Perceived Budget Constraint of the Government*

Gabriele Maugeri† Dmitriy Sergeyev‡

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Abstract

We study households' perception of the intertemporal budget constraint of the government. Using a large representative survey of U.S. households, we elicit beliefs about how the government will finance both existing debt and newly issued debt due to fiscal policy shocks. On average, respondents expect only 45% of current debt to be financed through future primary surpluses. The remainder is attributed to alternative sources. For example, 23% is expected to be rolled over indefinitely without collecting positive surpluses, and 11% is expected to be inflated away. Similar patterns emerge when respondents are asked about the financing of new debt resulting from unexpected policies, such as a temporary increase in government military spending or direct transfers to households. We calibrate a dynamic general equilibrium model to match perceived government debt financing and evaluate how these beliefs affect macroeconomic dynamics.

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†Bocconi University. E-mail: gabriele.maugeri@phd.unibocconi.it

‡Bocconi University, CEPR, IGIER. E-mail: dmytro.sergeyev@unibocconi.it

1 Introduction

Government debt has risen substantially over the past decades across many economies, making its economic effects increasingly important. These effects depend on how the debt is expected to be financed in the future. Such expectations shape how households, firms, and financial markets behave. Yet despite their importance, there is little direct evidence on what people actually believe about how governments will manage their debt.

In this paper, we provide direct empirical evidence on household beliefs about the intertemporal budget constraint of the government (iBCg). Unlike most of the existing literature—which infers expectations by examining historical patterns of debt financing and assuming these will persist—we elicit these beliefs directly. We survey a representative sample of 2,783 U.S. households, asking respondents how they think the government will finance its stock of debt. To do so, we present a structured list of potential financing sources that extend beyond conventional primary surpluses. These include, for example, money creation, government asset sales, interest rate manipulation, and more. All of these options arise from a rich but nevertheless standard intertemporal budget constraint. Respondents first select the financing methods they believe the government is likely to use. Then, for each selected method, they allocate shares of the total debt they expect it to cover.

On average, respondents expect 45 percent of government debt to be financed through conventional future primary surpluses. Specifically, they attribute 16 percent to higher tax rates, 11 percent to increased tax revenues from economic growth (i.e., an expanded tax base), and 18 percent to reductions in government spending. Smaller shares are assigned to less conventional financing methods: 6 percent to money creation, 6 percent to a lower cost of servicing the debt (i.e., reduced interest rates), 4 percent to the sale of government assets, and 4 percent to outright default. Only 11 percent of the debt is expected to be inflated away.

Remarkably, 23 percent of government debt is expected to be rolled over indefinitely without ever generating fiscal surpluses—suggesting that many respondents view a substantial portion of debt as potentially functioning like a bubble. Within this 23 percent, respondents attribute 3 percent to financial repression (i.e., the government pressuring institutions to hold debt at below-market rates), 7 percent to the liquidity and safety premium of government bonds, and 10 percent to beliefs that future investors will continue to purchase government debt.[1]

Do household beliefs depend on the current political environment or economic conditions? In other words, are fiscal beliefs state-dependent? To investigate this, our survey

[1]The remaining 3 percent within the rollover category is classified as "other."

goes beyond perceptions of financing of the current stock of government debt in the current conditions. Following a growing literature that measures beliefs in counterfactual situations or vignettes (Fuster, Kaplan and Zafar, 2021; Andre, Pizzinelli, Roth and Wohlfart, 2022; Armantier, Sbordone, Topa, Van der Klaauw and Williams, 2022), we pose a debt financing question in a series of hypothetical scenarios. The key advantage of this approach is that it allows us to control the features of each scenario aligning them precisely with our research questions, even when such scenarios are rarely observed in real-world data.

First, we ask respondents to consider a point in time five years in the future, when the U.S. political environment will most likely change considerably, and to report how they believe the government will finance its debt of the same size as it is today. Most respondents indicate that their expectations remain unchanged compared to current debt financing. Among those who do report different views, the average responses are close to those for current debt financing.

Second, we show that the level of government debt influences financing beliefs. We ask respondents to consider a hypothetical scenario in which the government's debt is 150 percent relative to the gross domestic product (GDP). We find that average responses shift in meaningful ways. Most notably, the share of debt expected to be rolled over without generating surpluses declines from 23 percent to 15 percent, while the share anticipated to be defaulted on rises from 4 percent to 8 percent. In contrast, the share of debt expected to be financed through future surpluses remains stable at 45 percent.

Third, we measure debt financing beliefs in a scenario were the debt bubble component is absent. Brunnermeier, Merkel and Sannikov (2020) argue that in models with asset bubbles—such as overlapping-generations models (Samuelson, 1958) or incomplete markets with uninsurable idiosyncratic risk (Bewley, 1979)—the government can ensure that the bubble remains attached to government debt rather than shifting to alternative assets like equities or private bonds. This can be achieved by credibly committing to generate sufficient primary surpluses to repay all debt if the bubble component were to vanish. If the public believes this commitment, government debt retains its bubble component in equilibrium, and the government is never required to fully back its debt with surpluses. To elicit such out-of-equilibrium beliefs, we ask participants who previously selected the "bubble method" of financing to consider a situation in which the government can no longer roll over its debt without raising surpluses. On average, these respondents increase the share of debt they expect to be financed through conventional primary surpluses by 24 percentage points—providing some support for the mechanism proposed by Brunnermeier, Merkel and Sannikov (2020). At the same time, they also increase the share of debt attributed to other sources, including default.

How do debt financing expectations depend on the shocks that raise government debt? To answer this question, we ask households how newly issued government debt following two unexpected changes in current fiscal policy will be covered in the future. The first policy change is an unexpected and temporary increase in military spending; the second involves one-time cash transfers similar to those implemented during the COVID-19 pandemic. Both policies are framed as raising the public debt-to-GDP ratio by 10 percentage points. We find that respondents expect future fiscal surpluses to cover 42 percent of the military spending increase and 41 percent of the cash transfers. Meanwhile, 29 percent (military) and 26 percent (cash transfers) of the debt are expected to be rolled over indefinitely without collecting surpluses. These results suggest that, in the eyes of the public, a substantial share of government spending following such shocks is perceived to be unfunded.

The results so far have focused on average responses across households, but these averages mask substantial heterogeneity. We find that some cross-sectional variation is systematically related to individual characteristics, which we elicit in the survey. In particular, respondents who are parents, college-educated, Republican-leaning, employed, or in lower income brackets tend to expect a larger share of government debt to be repaid through future surpluses and a smaller share to be rolled over without generating surpluses.

In the final part of the paper, we embed the elicited beliefs into a standard New Keynesian model augmented with wealth-in-the-utility to capture the possibility that government debt can be valuable without generating surpluses. This framework allows us to quantify how the measured expectations about government debt financing alter the transmission of fiscal shocks.

Related literature. This paper relates to several strands of literature. First, a large body of macroeconomic research examines the historical evolution of the debt-to-GDP ratio and quantifies the contributions of primary surpluses, inflation, economic growth, and interest rates to its dynamics (Hall and Sargent, 1997, 2011). In contrast, our paper takes a forward-looking approach by measuring individuals' expectations about how the government will finance its debt in the future.

Second, recent work highlights a puzzle: in countries like the United States and Japan, current debt-to-GDP ratios substantially exceed what can be justified by extrapolating future primary surpluses, raising the question of why investors continue to hold government debt (Chien, Cole and Lustig, 2023; Jiang, Lustig, Van Nieuwerburgh and Xiaolan, 2024). While households are not typically the marginal investors in sovereign debt markets, our findings provide insight into this valuation puzzle. In particular, the fact that

respondents expect a large share of existing debt to be rolled over indefinitely without generating surpluses suggests that many perceive the debt as being sustained, at least in part, by a bubble. Reis (2022) and Brunnermeier, Merkel and Sannikov (2024) link this bubble component to the perceived safety and liquidity of U.S. government debt. These properties can support the demand for government securities even in the absence of conventional primary surpluses.

Third, a growing theoretical literature in macroeconomics explores the implications of non-rational expectations. Models that explicitly incorporate fiscal policy must make assumptions about agents' beliefs regarding future fiscal actions—that is, the government's intertemporal budget constraint. A common assumption is that agents hold Ricardian beliefs (Woodford, 2013), meaning they expect the present value of future primary surpluses to equal the current level of debt. Recent work by Iovino and Sergeyev (2023) and Bianchi-Vimercati, Eichenbaum and Guerreiro (2024) relaxes this assumption. These papers allow for the possibility that some agents do not hold Ricardian beliefs, which can generate real effects of government debt even in the absence of credit constraints. Our paper contributes to this literature by providing direct empirical evidence on the share of government debt that households believe is backed by future surpluses.

Finally, our paper connects to recent work examining how information about government debt influences household expectations. Roth, Settele and Wohlfart (2022) conduct a randomized control trial (RCT) in which they provide information about the level of government debt and study its effect on attitudes toward government spending, as well as beliefs about future taxes, spending, and debt sustainability. In contrast, we directly elicit beliefs about the relative contribution of various methods of government debt financing. Coibion, Gorodnichenko and Weber (2021) also run an RCT, showing that inflation expectations respond to information about projected future debt but are less sensitive to current debt levels. While our primary focus is on expectations regarding debt financing, we also measure inflation expectations in some scenarios and find that they respond to fiscal shocks that increase government debt. Finally, Andrade, Gautier, Mengus, Moench and Schmidt (2025) examine how the effect of debt information on inflation expectations depends on households' perceptions of fiscal space, proxied by the perceived probability of default. They find that only households who believe fiscal space is limited revise their inflation expectations. Our survey also allows for the possibility that government debt may be inflated away. Interestingly, in the counterfactual scenario where the debt-to-GDP ratio is 50 percentage points higher, the average expected share of debt to be inflated away remains similar to that under the current debt level.

The rest of the paper is organized as follows. Section 2 introduces the conceptual theoretical framework underlying our survey financing options. Section 3 presents the survey

design. Section 4 describes the results average across respondents. Section 5 documents heterogeneity. Section 6 investigates model implications of average households beliefs. Section 7 concludes. Appendix presents omitted figures and tables.

2 Intertemporal Budget Constraint of the Government

This section introduces the intertemporal budget constraint of the government, starting with its standard formulation and then extending it to incorporate additional financing methods that correspond to the options presented in our survey.

2.1 Conventional Budget Constraint

Consider the flow budget constraint of the government in the following form:

$$B_{t-1} = P_t s_t + \frac{1}{1+i_t} B_t, \tag{1}$$

where B_{t-1} denotes the stock of nominal one-period government debt at the end of period $t-1$, P_t is the aggregate price level, i_t is the nominal interest rate, and s_t is the real primary surplus. We will use $b_t \equiv B_t/P_t$ and $\Pi_t \equiv P_t/P_{t-1}$ to denote the real value of public debt and gross inflation rate.

Dividing equation (1) by P_{t-1}, log-linearizing around a steady state with constant debt and surpluses and zero inflation, and then iterating it forward to infinity produces the intertemporal budget constraint of the government:

$$\widetilde{b}_t = \sum_{k=0}^{\infty} \beta^k \left(\widetilde{s}_{t+k} - \beta s_b \widehat{i}_{t+k} + s_b \pi_{t+k} \right) + \lim_{k\to\infty} \beta^k \widetilde{b}_{t+k}, \tag{2}$$

where $\widetilde{b}_t \equiv (b_t - b)/y$, $\widetilde{s}_t \equiv (s_t - s)/y$, $\pi_t \equiv \log(\Pi_t)$, $\widehat{i}_t = \log(1+i_t) - \log(1+i)$, $\beta = 1/(1+i)$ is the steady-state discount factor, $s_b = b/y$, and y is a steady state output.

In most macroeconomic models, the budget constraint (2) holds under every possible realization of future shocks, as well as on average across different future states by applying expectations. We do not impose any conditions on the limit term and present this budget constraint in log-linearized form to allow decomposition into distinct channels that we map into the survey options.[2]

This decomposition reveals four distinct channels through which the government can

[2]The fact that the equation is written in deviations from steady state is without loss of generality, as we can add the steady-state relation $b = s/(1-\beta)$ to equation (2) multiplied by output y to express it in absolute levels.

finance its outstanding debt. The first term captures the discounted sum of future primary surpluses—the difference between tax revenues and government spending on goods, services, and social programs (excluding interest payments). Government revenues can be further decomposed into the average tax rate $\psi_{y,t}$ and the tax base y_t, such as gross domestic product. Formally, by representing the level of surpluses as $s_t = \psi_{y,t} y_t - g_t$, we can express $\widetilde{s}_t = \psi_y \widehat{y}_t + \psi_y \widehat{\psi}_{y,t} - \widetilde{g}_t$, where $\widehat{y}_t$ and $\widehat{\psi}_{y,t}$ are log deviation of GDP and the average tax rate from steady state, and $\widetilde{g}_t$ is the deviation of government spending from its steady state value divided by steady state GDPi

The second term in equation (2) reflects the nominal cost of servicing government debt. All else equal, the lower the nominal interest rate, the slower government debt accumulates and the easier it is for the government to repay its existing stock of debt by collecting surpluses.[3]

The third term emphasizes the role of inflation, keeping other variables constant. Because the government issues nominal bonds B_t, the nominal value of real surpluses s_t changes with inflation, making it easier to repay debt if the government collects positive real surpluses. In many macroeconomic models, inflation helps reduce debt only when it is unexpected. If inflation is anticipated, nominal interest rates will typically adjust through the Fisher equation. However, there is no guarantee that household expectations conform to the Fisher equation. For example, households may lack rational expectations or access to financial markets that would allow them to arbitrage beliefs inconsistent with the Fisher equation.

The final term corresponds to the long-run behavior of real debt. In standard representative agent macro models, the household transversality condition ensures this term is zero and bubbles do not exist. However, some models, such as overlapping generations models (Samuelson, 1958; Diamond, 1965), allow for the possibility that the debt is sustained by investors' belief that it will be rolled over indefinitely, independent of fundamental fiscal backing. The last term in equation (2) takes such a possibility into account.

2.2 Extended Budget Constraint

This section presents additional sources of government debt financing. Consider the following flow budget constraint of the government:

$$\frac{B_{t-1}}{P_{t-1}}(1-\delta_t) = \Pi_t \left[s_t + f_t + \frac{M_t - M_{t-1}}{P_t} + \left(\frac{1}{1+i_t} - \frac{1}{1+i_t^s} \right) \frac{B_t}{P_t} + \frac{1}{1+i_t^s} \cdot \frac{B_t}{P_t} \right], \quad (3)$$

[3]History is full of examples where the nominal interest rate was manipulated to ease fiscal pressure. For example, the experience of the U.S. from 1942 until the Treasury-Fed Accord of 1952 aimed to maintain stable yields on U.S. government securities (Friedman and Schwartz, 1963).

where $\delta_t \in [0,1]$ is the share of debt the government defaults on in period t, f_t are real proceeds from the sale of government assets (i.e., privatization) or revenues from renting these assets, M_t is the supply of money (i.e., currency), and i_t^s is the interest rate on safe privately issued securities. We next describe each of the new elements in more details.

Default. Another way governments can satisfy their budget constraints is by defaulting on their obligations. We account for this by introducing a default parameter $\delta_t \in [0,1]$, denoting the fraction of debt the government defaults on at time t. A higher δ_t reduces the amount of debt the government must repay. As with inflation, in many macro models, default helps only if it is unexpected. Typically, a higher default probability affects interest rates and does not necessarily reduce the fiscal burden. In our extended budget constraint below, equation (4), we do not require that higher default expectations translate into higher interest rates. Some respondents may believe that high levels of government debt will eventually lead to default, even if current interest rates remain relatively low.

Government Assets. Governments own assets, such as infrastructure, land, and natural resources. While asset-based financing is rarely the primary mechanism in advanced economies, it becomes relevant during fiscal distress or in resource-rich countries with substantial public wealth. In such cases, asset sales can delay or reduce the need for politically costly fiscal adjustments.[4] We capture this through the real proceeds from government asset sales or, alternatively, the revenues from renting government assets f_t.[5]

Money printing. The third term in equation (3) represents seigniorage from new issues of fiat money, which pays zero nominal interest. This term formalizes the idea that a central bank can prevent default by purchasing government debt with newly printed money.

Liquidity Yield. Government bonds can provide liquidity services that private assets cannot, which results in lower yields. Gorton and Pennacchi (1990), Gorton (2012) and Dang, Gorton and Holmstrom (2012) argue that safe debt is especially useful medium of exchange in transactions because it reduces the scope of adverse selection arising from asymmetric information across asset traders. Krishnamurthy and Vissing-Jorgensen (2012) and Nagel (2016) document the presence of such yield in the U.S. treasuries market. This yield creates a positive wedge between the private safe interest rate i_t^s and the government bond rate i_t. We formalize this by decomposing $B_t/P_t \cdot 1/(1+i_t)$ into the third and fourth terms in equation (3). Discounting government debt at the private rate reveals this yield as an implicit revenue stream, akin to seigniorage.

[4]For example, to reduce public debt, the Greek government sold a majority stake in the Piraeus Port Authority (PPA) to China COSCO Shipping Corporation in 2016 (Reuters, 2016).

[5]We do not include the full value of government assets in the budget constraint, as it is unclear how much will ultimately be sold or rented.

Financial Repression. Some of the wedge between i_t^s and i_t may result not from market preferences but from policies that artificially increase demand for government bonds, such as regulations requiring banks to hold them. Following the literature (Reinhart, Reinhart and Rogoff, 2015), we refer to this as *financial repression*. We decompose the wedge $i_t^s - i_t$ further in the equation below into a liquidity yield component $i_t^s - i_t^{nr}$ and a repression component $i_t^{nr} - i_t$, where i_t^{nr} is the shadow rate that would prevail absent financial repression.

