

THE FINANCIAL HEALTH CHECK

A Behavioral Approach to Financial Coaching

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Managing day-to-day finances is about as complex as changing the oil in a car – with some skill and instruction we can manage it, but there’s a good chance we’ll wind up with a big mess of black gunk everywhere. For the messy task of changing oil, most of us choose to hire a trained specialist like a mechanic at Jiffy Lube. For the essential task of managing finances, many of us choose to hire financial services specialists, though most of the time they only serve the wealthy. For a hefty fee, private bankers handle all the forms, phone calls, opening and closing of accounts, and movement of money involved in complex transactions. The client must do little more than sign documents and make a few choices.

Low- and middle-income households ought to have at least the same level of banking services as the rich; they may even need more, but what they commonly have access to is nothing like the private banking services available to the wealthy. They can get full financial service from credit counseling agencies, but only if they need remedial help digging out from under a mountain of debt. The rest of the financial advice available to them is just that – advice. It’s like going into a Jiffy Lube to get a one-hour lesson on how to change the oil in your car and then having to do it yourself in your garage. In other words, the only time a trained mechanic will really help you is if your engine blows up after you made a small mistake changing the oil on your own. Counselors and financial educators teach financial concepts, help clients make a budget, and then leave them with a lot of “homework,” and getting a wrong answer on it has perilous financial consequences. Clients must go home and open savings accounts, pay off debts, set up savings plans, cut up credit cards, and take any number

of actions that are usually complex, often require self-control, are sometimes daunting, and are always tedious.

Behavioral Science predicts that most people will not persevere through all this tedium. Research on what actually happens is unclear. In their extensive review of studies evaluating the impact of financial counseling and education, Collins and O’Rourke (2010) found some evidence that people do learn. A few studies even suggest that they do their “homework” (Duflo and Saez 2003, Collins 2012), but other experiments show that financial education has no effect on financial behavior (Mandell and Klein 2009, Servon and Kaestner 2008).

Looking at the problem through a behavioral lens exposes why people may want to improve their financial health, but fail to follow through. Many psychological barriers could be at play in preventing people from successfully managing their finances, but a few key barriers are most likely to be

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the main cause. People may forget to act when they have only a vague plan and no reminders (Nickerson and Rogers 2010; Milkman et al. 2012; Karlan et al. 2010), small hassles may deter them from action (Lewin 1951), or temptation may divert them from financial responsibility (Baumeister 2002).

If we can redesign financial education and counseling to close the gap between intention and action, we will have tremendous impact on the wellbeing of low-income households. We can scale up that impact by fine-tuning the vast machinery that provides financial advice to low-income households. Credit counseling agencies assist millions of people per year. Countless community organizations offer free financial education or one-on-one coaching. Most employers offer education on retirement planning in some form, and larger employers are also offering broader financial management concepts (Mandell 2008). Many banks and credit unions offer financial education workshops to their customers. The government has launched the website mymoney.gov for self-service advice. Media personalities like Suze Orman, Dave Ramsey, and Robert Kiyosaki have brought financial education into the limelight. Even changing the practices of some of these providers can multiply the social return on the investment that fuels them.

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ideas42 set out to design a coaching approach that would help recipients have more tangible impact on their financial health. We called the one hour session a “Financial Health Check” or FHC. Even in a small, initial randomized experiment with a credit union we found that FHC recipients with no savings at the credit union had 21% more savings at the end of the study period than the control

group. The control group opted into the FHC, but was told that an appointment was not available for them.

The next section explains the behavioral barriers to taking action in more detail to set context for the behavioral interventions we used to counteract them. The section after that describes ideas42’s “Financial Health Check” pilot, the key lessons we took away from it, and how we propose to refine the initial design. The final section draws on these insights to discuss two paths for scaling up impact, one of which would be simply to enhance existing financial counseling and financial education programs with a handful of behavioral interventions.

Closing the Intention-Action Gap

The most intuitive barrier to following through on our intentions is forgetting. Karlan et al. (2010) found that simple SMS reminders to save increased balances by 6%, suggesting that at least some people were simply forgetting to make deposits. Researchers have also found that we are more likely to fail to take action when we have only a vague plan. Nickerson and Rogers (2010) found that voter turnout increases by 9 percentage points when people are asked what time they will vote, where they will be coming from, and how they plan to get to the polling station. Similarly, people are 13% more likely to get a flu shot when they are asked to make a specific plan (Milkman et al. 2012). These studies begin to quantify how much forgetting matters, but they also give us solutions – give more reminders and encourage people to make very specific plans.

