



RESEARCH
BRIEF

Can Behavioral Economics Increase Savings and Member Loyalty?



AUTHOR

Melina Palmer
The Brainy Business

🕒 15 MINUTE READ

In this research brief, Melina Palmer provides insights from behavioral economics that can be leveraged to increase savings and member loyalty for credit union members.

OVERVIEW

Why is it so hard for people to save money—and why do so many initiatives to encourage saving fail? Research in the field of behavioral economics suggests that in order to help members save, it is better to create programs that take into account how people actually do behave rather than how we expect they *should* behave.

RESEARCH BRIEF

This brief introduces concepts from the field of behavioral economics, provides a case study for how to put these insights into use, and offers tips for credit unions to launch their own experiments for improving member savings and loyalty. These experiments can increase your understanding about what works in practice while also bringing greater value to your membership.

What Does Research from Behavioral Economics Show?

When it comes to improving savings rates, financial education is not enough, and existing products and programs are not built to consider the actual behavior of consumers (Ariely and Foley 2016). An analysis of



201 studies discovered that less than 0.1% of the variance in financial behavior can be explained by financial literacy education—and the effects diminish over time (Fernandes, Lynch, and Netemeyer 2014). For greater detail, see [The Case for Workplace Financial Well-being](#) (Nelms 2019). Behavioral economists, meanwhile, have shown how a range of psychological and behavioral tendencies—including loss aversion, mental accounting, consideration of opportunity costs, and hyperbolic time discounting—can have significant impacts on people’s savings habits, or lack thereof (Kahneman 2011; Tversky and Kahneman 1991; Prelec and Loewenstein 1998; Ariely and Kreisler 2017; Spiller 2011). This research shows that people are typically bad at planning for the future (hyperbolic time discounting) and tend to think of their money as being in different buckets with different rules (mental accounting). They also tend to focus on not losing out on the opportunity to get something today (loss aversion)—for instance, why save money you could spend today—and ignore the true cost of delayed savings (opportunity cost).

Time discounting—that is, making decisions with benefits today without thinking about tomorrow—is especially common; studies have shown that someone who is particularly disposed to time discounting might actually see their future self as a completely different person (Frederick, Loewenstein, and O’Donoghue 2002; Sunstein 2013). It is easy to commit someone else to eat better, save more, or start exercising, but the follow-through is problematic.

Specific short-term, positively framed goals can help combat time discounting and result in increased success; the simpler the plan or goal, the easier it might be for someone to stick to it (Gollwitzer 1999). In addition, externally imposed deadlines can improve the performance of a task and the likelihood of meeting a goal (Ariely and Wertenbroch 2001). And in order to experience a sense of achievement, it is important to make consistent and meaningful progress toward a goal (Amabile and Kramer 2011). Therefore, being provided an item that allows for the consistent tracking of short-term savings goals (which have been implemented by a third party) could increase the ability to save.

Continual reminders are also important for keeping a goal top of mind, which can help increase savings behavior (Karlan et al. 2014). Seeing an item intended as a reminder regularly can help encourage behavior. In a “nudge” experiment, Thaler and Sunstein (2008) noted that after changing the order of items in a cafeteria line, people were more likely to choose healthy options when they were kept at the front of the line instead of the end. Being part of a group can help influence behavior as well, so suggesting that others have been able to save using this method could create a positive shift in savings habits. Representation of savings in others can be powerful (Bargh and Chartrand 1999, 465).

Finally, giving a gift—even a small one—can encourage the recipient to want to reciprocate, especially when the gift is personalized and unexpected (Cialdini 2012). When approached with a friendly action, people are more likely to be cooperative and kind, even when the reciprocity is costly for them or if the gift is provided by a stranger (Fehr and Gächter 2000). In short, people are more likely to be more committed and obliging after someone does them a favor (Goei et al. 2007). It may be that even the gift of an unsolicited mechanism to help someone achieve the goal of saving more could encourage follow-through.

Previous studies have had some success with increasing savings by adopting concepts like time discounting and precommitment from behavioral economics; see, for example, *Enhancing Savings Behaviors of Low- to Middle-Income Families* (Ariely and Foley 2016). In one example, the Save More Tomorrow program—a national retirement savings intervention—used time discounting to its advantage by having participants commit in advance to save in the future, with a portion of future salary increases automatically going toward retirement. Of those presented with this opportunity, 78% joined and 80% were still participating after the fourth pay raise, increasing their retirement savings by an average of 10% over the 40-month period (Benartzi and Thaler 2004). Another study in the Philippines found the benefits of combining precommitment and time discounting: women who were less sensitive to discounting rates were significantly more likely to open a savings account (Ashraf, Karlan, and Yin 2006).

