Treasury Debt and Inflation Tax

Yu-Ting Chiang, Ezra Karger, and Jesse LaBelle

Abstract

We calculate the implicit inflation tax borne by households due to their holdings of U.S. Treasury debt. Nominal assets lose value due to unexpected inflation. We calculate unexpected changes in current and future inflation and document households' holdings of Treasury debt across the wealth distribution, accounting for direct and indirect holdings through financial intermediaries. Combining these two pieces of information, we calculate the implied inflation tax across household wealth groups over the past four decades.

JEL codes: E31, E44, E62

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1. INTRODUCTION

Households face an implicit inflation tax because they are net holders of nominal U.S. Treasury debt, which loses value when inflation unexpectedly increases. We consider households' holdings of Treasury debt across the wealth distribution, accounting for both directly held Treasury debt and debt held indirectly through financial intermediaries. We document households' net holdings of Treasury debt and use changes in inflation and inflation expectations from the 1980s to the present to calculate the implied inflation tax across household wealth deciles over the past 40 years.

Unexpected inflation redistributes wealth from nominal lenders to nominal borrowers: When two parties enter a nominal contract, with one party paying another party a fixed dollar amount, an unexpected increase in the price level (inflation) lowers the contract's real value. The U.S. government, the world's largest single nominal borrower, sees the real value of its debt decrease with unexpected inflation, leaving debt holders to face an implicit inflation tax.

The majority of outstanding U.S. government debt is held by U.S. households. While households hold some Treasury debt directly, the vast majority of Treasury debt is held indirectly through intermediaries such as pension funds, mutual funds, and corporate equity, which in turn often partially comprise other intermediaries. To understand the importance of indirect Treasuries to household balance sheets, consider that, in the 1989 Survey of Consumer Finances, U.S. households held roughly $63 billion of direct Treasury debt. Direct holdings peaked at $180 billion in 2001 and had fallen to $80 billion by 2019. In contrast, indirect holdings of

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Treasuries totalled over $320 billion in 1983, increased to $620 billion by 2001, and grew to over $4 trillion in 2019.

To understand how much wealth each household loses from holding nominal Treasury debt when inflation unexpectedly spikes, we disentangle the intricate cross-holdings between financial intermediaries to consolidate the total Treasury holdings for each household group, using a combination of Survey of Consumer Finance (SCF) data and Flow of Funds data. When combining direct and indirect holdings, Treasuries account for up to 5% of households' total assets for households in the top 20 percent of wealth, compared with around 1 percent for the bottom 20 percent. This has not always been the case: In 1983, households in the top and bottom 20 percent groups were equally exposed, holding around 2 percent of their assets in Treasuries. This change in asset composition over time and across household wealth highlights households' differential exposure to a Treasury-holdings-driven inflation tax.

Given households' consolidated holdings of Treasury debt, we first construct a time series of unexpected changes in inflation. Using data on inflation expectations over different time horizons from the Cleveland Fed, we gather measures of inflation expectations and unexpected changes in inflation We use these time series to estimate changes in the real value of Treasury debt — that is, the inflation tax imposed on each household group. This is a topic of interest, as the recent increase in inflation and inflation expectations during 2022 led to a large decline in the real value of households' holdings of Treasury debt. As mentioned, for some groups, nearly 5 percent of their total assets are held in Treasuries. Therefore, a large inflation shock like the one experienced in 2021-22 (6 percent for the one-year horizon) reduced the value of their asset holdings by around 0.4 percent. This reduction represents a direct transfer from households to the government, functioning as an implicit inflation tax.

It is important to note that the redistribution between households and the government represents only one aspect of the redistributive effect of inflation, as all nominal contracts signed between households and other parties are subject to this effect. The redistributive effect of unexpected inflation and nominal contracts has been the focus of Doepke and Schneider, 2006, Cardoso et al., 2022, and Del Canto et al., 2023. Our method for consolidating indirect holdings builds on that in Chiang and Karger, 2024, and relates to the accounting method described in Mian, Straub, and Sufi, 2020. Chiang and Karger, 2024, provide a comprehensive analysis of the redistributive effect of unexpected inflation, accounting for all nominal assets and identifying the added welfare costs of the mismatch between households' nominal assets and liabilities due to inflation and illiquidity.

