. For example, a respondent indicating that household income is between $40,000 and $50,000 is assigned the value 45 for the "income" variable.

Education in the SCE is elicited in categories, which we convert to equivalent years of schooling in our "education" variable.

- Individuals with less than a high school education are assigned the value 6.
- Individuals with a high school diploma (or equivalent) are assigned the value 12.
- Individuals with some college but no degree, including academic, vocational, or occupational programs, are assigned the value 13.
- Individuals with an associate or junior college degree, including academic, vocational, or occupational programs, are assigned the value 14.
- Individuals with a bachelor's degree, such as a BA or BS, are assigned the value 16.
- Individuals with a master's degree, such as an MA, MBA, MS, or MSW, are assigned the value 18.
- Individuals with a doctoral degree, such as a PhD, are assigned the value 22.
- Individuals with a professional degree, such as an MD, JD, or DDS, are assigned the value 20.

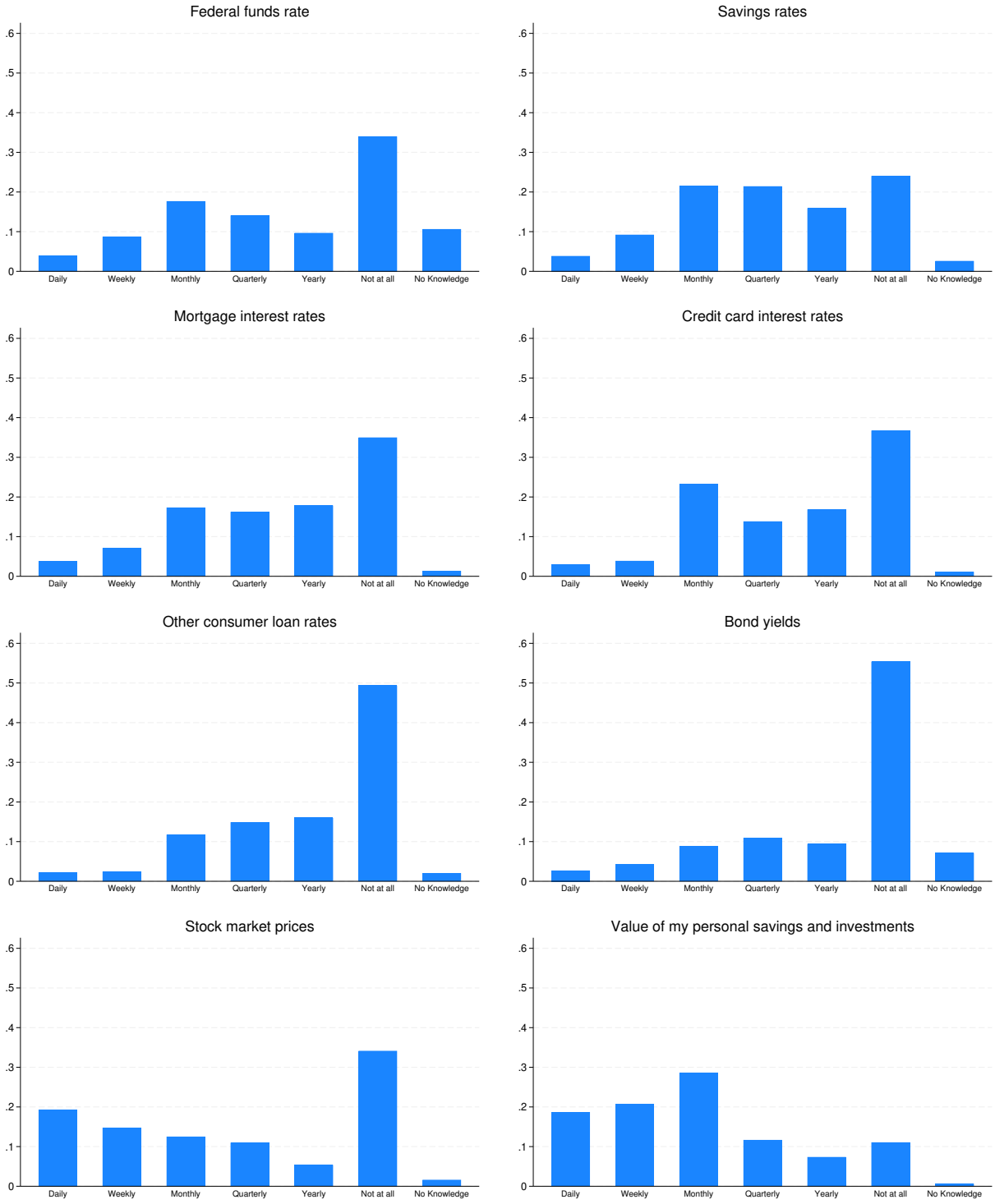
The indicator variable "high numeracy" is a category provided in the SCE that indicates whether respondents answered a set of questions testing their numeracy correctly.

The indicator variable "unemployment concern" summarizes answers to Question 6 in our survey (see Appendix D): "To what extent do you agree or disagree with the following statement: "Inflation is giving my family and me cause for concern at the moment." The indicator variable is set to one if the respondent answers 4 or higher, i.e. agrees with the statement. The indicator variable "inflation concern" summarizes answers to Question 6 in our survey in the same way.

The remaining demographic characteristics are self-explanatory indicator variables. The precise wording of the questions for these variables can be obtained on the SCE homepage or directly here: https://www.newyorkfed.org/medialibrary/Interactives/sce/sce/downloads/data/FRBNY-SCE-Survey-Core-Module-Public-Questionnaire.pdf.