One notable experiment in Kenya was successful in combining precommitment, time discounting, reciprocity, and physical representation of savings (Akbas et al. 2016). This study provided participants with a gold coin with numbers around the edge to serve as a reminder to save. Researchers also tested the effects of providing significant matching funds, text message reminders, and the gold coin reminder combined with matching funds on savings rates. The gold coin by itself did best out of all the conditions.

THE STUDY

From Gold Coin to Fridge Magnet

The study in this brief replicated three of the key factors from the Kenya gold coin research: a physical manifestation/representation of savings, counteracting hyperbolic time discounting, and reciprocity. Our study emerged from a partnership between the researcher, Filene Research Institute, and Point West Credit Union of Portland, Oregon (more details in Appendix A). Data were collected from 240 members who were randomly assigned into control and experimental groups. While a gold coin worked in Kenya, we made use of a different form of physical representation: a scratch-off refrigerator magnet (Figure 1).

FIGURE 1

REFRIGERATOR MAGNET PROVIDED TO MEMBERS TO TRACK SAVINGS



The control group (80 individuals) received no contact and their deposit balances were tracked without notification. The remaining 160 participants received a mailed letter and email explaining the importance of saving and how the credit union had selected them to pilot a new 24-week savings program (see the letter in Appendix B). The letter encouraged them to set a total savings goal and a weekly dollar amount to save in order to reach that goal. The suggestion to save weekly was established for them to encourage compliance and small victories. To help leverage social pressures and the desire to emulate others, the letter mentioned that this setup was based on a program that was proven to increase savings rates for participants. The letter group received communications only, and a magnet group also received the “gift” of a refrigerator magnet. A check-in email was also sent at the 12-week mark.

Upon completion of the 24 weeks, pre- and post-study savings balances were recorded for comparison. A final email was sent to thank the member for participating, encourage them to continue saving, and ask them to answer a “likelihood to recommend” question using Point West’s already established Net Promoter Score (NPS) assessment system. Measures for each participant were matched from before and after the study period.

FIGURE 2

SCRATCH-OFF REFRIGERATOR MAGNET



As in the Kenya experiment, the research lasted for 24 weeks, with each week numbered around the edges of the magnet. A magnet was chosen to make the act of saving public, with consistent reminders of the goal and precommitment on a subconscious level every time the participant saw the magnet—when, for example, walking through the kitchen. The magnet edge included scratch-off material that individuals could use to track each week they saved (Figure 2). Weekly scratch-offs provided additional reminders and revealed a positive comment to encourage continued savings.

RESULTS

The group receiving the behavioral economics nudges in the form of a letter, emails, and the fridge magnet saved more and also had a larger increase in their likelihood to recommend Point West. What made the magnet treatment successful? It served as a consistent reminder to save and of the accomplishments already made toward the savings goals. The magnet also counteracted time discounting with its weekly schedule and small, consistent rewards from the scratch-off activity. Also, the magnet served as a gift from Point West that may have encouraged participants to reciprocate with savings. Finally, likelihood to recommend the financial institution was tested before and after the

FIGURE 3

CHANGE IN SAVINGS DURING STUDY PERIOD

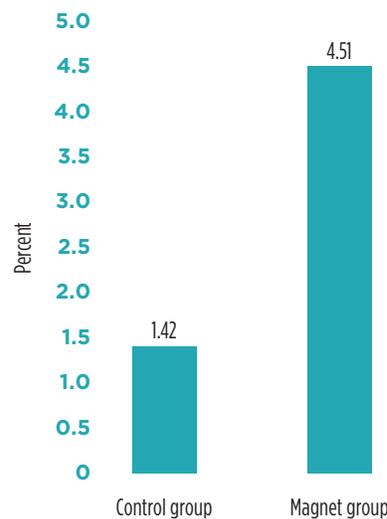
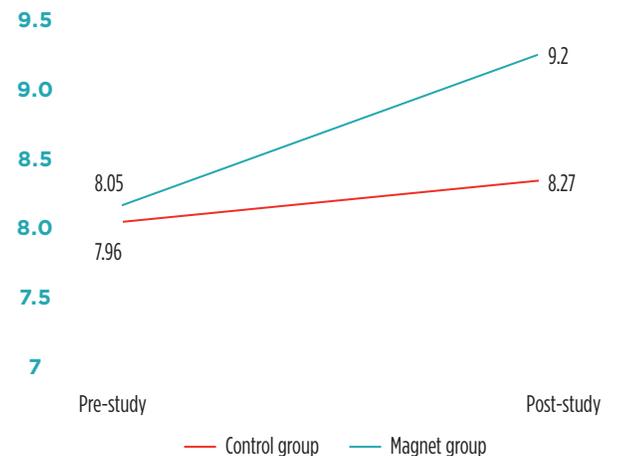


FIGURE 4

PRE-STUDY AND POST-STUDY “LIKELIHOOD TO RECOMMEND”



experiment. The question asked, using a scale of 0 to 10, was, “How likely is it that you would recommend Point West Credit Union to a friend or colleague?”