Framework

We adopt a simple framework to calculate this inflation tax. At the beginning of each time period t, a household's holdings of nominal Treasury debt of all maturities is represented by a stream of nominal payment $\{B_t^{t+h}\}$ from a portfolio of zero-coupon bonds with maturity $h \in \{1, \ldots, \infty\}$. Suppose that the nominal yield between period t and $t+h$ is given by i_t^{t+h} and the price level in period t is given by P_t. The real net present value of Treasury holdings is the sum of the real present value of the nominal payments in each horizon:

$$w_t = \sum_{h \geq 1} \frac{B_t^{t+h}}{(1 + i_t^{t+h})^h \times P_t}.$$

During the period, inflation and households' inflation expectations change due to some underlying shocks. Let $\hat{\pi}_t^{t+h}$ denote the annualized inflation expectations update over horizon h from period t to $t+1$:

$$\hat{\pi}_t^{t+h} \coloneqq \mathbb{E}_{t+1}[\pi_t^{t+h}] - \mathbb{E}_t[\pi_t^{t+h}].$$

With inflation realized and households updating their inflation expectations, the real value of Treasury debt changes by

$$\Delta w_t \approx \sum_{h \geq 1} -\frac{B_t^{t+h}}{(1 + i_t^{t+h})^h \times P_t} \times h \times \hat{\pi}_t^{t+h}.$$

We multiply the expectation updates in each period (over each horizon), $\hat{\pi}_t^{t+h}$, by the real net present value of the nominal payment at each horizon. The sum of these effects across all horizons gives the full effect of the inflation tax on households through their Treasury holdings.

As an example, suppose that households expect inflation to be 0 percent for the next two years as of August 2023; that is, $\mathbb{E}_{Aug2023}[\pi_{Aug2023}^{Aug2025}] = 0\%$. The household decides to lend the government money by purchasing Treasury debt and expects payments of $\$1,000$ for the next two years. However, during the first year, the

household realizes inflation is at 5 percent during that year; $\hat{\pi}^{Aug2024}_{Aug2023} = 5\%$. At the same time, it updates its expectations and now expects inflation to be 5 percent, on average, for the first two years; $\mathbb{E}_{Aug2024}[\pi^{Aug2025}_{Aug2023}] = 5\%$. This is an inflation shock, $\hat{\pi}^{Aug2025}_{Aug2023}$, of 5 percent for the two-year horizon. As a result, the payment of \$1,000 at the end of the first year (now August 2024) loses around 5 percent of its original expected value ($-5\% \approx 1/1.05 - 1$), and a payment of \$1,000 in two years (August 2025) is now worth approximately 10 percent less than its original expected value ($-10\% = -2 \times 5\% \approx 1/1.05^2 - 1$). The new value of these payments after the first year, now July 2024, decreases by 5 percent and 10 percent relative to their original value—a loss of $\$52.50 = \$1,050 \times 5\%$ and $\$100 = \$1,000 \times 10\%$, respectively.

Data

Inflation expectations data: We construct our inflation shocks using monthly consumer price index data from the Bureau of Labor Statistics and inflation expectations data from the Federal Reserve Bank of Cleveland. The latter source publishes its expectations monthly across a 30-year horizon using a combination of professional surveys and predictive models.

Treasury data: We use data from the Center for Research in Security Prices to obtain information on the maturity of all outstanding Treasuries at the monthly level. We focus on nominal debt and obtain nominal yields on Treasury debt from the U.S. Treasury's website.

FoF data: The Federal Flow of Funds (FoF) maintained by the Federal Reserve Board provides data for cross-holdings of 28 financial intermediaries, which we combine into 10 larger groups of intermediaries.

SCF data: We gather data on household balance sheets from the SCF, maintained by the Federal Reserve Board. Specifically, we rely on the SCF+ work done by Kuhn, Schularik, and Steins, 2016, who adapted the SCF to be more uniform before and after changes to the survey in 1983. To compile micro-level data on debt holdings, we incorporate the 2019 SCF with the authors' dataset and supplement it with raw SCF data as needed. We observe households' direct holdings of Treasury debt in the SCF, along with their holdings of different financial intermediaries. We then link these holdings of indirect Treasury debt holdings of households. Households are divided into three different groups according to their total assets: the top 20 percent, the middle 60 percent (20 percent to 80 percent), and the bottom 20 percent. These groups are defined using all forms of assets, including financial assets (such as equity, pensions, and mutual funds), real assets (such as private businesses and home values), and one-year nominal income.

2. INFLATION SHOCKS

We construct inflation shocks as updates in inflation expectations one period after the initial expectation at period t, over different horizons h:

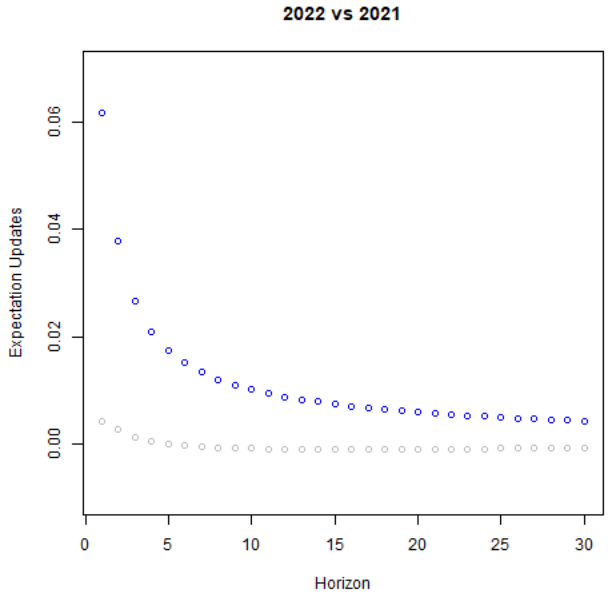
$$\hat{\pi}^{t+h}_t = \mathbb{E}_{t+1}[\pi^{t+h}_t] - \mathbb{E}_t[\pi^{t+h}_t].$$