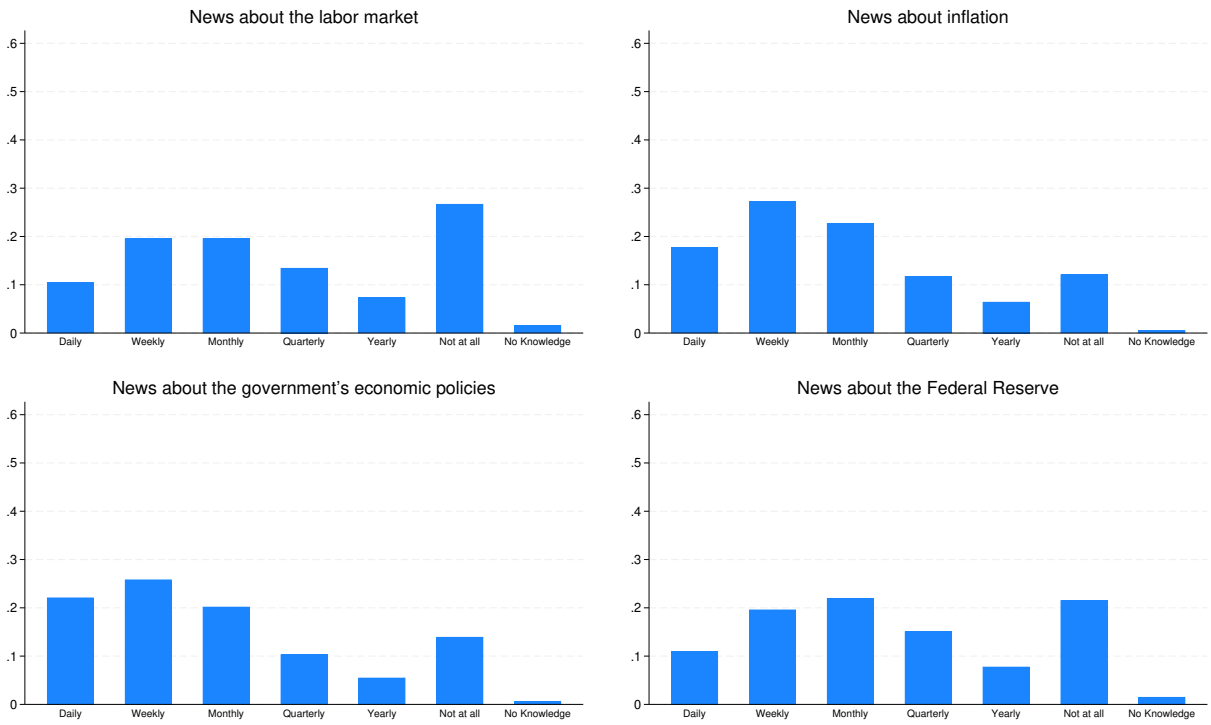
Appendix C. Appendix Tables and Figures

Appendix Figure A1. Attention to Interest Rates and Assets.



Note: Shares of total survey responses to Question 1: "How often do you pay attention to the following: [...]". Distributions are weighted by sample weights. This set of questions was only fielded in the June 2023 wave. N=2106.

Appendix Figure A2. Attention to Macroeconomic News.



Note: Shares of total survey responses to the question: "How often do you pay attention to the following: [...]". Distributions are weighted by sample weights. This set of questions was only fielded in the June 2023 wave. N=2119.

Appendix Table A1: Determinants of Attention

	(1) Fed funds rate	(2) Mortgage rates	(3) Stock prices	(4) Labor market	(5) Inflation	(6) Federal Reserve
income	0.04***	0.03***	0.05***	0.02***	0.01	0.02***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
education	0.03***	0.02	0.06***	0.07***	0.04***	0.06***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
high numeracy	-0.00	0.23***	0.25***	0.20**	0.14*	0.21***
	(0.07)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)
homeowner	0.07	-0.17**	0.05	0.11	0.11	0.07
	(0.08)	(0.08)	(0.08)	(0.08)	(0.09)	(0.09)
unemployed	0.17	0.39	0.54**	0.57**	0.41*	0.34
	(0.24)	(0.27)	(0.27)	(0.25)	(0.24)	(0.26)
business owner	0.17	-0.20	0.26	0.03	0.14	0.14
	(0.17)	(0.17)	(0.21)	(0.14)	(0.16)	(0.19)
student	-0.08	-0.23	-0.01	-0.21	-0.13	-0.32*
	(0.27)	(0.28)	(0.23)	(0.25)	(0.24)	(0.19)
retired	0.05	-0.17*	0.27***	0.00	0.05	0.03
	(0.09)	(0.10)	(0.11)	(0.10)	(0.11)	(0.10)
under 35	-0.26***	0.12	-0.22**	-0.26***	-0.35***	-0.31***
	(0.10)	(0.10)	(0.09)	(0.09)	(0.10)	(0.10)
over 55	0.12	-0.02	0.01	0.01	0.16	0.28***
	(0.09)	(0.10)	(0.10)	(0.09)	(0.11)	(0.10)
female	-0.40***	-0.22***	-0.63***	-0.38***	-0.20***	-0.36***
	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)
Latino	0.06	0.11	-0.23*	-0.06	0.04	-0.01
	(0.18)	(0.14)	(0.14)	(0.14)	(0.15)	(0.14)
Black	-0.04	0.19	-0.02	0.25*	0.18	0.11
	(0.13)	(0.13)	(0.13)	(0.14)	(0.14)	(0.14)
Native	0.18	0.11	-0.50**	-0.50**	-0.64**	-0.39
	(0.30)	(0.16)	(0.25)	(0.25)	(0.27)	(0.24)
Asian	0.20	0.10	0.32*	-0.14	0.10	-0.04
	(0.19)	(0.13)	(0.19)	(0.22)	(0.14)	(0.21)
Pacific	0.32	0.11	-0.27	0.05	-0.38	-0.12
	(0.30)	(0.36)	(0.52)	(0.31)	(0.34)	(0.31)
other race	0.13	0.30	0.15	0.24	0.05	0.16
	(0.18)	(0.21)	(0.19)	(0.19)	(0.22)	(0.17)
Observations	2106	2106	2106	2106	2105	2106
Pseudo R^2	0.034	0.032	0.081	0.038	0.022	0.042

