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Refund to Savings Initiative

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How do Changing Financial Circumstances Relate to Financial Well-Being? Evidence from a National Survey

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Introduction

This brief is the third and final brief in a series exploring the financial well-being of low- and moderate-income (LMI) households in the United States. The first brief in this series explored how financial well-being differed between LMI households and the general population.[1] The second in the series examined how financial well-being changed over time in a sample of LMI respondents.[2] This brief uses longitudinal survey data paired with administrative tax data to assess how different household experiences—including the use of alternative financial services, the experience of material and medical hardship, and improvements in physical and financial health—correspond to the changes in the financial well-being of LMI households.

Research on financial health and financial security commonly relies on objective measures like savings behaviors, access to credit, and so on. By contrast, in their recent efforts to understand and measure financial well-being, the Consumer Financial Protection Bureau (CFPB) defined financial well-being as a function of four key subjective components: "having control over day-to-day, month-to-month finances," "having the capacity to absorb a financial shock," "being on track to meet your financial goals," and "having the financial freedom to make the choices that allow you to enjoy life."[3]

Understanding subjective financial well-being in this way can provide practitioners, policymakers, and other financial capability-focused organizations insight on how to help households gain a greater sense of control over their financial lives in a

Findings from the first two briefs in this series:

- Our low-income sample had financial well-being scores that were six points lower on average than the general population. LMI respondents were also much more likely to have very low levels of well-being
- Financial well-being remained relatively stable over a short period of time and did not vary substantially across different demographic and financial characteristics.
- Financial well-being in LMI households decreased as age and education increased. This was roughly the reverse of the trend observed in the general population.
- Ownership of liquid assets and access to emergency resources were the strongest correlates of financial well-being. Similarly, an inability to access $2,000 in emergency funds at tax time were negatively associated with financial well-being six months later.
- The difference in financial well-being between low-income households and the general population was functionally eliminated if those low-income households could rely on family and friends as a safety net.
- Racial/ethnic minorities in the low-income sample had similar levels of financial well-being to the general population, but low-income white households had much lower financial well-being than white households in the general population.

way that simply relying on objective measures of financial security cannot. For example, using savings levels to measure financial security ignores the fact that different families and communities may be able to rely on social or familial networks to provide them with financial support in an emergency, whereas relying on an individual's subjective sense of being able to absorb a financial shock would incorporate this reality. As such, work on financial well-being can help identify which communities or target populations experience disproportionately low levels of overall financial security, and which are most at risk of losing this sense of security. Additionally, this research can help in identifying which programs, practices, or policies are the most effective at driving an increased sense of security, and what can be done to prevent vulnerable households from experiencing declines in well-being.

This brief focuses on the sources of volatility in a household's sense of financial well-being. Given that finances are consistently the chief source of anxiety for American households,[4] that the experience of financial volatility is common and costly,[5] and that household economic situations are becoming more precarious over time,[6] it may be expected that a sense of financial well-being would depend on household circumstances and be relatively volatile within the same household. However, what we have found over the course of this brief series indicates that financial wellbeing varies across different characteristics of LMI households, but is relatively stable over a six-month time period. At the same time, while lacking access to financial resources in the event of an unexpected emergency was strongly associated with reductions in financial well-being over six months, most other financial characteristics (e.g., employment, income volatility) are not associated with large changes in financial well-being.[7]

While the prior briefs in this series explored the interaction between LMI household characteristics and changes in financial well-being, they did not examine the role that changes in household financial circumstances play in driving financial well-being. This is important because household financial circumstances tend to be relatively volatile; survey research has shown that in a given year 60 percent of households reported experiencing an unexpected shock (e.g., experienced income reduction or health issues),[8] nearly 40 percent of households said they had some material hardship,[9] and 23 percent of adults used some type of alternative financial services.[10] This brief thus examines the extent to which experiences contribute to the changes in financial well-being in LMI households, by answering the following questions:

- How does the experience of different household hardships influence financial well-being?
- To what extent is the use of credit- and transaction-based alternative financial services associated with changes in financial well-being?
- What household decisions and circumstances are associated with improvements in financial well-being?

