

Americans' Financial Resilience during the Pandemic

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Abstract

How household wellbeing responds to pandemic-induced financial shocks likely depends on whether people undertake certain actions that enhance their ability to withstand adverse economic events, along with their ability to efficiently respond to the shocks when they occur. This paper examines Americans' financial robustness during the Covid-19 pandemic, using an index of financial resilience and a measure of financial fragility derived from household surveys of persons age 45-75 in spring of 2020, and in May-June 2021. We estimate the factors associated with resilience and fragility in both years, show how these two measures changed a year into the pandemic, and consider whether resilience in 2020 led to better outcomes in 2021. We conclude that higher initial levels of resilience were, in fact, associated with lower levels of financial fragility a year into the pandemic. These findings suggest that policies and programs that enhance financial resilience can help low and moderate-income households withstand economic shocks and be able to better address unexpected income needs.

Keywords: Financial resilience, poverty dynamics, aging

JEL classification: G53, D14, I38

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The economic and health upheavals associated with the Covid-19 pandemic have brought new focus to older Americans' need to become more financially resilient in the face of major shocks. This paper addresses a series of issues concerning financial resilience and fragility in the older population. First, we identify the factors and household characteristics associated with financial resilience, and we investigate whether these proved stable during the pandemic. Second, we document the factors and household characteristics that were linked to financial fragility, and whether these relationships persisted over time. Finally, we evaluate whether financial resilience as measured in 2020 shaped financial fragility in 2021, after a year of the Covid pandemic.

Our analysis draws on two surveys of people age 45-75 fielded in the Spring of 2020 and 2021, part of the Understanding America Study (UAS), a nationally representative online panel study managed by the University of Southern California.¹ These surveys provide detailed information on respondents' economic status, along with their attitudes toward and preparedness for financial shocks.² Here we define *financial resilience* as a household's ability to withstand acute shocks having an adverse effect on its financial well-being.³ We develop an eight-question resilience index that reflects a household's capacity to respond to economic shocks, namely how able it is to respond to unexpected loss of earnings; whether it has developed retirement/spending plans and tracked spending; how it perceives the impact of current debt on spending; and its level

¹ For more on the UAS see <https://uasdata.usc.edu/index.php>. The panel was recruited with address-based sampling and anyone willing to participate yet lacking a computer/internet access received a tablet and broadband Internet. UAS sampling weights are generated so that the weighted distributions of specific sociodemographic variables in the survey sample match their population counterparts in the Current Population Survey.

² The specific surveys used in the present analysis are UAS226 and UAS378; see <https://uasdata.usc.edu/index.php>

³ Personetics (2020) defines financial resilience as "the ability to withstand and recover from temporary financial hardship and disruptions."

of concern regarding finances. Following Clark, Lusardi, and Mitchell (2021), we measure *financial fragility* using a question designed to evaluate a household's ability to cover short term expenses: specifically, it indicates whether people are confident that they could come up with \$2,000 if an unexpected need arose within the next month.⁴ In addition, we explore which long-term actions can help protect households against impending shocks. Accordingly, being better financially protected requires that people plan for the potential of adverse economic shocks and have a strategy to solidify their financial positions when shocks occur. In other words, while traditional risk management tends to concentrate on the chances of financial failure, forward-looking risk management seeks methods to proactively strengthen individuals' ability to withstand future financial surprises.⁵

We document several important factors associated with financial resilience. Specifically, more financially literate households are better prepared for financial shocks, while people exhibiting higher levels of impatience are not. Unsurprisingly, adverse events such as poor health or loss of income reduces households' ability to be able to respond to financial shocks. We also track household financial fragility over the course of the pandemic, to consider how it relates to resilience. We find that people least able to cover a \$2,000 unexpected expense are those with less income, lower education, and less financial literacy. We also show that being resilient to adverse financial events in 2020 significantly reduced the likelihood of being financially fragile a year into the pandemic.

I. Prior Literature

Economists have long been interested in factors associated with household financial distress and fragility (c.f. PEW Charitable Trusts 2017; Picchi 2015). One way to assess household

⁴ This question was designed by Lusardi, Schneider, and Tufano (2011).

⁵ See for instance Wikipedia (2021)

financial resilience is to focus on respondents' subjective assessments of their financial status. For instance, Clark et al. (2021) used the financial wellbeing definition proposed by the Consumer Financial Protection Bureau (CFPB 2015), asking people how they perceive their financial skills, behavior, and situations. Interestingly, that research concluded that the CFPB measure was correlated at only the 0.4-0.5 level with more conventional indicators of self-assessed financial stress.⁶

Another approach to evaluate households' capacity to cope with financial shocks has focused on problems faced when dealing with unexpected expenses. For instance, Lusardi et al. (2020) asked respondents: "*How confident are you that you could come up with \$2,000 if an unexpected need arose within the next month?*" Possible responses to this question were: "*I am certain I could come up with the full \$2,000; I could probably come up with \$2,000; I could probably not come up with \$2,000; I am certain I could not come up with \$2,000; Don't know.*" When respondents indicated that they "could probably not" or "certainly not" come up with the money, they were classified as financially fragile. This question, which has come to be known as the *financial fragility measure*, has proven to be a very good indicator of respondents' financial instability (Gupta et al. 2018; Hasler and Lusardi 2019). Moreover, the Federal Reserve Bank of New York (2017) has tracked this question for the past several years, thus attesting to its importance to policymakers. In what follows, we rely on the \$2,000 financial fragility question as a key indicator of households' ability to withstand financial shocks just before and then during the pandemic.⁷

⁶ Others have employed different questions that they posit can proxy for financial resilience. For instance, Valdes et al. (2021) used several indicators as proxies for financial resilience, including households' financial literacy, debt, ownership of a retirement account, health insurance coverage, and home ownership.