If we do manage to remember what to do, tiny hassles can deter us from acting, even when the benefits are very high (Lewin 1951). For example, the prospect of receiving thousands of dollars in financial aid for college should be enough to compensate for the pain of having to fill out a lengthy form. However, Bettinger et al. (2012) found that parents with college age kids were 40% more likely to apply for financial aid and 25% more likely to enroll their kids in college if Federal Student Aid (FAFSA) forms were partially pre-filled for them using data from their tax returns. The

more hassles we can reduce, like pre-filling forms, the more likely people will be to follow through on their intentions.

A third barrier to closing the intention-action gap, after forgetfulness and burdensome processes is the failure of self-control. We have all experienced moments of weakness when we splurged on an expensive purchase or ruined our diets for the day by ordering an irresistible dessert. Psychologists suggest that our self-control is weaker if we are emotionally upset, we don't have specific goals we're adhering to, we stop monitoring our behavior, or our willpower simply gets depleted (Baumeister 2002). We can encourage more consistent behavior by asking people to set specific financial goals (Latham and Locke 1991). We can also make it harder for them to act on their impulses. In this case, we must carefully insert hassle factors rather than remove them. For example, the bank could require customers to make a phone call to authorize a charge on their credit card if it pushes their spending above a pre-set budget. An extra step can deter people from making impulse purchases both directly and indirectly by prompting them to re-evaluate the wisdom of the impulse decision.

Finally, a fourth barrier to closing the intention-action gap is that we often change our minds when the time comes to act. To improve our future financial health, we must usually forego some expenditure so that we may save or pay down debt. When we're thinking about that trade-off in the future, the benefit feels much higher than the cost. However, when the time comes to actually forego the expenditure, the cost, now immediate, feels much higher than the future benefit (Laibson 1997). For example, as a strategy for saving more, we may decide not to eat out for the next two weeks, but when a friend asks us to go to dinner the following day, saving feels too expensive. Researchers have even found that different parts of our brain are activated when we're thinking about immediate versus delayed rewards (McLure et al. 2004). Trying to get to the gym first thing in the morning is a great example—we may be totally committed when the scale reads a few

extra pounds, but when the alarm goes off at 6 am the next morning, the cost of getting out of bed feels too high a price to pay for losing a little bit of weight after weeks of painful exercising. If we make it more painful to change our mind than to stick to our commitment, then we can counteract this psychological barrier.

In cases where actions can be programmed to occur automatically in the future, like savings deposits or extra payments on a credit card, we can counteract many behavioral barriers by simply committing to them in advance. Sadly, this isn't possible in the case of getting exercise early in the morning, but it is possible for most financial services. Pre-commitment to automatic, recurring transactions is exactly what we used as the primary behavioral intervention in the FHC. The next section describes the flow of the FHC session in detail.

Financial Health Check: Pilot and Results

The Financial Health Check session followed existing best practices in financial training, but added several important behaviorally designed elements to close the intention-action gap. During a one-hour, in-person meeting, a financial coach helped participants pay down credit card debt, meet their savings goals, and reduce late fees and penalties. Just as in a traditional financial coaching session, participants sat down with the coach to go over their monthly budget, balance sheet, and credit report, but in the FHC, this part was completed quickly with approximate figures. At the end of the assessment, the coach asked the client about their goals for saving and debt management and recorded them in a worksheet. Depending on the client's situation, the coach also made specific recommendations; for example, she advised clients with low savings to build up an emergency fund.

After the financial review and goal-setting was completed, the coach used the rest of the session to set up transactions to help clients reach their goals. For clients who wanted to save more, the coach set up automatic savings transfers.