Key Findings:

- Recent experiences of financial and medical hardships are associated with large reductions in financial well-being.
- Recent use of credit-based alternative financial services like payday loans is not associated with significant reductions in financial well-being. By contrast, the recent use of transaction-based alternative financial services like check cashers is associated with a significant drop in financial well-being.
- Going from poor health to good health and gaining access to emergency resources are both associated with large increases in financial well-being. Saving the tax refund is associated with a smaller but still significant increase.
- These results suggest that, although financial well-being tends to remain relatively stable over a short time period, the exposure to negative (positive) financial experiences can disrupt (improve) the sense of financial well-being, even when accounting for other household characteristics.

Research Background and Data

Data and Sample

This analysis uses data obtained through the Refund to Savings (R2S) initiative, an ongoing research partnership between Washington University in St. Louis, Duke University, and Intuit Inc., the makers of TurboTax. The initiative primarily aims to encourage LMI tax filers to save their tax refunds by incorporating the insights of behavioral economics into TurboTax Freedom Edition (TTFE), a free tax filing software platform available to eligible LMI households.[11] Households that earned $33,000 or less in adjusted gross income or qualified for the Earned Income Tax Credit in 2017 could file taxes in TTFE, and looser income requirements were applied to active duty military households.

In addition to relying on administrative tax records for LMI tax filers, we also administer two waves of a Household Financial Survey (HFS) as part of the R2S initiative: a random sample of TTFE tax filers is invited to participate in the first wave of the HFS immediately after tax filing (HFS wave 1), and those who complete the first survey iteration are re-contacted six months later for a follow-up survey (HFS wave 2). Each wave of the HFS collects comprehensive information about TTFE filers' financial situations, behaviors, and experiences to complement administrative data.

We measure financial well-being using the abbreviated 5-item version of the CFPB's Financial Well-Being Scale.[12] The calculated financial well-being score ranges between 14 and 95 points, where higher scores correspond to a higher level of financial well-being.[13] The abbreviated scale consists of the following five questions:[14,15]

- "Because of my money situation, I feel like I will never have the things I want in life"
- "I am just getting by financially"
- "I am concerned that the money I have or will save won't last"
- "I have money left over at the end of the month"
- "My finances control my life"

Methods

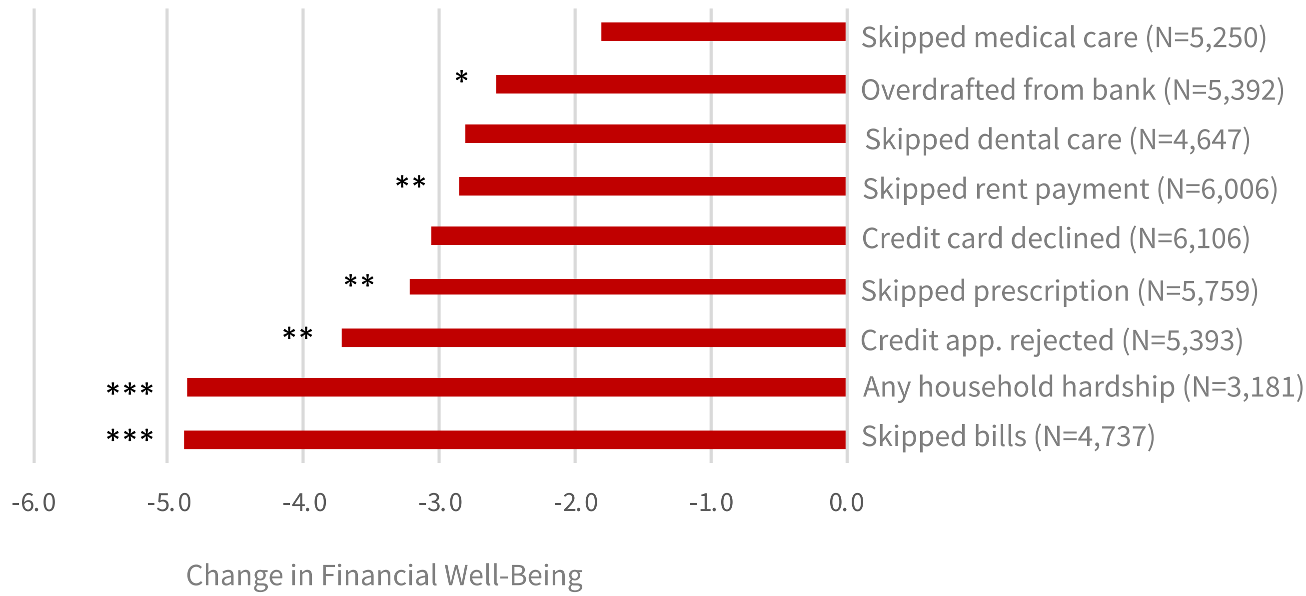
To assess the role that changing household circumstances play in driving financial well-being, we use a difference-in-differences approach to

