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The Enduring Impacts of the COVID-19 Pandemic on Americans' Economic Security

Abstract

We examine how the pandemic has influenced Americans' short-term financial security and future retirement stability using longitudinal survey data from the Understanding America Study (UAS), spanning the period May 2018 to May 2022. We find that while, on average, Americans' short-term financial stability improved through the first year of the pandemic, Americans' financial security decreased between 2021 and 2022. In particular, relative to 2021 levels, we observe reductions in financial satisfaction and short-term savings behavior and balances, and an increase in the proportion of respondents spending in excess of their income. Part of the decline appears to be driven by difficulties dealing with the spike in inflation: Approximately 30% of respondents reported that the price increases were causing them either a "moderate" or "high" amount of financial stress, and these individuals experienced particularly stark reductions in short-term financial stability. Despite declines in the pandemic's second year, on average, short-term financial security remained above prepandemic levels in 2022. Impacts on retirement security, however, appear bleaker. We observe reductions in retirement saving behavior and balances in 2022, both relative to 2021 and to prepandemic levels: On average, our sample was less likely to be saving for retirement and had lower retirement savings in 2022 than in 2019, despite being three years older. Collectively, our results suggest that the observed improvements in short-term financial stability may not translate into improved retirement outcomes in the future.

Citation

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1. Introduction

The COVID-19 pandemic has had enormous effects on the U.S. economy. Governmental mandates temporarily closing businesses and schools and public concern regarding health risks led to a steep reduction in economic activity in early 2020 (Goolsbee and Syverson 2021). Accordingly, the labor market experienced a sharp contraction, with the unemployment rate increasing more than fourfold from 3.5% in February 2020, to 14.7% in April of that year (Bureau of Labor Statistics 2022a). The unemployment rate remained elevated through much of 2021, and labor force participation continued to be below prepandemic levels though 2022 (Abraham and Rendell 2023).

Despite the large economic contraction and persistent effects in the labor market, Americans' short-term financial stability *improved*, on average, through the pandemic's first year. Indeed, both subjective measures — such as perceived financial well-being and financial stress — and objective measures — such as liquid savings balances and credit scores — improved on average in mid-2020 relative to the prepandemic period (Angrisani et al. 2021; Fulford et al. 2021) and remained elevated through mid-2021 (Angrisani et al. 2022). Additionally, the average improvement was concentrated on those who were more financially fragile before the pandemic hit, such as individuals with lower incomes and lower financial literacy. The improvement, both overall and differential, was likely driven, at least in part, by the government's economic stimulus program, which had larger impacts on those who were more economically vulnerable (Angrisani et al. 2021). Other research has suggested that the stimulus may have also

been effective in offsetting reductions in income and spending (Cox et al. 2020; Han et al. 2020).

Though short-term financial stability improved for many Americans, troubling signs have emerged. First, financial fragility increased, on average, in 2021 relative to prepandemic levels, particularly among Hispanics and individuals who did not receive Economic Impact Payments (EIPs) or had higher incomes (and consequently were more likely to have received a reduced EIP amount conditional on receipt). Second, though short-term savings rates and balances increased early in the pandemic, self-reported (inflation-adjusted) retirement balances were lower in mid-2021 than prior to the pandemic's onset (Angrisani et al. 2022). Thus, though short-term financial security increased on average early in the pandemic, retirement security may have decreased.

Two additional factors are cause for worry. The EIP program, which was strongly associated with improved short-term financial stability, ceased in 2021. Moreover, inflation spiked in the same year and reached its highest level in four decades in 2022. Both factors may have placed increased stress on many households' balance sheets, jeopardizing accrued gains in short-term financial security and further imperiling future retirement preparedness.

In this paper, we build on prior work by leveraging new longitudinal surveys from the Understanding America Study (UAS) to assess the longer-term impacts of the pandemic, removal of governmental stimulus, and increase in inflation on Americans' economic security and financial well-being through the pandemic's second year. Our primary analysis sample consists of five annual surveys fielded in April/May of 2018 to 2022, spanning the onset and subsequent years of the COVID-19 pandemic. Our data

measure respondents' financial situations in detail, including information on employment, income, spending and savings behavior, debt accumulation, subjective financial well-being, financial fragility, retirement savings, and financial distress. In addition to the annual surveys, we incorporate additional data on subjective retirement preparation and Social Security retirement benefits claiming intentions, before and during the pandemic. We also merge COVID-19 infection data from other UAS surveys to assess how individual variation in health shocks might influence financial behaviors and financial security.

Overall we find that, on average, Americans' short-term financial security decreased between 2021 and 2022, though it remained above prepandemic levels on most indicators. In particular, relative to 2021 levels, we observe reductions in financial satisfaction and short-term savings behavior and balances, and an increase in the proportion of respondents spending in excess of their income. The increased spending relative to income and reduction in short-term savings balances are consistent with respondents drawing down their increased, EIP-bolstered savings.

Individuals who received the EIPs experienced larger improvements in short-term financial security through 2021 than those who did not receive the stimulus. The importance of EIPs in bolstering short-term financial situations raised concerns that households that benefited from stimulus might experience steep declines in financial stability after the program's removal. The data do not support this conjecture, as both groups experienced similar proportional reductions in financial stability between 2021 and 2022. We do find evidence of a significant, adverse effect of inflation on many households. Approximately 30% of our sample claimed that recent price spikes caused

either a “moderate” or “high” amount of financial stress. These individuals suffered much starker reductions in financial satisfaction and savings rates, and increases in financial stress and financial fragility in 2022 than those reporting either “some” or no financial stress from inflation.

We observe some differences in short-term financial security trajectories based on demographic characteristics, though most differences are muted. Older adults experienced larger improvements in financial satisfaction and smaller increases in financial fragility in 2022 relative to prepandemic than younger individuals. We find few differences by race and ethnicity, most notably a sharper increase in short-term savings likelihoods for Black individuals and a significantly larger increase in financial fragility among Hispanics in 2022. Lower income households continued to experience larger improvements in short-term financial stability than their higher income counterparts through 2022. We find that COVID-19 infection is directionally associated with lower short-term financial stability. There is little evidence of differential effects across race or ethnicity, though our estimates are imprecise.

While we find evidence of persistent, though declining, increases in short-term financial stability after the pandemic’s onset, the story for future retirement security appears bleaker. We observe reductions in retirement saving behavior and balances in 2022, both relative to 2021 and to prepandemic levels: On average, our sample was less likely to be saving for retirement and had lower retirement savings in 2022 than in 2019, despite being three years older. While subjective perceptions of retirement preparedness were slightly higher on average in 2022 than prior to the pandemic, we find little improvement relative to the increase documented in 2020. Collectively, our

results suggest that the observed improvements in short-term financial stability may not translate into improved retirement outcomes in the future.

The remainder of the paper proceeds as follows. Section 2 briefly describes the data used for this study and presents summary statistics. Section 3 presents year-over-year changes in descriptive statistics, our empirical approach, main results, and analyses of heterogeneity. Section 4 concludes.

2. Data and sample characteristics

We draw our data from the Understanding America Study (UAS) panel. The UAS is a probability-based internet panel that longitudinally tracks a U.S. representative sample of more than 13,000 adults. Panel members are recruited exclusively through Address Based Sampling and receive a tablet and broadband access (and related training) if they do not have internet access. This mitigates selection problems facing convenience panels, where respondents are recruited from existing internet users. The UAS contains a very large set of background characteristics for all panel members, including demographic (e.g., age, gender, race, education), financial (e.g., income, financial literacy), health (e.g., self-assessed general health, self-reported doctor's diagnoses of conditions), personality traits (the big five) and cognition measures (e.g., number series, propositional analogies, picture vocabulary).

Since 2018, more than 4,000 panel members have completed annual surveys tracking their financial lives in detail. The fifth wave was fielded in late April/early May 2022, more than two years after the onset of the COVID-19 pandemic. These longitudinal data contain repeated measures of subjective financial well-being (particularly financial satisfaction) and numerous indicators of economic security and

financial distress. These include, but are not limited to, employment and income shocks, spending and saving behavior, debt accumulation and levels, financial fragility (e.g., inability to cover a $400 emergency expense with a cash equivalent; months of expenditure covered by savings), retirement saving behaviors, and financial stress. We restrict our analysis sample to individuals who completed at least one wave prepandemic (in 2018 or 2019) and one wave after the pandemic's onset, though results are qualitatively unchanged when including all survey responses.