⁷ Klapper and Lusardi (2019) examine many of these same issues in a global context.

Prior studies have also found that being financially resilient is related to peoples' personal discount rates. Specifically, individuals with higher levels of impatience (present bias) are more likely to spend now and less likely to prepare for future economic shocks. This has been demonstrated by Meier and Sprenger (2010) regarding credit card debt, while Brown and Previtiero (2015) showed that present-biased individuals were less likely to annuitize in defined benefit pension plans. Xiao and Porto (2019) examined the relationship between present bias and expenditure patterns in China and concluded that the present biased tended to spend more impatiently. In line with this literature, our analysis also elicits respondents' impatience levels and relates it to their vulnerability to financial shocks. Overall, our contribution is to extend the analysis of the factors driving financial resilience and fragility, by creating an expanded resilience index and evaluating financial fragility, before and during the pandemic.

II. Data and Methodology

Our empirical analysis examines results from two UAS surveys pre- and during the Covid 19 shock. The first (UAS 226) was fielded in April-May of 2020 to 3,185 individuals age 45-75 who had previously completed an earlier module (UAS183) in 2019. Of those invited, 2,903 completed our module for a response rate of 90.7%. Accordingly, these respondents' perceptions reflected their financial situations at the beginning of the Covid-19 pandemic. The second wave, UAS378, was fielded May-June of 2021; it was sent to the 2,903 who responded to UAS226, and 2,510 individuals responded to this survey for a response rate of 86.1%. Below we examine changes in financial resilience and fragility for those who responded to both surveys. A key goal of these surveys was to collect information on people's perceptions of their financial status and whether/how they had prepared for financial shocks. Moreover, we sought to determine which and how households responded to the shocks.

To assess and compare results over time, we develop an index of financial resilience based on eight questions asked in both surveys. These questions fall into four areas reflective of the household's capacity to respond to economic shocks, namely how able it was to respond to unexpected loss of earnings; whether it had developed retirement/spending plans and tracked spending; how it perceived the impact of current debt on spending; and its level of concern regarding finances. Our index is based on all appropriate questions that were asked in both UAS226 and UAS378.⁸

1. *Ability to respond to unexpected loss of earnings or the ability to respond to unexpected expenses*

Cope With Lost Earnings: Does the respondent have an emergency fund that could cover expenses for at least 3 months?

2. *Developed a retirement and spending plans and do they track their spending*

- **Develop Retirement Plan:** Has the respondent calculated the financial resources will needed in retirement?
- **Track Spending:** Does the respondent track day-to-day spending?
- **Set Budget Target:** Does the respondent create a budget and set targets with that budget?

3. *Impact of current debt on spending*

- **Debt Level OK:** Does the respondent consider his/her current debt level to be manageable?
- **No Medical Delays:** Has this debt delayed or prevented you from receiving medical treatment (including filling prescriptions)?

4. *Level of concern over finances*

⁸ The specific questions and variable names are shown below and details on responses to the questions and how they are coded are described in the Appendix A.

- **Not Financially Anxious:** Is the respondent anxious about the state of his/her finances and preparedness?
- **Money Will Not Run Out:** Is the respondent confident that his/her money will not run out in retirement?

The proportion of individuals giving resilient (positive) responses to these eight questions is provided in Table 1 for both 2020 and 2021. In the first wave, a majority of respondents was reasonably confident that it could cope with a short-term loss of earning: 68% gave positive responses to this question. Yet only about one-third had developed a retirement plan: 79% reported tracking spending; and 55% set budgetary targets. Almost three quarters of the sample reported that its debt level was manageable and did not prevent it from accessing medical treatment. Nevertheless, fewer than half (43%) indicated that they were not anxious about their finances, and only 24% were unconcerned about their money running out. Mean values for each of the responses in 2021 were very close to those in 2020. Interestingly, the proportion of respondents who believed that their money would not run out actually rose from 24% in 2020, to 30% in 2021.

Table 1 here

Using these data, we create an index indicating the total number of positive values that respondents gave for each of the eight underlying variables.⁹ On average, individuals indicated a positive response to 4.5 of the eight questions included in the index, in both years. Despite the closeness of the index mean in both years, more than one third of the respondents' score increased while another third experienced a decline in their resilience index. Figure 1 shows the frequency and magnitude of the individual changes in the index; however, most of the changes in the index

⁹ The analysis is based on 2,486 respondents with values for all variables in the index as well as the control variables discussed below. The number of individuals used in the sample is slightly lower than the total number of respondents as 24 respondents were dropped from the analysis because they did not provide answers to one or more of the key variables used in the index or regressions.

were small, and thus over 70% of respondents had the same or within one question of the same index value in both years.¹⁰

Figure 1 here

Next, we link respondents' resilience index scores to their economic and demographic characteristics including race/ethnicity, education, gender, marital status, and working status. In addition, our surveys contain measures of respondents' financial literacy, time preference, risk aversion, as well as recent events such as income drops, poor health, and whether the household had received federal stimulus funds in response to the pandemic.¹¹ Descriptive statistics for all variables from both surveys are shown in Table 2.¹² Additionally, we use the 'Big Three' questions on interest rates, inflation, and risk diversification (as in Lusardi and Mitchell, 2014) drawing on important financial concepts used in many prior studies. Additional controls include an indicator of respondent time preference, following Huffman et al. (2019). All analyses use data weights provided by UAS.