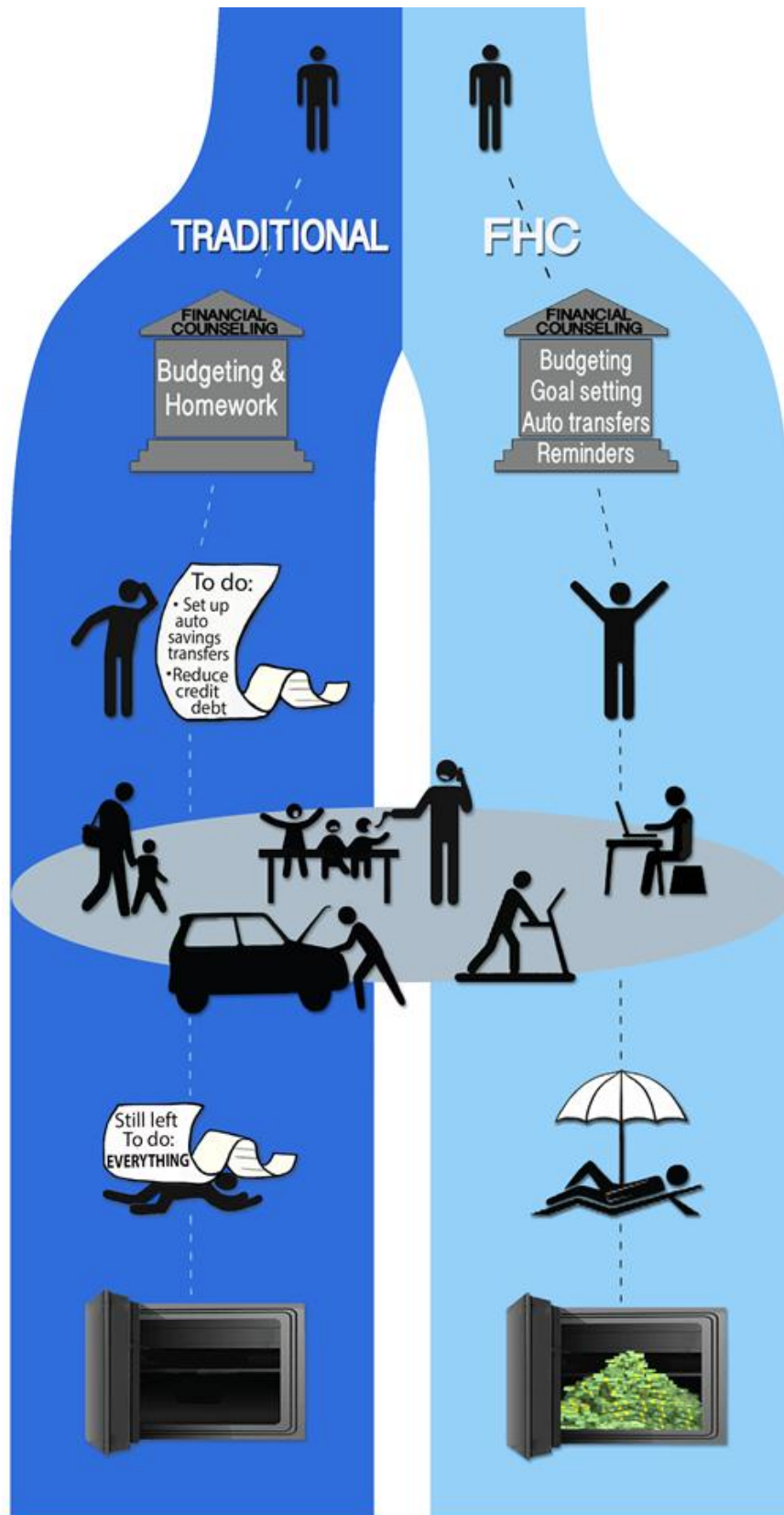


Figure 1. Two paths of financial planning. Traditional financial planning involves many steps and leads many participants to drop out of the process. A financial health check streamlines the process and closes the Intention-Action Gap.

For those who wanted to reduce their credit card debt, the coach helped them set up an automatic payment above the monthly minimum payment. If clients reported high levels of late fees, the coach set up automatic bill payments for them. Naturally, the coach only took these actions if the client agreed to them. Figure 1 shows a graphical comparison between traditional financial coaching and the FHC.

If participants were not prepared to sign up for automatic savings transfers or payments during the session, the coach provided them with the option to schedule email or text message reminders. In this case, the coach also asked the client to make a verbal commitment to save a specific amount. Clients who were having difficulty managing their credit card use had the option of leaving their credit cards at the bank as a barrier to future spending. The credit card would be returned to them at their request.

Pilot Structure and Recruitment

ideas42 partnered with a moderately sized credit union in the Pacific Northwest to test the effectiveness of the FHC. Between July, 2010 and April, 2012 the credit union mailed an invitation to 40,833 of their members to participate in a free FHC. The financial coach also called a randomly selected subset of the members, when time permitted, to attempt to recruit them for an FHC. Members met with the coach at one of the credit union’s branches.

Recruitment statistics are summarized in Table 2 below. In all, 834 members expressed interested in the FHC, half of whom were randomly selected for a session. The other half formed the control group. Not all of those assigned to treatment attended their appointment: the coach successfully completed an appointment with 341 individuals.

About 1.5% responded positively to letters, but nearly 20% of those reached by phone opted to attend a session, indicating that many people find the FHC service useful, but don’t open solicitations from their credit union or just

don’t get around to calling to make an appointment. Financial coaches called a random sample of those credit union members who received a letter. Those reached by phone represent a random sample of credit union members because calls were made at different times of the day to ensure equal chances of being available. The high response to phone calls is a promising result, and a more important measure than the letter response rate of whether a proactive financial coaching service like the FHC would be well-received by consumers.