We augment this longitudinal data set over a period of five years with additional modules fielded in the UAS eliciting respondents' knowledge about Social Security programs and benefits. As a part of these surveys, individuals are asked to self-assess how financially well-prepared they are for retirement on a four-point scale. Those who have not yet claimed their Social Security retirement benefits report the age at which they intend to claim. Four waves of these surveys have been fielded: one in 2015/2016, one in 2017/2018, one at the beginning of the pandemic in April 2020 that was rolled out on a staggered basis through June 2022, and one in June 2022 that opened to respondents once approximately two years had elapsed since last completing the survey.

Table 1 presents sample summary statistics in 2019, the last wave of surveys in our primary analysis sample prior to the pandemic.[1] Over 5,100 respondents completed at least one prepandemic wave and a wave after the pandemic began. Average age in the sample is 51 years, 57% of the sample identifies as female, and 81% of

[1] If an individual in the sample completed the 2018 wave but not the 2019 wave, we use their characteristics as of 2018 when constructing Table 1.

respondents are white. A little less than a quarter of the sample has a high school education or less; approximately 38% has completed some college or received an associate degree, with the remainder completing a bachelor's degree or more. There is considerable variation in household income, with approximately a quarter of the sample in each income bracket: below $30,000, between $30,000 and $60,000, between $60,000 and $100,000, and $100,000 or more per year. Approximately 60% of our respondents indicated that they were working in 2019, and 17% claimed to be in "fair" or "poor" health.

3. Results

3.1 Year-over-year descriptive atatistics

Table 2 presents levels of some key variables of interest in each year of our data. Relative to prior years, there is a notable increase in financial satisfaction (measured on a five-point scale from "Not at all satisfied" to "Extremely satisfied") in 2020, and an even larger increase in 2021. In particular, relative to 2019, financial satisfaction was 0.22 points higher in 2021 (a 7% increase). However, financial satisfaction noticeably declined in 2022 from the 2021 high, by 0.1 points, though remained above prepandemic levels.

We observe a similar pattern in regard to financial stress over time. The fraction of respondents indicating that they are experiencing either a "moderate" or "high" amount of stress due to their financial situation dropped by 3 percentage points from 2018 to 2019, by 4 percentage points from 2019 to 2020, and by 8 percentage points from 2020 to 2021 (a cumulative 15 percentage-point drop — from 42% to 27%).

However, financial stress increased by 2 percentage points between 2021 and 2022, breaking this declining trend.

Financial fragility remained relatively constant early after the pandemic's onset across the sample, then increased in 2021 and 2022. The fraction of respondents who reported that they would have to use a method other than cash or a cash equivalent to cover an unexpected $400 expense rose from 41% in 2020 to 46% in 2022.

Short-term savings behavior improved shortly after the pandemic's onset and remained elevated in 2021 relative to prepandemic levels. The fraction of respondents who indicated that they are currently saving increased 6 percentage points between 2019 and 2020, from 75% to 81%, climbing to 82% in 2021. This increase in savings participation is driven primarily by active saving behavior in liquid accounts (checking or savings accounts, cash, other nonretirement account saving or investing), which rose from 71% in 2019 to 79% in 2020 and 80% in 2021. However, rates of both general savings and savings in liquid accounts declined in 2022 by approximately 3 percentage points in the headwinds of inflation and cessation of the stimulus.

Though short-term saving participation declined in 2022, it remained above prepandemic levels. In contrast, we see smaller differences in saving activity in retirement accounts (employer-sponsored retirement accounts or IRAs) across our study years. If anything, it appears that relatively fewer respondents were saving for retirement in 2022 compared to the period before the pandemic. This remains true if we restrict the sample to individuals who are not retired at the time of the survey; 54% of nonretirees were saving in 2018, while 51% were saving in 2022 (not shown in Table 2). This is notable since, by construction, respondents have aged four years over that time

span, and report generally better short-term financial stability, yet retirement savings participation remained around 50% among nonretirees.

The persistent increase in short-term financial stability occurred despite continued lower levels of labor force participation. Mirroring the national experience, there was a substantial drop of approximately 6 percentage points (10%) in the fraction of our respondents who were working in 2020 relative to 2019. Since the pandemic's onset, labor force participation has remained relatively stable in our sample at about 55%.

Table 3 describes the distribution of savings and debt balances across years. At the median, (inflation adjusted) liquid account balances increased in both 2020 and 2021, yet declined in 2022 by about 30% from the 2021 high. At the 25th percentile and below, liquid account balances have been steadily declining following a steep increase in 2020 on the heels of the first EIP.

Removing other savings and investing and focusing strictly on checking and savings balances, we see relatively similar patterns. Checking and savings balances increased in 2020 and 2021 at the median, yet declined in 2022 by approximately 30%. Part of the reduction is due to increased inflation reducing real value, though we also observe a reduction in nominal balances at the median of about 25%. At the 25th percentile and below, balances in checking and savings accounts have been steadily declining since 2020. Notably, at the median and below, checking and savings balances were near or below prepandemic levels in 2022.

While short-term savings balances were, at least temporarily, boosted following the release of the stimulus in 2020, we observe declines in median retirement account

balances after the pandemic's onset. In particular, the median retirement account balance fell from $4,909 in 2019 to $3,867 in 2020, to $2,191 in 2021, and to just $1,302 in 2022. While some of the reduction in 2021 and 2022 is due to a larger inflation adjustment than in 2020, we also observe reductions in nominal balances at the median. This is particularly startling when considering that the S&P 500 increased by approximately 40% between May 2020 and May 2022, possibly indicating that some rebalanced portfolios away from stock prior to the increase in equities while others were drawing down on their retirement wealth.

Table 3 also explores debt levels across our window of observation. Following an initial increase shortly after the pandemic's onset, total debt levels dropped markedly at the median in 2021 and 2022, by about 28% and 37% respectively, relative to 2020. We observe even larger proportional decreases when excluding mortgage debt. While less pervasive in our sample, we also observe reductions in credit card debt: Balances at the 75th percentile fell from $2,417 in 2020 to $1,246 in 2021, though rose slightly in 2022 to $1,302 despite the larger inflation adjustment.

3.2 Empirical approach and regression results

We exploit the longitudinal nature of our data to estimate individual fixed effects regressions of the following form:

$$(1)\ Y_{it} = \alpha + \beta X_{it} + \phi_i + \gamma_t + \varepsilon_{it}$$

where Y_{it} captures an outcome of interest for individual *i* in year *t*, X_{it} is a vector of (time-varying) financial and demographic characteristics and behaviors, and ϕ_i and γ_t capture individual and year fixed effects, respectively. We cluster standard errors at the individual level. Our primary coefficients of interest are the 2020, 2021, and 2022

indicators, capturing how the average individual's financial situation differs after the onset of the pandemic and into its first and second year, relative to prepandemic.

Table 4 examines effects on subjective outcome measures and financial fragility. On average, financial satisfaction improved early after the pandemic's onset and continued to improve through the first year. In particular, financial satisfaction was 0.09 points higher in 2020, a 3% increase, and 0.23 points higher in 2021, an 8% increase, relative to prepandemic levels. However, between 2021 and 2022, financial satisfaction fell by 0.09 points, yet remained considerably above prepandemic levels.

Similarly, respondents were 5.3 percentage points and 14 percentage points less likely to report that their financial situation was causing them a moderate or high amount of stress in 2020 and 2021, relative to the period before the pandemic. Yet, financial stress increased 2.1 percentage points in 2022 relative to 2021, but remained 11.9 percentage points below its prepandemic level.

In contrast to the persistent, though declining, improvements in financial satisfaction and financial stress since the pandemic's onset, financial fragility increased between 2020 and 2021 and remained above prepandemic levels in 2022. While the prevalence of financial fragility was lower by approximately 3 percentage points in 2020 than prior to the pandemic's onset, it was *higher* in 2021 than before the pandemic, also by approximately 3 percentage points, and remained 2 percentage points higher in 2022. Thus, there appears to be somewhat of a disconnect between respondents' subjective assessment of their financial situations and the more objective measure of financial fragility. Individuals may feel better about their short-term financial conditions,

maybe partly due to increased credit availability (following a reduction in credit card debt), but may have more difficulty covering an unexpected expense solely using cash.

