2018 Annual Report

COMMON CENTS LAB

Duke UNIVERSITY | CENTER FOR ADVANCED HINDSIGHT

commoncentslab.org

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About Us

Common Cents Lab

Common Cents, supported by MetLife Foundation, is a financial research lab at Duke University that creates and tests interventions to help low-to-moderate income households increase their financial well-being. Common Cents leverages research gleaned from behavioral economics to create interventions that lead to positive financial behaviors.The Common Cents Lab is part of the Center for Advanced Hindsight at Duke University. Common Cents is comprised of researchers and experts in product design, economics, psychology, public policy, advertising, business administration, and more. The lab is led by Behavioral Economics Professor Dan Ariely. Ariely has written three New York Times bestsellers, including Predictably Irrational.

To fulfill its mission, Common Cents partners with organizations, including fin-tech companies, credit unions, banks and nonprofits, that believe their work could be improved through insights gained from behavioral economics. To learn more about Common Cents Lab visit advanced-hindsight.com/commoncents-lab/

MetLife Foundation

At MetLife Foundation, we believe financial health belongs to everyone. We bring together bold solutions, deep financial expertise and meaningful grants to build financial health for people and communities that are underserved and aspire for more. We partner with organizations around the world to create financial health solutions and build stronger communities, engaging MetLife employees to help drive impact. To date, our financial health work has reached more than 6 million low-income individuals in 42 countries.To learn more about MetLife Foundation, visit metlife.org.

Dear Reader

Now that Common Cents Lab has concluded its third year, we are officially past the startup (or lift-off) phase and are, so to speak, ready to add fuel.

This doesn't mean that the journey has been without turbulence. Designing products and processes to transform the financial lives of people with low incomes isn't simple, even with all we've learned to date. What it does mean is that the Common Cents Lab team has become ever more adept at responding to and learning from our changing environment – the economy, politics, research insights, and the increasing availability of data – in our shared quest to build financial health for all. Recognizing that change is the only constant, the team remains focused on ensuring that the research they rely on and experiments they conduct have potential to translate into a positive impact on the people we care about. Along with the successes, the team is also dedicated to sharing what's not working – or, what's working, but not having a significant impact. Sure, it means that the work ahead remains difficult – but, you weren't really expecting a silver bullet (right?).

As I am a couple of weeks late in writing this opening letter, I also am relieved to discover that CCL and its partners also suffer from optimism bias – the justified assumption that all important work has a way of getting done in the hours optimistically allotted. Tardiness does not, however, minimize our real optimism about and commitment to our collective ability to serve low-income folks with the right products and services.

MetLife Foundation's optimism is expressed through our continued commitment to this work in the US, and also through our support to CCL in expanding its approach to partners outside the US. We look forward to bringing the practical and rigorous approach of behavioral science and experimentation that CCL champions to new markets and contexts. MetLife Foundation continues to support financial health projects and programs in more than 40 countries. We've reached our goal of committing $200 million to the cause of financial inclusion, and we're continuing our work to ensure that financial health belongs to everyone.

Our energy and optimism around financial health through product and service design and delivery continues to grow as we work with partners like CCL and the universe of nonprofits, tech firms, credit unions, academics, and others who have joined together in identifying new solutions to strengthen families and communities. We trust that this (very readable) annual update from CCL will inspire you and your organizations to join in our mission, too.

Evelyn Stark
MetLife Foundation

About This Report

The following report summarizes all of our 2018 projects in case studies, detailing our processes, original hypotheses, experiments and results. Each of our projects designs and tests an innovative intervention to solve a behavioral challenge.

While these interventions may seem varied, they all approach changing behavior using the rocketship metaphor. Each of the projects falls into one of the following categories:

- » Short-Term Savings
- » Long-Term Savings
- » Managing Cash Flow
- » Reducing (Bad) Debt

We encourage you to read through each case study and ask yourself how you can apply the insights to your organization. We hope the work we document here provides inspiration and guidance both for organizations already using behavioral economics as well as those just beginning to think about how to better support the communities they serve.