Intertemporal Budget Constraint of the Government. Log-linearizing equation (3) at a zero-inflation steady state, forward-iterating it, and applying a potentially non-rational expectations operator yields:[6]

$$\begin{aligned}\widetilde{b}_t = \widetilde{\mathbb{E}}_t \sum_{k=0}^{\infty} \beta^k \Big[& \underbrace{\psi_y \widehat{\psi}_{y,t}}_{\text{Tax rate}} + \underbrace{\psi_y \widehat{y}_t}_{\text{Tax base}} - \underbrace{\widetilde{g}_t}_{\text{Gov. spending}} \\ & + \underbrace{\Delta \widehat{m}_{t+k+1}}_{\text{Money printing}} - \underbrace{\beta s_b \widehat{i}_{t+k}}_{\text{Nom. interest rate}} + \underbrace{(s_m + s_b)\, \pi_{t+k}}_{\text{Inflation}} \\ & + \underbrace{\widehat{f}_{t+k}}_{\text{Gov. Assets}} + \underbrace{b\delta_{t+k}}_{\text{Default}} \\ & + \underbrace{\beta \frac{i_{t+k}^s - i_{t+k}^{nr}}{1+i} \widetilde{b}_{t+k}}_{\text{Liquidity yield}} + \underbrace{\beta \frac{i_{t+k}^{nr} - i_{t+k}}{1+i} \widetilde{b}_{t+k}}_{\text{Financial repression}} \Big] + \underbrace{\widetilde{\mathbb{E}}_t \lim_{k\to\infty} \beta^k \widetilde{b}_{t+k}}_{\text{Speculative bubble}}. \end{aligned} \tag{4}$$

where s_m is a steady state ratio of money to GDP. The first line in equation (4) contains the conventional terms forming changes in primary surpluses. The second line includes conventional monetary sources of financing: money printing, interest changes, and inflation. The third line features somewhat unconventional sources: asset sales and default. The last line captures mechanisms that allow the government to roll over debt without collecting either conventional or unconventional surpluses. This decomposition provides the theoretical foundation for our empirical analysis. Each term in equation (4) maps to a distinct theoretical channel, which we link to survey responses to study how people perceive the government's intertemporal budget constraint. We note that these channels may not be independent from each other. In such a case, we will interpret equation (4) as an accounting decomposition.

[6] When iterating forward equation (3), we keep only government bonds on the left-hand side, while money printing becomes a term on the right-hand side. See Bassetto and Sargent (2020) for two alternative ways to write the intertemporal budget constraint of the government in their equations (19) and (20).

3 Survey Design

This section introduces our survey of U.S. households. We first describe the sample and then provide details of the survey structure.

3.1 Sample

Our survey includes a sample of 2,783 U.S. households. The sample is broadly representative of the U.S. population in terms of gender, age, region, gross household income, and education. Data were collected in May 2025 using the online platform Prolific, which is widely used in economics research (Haaland, Roth and Wohlfart, 2023). To ensure high-quality responses, the survey was kept relatively short, with a median completion time of 12.9 minutes. Participants were compensated at a rate slightly above the minimum wage. Appendix Table A.1 shows that the demographic characteristics of our sample closely match those reported in the 2023 American Community Survey (Ruggles, Flood, Goeken, Schouweiler and Sobek, 2023). The full questionnaire is available in Appendix C.

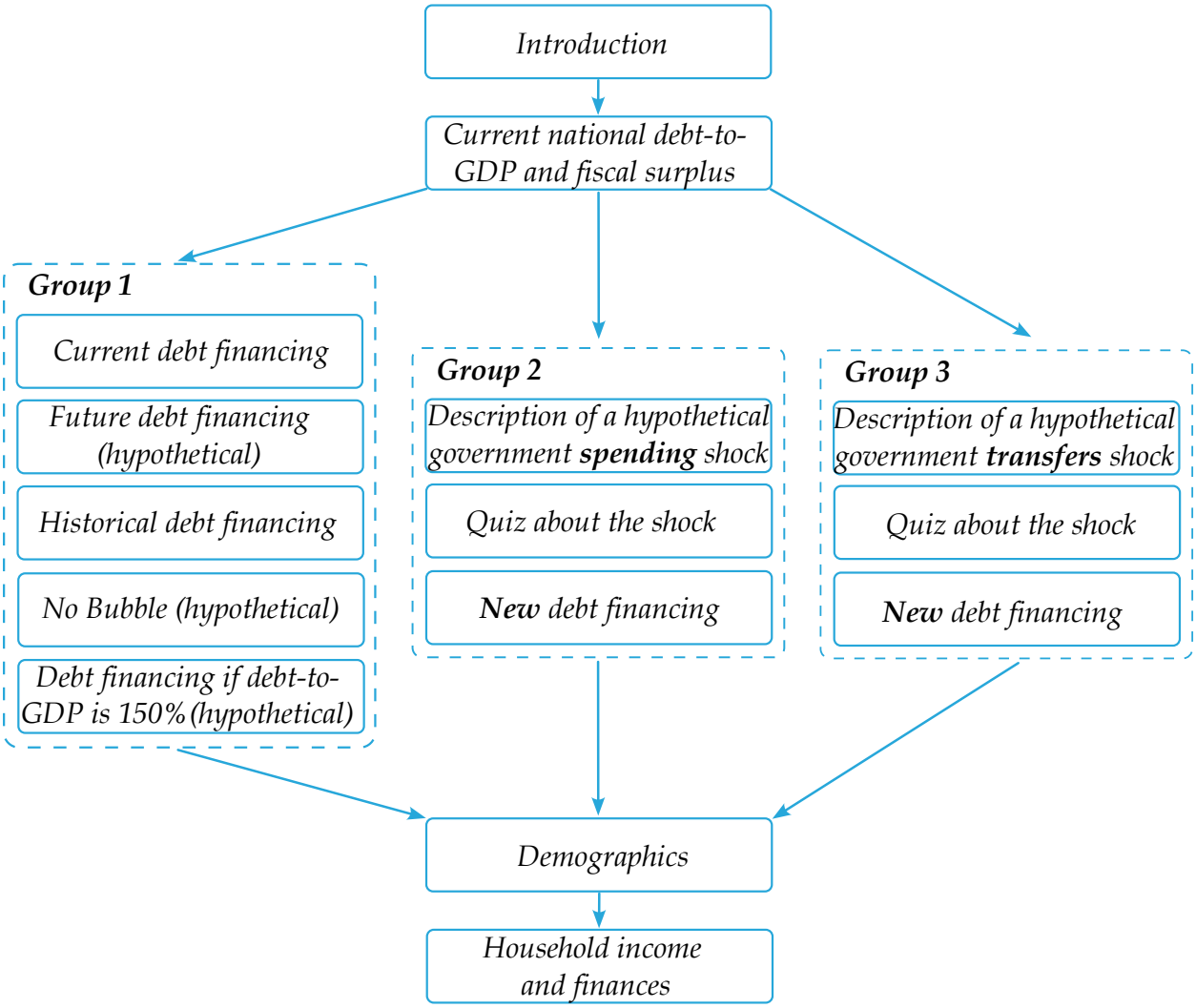
3.2 Survey Structure

Our survey consists of three parts, represented in Figure 1. In the first part, all participants read the introduction and are asked about their perception of the national debt *held by the public* (or net national debt) as a share of GDP at the end of 2024.[7] We then provide all participants with accurate information about the net national debt-to-GDP ratio at the end of 2024 and the level of primary surpluses in 2024. By disclosing this information, we aim to minimize the influence of misperceptions about the level of government debt and surpluses on respondents' expectations regarding its future financing.

In the second part of the survey, we ask questions about government debt financing. Participants are randomly assigned to one of three groups. The first group answers a set of questions about the overall level of national debt, followed by questions based on hypothetical scenarios that vary assumptions about the economic conditions. The

[7] We focus on the national debt—the debt owed by the federal government of the United States to holders of Treasury securities—because it is arguably the most widely publicized measure of government indebtedness in the media. In addition, we ask questions about the national debt held by the public, defined as the national debt net of federal securities held by various branches of the U.S. federal government (e.g., the Social Security Trust Fund), because it is the more relevant concept for the intertemporal budget constraint we study. Finally, following the Treasury's definition of federal debt held by the public, we do not exclude the Federal Reserve's holdings. This choice reflects the fact that, since the Global Financial Crisis, majority of the Fed's Treasury holdings have been financed by interest-bearing reserve balances rather than by zero-interest currency in circulation. As a result, these reserve balances generate substantially smaller profits for the Fed—and therefore smaller remittances to the Treasury—than they would if they were financed primarily by currency issuance.

Figure 1: Survey Structure



second and third groups receive similar questions but within the context of two distinct macroeconomic shocks: a change in military spending for the second group, and a change in government cash transfers for the third.

After completing an attention check, all respondents proceed to the final set of background questions, such as age, gender, state of residence, education level, and personal financial circumstances.

3.3 Government Debt Financing Questions

We now describe in detail the questions asked to respondents in each group.

Group 1: total level of debt. We began by asking respondents the following question about how they think the U.S. government will manage its current national debt, where

the list of possible answers is presented in random order.

In your opinion, what will the U.S. government do, both in the near and distant future, to handle its current level of debt? (Select all options you think apply.) The government will ...

- *increase tax revenues through higher tax rates*
- *increase tax revenues thanks to economic growth, which will expand the tax base, without needing to increase tax rates*
- *lower government spending (on goods, services, and social programs)*
- *allow for inflation, making debt issued today easier to repay with less valuable future dollars*
- *print money to repay the debt*
- *sell government property (like federal buildings, land, or highways)*
- *keep borrowing (rolling over the debt), potentially forever, even without collecting revenues above government spending (on goods, services, and social programs)*
- *default on part of the debt*
- *lower the interest rate on its debt*
- *do something else (please specify)*

These answer options are not arbitrary: they correspond to the components of the government budget constraint laid out in Section 2. Allowing multiple selections reflects the theoretical possibility that governments may use a mix of tools rather than relying on a single tool. We refer to this as the *(qualitative) current debt financing* question.

Among the listed answers is the option: *"Keep borrowing (rolling over the debt), potentially forever, even without collecting revenues above government spending ..."* We refer to this answer as bubble. Those who select it receive a follow-up question asking to indicate which mechanisms enable the government to continue borrowing. We refer to this as the *bubble* question. It read as follows:

In the previous question, you chose that "The government will keep borrowing (rolling over the debt), potentially forever, even without collecting revenues above government spending (on goods, services, and social programs)".

Which of the following reasons do you think would allow the government to continue borrowing in this situation? (Pick all that apply)

- *Today's government bond investors believe that future investors will keep purchasing government debt*

- *Government debt is a safe and liquid asset, allowing the government to borrow at lower interest rates than private firms*
- *The government will force private banks to buy its debt, for example, through financial regulation*
- *Something else (please specify)*

Next, respondents are asked to allocate the level of national debt across the financing methods they selected in the initial question, assigning percentage shares that sum to 100. For those who selected the bubble option, an additional step follows: they are asked to divide the share assigned to the bubble across the specific mechanisms they chose in the follow-up bubble question. These questions provide quantitative structure to respondents' qualitative beliefs.

We then ask debt financing questions in three hypothetical scenarios and in historical perspective. The first hypothetical scenario aims at measuring to what degree the answers to the debt financing questions are influenced by the current economic and political environment. To do this, we ask the respondents to imagine that today is year 2030, the U.S. administration has changed and the aggregate economy operates normally (see the exact wording in Appendix C.2.2).[8] The respondents are first asked whether they would answer previous questions differently under this scenario. Those who respond "Yes" are prompted to re-answer both the debt financing and percentage allocation questions. Those who respond "No" proceed directly to the next question.

Following this, we ask respondents how they believe the government has handled its debt in the past. The structure of this question mirrors that of the current debt financing question and is presented in Appendix C.2.3. This question helps assess whether respondents perceive a shift in fiscal strategy over time and how those perceptions may inform their current expectations.

Next, we present a second hypothetical scenario, shown only to respondents who previously selected the bubble option. In this scenario, participants are asked to imagine that the government can no longer continue borrowing without collecting revenues exceeding its spending. Respondents are then asked again how they believe the government would manage its debt and to allocate the debt financing shares across the options they select. This question is inspired by Brunnermeier, Merkel and Sannikov (2020), who show that the government can support a stable debt bubble by committing to raise surpluses if

[8] One potential concern is that, since we ask related questions that vary only in some features to the same respondents in Group 1, these respondents might infer which answers we expect and respond accordingly. In other words, the within-subject treatment effects could be influenced by experimenter demand effects. While this is possible, in our setting it is not obvious which government financing options are more likely under the different scenarios we consider. Moreover, existing evidence (De Quidt, Haushofer and Roth, 2018) suggests that experimenter demand effects are small in practice.

debt valuation falls below a threshold. This off-equilibrium commitment is never used in equilibrium but is critical for keeping the bubble attached to public debt. Our question provides a direct empirical measure of these off-equilibrium beliefs.

Finally, all respondents in group 1 are presented with a third hypothetical scenario. They are asked to imagine that, as of January 1, 2030, the debt-to-GDP ratio is 150 percent, while the economy remains stable and a new president has been in office for about a year. We refer to this as the *high debt* scenario. As in previous scenarios, respondents are asked to re-answer the debt financing question and to reallocate the debt shares accordingly.

Group 2: military purchases shock. Participants in group 2 are presented with a hypothetical scenario involving an unexpected increase in U.S. government military purchases. This fiscal shock is designed to mirror canonical fiscal interventions commonly studied in macroeconomic models and empirical work.[9].

To contextualize the scenario, we first explain that military purchases refers to current expenditures on goods and services and does not include long-term investments like constructing military bases or purchasing aircraft and ships. Appendix C.3 provides the exact wording. Respondents are asked to imagine that today is January 1, 2030 and the U.S. government unexpectedly announces and begins implementing a temporary increase in military spending on goods and services. The policy raises military spending by 10 percent of GDP. The increase lasts for one year, does not affect other types of government spending, and is fully financed through borrowing, resulting in a 10 percentage point increase in the national debt-to-GDP ratio. We explain that this decision is not driven by any change in the government's assessment of national security or broader economic conditions.

To ensure respondents understand the scenario, we include a comprehension check in the form of a quiz, where they are asked to identify all correct statements from a list.

As in group 1, the respondents in group 2 are first asked how they believe the government will finance the resulting increase in debt. They select one or more financing methods from a randomized list of options. For each selected method, they are then asked to indicate what percentage of the total debt increase they believe will be covered by that method. If respondents select the bubble option, they are shown a follow-up question asking them to choose the specific reasons they had in mind from a predefined list. They are then asked to allocate the portion of the debt they assigned to the bubble across the selected reasons.

Additionally, we ask respondents who expect an increase in taxes—either through higher tax rates or an expanded tax base—whether they believe they will personally have

[9]See e.g. Blanchard and Perotti (2002), Romer and Romer (2010) and Ramey and Zubairy (2018).

to pay more taxes in the future.

Group 3: cash transfer shock. Participants in group 3 are presented with a hypothetical scenario involving a large, one-time expansion in government cash transfers. We ask respondents to imagine that today is January 1, 2030 and the U.S. government unexpectedly announces and immediately begins implementing a policy that provides an equal cash payment to every U.S. resident. The program increases the debt-to-GDP ratio by 10 percentage points. The questions for group 3 follow the same structure as that of group 2.

The purpose of asking the reaction to the transfer shock is three-fold. First, respondents may differ in moral attitudes toward military spending, which can affect their answers. Second, we want to investigate whether and how different sources of government debt changes affects beliefs about debt financing. Third, cash transfer policies was an important driver in the increase in government debt across many countries during the COVID-19 pandemic.

4 Results

In this section, we present aggregate results—that is, responses not conditioned on demographics. We begin by discussing the perceptions of the U.S. net national debt-to-GDP ratio. Each participant entered a numerical percentage corresponding to their estimate of the ratio at the end of 2024.[10]

The data show that the median respondent reports a debt-to-GDP ratio of 80%, compared to an actual level of 97%, implying a 17 percentage point gap between perception and reality. This is consistent with Coibion, Gorodnichenko and Weber (2021) and Roth, Settele and Wohlfart (2022) who also show that households underestimate the level of government debt. The cross-sectional standard deviation is 49 percentage points, pointing to considerable heterogeneity among respondents.[11]

4.1 Total Level of Debt

Out of 2,783 respondents, 959 were randomly assigned to group 1 and first answered the current debt financing question. Of these, 519 selected the "bubble" option and were shown a follow-up question on the motives behind continued borrowing. Figure 2 displays the distribution of the number of responses selected in each question—the left panel

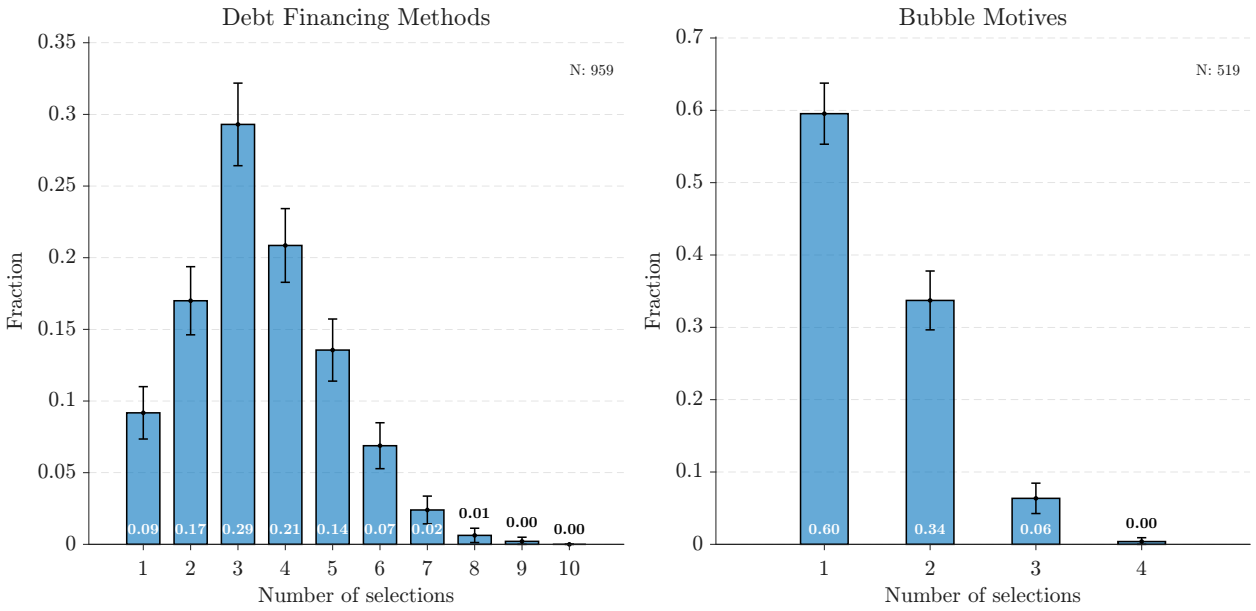
[10] After excluding responses above 500 percent and removing missing or invalid entries, we obtain 2,752 answers.