The trends from this observational study were encouraging, as the study group with the best outcomes received the full benefit of behavioral economics nudges and enjoyed the largest increase in savings and likelihood to recommend. The observational nature of this study makes the findings even more encouraging. Because there was no precommitment with the members, we do not know if those individuals were saving using other means, their thoughts on saving, or if they placed the items on their refrigerator and/or used the scratch-off tracking mechanism. What we do know is that the magnet group had a higher percentage change in savings and increased likelihood to recommend. With a relatively small sample size, the study warrants further research to identify whether the outcomes can be attributed to the magnet intervention or if other factors were involved.

WHAT ARE THE CREDIT UNION IMPLICATIONS?

Many financial institutions sponsor savings programs, and yet many have not helped to solve the problem of undersaving. Perhaps behavioral economics and its insights into the way humans actually behave (instead of how one might logically think they *should* behave) can offer an answer. Using the concepts of time discounting and a physical manifestation of savings in a prominent place to remind people of their desire to save may have contributed to the increased balances and likelihood to recommend in this study, although the study would need to be replicated and sample size expanded to confirm the statistical validity of these results. In addition, simple acts of reciprocity, including helping a member to save more and providing a tracking mechanism, can potentially increase a member’s likelihood to recommend their credit union to others.

Simple yet effective insights from behavioral economics can be put to use in nudging desired member behaviors while increasing engagement. What’s more, neither of the interventions presented here requires a large investment or expensive products from the credit union—simply some focused attention on an item that can help members achieve their savings goals.

We encourage credit unions to conduct their own experiments to identify what works best for their members. For points of departure, consider two additional Filene reports, [*Best Practices Are Dead. Experiment Instead!*](#) (Filene Research Institute 2018) and [*Diving Headfirst into the \(Applicant\) Pool*](#) (Bermiss and Darnell 2018).

Setting Up Your Own Experiments

Every organization can and should do experiments—and they do not need to be complicated. While there are many times where it is best to bring in an expert research team, there are ways to learn and grow from the work you do each day in your credit union. For an example on how research helped a credit union learn, consult [Using Analytics to Meet Member Needs](#) (Brown, George, and Callen 2019). When you set up your experiments, keep these three key things in mind: be thoughtful, keep it small, and test as often as you can.

Being thoughtful means looking outside of what you always do or what you “know” to be true. Often, the things we take for granted are those that present the biggest opportunity for learning. Behavioral economics teaches that humans do not always act “rationally” or with much forethought. Fight the tendency to make assumptions about people’s behavior as you look for opportunities to learn in your organization. Before you jump in to build a test, know what problem you are trying to solve—and why it matters to solve it. What are you trying to achieve, and why does it matter for your credit union and your members? Consult the Filene reports [Accessible Financial Services Incubator](#) (Hofheimer, Campbell, and Wooden 2016) and [Reaching Minority Households Incubator](#) (Hofheimer et al. 2018) for ideas and strategies to test solutions.

When designing tests, keep them as small as possible. Yes, it would be great to learn everything, but adding too many variables can make it difficult to understand what contributed to the findings. For an extreme example, Google tested over 40 shades of blue to determine the color that would generate the most clicks! The final blue was estimated to have increased Google’s ad revenue by over \$200 million each year (Hern 2014). Small tweaks can make a big difference that really add up. Where are those little experiments hiding in your credit union?

Finally, test early and often. Consider taking part in [Filene’s Innovation Programs](#). Smaller experiments allow for frequent, nimble testing. The more you test, the more you learn. It is in the iteration of experiments and pilots that the real findings start to emerge and come together. Yes, there may be studies that come up with no noticeable difference, but that is still an important finding. These nonfindings can identify factors or programs that do not matter to your members and are potentially a waste of time and resources; they show you areas where you might consider saying “no” in your strategy. This can help your credit union run leaner and smarter than it would have without testing.