Mailed	40,833
Responded	834
Selected for treatment group	437
Showed up for session	341
Letter response rate	~1.5%
Phone response rate (of those reached)	~20%

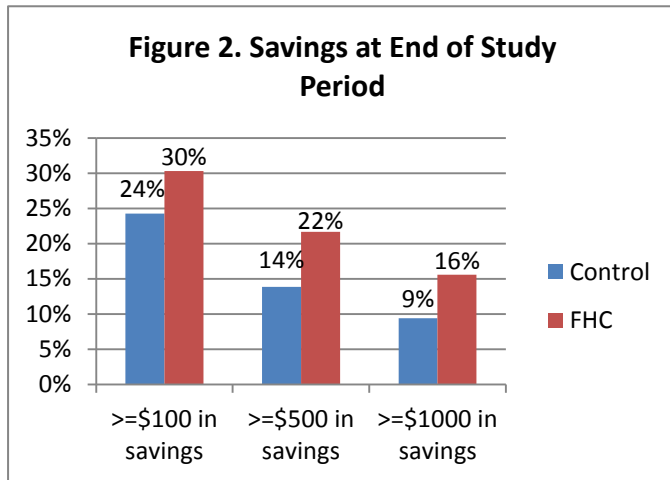
Results and Discussion

The results of the pilot were very promising, with 21% higher savings than the control group for those recipients who had no initial savings activity at the credit union. Roughly half of this group had no savings account and the other half had an account with only the minimum \$5 balance in it. Both the control and treatment groups grew their savings over the study period, but those in the treatment group had higher savings at the end of the period. The FHC treatments may have prompted more people to follow through on their intention to save, or encouraged them to save a larger amount. The change is measured between June 2010 and June 2012 as all FHC sessions were delivered between these two points in time. The chart below shows the proportion of FHC recipients in the treatment vs. control group who had more than \$100, \$500, or \$1000 in savings at the end of the study period.

Five percent of recipients signed up for an automatic savings transfer. Another 18% of recipients signed up for monthly reminders to save. Uptake of automatic credit card

¹ Detailed recruitment statistics and demographics are provided in the technical appendix.

or bill payments was lower at 3.9% of FHC recipients, and very few recipients signed up for reminders to set up automatic payments.



Through the pilot we also learned that while automatic transactions are the ideal behavioral intervention, people are not willing to commit to them in every setting. The New America Foundation’s AutoSave pilot, for which ideas⁴² provided some behavioral design guidance, found similar results (Chan and Schultz 2012). AutoSave attempted to enroll employees in an automatic payroll deduction that went to an unrestricted savings account. When employees signed up when they were recruited via a face-to-face discussion, or with the help of supervisors (Schultz 2010), especially at smaller employers. Qualitative insights from the FHC and AutoSave pilots suggest that when people trust the financial institution or see their peers signing up, they are more likely to agree to automatic, recurring transactions. However, those on very tight budgets may value flexibility over the convenience of automatic deductions, and may perceive automatic transactions as too rigid for their circumstances. Or they may be skeptical that the rough budget designed with the help of their FHC counselor correctly estimated how much free cash flow they have each month.

Learning from the FHC and AutoSave pilots, we can design an even more effective financial-coaching approach that incorporates behavioral enhancements into financial education programs. One way we could utilize the power of

automation while still ceding control to the client is by sending an email with “Cancel” and “Postpone” buttons the day before a payment is set to go out. To further communicate flexibility, coaches could emphasize that the savings are accessible at any time. Drawing from the Save More Tomorrow program (Thaler and Benartzi 2004) that puts future raises towards retirement savings, coaches could recommend starting with a very small monthly deposit set to automatically increase over time, again with cancellation reminders delivered in advance.

Scaling Impact

We designed the FHC as a stand-alone, optional service so that we could test whether consumers who chose to take part in an FHC are revealing themselves to be more committed to improving their financial health. That indicator can be very useful to lenders who are trying to determine whether a particular consumer is a safe bet for a loan. The data traditionally used by lenders in making credit decisions are backward-looking. If an otherwise responsible and financially capable consumer suffered a one-time shock that damaged her credit history, she may not be able to obtain affordable credit. Through a financial health check we could help consumers like this get back on their feet and help lenders discover profitable new customers. We expect that lenders would be willing to pay for this benefit, so we would be able to scale up the FHC service in a financially sustainable way to the benefit of both consumers and lenders.