We are proud of, and excited by, the impact we have had with our partners. Even still, we recognize how much more there is to learn about how to effectively apply behavioral science to help improve the lives of those we serve. In this report, we document our work over last year and show how we have worked with our partners to apply behavioral insights in their work. In some cases, these efforts successfully changed how their clients behaved. In some cases, they did not. Across all of them, we learned more about how we behave as human beings and how we, as organizations, can translate those learnings into practice.

Looking forward to 2019, we are excited to expand our impact even further. By developing products and services that reflect the real experiences of people and by leveraging the ways that people actually make decisions, we will be able to continue to foster financially stable and healthy communities with our partners.

Executive Summary

Just over the past year alone, GDP growth reached 4.2%[1], the U.S. labor market is widely considered to be at full-employment[2], and inflation is just above 2%[3]. By all metrics, 2018 was representative of the past few years when we have experienced a healthy, even booming economy. And yet, over half of all households in the U.S. regularly worry about their finances. This feeling is not unfounded – by and large, U.S. households are not financially stable.

This year, 6 in 10 households will experience at least one financial shock, averaging $2,000, and yet almost half are struggling to make ends meet from one paycheck to the next.[4] Households are relying on high-cost debt to cover necessary and discretionary expenses: 48% of households have revolving credit card debt[5] and 1 in 3 households have debt that is in collections.[6] Over and over again, we see that a strong economy is not enough. A good job is not enough. Financial education is not enough.

What we do need are strategically designed products and services that incorporate an understanding of behavior and motivation, also known as behavioral science, that can move the needle to increase short- and long-term savings, decrease (bad) debt, and help people to better manage their cash flow.

At the Common Cents Lab, we partner with mission-aligned organizations across the country to create and test interventions that use behavioral science to overcome the challenges their clients face. In the first three years of Common Cents Lab, we partnered with 62 organizations and together we worked on 83 unique projects and experiments. We currently have 17 projects that have either launched and are still collecting data, or plan launch early next year.

Our partners are a diverse group that includes credit unions, banks, governmental agencies, non-profit organizations, and technology companies. Some of our partners serve hundreds of people while others serve hundreds of thousands or even more. Although diverse, at the heart of our partnerships is a common desire to meaningfully improve the financial lives of people and communities across the country, with a special emphasis on low- to moderate-income (LMI) households.

In our partnerships, we have learned together how and when to apply findings from behavioral research to products and services in order to achieve this goal. Over the past three years, we tentatively expect that our work could have positively affected the financial lives of over 675,000 LMI households. At full roll-out, that means our work has the potential to influence the financial well-being of 5.7 million people.

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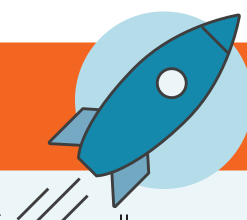
Our Approach

Across all the various partnerships and experiments that we have launched, we have learned a great deal about how human beings behave but also about how organizations can translate those learnings into practice. Through our experience over the years, we've learned that our environment and surrounding context significantly shapes the decisions we make.

Designing that environment is a little like trying to build a rocket to send into space – if you are going to be successful, you have to calculate exactly where you are going (by getting very specific with your target behavior and desired outcome), find ways to reduce friction points on the path to the desired behavior, and add more fuel and motivation to spur them on.

1. Reducing friction
to follow through on good decisions



Friction costs are real. Each additional click, field, step, choice, form, or call is a toll on the decision-maker and can deter even the best of intentions. For example, research suggests that reducing a form from 9 fields to just 5 fields can increase conversion rates by 3.4 percentage points.[7] Simply removing or reducing the number of steps required of people can increase how many of those people end up following through.

We are currently testing both light-touch and heavier re-design strategies for friction reduction in several 2018 projects. Beyond simply cutting steps out of the process, there are several strategies that we are using to reduce friction.