So, what are you waiting for? It’s time to experiment!



filene.org/research/report/483

BIBLIOGRAPHY

Akbas, M., D. Ariely, D. A. Robalino, and M. Weber. 2016. *How to Help the Poor to Save a Bit: Evidence from a Field Experiment in Kenya*. IZA Discussion Paper.

Amabile, T., and S. J. Kramer. 2011. "The Power of Small Wins." *Harvard Business Review* 89 (5).

Ariely, D., and P. Foley. 2016. *Enhancing Savings Behaviors of Low- to Middle-Income Families*. Filene Research Institute Report #406. filene.org/learn-something/reports/enhancing-savings-behaviors-of-low-to-middle-income-families.

Ariely, D., and J. Kreisler. 2017. *Dollars and Sense: How We Misthink Money and How to Spend Smarter*. New York: HarperCollins Publishers.

Ariely, D., and K. Wertenbroch. 2001. "Procrastination, Deadlines, and Performance: Self-Control by Precommitment." *Psychological Science* 13 (3): 219–24.

Ashraf, N., D. Karlan, and W. Yin. 2006. "Tying Odysseus to the Mast: Evidence from a Commitment Savings Product in the Philippines." *Quarterly Journal of Economics* 121 (2): 673–97.

Bargh, J. A., and T. L. Chartrand. 1999. "The Unbearable Automaticity of Being." *American Psychologist* 54 (7): 462–79.

Benartzi, S., and Thaler, R. H. 2004. "Save More Tomorrow: Using Behavioral Economics to Increase Employee Saving." *Journal of Political Economy* 112 (1): S164–S187.

Bermis, Y. S., and S. Darnell. 2018. *Diving Headfirst into the (Applicant) Pool: How Employee Attraction Impacts Employee Retention*. Filene Research Institute Report #453. <https://filene.org/453>.

Brown, M., M. George, and B. Callen. 2019. *Using Analytics to Meet Member Needs: A Case Study of Kern Schools FCU*. Filene Research Institute Report #471. filene.org/471.

- Cialdini, Robert.** 2012. *Science of Persuasion*. Influence at Work video, 11:50, November 26. www.youtube.com/watch?v=cFdCzN7RYbw.
- Fehr, E., and S. Gächter.** 2000. "Fairness and Retaliation: The Economics of Reciprocity." *Journal of Economic Perspectives* 14 (3): 159–81.
- Fernandes, D., J. G. Lynch, and R. G. Netemeyer.** 2014. "Financial Literacy, Financial Education, and Downstream Financial Behaviors." *Management Science* 60 (8): 1861–83.
- Filene Research Institute.** 2018. *Best Practices Are Dead. Experiment Instead! Research in Action Recap*. Filene Research Institute Report #466. filene.org/466.
- Frederick, S., G. Loewenstein, and T. O'Donoghue.** 2002. "Time Discounting and Time Preference: A Critical Review." *Journal of Economic Literature* 40 (2): 351–401.
- Goei, R., A. Roberto, G. Meyer, and K. Carlyle.** 2007. "The Effects of Favor and Apology on Compliance." *Communication Research* 34 (6): 575–95.
- Gollwitzer, P.** 1999. "Implementation Intentions: Strong Effects of Simple Plans." *American Psychologist* 54 (7): 493–503.
- Hern, A.** 2014. "Why Google Has 200m Reasons to Put Engineers over Designers." *The Guardian*, February 5. www.theguardian.com/technology/2014/feb/05/why-google-engineers-designers.
- Hofheimer, G., C. Campbell, and C. Wooden.** 2016. *Accessible Financial Services Incubator*. Filene Research Institute Report #389. filene.org/389.
- Hofheimer, G., R. Foss, A. Lee, and C. Wooden.** 2018. *Reaching Minority Households Incubator*. Filene Research Institute Report #452. filene.org/452.
- Kahneman, D.** 2011. *Thinking, Fast and Slow*. New York: Farrar, Straus and Giroux.
- Karlan, D., M. McConnell, S. Mullainathan, and J. Zinman.** 2014. "Getting to the Top of Mind: How Reminders Increase Saving." *Management Science* 62 (12): 3393–411.
- Nelms, T. C.** 2019. *The Case for Workplace Financial Well-Being: The View from Credit Unions*. Filene Research Institute Report #480. filene.org/480.
- Prelec, D., and G. Loewenstein.** 1998. "The Red and the Black: Mental Accounting of Savings and Debt." *Marketing Science* 17 (1): 4–28.
- Spiller, S. A.** 2011. "Opportunity Cost Consideration." *Journal of Consumer Research* 38 (4): 595–610.
- Sunstein, C. R.** 2013. *Simpler: The Future of Government*. New York: Simon & Schuster Paperbacks.
- Thaler, R. H., and C. R. Sunstein.** 2008. *Nudge: Improving Decisions about Health, Wealth, and Happiness*. New York: Penguin Books.
- Tversky, A., and D. Kahneman.** 1991. "Loss Aversion in Riskless Choice: A Reference-Dependent Model." *Quarterly Journal of Economics* 106 (4): 1039–61.