We find generally similar patterns for short-term saving activity. Table 5 shows that respondents were 5.6 percentage points more likely to be currently saving in 2020 relative to prepandemic, and were 4.9 percentage points more likely to be saving in 2021. However, this drops to 3.5 percentage points in 2022, a reduction in the proportion of the sample actively saving in 2022 relative to 2021, yet still above rates observed before the pandemic's onset. These trends are primarily driven by saving in liquid accounts rather than retirement accounts. Respondents were 7.1 percentage points and 6.7 percentage points more likely to be currently saving in checking or savings accounts, cash, or other nonretirement saving or investment accounts in 2020 and 2021, respectively, relative to prepandemic. This figure drops to 5.2 percentage points in 2022.

More concerningly, while we see a modest increase in retirement saving activity (IRAs or employer-sponsored retirement accounts) in 2020 of 1.6 percentage points, we observe no difference in retirement savings participation in 2021 relative to before the pandemic's onset, and a reduction in retirement savings in 2022 of 1.9 percentage points relative to prepandemic levels.[2]

Table 6 examines effects on savings balances. Given the highly skewed nature of the data with many zeros, we transform balance variables using the inverse hyperbolic sine function and calculate elasticities following Bellemare and Wichman (2020). We find that liquid account balances increased substantially in 2020 and the

[2] We find qualitatively similar results restricting the sample to nonretirees.

increase persisted into 2021. On average, liquid account balances were higher post-pandemic by about 25% to 30% in 2020 and 2021. This finding is predominately driven by activity in short-term savings: balances in checking and savings accounts increased approximately 37% to 40% relative to prepandemic levels. However, savings balances dropped precipitously in 2022. In fact, liquid account balances in 2022 were statistically indistinguishable from prepandemic levels, while balances in checking and savings accounts dropped to approximately 14% above prepandemic levels. In contrast, while we observe no statistical difference in retirement savings balances in 2020, we find that retirement balances were 18% lower in 2021, and 27% lower in 2022, on average, relative to prepandemic. As discussed when examining descriptive statistics, the reduction is in part due to a larger inflation adjustment in 2021 and 2022 than previous periods, but it is a stark reduction considering the substantial rise in the stock market between May 2020 and May 2022.

Thus, following the cessation of the stimulus program and the stark rise in inflation, it appears that, on average in 2022, Americans drew down their short-term buffer stock accumulated during the pandemic's early days. This may indicate that respondents were having more difficulty covering expenses with their income. Table 7 finds evidence in support of this. While respondents were 2 to 3 percentage points less likely to say they were spending above their income in 2020 and 2021 than prior to the pandemic's onset, they were about 3 percentage points *more* likely to be having difficulty making ends meet in 2022. Despite this, respondents were still more likely to report paying all their bills on time in 2022 than during the prepandemic period. Collectively, the evidence is consistent with Americans' continuing to experience

improved short-term financial security in 2022, in part by drawing down on their accumulated savings. We specifically explore the role of inflation and removal of the stimulus in subsequent sections.

Table 8 examines effects on debt loads. Mirroring our summary statistics, total debt — comprised of mortgage debt, auto debt, student loans, business loans, medical debt, credit card balances, and other debt — was statistically indistinguishable in 2020 relative to prepandemic levels, yet was 47% lower in 2021 and 57% lower in 2022. We find similar patterns for debt without mortgage (Column 2) and for credit card debt (Column 3). Relatedly, we find that consumers' subjective perceptions of their debt situations continued to improve through the pandemic. In particular, respondents were approximately 3.6 percentage points less likely to report that they have more debt than is manageable in 2020, yet 6.4 and 5.9 percentage points less likely to do so in 2021 and 2022, relative to before the pandemic's onset.

3.3 Removal of Economic Impact Payments

Previous research highlighted the importance of the stimulus in bolstering Americans' short-term financial stability during the pandemic's early days (Angrisani et al. 2021; Angrisani et al. 2022). This raises concerns that for those who previously received it, removal of the stimulus payments may have led steeper declines in short-term financial stability in 2022 than that experienced by individuals who did not receive the EIPs. We examine this heterogeneity by dividing the sample in two, those who received at least one EIP and those who did not receive any of them.[3]

[3] Though eligibility criteria differed slightly across the three EIPs, the clear majority of individuals in our sample who received one of the EIPs received all three.

Table 9 replicates Table 4, exploring effects on subjective measures of financial stability and financial fragility, accounting for stimulus receipt. The coefficients on our 2020 indicators reaffirm the importance of the stimulus in bolstering short-term financial stability early after the pandemic's onset. While financial situations for individuals who did not receive the EIPs were statistically indistinguishable in 2020 relative to before the pandemic began, individuals who received the EIPs experienced stark improvements in financial satisfaction, and stark reductions in financial stress and financial fragility. Financial satisfaction and financial stress improved for both groups in 2021 relative to 2020, by relatively similar amounts, while financial fragility increased. Between 2021 and 2022, we see declines for both groups on financial satisfaction and financial stress, also by relatively similar proportions. Financial satisfaction decreased by 0.09 points for those who received the EIPs, and by 0.07 points for those who did not (the difference is not statistically significant). Similarly, financial stress directionally increased by about 2 percentage points for both groups, though this estimate is not statistically significant. Our estimates for financial fragility decreased slightly for both groups, also by a similar amount.

Table 10 explores heterogeneity in saving behavior. Receiving a stimulus payment is associated with a significantly larger increase in the likelihood of short-term saving early in the pandemic, particularly in 2021, though it is also associated with (directionally) improved short-term saving participation in 2022. That is, much of the improvement in savings rates experienced early in the pandemic by those who received the stimulus persisted into 2022. While we do see a directionally larger reduction in

retirement savings participation in 2022 relative to 2021 for those who received the EIPs compared with those who did not, the difference is not statistically significant.

Thus, while the stimulus was associated with a stark increase in short-term financial stability after its issuance early in the pandemic, its removal does not appear to be related to starker declines in financial security than that experienced by individuals who did not receive the EIPs.

3.4 Inflation

Consumer prices rose sharply in 2021 and continued to increase through 2022. In June 2022, the Consumer Price Index had increased 9.1% over the previous 12 months, the largest increase since the 1980s (Bureau of Labor Statistics 2022b). The sharp and sudden inflation caused strain on many household's budgets. Among our sample, over 30% of respondents indicated in 2022 that the recent increase in prices was causing them either a "Moderate" or "High" amount of financial stress. Figure 1 shows that those who were suffering acute stress from inflation were more likely to be younger, female, nonwhite, have less education than a bachelor's degree, and have lower than median household income. For example, only 21% of individuals with a household income of $60,000 or more reported to be experiencing considerable financial stress from inflation, while that figure was 41% for those earning less than $60,000 per year. Importantly, individuals with inflation-protected income experience less stress from inflation: Those receiving Social Security benefits were 12 percentage points less likely to report a moderate or high amount of financial stress from the recent price increases.

Table 11 examines whether individuals who reported stress from inflation in 2022 experienced larger declines in financial stability. We first note that those who report inflation related stress in 2022 appeared to have similar outcomes on subjective measures and financial fragility in 2020 and 2021 to those who did not report stress from inflation: We do not find any statistical evidence of heterogeneous outcomes in these years. However, the story is markedly different in 2022. Those who felt the pinch from inflation, on average, experienced a significantly larger reduction in financial satisfaction and a significantly larger increase in financial stress and financial fragility than those who reported suffering less from inflation. For example, those suffering inflation related stress experienced a 0.144 point larger reduction in financial satisfaction. Additionally, these individuals were 5.8 percentage points more likely to be financially fragile in 2022 relative to prepandemic, yet those who were suffering less from inflation were no more likely to be financially fragile in 2022 than they were prior to the pandemic's onset.

Table 12 examines heterogeneity in savings outcomes. We find little difference in saving propensities early in the pandemic between those who experienced acute financial stress from inflation in 2022 and those who did not. If anything, those who experienced inflation stress experienced a larger increase in the likelihood of short-term saving in 2020. In contrast, we find that acute financial stress is associated with a significant reduction in the likelihood of saving in 2022. Those suffering more from inflation experienced a 3.8 percentage point larger reduction in the likelihood of saving in 2022 than those who reported "Some" or "No" financial stress from inflation. This comparative reduction in saving likelihood was driven by reduced saving in short-term

liquid accounts, while no differential effect is detected in 2022 in regard to retirement saving likelihood.

Overall, we find evidence consistent with inflation meaningfully reducing financial security for a sizeable portion of our sample. Over 30% of respondents reported moderate or high financial stress due to the recent increase in prices, and these individuals experienced significantly larger reductions in financial security and short-term saving rates than those reporting only some or no stress from inflation.