[11] The histogram of responses is reported in Appendix Figure A.1.

for the initial debt financing choices, and the right panel for the bubble follow-up. In both cases, respondents could select multiple options.

The data reveal that responses are significantly dispersed across multiple choices. For the debt financing question, about half of respondents selected three or four options, with a substantial share selecting even more. Less than 10 percent chose a single answer. This pattern indicates that individuals do not view the government's budget constraint as being satisfied through a single method.

Figure 2: Current Debt Financing Choice Dispersion



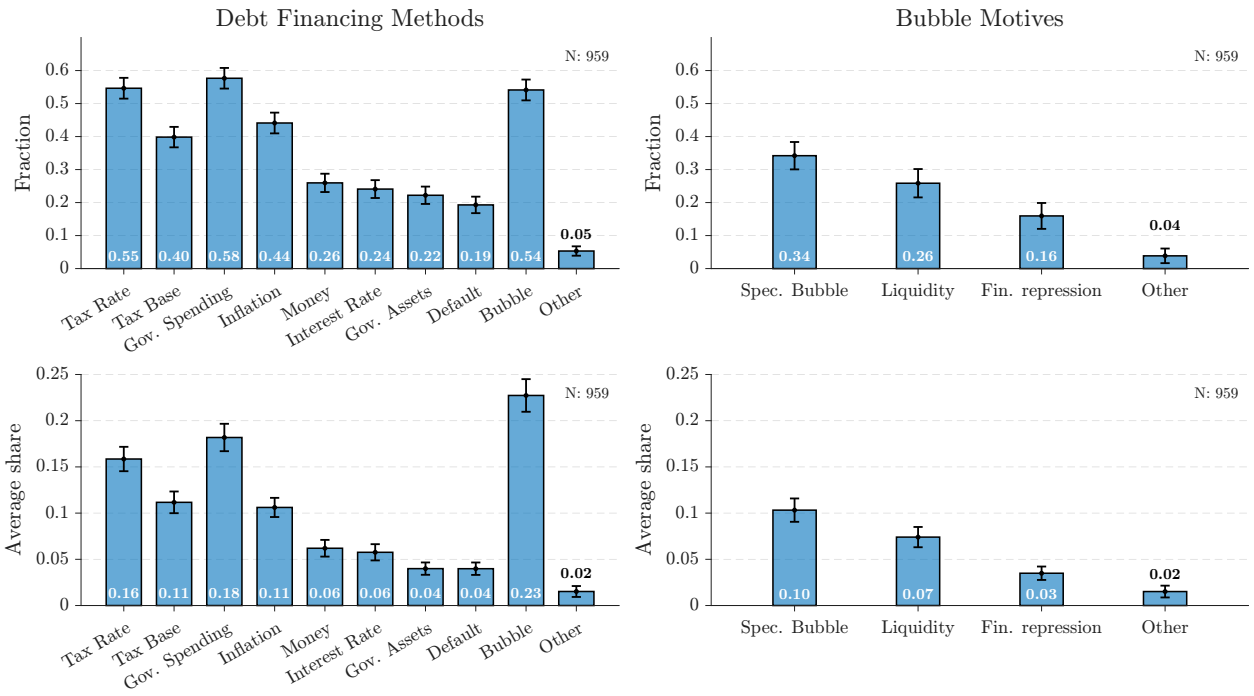
Notes: The left panel shows how many options respondents selected when asked how the government finances its debt ($N = 959$). The right panel shows selections in the follow-up on bubble motives among those who chose a bubble explanation ($N = 519$). Both figures report 95% confidence intervals. Multiple responses were allowed in both questions.

For the bubble motive question, a similar though more concentrated pattern emerges. Most respondents selected only one explanation, and very few chose more than two. This suggests that while individuals entertain multiple views about how debt can be "rolled over," they tend to hold more singular beliefs about the underlying roll-over nature.

Current debt financing expectations. Figure 3 summarizes responses to the debt financing and bubble questions. The top panels report the fraction of all respondents selecting each option, while the bottom panels show the cross-sectional average shares allocated to the selected options. The left side corresponds to the debt financing question, and the right side to the bubble follow-up.

The results indicate that the most commonly selected options (top left panel of Figure 3) are cutting government spending (58 percent), raising tax rates (55 percent), and continued borrowing (54 percent). A sizable fraction also believes the government will use

Figure 3: Current Debt Financing Methods



Note: Top panels show the fraction of all respondents selecting each option. Bottom panels show the average share of debt allocated to selected items, with 95% confidence intervals. Left: debt financing methods (N=953). Right: bubble motives (N=953), including zeros for respondents who did not select the keep borrowing option. Average shares sum to 1 per respondent over selected options. Labels refer to the options presented in the debt financing methods and bubble questions. They are shown in the same order as they appeared in Section 3.3.

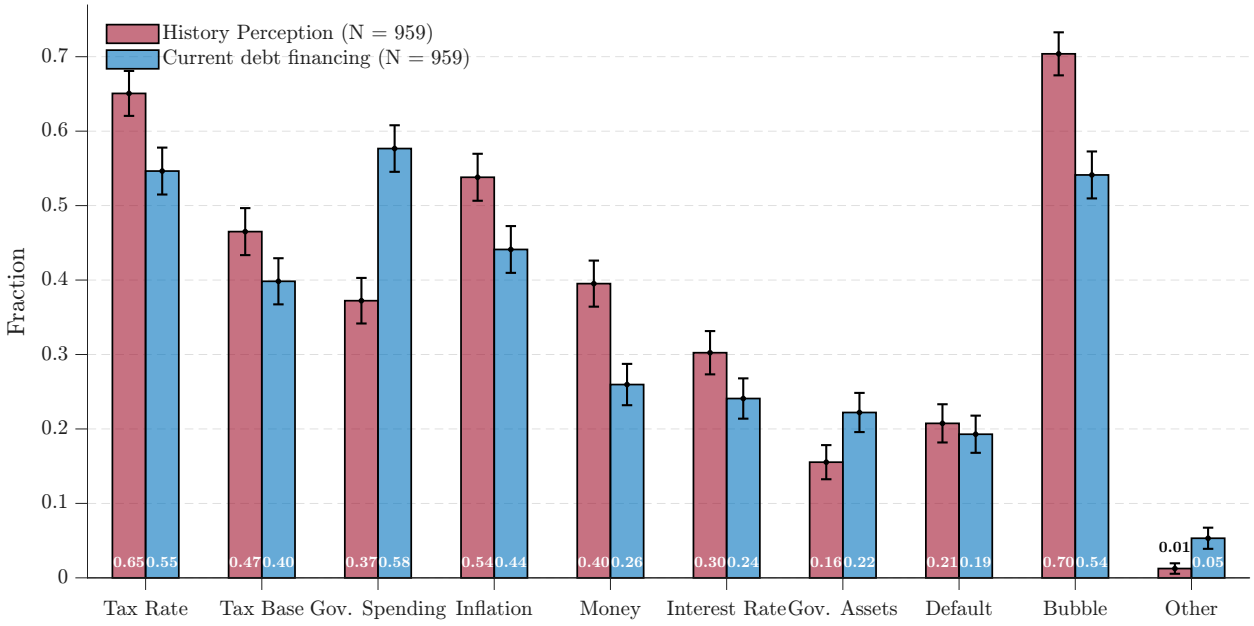
inflation to erode the real value of debt (44 percent). Channels such as money creation, default, government asset sales, and interest rate changes are less frequently chosen.

In the bubble follow-up question, 34 percent of respondents select the "speculative bubble" ("*Today's government bond investors believe that future investors will keep purchasing government debt*") explanation for government debt roll-over (or bubble), 26 percent pick the liquidity motive, and 16 percent cite financial repression (e.g., regulation).[12] It shows that beliefs about continued borrowing are not confined to abstract speculation: many attribute it to liquid-asset demand or financial repression (regulation).

The quantitative questions answers further clarify the relative importance of these mechanisms. Respondents assign, on average, the largest portion of debt to the bubble channel (23 percent), followed by spending cuts (18 percent) and tax rate increases (16 percent). Inflation and tax base expansion receive lower average shares (around 11 percent). Within the bubble channel, the average share is distributed as follows: 10 percent for the speculative bubble, 7.4 percent for liquidity services, and 3.5 percent for financial

[12]These values are computed relative to the full group, assigning zero to non-respondents of the bubble question. This approach allows for a clearer comparison of how prevalent each explanation is in the broader population, including those who did not select the rollover option.

Figure 4: Current vs. Historical Debt Financing Perception



Notes: The figure compares the fraction of respondents selecting each financing method across two questions: what the government will do in the future (blue) and what it has done in the past (red), according to respondents' beliefs. The figure reports 95% confidence intervals.

repression. These add up to the total average assigned to the bubble channel.[13]

In sum, the results reveal that people perceive the government as relying on a mix of conventional fiscal tools and debt roll-over (i.e., bubble). While the bubble channel accounts for a notable portion of perceived financing, its underlying justifications vary, with some respondents pointing to speculative dynamics and others to institutional features of the bond market.

Historical debt financing perception. Respondents were also asked how they perceive the government handled its debt in the past. Figure 4 shows the fraction of respondents selecting each financing method in response to the two questions—red bars for perceptions about the past and blue bars for the future beliefs, corresponding to those presented in the top left plot of Figure 3. This comparison allows us to examine how perceptions about the past government behavior compare to anticipated future actions.

The figure reveals several notable differences in perceived financing strategies. Roll-

[13]One may be concerned that a typical household does not usually think about how the government finances itself. As a result, their responses could be quite noisy. At the same time, households with "skin in the game"—for example, those investing in financial assets in general, and in U.S. Treasuries in particular—may be more knowledgeable about public finances and thus provide more accurate responses. Appendix Figure A.2 compares the average shares in Figure 3 with those conditional on respondents investing in financial assets in general and in U.S. bonds in particular. The figure shows that the average responses are virtually identical.

over (or bubble) is the most frequently selected option when thinking about the past, chosen by 70 percent of respondents, compared to 54 percent in the current debt financing case. Inflation and tax rate increases are also viewed as more prevalent historically—selected by 54 and 65 percent of respondents, respectively—than in expectations for the future (44 and 55 percent). In contrast, spending cuts show the largest shift in the opposite direction: only 37 percent believe they were used in the past, while 58 percent expect them to be used in the future. Other channels, such as money creation or government asset sales, exhibit relatively minor changes across the two questions.

Overall, this comparison shows that respondents believe the government relied more heavily on debt rollover and inflation in the past, but expect relatively greater reliance on conventional fiscal tools—especially spending cuts—going forward.[14]

4.2 State Dependence

In this subsection, we present results from the three hypothetical scenarios introduced in Section 3: the *future debt financing* scenario, in which the debt-to-GDP ratio remains unchanged at 97 percent after five years; the *no bubble or off-equilibrium* scenario, which assumes that the government can no longer rely on continued borrowing; and the *high debt* scenario, where the debt-to-GDP ratio rises to 150 percent over the same time horizon.

Out of the 959 respondents in Group 1, 336 participated in the future debt financing scenario, having indicated that they would answer the debt questions differently under that condition. The off-equilibrium scenario was shown only to the 519 respondents who had selected the bubble option in the current debt question. Finally, all 959 respondents were shown the high debt scenario.

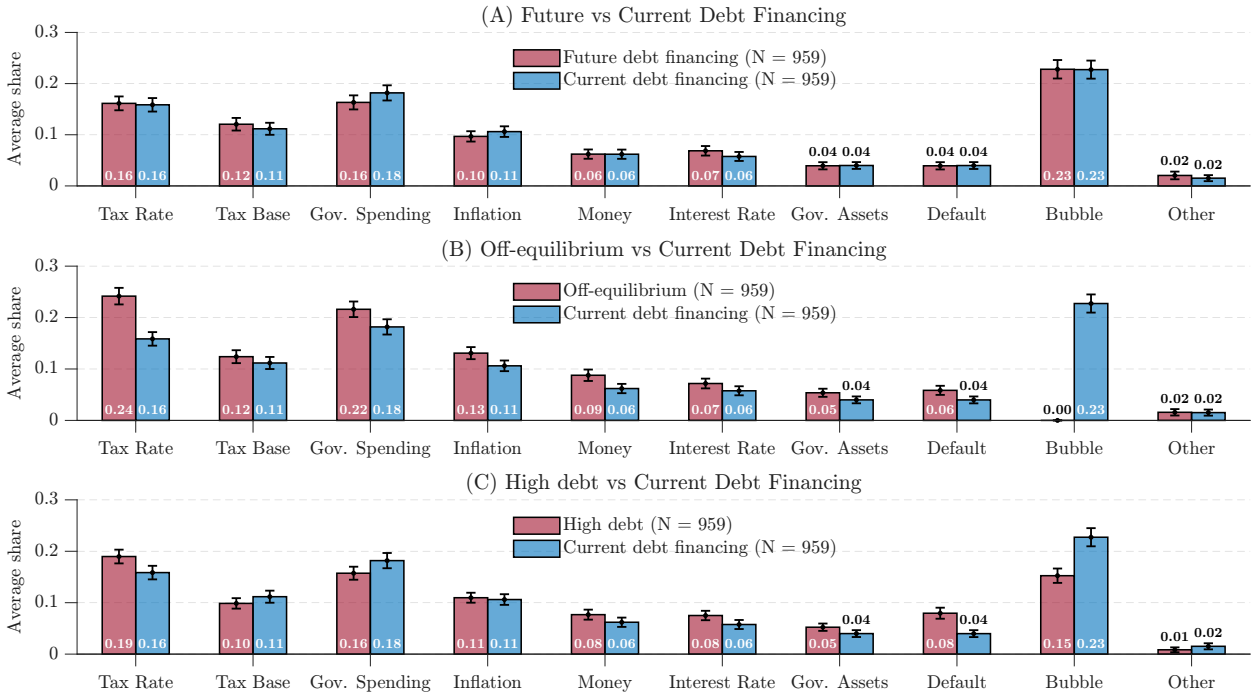
Figure 5 compares the responses across the different scenarios and the current debt financing case, showing the average share of debt allocated to each selected item. For the future debt financing and off-equilibrium scenarios, the red histograms are calculated by combining the responses of participants in the respective scenarios (336 and 519 individuals) with those of non-participants (623 and 440 individuals, respectively).

In the *future debt financing* scenario, the resulting distribution is almost identical to the current debt financing benchmark. When participants are told that the debt-to-GDP ratio will remain unchanged in 2030, they scarcely revise their views on how public debt will be financed. This suggests that perceptions of debt financing are largely insensitive to the prevailing economic and political environment.

In the *off-equilibrium* scenario, the absence of the bubble option leads to a broad redistribution of responses. All channels see an increase in selection, with the largest jump

[14] We did not ask a quantitative question about historical debt financing perception to keep the survey relatively short.

Figure 5: State Dependency



Notes: The figure displays the average share of debt allocated to each selected financing method, with 95% confidence intervals, in the current debt financing scenario (blue) and in each of the three hypothetical scenarios (red): Future Debt Financing, Off-Equilibrium, and High Debt. For Panel A and B red bars are computed by combining the responses of participants to the scenario with those of non-participants.

in tax rate increases. This redistribution suggests that, in the absence of the perpetual rollover option, respondents expect the government to rely on a mix of fiscal tools.

Compared to the current debt financing case, in the *high debt* scenario the bubble channel receives a noticeably smaller weight, while taxation, default, and interest rate strategies take on a larger role. At the same time, reliance on government spending cuts decreases. This pattern suggests that respondents anticipate a broader mix of tools to address the high-debt environment, with less emphasis on rollover and more on active fiscal adjustment.

Overall, respondents adapt their beliefs to the debt environment in intuitive ways. As debt becomes larger, reliance on the bubble option weakens, while tax increases, interest rate management, and default become more prominent.