Instead of considering exogenous shocks that drive changes in inflation and inflation expectations, we construct our expectation updates directly from inflation expectation data. Doing this allows us to focus on the channel through which inflation affects households due to their holdings of nominal Treasury debt. Since our goal is to measure the size of the inflation tax, we use the measure of inflation expectations provided by the Federal Reserve Bank of Cleveland, which we interpret as a "consensus forecast" that combines survey measures and information from inflation swaps. Using a consensus forecast implies that when one party gains from inflation shocks, another party loses. However, this misses an important aspect of the "perceived welfare gain/loss" of each household, which originates from the large dispersion in inflation expectations among households.

Figure 1 shows the inflation shocks (annualized) for January 2020 to January 2021 (gray circles) and January 2021 to January 2022 (blue circles). For the blue circles, the initial inflation expectations were made in 2021. Over one year, realized inflation exceeded initial expectations by 6 percentage points. Similarly, for the subsequent two years from that point, inflation expectations climbed nearly 4 percentage points higher than original expectations. For all horizons, households generally expect inflation to be, on average, 0.5 percentage points higher than originally expected, even 30 years later. These updates in inflation and inflation expectations represent a large change in the real value of nominal assets throughout 2021. By contrast, the gray dots show that throughout 2020 inflation expectations saw only small updates in the first couple of years, with the long-run expected inflation remaining unchanged from the beginning of the year.

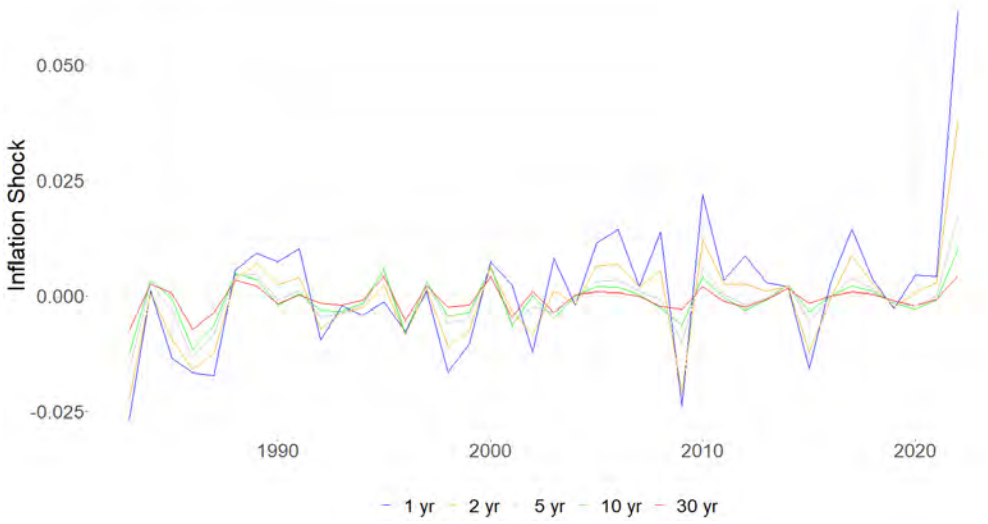
Figure 2 shows inflation shocks at the 1-, 2-, 5-, 10-, and 30-year horizons from 1983 to 2022. The inflation shock experienced in 2021 was the largest in magnitude in terms of 1-, 2-, 5-, and 10-year horizons, while the shock to 30-year horizons was the largest since 2000. Inflation and expectation updates over the 1- and 2-year horizons reached around 5 percent, and even the 5-year inflation expectations revised upward by 2 percent.

Figure 1
Inflation Shocks over Different Horizons



NOTE: Blue circles indicate period from January 2021 to January 2022; gray circles indicate period from January 2020 to January 2021.