Table 2 here

III. Empirical Findings: Multivariate Results

Our first goal is to evaluate how financial resilience varies according to key economic and demographic factors. To this end, we estimate multivariate linear regression models separately by year, with the dependent variable being the total number of positive responses to the resilience index questions; results are provided in Table 3. Here, columns 1 and 3 report the coefficients from an OLS model that uses a limited number of economic and demographic characteristics of

¹⁰ Comparing the change in the resilience index over time is important because the extent to which households can prepare for future shocks is affected by changes in household composition as well as adverse health events that may influence people's discount rates (Streeter, 2021).

¹¹ The questionnaires for both surveys are available on the UAS website along with a codebook for the survey.

¹² Fonton-O'Creevy and Furnham (2019) examine the role of similar factors on financial knowledge and behavior.

the respondent. Columns 2 and 4 show the results from an expanded model that augments these variables with additional shocks to the household (income drop and bad health), whether the household had received or expected to receive a federal stimulus check due to the pandemic, and a few additional variables collected only in the 2020 survey.

Table 3 here

Not surprisingly, our results confirm that higher levels of income are associated with higher resilience scores. Measured against an annual income reference category of \$75,000 to \$99,999, individuals with less than this amount had lower resilience scores, and the effect was more negative at lower levels of income. Older respondents exhibited statistically significantly higher levels of resilience, and those who had received/anticipated receiving stimulus checks were also in better financial shape. We also learned that those who self-reported themselves to be procrastinators were more resilient, by around 10 percent compared to their counterparts. Conversely, being in poor health was linked to lower financial resilience, as was greater impatience. One finding of particular interest is that being more financially literate was associated with greater resilience: a one unit increase in the financial literacy index was associated with about 10 percent greater resilience relative to the mean of 4.5.¹³ One surprising finding given recent research on wealth gaps by race/ethnicity (e.g., Bhutta et al. 2020; Thomas 2021) is that Blacks and Hispanics in our dataset did not differ significantly from Whites in terms of financial resilience, in either year, controlling on other factors that could be associated with race/ethnicity including income, health, education, and so forth.¹⁴

¹³ Interestingly, respondents whose parents had greater financial literacy also scored higher on the resilience index.

¹⁴ This is similar to findings by race and ethnicity reported by Clark et al. (2021) using an alternative measure, the CFPB financial wellbeing score.

While most of the estimated coefficients in Table 3 are comparable across years, a few are worthy of particular note. Specifically, those not working were scored as being significantly more resilient in 2021 than pre-pandemic, probably because the enhanced generosity of unemployment benefit checks provided during the Covid period played a role in protecting the jobless. In addition, households receiving stimulus checks were much more resilient than those who did not.

Recall that Table 1 showed that 72 percent of the sample had changes in their resilience index between 2020 and 2021. Over half of these changes were only one point on the index with an equal number experiencing an increase and a decrease in the index. We estimate a multinomial logit for comparing the index in 2021 to that in 2020 with the dependent variables indicating whether the index increased, decreased, or remained the same. The results are shown in Table 4. Significant findings indicate older respondents were more likely to increase their resilience index and less likely to have a reduction in resilience, individuals not working in 2020 were more likely to have a higher index score in 2021 perhaps reflecting a change in the labor market status, and individuals with a higher level of procrastination were more likely to have a decline in their resilience index. Given the relatively small change in the year to year value of the index, it is not surprising that there are relatively few significant effects in the estimation.

IV. Impact of the Pandemic on Financial Fragility

As noted above, several previous studies have defined financial fragility as the ability to respond to an unexpected \$2,000 expense in a month. Using this indicator, we estimate the factors associated with such fragility at the beginning of the pandemic, and again one year later (see Table 5). Early on, 18.3% of our survey respondents indicated that they would not be able/probably would not be able to adequately respond to unexpected bills of \$2,000. A year later, having experienced health crises and economic turmoil, fragility as measured by the \$2,000 question had

actually *fallen* by 10 percent: only 16.7% of the same respondents said they could not cover a \$2,000 unexpected bill in 2021. This improvement in their resilience was probably due to the impact of government programs such as the stimulus checks sent to low- and moderate-income households, as well as the higher unemployment benefit checks provided during this period.

Table 5 here

Table 5 also shows that the incidence of financial fragility varies across economic and demographic groups, using a multivariate Probit equation (marginal effects are reported). Again, results are generally consistent across the two years. Older Americans were less fragile, as were the better educated and higher income households. Not surprisingly, those working full-time were also better protected. Compared to currently married respondents, those that were separated, divorced, never married, and widowed tended to be more fragile. Again, rather unexpectedly given media reports, Blacks were not significantly different from their White counterparts, but now Hispanics were found to be substantially more fragile, 22-44 percent more likely than Whites. We cannot explain this discrepancy, it may be due to the difficulty some Hispanics had with their immigrant status discouraging them from seeking aid. One finding consistent with earlier studies is that higher financial literacy levels were associated with a lower chance classified as fragile in 2020, though the effect attenuated during the pandemic.¹⁵

How Are Resilience and Fragility Linked?

A question of potential policy interest is whether peoples' financial resilience at one point in time is related to their financial fragility in the future, and if so, how. To address this, we relate peoples' reported resilience scores pre-pandemic to their 2021 fragility score, controlling on the

¹⁵ A correlation matrix showing the correlation among the 8 questions and the ability to pay for \$2,000 in unexpected expenses is shown in Appendix B.

other factors included in the earlier model. Marginal results from a Probit model are provided in Table 6.

Table 6 here

The evidence confirms that a household's prior year's resilience score is negatively and significantly related to its fragility during the pandemic. Specifically, we find that a one unit increase in the resilience index is associated with a 3percentage point lower chance of being financially fragile one year later. Measured at the mean of the fragility index, this translates into a 18% lower probability of being unable to handle a \$2,000 unexpected expense.¹⁶

Column 2 of Table 6 also includes the eight separate questions comprising the index in Column 1 in order to highlight which individual questions are most influential in shaping financial fragility. Here we see that four of the eight concepts used in the index are individually negatively and significantly associated with fragility in 2021. Factors lowering the chance of being fragile according to our definition include believing that one can cope with lost earnings, having developed a retirement plan, not being financially anxious about one's own finances, and believing that one's money will not run out in the future.