4.3 Fiscal Shocks

We now analyze responses from participants in groups 2 and 3, who were presented with two distinct one-time fiscal expansions: an increase in military spending (group 2) and a universal cash transfer (group 3). Out of 2,783 respondents, 922 were assigned to the

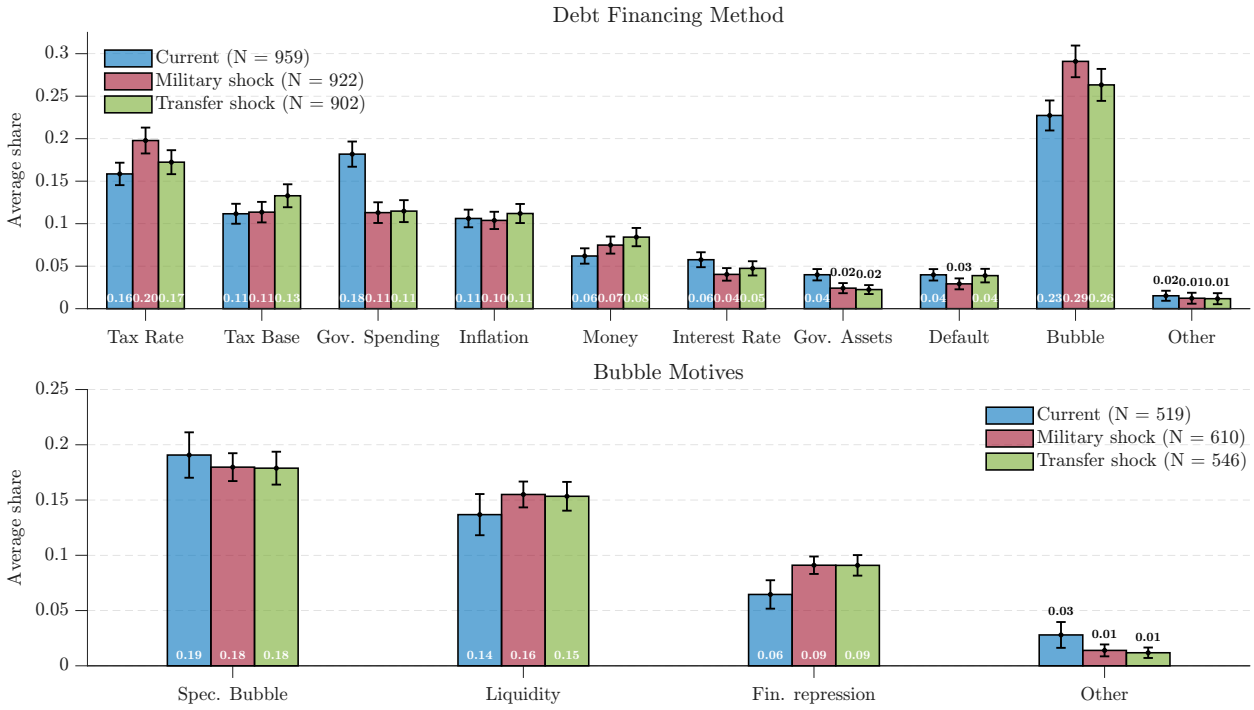
military spending scenario and 902 to the cash transfer scenario.

New debt financing expectations. Figure 6 compares both fiscal shocks to the current debt financing scenario, focusing on the debt financing and bubble questions. The top panels shows the average share of debt allocated to selected methods while the bottom panel displays the average share distribution across bubble-related motives.

The overall pattern suggests that respondents interpret the two fiscal shocks in similar ways. The fraction of people selecting each financing method is nearly identical across the military and transfer scenarios, indicating that respondents do not perceive strong differences in their implications for debt coverage. Small variations exist—tax rate increases and the bubble option are slightly more common in the military case, while tax base expansion, inflation, money creation, and default are marginally higher in the transfer case—but these differences are modest.

Relative to the current debt financing scenario, both shocks lead to greater reliance on tax rate increases, tax base expansion and the bubble option, and less emphasis on government spending cuts, government asset sales, interest rate adjustments, and default.

Figure 6: New Debt Financing Methods: Military vs. Transfer Shock



Notes: The figure displays the average share of debt allocated to each selected financing method (top panel) and bubble motives (bottom panels), with 95% confidence intervals, for the current debt financing scenario (blue, 959), military spending scenario (red, 922) and cash transfer scenario (violete, 902).

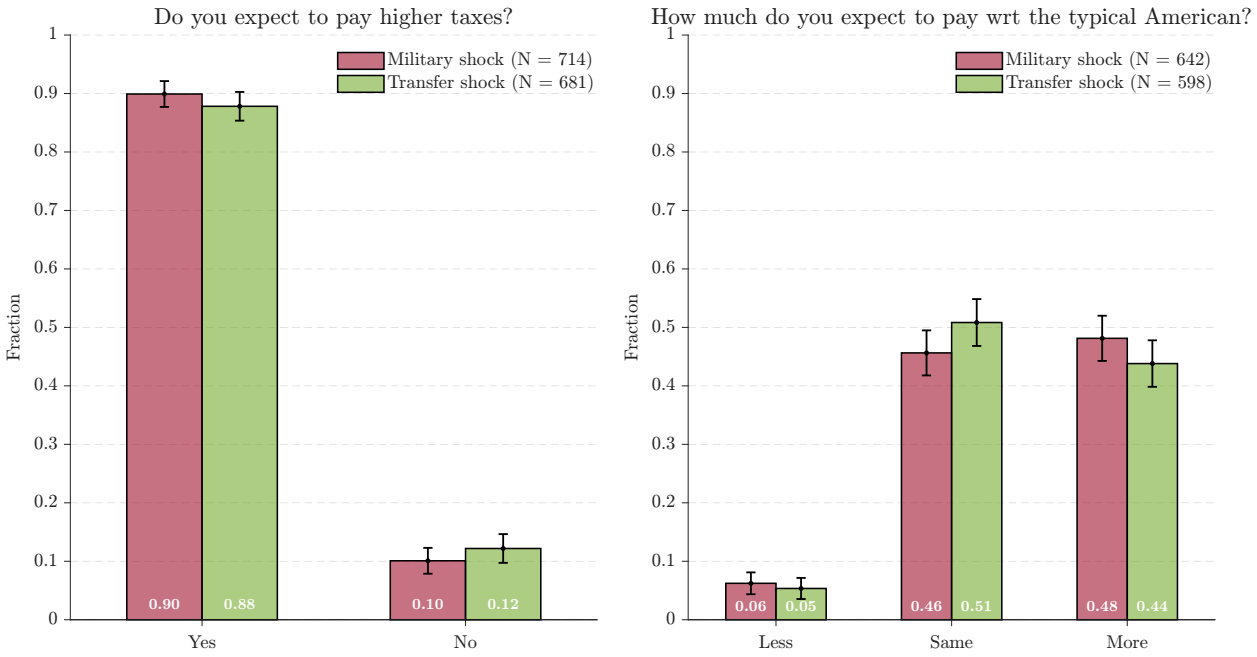
Turning to the bubble follow-up question, we observe that the distribution of average shares across motives is very similar in both scenarios. Compared to the current debt

financing case, the share attributed to the speculative bubble explanation declines, while liquidity and financial regulation receive slightly higher average weights. This suggests a modest shift from a purely expectations-based interpretation of rollover toward one that also acknowledges institutional and financial mechanisms.

Perceived taxation. Figure 7 reports respondents' expectations about their own tax burden following the military and transfer shocks. The left panel shows whether individuals expect to pay higher taxes in the future, while the right panel compares their expected tax burden to that of the average American.

Overall, expectations are remarkably consistent across the two fiscal shocks. In both cases, a majority of respondents anticipate higher taxes as a result of the policy, and most expect to pay either the same or more than the typical American. Hence, regardless of the specific nature of the fiscal expansion, individuals generally internalize the idea that such policies will require increased revenue and may affect them personally.

Figure 7: Perceived Personal Tax Burden: Military vs. Transfer Shock



Note: The left panel reports whether respondents expect to pay higher taxes in the future. The right panel shows how respondents compare their expected tax burden to that of the average American. Both panels report 95% confidence intervals. Results are shown separately for the military spending (red) and cash transfer scenarios (violete).

5 Heterogeneity

So far, we focused on the average responses across households. This section highlights analyzes heterogeneity in answers.

We start by estimating a linear probability model of the form

$$\mathbb{P}\left(\mathbb{I}_i(m) = 1 | X_i\right) = \alpha_m + \beta_m X_i + \epsilon_{m,i}, \tag{5}$$

where $\mathbb{I}_i(m)$ is an indicator variable, which equals one when respondent i chose debt financing method m, described in Section 3.3, and X_i is a collection of individual characteristics we measure in the survey. We allow the answers to be correlated across methods by clustering the standard errors at an individual level.

Then, we investigate how the expectations about shares of debt covered by each method are related to respondent characteristics by estimating

$$w_{m,i} = \alpha_m + \beta_m X_i + \epsilon_{m,i}, \tag{6}$$

where $w_{m,i}$ is a share of outstanding government debt expected to be covered by method m. We again allow the answers to be correlated by across different methods.

5.1 Total Level of Debt

Table 2 presents the results of the estimation of specification (5) where we use all individual characteristics collected in the survey as independent variables. There are several notable observations. First, we see that not having college degree is negatively associated with picking surpluses options, such as "tax base" and "government spending," and positively associated with choosing the "bubble" option, relative to completing a college degree. At the same time, being a republican as opposed to a democrat makes you more likely to choose surplus options and less likely to pick the bubble answer. Being a parent predicts an adjustment through tax rates, and women are less likely to think that the government debt is a bubble than man.

Appendix Table A.2 shows that the estimation results from equation (6) are broadly similar to those reported in Table 5. We note that some individual characteristics are not only significantly correlated with debt financing shares but are also associated with economically meaningful differences in magnitude. For example, all else equal, Republicans expect the bubble component to account for a smaller share of government debt—by nearly 10 percentage points—compared with Democrats. This is a sizable effect, given that the average share attributed to the bubble component is 23 percent.

6 A Model with Measured Expectations

The goal of this section is to examine how beliefs about government debt financing—elicited in our survey in the context of fiscal shocks—affect the transmission of fiscal policy shocks in a conventional New Keynesian model. We focus on fiscal shocks rather than the overall level of government financing because it is unclear how respondents perceive the current (or future) macroeconomic situation. For example, a respondent may believe that the U.S. economy—and government debt in particular—is undergoing a post-COVID transition back to a previous steady state, or alternatively, toward a new steady state shaped by the new U.S. administration. By conditioning on shocks, we can isolate and study transition dynamics of a specific nature that is comparable to our hypothetical shocks in the survey.

Following Michaillat and Saez (2021), we set up a New Keynesian economy in discrete time with a unit mass of self-employed households who produce differentiated goods and set their prices subject to a Rotemberg (1982) quadratic adjustment cost. Household $j \in [0,1]$ chooses production y_t^j, price p_t^j, hours worked h_t^j, a bundle of consumption across varieties $\{c_t^j(k)\}_{k=0}^1$, nominal government bond holdings B_t^j and nominal money holdings M_t^j to maximize expected utility

$$\mathbb{E}_t \sum_{t=0}^{\infty} \beta^t \left[\frac{\left(c_t^j\right)^{1-\sigma^{-1}} - 1}{1-\sigma^{-1}} + \chi_b \ln\left(\frac{B_t^j}{p_t}\right) + \chi_m \ln\left(\frac{M_t^j}{p_t}\right) - \iota \frac{\left(h_t^j\right)^{1+\varphi^{-1}}}{1+\varphi^{-1}} - \frac{\gamma}{2}\left(\frac{p_t^j}{p_{t-1}^j} - 1\right)^2 \right].$$

Household-j's aggregate consumption is given by the CES aggregator $c_t^j \equiv \left[\int_0^1 c_t^j(k)^{\frac{\epsilon-1}{\epsilon}} dk\right]^{\frac{\epsilon}{\epsilon-1}}$ with elasticity of substitution across goods $\epsilon > 1$; p_t is the corresponding aggregate price index; $\beta \in (0,1)$ is the subjective discount factor; $\sigma, \varphi > 0$ denote the elasticity of intertemporal substitution of consumption and the Frisch elasticity of labor supply, respectively; the coefficients $\chi_b, \chi_m \geq 0$ determine the strength of the direct utility value of holding real bonds and real money balances; and $\gamma > 0$ and $\iota > 0$ are scale parameters that multiply, respectively, the cost of changing prices and the disutility from hours worked. Technology is linear $y_t^j = a h_t^j$ with productivity $a > 0$, and demand for variety j is $y_t^j = (p_t^j / p_t)^{-\epsilon} c_t$, where $c_t \equiv \int_j c_t^j dj$ is aggregate consumption.

In this model, we assume that households have rational expectations and that these expectations are common across all households. Because our survey data capture beliefs about the future, we do not yet have realized outcomes against which to compare them. Therefore, we adopt the conventional assumption in the macroeconomic literature of rational expectations. Furthermore, we solve the model in its log-linearized form, where

only average expectations matter for the equilibrium dynamics. Consequently, we abstract from heterogeneity in expectations.

The household's nominal budget constraint is

$$\int_0^1 p_t(k)c_t^j(k)dk + M_t^j + q_t B_t^j + p_t f_t^j = p_t^j y_t^j - \tau_t + B_{t-1}^j + M_{t-1}^j,$$

where q_t is the price of a one-period government bond, τ_t is a lump-sum tax (net of transfers), and f_t^j denotes the household's purchases of government goods and services (e.g., leases of public land and buildings in an attempt to raise fiscal revenues). We do not model the direct sale of government assets to avoid introducing another state variable in the model. Households take as given the initial values B_{-1}^j, M_{-1}^j and $p_{-1}^j$and the paths of aggregate variables $\{p_t, q_t, c_t\}_{t=0}^{\infty}$.

Optimal behavior of the household results in the following bond Euler equation, money demand (money Euler equation), and the Phillips curve:

$$q_t = \chi_b \frac{\left(c_t^j\right)^{\frac{1}{\sigma}}}{b_t^j} + \beta \mathbb{E}_t \left[\frac{p_t}{p_{t+1}} \left(\frac{c_t^j}{c_{t+1}^j} \right)^{\frac{1}{\sigma}} \right], \tag{7}$$

$$1 = \chi_m \frac{\left(c_t^j\right)^{\frac{1}{\sigma}}}{m_t^j} + \beta \mathbb{E}_t \left[\frac{p_t}{p_{t+1}} \left(\frac{c_t^j}{c_{t+1}^j} \right)^{\frac{1}{\sigma}} \right], \tag{8}$$

$$\gamma \left(\frac{p_t^j}{p_{t-1}^j} - 1 \right) \frac{p_t^j}{p_{t-1}^j} = \varepsilon \iota \left(\frac{y_t^j}{a} \right)^{1+\varphi^{-1}} - (\varepsilon - 1) \frac{p_t^j y_t^j}{p_t \left(c_t^j\right)^{\frac{1}{\sigma}}} + \beta \gamma \left(\frac{p_{t+1}^j}{p_t^j} - 1 \right) \frac{p_{t+1}^j}{p_t^j}, \tag{9}$$

where we define individual real debt and money as $b_t^j \equiv B_t^j / p_t$ and $m_t \equiv M_t^j / p_t$.

The consolidated government finances its nominal obligations by combining primary budget surpluses, money issuance, and income from selling government goods and services. Its nominal budget constraint is

$$q_t B_t + M_t = B_{t-1} + M_{t-1} - p_t s_t - p_t f_t,$$

where s_t is the real primary surplus, given by the difference between tax revenues τ_t and government spending g_t, and f_t is the real quantity of goods and services sold by the government. We assume tax revenues, government spending, and sale of government goods and services to be responding to developments in the economy as prescribed by the fiscal rules that we discuss below.

The central bank set the nominal interest rate i_t according to the Taylor rule

$$\frac{i_t}{i} = \left(\frac{p_t}{p_{t-1}}\right)^{\phi_\pi} \left(\frac{B_t/p_t}{b}\right)^{\phi_b}, \tag{10}$$

where i and b denote the steady-state values of the nominal interest rate on government bonds and real government bonds, respectively. We assume$\phi_\pi \geq 0$ and $\phi_b \leq 0$, implying that the central bank rises the interest rate whenever inflation increases or real debt falls below its steady-state value. The price of government bonds is inversely proportional to the interest rate: $q_t = 1/(1+i_t)$.

6.1 Equilibrium

We study a symmetric equilibrium with $p_t^j = p_t$, $y_t^j = y_t$, $c_t^j = c_t$, $h_t^j = h_t$, $B_t^j = B_t$ and $M_t^j = M_t$ for all $j \in [0,1]$. The final-goods market clearing is

$$y_t + f_t = c_t + g_t. \tag{11}$$

Note that the aggregate supply of final goods consists of privately produced goods f_t and government goods (and services) f_t.

We log-linearize the equilibrium conditions around a steady state with zero inflation and a positive real debt. For any variable variable x_t, let x denotes its steady state value and y the steady state output. We use two standard normalizations for different variables. Specifically, $\widehat{x}_t \equiv (x_t - x)/x$ indicates percentage deviation from steady state, while $\widetilde{x} \equiv (x_t - x)/y$ indicates the deviation expressed in units of steady-state output. In addition, the steady state ratio between a variable x and output y is denoted as $s_x \equiv x/y$.

Resource constraint. Linearizing (11) gives

$$\hat{y}_t + \widetilde{f}_t = \widetilde{g}_t + s_c \hat{c}_t. \tag{12}$$

The IS curve. Linearizing the bond Euler equation (7) and using the resource constraint (12) yield

$$\hat{y}_t = \widetilde{g}_t - \widetilde{f}_t + \sigma\omega\widetilde{b}_t + \alpha\mathbb{E}_t\left(\hat{y}_{t+1} + \widetilde{f}_{t+1} - \widetilde{g}_{t+1}\right) - \sigma s_c\left(\hat{i}_t - \alpha\mathbb{E}_t\left[\pi_{t+1}\right]\right), \tag{13}$$

where $\alpha \equiv \beta q^{-1} \leq 1$ and $\omega \equiv (1-\alpha)\, c/b$.

Money demand. Linearizing the money Euler equation (8) and using the resource constraint (12) yield

$$\widetilde{m}_t = \mu \widetilde{b}_t + \eta \mathbb{E}_t \left[\sigma^{-1} s_c^{-1} \left(\hat{y}_{t+1} + \widetilde{f}_{t+1} - \widetilde{g}_{t+1} \right) + \pi_{t+1} \right] - \nu \hat{i}_t, \tag{14}$$

where $\mu \equiv (1-\alpha)/(1-\beta) \cdot m/b, \eta \equiv (\alpha-\beta)/(1-\beta) \cdot s_m, \nu \equiv s_m/(1-\beta)$.

Phillips curve. Finally, the Phillips curve is

$$\pi_t = \beta \pi_{t+1} + \widetilde{\kappa} \left[\hat{y}_t - \Gamma \left(\widetilde{g}_t - \widetilde{f}_t \right) \right], \tag{15}$$

where $\widetilde{\kappa} \equiv \xi(\varphi^{-1} + \sigma^{-1} s_c^{-1})$, $\xi \equiv y c^{-1/\sigma} (\varepsilon - 1)/\gamma$, and $\Gamma \equiv \sigma^{-1} s_c^{-1}/(\varphi^{-1} + \sigma^{-1} s_c^{-1})$.