Note: Each column represents an ordered probit regression with the dependent variable being the answer to Question 1: "How often do you pay attention to the following:". Exact wording of the items are: "Federal funds rate", "Mortgage interest rate", "Stock market prices", "News about the labor market", "News about inflation", "News about the Federal Reserve. Possible response values are "Daily", "Weekly", "Monthly", "Quarterly", "Yearly", "Not at all" and "I do not know what this is". Robust standard errors in parentheses. All regressions are weighted by sample weights. *** p<0.01, ** p<0.05, and * p<0.1.

Appendix Table A2: Determinants of Inflation Expectations and Objectives: Time Elapsed from the Previous Survey Participation and Tenure

	(1) perceived objective	(2) optimal objective	(3) difference	(4) 1-year exp.	(5) 2-year exp.
2-year exp.				0.81***	
				(0.01)	
perceived objective				0.10***	0.42***
				(0.02)	(0.03)
optimal objective	0.05***			0.03*	0.43***
	(0.02)			(0.02)	(0.03)
income	-0.01**	0.02***	-0.03***	-0.01	-0.05***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
education	-0.03**	0.15***	-0.14***	0.06***	0.03
	(0.01)	(0.02)	(0.02)	(0.02)	(0.04)
high numeracy	-0.45***	-0.16	-0.37**	-0.06	0.36
	(0.09)	(0.10)	(0.15)	(0.13)	(0.24)
homeowner	0.15*	0.60***	0.01	-0.37***	0.64***
	(0.09)	(0.09)	(0.15)	(0.12)	(0.23)
no tworking	-0.11	-0.11	-0.55**	0.15	0.86***
	(0.12)	(0.14)	(0.22)	(0.17)	(0.31)
student	-0.06	0.02	-0.61	0.93**	-1.84***
	(0.23)	(0.49)	(0.40)	(0.37)	(0.71)
retired	-0.14	0.72***	-0.72***	0.07	0.45*
	(0.10)	(0.10)	(0.15)	(0.14)	(0.25)
under 35	-0.12	-0.85***	0.51***	-0.17	0.38
	(0.09)	(0.11)	(0.16)	(0.13)	(0.25)
over 65	-0.25**	0.21**	-0.37**	-0.00	0.16
	(0.11)	(0.10)	(0.16)	(0.16)	(0.26)
female	0.24***	-0.69***	0.84***	-0.23**	-0.08
	(0.07)	(0.08)	(0.12)	(0.10)	(0.18)
Latino	0.51***	-0.44***	0.69**	0.13	0.27
	(0.15)	(0.16)	(0.28)	(0.26)	(0.46)
White	1.75***	4.62***	5.49***	10.32***	-5.23***
	(0.39)	(1.18)	(2.02)	(0.87)	(1.21)
Black	1.71***	3.34***	6.11***	10.19***	-5.52***
	(0.40)	(1.18)	(2.02)	(0.87)	(1.23)
Native	1.50***	5.76***	3.95**	10.01***	-5.17***
	(0.36)	(1.14)	(2.01)	(0.84)	(1.09)
Asian	1.66***	5.34***	4.49**	10.41***	-5.59***
	(0.38)	(1.18)	(2.01)	(0.87)	(1.16)
Pacific	2.78***	3.80***	5.61***	10.90***	-5.96***
	(0.42)	(1.28)	(2.12)	(1.03)	(1.30)
other race	1.45***	4.03***	5.02**	10.41***	-4.70***
	(0.30)	(1.12)	(1.95)	(0.75)	(0.78)
Q35_any	-1.74***	-4.01***	-5.44***	-10.15***	5.64***
	(0.31)	(1.11)	(1.97)	(0.79)	(0.97)
2024 wave	-0.31***	-0.46***	-0.17	-0.61***	-0.15
	(0.08)	(0.14)	(0.14)	(0.12)	(0.22)
Months out of sample	0.00	0.00	0.00	0.01***	-0.00
	(0.00)	(0.00)	(0.01)	(0.00)	(0.01)
Months out of sample> 48	-0.31*	0.11	-0.41	-0.61**	0.43
	(0.18)	(0.23)	(0.30)	(0.28)	(0.46)
tenure	0.01	0.03	-0.02	0.03	-0.07
	(0.02)	(0.03)	(0.03)	(0.02)	(0.05)
tenure> 12	-0.35**	-0.20	-0.37*	-0.16	0.45
	(0.14)	(0.14)	(0.22)	(0.21)	(0.38)
Observations	2674	2884	2799	2785	2846
R^2	0.115	0.260	0.179	0.871	0.444

Note: "Perceived objective" refers to Question 3, "Optimal objective" refers to Question 7. "Difference" is the difference between perceived and optimal objective. "1-year exp." is the expectation for the rate of inflation between the time of the survey and one year from the survey date. "2-year exp." is the expectation for the average annual rate of inflation between the time of the survey and two years from the survey date. "tenure> 12" refers to participants who previously participated in special modules. Robust standard errors in parentheses. Each regression is weighted using Huber (1964) and sample weights. *** p<0.01, ** p<0.05, and * p<0.1.