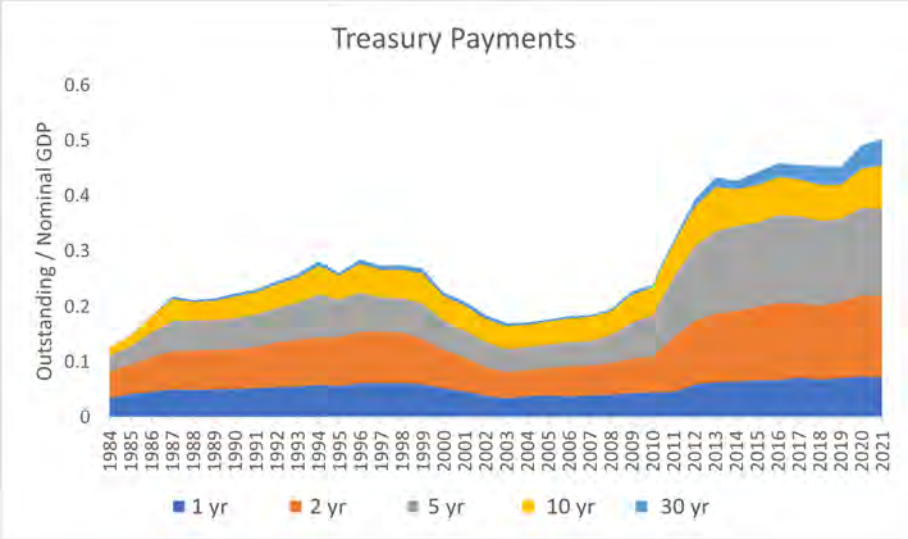
Figure 2
Inflation Shocks over Different Horizons: 1983–2022



The recent inflation episode during the year 2021 was an unseen phenomenon over the past four decades as inflation had been stable and expectation updates seldom exceeded 2 percent. The largest (dis)inflation shocks before 2021 occurred during the years 1983 and 2009. In 1983, the economy was at the end of Paul Volcker's interest rate hikes to combat the persistently high inflation of the 1970s and early 1980s. From 1980 to 1983, the inflation rate decreased from over 10 percent to around 3 percent, accompanied by unexpected decreases in inflation expectations. Unexpected deflation of similar magnitude occurred in 2009 after the onset of the Great Recession. Both of these shocks are dwarfed in magnitude by the 2021–22 inflation episode.

3. TREASURY DEBT

Figure 3
Treasury Debt Outstanding over Time: 1984–2021



3.1 Treasury Debt Outstanding by Maturity

Figure 3 shows the value of outstanding government Treasuries as a share of U.S. GDP held by U.S. households (excluding those held by the Federal Reserve and the rest of the world). While there have been some fluctuations since 1984, with a notable rise in the 1990s and a fall in the 2000s, the amount has more than doubled in recent years since the early 2000s, currently sitting nearly 100 percent higher than its peak during the 1980s. The maturity of Treasury debt is relatively long: 1-year Treasuries make up only a small fraction of the total, and even when combining 1- and 2-year Treasuries, they account for less than 50 percent of the total. The long maturity of Treasury debt implies that longer-run inflation expectations will have a large impact on the real value of nominal assets: A 0.5 percent increase in inflation expectations over the 30-year horizon is enough to reduce the real value of a nominal payment at the 30-year horizon by around 15 percent.

3.2 Treasury Debt as Nominal Payment Streams

We use the information on the maturity of Treasury debt outstanding each year to construct nominal payment streams that households expect to receive over different horizons at each point in time. First, we take the total face value of outstanding Treasuries in the current period. For each period t, the nominal payments to be received from the outstanding Treasury debt at period $t + h$ consist of the principal from all debt issued in period $s \leq t$ with maturity $h \geq t - s$:

$$B_t^{t+h} = \sum_{s \leq t} F_s^{t+h} + \sum_{s \leq t} \sum_{\tau \geq h} F_s^{t+\tau} \times C_s^{t+\tau}.$$

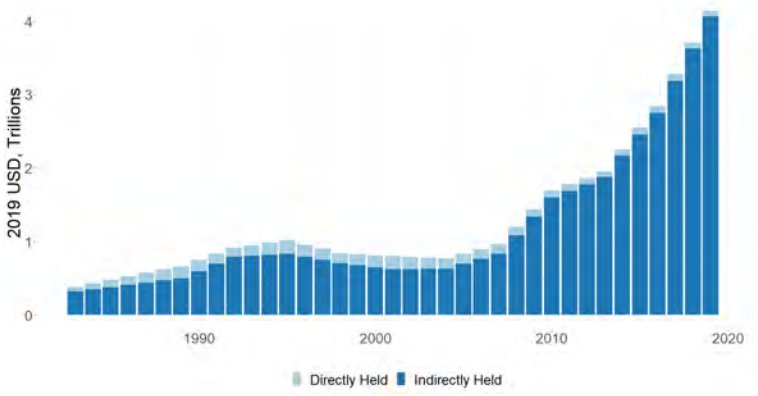
From the outstanding Treasury debt, the expected nominal payment stream to be received at period $t + h$, B_t^{t+h}, is the sum of the face value of all Treasuries issued before period t that mature in period $t + h$, F_s^{t+h}, plus the coupon payment from all Treasuries maturing after period $t + h$, $C_s^{t+\tau}, \forall \tau \geq h$. Given all the outstanding Treasuries, we use the SCF and FoF data to distribute them among households.