V. Conclusions and Discussion

To withstand significant financial shocks, households are often advised to plan ahead and have in place a strategy for reacting to adverse events when they do occur. To examine this how effective this was during the pandemic, we constructed an eight-item financial resilience index based on indicators of household financial preparedness, including having developed a retirement plan and having sufficient money to not run out in retirement. Using panel survey data on

¹⁶ We recognize that the association need not necessarily be causal, and fragility may in turn affect resilience. Nevertheless we do find that financial resilience is an important factor associated with peoples' ability to weather economic shocks associated with the pandemic and to avoid becoming financially fragile during economic downturns.

individuals age 45-75 in 2020 and 2021, we explore the factors associated with resilience and financial fragility. Our results indicate that respondents' resilience score remained relatively stable, immediately before and into the pandemic. Nonetheless, there is some heterogeneity: the more financially resilient households were older, better educated, and earned higher incomes. Additionally, and not surprisingly, federal stimulus checks improved resilience, as did higher levels of financial literacy. By contrast, those with higher personal discount rates were less resilient. We also document that greater resilience pre-pandemic was associated with less financial fragility in 2021. Accordingly, our index is a useful indicator of which households are better able to overcome adverse economic shocks.

Our findings suggest that policies and programs that enhance resilience and financial literacy could help households better withstand economic shocks and more successfully address unexpected income needs. Moreover, the fact that Americans' financial resilience remained relatively stable during the first year of the pandemic does not necessarily predict continued resilience now that stimulus payments have ceased. Additional research will be needed to determine whether and which households remain financially stable as the economy struggles to regain its footing.

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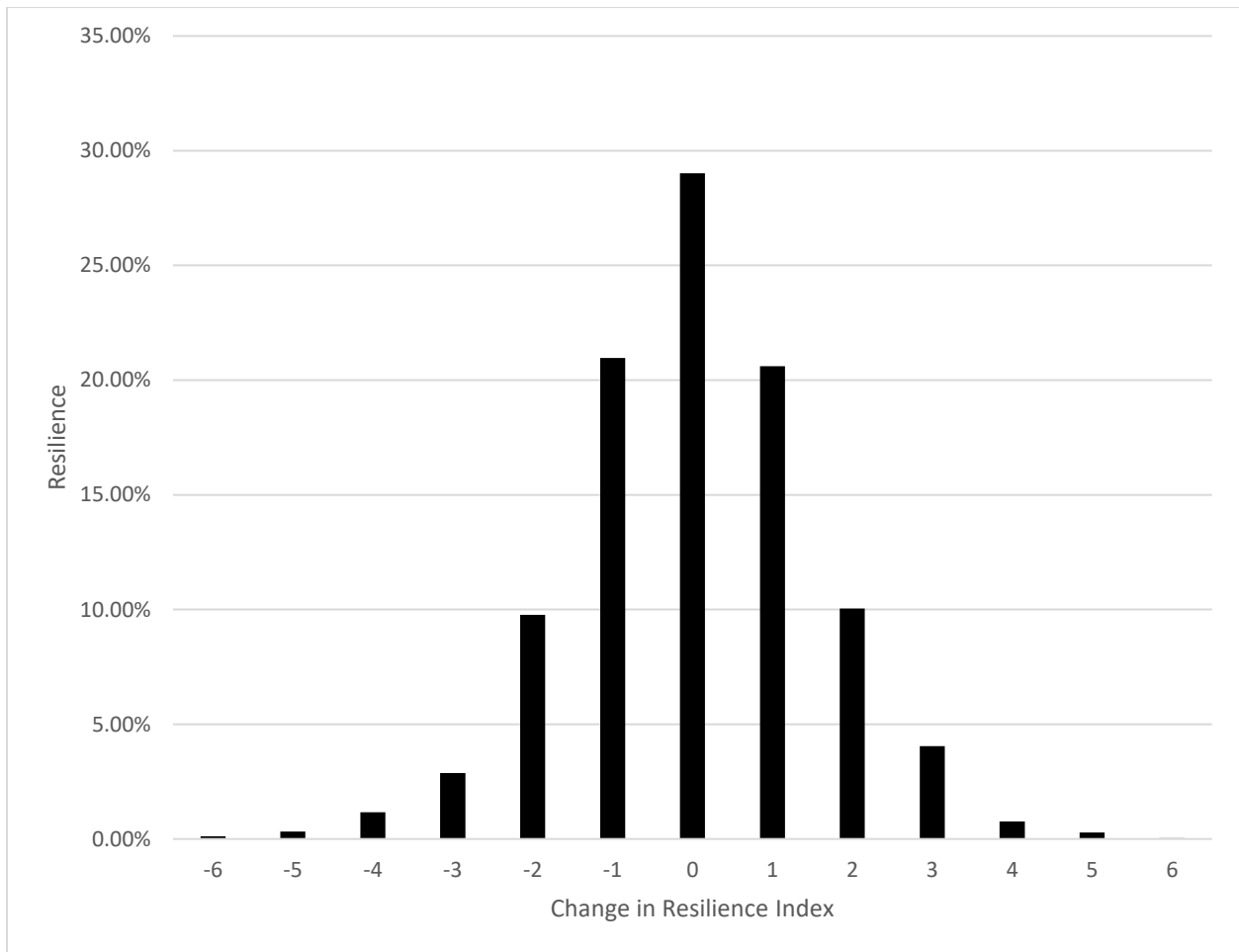
Figure 1: Change in Financial Resilience Index 2020 to 2021 (8-question index; see text)