3.5 Heterogeneity by demographic characteristics

3.5.1 Age

We first examine whether older adults were differentially impacted over the pandemic across our main outcome variables. For this purpose, we create an indicator variable for whether an individual is 50 or older in 2019 (approximately the median age in the sample), and interact it with the yearly time dummies. Table 13 shows little evidence of differential impacts for older adults immediately after the pandemic's onset in 2020. However, in both 2021 and 2022, older adults experienced differentially larger improvements in financial satisfaction than their younger counterparts: Older adults experienced a 0.06 point larger and a 0.09 point larger increase in financial satisfaction in 2021 and 2022, respectively. Older adults also experienced a smaller increase in financial fragility in 2022. While younger adults were 3.9 percentage points more likely to be financially fragile in 2022 relative to prepandemic, older adults were no more likely to be financially fragile in 2022 than they were before the pandemic began.

We find relatively little evidence of heterogeneity in savings responses by age. Table 14 shows that there were similar increases in short-term saving activity among

older and younger respondents shortly after the pandemic, and that these heightened savings rates were similarly maintained into the pandemic's first year. Both groups were approximately 5 percentage points more likely to say that they were currently saving in 2020 and 2021 relative to prepandemic. Interestingly, we do find evidence of heterogeneity in saving responses in 2022: Older adults experienced a smaller decline in the likelihood that they were saving relative to 2020 and 2021, primarily driven by a directionally smaller reduction in saving in liquid accounts. We find little evidence of age-based heterogeneity in retirement savings participation rates shortly after the pandemic's onset and through its second year.

3.5.2 Race

The pandemic has had a disproportionate health impact on racial minorities, with higher rates of death among the African American, Native American, and Latino communities than observed among whites (Tai et al. 2020). We examine whether there have also been heterogeneous impacts in financial stability measures across race (this subsection) and ethnicity (next subsection). Given the composition of our sample, we group respondents into three racial groups: whites (81% of the sample), Blacks (8%), and other racial minorities (11% of the sample).

Table 15 explores racial heterogeneity on subjective financial well-being and financial fragility. While our results are relatively imprecise, we find directional evidence that Black individuals' financial satisfaction improved more than for whites and other minorities in 2021 and 2022, though differences are not statistically significant. Similarly, Blacks experienced a directionally larger reduction in financial fragility in 2020, and

directionally smaller increases in fragility in 2021 and 2022 relative to other races, though effects are statistically indistinguishable due to limited statistical power.

While there is relatively little evidence of racial heterogeneity on subjective measures and financial fragility, we find statistically significant evidence of racial heterogeneity in saving behaviors. In particular, Table 16 shows that the proportion of Blacks who responded that they were currently saving rose by 7.8 percentage points more than that for whites in 2020, by 5.7 percentage points more than for whites in 2021, and 4.3 percentage points more than for whites in 2022 (not statistically significant), relative to the prepandemic period. Much of the racial heterogeneity is driven by differential increases in short-term savings activity – Black respondents experienced an 8.7 percentage point larger increase in the likelihood of saving in liquid accounts in 2020, a 6.6 percentage point larger increase in 2021, and a 5.1 percentage point larger increase in 2022 (marginally significant), relative to prepandemic than whites. We find less evidence of racial heterogeneity in retirement savings behavior. While Blacks experienced a 5.5 percentage point larger increase in the likelihood of saving for retirement in 2020 than whites, differences in savings rates relative to prepandemic are statistically similar across races in 2021 and 2022.

We find little evidence of differential savings behavior for other minorities relative to whites.

3.5.3 Ethnicity

Table 17 explores heterogeneity in subjective financial well-being and financial fragility by ethnicity. We find little evidence of differences in subjective measures for Hispanics and non-Hispanics. None of the differences in financial satisfaction and

financial stress are statistically significant and point estimates are small. We do detect differences in financial fragility: Hispanics experienced larger increases in financial fragility post-pandemic than non-Hispanics. In particular, financial fragility increased 5.2 percentage points more among Hispanics than non-Hispanics in 2020, 2.7 percentage points more in 2021 (not statistically significant), and 7.1 percentage points more in 2022. In fact, almost all the increase observed in 2022 relative to prepandemic was concentrated among Hispanics – Hispanics were 8.3 percentage points more likely to be financially fragile in 2022 relative to the prepandemic period, while there is no difference in financial fragility in 2022 relative to before the pandemic began for non-Hispanics. This large difference may be due to heterogeneous effects of inflation across ethnic groups. Hispanics were 12 percentage points more likely to report that recent increases in prices were causing them a moderate or high amount of financial stress in 2022 than non-Hispanics.

We observe little heterogeneity in savings behavior by ethnicity (Table 18). Immediately after the pandemic's onset, Hispanics experienced a 3.5 percentage point larger increase in the likelihood they were saving relative to non-Hispanics (marginally significant), though the estimated difference vanishes by 2022.

3.5.4 Income

Table 19 explores whether the pandemic had heterogeneous effects by income level, where we split the sample into above and below median household income in 2019, corresponding to $60,000 per annum. Relative to their higher income counterparts, financial satisfaction rose by 0.07 points more in 2020, and 0.10 points more in 2021, and 0.12 points more in 2022, compared to prepandemic levels for

individuals living in households earning less than $60K a year. Individuals with below median household income also experienced larger reductions in financial stress, by 5.7 percentage points in 2020, 3.0 percentage points (marginally significant) in 2021, and 3.4 percentage points in 2022. Most strikingly, nearly all the reduction in financial fragility observed in 2020 was concentrated among lower earners, while nearly all the increases in financial fragility observed in 2021 and 2022 were concentrated among those with above median household incomes. In fact, those with below median incomes had directionally lower financial fragility in 2021 and 2022 relative to the prepandemic period, while their higher income counterparts experienced increases in fragility.

Part of the improvement in financial situations for lower-income individuals may have been driven by differential increases in savings activity. Table 20 shows that the likelihood of currently saving rose by 6 percentage points more in 2020 than in the prepandemic period for individuals with below median household income relative to those with above median household income, and that this differential persisted through 2022. Essentially all of this observed increase is driven by differential saving in liquid accounts: We find essentially no evidence of heterogeneity in retirement savings participation rates after the onset of the pandemic.

3.6 Retirement security

In addition to our five annual survey waves, we also draw data from four additional modules in the UAS that elicit Social Security retirement benefits claiming intentions and self-assessed financial preparedness for retirement. These modules were fielded in 2015/2016, 2017/2018, April 2020 through June 2022, and starting in

June 2022 on a staggered basis. Over 96% of our sample completed at least one post-pandemic module and at least one prepandemic module.[4] Approximately 40% of the post-pandemic responses in our sample were recorded in 2020, 20% were recorded in 2021, and the remaining 40% were recorded in 2022.

Respondents indicate whether they are “Very well prepared,” “Somewhat well prepared,” “Not too prepared,” or “Not at all prepared” financially for retirement. We create a binary indicator taking value 1 for “Somewhat well prepared” or “Very well prepared” and 0 otherwise. About 48% of the sample indicates they are at least somewhat well prepared financially for retirement in the 2015/2016 wave. The claiming intentions question elicits the age at which respondents plan to claim Social Security retirement benefits if they have not already claimed. Due to nonresponse and prior claiming, less than half the sample responded to these questions. Of the provided responses, we winsorize to the 95th percentile, which corresponds to claiming at the latest possible age of 70 years old.

Table 21 shows that our respondents were more likely to indicate that they were financially well prepared for retirement shortly after the onset of the pandemic. In particular, the likelihood one felt financially well prepared in 2020 increased 2.7 percentage points relative to prepandemic. We observe a directional, though not statistically significant increase, in retirement preparedness in 2021, and respondents in our sample were 3.3 percentage points more likely to report they were at least somewhat well prepared for retirement in 2022, relative to prepandemic. Thus, while

[4] Demographic characteristics of the merged sample are very similar to those of the overall sample and available from the authors upon request.

retirement preparedness improved immediately after the pandemic's onset, we find no evidence of improvements since 2020. This is somewhat concerning as one might expect to see retirement preparedness improve with age, though we see no improvements over the last two years despite our sample being two years older.