Table 1.
Sample Descriptive Statistics

Characteristic	Mean
Financial well-being	48.6
Age	47.2
Adjusted gross income ($)	15,689
Any household hardship (%)	55.3
Access to $2,000 in an emergency (%)	55.8
Used any credit-based AFS (%)	14.9
Used any transaction-based AFS (%)	22.0
Saved any tax refund (%)	40.9
Race/Ethnicity	
White (%)	56.9
Black (%)	13.3
Asian (%)	10.4
Hispanic (%)	16.3
Other (%)	3.1
Male (%)	39.5

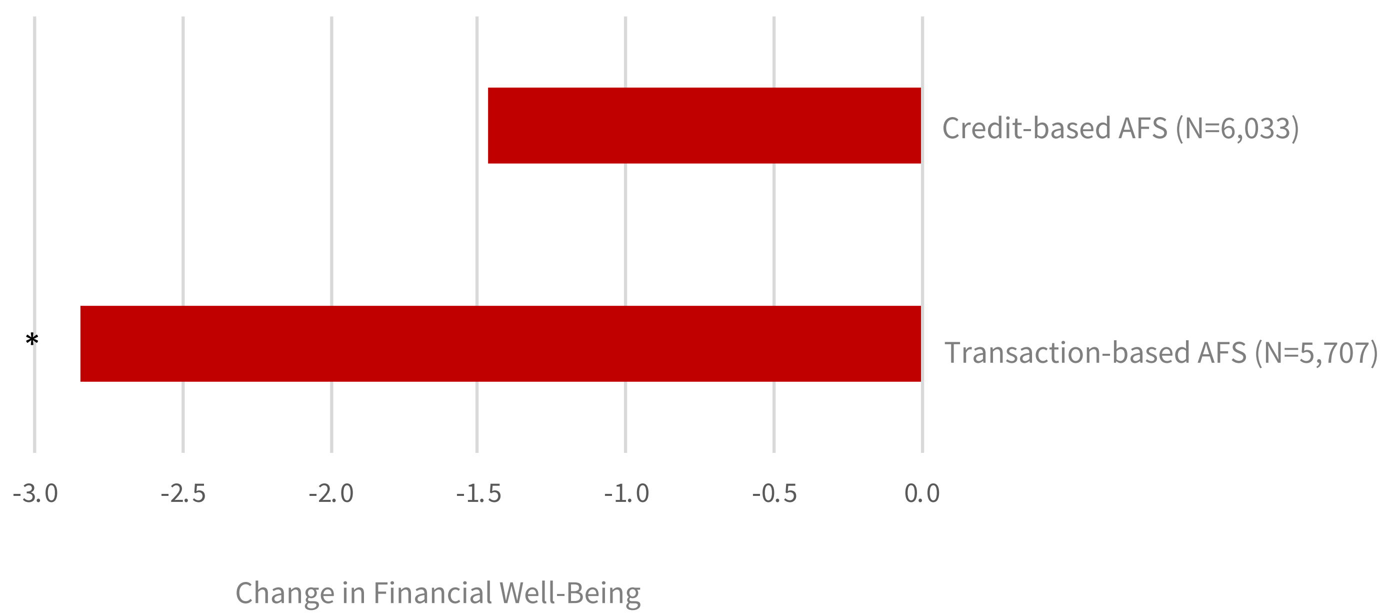
Notes: N=6,965. Results are weighted using the 2016 American Community Survey.