Taylor rule. The linear version of the Taylor rule (10) is

$$\hat{i}_t = \phi_\pi \pi_t + \phi_b s_b^{-1} \widetilde{b}_t. \tag{16}$$

Fiscal rules. The fiscal rules are described by the following linear equations

$$\widetilde{\tau}_t = \psi_b \widetilde{b}_{t-1} + \varepsilon_t^\tau, \tag{17}$$

$$\widetilde{g}_t = \mu_y \widehat{y}_t + \varepsilon_t^g, \tag{18}$$

$$\widetilde{f}_t = \vartheta_b \widetilde{b}_{t-1}. \tag{19}$$

where $\psi_b > 0$ implying that the government increases tax revenues with outstanding government debt, $\mu_y < 0$ implies that the government spending reacts negatively to the state of the business cycle, and $\vartheta_b > 0$ implying that the government sells more goods and services when its debt is higher. These rules are subject to two shocks: a lump-sum transfer shock (ε_t^τ) and a government spending shock (ε_t^g).

Debt dynamics. The linearized law of motion of real debt is

$$\widetilde{b}_t = \alpha\beta^{-1} (1 - s_b \varrho_b) \widetilde{b}_{t-1} - \alpha\beta^{-1} \left(\widetilde{s}_t + \widetilde{f}_t \right) + s_b \left(\hat{i}_t - \alpha\beta^{-1} \pi_t \right) - \alpha\beta^{-1} \left(\widetilde{m}_t - \widetilde{m}_{t-1} + s_m \pi_t \right), \tag{20}$$

where $\widetilde{s}_t \equiv \widetilde{\tau}_t - \widetilde{g}_t$. Iterating forward this flow budget constraint and imposing household transversality condition, we obtain the intertemporal budget constraint

$$\widetilde{b}_{t-1} = \mathbb{E}_t \sum_{k=0}^{\infty} \beta^k \left[\widetilde{s}_{t+k} + \widetilde{f}_{t+k} - s_b \left(q \hat{i}_{t+k} - \pi_{t+k} \right) + \left(\Delta \widetilde{m}_{t+k} + s_m \pi_{t+k} \right) + (q - \beta) \widetilde{b}_{t+k} \right]. \tag{21}$$

6.2 Shocks

We will study the reaction of the above described economy to one-time unanticipated shocks to either government spending or transfers. Specifically, to mimic the experiment in our survey, we will assume that in period $t = 0$, the government announces either of two sequences of shocks: $\{\epsilon_t^g\}_{t=0}^{\infty} = \{0.1, 0.1, 0.1, 0.1, 0, 0, \ldots\}$, $\{\epsilon_t^\tau\}_{t=0}^{\infty} = \{-0.1, -0.1, -0.1, -0.1, 0, 0, \ldots\}$. That is, the government either increases its spending by 10 percent in every period, which we take to be a quarter, for four periods. In addition, we assume that the government does not change change its spending and tax collection during these first four periods. That is, we turn off the fiscal rule for the first four periods and turn them back on for every $t \geq 4$.

6.3 Debt Financing Decomposition

Writing the intertemporal budget constraint in period $t = 0$, and taking into account the shock structure together with no endogenous fiscal policy response during the first 4 quarters as described in the above Section 6.2, we define the shock decomposition as

$$\begin{aligned} 1 = & \underbrace{\frac{s_b q \mathbb{E}_0 \sum_{k=0}^{\infty} \beta^k \left(-\hat{i}_k \right)}{-\sum_{k=0}^{3} \beta^k \widetilde{s}_k^{\text{exo}}}}_{\text{Nominal interesrt rate}} + \underbrace{\frac{(s_b + s_m) \mathbb{E}_0 \sum_{k=0}^{\infty} \beta^k \pi_k}{-\sum_{k=0}^{3} \beta^k \widetilde{s}_k^{\text{exo}}}}_{\text{Inflation}} + \underbrace{\frac{\mathbb{E}_0 \sum_{k=0}^{\infty} \beta^k \Delta \widetilde{m}_k}{-\sum_{k=0}^{3} \beta^k \widetilde{s}_k^{\text{exo}}}}_{\text{Money printing}} \\ & + \underbrace{\frac{\mathbb{E}_0 \sum_{k=4}^{\infty} \beta^k \widetilde{s}_k}{-\sum_{k=0}^{3} \beta^k \widetilde{s}_k^{\text{exo}}}}_{\text{Primary surpluses}} + \underbrace{\frac{\mathbb{E}_0 \sum_{k=0}^{\infty} \beta^k \widetilde{f}_k}{-\sum_{k=0}^{3} \beta^k \widetilde{s}_k^{\text{exo}}}}_{\text{Gov. goods sale}} + \underbrace{\frac{(q - \beta) \mathbb{E}_0 \sum_{k=0}^{\infty} \beta^k \widetilde{b}_k}{-\sum_{k=0}^{3} \beta^k \widetilde{s}_k^{\text{exo}}}}_{\text{"Bubble"}}, \end{aligned} \tag{22}$$

where $\widetilde{s}_k^{\text{exo}} \equiv -\epsilon_k^g$ in the case of the government spending shock and $\widetilde{s}_k^{\text{exo}} \equiv \epsilon_k^\tau$ in the case of transfers shock.

Decomposition of primary surpluses. We next decompose the first term on the right-hand side of the equation (22) into three components: (i) adjustment of the tax rate applied to the tax base, (ii) changes in the tax base while keeping the tax rate constant, and (iii) changes in government spending.

In equation (17), we defined the fiscal rule for tax revenues. Assuming that the tax revenues is the product of the effective average tax rate $\psi_{y,t}$ and the tax base y_t, we decompose tax revenues into those that stem from effective average tax rate changes and those that results from the tax base variation as follows:

$$\widetilde{\tau}_t = \underbrace{\psi_y \widehat{\psi}_{y,t}}_{\text{Tax Rate}} + \underbrace{\psi_y \widehat{y}_t}_{\text{Tax Base}} ,$$

where $\psi_y \widehat{\psi}_{y,t}$ is essentially compute as a residual by taking the difference between $\widetilde{\tau}_t$ and $\psi_y \widehat{y}_t$. Consequently, we have

$$\text{Primary Surpluses}_0 \equiv \underbrace{\frac{\mathbb{E}_0 \sum_{k=4}^{\infty} \beta^k \widetilde{s}_k}{-\sum_{k=0}^{3} \beta^k \widetilde{s}_k^{\text{exo}}}}_{\text{Primary surpluses}} = \underbrace{\frac{\psi_y \sum_{k=4}^{\infty} \beta^k \widehat{\psi}_{y,k}}{-\sum_{k=0}^{3} \beta^k \widetilde{s}_k^{\text{exo}}}}_{\text{Tax rate}} + \underbrace{\frac{\psi_y \sum_{k=4}^{\infty} \beta^k \widehat{y}_k}{-\sum_{k=0}^{3} \beta^k \widetilde{s}_k^{\text{exo}}}}_{\text{Tax base}} + \underbrace{\frac{-\mu_y \sum_{k=4}^{\infty} \beta^k \widehat{y}_k}{-\sum_{k=0}^{3} \beta^k \widetilde{s}_k^{\text{exo}}}}_{\text{Gov. spending}} .$$

6.4 Calibration

In this section, we describe our calibration strategy, which is summarized in Table 1.

The national debt-to-GDP held by the public, government spending-to-GDP ratio, money-to-GDP and are taken from FRED, while consumption-to-GDP ratio is computed as residual given the aggregate resource constraint in steady state.

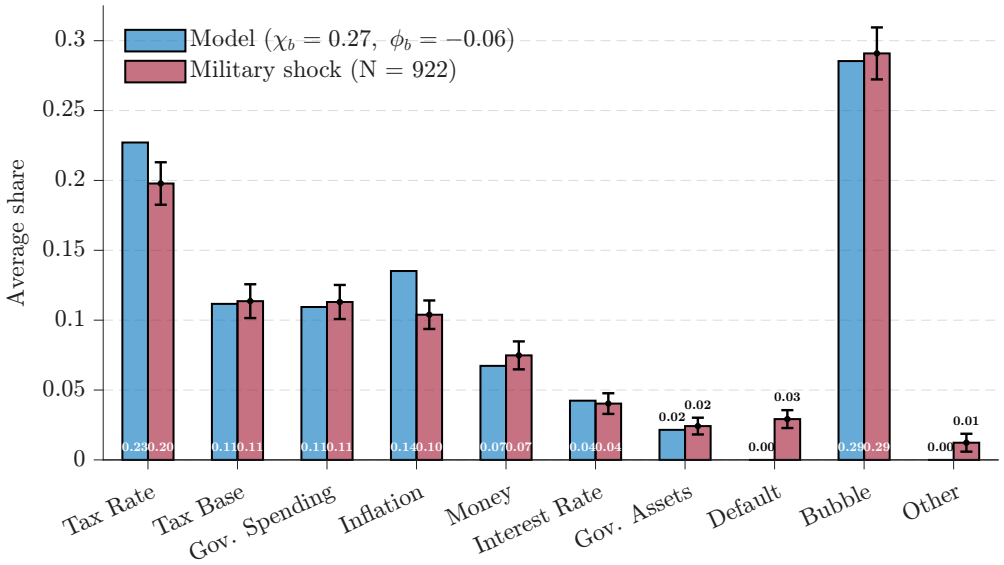
Parameter	Description	Value
Demand block		
σ	EIS	1
φ	Frisch elasticity	1
β	Discount factor	0.94
χ_b	Bonds in utility parameter	0.27
χ_m	Money in utility parameter	0.06
Supply block		
$\widetilde{\kappa}$	Phillips curve slope	0.0066
Policy		
μ_y	Gov. spending-GDP elasticity	-0.49
ψ_y	Steady state average tax rate	0.5
ψ_b	Tax revenues reaction to debt	0.1
ϕ_b	CB reaction to debt	-0.055
ϕ_π	CB reaction to inflation	2.1
ϑ_b	Sensitivity of gov. goods sales to debt	0.0045
s_g	Steady state gov. spending to GDP	0.2

Table 1: Parameters

We adopt standard values for the elasticity of intertemporal substitution and the Frisch elasticity, both set to one. The steady-state interest rate on government bonds is set to $i = 0.005$, corresponding to an annual rate of two percent. The parameter χ_m, which governs the strength of preferences for holding real money balances, is chosen to match the end-of-2024 value of currency in circulation relative to GDP, equal to 0.75 at a quarterly frequency (or 0.19 on an annual basis). The parameter γ, capturing the disutility of price adjustment, is calibrated to match the slope of the Phillips curve estimated by Hazell, Herreno, Nakamura and Steinsson (2022). The central bank's response to inflation in the Taylor rule is set to 2.1 and the steady state value of government spending to GDP is 0.2.

The remaining parameters are jointly calibrated to match the expected composition of government debt financing following a government spending shock and to reproduce the end-of-2024 public debt-to-GDP ratio of 3.85 at a quarterly frequency (equivalently, 0.97 annually).[15] Since the model does not feature default and the "other" category present in our survey, we do not match the debt financing shares perfectly. Specifically, we let the "tax rate" financing share in the model absorb the shares allocated to default and the "other" category in our survey. Figure 8 compares the shares from our survey and those generated by our model.[16]

Figure 8: New Debt Financing after Military Shock: Model vs. Survey

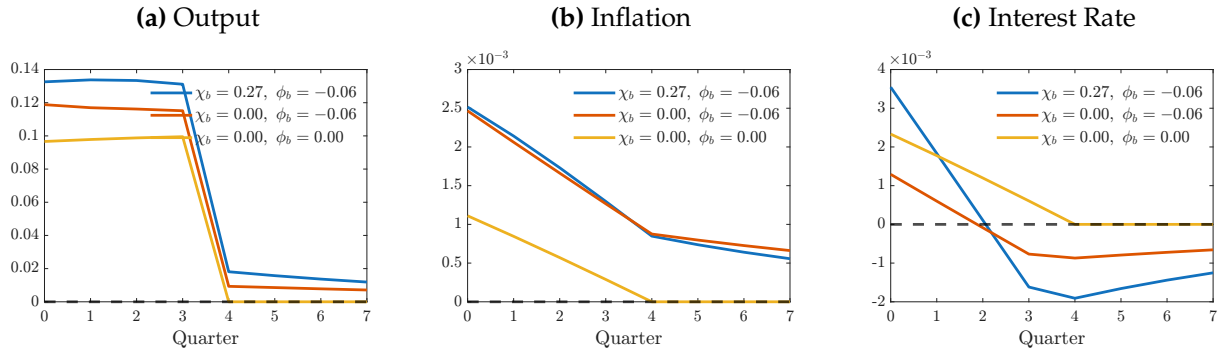


Note: The figure displays the average share of newly issued debt (following military spending shock) allocated to each selected financing method in a calibrated model and in our survey, with 95% confidence intervals.

[15] This measure of debt-to-GDP includes government bonds held by foreigners. We calibrate our closed-economy model to this broader measure because our survey question refers to debt held by the public, which also includes foreign holdings.

[16] Interestingly, while not targeted, the calibrated model also matches the newly issued debt financing shares following the transfer shock quite well. See Appendix Figure A.7.

Figure 9: Model Impulse Responses to Military Spending Shock



Note: Impulse responses of output, inflation, and the interest rate to a military spending shock $\{\epsilon_t^g\}_{t=0}^{\infty} = \{0.1, 0.1, 0.1, 0.1, 0, 0, \ldots\}$, announced in period 0. Blue lines: benchmark calibration. Orange lines: benchmark calibration without bonds in the utility function. Yellow lines: benchmark calibration reduced to a standard 3-equation New Keynesian model.

6.5 Responses to Fiscal Shocks

This section presents our main model results. We will compare the results of the model under three alternative calibrations: (i) benchmark, benchmark without debt-in-the-utility function, (iii) benchmark without debt and money in the utility function, without government assets sale, without interest rate responses to variation in government debt, government spending reaction to the state of business cycle.

Figure 9 compares the responses of output, inflation, and the nominal interest rate across three alternative calibrations. The yellow line represents the response of the standard three-equation New Keynesian model. As shown in the left panel 9a, output rises by nearly the same amount as the increase in military spending, implying a fiscal multiplier close to one. This occurs because the flat Phillips curve limits changes in inflation; consequently, the real interest rate remains almost unchanged.

Under the benchmark calibration, the output response is 1.37 times larger (orange line), whereas without bonds in the utility function, the response is only 1.21. Two main factors drive these stronger responses. First, when the central bank reacts to higher debt by lowering the nominal interest rate (orange and blue lines in Figure 9c), it provides additional stimulus beyond the direct fiscal effect. Second, including bonds in the utility function makes government debt net wealth (Barro, 1974), as households do not expect to fully offset it through future taxes. As a result, the direct fiscal stimulus is less crowded out than in the standard three-equation New Keynesian model.

7 Conclusion

This paper provides novel evidence on how households perceive the intertemporal budget constraint of the government. Using a representative U.S. survey, we find that respondents expect, on average, only about 45 percent of public debt to be financed through future primary surpluses, with roughly one quarter viewed as being rolled over indefinitely. These beliefs exhibit systematic heterogeneity across demographic and political groups and adjust to alternative macroeconomic scenarios.

Embedding these measured expectations into a New Keynesian framework shows that non-Ricardian beliefs—particularly the perception of a bubble component in government debt—amplify the effects of fiscal expansions.

Table 2: Do individual characteristics predict debt financing method expectations?