Column 3 examines planned Social Security claiming ages. We find evidence that intended claiming ages rose after the onset of the pandemic among individuals who had not already claimed. In particular, intended claiming ages increased by 0.20 years on average in 2020 and persisted at 0.22 years in 2022. This is consistent with the possibility that our sample intends to work longer in light of drops in retirement saving balances.

Next, we investigate the presence of heterogeneity in retirement behavior/preparedness by age. Columns 2 and 4 augment the specifications explored in Columns 1 and 3 by interacting our period dummy variables with indicators capturing whether respondents were 50 years of age or older prior to the pandemic's onset. For subjective financial retirement preparedness, we find that the increases observed in 2020 and 2022 were directionally more concentrated among older adults, but our estimates of age-based heterogeneity are not statistically significant. We find a similar pattern of heterogeneity for intended claiming ages. In particular, we find that older adults increased their planned claim age directionally more than younger adults, though differences are not statistically significant.

3.7 COVID-19 infection

The financial and labor market turmoil caused by COVID-19 arose due to its highly infectious nature and severe, sometimes fatal, health effects. Though it is difficult

to get an exact measure of how many Americans have been infected with COVID-19, some studies suggest that around half of American adults had been infected by May 2022, though one study found that 42% of individuals who had antibodies indicating previous infection reported never contracting the virus (Akinbami et al. 2022; Schulman et al. 2022).

Since the pandemic's onset, the UAS has routinely tracked whether participants report having tested positive for COVID-19. We observe self-reported COVID-19 infection (or absence) for nearly our entire sample. We examine whether contracting COVID-19 during our window of analysis is associated with lower financial security.

Approximately 25% of our sample reported having tested positive for, or been diagnosed with, COVID-19 by May 2022. While considerable evidence suggests a higher incidence rate of infection among minority populations (Hill and Artiga 2022), we do not find evidence of this in our sample — 26% of white respondents report having tested positive, while 25% of minorities report the same.

Table 22 examines whether previously testing positive for COVID-19 influences subjective financial well-being measures and financial fragility. Overall, we find little evidence of impacts. COVID-19 infection is associated with directionally lower financial satisfaction, though estimates are not statistically significant. Our point estimates on COVID-19 infection's impacts on financial stress are close to zero and, if anything, previously testing positive for COVID-19 seems to be associated with lower financial fragility, though again, estimates are not statistically significant. Similarly, in unreported regressions we find little evidence for an association between COVID-19 infection and saving behavior, either short-term or retirement. We also find little evidence of

heterogeneous impacts of COVID-19 infection by ethnicity or race in unreported regressions.

4. Conclusion

In this paper, we examine how the pandemic has influenced Americans' short-term financial security and future retirement stability using longitudinal survey data from the Understanding America Study (UAS), spanning the period May 2018 to May 2022. We also merge in data collected in other UAS surveys that elicit subjective financial preparedness for retirement and intended Social Security retirement benefit claiming ages, as well as prior COVID-19 infections.

We find that Americans' short-term financial security improved during the first year of the pandemic, yet declined on average between 2021 and 2022. Notably, we observe reductions in financial satisfaction and short-term savings behavior and balances during the second year of the pandemic, and an increase in the fraction of respondents spending in excess of their income. This is in part driven by difficulties dealing with inflation. Over 30% of our sample indicated considerable financial stress from the recent price hikes. These individuals experienced considerably larger reductions in financial satisfaction and savings rates, and increases in financial stress and financial fragility, than those less impacted by inflation. In part to combat rising costs, many Americans appear to have drawn down on their short-term savings buffer accumulated during the pandemic's first year.

Prior research has indicated that the governmental stimulus, particularly Economic Impact Payments (EIP), were an important contributor to bolstering short-term financial security during the pandemic. However, the stimulus ended in 2021,

raising concerns about how previous recipients would fare going forward. We find little evidence indicating that the cessation of the stimulus led to disproportional reductions in financial security among those who previously received checks. Both individuals who did and did not receive EIPs experienced similar levels of declines in short-term financial stability between 2021 and 2022.

We find relatively muted differences in financial security trajectories based on demographic characteristics, though the reductions in financial satisfaction and increases in financial fragility between 2021 and 2022 appear to be concentrated among younger individuals and Hispanics. Lower income households continued to experience larger improvements in short-term financial stability than their higher income counterparts through 2022. While COVID-19 infection is directionally associated with lower short-term financial stability in our sample, we find little evidence of differential effects across race or ethnicity, though we lack the statistical precision to rule out the possibility of meaningful differences.

While short-term financial stability declined during the pandemic's second year, on average most metrics remained above prepandemic levels. Unfortunately, the same does not appear to be true for future retirement security. We find that retirement savings behavior and balances declined in 2022, both relative to 2021 and prior to the pandemic's onset. On average, our sample was less likely to be saving for retirement and had lower retirement savings in 2022 than in 2019, despite being three years older. While subjective perceptions of retirement preparedness remained above prepandemic levels, we observe no increase since 2020, suggesting progress toward retirement security may have stalled for many.

Overall, our evidence is consistent with inflation being a key stressor for many households, dwindling short-term financial stability and potentially reducing future retirement security as the pandemic moved into its second year. How long prices continue to rise, and how well Americans' are able to deal with extended inflation will be important questions shaping future financial security in both the short and longer terms.

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Tables and figure

Table 1: Sample summary statistics (prepandemic)

Age	51.38
Female	0.57
White	0.81
Married	0.58
Education	
High school or less	0.23
Some college	0.38
Bachelor's or more	0.39
Household Income	
< $30,000	0.24
$30,000 - $59,999	0.26
$60,000 - $99,999	0.24
> $100,000	0.26
Working	0.60
Poor health	0.17
N	5,120

Table 2: Descriptive statistics over time

	2018	**2019**	**2020**	**2021**	**2022**
Financial Satisfaction	3.06	3.03	3.11	3.25	3.15
High Financial Stress	0.42	0.39	0.35	0.27	0.29
Financially Fragile	0.41	0.42	0.41	0.45	0.46
Currently Saving (Liquid or Retirement)	0.78	0.75	0.81	0.82	0.79
Currently Saving (Liquid)	0.74	0.71	0.79	0.80	0.77
Currently Saving (Retirement)	0.48	0.46	0.47	0.46	0.45
Working	0.63	0.61	0.55	0.56	0.55

Notes: Data are weighted. High Financial Stress is coded as 1 if a respondent indicates that they are experiencing a “High” or “Moderate” amount of stress due to their financial situation. Financially Fragile is coded as 1 if a respondent indicated that they would cover a $400 shock using something other than cash or a cash equivalent. Currently Saving (Liquid or Retirement) captures whether a respondent reports saving in a checking account, saving account, cash, or other form (Liquid) or an employer sponsored retirement account or an IRA (Retirement).

Table 3: Savings and debt balances over time

	p10	p25	p50	p75
Liquid Account Balance				
2018	10	501	5,800	40,100
2019	20	492	4,909	34,851
2020	76	972	5,318	29,488
2021	12	754	6,878	36,744
2022	4	434	4,774	32,984
Checking/Savings Balance				
2018	5	400	3,000	14,000
2019	6	393	2,945	13,744
2020	19	677	3,867	13,632
2021	3	565	4,240	16,959
2022	1	293	2,951	14,756
Retirement Account Balance				
2018	0	0	5,000	85,001
2019	0	0	4,909	82,464
2020	0	0	3,867	67,678
2021	0	0	2,191	75,372
2022	0	0	1,302	69,440
Total Debt				
2018	0	250	30,000	128,450
2019	0	0	20,812	115,842
2020	0	0	24,750	116,020
2021	0	0	17,901	115,884
2022	0	0	15,624	102,424
Nonmortgage Debt				
2018	0	0	8,000	30,000
2019	0	0	4,909	24,543
2020	0	0	6,768	28,522
2021	0	0	4,659	23,789
2022	0	0	2,713	20,832
Credit Card Debt				
2018	0	0	0	3,200
2019	0	0	0	1,963
2020	0	0	0	2,417
2021	0	0	0	1,246
2022	0	0	0	1,302

Notes: Data are weighted and indexed to 2018 dollars.