Strategy 1: Make the right behavior automatic

Evidence suggests that changing intentions is unlikely to lead to big changes in behavior.[8] Even with strong intentions, people have lapses in self-control or they might procrastinate. In reality, there are many barriers and biases that make it difficult for even the best among us to follow through on our intentions. When designing products and services, it is often better to recognize this and make the right behaviors automatic.

> **"*making saving automatic can help overcome the many barriers and biases that make it difficult, but many automated savings options are not well designed for low-wage workers.***

For long-term savings, automatic enrollment and default contributions have been the biggest factor in increasing savings rates, increasing participation from 34% to 90%. Setting up automatic transfers is often heralded as a best practice for building short-term savings as well. However, current automatic savings programs require the saver to pick a day each month, like the 25th, and a fixed amount to transfer, like $100. These are not designed well for most low-wage workers, who are more likely to be paid bi-weekly and income that varies paycheck to paycheck. We are building better automatic systems for LMI households. This means programs that align with when and how much people are paid and programs that de-risk signing up for an automatic savings transfer.

With Narmi, a tech platform for Credit Unions, we are testing ways in which we can connect automating savings directly with when someone gets paid. Specifically, we are exploring whether a fixed percent-based transfer amount (i.e. 6% of every deposit) is more or less attractive than an escalating percent-based transfer amount (i.e. 2% to start, increasing by 1% until 6%). With Earn, a non-profit, financial technology company that incentivizes savings, we are testing whether offering overdraft protection helps make automatic savings feel less risky and more attractive to potential savers.

We are also exploring how automation at the employer level can help employees' financial wellness. For example, in our work with Homebase, a scheduling platform for small- to mid-sized employers, we are encouraging managers to publish work schedules earlier. This gives employees more notice to better plan for their work schedules or pick up additional work outside of their primary job. To do this, we are creating default schedules that allow employers to easily and quickly copy schedules from prior weeks. We believe that automatically generating schedules will make it easier for employers to publish their schedules sooner, giving employers significantly more time to plan ahead.

The tests with Earn and Homebase are currently in the field. The test with Narmi is poised to launch in summer 2019. We look forward to sharing our results.

Strategy 2: Make the right choice the default

In addition to automation, it's important to set the right default. Defaults are incredibly powerful, and yet, many financial institutions and companies set defaults that are not ideal for the consumer. For example, the most common default contribution rate for auto-enrollment retirement plans is 3%[9], and 40-70% of employees stick to the default rate.[10] Yet, experts recommend that people save closer to 15% of their income to be adequately prepared for retirement. Defaults are powerful because they make that choice the easy choice, they imply that is the "right choice", and they create an anchor around the default number.[11]

> ***"re-designing the way student loans were offered cut in half the number of graduate students that the borrowed the maximum amount available.***

Another area where carefully choosing the right defaults is important is debt: taking on debt and paying it back. For example, the default for taking out a car loan or a student loan is often the maximum available. In partnership with Duke's Office of Personal Finance, the department that manages student loans for the University, we re-designed how graduate students were offered and accepted loans. Instead of providing the total amount available to borrow, we split the total loan package into two bundles – one covering known, fixed costs like tuition and the other covering unknown, variable expenses like the cost of living. By breaking up the loan into two separate numbers, we decreased the percent of students borrowing the maximum loan amount from 29% to 13%, a more than 50% reduction.

With Beneficial State Bank, a community development bank based in California, we changed the default payment due date of car loans from 30 days from the day they buy the car to the day they get paid. By defaulting the due date to their payday, we are reducing the mismatch between income and expenses, which may improve rates of repayment. This project is currently in the field and results will be shared in our 2019 Annual Report.