The present pilot did not have sufficiently effective recruitment to show any conclusive results on this positive selection effect, however. Many credit union members who would have chosen to receive an FHC, and should be on a positive financial trajectory, probably ignored the credit union’s letter or just failed to follow through by calling for an appointment. The large difference between the letter response rate (1.5%) and phone outreach response (20%) is a convincing clue that the pilot suffered from this problem. We intend to continue testing for positive selection by employing different recruitment strategies in future pilots.

Even without positive selection as a valuable indicator, going through an FHC can make the recipient more resilient to financial downturns. By building savings, recipients can buffer themselves against shocks, and by reducing high cost debt they can free up cash flow for necessary expenses. Both make them more capable of handling a mortgage, auto or student loan. Lenders may want to offer an FHC to applicants who are at the borderline of qualifying for a loan.

A financially sustainable scaling strategy is ideal; however, a more immediate and much simpler path is also worth pursuing. The financial literacy and counseling community can use behavioral insights to enhance the interactions that already occur with millions of consumers who call into credit counseling. ideas42's FHC trial showed that taking actions during a coaching session can multiply its impact. The same principle applies to financial education workshops. Bertrand et al. (2006) found that having a bank representative present to open accounts during a financial education workshop increased uptake by 20%. Similarly, the instructor could assist attendees to take other actions, like setting up a monthly savings deposit, before leaving the

workshop.

Providers of financial counseling and education may be legitimately concerned that many financial transactions are logistically impossible to execute during a session. For example, to sign up for paycheck direct deposit, most clients must fill out a form and deliver it to their employer's HR department. For these same reasons, we focused the FHC on just three transactions that we knew we could execute during the sessions: saving, debt reduction, and bill payment. Similarly, counselors and financial educators could focus just on the few transactions that would be feasible for any client with access to online banking. For tasks that clients must complete later, behavioral interventions like reminders and specific plans can help increase follow-through.

The Financial Health Check pilot showed that we can multiply the impact of financial counseling and education with just a few, simple changes. Using behavioral insights, we can ensure that consumers follow through on all the good advice they get from counselors and instructors, and achieve measurable improvements in their financial health.

References

- Baumeister, R. F. (2002). Yielding to temptation: Self-control failure, impulsive purchasing, and consumer behavior. *Journal of Consumer Research*, 28(4), 670–676.
- Bertrand, M., Mullainathan, S., & Shafir, E. (2006). Behavioral economics and marketing in aid of decision making among the poor. *Journal of Public Policy & Marketing*, 8–23.
- Bettinger, E. P., Long, B. T., Oreopoulos, P., & Sanbonmatsu, L. (2012). The Role of Application Assistance and Information in College Decisions: Results from the H&R Block Fafsa Experiment*. *The Quarterly Journal of Economics*, 127(3), 1205–1242.
- Chan, P. & Schultz, C. (2012). Savings Innovations in the Workplace: Insights from the AutoSave Pilot. Presented at Grassroots & Groundwork Conference. Retrieved from <http://assets.newamerica.net/sites/newamerica.net/files/profiles/attachments/AutoSaveOverviewGrassrootsGroundwork6-7-12.pdf>
- Collins, J. M. (2012). The Impacts of Mandatory Financial Education: Evidence from a Randomized Field Study. *Journal of Economic Behavior & Organization*.
- Collins, J. M., & O'Rourke, C. M. (2010). Financial Education and Counseling—Still Holding Promise. *Journal of Consumer Affairs*, 44(3), 483–498. doi:10.1111/j.1745-6606.2010.01179.x
- Duflo, E., & Saez, E. (2003). The role of information and social interactions in retirement plan decisions: Evidence from a randomized experiment. *The Quarterly Journal of Economics*, 118(3), 815–842.
- Karlan, D., McConnell, M., Mullainathan, S., & Zinman, J. (2010). Getting to the top of mind: How reminders increase saving. National Bureau of Economic Research.
- Laibson, D. (1997). Golden eggs and hyperbolic discounting. *The Quarterly Journal of Economics*, 112(2), 443–478.
- Latham, G. P., & Locke, E. A. (1991). Self-regulation through goal setting. *Organizational behavior and human decision processes*, 50(2), 212–247.
- Lewin, K. (1951). *Field theory in social science: selected theoretical papers* (Edited by Dorwin Cartwright.).
- Mandell, L. (2008). Financial education in the workplace: Motivations, methods, and barriers. Prepared for Asset Building Program, New America Foundation. Retrieved from http://www.newamerica.net/files/nafmigration/Financial_Education_in_the_Workplace.pdf
- Mandell, L., & Klein, L. S. (2009). The impact of financial literacy education on subsequent financial behavior. *Journal of Financial Counseling and Planning* Volume, 20(1), 16.