Table 1. Financial Resilience Index and Components

Variables	2020		2021	
	<u>Mean</u>	<u>Std Dev</u>	<u>Mean</u>	<u>Std Dev</u>
Cope Lost Earnings	0.68	0.47	0.70	0.46
Develop Retirement Plan	0.37	0.48	0.35	0.48
Track Spending	0.79	0.41	0.78	0.41
Set Budget Target	0.55	0.50	0.52	0.50
Debt Level OK	0.72	0.45	0.72	0.45
No Medical Delays	0.72	0.45	0.72	0.45
Not Financially Anxious	0.43	0.49	0.43	0.49
Money Will not Run Out	0.24	0.43	0.30	0.46
Mean Positive Responses	4.49		4.52	
N	2,486		2,486	

Note: All variable definitions are shown in the Appendix

Change in Resilience Status between 2020 and 2021

Same both years	27.81%
Decreased in 2021	36.41%
Increased in 2021	35.77%

Table 2. Comparison of Explanatory Variables Across Years (N=2,486)

Variables	2020		2021	
	Mean	Std Dev	Mean	Std Dev
Age	57.19	8.37	59.23	8.36
Black	0.13	0.33	0.13	0.33
White	0.82	0.38	0.82	0.38
Race Other	0.09	0.28	0.08	0.28
HispLatino	0.13	0.34	0.13	0.34
Less than High School	0.06	0.24	0.06	0.24
High School Degree	0.32	0.47	0.32	0.47
Some College	0.27	0.44	0.26	0.44
Bachelor's Degree	0.20	0.40	0.20	0.40
Graduate Degree	0.15	0.36	0.15	0.36
Male	0.48	0.50	0.48	0.50
Female	0.52	0.50	0.52	0.50
Married	0.63	0.48	0.62	0.49
Divorced	0.19	0.39	0.20	0.40
Separated	0.02	0.15	0.02	0.15
Widowed	0.05	0.21	0.05	0.23
Never Married	0.11	0.31	0.11	0.31
Income Under \$15,000	0.11	0.32	0.11	0.31
Income \$15,000 - \$24,999	0.09	0.28	0.10	0.29
Income \$25,000 - \$34,999	0.10	0.30	0.11	0.31
Income \$35,000 - \$49,999	0.14	0.34	0.13	0.34
Income \$50,000 - \$74,999	0.19	0.39	0.18	0.38
Income \$75,000 - \$99,999	0.13	0.34	0.14	0.34
Income \$100,000 - \$149,999	0.14	0.35	0.13	0.34
Income \$150,000 or Higher	0.11	0.31	0.11	0.32
Working	0.57	0.49	0.53	0.50
Not Working	0.42	0.49	0.47	0.50
Literacy Index	2.14	0.97	2.14	1.02
Impatience	0.38	0.32		
Procrastination	0.68	0.47		
Bad Health	0.25	0.43		
Received or Expect Stimulus Check	0.82	0.39		
Parents Financial Literacy	0.58	0.49		
Mean Positive Responses to Resilience Index	4.49	1.84	4.52	1.76

Table 3. Factors Associated with Financial Resilience in 2020 and 2021

Variables	2020 <u>Resilience</u> <u>index</u>	2020 <u>Resilience</u> <u>index</u>	2021 <u>Resilience</u> <u>index</u>	2021 <u>Resilience</u> <u>index</u>
Age	0.033*** (0.006)	0.028*** (0.006)	0.052*** (0.006)	0.048*** (0.006)
Female	-0.132 (0.086)	-0.167** (0.084)	0.042 (0.083)	0.0195 (0.082)
Black	-0.035 (0.156)	0.019 (0.146)	0.198 (0.144)	0.264* (0.140)
Race Other	-0.419** (0.166)	-0.380** (0.159)	-0.296** (0.148)	-0.249* (0.147)
High School Only	0.319 (0.222)	0.238 (0.205)	0.375* (0.222)	0.281 (0.211)
Some College	0.489** (0.223)	0.364* (0.204)	0.485** (0.221)	0.351* (0.211)
Bachelor's Degree	0.440* (0.237)	0.293 (0.220)	0.435* (0.230)	0.282 (0.219)
Graduate Degree	0.622** (0.252)	0.477** (0.234)	0.635*** (0.242)	0.488** (0.230)
HispLatino	0.0463 (0.164)	0.188 (0.153)	0.0624 (0.147)	0.153 (0.147)
Divorced	-0.030 (0.115)	0.0324 (0.110)	-0.193* (0.115)	-0.153 (0.113)
Separated	-0.111 (0.280)	-0.209 (0.280)	0.066 (0.257)	-0.040 (0.238)
Widowed	-0.132 (0.190)	0.036 (0.179)	-0.0352 (0.167)	0.0571 (0.162)
Never married	-0.149 (0.158)	-0.058 (0.153)	-0.269* (0.155)	-0.218 (0.154)
Income under \$15,000	-0.932*** (0.205)	-0.711*** (0.197)	-0.777*** (0.208)	-0.635*** (0.202)
Income \$15,000 to \$24,999	-0.596*** (0.211)	-0.430** (0.202)	-0.698*** (0.181)	-0.585*** (0.181)
Income \$25,000 to \$34,999	-0.649*** (0.182)	-0.483*** (0.175)	-0.358** (0.167)	-0.285* (0.164)
Income \$35,000 to \$49,999	-0.439*** (0.164)	-0.378** (0.157)	-0.337** (0.151)	-0.305** (0.146)
Income \$50,000 to \$74,999	-0.242 (0.148)	-0.236* (0.139)	-0.146 (0.138)	-0.144 (0.133)
Income \$100,000 to \$149,999	0.239 (0.155)	0.314** (0.149)	0.171 (0.137)	0.219 (0.133)