Figure 1.
The Relationship between Hardships and Changes in Financial Well-Being



Notes: This table presents the results of a difference-in-differences analysis conducted using ordinary least squares regression with individual fixed effects. *p<.05; **p<.01; ***p<.001.

Figure 2.
The Relationship between Alternative Financial Service Use and Changes in Financial Well-Being



Notes: This table presents the results of a difference-in-differences analysis conducted using ordinary least squares regression with individual fixed effects, *p<.05.

explore how certain financial experiences changed financial well-being between the two waves of the survey. For the difference-in-differences analysis, we restrict our sample to two groups. The first group includes households that experienced some event (e.g., had a hardship or took out a payday loan) only between the first and second survey waves, and the second group includes households that did not experience such event in either survey wave. To assess the influence of that event on financial well-being, we compare how the trends in financial well-being over time differed between these two groups.[16]

As an example of how this works in practice, consider the question of how using alternative financial services changes financial well-being. The first group would include households that did not report using any alternative financial services at wave 1 of the survey, but did report using alternative financial services at wave 2. The second group would include those that did not use alternative financial services in either wave of the survey. By comparing the trends in financial well-being of the group that used alternative financial services between wave 1 and wave 2 with those that did not, we can estimate the relationship between using these alternative financial services and changes in financial well-being. Using the 2016 American Community Survey, we have weighted all results in this brief so that they are reflective of general U.S. LMI population.

Table 1 contains descriptive statistics of the 6,965 individuals in our sample. Generally, the individuals in our sample face difficult financial circumstances. The average adjusted gross income was just $15,689, and only a little over half of our sample reported having access to $2,000 if an emergency arose. In the 6 months prior to filing their taxes, about 15% of the sample reported using a credit-based alternative financial services (e.g., payday loans, auto-title loans, pawn shops, rent-to-own stores), and 22% reported using transaction-based alternative financial services (e.g., check cashing, money orders, payroll card usage). The average age was 47 years old. Just over half the sample identified as White, and about 40% of the sample identified as male.

Results

How does the experience of different household hardships affect financial well-being?

Figure 1 describes the change in financial well-being associated with the experience of various household hardships. For this analysis, we included a number of financial and medical hardships including skipping medical care, dental care, prescriptions, bills, or rent and mortgage payments; overdrafting from a bank account; having a credit card get declined; and having a credit application rejected.

Overall, respondents who reported experiencing each of these hardships between the first and second survey waves consistently experienced significant declines in financial well-being levels over time, relative to households that reported not experiencing hardships in both waves of the survey. Respondents who said they experienced any household hardship between the two waves reported a decline in financial well-being of 4.9 points ($p<.001$), relative to households that reported not experiencing any hardship in both waves of the survey. In terms of specific hardships, the greatest relative declines in financial well-being were observed for skipped bill payments, rejected credit applications, and skipped prescription medications, corresponding to relative reductions of financial well-being by 4.9 points ($p<.001$), 3.7 points ($p<.01$), and 3.2 points ($p<.01$), respectively. Skipping housing payments and overdrafting bank accounts were associated with smaller but still significant declines in financial well-being. Skipping medical care, skipping dental care, and having a credit card declined were negatively associated with financial well-being but these relationships were statistically insignificant.

To what extent is the use of credit- and transaction-based alternative financial services associated with changes in financial well-being?