McClure, S. M., Laibson, D. I., Loewenstein, G., & Cohen, J. D. (2004). Separate neural systems value immediate and delayed monetary rewards. *Science*, 306(5695), 503–507.

Milkman, K. L., Beshears, J., Choi, J. J., Laibson, D., & Madrian, B. C. (2012). Following through on good intentions: the power of planning prompts. National Bureau of Economic Research.

Nickerson, D. W., & Rogers, T. (2010). Do you have a voting plan? Implementation intentions, voter turnout, and organic plan making. *Psychological Science*, 21(2), 194–199.

Servon, L. J., & Kaestner, R. (2008). Consumer Financial Literacy and the Impact of Online Banking on the Financial Behavior of Lower-Income Bank Customers. *Journal of consumer affairs*, 42(2), 271–305.

Schultz, C. (2010) Building Non-Retirement Savings through the Workplace: Findings from the AutoSave Pilot. Presented at Conference on Savings Strategies & Innovations for Low-Income Households. Retrieved from [http://assets.newamerica.net/sites/newamerica.net/files/profiles/attachments/Building%20Non-Retirement%20Savings%20through%20the%20Workplace%20\(December%202010\).pdf](http://assets.newamerica.net/sites/newamerica.net/files/profiles/attachments/Building%20Non-Retirement%20Savings%20through%20the%20Workplace%20(December%202010).pdf)

Thaler, R. H., & Benartzi, S. (2004). Save More Tomorrow™: Using Behavioral Economics to Increase Employee Saving. *Journal of Political Economy*, 112(S1), S164–S187. doi:10.1086/380085

Technical Appendix

The Financial Health Check (FHC) was designed to be run as a randomized controlled trial. Individuals and families were recruited into the study, but only half of those who agreed to participate were offered the FHC treatment. Offering the treatment to only a randomly determined subset of interested individuals allows us to separate the “treatment” effects from “opt in” effects. This is especially important in determining the effectiveness of the financial health check – people who are interested in learning about personal finance may be on a relatively positive financial trajectory. If treatment was entirely voluntary, a program might appear to be effective without actually changing behavior.

Unfortunately, an analysis of the characteristics of the “control” and “treatment” groups at baseline—before anyone received the financial health check—revealed substantial differences between our control and treatment groups. Before the experiment took place, people in the control group tended to have more assets located at the credit union, less credit card debt, and higher credit scores. Table 1 presents the differences between the control and treatment groups at baseline. Note that the overall pattern of the differences between treatment and control groups at baseline uniformly indicate that the FHC treatment group was in worse financial shape than the control group. In general, we expect the result of these differences will be to bias FHC impact estimates downward.

There are many possible reasons that we might observe these differences in baseline characteristics:

- The financial coaches, who recruited subjects, may have reassigned people who seemed especially interested in the FHC to treatment, rather than give them the bad news that they were assigned to control. Interviews with the coaches revealed this happened on at least one occasion.
- People who called to find out more about the FHC, but ultimately decided they were not interested may have been erroneously assigned to the control group.

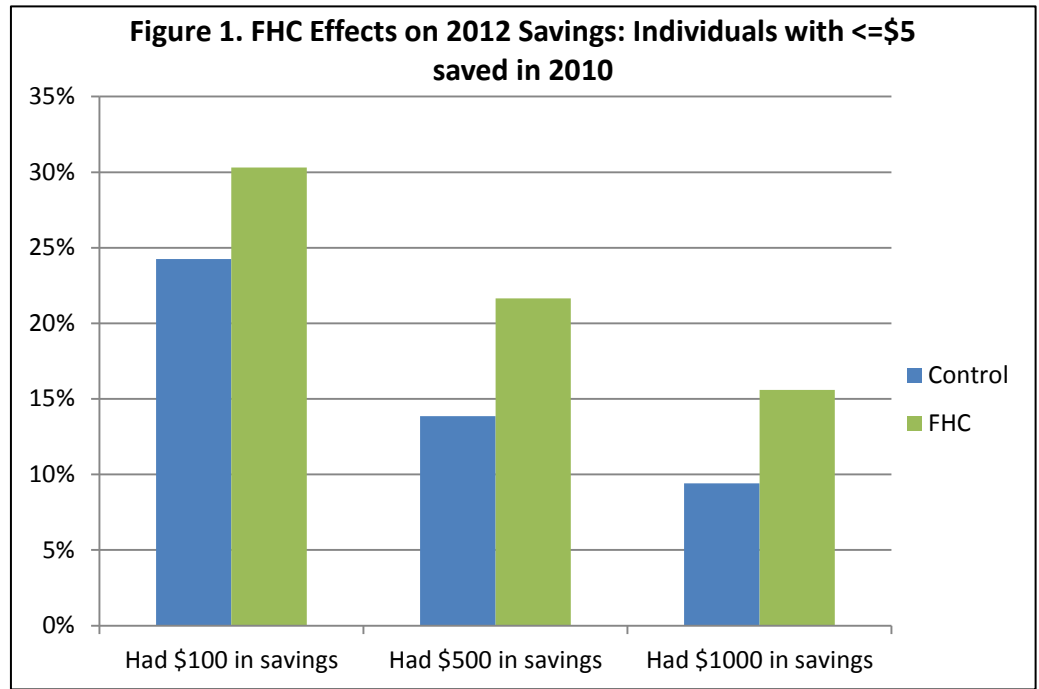
- People who were very interested in receiving the FHC may have continued to call even after having been put into the control group until they were eventually assigned to treatment.