	Tax rate	Tax base	Gov. spending	Inflation	Money	Gov. assets	Bubble	Default	Interest rate	Other
Age: 35–64	−0.035	−0.000	0.007	−0.062	0.040	0.118***	0.029	0.041	−0.040	0.010
	(0.038)	(0.036)	(0.038)	(0.038)	(0.033)	(0.032)	(0.038)	(0.030)	(0.033)	(0.017)
Age: 65+	0.013	−0.014	−0.002	−0.158***	0.144***	0.153***	0.029	0.012	−0.053	0.026
	(0.054)	(0.052)	(0.054)	(0.055)	(0.047)	(0.045)	(0.054)	(0.043)	(0.047)	(0.024)
Midwest	0.003	0.007	0.004	0.029	−0.062	−0.021	0.090*	0.106**	−0.032	0.012
	(0.052)	(0.050)	(0.052)	(0.053)	(0.045)	(0.043)	(0.052)	(0.042)	(0.045)	(0.024)
South	−0.016	0.012	0.004	−0.029	−0.035	−0.034	0.034	0.043	−0.002	−0.005
	(0.046)	(0.044)	(0.046)	(0.047)	(0.040)	(0.038)	(0.046)	(0.037)	(0.040)	(0.021)
West	0.084	0.001	−0.001	0.022	0.014	−0.024	0.112**	0.045	0.016	0.005
	(0.052)	(0.050)	(0.052)	(0.052)	(0.045)	(0.043)	(0.052)	(0.041)	(0.045)	(0.023)
Government employee	0.082	−0.095*	0.001	−0.073	0.077	−0.001	0.064	0.088**	0.116**	0.034
	(0.052)	(0.050)	(0.052)	(0.052)	(0.045)	(0.043)	(0.052)	(0.041)	(0.045)	(0.023)
Income ($< \$80k$)	0.023	0.060*	−0.005	0.019	−0.098***	−0.011	−0.092***	0.028	−0.017	−0.010
	(0.035)	(0.034)	(0.035)	(0.036)	(0.030)	(0.029)	(0.035)	(0.028)	(0.031)	(0.016)
Liquidity constrained	0.011	−0.035	0.012	0.031	0.055	0.015	0.029	0.068	−0.014	−0.036
	(0.061)	(0.058)	(0.061)	(0.061)	(0.053)	(0.050)	(0.060)	(0.048)	(0.053)	(0.027)
Assets: no bonds	−0.019	−0.026	−0.037	−0.063	−0.059	−0.080**	−0.072*	−0.006	−0.062	0.013
	(0.044)	(0.043)	(0.044)	(0.045)	(0.039)	(0.037)	(0.044)	(0.035)	(0.039)	(0.020)
No college education	−0.022	−0.137***	−0.020	−0.012	−0.034	0.098***	0.108***	−0.009	−0.016	0.025
	(0.038)	(0.036)	(0.038)	(0.038)	(0.033)	(0.032)	(0.038)	(0.030)	(0.033)	(0.017)
Republican	−0.088**	0.151***	−0.085**	−0.063	−0.072*	−0.124***	−0.122***	−0.040	0.038	0.024
	(0.039)	(0.037)	(0.039)	(0.039)	(0.034)	(0.033)	(0.039)	(0.031)	(0.034)	(0.018)
Independent	0.022	−0.037	−0.025	−0.019	0.025	−0.052	−0.006	0.019	−0.038	0.020
	(0.040)	(0.038)	(0.040)	(0.040)	(0.034)	(0.033)	(0.040)	(0.032)	(0.035)	(0.018)
Something else	−0.180*	−0.170*	−0.124	−0.140	−0.071	−0.115	−0.064	0.054	0.066	0.031
	(0.097)	(0.093)	(0.097)	(0.097)	(0.082)	(0.079)	(0.096)	(0.077)	(0.084)	(0.043)
Follow econ News	0.002	0.046	0.037	−0.013	0.061*	0.038	−0.036	−0.048*	−0.008	0.039**
	(0.036)	(0.035)	(0.036)	(0.036)	(0.030)	(0.029)	(0.036)	(0.029)	(0.031)	(0.016)
No econ education	0.003	−0.078*	−0.007	−0.007	−0.035	−0.036	0.026	−0.034	−0.056	0.012
	(0.043)	(0.041)	(0.043)	(0.044)	(0.037)	(0.035)	(0.043)	(0.034)	(0.038)	(0.019)
Female	−0.018	−0.053	−0.037	0.006	−0.056*	−0.047	−0.063*	0.064**	−0.024	−0.039***
	(0.033)	(0.031)	(0.033)	(0.033)	(0.028)	(0.027)	(0.033)	(0.026)	(0.028)	(0.015)
Married	−0.071*	−0.012	−0.051	−0.030	−0.045	−0.058*	−0.040	0.026	−0.061*	−0.027
	(0.038)	(0.036)	(0.038)	(0.038)	(0.033)	(0.032)	(0.038)	(0.030)	(0.033)	(0.017)
Children	0.134***	0.051	−0.013	−0.028	−0.079**	−0.042	−0.056	−0.073**	0.013	0.004
	(0.040)	(0.038)	(0.040)	(0.040)	(0.035)	(0.034)	(0.040)	(0.032)	(0.035)	(0.018)
Constant	0.522***	0.509***	0.524***	0.683***	0.406***	0.450***	0.598***	0.071	0.296***	−0.016
	(0.088)	(0.085)	(0.088)	(0.089)	(0.076)	(0.074)	(0.088)	(0.070)	(0.077)	(0.040)
Observations	958	958	958	958	958	958	958	958	958	958
R^2	0.032	0.093	0.036	0.027	0.081	0.034	0.054	0.045	0.026	0.0305

Notes: The table presents the results of the estimation of regression (5). Each column represents the estimates of the coefficients for a particular method. The errors are allowed to be correlated across methods, making the specification a seemingly unrelated regression (SUR). Each cell reports the coefficient and standard error (in parentheses). Significance levels: $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

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Appendix

A Additional Tables and Figures

Table A.1: Summary Statistics

	ACS (2023)	Survey
Gender		
Female	51.4%	52.7%
Age		
18 - 34	24.9%	32.3%
35 - 64	46.6%	54.6%
65+	28.5%	13.1%
Before-tax Income		
Median, USD	72,100	75,000
Education		
College or more	34%	35.6%
Region		
Northeast	17.6%	17.3%
Midwest	20.7%	19.1%
South	38.2%	40.8%
West	23.5%	22.8%
Observations	2,765,524	2,783

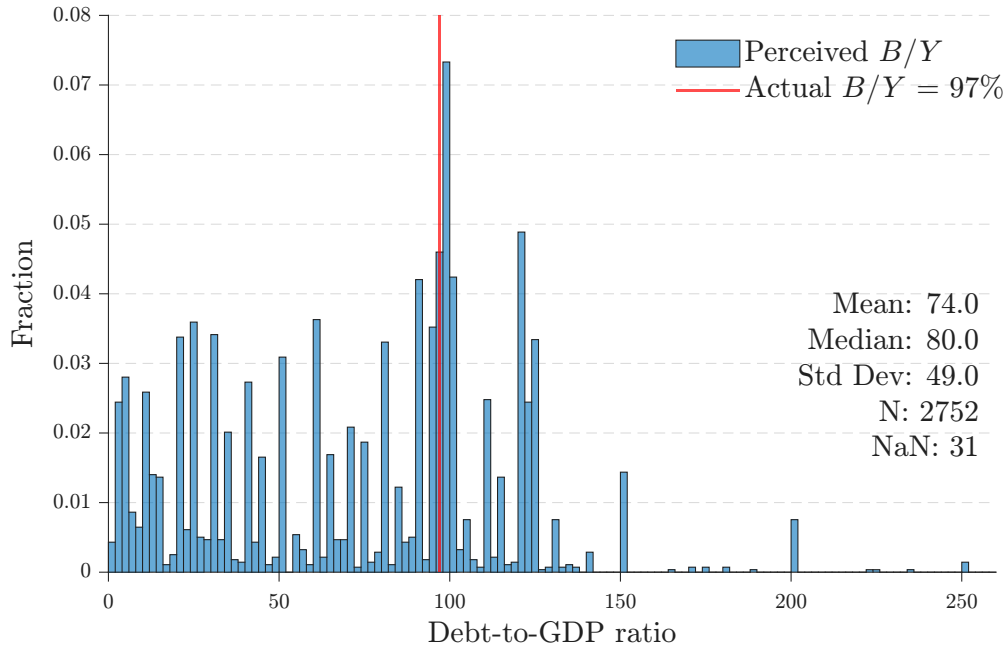
Notes: This table compares individual characteristics of Americans from the 2023 American Community Survey (ACS) (column "ACS (2023)") with those from the full sample (column "Survey"). ACS statistics are based on unique individuals aged 18 and older. Household before-tax income is the sum of gross incomes of all (non-institutionalized) household members, yielding 1,514,265 household-level observations.

Table A.2: Do individual characteristics predict the *share allocated* to each debt financing method?

	Tax rate	Tax base	Gov spending	Inflation	Money	Gov assets	Bubble	Default	Interest rate
Age 35–64	-2.446	-0.274	0.048	-1.419	0.708	1.654**	1.511	0.690	-1.570
	(1.608)	(1.380)	(1.797)	(1.260)	(1.089)	(0.814)	(2.118)	(0.812)	(1.074)
Age 65+	-3.224	1.395	-1.226	-4.801**	3.985**	1.890	2.873	1.001	-1.651
	(2.398)	(2.059)	(2.680)	(1.879)	(1.625)	(1.214)	(3.159)	(1.212)	(1.602)
Midwest	-0.985	-0.366	-5.060**	0.122	-0.272	-0.973	4.082	2.664**	0.261
	(2.214)	(1.901)	(2.475)	(1.735)	(1.500)	(1.121)	(2.917)	(1.119)	(1.479)
South	-0.726	-0.825	1.647	-1.692	1.060	-0.646	0.241	-0.073	0.989
	(1.960)	(1.683)	(2.191)	(1.536)	(1.328)	(0.992)	(2.583)	(0.990)	(1.310)
West	-0.042	-1.267	-0.923	-0.979	0.582	-0.223	3.761	-0.050	0.357
	(2.196)	(1.885)	(2.454)	(1.720)	(1.488)	(1.111)	(2.893)	(1.109)	(1.467)
Unemployed	2.934*	-4.033***	-2.949	0.649	-1.018	0.289	2.975	-0.104	-0.238
	(1.751)	(1.503)	(1.956)	(1.372)	(1.186)	(0.886)	(2.306)	(0.884)	(1.170)
Income ($< \$80k$)	0.817	3.046**	0.108	0.884	-1.635	0.687	-4.110**	0.488	-0.048
	(1.497)	(1.285)	(1.673)	(1.173)	(1.014)	(0.758)	(1.972)	(0.756)	(1.000)
Liq. constrained	-1.800	-0.815	0.834	-0.660	2.488	-1.383	-0.188	3.700***	-0.903
	(2.593)	(2.226)	(2.898)	(2.031)	(1.757)	(1.312)	(3.416)	(1.310)	(1.732)
Assets: no bonds	0.539	1.362	3.091	0.629	-1.365	-0.019	-4.830*	1.048	-1.081
	(1.877)	(1.612)	(2.098)	(1.471)	(1.272)	(0.950)	(2.473)	(0.948)	(1.254)
No College	0.833	-4.688***	-1.327	-0.092	1.369	0.570	3.855*	-0.547	-0.861
	(1.630)	(1.399)	(1.821)	(1.277)	(1.104)	(0.825)	(2.147)	(0.823)	(1.089)
Republican	-2.575	6.998***	5.464***	-1.944	-0.059	-0.608	-9.777***	-0.728	2.506**
	(1.650)	(1.416)	(1.844)	(1.293)	(1.118)	(0.835)	(2.173)	(0.833)	(1.102)
Independent	1.221	-1.462	2.198	-1.079	2.680**	-1.807**	-3.437	0.246	-0.052
	(1.686)	(1.447)	(1.884)	(1.321)	(1.142)	(0.853)	(2.221)	(0.852)	(1.126)
Something else	-6.211	0.091	6.698	-5.770*	3.511	-3.002	-1.676	1.299	5.423**
	(4.086)	(3.508)	(4.566)	(3.201)	(2.768)	(2.068)	(5.383)	(2.064)	(2.730)
Follow econ news	-0.425	0.869	2.241	-0.651	1.036	0.045	-4.201**	-0.582	0.062
	(1.530)	(1.314)	(1.710)	(1.199)	(1.037)	(0.774)	(2.016)	(0.773)	(1.022)
No econ education	-2.764	-2.326	0.806	2.463*	1.903	-0.148	1.541	-0.493	-1.106
	(1.831)	(1.572)	(2.046)	(1.434)	(1.240)	(0.927)	(2.412)	(0.925)	(1.223)
Gov. Employee	1.414	-2.568	-1.027	-4.416**	2.022	-1.219	0.335	1.616	3.030**
	(2.204)	(1.892)	(2.463)	(1.727)	(1.493)	(1.116)	(2.904)	(1.113)	(1.473)
Female	0.668	-0.953	2.894*	1.490	-3.778***	1.572**	-3.762**	1.728**	0.109
	(1.386)	(1.190)	(1.549)	(1.086)	(0.939)	(0.701)	(1.825)	(0.700)	(0.926)
Married	-0.742	1.159	-0.084	1.420	0.599	0.196	-2.151	1.268	-1.124
	(1.607)	(1.379)	(1.795)	(1.259)	(1.089)	(0.813)	(2.116)	(0.812)	(1.073)
Children	5.338***	0.399	1.542	-1.889	-1.751	0.258	-2.464	-1.861**	0.803
	(1.697)	(1.457)	(1.897)	(1.330)	(1.150)	(0.859)	(2.236)	(0.858)	(1.134)
Constant	13.249***	12.898***	11.944***	16.516***	4.947*	3.408*	34.085***	0.547	4.541*
	(3.734)	(3.206)	(4.173)	(2.926)	(2.530)	(1.890)	(4.919)	(1.887)	(2.495)

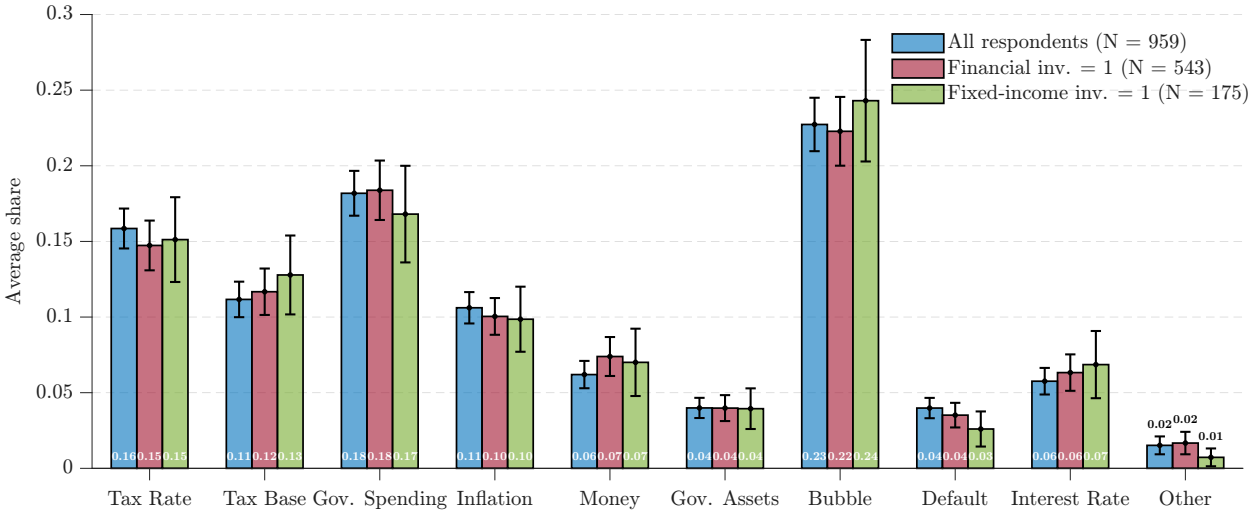
Notes: The table presents the results of the estimation of regression (6). Each column represents the estimates of the coefficients for a particular method. The errors are allowed to be correlated across methods, making the specification a seemingly unrelated regression (SUR). Each cell reports the coefficient and standard error (in parentheses). Significance levels: $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Figure A.1: Perceived Debt-to-GDP Ratio



Note: The histogram shows the distribution of respondents perceptions of the U.S. debt-to-GDP ratio at the end of 2024. Participants entered a numerical percentage; responses above 500% were excluded. Values are grouped into 2 percentage point intervals. 31 submissions were missing or invalid.

Figure A.2: Current Debt Financing Methods by Respondent Investment Types



Note: The figure shows the average share of debt allocated to selected financing methods, with 95% confidence intervals. Labels refer to the options presented in the debt financing methods and bubble questions.