Figure 2 presents the relative changes in financial well-being associated with the usage of credit- and transaction-based alternative financial services (AFS). Credit-based AFS include financial services that provide users with access to liquidity, typically at high interest rates (e.g., payday loans, auto-title loans, pawn shops, rent-to-own stores). Transaction-based AFS include financial services that facilitate financial transactions, often with expensive fees (e.g., check cashing, money orders, payroll card usage).

Compared to respondents who never used transaction-based AFS, respondents who reported using them only in the second wave of the survey saw their financial well-being decline by more than 2.5 points over the following six-month period ($p<.05$). Directionally, survey-takers who only reported using credit-based AFS in the second wave of the survey had their financial well-being decline over time, relative to respondents who never used credit-based AFS; however, this finding was statistically insignificant.

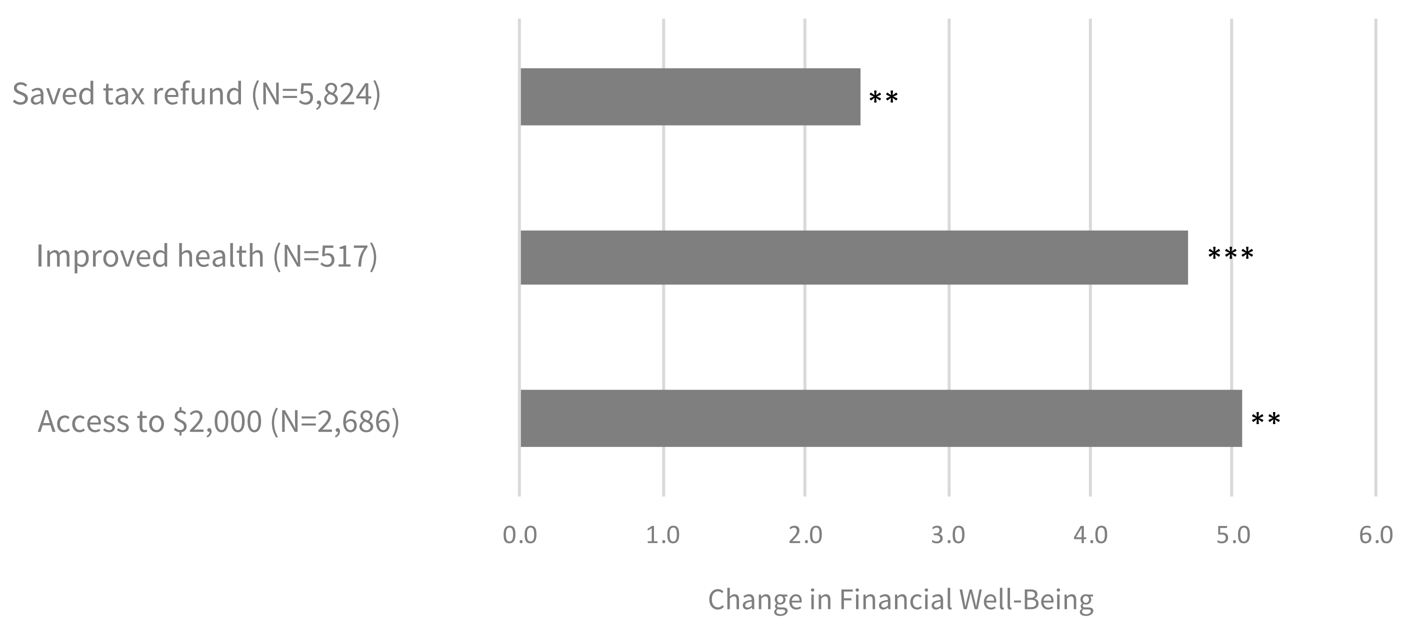
What household decisions and circumstances are associated with improvements in financial well-being?

Figure 3 shows the relationship between several positive household experiences and changes in financial well-being. Specifically, we examine three different experiences that were captured in the survey: the saving of the tax refund, gaining access to $2,000 in emergency resources, and experiencing improvements in self-reported physical health.