Table 4: Subjective measures and financial fragility

VARIABLES	(1) Financial Satisfaction	(2) High Financial Stress	(3) Financially Fragile
2022	0.142***	-0.119***	0.019**
	(0.013)	(0.008)	(0.008)
2021	0.230***	-0.140***	0.027***
	(0.012)	(0.008)	(0.008)
2020	0.092***	-0.053***	-0.027***
	(0.012)	(0.008)	(0.007)
Constant	2.706***	0.538***	0.544***
	(0.094)	(0.045)	(0.049)
Covariates	Y	Y	Y
Individual FEs	Y	Y	Y
Observations	21,809	21,800	21,720
R-squared	0.732	0.592	0.642

Notes: Each specification includes the (time varying) demographic and financial characteristics listed in Table 1. Robust standard errors in parentheses. Standard errors are clustered at the individual level. *** p<0.01, ** p<0.05, * p<0.1.

Table 5: Savings behavior

VARIABLES	(1) Saving	(2) Saving - Liquid	(3) Saving - Retirement
2022	0.035***	0.052***	-0.019**
	(0.007)	(0.007)	(0.008)
2021	0.049***	0.067***	-0.004
	(0.006)	(0.007)	(0.007)
2020	0.056***	0.071***	0.016**
	(0.006)	(0.006)	(0.006)
Constant	0.574***	0.552***	0.183***
	(0.045)	(0.045)	(0.039)
Covariates	Y	Y	Y
Individual FEs	Y	Y	Y
Observations	21,442	21,524	21,605
R-squared	0.618	0.603	0.724

Notes: Each specification includes the (time varying) demographic and financial characteristics listed in Table 1. Robust standard errors in parentheses. Standard errors are clustered at the individual level. *** p<0.01, ** p<0.05, * p<0.1.

Table 6: Savings balances

VARIABLES	(1) Liquid Acct Bal	(2) Check/Saving Bal	(3) Retirement Bal
2022	0.088	0.141***	-0.272***
	(0.052)	(0.045)	(0.075)
2021	0.296***	0.406***	-0.183***
	(0.052)	(0.040)	(0.070)
2020	0.247***	0.372***	-0.090
	(0.046)	(0.034)	(0.060)
Constant	8.096***	7.064***	4.951***
	(0.339)	(0.293)	(0.386)
Covariates	Y	Y	Y
Individual FEs	Y	Y	Y
Observations	16,048	20,701	19,881
R-squared	0.839	0.799	0.833

Notes: Balances have been transformed using the inverse hyperbolic sine function. Coefficients on yearly indicators represent elasticites calculated following Bellemare and Wichman (2020). Sample sizes vary across specification due to item nonresponse. Each specification includes the (time varying) demographic and financial characteristics listed in Table 1. Robust standard errors in parentheses. Standard errors are clustered at the individual level. *** p<0.01, ** p<0.05, * p<0.1.

Table 7: Spend down

VARIABLES	(1) Spend > Income	(2) Paid All Bills on Time
2022	0.028***	0.054***
	(0.008)	(0.007)
2021	-0.027***	0.064***
	(0.007)	(0.007)
2020	-0.022***	0.022***
	(0.006)	(0.006)
Constant	0.231***	0.620***
	(0.044)	(0.044)
Controls	Y	Y
Individual FEs	Y	Y
Observations	21,738	21,737
R-squared	0.464	0.688

Notes: Each specification includes the (time varying) demographic and financial characteristics listed in Table 1. Robust standard errors in parentheses. Standard errors are clustered at the individual level. *** p<0.01, ** p<0.05, * p<0.1.

Table 8: Debt levels

VARIABLES	(1) Total Debt	(2) Nonmortgage Debt	(3) Credit Card Debt	(4) Debt Unmanageable
2022	-0.572***	-0.636***	-0.466***	-0.059***
	(0.083)	(0.083)	(0.067)	(0.007)
2021	-0.470***	-0.543***	-0.452***	-0.064***
	(0.075)	(0.075)	(0.063)	(0.007)
2020	-0.093	-0.144**	-0.116**	-0.036***
	(0.062)	(0.064)	(0.056)	(0.006)
Constant	7.798***	6.254***	3.635***	0.244***
	(0.490)	(0.487)	(0.369)	(0.044)
Covariates	Y	Y	Y	Y
Individual FEs	Y	Y	Y	Y
Observations	20,273	20,446	21,166	21,647
R-squared	0.766	0.740	0.733	0.647

Notes: Balances have been transformed using the inverse hyperbolic sine function. Coefficients on yearly indicators in columns (1) to (3) represent elasticites calculated following Bellemare and Wichman (2020). Sample sizes vary across specification due to item nonresponse. Each specification includes the (time varying) demographic and financial characteristics listed in Table 1. Robust standard errors in parentheses. Standard errors are clustered at the individual level. *** p<0.01, ** p<0.05, * p<0.1.

Table 9: Subjective measures and financial fragility,

heterogeneity by stimulus receipt

VARIABLES	(1) Financial Satisfaction	(2) High Financial Stress	(3) Financially Fragile
2022 * No Stim	0.070**	-0.044**	0.026
	(0.033)	(0.019)	(0.019)
2022 * Stim	0.162***	-0.135***	0.014
	(0.015)	(0.009)	(0.009)
2021 * No Stim	0.136***	-0.068***	0.040**
	(0.034)	(0.021)	(0.019)
2021 * Stim	0.251***	-0.153***	0.024***
	(0.014)	(0.009)	(0.009)
2020 * No Stim	0.004	0.010	0.017
	(0.028)	(0.017)	(0.014)
2020 * Stim	0.115***	-0.068***	-0.039***
	(0.013)	(0.009)	(0.008)
Constant	2.715***	0.517***	0.544***
	(0.095)	(0.047)	(0.050)
Covariates	Y	Y	Y
Individual FEs	Y	Y	Y
Observations	20,661	20,657	20,614
R-squared	0.732	0.590	0.642

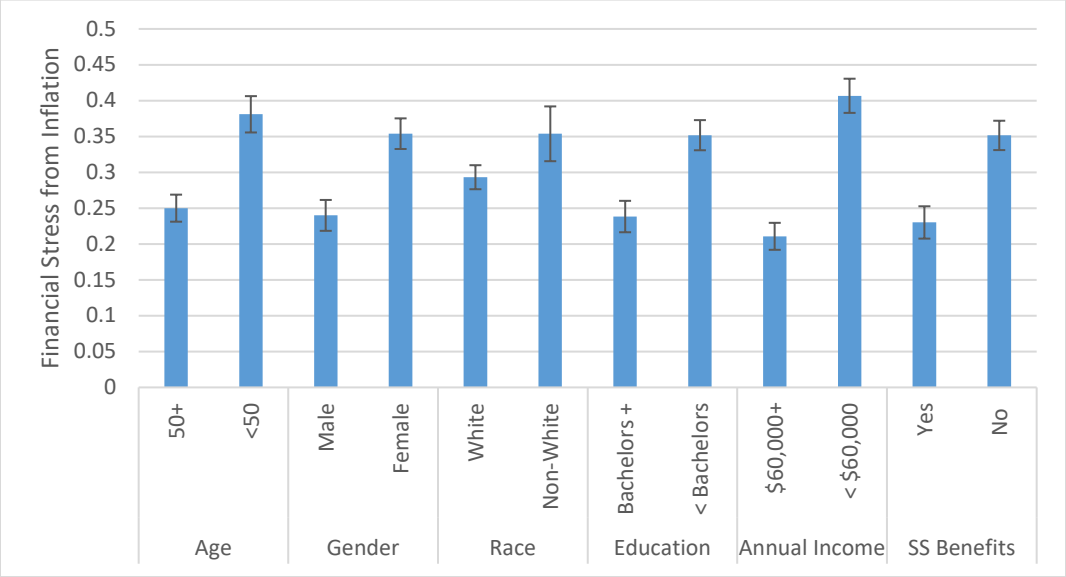
Notes: Each specification includes the (time varying) demographic and financial characteristics listed in Table 1. No Stim identifies individuals who did not receive any Economic Impact Payments. Robust standard errors in parentheses. Standard errors are clustered at the individual level. *** p<0.01, ** p<0.05, * p<0.1.