These flaws in the randomization process, and the resulting differences between the observable characteristics of the treatment and control groups, necessarily impairs the validity of simple treatment to control comparisons in this study. In our analysis of FHC impacts, therefore, we took two approaches. First, we isolated a similar population, those with no or little savings, and analyzed the effect of the FHC on that subpopulation. This is the result reported in the primary paper. Second, we used a statistical method called propensity score matching to estimate any bias in the determination of treatment assignment, and correct for errors as much as possible. In both analyses, our primary outcome of interest is whether an individual had managed to accumulate a certain amount (\$100, \$500 or \$1000) by the end of the experiment.

Table 1: Baseline Summary Statistics		
	Control	FHC
Savings	\$1137 (166)	\$797 (316)
Total Assets	\$9322 (1247)	\$2624*** (547)
Bank Card Balance	\$3,239 (292)	\$4,506** * (378)
Had a delinquent account in the last 6 months	0.18 (0.02)	0.24** (0.02)
Had a delinquent account in the last 24 months	0.25 (0.02)	0.31** (0.02)
Had a delinquent bank card account in the last 24 months	0.09 (0.01)	0.11 (0.02)
Credit Score	733.06 (5.79)	707.85*** (4.53)
n	383	427
Standard errors shown in parentheses. Asterisks on FHC values indicate significance of the difference from control values: * = p<.10, ** - p <.05, *** - p<.01		

Isolation Analysis

Isolating and analyzing those who had little to no savings has both an analytical and a substantive purpose. As discussed earlier, it restricts the analysis to individuals who were similar to each other before the intervention began in the most important dimension for our outcomes of interest. Moreover, this is the subpopulation we are most interested in. The FHC is designed to assist low-income people to save money, manage their debt, and avoid penalty fees. While we delivered it without conditioning on initial savings, we did not design it (nor expect it) to have a large effect on individuals who were already saving successfully and were otherwise in good financial health.



FHC on average had savings balances that were 21% higher than those in the control group. In raw numbers, average balances in 2012 were \$770 and \$987 among controls and treatments respectively – a positive difference of \$217 for FHC recipients. Treated individuals are 18% more likely to have \$100 or more saved, 30% more likely to have \$500 or more saved, and 30% more likely to have save \$1000 (See figure 1).

We also observe that FHC-treated individuals who had high savings initially saw their savings located at the credit union decrease over the study period. While we cannot directly observe why funds decreased in these cases it is plausible that individuals with large amounts of savings realized they should invest their excess funds in higher return

Table 2: FHC Impact on Logged 2012 Savings (Low Initial Savings)

Controls:	None	Credit Score	Median Credit Score Dummy
FHC	0.21* (0.11)	0.29*** (0.10)	0.28** (0.10)
Constant	1.30*** (0.08)	-0.36 (0.27)	1.13*** (0.08)
N	810	810	810

Robust standard errors shown in parentheses. Asterisks indicate significance: * = p<.10, ** - p <.05, *** - p<.01 Individuals had low initial savings if they had \$5 in their savings account, or no savings.

We estimate FHC impacts on savings levels for the subgroup of study participants who had low initial savings—essentially no savings—at baseline. This includes both individuals who had no savings located at the credit union, and those who had opened an account, but not made any deposits over the \$5 minimum. In total, this group made up 53% of our sample.