Appendix Table A3: Responses to the First Step of Question 9: Evaluation of Scenarios

	prefer A	indifferent	prefer B	Total
$\pi_A = 0$	58.9	29.6	11.5	100.0
$\pi_A = 2$	59.1	31.9	9.0	100.0
$\pi_A \geqslant 4$	59.7	31.5	8.8	100.0
Total	59.3	31.1	9.7	100.0
N	3117			

	prefer A	indifferent	prefer B	Total
$u_B = 3$	53.6	32.2	14.2	100.0
$u_B = 5$	54.7	36.2	9.1	100.0
$u_B \geqslant 7$	67.2	26.1	6.7	100.0
Total	59.3	31.1	9.7	100.0
N	3117			

Note: Respondents are presented with two Scenarios A and B and have to answer the question: "Which scenario would be better for you and your family?" "Prefer A" denotes respondents who answered that Scenario A would be better or much better. "Prefer B" denotes respondents who answered that Scenario B would be better or much better. "Indifferent" denotes respondents who answered that "the two scenarios are equally good or bad." Responses are broken down by the value of the inflation rate π_B in Scenario A (left panel) and the unemployment rate u_B in Scenario B (right panel).

Appendix Table A4: Determinants of the Acceptable Sacrifice Ratio: Time Elapsed from the Previous Survey Participation and Tenure

	(1) 2023 wave	(2) 2024 wave	(3) both waves
π_Ai	0.068***	0.090***	
	(0.008)	(0.011)	
u_Bi	-0.058***	-0.049***	
	(0.008)	(0.012)	
perceived objective	-0.004	-0.004	-0.003*
	(0.003)	(0.005)	(0.002)
optimal objective	0.006	0.002	0.003
	(0.005)	(0.004)	(0.003)
income	0.004	0.006	0.005**
	(0.003)	(0.004)	(0.002)
education	0.014**	-0.007	0.012**
	(0.006)	(0.010)	(0.005)
high numeracy	0.039	0.098*	0.052*
	(0.034)	(0.053)	(0.027)
homeowner	0.010	0.017	0.019
	(0.031)	(0.051)	(0.025)
not working	0.037	-0.027	0.008
	(0.041)	(0.060)	(0.031)
student	0.016	0.028	0.049
	(0.095)	(0.137)	(0.070)
retired	-0.011	-0.085	-0.019
	(0.037)	(0.058)	(0.029)
under 35	0.186***	0.112*	0.136***
	(0.037)	(0.060)	(0.030)
over 65	-0.110***	-0.098	-0.102***
	(0.041)	(0.066)	(0.033)
female	-0.045	-0.050	-0.040*
	(0.028)	(0.045)	(0.021)
Latino	-0.093	-0.186*	-0.086*
	(0.060)	(0.095)	(0.051)
White	0.046	-0.175	-0.057
	(0.519)	(0.310)	(0.167)
Black	0.020	-0.226	-0.107
	(0.518)	(0.308)	(0.164)
Native	0.215	-0.291	0.055
	(0.515)	(0.280)	(0.161)
Asian	0.074	-0.074	-0.044
	(0.517)	(0.307)	(0.165)
Pacific	0.178	-0.129	0.079
	(0.515)	(0.309)	(0.172)
other race	0.274	0.101	0.135
	(0.501)	(0.176)	(0.132)
Q35_any	-0.185	0.174	-0.036
	(0.507)	(0.198)	(0.141)
Months out of sample	0.000	0.001	0.000
	(0.001)	(0.003)	(0.001)
Months out of sample> 48	-0.006	0.023	0.001
	(0.076)	(0.150)	(0.062)
tenure	0.008	0.000	0.005
	(0.016)	(0.007)	(0.005)
tenure> 12	-0.033	0.043	-0.017
	(0.061)	(0.110)	(0.047)
Observations	1573	611	2167
R^2	0.179	0.227	0.380

Note: Linear regressions of the acceptable sacrifice ratio S_i as described in Section 4.3. Negative values of S_i are excluded. Column (3) includes dummies for each possible combination of scenarios shown to respondents. "Black" stands for Black or African American race. "Latino" stands for Latino or Hispanic origin. "tenure> 12" refers to participants who previously participated in special modules. Robust standard errors are in parentheses. Regressions are weighted using sample and Huber weights. *** p<0.01, ** p<0.05, and * p<0.1.