Data Collection via Credit Union Partners

Credit unions are particularly motivated to help their members find ways to be better at saving. Point West Credit Union agreed to be part of the study, allowing a subset of its members to receive the materials and be included in the research process. The credit union obtained information from existing member databases, which meant that no members were contacted or surveyed in advance. In addition, the researcher did not obtain any identifiable member data (names, social security numbers, account numbers, etc.), as the credit union was instructed to remove this information before providing data to the researcher.

Participants

For this research study, the participating credit union performed cuts of the data to remove outliers and children from the research pool. This left a population of all the credit union's members ages 21 to 65, with annual incomes of \$25,000 to \$250,000, who had a valid physical address and email address on file and who had completed an NPS survey with the credit union in the past year. Once the population was identified, simple random sampling produced a list of 240 members for the research. An additional random process divided the participants into three equal groups: control, letter only, and letter with magnet. Participants were not notified in advance that this process was part of a research study. Instead, the credit union executed the materials as if it were any other new program or product within its normal course of business.

Analysis

The first hypothesis tested was that the magnet group would save more than the control and letter-only groups as measured by the difference between savings deposit balances on the first day of the study and the final day of the study six months later. Outliers were removed and a repeated measures analysis of variance (ANOVA) was used to identify differences in savings. Although the results were not statistically significant, the pattern of savings did trend in the expected direction. It is not clear whether the results were not significant because of sample size or the percentage change in savings (large standard deviations), but further research is recommended to determine if statistically significant results can be found.

The second hypothesis tested was that the magnet group would have a higher “likelihood to recommend” Point West Credit Union after the study was completed. Again, a repeated measures ANOVA was used to determine if there was a difference between the pre- and post-study period responses to a likelihood to recommend question. Although the results were not significant, the pattern of likelihood to recommend did trend in the expected direction. Since only 62 of the 240 participants completed the likelihood to recommend question at the end of the study, the sample size was too small to verify significance.

The trend of the findings from this observational study of 240 credit union members over 24 weeks was encouraging, as the magnet group, which received the full benefit of behavioral economics nudges, did appear to save more and have the largest increase in

likelihood to recommend. It is possible that increased homogeneity between groups and larger sample sizes could lead to results that are statistically significant instead of just trending in the right direction.

**APPENDIX B:
PROGRAM
LETTER SENT TO
MAGNET GROUP
PARTICIPANTS**

[FIRST NAME],

First, thank you for choosing to be a member of Point West Credit Union. We love having you as a member, and your well-being is important to us.

Because we care about our members as individuals, we are always looking for ways to help people improve their quality of life. That is why we are reaching out to you today.

Most members have told us at one point or another that they would like an opportunity to save more and establish a safety net of funds for a rainy day. We have done the research and are testing a simple item (the enclosed refrigerator magnet) to help a select group of members (including you!) to save.

Here is what we found out:

1. Choosing your own goal and writing it down will help you achieve that goal.
2. Breaking that down into equal, weekly deposits will make you **even more likely** to achieve your goal.
3. Making it fun (incorporating the “scratch ticket” element) made people **100% more likely** to stick to their goal!

So, we developed this refrigerator magnet to help you save. If you choose to participate, great! All you need to do is fill in your total goal, and then divide that by 24 to get your weekly number. For example, a total goal of \$1,000 would be about \$42 per week. Remember to pick something achievable, but with a little stretch if you can. Write each number in on the magnet, place it on your fridge, and scratch each week when you saved!

If you use the number in the example, it would look like this:

$$\begin{array}{r} \$42 \\ \hline \text{(WEEKLY)} \end{array} \qquad \begin{array}{r} \$1,000 \\ \hline \text{(TOTAL)} \end{array}$$

If you need help settling on a number, consider this: **Week 1 of the program starts June 4**, which means the 24th week will end November 18 (just before Black Friday). A number that will pay for all your holiday gifts is a great place to start.

And, if you do not choose to participate, no problem. There is no obligation and this magnet is a free gift for you in case you ever choose to use it in the future.

Remember, **Week 1 begins June 4**, happy saving!

[SIGNATURE LINE]