4. HOUSEHOLD HOLDINGS OF TREASURY DEBT

All Treasuries in the U.S. are either directly held by U.S. households, the Federal Reserve, and the rest of the world or indirectly held through intermediate assets, which in turn are held by either U.S. households, the Federal Reserve, the government, or the rest of the world. Figure 4 shows Treasury debt held directly and indirectly by households in the U.S. over time.

In the early part of the sample, before the 1990s, direct Treasuries were already dwarfed by indirect ones. However, in recent years, this disparity has become more pronounced. The total amount of direct Treasuries has increased by about 30 percent since 1983 (peaking and falling in between), while the total amount of indirect Treasuries has grown by nearly 1,000 percent. This dramatic growth in indirect Treasury holdings is an important feature of household balance sheets that leads to exposure to inflation shocks: While direct Treasuries

Figure 4
Directly and Indirectly Held Debt: 1983–2021



NOTE: The figure shows direct and indirect holdings of Treasury debt by U.S. households, with a breakdown of indirect holdings by intermediary type.

are more visible to a household, the amount of those held indirectly is far greater. To understand Treasury holdings among different household groups (and therefore their exposure to inflation shocks), we consolidate their indirect holdings using the cross-holdings of financial intermediaries through which households hold these assets.

4.1 Consolidating Indirect Treasury Holdings

The majority of Treasury debt owned by households is held indirectly. We trace out the indirect holdings of Treasury debt by each household group using the SCF and FoF data, which we combine. The SCF data provide information on households' direct holdings of Treasury debt and holdings of various financial intermediaries (e.g., pension funds, mutual funds, corporate equity), while the FoF data contain information on the cross-holdings between various types of financial intermediaries.

Consider household groups indexed by $g = 1, \ldots, G$. These households hold various types of financial intermediaries indexed by $i = 1, \ldots, I$. For each time period t, we use the (i, g) element of matrix $\boldsymbol{b} = [b_{i,g}]$ to denote the share of intermediary i in the economy owned by household group g. We also use the (i, j) element of matrix $\boldsymbol{\Omega} = [\omega_{i,j}]$ to denote the share of intermediary i owned by intermediary j and use the i element of vector $\boldsymbol{a} = [a_i]$ to denote the amount of Treasury debt on intermediary i's balance sheet.[2]

The indirect holdings of Treasury debt by household g, $\boldsymbol{a}^{ID} = [a_g^{ID}]$, is given by

$$\begin{aligned} \boldsymbol{a}^{ID} &= \boldsymbol{a}(\boldsymbol{I} + \boldsymbol{\Omega} + \boldsymbol{\Omega}^2 + \cdots)\boldsymbol{b} \\ &= \boldsymbol{a}(\boldsymbol{I} - \boldsymbol{\Omega})^{-1}\boldsymbol{b}. \end{aligned}$$

To understand the formula, consider a household g that holds a \$100,000 stake in a mutual fund i worth \$10 million: Ownership of $b_{i,g} = 1\%$. This makes the household indirect owners of 1 percent of all the Treasuries that the fund holds. So if the fund holds $a_i = \$200,000$ in Treasury debt, then the household effectively holds \$2,000 in Treasury debt indirectly through the fund $(a_i \times b_{i,g})$. This is the first layer of indirect holding, captured by the first term of the geometric sum, $\boldsymbol{a} \times \boldsymbol{b}$. Moreover, if the fund holds 20 percent of a company j, $\omega_{j,i} = 20\%$, and the company holds \$500,000 in Treasury debt, $a_j = \$500,000$, then the household holds another $\$500 = a_j \times \omega_{j,i} \times b_{i,g}$ through a second-layer ownership. This second-layer ownership is captured by the second term of the geometric sum, $\boldsymbol{a} \times \boldsymbol{\Omega} \times \boldsymbol{b}$. The same logic applies to higher layers of ownership as captured by the geometric series, and total indirect holding is given by the geometric sum $\boldsymbol{a}(\boldsymbol{I} - \boldsymbol{\Omega})^{-1}\boldsymbol{b}$.

4.2 Treasury Ownership in 2019

We illustrate the calculation of indirect holdings in detail using data from 2019. Table 1 shows matrix $\boldsymbol{b}$ (transposed): the share of intermediaries held directly by each household group. We split households into three groups according to their total assets holdings: the bottom 20 percent, the middle 60 percent (20 percent to

2. Since we do not observe holdings of different kinds of Treasury debt in the FoF data, we assume that Treasury debt holdings of all intermediaries are proportional to the aggregate Treasury debt outstanding.