Appendix Table A5: Weights on Inflation Relative to Unemployment

	Prefer Scenario B to Scenario A					
	Two-Point Scale				Five-Point Scale	
	(1)	(2)	(3)	(4)	(5)	(6)
Difference in π	−0.0002	0.001	0.008	0.009	−0.011	−0.008
	(0.006)	(0.006)	(0.011)	(0.011)	(0.015)	(0.015)
Difference in u	0.026***	0.027***	0.026***	0.028***	0.064***	0.072***
	(0.006)	(0.006)	(0.007)	(0.007)	(0.015)	(0.015)
Education		0.003		0.004		0.004
		(0.004)		(0.005)		(0.011)
Income		−0.00004		−0.0002		−0.0002
		(0.0002)		(0.0002)		(0.001)
Own Home		0.065***		0.079***		0.139**
		(0.022)		(0.027)		(0.058)
Not Working		0.080***		0.032		0.191***
		(0.028)		(0.035)		(0.073)
Student		−0.037		−0.053		−0.054
		(0.098)		(0.104)		(0.251)
Retired		−0.128***		−0.123***		−0.195***
		(0.028)		(0.034)		(0.073)
High Numeracy		−0.070***		−0.096***		−0.168***
		(0.021)		(0.026)		(0.056)
Female		0.010		0.037		0.124**
		(0.019)		(0.023)		(0.051)
Latino		0.072*		0.126***		0.183*
		(0.039)		(0.046)		(0.100)
Constant	0.022	0.058	0.077	0.132		
	(0.054)	(0.102)	(0.087)	(0.127)		
Race Controls?	✗	✓	✗	✓	✗	✓
Age Controls?	✗	✓	✗	✓	✗	✓
Observations	1,498	1,492	1,005	1,002	2,122	2,101
R^2	0.014	0.100	0.015	0.123		
Adjusted R^2	0.013	0.089	0.013	0.107		

*p<0.1; **p<0.05; ***p<0.01

Column (1) and Column (2) are linear probability models of whether someone strictly preferred Scenario B to Scenario A on a 5-point scale with no control and controls, respectively. Column (3) and (4) drop respondents who were randomized $X = 0$. Column (5) and Column (6) are ordered probit models with the same set of controls as Columns (1) and (2), but allows for a five-point ordinal scale instead of a strict preference for Scenario B to Scenario A as in the linear probability models.

Appendix Table A6: Determinants of Inflation Expectations and Objectives: 2023 wave only

	(1) perceived obj.	(2) optimal obj. (restricted)	(3) difference (restricted)	(4) defl. optimal	(5) Tobit reg.	(6) 1-year exp.	(7) 5-year exp.
5-year exp.						0.361***	
						(0.02)	
perceived trg.						0.278***	-0.005
						(0.03)	(0.04)
optimal objective–full	0.440***					0.315***	0.881***
	(0.04)					(0.04)	(0.07)
Deflation optimal	1.126***					0.276	0.168
	(0.13)					(0.20)	(0.26)
attn to Fed funds rate	0.036	0.112***	-0.039	-0.018*	0.185**	-0.114**	-0.020
	(0.03)	(0.02)	(0.03)	(0.01)	(0.08)	(0.05)	(0.06)
attn to inflation news	-0.016	-0.025	0.071*	0.016	-0.073	0.080	-0.174
	(0.05)	(0.04)	(0.04)	(0.01)	(0.14)	(0.07)	(0.11)
attn to Fed news	-0.025	-0.018	-0.046	-0.030**	0.071	0.078	0.171*
	(0.04)	(0.03)	(0.04)	(0.01)	(0.14)	(0.08)	(0.10)
education	-0.016	0.051***	-0.052***	-0.033***	0.059	0.026	-0.011
	(0.02)	(0.02)	(0.02)	(0.01)	(0.04)	(0.03)	(0.04)
income	-0.002**	0.001	-0.000	-0.000	-0.000	-0.001	-0.000
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
ownhome	0.061	0.192**	-0.097	-0.035	0.916**	-0.116	0.340
	(0.11)	(0.08)	(0.11)	(0.04)	(0.36)	(0.20)	(0.28)
notworking	-0.266*	-0.003	-0.207	0.006	0.762	0.146	0.321
	(0.16)	(0.11)	(0.18)	(0.05)	(0.56)	(0.33)	(0.41)
student	0.100	0.029	0.542**	-0.158	1.460	-1.088	0.065
	(0.32)	(0.21)	(0.26)	(0.12)	(1.07)	(0.76)	(0.52)
retired	-0.158	0.111	-0.101	-0.051	0.622	0.026	0.400
	(0.14)	(0.10)	(0.14)	(0.04)	(0.42)	(0.25)	(0.32)
female	0.279***	0.039	0.248***	0.102***	-0.659**	-0.146	-0.645***
	(0.09)	(0.07)	(0.09)	(0.03)	(0.29)	(0.16)	(0.21)
Observations	1858	1138	1103	2105	2028	1947	1932
R^2	0.192	0.080	0.076	0.143		0.599	0.312

Note: "Perceived trg." is the rate of inflation that the Federal Reserve aims to achieve between five and ten years from the survey date. "Optimal trg." is the rate of inflation that would be best for the American economy (restricted to those that answer nonnegatively). "Difference" is the difference between perceived and optimal objective (restricted to those that answer numerically). "Defl. optimal" reports estimates of the linear probability model for calculates those that answered that deflation is optimal. "Tobit reg." is reporting a Tobit predictive regression for left-censored observations in optimal inflation (those that answered deflation is optimal). "1-year exp." is the expectation for the rate of inflation between one and two years from the survey date. "5-year exp." is the expectation for the rate of inflation between five and six years from the survey date. Robust standard errors in parentheses. Each regression is weighted using Huber (1964) and sample weights. "optimal objective–full" is a generated regressor. *** p<0.01, ** p<0.05, and * p<0.1.