Strategy 3: Simplify complexity

Complexity creates its own kind of friction. A study from 2015 found that complexity around the Earned Income Tax Credit explains why not everyone takes advantage of the tax benefit.[12] As a decision becomes more complex, we should take more time and effort figuring out the right decision for ourselves – but instead, we rely on mental shortcuts that may be error-prone and imprecise.[13]

> *"figuring out what is affordable to pay for a car is complicated and most people anchor on the monthly payment, neglecting uncertain or future expenses*

One complex decision is figuring out how much car you can buy. With 7 million Americans more than 90 days behind in their car payments,[14] it appears that many people are mis-calculating how much they can afford. Most car buyers only consider the monthly payment of their auto loan, neglecting to consider uncertain or future expenses that are difficult to determine. These expenses include repairs, maintenance, insurance, or how much they will spend on gas. As a result, many people end up paying more than they can comfortably afford. We designed an auto loan calculator that breaks down these complex costs and conveniently adds them to the monthly payment, therefore adjusting the total amount one should borrow. In a lab experiment, we found that going through the auto loan calculator significantly reduced the size of an auto loan participants felt they could afford, moving from $15,000 to $12,500 on average, a 20% reduction in the size of a potential loan. We plan on testing the calculator in the field to see if it actually decreases the amount people borrow.

With the St. Louis Housing Authority, the government entity that manages St. Louis' section-8 housing voucher program, we are testing a text-message program that breaks down the complex steps of moving to better neighborhoods with a voucher. Voucher recipients receive weekly text messages that provide clear action steps for that week to get them closer to moving. We think that simplifying the complexity of moving with a voucher will encourage more voucher recipients to move to higher opportunity areas, which has been shown to improve life outcomes. This project is currently in the field; we will share results in our 2019 Annual Report.

2. Adding Fuel
to increase motivation

Making a process completely frictionless is often impossible due to technological, regulatory, financial or logistical constraints. This means that we also have to find ways to reward and motivate people to overcome the remaining barriers. Once friction has been reduced as much as possible, we look to boost motivation either by making the existing benefits more appealing or by adding benefits, often closer in time.

Strategy 1: Emphasize benefits that are immediate and tangible.

We are naturally more motivated by wants and desires in the present moment than by our possible needs in the future.[15] This makes good financial decision-making very difficult, where we are regularly asking people to give up something concrete and appealing right now for a long-term, intangible pay-off.

In some cases, simply reframing the way benefits are described can change how people perceive them. In a project with NetSpend, a pre-paid card provider, we sent an email to encourage users to use the savings feature. However, instead of talking about it as an opportunity to save, which has connotations of future benefits, we reframed saving as an opportunity to "earn" money, which people think of as a more immediate benefit. Consistent with previous research, reframing saving as "earning" increased response to the email by 4 percentage points as compared to the usual response rate.

> ***"creating a goal-setting exercise that helped coaching participants connect with their long-term aspirations increased the program retention rate from 9% to 13%.***

With LISC's Financial Opportunity Centers, a network of non-profits committed to improving financial wellbeing through financial coaching, we designed postcards to facilitate a visual goal-setting exercise in a financial coaching session. This activity helped frame the benefits of coaching as more tangible and immediately rewarding. Coaching participants who participated in the goal-setting exercise were more likely to attend subsequent coaching sessions, leading to an increase in the retention rate from 9% to 13%.

Strategy 2: Add new benefits that are immediate and tangible

Sometimes the benefits a product or services provides are neither immediate nor tangible. In these cases, you may need to create new benefits within the process. These benefits do not need to be financial incentives – they can include emotional, reputational, social, or other psychological benefits.[16]

> *"not all incentives need to be (or should be) monetary - adding in emotional, reputational, social, or other psychological benefits can be equally effective.*

We are currently testing the effect of giving parents a sense of progress toward their savings goals with San Francisco's Kindergarten to College program, a college savings program run by the city of San Francisco. Together, we are currently testing a tool that helps people visualize and monitor their progress toward long-term savings goals. We have designed a simple card that helps people visualize and monitor progress. We will share the results in our 2019 Annual Report.

With OregonSaves, a state-run retirement savings program for all employees in Oregon, we are testing adding a social benefit. We designed a simple decision-aid that communicates the benefits of the program through profiles of Oregonians. We are testing whether we can increase retirement savings rates by providing an implicit recommendation using social proof (i.e. most people like you have decided this is the right thing for them).