Table 1
Household Holdings of Intermediaries, b^{T}

Household group	MMFs	Corp	MFs	DC pension	Noncorps
Lower	< 1%	< 1%	< 1%	< 1%	< 1%
Middle	8%	4%	3%	23%	6%
Upper	53%	34%	53%	76%	94%

Table 2
Intermediaries Holdings of Intermediaries, Ω

	MMFs	Corp	MFs	DC pension	Noncorps
MMFs	0%	26%	0%	3%	3%
Corp	0%	15%	22%	4%	< 1%
MFs	0%	19%	0%	16%	0%
DC pension	0%	0%	0%	0%	0%
Noncorps	0%	0%	0%	0%	0%

80 percent), and the top 20 percent. There are five groups of intermediaries: money market funds, corporate equity, mutual funds, defined contribution (DC) pension funds, and noncorporate businesses. We do not include defined-benefit pensions because we treat them as liabilities fully owed by either the corporation for private pensions or the government for public pensions. Therefore, the assets owned by those pension funds are held by those respective entities. In the case of private funds, the household indirectly holds these assets via corporate equity. Holdings of intermediaries are concentrated in the top 20 percent group. For holdings of money market funds, corporate equity, and mutual funds, the shares directly held by households total less than 60 percent, as a large portion of the shares is held by other intermediaries.[3]

Table 2 shows the share of intermediaries held by other intermediaries, represented by the Ω matrix. Each column represents an intermediary's holdings of all intermediaries, and each row represents the share of an intermediary held by all intermediaries. For example, the column "Corp" shows that the corporate sector holds 26 percent of the shares of all money market funds, 15 percent of the shares of all corporate equity, and 19 percent of the shares of all mutual funds. The column corresponding to money market funds is all zeros because money market funds have only debt securities on their balance sheets and do not own other intermediaries. Rows corresponding to DC pensions and noncorporate businesses are all zeros because they are fully held by households directly. Rows corresponding to money market funds, corporate equity, and mutual funds show more complicated patterns because these intermediaries are owned by other intermediaries.

Table 3 presents the share of total Treasury debt held by each intermediary in 2019, represented by the $\boldsymbol{a}$ vector. Pensions hold the most, around 15 percent of all outstanding Treasuries. Overall, 37 percent of the outstanding Treasuries are held by these intermediaries and owned indirectly by U.S. households. This Treasury debt held by intermediaries are indirectly held by different groups of households. In Table 4, $\boldsymbol{a}^{ID}$ represents holding by the three different household groups.

4.3 Heterogeneity in Treasury Holdings across Households

Figure 5 shows the Treasury holdings of different household groups over time, accounting for both direct and indirect holdings. We linearly interpolate the Treasury holdings for each household group over the years in which the SCF data were not collected before 2019 and use the 2019 observations for 2020–22. Households in the lower 20 percent of total asset holdings, represented by the red bars, hold around 2 percent of their total assets in Treasury debt, directly and indirectly. Over time, the importance of Treasury debt for these households declined gradually to around 1 percent. The middle and upper groups show a different pattern: While Treasury debt constituted around 1 percent to 2 percent of the total assets for these two groups in the early 1980s, by the end of our data in 2019 it made up around 3 percent to 5 percent of their total asset holdings. The heterogeneity in Treasury holdings as a fraction of total assets among households implies different exposure to the implicit inflation tax, which we now describe.

3. Some fraction is also held by the government and the rest of the world, but their shares are relatively small compared with holdings of households or other intermediaries.

Table 3
Intermediaries Holdings of Treasury Debt, a

Intermediary	Treasuries held (billions 2019 USD)
MMFs	1,037 (5%)
Corp	1,811 (9%)
MFs	1,311 (7%)
Pensions	2,935 (15%)
Noncorps	288 (1%)

Table 4
Household Indirect Holdings of Treasury Debt, a^{ID}

Household group	Treasuries held indirectly (billions 2019 USD)
Lower	5
Middle	1,326
Upper	2,733

5. IMPLIED INFLATION TAX

To compute the implied inflation tax, we combine the inflation shocks, $\hat{\pi}_t^{t+h}$, from Section 2 and the expected nominal payment streams B_t^{t+h} for each household group from Sections 3 and 4:

$$\Delta w_t \approx \sum_{h\geq 0} \frac{-B_t^{t+h}}{(1+i_t^{t+h})/P_t} \times t \times \hat{\pi}_t^{t+h}.$$

Figure 6 shows the implied inflation tax relative to household total asset holdings over the previous four decades. The top panel shows the overall effects of the whole household sector. The bottom panel splits households into three household groups and shows the heterogeneous effects on each group over time. A negative number signifies a redistribution from debt holders to the U.S. government, effectively acting as an inflation tax imposed on those holding the debt.

Historically, the effects of inflation shocks, both positive and negative, have been small—barely exceeding 0.1 percent of U.S. households' total asset holdings. However, the large inflation surprises we experienced during 2021, together with the ever-increasing Treasury debt in recent years, has led to an unprecedented, large-scale redistribution. This shift has resulted in an inflation tax amounting to 0.34 percent of the total asset holdings of U.S. households.