Figure A.3: Debt Financing Method: State Dependence



Figure A.4: Average Shares - Debt Financing Method: State Dependence

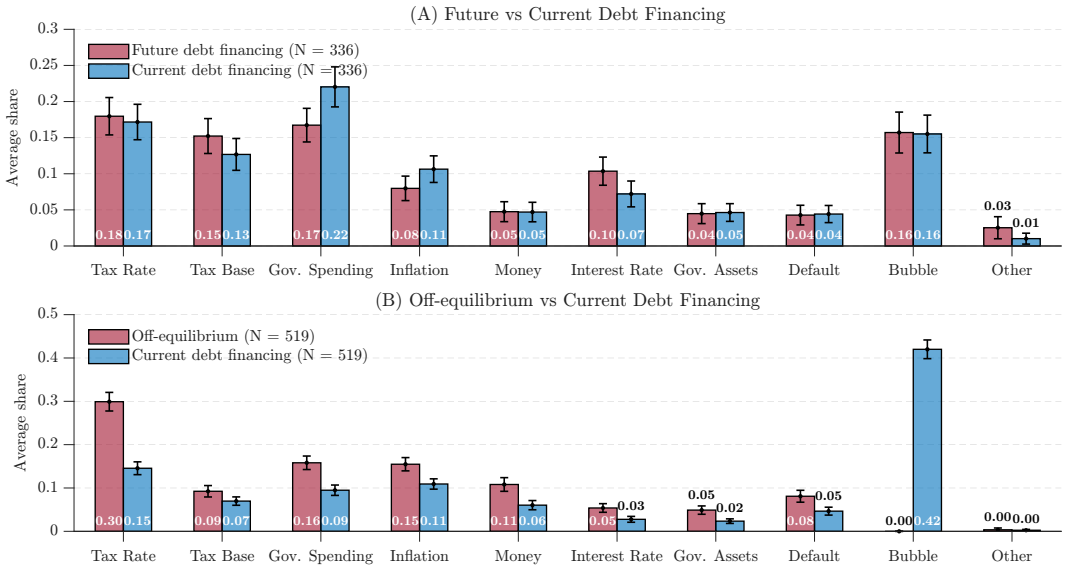


Figure A.5: New Debt Financing Methods: Military vs. Transfer Shock

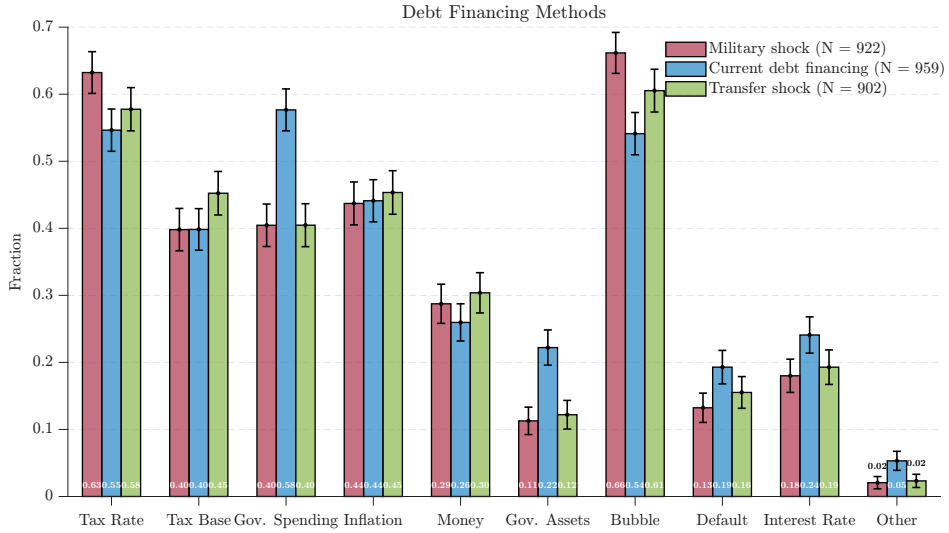


Figure A.6: Current Debt Financing Methods: Shares Distribution

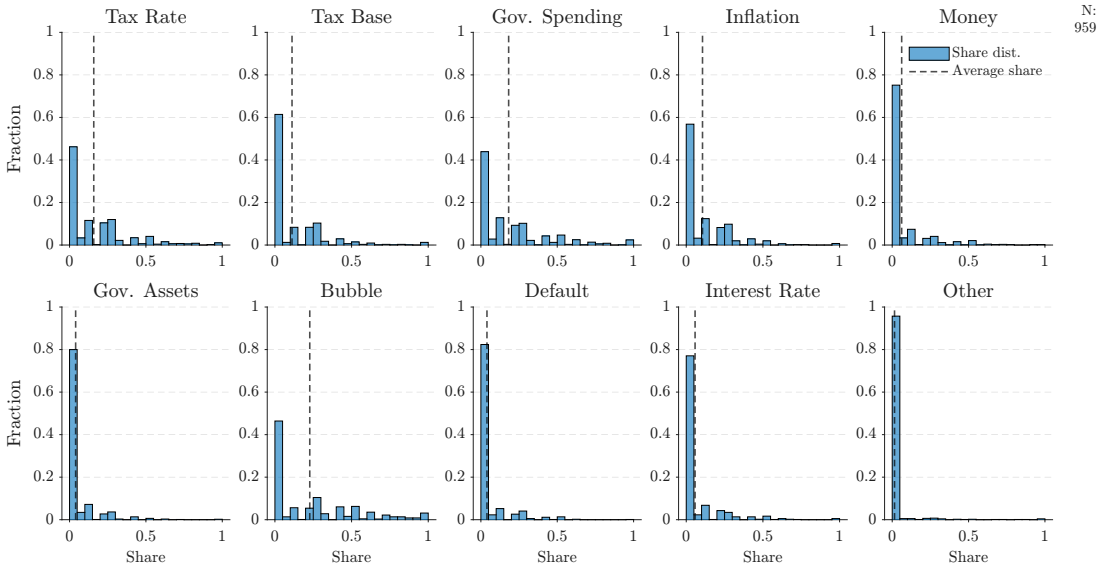
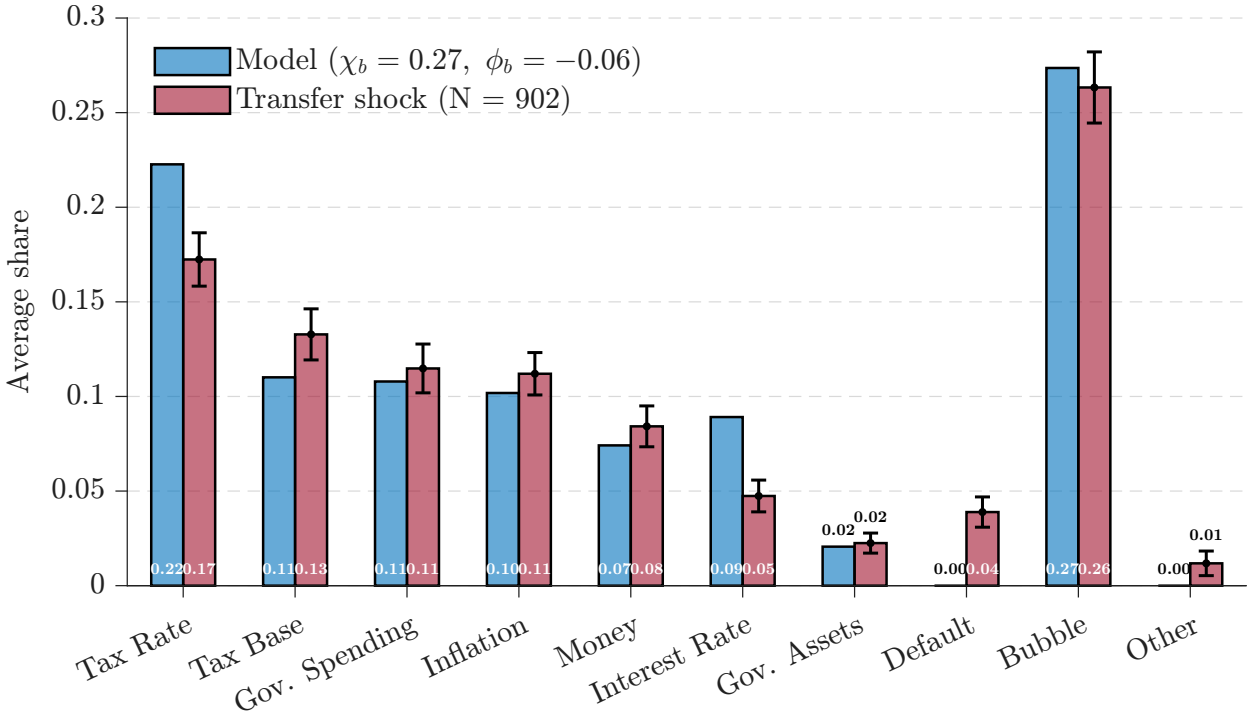


Figure A.7: New Debt Financing after Transfer Shock: Model vs. Survey



Note: The figure displays the average share of newly issued debt (following a government transfer shock) allocated to each selected financing method in a calibrated model and in our survey, with 95% confidence intervals.

B Proofs

B.1 Omitted Proofs of Section 2

Conventional iBCg. Dividing equation (1) by P_{t-1}, we obtain

$$b_{t-1} = \Pi_t \left(s_t + \frac{b_t}{1+i_t} \right),$$

where $b_t \equiv B_{t-1}/P_t$, and $\Pi_t \equiv P_t/P_{t-1}$ is gross inflation. Linearizing around a steady state yields:

$$\widetilde{b}_{t-1} = \widetilde{s}_t + \left(\pi_t - \beta \widehat{i}_t \right) s_b + \beta \widetilde{b}_t, \tag{B.1}$$

where $\widetilde{b}_t \equiv (b_t - b)/y$, $\widetilde{s}_t \equiv (s_t - s)/y$, $\pi_t \equiv \log(\Pi_t)$, $\widehat{i}_t = \log(1+i_t) - \log(1+i)$, $\beta = 1/(1+i)$ is the steady-state discount factor, $s_b = b/y$, and y is a steady state output.

Iterating equation (B.1) produces

$$\widetilde{b}_t = \sum_{k=0}^{\infty} \beta^k \Big[\underbrace{\widetilde{s}_{t+k}}_{\text{Surplus}} - \underbrace{s_b \left(\beta \widehat{i}_{t+k} - \pi_{t+k} \right)}_{\text{Nom. interest rate - Inflation}} \Big] + \underbrace{\lim_{k \to \infty} \beta^k \widetilde{b}_{t+k}}_{\text{Bubble}}.$$

C Survey Structure and Questions

The text in ALL CAPS, square brackets, and section titles contains technical information that was not shown to respondents. The order of questions presented in this section corresponds to the order of questions in the survey.

[RANDOMLY SPLIT ALL PARTICIPANTS INTO THREE GROUPS AND DENOTE THEM: GROUP1 (TOTAL LEVEL OF DEBT), GROUP2 (DEBT FOLLOWING MILITARY SPENDING SHOCK), GROUP3 (DEBT FOLLOWING TRANSFERS SHOCK)]

C.1 Introduction

Thanks a lot for participating in this study!

This survey is about the U.S. national debt. It will ask for your opinion about how the government sustains its debt and a set of demographic questions.

Importantly, we do not expect you to be experts on national debt. There are no right or wrong answers to our questions, as they concern the future, which is uncertain, and your thoughts and predictions reflect your personal views.

Key Information

- *You can skip any question you prefer not to answer.*
- *This survey is conducted under a strict policy of no deception. You will never be lied to during this survey. The instructions explain how the survey works.*
- *Participation in the study typically takes about 12 minutes.*
- *No personally identifying data about you will be collected, and all data and published work resulting from this survey will be fully anonymized and maintain your individual privacy.*
- *Your participation in this study is voluntary. Even if you consent to participate, you can withdraw consent or discontinue participation at any time, but you will receive a payment only if you complete the study.*

For additional details, see this information sheet.

If you agree to participate in the research, please click on the Yes button below.

- *Yes, I wish to participate in this study.*
- *No, I decline the opportunity to participate in this study.*

Introduction.

The United States federal government issues debt to cover some of its financing needs. The holders of this debt are typically households, businesses (including financial firms), and foreigners. Some branches of the U.S. federal government (like the Social Security Trust Fund) also buy U.S. government debt.

In this survey, we're only looking at the debt held by people and institutions outside the U.S. government. We'll call this the national debt held by the public, or just the national debt for short.

We will now ask you a question about the national debt-to-GDP ratio in the United States.

The national debt-to-GDP ratio is the national debt (held by the public) divided by the country's economic output, measured by gross domestic product (GDP). (GDP is the market value of all final goods and services produced by an economy in one year.).

What do you think was the national debt-to-GDP ratio in the end of 2024? (Please enter your answer as a percentage in the text field below.).

- National debt-to-GDP in % ☐

For your information, the U.S. Treasury Department reported that at the end of 2024, the national debt of the U.S. federal government (held by the public) was $29 trillion—equivalent to 97% of the U.S. Gross Domestic Product (GDP) for 2024.

Primary Balances.

To evaluate the government's finances, analysts often focus on the primary balance — the difference between tax revenues and government spending, excluding interest payments. It highlights the structural gap between what the government collects and what it spends on goods, services, and social programs.

A negative primary balance means the government spends more than it collects and must borrow to cover the gap. A positive primary balance allows the government to pay interest and reduce its debt.

For your information, the U.S. Treasury Department reported that in 2024, the U.S. primary balance was negative: –$1 trillion, or –3.3% of GDP. In other words, the U.S. federal government spent more than it collected in tax revenues.

C.2 Group 1: Total Level of Debt

C.2.1 Unconditional Scenario: Current Debt Financing

[ASK If GROUP1 = TRUE]
The next question is especially important for our research. Please give it your full attention before answering.

In your opinion, what will the U.S. government do, both in the near and distant future, to handle its current level of debt? (Select all options you think apply.)

The government will ...

- *increase tax revenues through higher tax rates*
- *increase tax revenues thanks to economic growth, which will expand the tax base, without needing to increase tax rates*
- *lower government spending (on goods, services, and social programs)*
- *allow for inflation, making debt issued today easier to repay with less valuable future dollars*
- *print money to repay the debt*
- *sell government property (like federal buildings, land, or highways)*
- *keep borrowing (rolling over the debt), potentially forever, even without collecting revenues above government spending (on goods, services, and social programs)*
- *default on part of the debt*
- *lower the interest rate on its debt*
- *do something else (please specify)*

[ASK IF GROUP1 = TRUE AND IF "keep borrowing (rolling over the debt), potentially forever, even without collecting revenues above government spending (on goods, services, and social programs)" WAS CHOSEN IN THE PREVIOUS QUESTION]
In the previous question, you chose that "The government will keep borrowing (rolling over the debt), potentially forever, even without collecting revenues above government spending (on goods, services, and social programs)".

Which of the following reasons do you think would allow the government to continue borrowing in this situation? (Pick all that apply)

- *Today's government bond investors believe that future investors will keep purchasing government debt*
- *Government debt is a safe and liquid asset, allowing the government to borrow at lower interest rates than private firms*
- *The government will force private banks to buy its debt, for example, through financial regulation*
- *Something else (please specify)*

[ASK IF GROUP1 = TRUE AND IF AT LEAST ONE FINANCING METHOD WAS CHOSEN]
In your opinion, what percentage of the U.S. national debt will be handled by each of the options you selected previously (shown below)? (Please enter percentages below. Your answers should add up to 100%.)

The government will...

- *increase tax revenues through higher tax rates ...%*
- *increase tax revenues thanks to economic growth, which will expand the tax base, without needing to increase tax rates ...%*
- *lower government spending (on goods, services, and social programs) ...%*
- *allow for inflation, making debt issued today easier to repay with less valuable future dollars ...%*
- *print money to repay the debt ...%*
- *sell government property (like federal buildings, land, or highways) ...%*
- *keep borrowing (rolling over the debt), potentially forever, even without collecting revenues above government spending (on goods, services, and social programs) ...%*
- *default on part of the debt ...%*
- *lower the interest rate on its debt ...%*
- *do something else (please specify) ...%*

[ASK IF GROUP1 = TRUE, IF "keep borrowing (rolling over the debt), potentially forever, even without collecting revenues above government spending (on goods, services, and social programs)" AND AT LEAST ONE BUBBLE OPTION WAS CHOSEN]
In the previous question, you answered that x% of government debt will be rolled over potentially forever.

Please allocate this x% across the options you selected earlier (listed below), in any proportions you think are appropriate. (Please enter percentages below. Your answers should add up to x%.)

- *Today's government bond investors believe that future investors will keep purchasing government debt ...%*
- *Government debt is a safe and liquid asset, allowing the government to borrow at lower interest rates than private firms ...%*
- *The government will force private banks to buy its debt, for example, through financial regulation ...%*
- *Something else (please specify) ...%*

C.2.2 Hypothetical Scenario #1: Current Level of Debt Financing in the Future

[ASK If GROUP1 = TRUE]
Imagine that today is January 1, 2030. The U.S. has a new president for about a year. Picture the U.S. economy performing as it generally does during normal times: not shrinking or struggling as it would in a recession, and not growing at an unusually fast pace. In other words, it's "business as usual" for the economy-stable, with no major ups or downs.

Imagine that on January 1, 2030, the U.S. national debt-to-GDP ratio is the same as in December 2024 (as a reminder, this national debt-to-GDP ratio was 97 percent).

Would you answer the previous questions (about the ways the U.S. government would handle its debt) differently in this hypothetical scenario?

- *Yes*
- *No*

[ASK IF GROUP1 = TRUE AND IF "Yes" WAS CHOSEN IN THE PREVIOUS QUESTION]
In your opinion, what will the U.S. government do, both in the near and distant future, to handle its debt in this hypothetical scenario? (Select all options you think apply.)

The government will ...

- *increase tax revenues through higher tax rates*
- *increase tax revenues thanks to economic growth, which will expand the tax base, without needing to increase tax rates*
- *lower government spending (on goods, services, and social programs)*
- *allow for inflation, making debt issued today easier to repay with less valuable future dollars*
- *print money to repay the debt*
- *sell government property (like federal buildings, land, or highways)*
- *keep borrowing (rolling over the debt), potentially forever, even without collecting revenues above government spending (on goods, services, and social programs)*
- *default on part of the debt*
- *lower the interest rate on its debt*
- *do something else (please specify)*

[ASK IF GROUP1 = TRUE, IF "Yes" and AT LEAST ONE FINANCING METHOD WAS CHOSEN IN THE PREVIOUS QUESTION]

In your opinion, what percentage of the U.S. national debt will be handled by each of the options you selected previously (shown below)? (Please enter percentages below. Your answers should add up to 100%.)

- *increase tax revenues through higher tax rates . . . %*
- *increase tax revenues thanks to economic growth, which will expand the tax base, without needing to increase tax rates . . . %*
- *lower government spending (on goods, services, and social programs) . . . %*
- *allow for inflation, making debt issued today easier to repay with less valuable future dollars . . . %*
- *print money to repay the debt . . . %*
- *sell government property (like federal buildings, land, or highways) . . . %*
- *keep borrowing (rolling over the debt), potentially forever, even without collecting revenues above government spending (on goods, services, and social programs) . . . %*
- *default on part of the debt . . . %*
- *lower the interest rate on its debt . . . %*
- *do something else (please specify) . . . %*

C.2.3 Perception of Historical Financing

[ASK IF GROUP1 = TRUE]
How in your view the U.S. federal government handled its debt in the past? (Select all options you think apply.)

The government ...

- *increased tax revenues through higher tax rates*
- *increased tax revenues thanks to economic growth, which expanded the tax base, without needing to increase tax rates*
- *lowered government spending (on goods, services, and social programs)*
- *allowed for inflation, making debt issued today easier to repay with less valuable future dollars*
- *printed money to repay the debt*
- *sold government property (like federal buildings, land, or highways) to repay debt*
- *kept borrowing (rolling over the debt) without collecting revenues above government spending (on goods, services, and social programs)*
- *defaulted on part of the debt*
- *lowered the interest rate on its debt*
- *did something else (please specify)*

C.2.4 Hypothetical Scenario #2: No Bubble

[ASK If GROUP1 = TRUE AND IF "keep borrowing (rolling over the debt), potentially forever, even without collecting revenues above government spending (on goods, services, and social programs)" WAS CHOSEN]
Earlier, when you answered the question about how the U.S. government will handle its current level of national debt, you chose: "The U.S. government will keep borrowing (rolling over the debt), potentially forever, even without collecting revenues above government spending (on goods, services, and social programs)."

Please imagine that the U.S. government cannot continue borrowing (rolling over the debt) without collecting revenues above government spending (on goods, services, and social programs). This may happen because investors no longer believe that future investors will purchase the debt, or because they no longer see U.S. government debt as a safe and liquid way to store their wealth, or because the government cannot force private banks to hold government debt.

In your opinion, what will the U.S. government do, both in the near and distant future, to handle its debt in this hypothetical scenario? (Pick all that apply)

The government will ...

- *increase tax revenues through higher tax rates*
- *increase tax revenues thanks to economic growth, which will expand the tax base, without needing to increase tax rates*
- *lower government spending (on goods, services, and social programs)*
- *allow for inflation, making debt issued today easier to repay with less valuable future dollars*
- *print money to repay the debt*
- *sell government property (like federal buildings, land, or highways)*
- *default on part of the debt*
- *lower the interest rate on its debt*
- *do something else (please specify)*

[ASK If GROUP1 = TRUE, IF "keep borrowing (rolling over the debt), potentially forever, even without collecting revenues above government spending (on goods, services, and social programs)" AND AT LEAST ONE OPTION WAS CHOSEN IN THE PREVIOUS QUESTION]
In your opinion, in this hypothetical scenario (where the government cannot continue borrowing without running positive primary balances), what percentage of the U.S. national debt will be handled by each of the options you selected in the previous question? (Please enter percentages below. Your answers should add up to 100%.)