Table 10: Savings behavior, heterogeneity by stimulus receipt

VARIABLES	(1) Saving	(2) Saving - Liquid	(3) Saving - Retirement
2022 * No Stim	0.014	0.028*	-0.008
	(0.015)	(0.017)	(0.018)
2022 * Stim	0.042***	0.059***	-0.021**
	(0.008)	(0.008)	(0.009)
2021 * No Stim	0.012	0.022	-0.019
	(0.014)	(0.015)	(0.017)
2021 * Stim	0.056***	0.075***	-0.003
	(0.007)	(0.007)	(0.008)
2020 * No Stim	0.043***	0.050***	-0.003
	(0.013)	(0.014)	(0.012)
2020 * Stim	0.061***	0.077***	0.020***
	(0.006)	(0.007)	(0.007)
Constant	0.596***	0.572***	0.189***
	(0.046)	(0.047)	(0.041)
Covariates	Y	Y	Y
Individual FEs	Y	Y	Y
Observations	20,364	20,439	20,517
R-squared	0.620	0.605	0.723

Notes: Each specification includes the (time varying) demographic and financial characteristics listed in Table 1. No Stim identifies individuals who did not receive any Economic Impact Payments. Robust standard errors in parentheses. Standard errors are clustered at the individual level. *** p<0.01, ** p<0.05, * p<0.1.

Figure 1: Financial stress from inflation by demographic characteristics



Notes: The figure plots the fraction of respondents indicating that recent inflation is causing a "moderate" of "high" amount of financial stress. Whiskers denote 95% confidence intervals.

Table 11: Subjective measures and financial fragility,

heterogeneity by inflation stress

VARIABLES	(1) Financial Satisfaction	(2) High Financial Stress	(3) Financially Fragile
2022	0.185***	-0.153***	0.012
	(0.016)	(0.009)	(0.010)
2022 * Inf Stress	-0.144***	0.123***	0.046**
	(0.033)	(0.020)	(0.019)
2021	0.237***	-0.138***	0.041***
	(0.015)	(0.009)	(0.010)
2021 * Inf Stress	-0.036	0.005	-0.007
	(0.033)	(0.021)	(0.020)
2020	0.090***	-0.042***	-0.023***
	(0.016)	(0.010)	(0.009)
2020 * Inf Stress	-0.011	-0.019	-0.014
	(0.032)	(0.020)	(0.018)
Constant	2.717***	0.541***	0.485***
	(0.113)	(0.057)	(0.055)
Covariates	Y	Y	Y
Individual FEs	Y	Y	Y
Observations	16,058	16,058	16,039
R-squared	0.738	0.594	0.647

Notes: Each specification includes the (time varying) demographic and financial characteristics listed in Table 1. Inf Stress identifies individuals who reported that the recent increase in prices was causing a "Moderate" or "High" amount of financial stress. Sample is restricted to individuals who answered the inflation question in the 2022 survey wave. Robust standard errors in parentheses. Standard errors are clustered at the individual level. *** p<0.01, ** p<0.05, * p<0.1.

Table 12: Savings behavior, heterogeneity by inflation stress

VARIABLES	(1) Saving	(2) Saving - Liquid	(3) Saving – Retirement
2022	0.049***	0.066***	-0.011
	(0.007)	(0.008)	(0.010)
2022 * Inf Stress	-0.038**	-0.036*	-0.014
	(0.017)	(0.019)	(0.017)
2021	0.048***	0.064***	0.004
	(0.007)	(0.008)	(0.009)
2021 * Inf Stress	-0.009	0.001	-0.040**
	(0.016)	(0.017)	(0.017)
2020	0.041***	0.055***	0.012
	(0.007)	(0.008)	(0.009)
2020 * Inf Stress	0.020	0.032*	-0.006
	(0.015)	(0.016)	(0.016)
Constant	0.581***	0.582***	0.174***
	(0.053)	(0.055)	(0.049)
Covariates	Y	Y	Y
Individual FEs	Y	Y	Y
Observations	15,844	15,909	15,959
R-squared	0.600	0.583	0.718

Notes: Each specification includes the (time varying) demographic and financial characteristics listed in Table 1. Inf Stress identifies individuals who reported that the recent increase in prices was causing a “Moderate” or “High” amount of financial stress. Sample is restricted to individuals who answered the inflation question in the 2022 survey wave. Robust standard errors in parentheses. Standard errors are clustered at the individual level. *** p<0.01, ** p<0.05, * p<0.1.

Table 13: Subjective measures and financial fragility, heterogeneity by age

VARIABLES	(1) Financial Satisfaction	(2) High Financial Stress	(3) Financially Fragile
2022	0.090***	-0.105***	0.039***
	(0.021)	(0.013)	(0.013)
2022 * 50+	0.092***	-0.025	-0.036**
	(0.027)	(0.017)	(0.017)
2021	0.197***	-0.143***	0.041***
	(0.020)	(0.013)	(0.013)
2021 * 50+	0.059**	0.005	-0.025
	(0.025)	(0.016)	(0.017)
2020	0.081***	-0.061***	-0.027**
	(0.019)	(0.012)	(0.011)
2020 * 50+	0.020	0.015	-0.000
	(0.024)	(0.015)	(0.014)
Constant	2.683***	0.543***	0.553***
	(0.094)	(0.045)	(0.049)
Covariates	Y	Y	Y
Individual FEs	Y	Y	YS
Observations	21,809	21,800	21,720
R-squared	0.733	0.593	0.642

Notes: Each specification includes the (time varying) demographic and financial characteristics listed in Table 1. Robust standard errors in parentheses. Standard errors are clustered at the individual level. *** p<0.01, ** p<0.05, * p<0.1.

Table 14: Savings behavior, heterogeneity by age

VARIABLES	(1) Saving	(2) Saving - Liquid	(3) Saving - Retirement
2022	0.019*	0.041***	-0.011
	(0.011)	(0.011)	(0.011)
2022 * 50+	0.029**	0.019	-0.014
	(0.014)	(0.015)	(0.015)
2021	0.045***	0.073***	-0.011
	(0.009)	(0.010)	(0.010)
2021 * 50+	0.007	-0.010	0.011
	(0.013)	(0.013)	(0.014)
2020	0.053***	0.078***	0.026***
	(0.008)	(0.009)	(0.009)
2020 * 50+	0.005	-0.013	-0.019
	(0.011)	(0.012)	(0.012)
Constant	0.568***	0.550***	0.184***
	(0.045)	(0.046)	(0.039)
Covariates	Y	Y	Y
Individual FEs	Y	Y	Y
Observations	21,442	21,524	21,605
R-squared	0.618	0.603	0.724

Notes: Each specification includes the (time varying) demographic and financial characteristics listed in Table 1. Robust standard errors in parentheses. Standard errors are clustered at the individual level. *** p<0.01, ** p<0.05, * p<0.1.

Table 15: Subjective measures and financial fragility, heterogeneity by race

VARIABLES	(1) Financial Satisfaction	(2) High Financial Stress	(3) Financially Fragile
2022 * White	0.132***	-0.118***	0.021**
	(0.015)	(0.009)	(0.009)
2022 * Black	0.214***	-0.100***	-0.013
	(0.051)	(0.029)	(0.031)
2022 * Other Race	0.163***	-0.144***	0.030
	(0.041)	(0.026)	(0.026)
2021 * White	0.235***	-0.135***	0.029***
	(0.014)	(0.009)	(0.009)
2021 * Black	0.265***	-0.145***	-0.003
	(0.048)	(0.029)	(0.031)
2021 * Other Race	0.170***	-0.177***	0.032
	(0.040)	(0.025)	(0.027)
2020 * White	0.090***	-0.052***	-0.024***
	(0.013)	(0.008)	(0.008)
2020 * Black	0.088*	-0.045	-0.061**
	(0.047)	(0.028)	(0.027)
2020 * Other Race	0.108***	-0.064***	-0.027
	(0.038)	(0.023)	(0.022)
Constant	2.707***	0.537***	0.543***
	(0.094)	(0.045)	(0.049)
Covariates	Y	Y	Y
Individual FEs	Y	Y	Y
Observations	21,809	21,800	21,720
R-squared	0.732	0.593	0.642

Notes: Each specification includes the (time varying) demographic and financial characteristics listed in Table 1. Robust standard errors in parentheses. Standard errors are clustered at the individual level. *** p<0.01, ** p<0.05, * p<0.1.