With the City of St. Louis' College Kids program, we are redesigning the existing incentive structure for their college savings accounts. Currently, parents receive matched savings that get deposited into their child's account at the end of the year and will not be touched or used for 12 years. We are testing a new model where parents can receive part of the match immediately if they sign up for automatic savings transfers. We look forward to reporting out on those learnings next year.

Strategy 3: Provide simple, relevant information at the right time

Life is busy and it is easy to procrastinate, delay, and forget. A simple reminder can be effective at getting people to open an account, make a payment, or complete a task.[17] What we've learned, though, is that when you remind someone can be as important as what you are asking them to do.

> “
> ***savers saved an average of $120 more in the month when they were regularly reminded a few days before their weekly paycheck***

With Homebase, a scheduling platform, we reminded hourly workers to enter in their desired work hours in the moment that they were in the platform checking their schedule. These simple and timely reminders increased the number of entries from 1.4% of employees to between 2.2%-4.6% of employees, depending on the message text. We found this was especially effective when we framed the reminder as an ask to employees to provide “missing information”.

Similarly, we increased short-term savings for employees at IH Mississippi Valley Credit Union by sending weekly savings reminders for a month as part of a credit union-wide “Autumn Savings Fest.” Employees are paid weekly, so we tested sending the reminders on their payday versus on Monday, when they were past the weekend and the next payday was in sight. We found that Monday reminders were more effective – savers saved an average of $120 more in the month than when they were reminded on payday.

Unfortunately, sometimes a reminder isn’t enough. Reminders work best when the task is easy and people may simply forget. Similarly, reminders that are not sent through a proper channel or not timed correctly end up just providing information, which in and of itself does not significantly change behavior.

With the Pennsylvania Treasury and the City of St. Louis’s College Kids, we tried sending the message from a more familiar source and address message to the child rather than the parent to see if either made people notice the message more. Neither were successful. Similarly, with United Way of Tucson and Southern Arizona, we tried door-hangers using behaviorally-informed messages to remind and encourage people to use VITA sites rather than paid preparers for tax preparation. Ultimately none of the conditions had a significant impact.

We are continuing to try and better understand when and how to effectively to deliver timely information. With UpTrust, we are helping people avoid additional fines by providing reminders and timely information to encourage attendance in court-ordered classes. Relatedly, with the Vera Institute for Justice, we are designing a calculator that quickly calculates a defendant’s ability to pay before their arraignment hearing. This information can be presented to judges as they are making decisions about bail – a decision that often has significant financial implications for the defendants and their families.

3. Other Lessons

In addition to what we've learned about the various behavioral nudges we have been testing across the years, we also have general learnings about working in this field.

Light-touch and superficial changes often mean light (or no) effect.

> *"our mantra from 2019 will be "Be Bold" as we focus on more in-product flow and feature tests*

Over the last three years, we've completed 56 experiments and about half have had a statistically significant and positive effect. When we look at what differentiates what works from what does not, our biggest wins have also been those requiring the biggest changes. While small tweaks and different frames in emails have sometimes generated small lifts, most of these projects have had negligent or null effects. This suggests there is a real trade-off between what is easy and what is meaningful. We are taking this learning to heart and our mantra for 2019 will be "Be Bold." We will focus on more in-product flow and feature tests and fewer simple email tests.

Some savings decisions are harder to move than others.

We have worked on emergency savings, short-term goal savings, spending reductions, and retirement savings with a relatively high success rate. However, we have been unable to make meaningful movement on saving for college. This year alone, we have run six experiments, ranging from simple email tests to encourage participation to quick-enroll forms for employees to create auto-transfers to their child's account, without any of them creating a measurable lift. While we are not ready to give up (we have another three studies in the field or ready to launch), this does suggest that not all savings decisions are equal – that the same combination of reducing friction and adding fuel does not work as well for parents saving for college, which is likely a lower priority for struggling families. As we move into the next year, we will examine how various savings decisions interact with each other and explore ways to reduce the complexity around which account to save in, when, how much, and develop a deeper understanding of how people and parents prioritize savings decisions.