Appendix Table A7: Loss Functions Fitted to Survey Responses: 2023 wave only

	(1)	(2)	(3)	(4)	(5)	(6)
λ	0.966***	0.736***	0.798***	1.346***	1.363***	2.042***
	(0.03)	(0.09)	(0.13)	(0.05)	(0.05)	(0.11)
π^*	2	2.917***	2.837***	(optimal)	(optimal)	(optimal)
		(0.35)	(0.35)			
ρ	2	2	1.867***	2	1.676***	1.300***
			(0.17)		(0.12)	(0.10)
u^*	0	0	0	0	0	3.706***
						(0.21)
R^2	0.066	0.069	0.069	0.013	0.019	0.018
N	1444	1444	1444	1348	1348	1348

Note: Estimated using non-linear least squares regression as described in the text. Robust standard errors in parentheses. Where no standard error is given, the values are fixed, not estimated. For regressions where π^* is labeled "(optimal)", π_i^*, is given, for each respondent i, by their answer to what rate of inflation would be best for the American economy. All regressions use sample weights and Huber weights. Huber weights are computed using a linear regression of $\underline{u}_{Ai}$ on scenario dummies and the square root of sample weights. *** p<0.01, ** p<0.05, and * p<0.1.

Appendix Table A8: Loss Functions Fitted to Survey Responses: 2024 wave only

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
λ	0.780***	0.742***	0.751***	0.012	1.642***	1.407***	1.989***
	(0.03)	(0.09)	(0.10)	(0.05)	(0.18)	(0.12)	(0.16)
π^*	2	2.145***	2.146***	1.652	(optimal)	(optimal)	(optimal)
		(0.34)	(0.33)	(2.71)			
ρ	2	2	1.973***	3.633	2	1.638***	1.168***
			(0.16)	(2.12)		(0.08)	(0.06)
u^*	0	0	0	-20.047	0	0	3.839***
				(22.66)			(0.15)
R^2	0.364	0.365	0.364	0.369	0.119	0.148	0.239
N	570	570	570	570	533	533	533

Note: Estimated using non-linear least squares regression as described in the text. Robust standard errors in parentheses. Where no standard error is given, the values are fixed, not estimated. For regressions where π^* is labeled "(optimal)", π_i^*, is given, for each respondent i, by their answer to what rate of inflation would be best for the American economy. All regressions use sample weights and Huber weights. Huber weights are computed using a linear regression of $\underline{u}_{Ai}$ on scenario dummies and the square root of sample weights. *** p<0.01, ** p<0.05, and * p<0.1.

Appendix Table A9: Loss Functions Fitted to Survey Responses: Higher u^*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
λ	3.019***	3.113***	2.328***	1.758***	4.548***	2.586***	2.364***
	(0.12)	(0.46)	(0.14)	(0.15)	(0.22)	(0.12)	(0.11)
π^*	2	1.884***	1.809***	2.080***	(optimal)	(optimal)	(optimal)
		(0.54)	(0.26)	(0.25)			
ρ	2	2	1.319***	1.527***	2	1.277***	1.275***
			(0.09)	(0.15)		(0.05)	(0.05)
u^*	4.2	4.2	4.2	3.077***	4.2	4.2	3.874***
				(0.43)			(0.12)
R^2	0.121	0.122	0.129	0.158	0.036	0.077	0.091
N	1929	1929	1929	1929	1795	1795	1795

Note: Estimated using non-linear least squares regression as described in the text. Robust standard errors in parentheses. Where no standard error is given, the values are fixed, not estimated. For regressions where π^* is labeled "(optimal)", π_i^*, is given, for each respondent i, by their answer to what rate of inflation would be best for the American economy. All regressions use sample weights and Huber weights. Huber weights are computed using a linear regression of $\underline{u}_{Ai}$ on scenario dummies and the square root of sample weights. *** p<0.01, ** p<0.05, and * p<0.1.

Appendix Table A10: Loss Functions Fitted to Survey Responses: Respondents over 55 years

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
λ	1.228***	1.255***	1.288***	1.947***	1.633***	1.640***	2.879***
	(0.05)	(0.21)	(0.32)	(0.49)	(0.09)	(0.08)	(0.24)
π^*	2	1.919**	1.637	2.171***	(optimal)	(optimal)	(optimal)
		(0.61)	(0.88)	(0.51)			
ρ	2	2	2.260***	1.792***	2	1.844***	1.373***
			(0.24)	(0.35)		(0.19)	(0.12)
u^*	0	0	0	2.598*	0	0	3.824***
				(1.31)			(0.21)
R^2	0.135	0.135	0.133	0.134	0.059	0.064	0.069
N	862	862	862	862	802	802	802

Note: Estimated using non-linear least squares regression as described in the text. Robust standard errors in parentheses. Where no standard error is given, the values are fixed, not estimated. For regressions where π^* is labeled "(optimal)", π_i^*, is given, for each respondent i, by their answer to what rate of inflation would be best for the American economy. All regressions use sample weights and Huber weights. Huber weights are computed using a linear regression of $\underline{u}_{Ai}$ on scenario dummies and the square root of sample weights. *** p<0.01, ** p<0.05, and * p<0.1.

Appendix Table A11: Loss Functions Fitted to Survey Responses: Respondents under 35 years

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
λ	0.846***	0.817***	0.841***	1.258***	1.458***	1.337***	1.900***
	(0.04)	(0.14)	(0.12)	(0.24)	(0.14)	(0.08)	(0.15)
π^*	2	2.127***	2.300***	2.558***	(optimal)	(optimal)	(optimal)
		(0.61)	(0.46)	(0.33)			
ρ	2	2	1.807***	1.433***	2	1.593***	1.152***
			(0.22)	(0.32)		(0.14)	(0.09)
u^*	0	0	0	3.085***	0	0	3.970***
				(0.89)			(0.21)
R^2	0.187	0.187	0.190	0.191	0.034	0.062	0.091
N	401	401	401	401	372	372	372

Note: Estimated using non-linear least squares regression as described in the text. Robust standard errors in parentheses. Where no standard error is given, the values are fixed, not estimated. For regressions where π^* is labeled "(optimal)", π_i^*, is given, for each respondent i, by their answer to what rate of inflation would be best for the American economy. All regressions use sample weights and Huber weights. Huber weights are computed using a linear regression of $\underline{u}_{Ai}$ on scenario dummies and the square root of sample weights. *** p<0.01, ** p<0.05, and * p<0.1.