Compared to those that did not save any of their tax refunds, households that did manage to save part of the tax refunds experienced a 2.4 point ($p<.01$) increase in their financial well-being six months after tax-filing. Those who went from reporting below-average physical health to reporting above-average health experienced a 4.7 point ($p<.01$) increase in financial well-being, relative to respondents who reported having below-average health in both waves of the survey. Finally, compared to households who did not have access to $2,000 in an emergency in either wave of the survey, those

Figure 3.

Decisions and Circumstances Associated with Improvements in Financial Well-Being



Notes: This table presents the results of a difference-in-differences analysis conducted using ordinary least squares regression with individual fixed effects. **$p<.01$; ***$p<.001$.

who gained access to $2,000 in emergency resources between waves 1 and 2 saw a 5.1 point (p<.001) increase in financial well-being.

Conclusion and Implications

The first brief in this series looked at differences in financial well-being between the general population and LMI households and the relationship between different household characteristics and financial well-being. It found, among other things, that race, age, access to emergency resources, and health were all linked to levels of reported financial well-being, though access to emergency resources was the only factor associated with large changes in financial well-being. The second brief examined the stability of financial well-being over a six-month period and found that financial well-being in LMI

Implications for Research, Policy, and Practice

Research Implications

- The stability of financial well-being over the short-term for the average LMI household speaks to the measurement validity of the CFPB's scale. This may make the scale an attractive outcome measure for researchers, financial capability professionals, and policymakers looking to assess the impacts of different programs on their target populations.
- The higher rates of financial well-being for non-Hispanic Black households and the short-term improvements in financial well-being for non-Hispanic Black households, relative to other households, speaks to a compelling relationship between race and finacial well-being that warrants further study.

Policy Implications

- Financial well-being scores are most sensitive to indicators of resilience: Savings, emergency resources, social/familial supports, good health, etc. This speaks to a need to expand financial capability policy and program supports beyond savings. Policies and programs should seek to build emergency resilience in general (including access to affordable credit) to help households cope with shocks and reduce the likelihood of hardship.
- The close relationship between physical health and financial well-being speaks to a need to develop programs that can address households' needs more holistically. For example, providing financial incentives to pursue healthy behaviors, or promoting partnerships between financial capability organizations and community health providers.

Practice Implications

- Declines in financial well-being in older households indicate that financial capability practitioners should adopt a life-course perspective. Middle-aged clients who have been struggling with financial insecurity for years may need different services than younger clients, and practitioners should consider clients' well-being relative to their life goals. These goals may be focused on economic mobility for younger households and stability for older households.
- Clients with very low financial well-being scores may feel out of control and discouraged, and may thus need additional supports to build confidence in taking action. Additionally, this discouragement may be due to things beyond clients' control, such as affordable housing. Practitioners should look for things correlated with very low scores that they might address (e.g., need for child care, lack of emergency savings).

households was stable over the short-term and that this stability did not vary notably by most household characteristics.

While the second brief in this series demonstrated that financial well-being is a relatively stable measure across many household characteristics and over short time periods, this brief shows that it is also relatively sensitive to key financial experiences. Considering that the financial well-being score at wave 1 average 48.5 points (on a 14 to 95 point scale), our findings indicate that experiencing different types of hardships within six months of tax filing can contribute up to a 10 percent reduction in financial well-being six months post-filing. Similarly, gaining the ability to access $2,000 during an emergency can contribute to a 10.5 percent increase in financial well-being. These changes are substantially larger than the ones observed across the vast majority of demographic and financial household characteristics we measured.