- *increase tax revenues through higher tax rates . . . %*
- *increase tax revenues thanks to economic growth, which will expand the tax base, without needing to increase tax rates . . . %*
- *lower government spending (on goods, services, and social programs) . . . %*
- *allow for inflation, making debt issued today easier to repay with less valuable future dollars . . . %*
- *print money to repay the debt . . . %*
- *sell government property (like federal buildings, land, or highways) . . . %*
- *keep borrowing (rolling over the debt), potentially forever, even without collecting revenues above government spending (on goods, services, and social programs) . . . %*
- *default on part of the debt . . . %*
- *lower the interest rate on its debt . . . %*
- *do something else (please specify) . . . %*

C.2.5 Hypothetical Scenario #3: High Debt Financing in the Future

[ASK If GROUP1 = TRUE]
Now, we would like you to think about the following hypothetical scenario.

Imagine that today is January 1, 2030. The U.S. has a new president for about a year. Picture the U.S. economy performing as it generally does during normal times: not shrinking or struggling as it would in a recession, and not growing at an unusually fast pace. In other words, it's "business as usual" for the economy-stable, with no major ups or downs.

Imagine that on January 1, 2030, the U.S. national debt-to-GDP ratio is 150 percent, compared to 97 percent in December 2024.

[ASK If GROUP1 = TRUE]
In your opinion, what will the U.S. government do, both in the near and distant future, to handle its debt in this hypothetical scenario (where the national debt is 150% of GDP)? (Select all options you think apply.)

The government will ...

- *increase tax revenues through higher tax rates*
- *increase tax revenues thanks to economic growth, which will expand the tax base, without needing to increase tax rates*
- *lower government spending (on goods, services, and social programs)*
- *allow for inflation, making debt issued today easier to repay with less valuable future dollars*
- *print money to repay the debt*
- *sell government property (like federal buildings, land, or highways)*
- *keep borrowing (rolling over the debt), potentially forever, even without collecting revenues above government spending (on goods, services, and social programs)*
- *default on part of the debt*
- *lower the interest rate on its debt*
- *do something else (please specify)*

[ASK If GROUP1 = TRUE AND IF AT LEAST ONE OPTION WAS CHOSEN IN THE PREVIOUS QUESTION]
In your opinion, in this hypothetical scenario (where the national debt is 150\% of GDP), what percentage of the U.S. national debt will be handled by each of the options you selected in the previous question? (Please enter percentages below. Your answers should add up to 100\%.)

- *increase tax revenues through higher tax rates ...%*
- *increase tax revenues thanks to economic growth, which will expand the tax base, without needing to increase tax rates ...%*
- *lower government spending (on goods, services, and social programs) ...%*
- *allow for inflation, making debt issued today easier to repay with less valuable future dollars ...%*
- *print money to repay the debt ...%*
- *sell government property (like federal buildings, land, or highways) ...%*
- *keep borrowing (rolling over the debt), potentially forever, even without collecting revenues above government spending (on goods, services, and social programs) ...%*
- *default on part of the debt ...%*
- *lower the interest rate on its debt ...%*
- *do something else (please specify) ...%*

C.3 Group 2: Debt Following Military Spending Shock

C.3.1 Military Spending Hypothetical Scenario

[ASK If GROUP2 = TRUE]
Introduction.

You will read a scenario describing a change in U.S. government spending. We will ask you to predict how this change affects the U.S. economy.

[ASK If GROUP2 = TRUE]
Definition: Government Military Spending.

We will be interested in government military spending on goods and services. This spending serves to meet current military needs. New body armor, radios, and drones are examples of spending on goods. An example of spending on services is the salaries of military personnel.

Note that this type of spending excludes investments, such as building new military bases, aircrafts, and ships.

[ASK If GROUP2 = TRUE]
Details.

We would like you to think about the following hypothetical scenario.

Please imagine that today is January 1, 2030. The U.S. has a new president for about a year. Picture the U.S. economy performing as it generally does during normal times: not shrinking or struggling as it would in a recession, and not growing at an unusually fast pace. In other words, its business as usual for the economy-stable, with no major ups or downs.

Imagine that on January 1, 2030, the U.S. government unexpectedly announces and starts implementing a change in military spending on goods and services. Here are more details about this policy.

- *Size. The military spending increases by 10 percent relative to US output (that is, GDP) or, equivalently, by about $3 trillion (about $9,000 per U.S. resident).*
- *Duration. The change lasts for one year.*
- *Other spending. This change does not affect other types of government spending.*
- *Financing. Over this year, the government will issue national debt to finance this spending change. That is, the government debt-to-GDP ratio will increase by 10 percentage points.*
- *Rationale. The change happens even though the government has not revised its assessment of national security or economic conditions.*

[ASK If GROUP2 = TRUE]
Quiz.

We now want to assess how clear the scenario description was.

Please choose all correct statements about the hypothetical government spending change just described. Do not choose incorrect statements.

- *The spending change lasts for 6 months.*
- *Government military spending on goods and services buys new military equipment, such as radios, and pays military personnel.*
- *The size of the hypothetical government spending change is 10 percent relative to US output.*
- *The government immediately increases taxes to finance the hypothetical change in government spending.*
- *The government increases its spending on military goods and services.*
- *Government military spending on goods and services includes building new hydroelectric power plant.*

C.3.2 Debt Financing Following Military Spending Shock

[ASK If GROUP2 = TRUE]
In your opinion, what will the U.S. government do, both in the near and distant future, to handle the additional debt resulting from increased military spending? (Select all options you think apply.)

The government will ...

- *increase tax revenues through higher tax rates*
- *increase tax revenues thanks to economic growth, which will expand the tax base, without needing to increase tax rates*
- *lower government spending (on goods, services, and social programs)*
- *allow for inflation, making debt issued today easier to repay with less valuable future dollars*
- *print money to repay the debt*
- *sell government property (like federal buildings, land, or highways)*
- *keep borrowing (rolling over the debt), potentially forever, even without collecting revenues above government spending (on goods, services, and social programs)*
- *default on part of the debt*
- *lower the interest rate on its debt*
- *do something else (please specify)*

[ASK IF GROUP2 = TRUE AND IF AT LEAST ONE OPTION WAS CHOSEN IN THE PREVIOUS QUESTION]
In your opinion, what percentage of the newly issued debt will be handled by each of the options you selected in the previous question? (Please enter percentages below. Your answers should add up to 100%.)

The government will ...

- *increase tax revenues through higher tax rates* ...%
- *increase tax revenues thanks to economic growth, which will expand the tax base, without needing to increase tax rates* ...%
- *lower government spending (on goods, services, and social programs)* ...%
- *allow for inflation, making debt issued today easier to repay with less valuable future dollars* ...%
- *print money to repay the debt* ...%
- *sell government property (like federal buildings, land, or highways)* ...%
- *keep borrowing (rolling over the debt), potentially forever, even without collecting revenues above government spending (on goods, services, and social programs)* ...%
- *default on part of the debt* ...%
- *lower the interest rate on its debt* ...%
- *do something else (please specify)* ...%

[ASK IF GROUP2 = TRUE AND IF "keep borrowing (rolling over the debt), potentially forever, even without collecting revenues above government spending (on goods, services, and social programs)" WAS CHOSEN IN THE PREVIOUS QUESTION]
In the previous question, you assigned x% to the option: "The government will keep borrowing (rolling over the debt), potentially forever, even without increasing revenues or lowering government spending (on goods, services, and social programs)"

Please allocate this x% across the following possible reasons that could allow the government to continue borrowing in this situation, in any proportions you think are appropriate. (Please enter percentages below. Your answers should add up to x%.)

- *Today's government bond investors believe that future investors will keep purchasing government debt* ...%
- *Government debt is a safe and liquid asset, allowing the government to borrow at lower interest rates than private firms* ...%
- *The government will force private banks to buy its debt, for example, through financial regulation* ...%
- *Something else (please specify)* ...%

C.3.3 Future Taxes Following Military Spending Shock

[ASK IF GROUP2 = TRUE AND IF "increase tax revenues through higher tax rates" AND/OR "increase tax revenues thanks to economic growth, which will expand the tax base, without needing to increase tax rates" WAS CHOSEN IN THE PREVIOUS QUESTIONS]
Your answer suggests that you believe the hypothetical policy change will be funded, at least in part, by higher tax revenues in the future.

Do you expect that you personally will have to pay higher taxes in the future as a result of this policy change?

- *Yes*
- *No*

[ASK IF GROUP2 = TRUE AND IF "increase tax revenues through higher tax rates" AND/OR "increase tax revenues thanks to economic growth, which will expand the tax base, without needing to increase tax rates" AND IF "Yes" WAS CHOSEN IN THE PREVIOUS QUESTION]
Because you expect an increase in your taxes, do you think the tax amount you would pay - as a percentage of your income - would be higher, lower, or about the same as what a typical American would pay?

Relative to a typical American, I would pay ...

- *less*
- *about the same*
- more

C.4 Group 3: Debt Following Cash Transfer Shock

C.4.1 Cash Transfer Hypothetical Scenario

[ASK If GROUP3 = TRUE]
Introduction.

You will read a scenario describing a change in cash transfers by the U.S. government. We will ask you to predict how this change affects the U.S. economy.

[ASK If GROUP3 = TRUE]
Details.

We would like you to think about the following hypothetical scenario.

Please imagine that today is January 1, 2030. The U.S. has a new president for about a year. Picture the U.S. economy performing as it generally does during normal times: not shrinking or struggling as it would in a recession, and not growing at an unusually fast pace. In other words, its "business as usual" for the economy-stable, with no major ups or downs.

Imagine that on January 1, 2030, the U.S. government unexpectedly announces that it will give the same cash payment to every U.S. resident and immediately starts distributing the money. Here are more details about this policy.

- *Size. The total value of these transfers is 10 percent relative to US output (that is, GDP) or, equivalently, about 3 trillion(about 9,000 per U.S. resident).*
- *Duration. This is a one-time transfer.*
- *Other spending. This change does not affect other types of government spending.*
- *Financing. The government will issue national debt to finance the transfers. That is, the government debt-to-GDP ratio will increase by 10 percentage points.*
- *Rationale. The change happens even though the government has not revised its assessment of economic conditions. It is simply a policy decision to provide households with additional resources.*

[ASK If GROUP3 = TRUE]
Quiz.

We now want to assess how clear the scenario description was.

Please choose all correct statements about the hypothetical government spending change just described. Do not choose incorrect statements.

- *The transfers occur annually for five years.*
- *The government immediately cuts military spending to finance the transfers.*
- *The size of these transfers is 10 percent of U.S. output.*
- *The government immediately increases taxes to finance the transfers.*
- *The transfers are unexpected news for the population.*
- *The government transfers are not related to economic conditions in the U.S.*

C.4.2 Debt Financing Following Cash Transfer Shock

[ASK If GROUP3 = TRUE]
In your opinion, what will the U.S. government do, both in the near and distant future, to handle the additional debt resulting from these cash transfers? (Select all options you think apply.)

The government will ...

- *increase tax revenues through higher tax rates*
- *increase tax revenues thanks to economic growth, which will expand the tax base, without needing to increase tax rates*
- *lower government spending (on goods, services, and social programs)*
- *allow for inflation, making debt issued today easier to repay with less valuable future dollars*
- *print money to repay the debt*
- *sell government property (like federal buildings, land, or highways)*
- *keep borrowing (rolling over the debt), potentially forever, even without collecting revenues above government spending (on goods, services, and social programs)*
- *default on part of the debt*
- *lower the interest rate on its debt*
- *do something else (please specify)*

[ASK If GROUP3 = TRUE AND IF AT LEAST ONE OPTION WAS CHOSEN IN THE PREVIOUS QUESTION]
In your opinion, what percentage of the newly issued debt will be handled by each of the options you selected in the previous question? (Please enter percentages below. Your answers should add up to 100%.)

The government will ...

- *increase tax revenues through higher tax rates ...%*
- *increase tax revenues thanks to economic growth, which will expand the tax base, without needing to increase tax rates ...%*
- *lower government spending (on goods, services, and social programs) ...%*
- *allow for inflation, making debt issued today easier to repay with less valuable future dollars ...%*
- *print money to repay the debt ...%*
- *sell government property (like federal buildings, land, or highways) ...%*
- *keep borrowing (rolling over the debt), potentially forever, even without collecting revenues above government spending (on goods, services, and social programs) ...%*
- *default on part of the debt ...%*
- *lower the interest rate on its debt ...%*
- *do something else (please specify) ...%*

[ASK IF GROUP3 = TRUE AND IF "keep borrowing (rolling over the debt), potentially forever, even without collecting revenues above government spending (on goods, services, and social programs)" WAS CHOSEN IN THE PREVIOUS QUESTION]
In the previous question, you answered that x% of government debt will be rolled over potentially forever.

Please allocate this x% across the options you selected earlier (listed below), in any proportions you think are appropriate. (Please enter percentages below. Your answers should add up to x%.)

- *Today's government bond investors believe that future investors will keep purchasing government debt ...%*
- *Government debt is a safe and liquid asset, allowing the government to borrow at lower interest rates than private firms ...%*
- *The government will force private banks to buy its debt, for example, through financial regulation ...%*
- *Something else (please specify) ...%*

C.4.3 Future Taxes Following Cash Transfer Shock

[ASK IF GROUP3 = TRUE AND IF "increase tax revenues through higher tax rates" AND/OR "increase tax revenues thanks to economic growth, which will expand the tax base, without needing to increase tax rates" WAS CHOSEN IN THE PREVIOUS QUESTION]
Your answer suggests that you believe the hypothetical policy change will be funded, at least in part, by higher tax revenues in the future.

Do you expect that you personally will have to pay higher taxes in the future as a result of this policy change?

- *Yes*
- *No*

[ASK IF GROUP3 = TRUE AND IF "increase tax revenues through higher tax rates" AND/OR "increase tax revenues thanks to economic growth, which will expand the tax base, without needing to increase tax rates" AND IF "Yes" WAS CHOSEN IN THE PREVIOUS QUESTION]
Because you expect an increase in your taxes, do you think the tax amount you would pay - as a percentage of your income - would be higher, lower, or about the same as what a typical American would pay?

Relative to a typical American, I would pay ...

- *less*
- *about the same*
- more

C.5 Attention Check

The next question is about the following problem. In questionnaires like ours, sometimes some participants do not carefully read the questions and just quickly click through the survey. This means that there are a lot of random answers, which compromise the results of research studies. To show that you read our questions carefully, please choose both "Very strongly interested" and "Not at all interested" as your answer to the below question.

Given the above, how interested are you in economics?

- *Very strongly interested*
- *Very interested*
- *A little bit interested*
- *Almost not interested*
- *Not at all interested*

C.6 Demographics Questions

Now please tell us some information about yourself.

What is your current age?

What state do you currently reside in?

What best describes your current employment situation?

- *Working full-time (for someone or self-employed)*
- *Working part-time (for someone or self-employed)*
- *Not working*

Do you work for the U.S. government or a business funded by the US government?

- *Yes*
- *No*

Generally speaking, do you usually think of yourself as a Republican, a Democrat, an independent, or something else?

- *Republican*
- *Democrat*
- *Independent*
- *Something else*

To what extent do you agree with the following statement?

I usually follow news on the national economy.

- *Strongly agree*
- *Agree*
- *Neither agree nor disagree*
- *Disagree*
- *Strongly disagree*

What is the highest level of school you have completed, or the highest degree you have received?

- *Less than high school*
- *High school diploma (or equivalent)*
- *Some college but no degree (including academic, vocational, or occupational programs)*
- *Associate/Junior College degree (including academic, vocational, or occupational programs)*
- *Bachelor's degree (For example: BA, BS)*
- *Post-graduate degree (For example: MA, MS, PhD, MD, JD)*

What is the highest level of any course in economics, finance or business you ever took?

- *I have never taken a course in economics, finance, or business.*
- *High-school level*
- *College level*
- *Graduate level*

Which of these describes you more accurately?

- *Male*
- *Female*

Are you currently married or living as a partner with someone?

- *Yes*
- *No*

Do you have children?

- *Yes*
- *No*

C.7 Household Finances

How much income did your household earn in 2024 (before tax)? If you do not know, please estimate and choose an appropriate range.

Now we would ask you to enter an exact dollar amount of your household's 2024 income (before taxes) that lies in the bracket you specified above.

If your household experienced an emergency, would you need to borrow money to pay for a $2,000 expense?

- *No, I would not need to borrow money to cover a $2,000 expense*
- *Yes, I would need to borrow money to cover a $2,000 expense*
- *I would not be able to pay for this expense because I cannot borrow.*

Which financial assets (excluding housing) do you invest in? (Pick all that apply)

- *Checking and Savings Account*
- *Cash*
- *US Government Bonds*
- *US Corporate Bonds*
- *US Stocks*
- *Foreign Stocks or Bonds*
- *Gold or other precious metals*
- *Other (please specify)*

[ASK IF AT LEAST ONE OPTION WAS CHOSEN IN THE PREVIOUS QUESTION]
What percent of your financial wealth (excluding housing) do you invest in the categories you picked in the previous question? (Please enter a whole number of you invest in a given category. Percent should total 100%)

- *Checking and Savings Account* . . . %
- *Cash* . . . %
- *US Government Bonds* . . . %
- *US Corporate Bonds* . . . %
- *US Stocks* . . . %
- *Foreign Stocks or Bonds* . . . %
- *Gold or other precious metals* . . . %
- *Other (please specify)* . . . %

C.8 Feedback

Please evaluate the following statement: the questions in this survey were clear.

- *Strongly agree*
- *Agree*
- *Neither agree nor disagree*
- *Disagree*
- *Strongly disagree*