Table 2 presents these results. We observe that, among those with low initial savings, individuals who received the

Table 3: FHC Impact on Logged 2012 Savings (High Initial Savings)

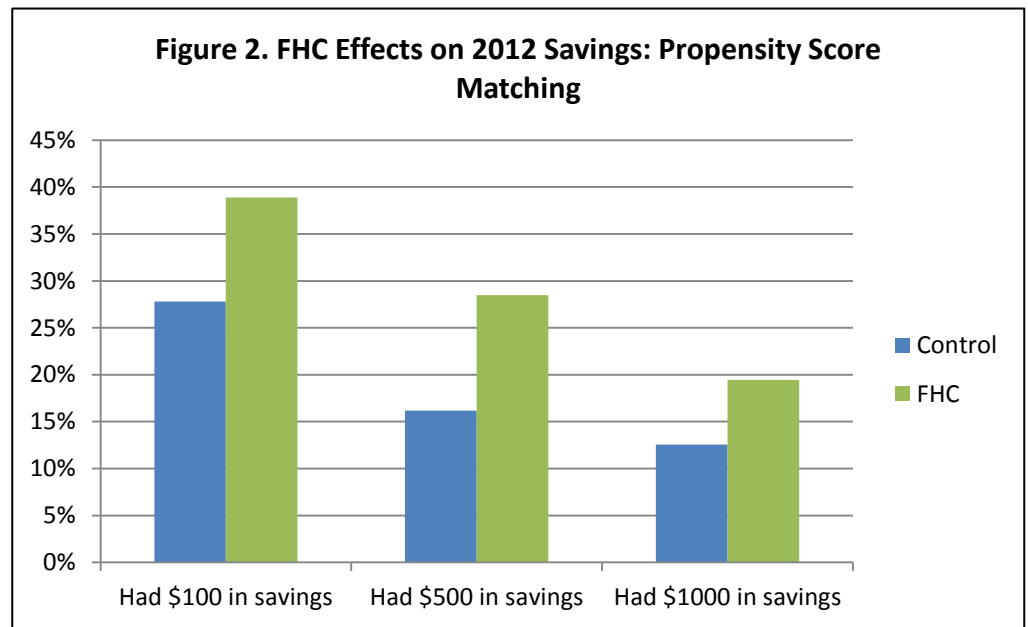
Controls:	None	Credit Score	Median Credit Score Dummy
FHC	-0.37*** (0.12)	-0.25** (0.12)	-0.29** (0.12)
Constant	2.47*** (0.08)	0.66** (0.31)	2.20*** (0.11)
n	810	810	810

Robust standard errors shown in parentheses. Asterisks indicate significance: * = p<.10, ** - p <.05, *** - p<.01 Individuals had high initial savings if they had more than \$5 (the minimum) in their savings account.

instruments after the FHC.

Propensity Score Matching Analysis

A concern about the isolation analysis is that any analysis of subgroups can be highly sensitive to how the subgroups are defined, which makes it difficult to determine the strength of the effects. As such, we also conducted an analysis using propensity score matching. A propensity score matching analysis is conducted in two stages. First, we estimate the probability that any given individual would have been assigned to treatment, based on the 2010 data (taking account of their credit score and how much money they held in any accounts at the credit union). This estimate is



matching. Using these weights, the FHC has a sizeable effect on the probability of a treated individual having savings at the end of the study period. Treated individuals are 41% more likely to have \$100 or more saved, 58% more likely to have \$500 or more saved, and 62% more likely to have save \$1000 (See Figure 2).

Variable	Sample	FHC	Controls	Standard Error	T-stat
Had \$100 in Savings	Unmatched	0.42	0.43	0.04	-0.32
	ATT	0.39	0.28	0.06	1.81
Had \$500 in Savings	Unmatched	0.29	0.31	0.03	-0.42
	ATT	0.28	0.16	0.05	2.28
Had \$1000 in Savings	Unmatched	0.21	0.25	0.03	-1.36
	ATT	0.19	0.13	0.05	1.44

Propensity Score Analysis was conducted using Mahanobolis kernel matching. Propensity score was constructed using the 2010 values for credit score, and the logs of checking account balance, savings account balance, money market account balance, certificate of deposit balance, and credit balance (plus one).

the propensity score.

Second, the analysis is conducted with each individual weighted according to the propensity score. Table 3 shows the effects of the FHC on savings using propensity score

Conclusion

While the flawed randomization makes it difficult to draw conclusive lessons from the FHC experiment, when we use appropriate statistical methods to mitigate the bias, we do observe that it has a large effect on treated individuals' and families' ability to save. Even small amounts of liquid savings can reduce the hardship individuals and families experience. The results are suggestive of the potential of using behavioral economics to effectively design small interventions that can make it easier for people in a variety of circumstances to save, and point toward promising directions for future work.



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