Income \$150,000 or Higher	0.483*** (0.177)	0.522*** (0.173)	0.248 (0.155)	0.311** (0.154)
Not Working	0.063 (0.102)	0.195** (0.099)	0.513*** (0.099)	0.596*** (0.099)
Literacy Index	0.390*** (0.057)	0.381*** (0.054)	0.382*** (0.056)	0.366*** (0.055)
Impatience†	-0.447*** (0.152)	-0.384*** (0.147)	-0.264* (0.144)	-0.224 (0.143)
Procrastinate†		0.485*** (0.088)		0.223** (0.088)
Bad Health†		-0.649*** (0.109)		-0.523*** (0.106)
Received or Expect Stimulus Check†		0.290** (0.115)		0.325*** (0.116)
Parents Financial Literacy†		0.371*** (0.083)		0.243*** (0.081)
Constant	1.905*** (0.421)	1.504*** (0.425)	0.319 (0.410)	0.097 (0.406)
Observations	2,486	2,486	2,486	2,486
R-squared	0.236	0.288	0.242	0.270
Robust standard errors in parentheses				

*** p<0.01, ** p<0.05, * p<0.1

Dependent variable is the number of positive responses on the 10-variable index.

Mean of dependent variable (score on the financial resilience index)	4.49	4.49	4.52	4.52
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†Variable measured in UAS226 but used in models for both years.

Table 4. Multilogit for Change in 8-Question Financial Index

Variables	<u>Decreased</u>	<u>Unchanged</u>	<u>Increased</u>
Age	-0.00890*** (0.00164)	0.00414*** (0.00148)	0.00476*** (0.00167)
Female	-0.0448* (0.0251)	0.0168 (0.0236)	0.0279 (0.0252)
Black	-0.00621 (0.0414)	-0.0657 (0.0414)	0.0719* (0.0410)
Race Other	-0.0301 (0.0453)	-0.0315 (0.0421)	0.0617 (0.0448)
High School Only	0.0141 (0.0636)	-0.0386 (0.0573)	0.0244 (0.0609)
Some College	0.0276 (0.0636)	-0.0337 (0.0575)	0.00612 (0.0610)
Bachelor's Degree	-0.00632 (0.0668)	-0.0252 (0.0615)	0.0316 (0.0652)
Graduate Degree	-0.0224 (0.0704)	-0.0114 (0.0645)	0.0338 (0.0702)
HispLatino	0.0261 (0.0421)	0.00869 (0.0413)	-0.0348 (0.0430)
Divorced	0.0609* (0.0331)	-0.0614* (0.0329)	0.000471 (0.0327)
Separated	0.0993 (0.0931)	-0.0750 (0.0992)	-0.0244 (0.0896)
Widowed	0.0195 (0.0615)	-0.0578 (0.0558)	0.0383 (0.0540)
Never married	0.00627 (0.0437)	0.0560 (0.0406)	-0.0622 (0.0448)
Income under \$15,000	-0.0271 (0.0589)	0.0323 (0.0532)	-0.00519 (0.0569)
Income \$15,000 to \$24,999	0.0988* (0.0557)	-0.0657 (0.0541)	-0.0331 (0.0543)
Income \$25,000 to \$34,999	-0.0174 (0.0543)	-0.0404 (0.0522)	0.0578 (0.0508)
Income \$35,000 to \$49,999	-0.00420 (0.0459)	-0.0265 (0.0439)	0.0307 (0.0456)
Income \$50,000 to \$74,999	-0.00390 (0.0409)	-0.0448 (0.0390)	0.0487 (0.0405)
Income \$100,000 to \$149,999	0.0248 (0.0424)	-0.00431 (0.0412)	-0.0205 (0.0441)
Income \$150,000 or Higher	0.0924* (0.0474)	0.0283 (0.0472)	-0.121** (0.0542)

Not Working	-0.0720** (0.0288)	0.000417 (0.0265)	0.0716** (0.0285)
Literacy Index	0.0289* (0.0156)	0.0155 (0.0153)	-0.0443*** (0.0154)
Impatience	-0.0358 (0.0422)	0.0331 (0.0406)	0.00273 (0.0420)
Procrastinate	0.0645** (0.0264)	0.0131 (0.0249)	-0.0776*** (0.0255)
Bad Health	-0.0370 (0.0323)	0.00118 (0.0293)	0.0358 (0.0307)
Received or Expect Stimulus Check	-0.0831** (0.0326)	0.0505 (0.0322)	0.0326 (0.0346)
Parents Financial Literacy	0.00985 (0.0247)	0.00598 (0.0233)	-0.0158 (0.0248)
Observations	880	725	894
R-squared	0.0484	0.0484	0.0484
Robust standard errors in parentheses			

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 5. Factors Associated with Financial Fragility: Probit Marginal Effects