Appendix Table A12: Survey Completion Times by Question and Wave

	Time (Seconds)				
Question	10th Percentile	Median	90th Percentile	Average	N
June 2023					
1	32.4	54.3	106.6	94.3	2,119
2	8.8	18.0	57.8	31.5	1,970
3	6.9	16.7	44.8	24.9	2,108
3a	4.7	9.1	19.6	45.7	2,116
4	3.2	13.6	32.7	18.9	2,116
5	4.3	8.9	17.0	15.9	2,118
6	3.8	7.6	15.2	9.2	2,117
7	11.2	24.0	55.8	31.6	2,112
8	8.5	18.1	46.5	27.2	1,975
9	23.1	64.5	166.8	91.3	2,116
10	31.0	87.6	199.3	118.7	2,115
June 2024					
1	Omitted	Omitted	Omitted	Omitted	0
2	Omitted	Omitted	Omitted	Omitted	0
3	7.0	13.9	38.3	27.1	967
3a	3.8	7.6	17.2	10.7	969
4	Omitted	Omitted	Omitted	Omitted	0
5	4.4	8.1	16.6	10.1	969
6	3.6	7.6	16.7	10.2	969
7	10.7	24.2	59.7	31.6	967
8	Omitted	Omitted	Omitted	Omitted	0
9	18.9	56.6	137.7	76.2	968
10	Omitted	Omitted	Omitted	Omitted	0

Note: Questions omitted from the June 2024 wave as compared to the June 2023 wave are marked as "Omitted." All statistics use sample weights from each respective year.

Appendix D. Survey Questions

The following pages portray the SCE June 2023 special module as respondents have seen it.

Monetary Policy Expectations and Attitudes

June 2023: Now we would like to ask you a few questions about interest rates, inflation, and unemployment. Remember, there is no right or wrong answer – we are interested in your views.
June 2024: Now we would like to ask you a few questions about inflation and unemployment. Remember, there is no right or wrong answer – we are interested in your views.

Question 1 (June 2023 only)

How frequently do you pay attention to the following:

Please select only one answer for each row.

	Daily (1)	Weekly (2)	Monthly (3)	Quarterly (4)	Yearly (5)	Not at all (6)	I do not know what this is (7)
(a) Federal funds rate	○	○	○	○	○	○	○
(b) Savings rates	○	○	○	○	○	○	○
(c) Mortgage interest rates	○	○	○	○	○	○	○
(d) Credit card interest rates	○	○	○	○	○	○	○
(e) Other consumer loan rates	○	○	○	○	○	○	○
(f) Bond yields	○	○	○	○	○	○	○
(g) Stock market prices	○	○	○	○	○	○	○
(h) Value of my personal savings and investments	○	○	○	○	○	○	○
(i) News about the labor market	○	○	○	○	○	○	○
(j) News about inflation	○	○	○	○	○	○	○
(k) News about the government's economic policies	○	○	○	○	○	○	○
(l) News about the Central Bank	○	○	○	○	○	○	○

Question 2 (June 2023 only)

[Not required. Display question only if at least one of QBoard1a, QBoard1b, QBoard1c, QBoard1d, QBoard1e, or QBoard1f includes code 1, 2, 3, 4, or 5]
Pick the label among Qboard1a to Qboard 1f that has the lowest response code. In case of a tie, pick the first label that appears in the previous question. Example: If the response codes to Qboard1a to Qboard1f are 6,5,5,3,3,4 pick "Credit card interest rates".

You just said that you pay attention to [label]. What do you expect the average level of these interest rates to be in **June 2024**? Please give your best guess.

Please enter a number greater than 0 or equal to 0.

I expect the label of [label] to be ___%.

Question 3 (June 2023 and June 2024)

What do you think is the annual rate of inflation that the Federal Reserve is trying to achieve on average over the five-year period between [June 2023: **June 2028** and **June 2033** | June 2024: **June 2029** and **June 2034**]?

Please enter a number greater than 0 or equal to 0.

The Federal Reserve is trying to achieve the rate of inflation of ___%.

Question 3a (June 2023 and June 2024)

How confident, if at all, are you that the Federal Reserve will achieve [answer in QBoard3]% annual rate of inflation on average over the five-year period between [June 2023: **June 2028** and **June 2033** | June 2024: **June 2029** and **June 2034**]?

Not confident at all (1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**Very confident (7)**
○	○	○	○	○	○	○

Question 4 (June 2023 only)

Now think about the lowest rate of unemployment that the economy can sustain without generating unwelcome inflation. How confident, if at all, are you that the Federal Reserve will achieve this rate of unemployment on average over the five-year period between **June 2028** and **June 2033**?

Not confident at all (1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**Very confident (7)**
○	○	○	○	○	○	○

Question 5 (June 2023 and June 2024)

To what extent do you agree or disagree with the following statement: "Inflation is giving my family and me cause for concern at the moment."

Totally disagree (1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**Totally agree (7)**
○	○	○	○	○	○	○

Question 6 (June 2023 and June 2024)

To what extent do you agree or disagree with the following statement: "The risk of becoming unemployed is giving my family and me cause for concern at the moment."