The inflation tax has heterogeneous effects on different household groups over time. In the early 1980s, both the positive and negative shocks similarly impacted households in the upper and lower group (sorted by their total assets holdings), and there were slightly smaller effects on the middle group. However, since then the impact has been much larger for households in the middle and upper groups. This change can be seen by the relative size of the red, yellow, and blue bars, and it reflects the shift in exposure documented in Section 4. As the 1980s mostly featured disinflation shocks, holdings of nominal Treasury debt increased in real value, and the bottom and top 20 percent groups had similar gains relative to their total asset holdings. The inflation episode in 2022 featured high unexpected inflation and large upward revisions in inflation expectations, and as a result, the largest loss accrued to holdings of Treasury debt. During this period, the top 20 percent group lost the most relative to their total asset holdings.

6. CONCLUSION

We calculate the implicit inflation tax borne by households through their holdings of U.S. Treasury debt, as unexpected inflation shifts the real value of nominal assets. We account for both the direct and indirect holdings of Treasury debt by U.S. households and consider these holdings across different households groups, sorted by their total assets. Over the last four decades, holdings of Treasury debt as a fraction of total asset holdings decreased for the bottom 20 percent group but increased for the top 20 percent group. Unexpected changes in inflation and inflation expectations during 2021–22 led to the largest redistribution from households to the government seen in 40 years. The decrease in the real value of Treasury debt amounts to an inflation tax of 0.1

percent to 0.4 percent of total asset holdings among household groups, with the top 20 percent group being the most exposed.