Variables	2020	2021
	<u>\$2000</u>	<u>\$2000</u>
Age	-0.007*** (0.001)	-0.005*** (0.001)
Female	0.0307 (0.020)	0.010 (0.020)
Black	0.0206 (0.029)	-0.005 (0.029)
Race Other	0.0294 (0.033)	-0.017 (0.032)
High School Only	-0.029 (0.041)	-0.068* (0.040)
Some College	-0.023 (0.041)	-0.059 (0.040)
Bachelor's Degree	-0.047 (0.047)	-0.103** (0.045)
Graduate Degree	-0.028 (0.050)	-0.132*** (0.051)
HispLatino	0.104*** (0.032)	0.053* (0.032)
Divorced	0.0759*** (0.025)	0.048* (0.024)
Separated	0.205*** (0.051)	0.179*** (0.053)
Widowed	0.0163 (0.044)	0.038 (0.036)
Never married	0.039 (0.030)	0.045 (0.030)
Income under \$15,000	0.344*** (0.047)	0.256*** (0.042)
Income \$15,000 to \$24,999	0.307*** (0.047)	0.224*** (0.041)
Income \$25,000 to \$34,999	0.255*** (0.046)	0.196*** (0.040)
Income \$35,000 to \$49,999	0.168*** (0.045)	0.108*** (0.039)
Income \$50,000 to \$74,999	0.142*** (0.043)	0.070* (0.037)
Income \$100,000 to \$149,999	0.054 (0.047)	-0.086* (0.047)
Income \$150,000 or Higher	-0.061	-0.137**

	(0.057)	(0.059)
Not Working	0.058***	0.007
	(0.022)	(0.022)
Literacy Index	-0.025**	-0.012
	(0.011)	(0.011)
Observations	2,486	2,486

Standard errors in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Dependent Variable Means	0.183	0.167
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Table 6. Probit Marginal Effects for Fragility in 2021 as a Function of Resilience Index in 2020

Variables	<u>Fragility \$2,000</u>	<u>Fragility \$2000</u>
Resilience Index	-0.030*** (0.005)	
Female	0.008 (0.019)	-0.009 (0.019)
HispLatino	0.009 (0.028)	0.053* (0.029)
Black	-0.049 (0.033)	0.007 (0.027)
Race Other	-0.044 (0.040)	-0.036 (0.033)
High School Only	-0.036 (0.040)	-0.055 (0.038)
Some College	-0.068 (0.046)	-0.042 (0.039)
Bachelor's Degree	-0.087 (0.0530)	-0.071 (0.045)
Graduate Degree	0.069** (0.031)	-0.079 (0.054)
Separated	0.052** (0.024)	0.133** (0.052)
Divorced	0.141*** (0.052)	0.041* (0.023)
Widowed	0.031 (0.038)	0.041 (0.035)
Never Married	0.027 (0.0302)	0.034 (0.029)
Income under \$15,000	0.232*** (0.044)	0.229*** (0.043)
Income \$15,000-\$24,999	0.235*** (0.042)	0.218*** (0.040)
Income \$25,000-\$34,999	0.187*** (0.042)	0.166*** (0.041)
Income \$35,000-\$49,999	0.087** (0.040)	0.081** (0.040)
Income \$50,000-\$74,999	0.086** (0.038)	0.080** (0.037)

Income \$100,000-\$149,999	-0.041 (0.046)	-0.034 (0.046)
Income \$150,000 or Higher	-0.099* (0.0588)	-0.046 (0.060)
Working	0.048** (0.021)	0.049** (0.020)
Literacy Index	0.0042 (0.011)	0.016 (0.011)
Cope Lost Earnings		-0.144*** (0.018)
Develop Retirement Plan		-0.054** (0.023)
Debt Level OK		0.006 (0.026)
No Medical Delays		0.014 (0.026)
Track Spending		0.019 (0.026)
Set Budget Target		0.022 (0.020)
Not Financially Anxious		-0.061*** (0.019)
Money Will Not Run Out		-0.073*** (0.027)
Observations	2,486	2,486
Standard errors in parentheses		
*** p<0.01, ** p<0.05, * p<0.1		
Dependent Variable Mean	0.167	0.167

Appendix A: List of Survey Questions and Variable Coding: UAS226 AND 378

The questions and answers shown below are from questions that appear in both UAS226 and UAS378; we use these variables to construct our financial resilience index. All variables are recoded as binary with a value of 1 for respondents who fit into the indicated category, and 0 otherwise. The variables are coded so that the answers indicate a positive response related to being financially resilient.

Cope Lost Earnings: 1 if FIN003 = 1 or 2, 0 otherwise (UAS378: a007)

How confident are you that you could cope if you did not have any labor earnings for the next 3 months?

FIN003	FREQUENCY	PERCENT	CUMULATIVE
1 I am certain I could cope	1164	40.1%	40.1%
2 I could probably cope	924	31.83%	71.93%
3 I probably could not cope	376	12.95%	84.88%
4 I am certain I could not	290	9.99%	94.87%
98 Don't know	142	4.89%	99.76%
Not asked	5	0.17%	99.93%
Not answered	2	0.07%	100%
Total	2903	100%	100%

Confident \$2,000: 1 if FIN015 = 1 or 2, 0 otherwise (UAS378: a008)

How confident are you that you could come up with \$2,000 if an unexpected need arose within the next month?

FIN015	FREQUENCY	PERCENT	CUMULATIVE
1 I am certain I could come up with the full \$2,000	1727	59.49%	59.49%
2 I could probably come up with \$2,000	521	17.95%	77.44%
3 I could probably not come with \$2,000	220	7.58%	85.02%
4 I am certain I could not come up with \$2,000	327	11.26%	96.28%
98 Don't know	94	3.24%	99.52%
Not asked	12	0.41%	99.93%
Not answered	2	0.07%	100%
Total	2903	100%	100%

Develop Retirement Plan: 1 if FIN017A = 1 or 2, 0 otherwise (UAS378: c002)

Did you develop a plan for retirement saving?

FIN017A	FREQUENCY	PERCENT	CUMULATIVE
1 Yes	663	22.84%	22.84%
2 More or less	542	18.67%	41.51%
3 No	94	3.24%	44.75%
98 Don't know	1	0.03%	44.78%
Not asked	1603	55.22%	100%
Not answered	0	0%	100%
Total	2903	100%	100%

Debt Level OK: 1 if FIN018 = 1 or 2, 0 otherwise (UAS378: e001)

Now thinking about all of your household's current debts, including mortgages, bank loans, student loans, money owed to people, medical debt, past-due bills, and credit card balances that are carried from prior months...