Table 16: Savings behavior, heterogeneity by race

VARIABLES	(1) Saving	(2) Saving - Liquid	(3) Saving - Retirement
2022 * White	0.036***	0.052***	-0.019**
	(0.007)	(0.008)	(0.008)
2022 * Black	0.079***	0.103***	0.015
	(0.028)	(0.030)	(0.027)
2022 * Other	0.000	0.015	-0.040*
	(0.021)	(0.023)	(0.022)
2021 * White	0.046***	0.063***	-0.008
	(0.007)	(0.007)	(0.008)
2021 * Black	0.103***	0.129***	0.019
	(0.025)	(0.027)	(0.025)
2021 * Other	0.035*	0.053**	0.003
	(0.019)	(0.021)	(0.020)
2020 * White	0.048***	0.062***	0.009
	(0.006)	(0.007)	(0.007)
2020 * Black	0.126***	0.149***	0.056***
	(0.024)	(0.025)	(0.022)
2020 * Other	0.059***	0.081***	0.036*
	(0.017)	(0.018)	(0.019)
Constant	0.574***	0.553***	0.184***
	(0.045)	(0.045)	(0.039)
Observations	21,442	21,524	21,605
R-squared	0.618	0.604	0.724

Notes: Each specification includes the (time varying) demographic and financial characteristics listed in Table 1. Robust standard errors in parentheses. Standard errors are clustered at the individual level. *** p<0.01, ** p<0.05, * p<0.1.

Table 17: Subjective measures and financial fragility,

heterogeneity by ethnicity

VARIABLES	(1) Financial Satisfaction	(2) High Financial Stress	(3) Financially Fragile
2022	0.143***	-0.118***	0.012
	(0.014)	(0.008)	(0.008)
2022 * Hispanic	-0.010	-0.011	0.071**
	(0.045)	(0.029)	(0.030)
2021	0.232***	-0.139***	0.024***
	(0.013)	(0.008)	(0.008)
2021 * Hispanic	-0.016	-0.007	0.027
	(0.048)	(0.029)	(0.031)
2020	0.095***	-0.054***	-0.033***
	(0.013)	(0.008)	(0.007)
2020 * Hispanic	-0.033	0.007	0.052**
	(0.042)	(0.027)	(0.026)
Constant	2.706***	0.538***	0.546***
	(0.094)	(0.045)	(0.049)
Covariates	Y	Y	Y
Individual FEs	Y	Y	Y
Observations	21,808	21,799	21,719
R-squared	0.732	0.592	0.642

Notes: Each specification includes the (time varying) demographic and financial characteristics listed in Table 1. Robust standard errors in parentheses. Standard errors are clustered at the individual level. *** p<0.01, ** p<0.05, * p<0.1.

Table 18: Savings behavior, heterogeneity by ethnicity

VARIABLES	(1) Saving	(2) Saving - Liquid	(3) Saving - Retirement
2022	0.036***	0.053***	-0.018**
	(0.007)	(0.008)	(0.008)
2022 * Hispanic	-0.005	-0.011	-0.007
	(0.025)	(0.026)	(0.026)
2021	0.046***	0.064***	-0.002
	(0.006)	(0.007)	(0.007)
2021 * Hispanic	0.034	0.032	-0.025
	(0.022)	(0.024)	(0.025)
2020	0.052***	0.067***	0.014**
	(0.006)	(0.006)	(0.007)
2020 * Hispanic	0.035*	0.040*	0.017
	(0.020)	(0.022)	(0.022)
Constant	0.574***	0.553***	0.183***
	(0.045)	(0.045)	(0.039)
Covariates	Y	Y	Y
Individual FEs	Y	Y	Y
Observations	21,441	21,523	21,604
R-squared	0.618	0.603	0.724

Notes: Each specification includes the (time varying) demographic and financial characteristics listed in Table 1. Robust standard errors in parentheses. Standard errors are clustered at the individual level. *** p<0.01, ** p<0.05, * p<0.1.

Table 19: Subjective measures and financial fragility, heterogeneity by income

VARIABLES	(1) Financial Satisfaction	(2) High Financial Stress	(3) Financially Fragile
2022	0.084***	-0.103***	0.051***
	(0.017)	(0.011)	(0.010)
2022 * HHI < $60K	0.119***	-0.034**	-0.067***
	(0.027)	(0.016)	(0.016)
2021	0.183***	-0.125***	0.071***
	(0.016)	(0.010)	(0.011)
2021 * HHI < $60K	0.096***	-0.030*	-0.092***
	(0.025)	(0.016)	(0.016)
2020	0.056***	-0.025**	-0.009
	(0.016)	(0.010)	(0.009)
2020 * HHI < $60K	0.072***	-0.057***	-0.037***
	(0.024)	(0.015)	(0.014)
Constant	2.724***	0.532***	0.531***
	(0.094)	(0.045)	(0.048)
Covariates	Y	Y	Y
Individual FEs	Y	Y	Y
Observations	21,807	21,798	21,718
R-squared	0.733	0.593	0.643

Notes: Each specification includes the (time varying) demographic and financial characteristics listed in Table 1. Robust standard errors in parentheses. Standard errors are clustered at the individual level. *** p<0.01, ** p<0.05, * p<0.1.

Table 20: Savings behavior, heterogeneity by income

VARIABLES	(1) Saving	(2) Saving - Liquid	(3) Saving - Retirement
2022	0.004	0.026***	-0.026**
	(0.008)	(0.009)	(0.011)
2022 * HHI < $60K	0.064***	0.052***	0.015
	(0.014)	(0.015)	(0.015)
2021	0.020***	0.041***	-0.009
	(0.006)	(0.007)	(0.010)
2021 * HHI < $60K	0.059***	0.054***	0.009
	(0.013)	(0.013)	(0.014)
2020	0.028***	0.047***	0.015
	(0.006)	(0.007)	(0.009)
2020 * HHI < $60K	0.056***	0.049***	0.002
	(0.011)	(0.012)	(0.012)
Constant	0.584***	0.562***	0.185***
	(0.045)	(0.045)	(0.039)
Covariates	Y	Y	Y
Individual FEs	Y	Y	Y
Observations	21,440	21,522	21,603
R-squared	0.619	0.604	0.724

Notes: Each specification includes the (time varying) demographic and financial characteristics listed in Table 1. Robust standard errors in parentheses. Standard errors are clustered at the individual level. *** p<0.01, ** p<0.05, * p<0.1.

Table 21: Retirement security

VARIABLES	(1) Well Prepared	(2) Well Prepared (By Age Group)	(3) Claiming Age	(4) Claiming Age (By Age Group)
2022	0.033***	0.022	0.221**	0.173
	(0.008)	(0.014)	(0.109)	(0.157)
2022 * 50+		0.019		0.097
		(0.017)		(0.211)
2021	0.019	0.025	0.354	0.415
	(0.015)	(0.021)	(0.217)	(0.300)
2021 * 50+		-0.014		-0.152
		(0.029)		(0.429)
2020	0.027***	0.013	0.196**	0.167
	(0.007)	(0.012)	(0.098)	(0.142)
2020 * 50+		0.024		0.056
		(0.015)		(0.190)
Constant	0.457***	0.453***	65.178***	65.164***
	(0.040)	(0.040)	(0.621)	(0.619)
Covariates	Y	Y	Y	Y
Individual FEs	Y	Y	Y	Y
Observations	16,221	16,221	6,174	6,174
R-squared	0.749	0.749	0.762	0.762

Notes: Each specification includes the (time varying) demographic and financial characteristics listed in Table 1. Robust standard errors in parentheses. Standard errors are clustered at the individual level. Claiming Age has been winsorized at the 95% level, corresponding to the maximum possible age of 70. *** p<0.01, ** p<0.05, * p<0.1.

Table 22: Subjective measures and financial fragility,

heterogeneity by COVID-19 infection

VARIABLES	(1) Financial Satisfaction	(2) High Financial Stress	(3) Financially Fragile
2022	0.153***	-0.119***	0.021**
	(0.015)	(0.009)	(0.009)
2022 * COVID	-0.037	-0.002	-0.006
	(0.027)	(0.017)	(0.017)
2021	0.234***	-0.139***	0.032***
	(0.013)	(0.008)	(0.009)
2021 * COVID	-0.024	-0.004	-0.031
	(0.034)	(0.020)	(0.021)
2020	0.095***	-0.051***	-0.024***
	(0.012)	(0.008)	(0.007)
2020 * COVID	-0.042	-0.021	-0.034
	(0.040)	(0.027)	(0.026)
Constant	2.705***	0.539***	0.544***
	(0.094)	(0.045)	(0.049)
Observations	21,809	21,800	21,720
R-squared	0.732	0.592	0.642

Notes: Each specification includes the (time varying) demographic and financial characteristics listed in Table 1. COVID captures whether a respondent reported testing positive for COVID-19 prior to the survey wave. Robust standard errors in parentheses. Standard errors are clustered at the individual level. *** p<0.01, ** p<0.05, * p<0.1.