First, we find that the experience of an array of household hardships between survey waves was associated with relatively large declines in financial well-being; skipping bills, for example, was associated with a financial well-being decline roughly five times larger than the decline associated with using credit-based alternative financial services like payday loans. This may potentially speak to a relationship between financial well-being and perceived financial control: Both payday loans and skipped bills can be costly in terms of fines, fees, and interest, but taking on a payday loan is a choice households make to manage their finances while skipping bills (and other household hardships) tend to represent a loss of financial control and an inability to manage financial needs. Organizations seeking to improve the financial well-being of their target populations should consider this in targeting their services: Providing support or resources to help households manage income shortfalls may be more effective than initiatives that seek to educate households on the costs of borrowing or the risks of payday loans. This finding may also stress the importance of providing LMI households that currently have limited access to mainstream credit services with more reliable and affordable credit options, including credit builder loans, payday loan alternatives through credit unions, or employer-sponsored small-dollar loans.

We also observe a relationship between “positive” life experiences and improvements in financial well-being. Most notably, our findings show that the decision to save the tax refund, gaining access to $2,000 in an emergency between wave 1 and wave 2 of the survey, and going from below average health to above average health between wave 1 and wave 2 all lead to significant improvements in financial well-being. The relationship between physical, mental, and financial health echoes patterns we observed in the first brief and speaks to the need for both research and interventions that explore the link between health and finances.

The findings concerning saving the tax refund and building emergency liquidity also echo the first two briefs in that they demonstrate the strong relationship between liquidity and well-being. In the first brief, we found that access to liquidity was the single strongest predictor of financial well-being; findings from the second brief showed that the lack of emergency savings contributed to a lower sense of financial well-being in the short-term; and this brief allows us to more precisely measure this relationship by examining how gaining access to liquidity over a six-month period actually influences financial well-being. Overall, this close link between the access to liquidity that has been observed throughout this brief series does not appear surprising, given that the underlying definition of financial well-being underscores the importance of having financial agency and the perceived capacity to address a range of diverse financial needs.

At the same time, these results repeatedly speak to the continued need for the development and support of initiatives that seek to build liquidity in economically vulnerable populations, but also the need to move beyond simply focusing on savings. Households may benefit from interventions that not only help them build savings, but also other forms of liquidity including access to build affordable credit, stronger social and familial support systems, and access to social services.

End Notes

[1] Sun et al. (2018).

[2] Sun et al. (2019).

[3] BCFP (2015, p. 7).

[4] Anderson et al. (2015).

[5] Pew Charitable Trusts (2015).

[6] Kalleberg (2009).

[7] Sun et al. (2018); Sun et al. (2019).

[8] Pew Charitable Trusts (2015).

[9] Karpman, Zuckerman, & Gonzalez (2018).

[10] Board of Governors of the Federal Reserve System (2017).

[11] TurboTax Freedom Edition is offered to LMI households as part of the IRS Free File Alliance (https://freefilealliance.org/).

[12] The BCFP has designed two versions of the financial well-being scale—the abbreviated (5-item) and standard (10-item) version—that are highly correlated and directly comparable to each other.

[13] The process of deriving financial well-being scores from the HFS response values followed the procedure identified in the BCFP's technical report, which involves applying a software-based scoring method relying on Item Response Theory (BCFP, 2017).

[14] BCFP (2015, p. 29).

[15] Given statements are measured on the 5-item Likert scale. Response categories for the first three questions are "Completely, Very well, Somewhat, Very little, Not at all," and responses for the last two questions are "Always, Often, Sometimes, Rarely, Never."

[16] Difference-in-differences estimates are obtained through an ordinary least squares (OLS) regression model, which included individual-level fixed effects to account for unobserved individual characteristics that do not vary over time (e.g. race/ethnicity, gender). The primary variable of interest is an interaction term between two indicator variables: an indicator for the survey wave and an indicator for the experience of some event between the two survey waves. The coefficient on this variable describes how mean financial well-being scores changed over time in households that experienced some event between the first and second survey waves, relative to those that did not.

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Disclaimer

Statistical compilations disclosed in this document relate directly to the bona fide research of, and public policy discussions concerning, financial security of individuals and households as it relates to the tax filing process and more generally. Compilations follow Intuit's protocols to help ensure the privacy and confidentiality of customer tax data.

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