We are all subject to planning fallacy.

We completed 19 studies this year. We have another 8 that are still in the field collecting data and another 9 that we are actively preparing to launch. Even after three years, we and our partners continue to be overly optimistic about timelines from ideation to build to launch to analysis. While this is a summary of our learnings this year, keep in mind that we still only have just over half of all studies reporting. We encourage you to keep in touch, subscribe to our newsletter, and stay tuned for more results.

Interested in learning more?

Sign up for you mailing list on commoncentslab.org to stay up to date on our latest findings.

Apply to attend one of our 2019 conferences.

Please reach out to jamie.foehl@duke.edu and info@commoncentslab.org

Increasing short-term savings

Even having a small cushion of savings can go a long way to improving the financial health of many people earning low- and moderate-incomes. The CFPB found recently that a third of adults regularly struggle to make ends meet and experience material hardship. According to a 2016 Urban Institute Report, households with just $250 in savings were less likely to be evicted or miss a housing or utilities payment. Unfortunately, more than 40% of adults in 2017 could not cover an unexpected expense of $400 without borrowing money or selling something.

We know there are systematic and individual barriers that coalesce to make building and maintaining savings difficult. Overcoming the systematic problems that undermine financial security requires longer-term efforts to find ways to boost stagnating wages and help people to build employable skills that prepare them for the next generation of jobs.

However, we also know that even people who can save do not always do so. We can help people to build savings if we recognize there are aspects of our psychology and in our environment that make saving difficult, regardless of financial circumstances.

Over the past year, we worked with 6 organizations to help develop interventions to boost savings. Within these partnerships, we tried to reduce friction or add motivation to build savings in three ways.

1. Make saving automatic.

People tend to think about saving as what they have left at the end of the month. Categorizing savings in this way is problematic. People have to stay motivated for the whole month in order to save, even when things come up throughout the month. Even more, organizing finances in this way means that saving comes at the expense of something else. In order to save, we have to sacrifice spending throughout the month.

> *"one way to make saving a little easier is to simply make savings automatic. When we don't have to think about it, saving is less painful.*

One way to make saving a little easier is to simply make savings automatic. When we don't have to think about it, saving is less painful and we don't have to make the same trade-offs in order to save. Although useful, we also know tha people are hesitant to use = automatic transfershow for a number of reasons.

In partnership with Narmi, we explored different ways of structuring automatic savings and found that majority of people actually prefer some sort of saving automatically. We're looking ahead to testing whether automating savings in a way that directly connects with someone's payday will alleviate some of the fear people have about automated savings.

We also worked with Earn to incorporate automatic savings transfers into their SaverLife program, which tries to help people build savings habits. We tested whether offering overdraft protection would assuage some of the fears people have and encourage more people to sign up for automatic savings transfers.

2. Make saving timely

When we try to encourage people to save, we often don't think about timing, but e should – asking people to set aside savings at the wrong times or when don't feel like they have slack in their budgets is unlikely to be successful. Instead, we might have more success in encouraging people to save if we take advantage of "savings moments," or times when we know that people are more likely to have a little extra slack in their budgets.

In two partnerships this year, we explored "savings moments" beyond tax time. In particular, we were interested to see how employers can support the the financial health of their employees. In one project with Credit Human Federal Credit Union, we tried to nudge employees to save some of their annual bonus.

With IH Mississippi Valley Credit Union, we created a special savings event for employees and tested whether a savings reminder was more effective if it coincided with someone's paycheck. Both of these suggest that there is more that employers can do to contribute to the financial health of their employees.

> ***"***
>
> ***people are more likely to dip into their savings when their money is pooled together in one place.***

3. Separate savings

People navigate their financial lives by creating categories or mental accounts that help them to organize and manage their finances. When people separate money into multiple accounts and designate it as especially for saving, people tend to exhibit greater self-control. On the other hand, people are more likely to dip into their savings and struggle to build savings in the first place when their money is pooled together in one place.