As of today, which of the following statements describes how manageable your household debt is?

FIN018	FREQUENCY	PERCENT	CUMULATIVE
1 Have a manageable amount of debt	1660	57.18%	57.18%
2 Have a bit more debt than is manageable	453	15.6%	72.79%
3 Have far more debt than is manageable	205	7.06%	79.85%
4 Do not have any debt	504	17.36%	97.21%
98 Don't know	74	2.55%	99.76%
Not asked	5	0.17%	99.93%
Not answered	2	0.07%	100%
Total	2903	100%	100%

No Medical Delay: 1 if FIN021_1D = 2, 0 otherwise (UAS378: e006)

Has this debt delayed or prevented you from receiving medical treatment (including filling prescriptions)?

FIN021_1D	FREQUENCY	PERCENT	CUMULATIVE
1 Yes	214	7.37%	7.37%
2 No	2086	71.86%	79.23%
98 Don't know	18	0.62%	79.85%
Not asked	583	20.08%	99.93%
Not answered	2	0.07%	100%
Total	2903	100%	100%

Track Spending: 1 if FIN023A = 1 or 2, 0 otherwise (UAS378: i008)

How often do you keep track of your actual spending? Would you say:

FIN023A	FREQUENCY	PERCENT	CUMULATIVE
1 Always	1096	37.75%	37.75%
2 Mostly	1232	42.44%	80.19%
3 Rarely	444	15.29%	95.49%

4 Never	96	3.31%	98.79%
98 Don't know	28	0.96%	99.76%
Not asked	5	0.17%	99.93%
Not answered	2	0.07%	100%
Total	2903	100%	100%

Set Budget Target: 1 if FIN024 = 1 or 2, 0 otherwise (UAS378: i010)

How often do you set budget targets for your spending? Would you say:

FIN024	FREQUENCY	PERCENT	CUMULATIVE
1 Always	502	17.29%	17.29%
2 Mostly	1121	38.62%	55.91%
3 Rarely	885	30.49%	86.39%
4 Never	340	11.71%	98.11%
98 Don't know	48	1.65%	99.76%
Not asked	5	0.17%	99.93%
Not answered	2	0.07%	100%
Total	2903	100%	100%

Not Financially Anxious: 1 if FIN027A = 1, 2, or 3, 0 otherwise (UAS378: a011)

Thinking about my personal finances can make me feel anxious.

FIN027A	FREQUENCY	PERCENT	CUMULATIVE
1 1Strongly Disagree	439	15.12%	15.12%
2 2	519	17.88%	33%
3 3	360	12.4%	45.4%
4 4	480	16.53%	61.94%
5 5	447	15.4%	77.33%
6 6	313	10.78%	88.12%
7 7Strongly Agree	303	10.44%	98.55%
98 Don't know	34	1.17%	99.72%
Not asked	5	0.17%	99.9%
Not answered	3	0.1%	100%
Total	2903	100%	100%

Money Will Not Run Out: 1 if FIN030 = 4 or 5, 0 otherwise (UAS378: f001)

Do you agree or disagree with the following statement?

"I am concerned that the money I have, or will have access to, won't last for the rest of my life."

FIN030	FREQUENCY	PERCENT	CUMULATIVE
1 Agree completely	619	21.32%	21.32%
2 Agree somewhat	804	27.7%	49.02%
3 Neither agree nor disagree	597	20.56%	69.58%
4 Disagree somewhat	452	15.57%	85.15%

5 Disagree completely	348	11.99%	97.14%
98 Don't know	75	2.58%	99.72%
Not asked	5	0.17%	99.9%
Not answered	3	0.1%	100%
Total	2903	100%	100%

Appendix B. Correlation Matrix of Resilience Variables.

2020:	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Fragility
Q1	100.0%								
Q2	30.9%	100.0%							
Q3	4.9%	1.4%	100.0%						
Q4	2.7%	0.6%	73.4%	100.0%					
Q5	8.3%	15.7%	9.3%	5.0%	100.0%				
Q6	1.1%	14.5%	10.0%	5.6%	44.8%	100.0%			
Q7	28.0%	19.1%	-0.9%	-0.1%	8.9%	3.1%	100.0%		
Q8	27.6%	26.2%	-7.8%	-7.1%	5.2%	-1.5%	37.0%	100.0%	
Fragility	-43.6%	-28.0%	-10.2%	-6.7%	-3.5%	2.1%	-25.6%	-23.1%	100.0%

2021:	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Fragility
Q1	100.0%								
Q2	18.7%	100.0%							
Q3	4.5%	-13.0%	100.0%						
Q4	-0.1%	-11.0%	78.6%	100.0%					
Q5	11.8%	7.1%	10.3%	8.6%	100.0%				
Q6	2.9%	2.7%	9.4%	6.6%	43.5%	100.0%			
Q7	34.0%	17.1%	-7.4%	-6.8%	9.8%	2.6%	100.0%		
Q8	29.0%	25.1%	-11.2%	-10.5%	6.3%	-2.3%	43.0%	100.0%	
Fragility	-45.0%	-4.6%	-5.9%	-1.3%	-3.9%	3.9%	-25.1%	-22.7%	100.0%

Key:

- Q1: Cope Lost Earnings
- Q2: Develop Retirement Plan
- Q3: Debt Level OK
- Q4: No Medical Delays
- Q5: Track Spending
- Q6: Set Budget Target
- Q7: Not Financially Anxious
- Q8: Money Will Not Run Out
- Fragility: Confident \$2000