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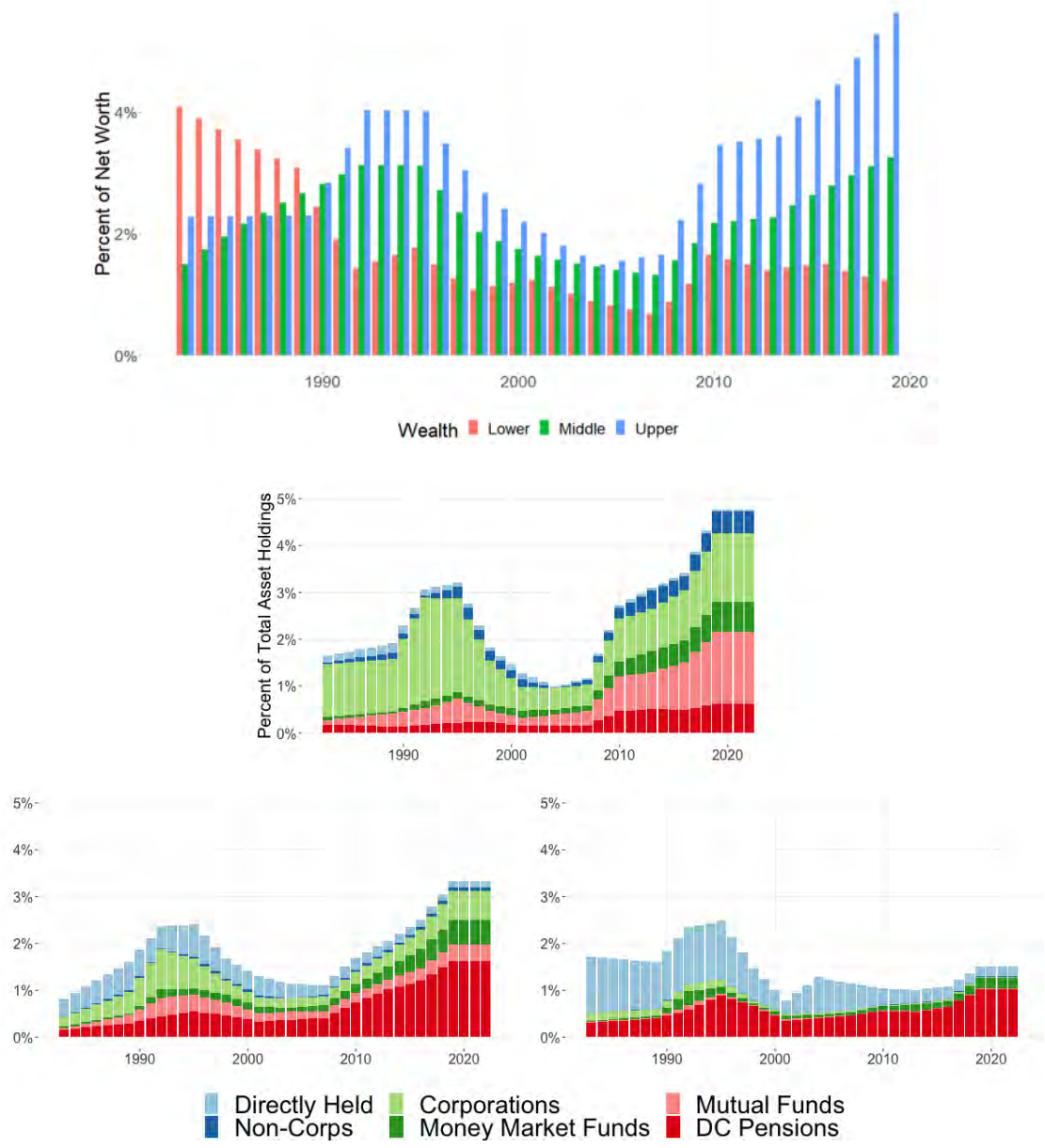
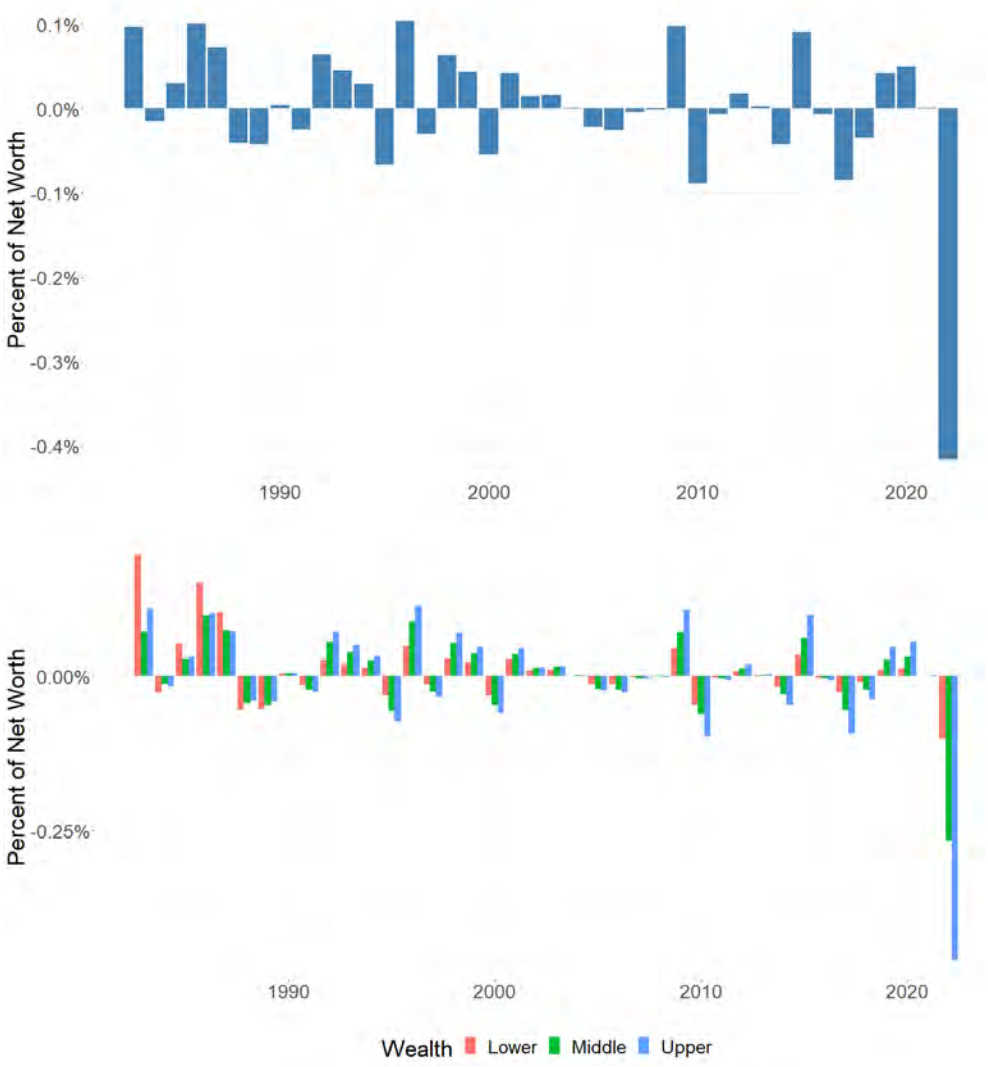
Figure 5
Treasury Holdings as a Percentage of Total Assets: 1983–2022



NOTE: The top panel presents a comparison between household groups. The bottom three panels provide a breakdown of holdings into various types of intermediaries, according to household wealth: upper (top panel), middle (bottom left), and lower (bottom right). The data are linearly interpolated for the years in which the SCF data were not collected before 2019. The 2019 observations are repeated for 2020–22.

Figure 6
Implied Inflation Tax Due to Holdings of Treasury Debt: 1983–2022



NOTE: The figure shows the implied inflation tax due to holdings of Treasury debt as a fraction of total asset holdings. The top panel depicts the entire household sector, while the bottom panel details this effect by household groups.