Totally disagree (1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**Totally agree (7)**
○	○	○	○	○	○	○

Question 7 (June 2023 and June 2024)

June 2023:

Earlier, you told us that you expect the rate of inflation to be [respondent's answer in an earlier part of the survey]% **over the next 12 months**. Now we would like you to think of the rate of inflation that would be best **for the American economy**. What do you think is this rate of inflation? Remember, there is no right or wrong answer—we are interested in **your** views.

○ I think an inflation rate of ___% would be best for the American economy (1).

○ I think deflation (negative inflation) would be best for the American economy (2).

○ The rate of inflation does not matter for the American economy (3).

June 2024:

Now we would like you to think of the rate of inflation that would be best **for the American economy** over the five-year period between June, 2029 and June, 2034. What do you think is this rate of inflation? Remember, there is no right or wrong answer—we are interested in **your** views.

○ I think an inflation rate of ___% would be best for the American economy (1).

○ I think deflation (negative inflation) of ___ % would be best for the American economy (2).

○ The rate of inflation does not matter for the American economy (3).

Question 8 (June 2023 only)

Now think of the general level of **interest rates** on things such as mortgages, bank loans, bonds, and savings. Do you think the current level of these interest rates is good **for the American economy**, or do you think a higher or lower level would be better?

Please select only one answer.

○ Much higher interest rates would be better (1).

○ Higher interest rates would be better (2).

○ Interest rates are more or less good (3).

○ Lower interest rates would be better (4).

○ Much lower interest rates would be better (5).

○ It does not matter either way (6).

Question 9 (June 2023 and June 2024)

Now think about how inflation and unemployment affect you and your family personally. Think of two hypothetical scenarios.

June 2023:

[Randomly assign X and Y to each individual respondent. Record X and Y for each individual. X can be either "0", "2", or "4"; Y can be either "3", "5", or "7" so there are 9 groups of equal size in total depending on the value of X and Y.]

In Scenario A, the rate of inflation is X%, but the unemployment rate is 10%. In Scenario B, the rate of inflation is 10%, but the unemployment rate is Y%.

	Rate of Inflation	**Unemployment Rate**
Scenario A	X%	10%
Scenario B	10%	Y%

June 2024:

[Randomly assign X and Y to each individual respondent. Record X and Y for each individual. X can be either "0", "2", "4", or "6"; Y can be either "3", "5", "7", or "9" so there are 16 groups of equal size in total depending on the value of X and Y.]

In Scenario A, the rate of inflation is X%, but the unemployment rate is 8%. In Scenario B, the rate of inflation is 8%, but the unemployment rate is Y%.

	Rate of Inflation	**Unemployment Rate**
Scenario A	X%	8%
Scenario B	8%	Y%

(June 2023 and June 2024)

Which scenario would be better for you and your family?

Please select only one answer.

- ○ Scenario A would be much better (1).
- ○ Scenario A would be somewhat better (2).
- ○ The two scenarios are equally good or bad (3).
- ○ Scenario B would be somewhat better (4).
- ○ Scenario B would be much better (5).

Question 9a (June 2023 and June 2024)

What rate of unemployment would make Scenario A equally good or bad for you and your family as Scenario B?

Please enter a number greater than 0 or equal to 0.

	Rate of Inflation	Unemployment Rate
Scenario A	X%	____%
Scenario B	10%	Y%

Question 9b (June 2023 and June 2024)

Just to make sure, you are saying that when the rate of inflation is X% and the unemployment rate is [answer in QBoard9a]%, this is just as good or bad for you and your family as when the rate of inflation is 10% and the unemployment rate is Y%?

Please select only one answer.

○ Yes (1).

○ No, I want to revise my answer (2).

Question 10 (June 2023 only)

[Distribute respondents randomly into four groups. The group names are LL,LH,HL,HH. In the text below, X and Y depend on the group as follows: Group LL: X="lower", Y="lower", Group LH: X="lower", Y="higher", Group HL: X="higher", Y="lower", Group HH: X="higher", Y="higher". Respondents remain in the same group also in QBoard10a]

Consider the following three hypothetical scenarios and think about how they would affect **you and your family's** economic and financial situation.

In Scenario A, the **rate of inflation over the past 12 months** was X than it actually was by 1 percentage point.

In Scenario B, the **unemployment rate over the past 12 months** was X than it actually was by 1 percentage point.

In Scenario C, the **general level of interest rates** on things such as mortgages, bank loans, bonds, and savings **over the past 12 months** was Y than it actually was by 1 percentage point.

	Rate of Inflation	Unemployment Rate	Interest Rates
Scenario A	1 percentage point X	Actual Level	Actual Level
Scenario B	Actual Level	1 percentage point X	Actual Level
Scenario C	Actual Level	Actual Level	1 percentage point X

Which of these three scenarios would be **the best** in terms of their impact on **you and your family's** economic and financial situation?

○ A ○ B ○ C

And which of these three scenarios would be the worst in terms of their impact on you and your family?s economic and financial situation?

○ A ○ B ○ C

Question 10a (June 2023 only)

	Rate of Inflation	Unemployment Rate	Interest Rates
Scenario A	1 percentage point X	Actual Level	Actual Level
Scenario B	Actual Level	1 percentage point X	Actual Level
Scenario C	Actual Level	Actual Level	1 percentage point X

Now, think of how these scenarios compare to **your current situation**. Please rate the impact of each scenario on you and your family's economic and financial situation **relative to your current situation**.

Please select only one answer for each row.

	Much worse (1)	Somewhat worse (2)	A little worse (3)	The same (4)	A little better (5)	Somewhat better (6)	Much better (7)
Scenario A	○	○	○	○	○	○	○
Scenario B	○	○	○	○	○	○	○
Scenario C	○	○	○	○	○	○	○