In two projects with Lake Trust Credit Union, we tried to figure out what kind of messaging is the most motivating. We tested messaging that encourages members to re-engage with an used savings CD and we are currently testing "in-the-moment" pop-up messages through their online banking platform.

We also partnered with Netspend, a prepaid card provider, to see if we could encourage more cardholders to use the savings wallet that Netspend offers with their prepaid card. We found that motivating people to rearrange their finances and use new products is difficult, but that we can frame savings in ways that will make savings products more attractive to people.

CASE STUDY

Assessing Demand for Smart, Automatic Savings

Narmi

Partner Type	Tech
Partner Cohort	2018
Project Type	Optimization
Project Status	Completed

Background

A system where individuals are defaulted to automatically set aside some of their paycheck has been an effective way to get people to save for retirement. In one study, opting new workers into a retirement plan increased the number of employees contributing to their retirement plans from approximately 60% to well over 95%. Surprisingly, we have yet to see this same default savings mechanism applied to short-term saving, despite how few people are consistently saving.

In an effort to explore how we might encourage people to set up automatic transfers to build savings, we partnered with the fintech company Narmi. Narmi provides clean and easy to use white label user interfaces for credit unions and banks of all sizes.

Key Insights

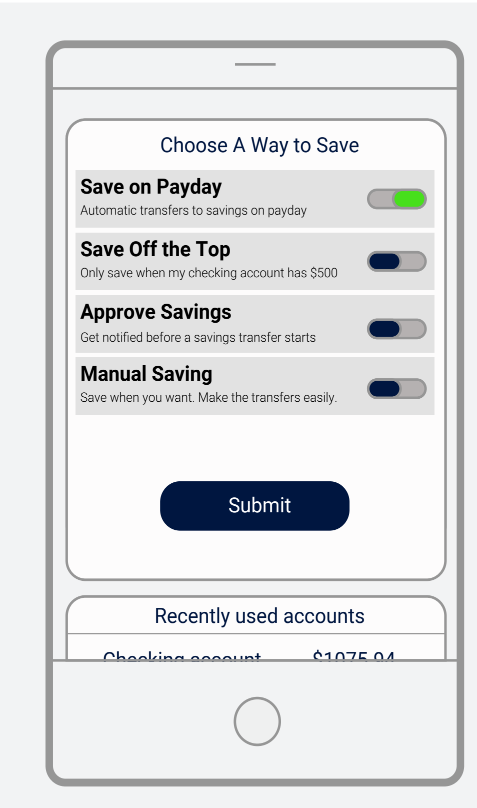
This partnership builds off of our previous work investigating why people are hesitant to adopt automatic transfers. That previous work highlights two barriers that discourage people from setting up automatic transfers:

- People fear overdraft fees. When people are asked to set up automatic transfers, they feel they are sacrificing some degree of control.
- People actually prefer ease and automation, as long as they don't think they will be taken advantage of. In a previous experiment with Payable, we found that people are concerned about maintaining control, but they also prefer ease and automation when it comes to difficult or arduous tasks like tax preparation.

Experiment

With these two insights in mind, we worked with Narmi to design potential savings products that would both default users into saving for the short term and decrease their concern with automatic savings tools. We hypothesized that if we were able to mitigate the fear of overdrafting, people would be more likely to adopt automatic savings plans.

CASE STUDY



In order to test whether customers will realistically sign up for a new feature, we designed a pilot to test demand for different types of automatic savings plans. We offered 124 Narmi users the chance to enroll in the new savings product. To measure how people actually behave, users were notified that their selection was under development for the future, if they chose to enroll.

The pilot offered users four potential savings strategies. Each was chosen because we hypothesized they may mitigate the fear of automatic savings.

» Users could opt to "save on payday," where a transfer would only be initiated the day that income was deposited into the account.

» Users could "save off the top," where a transfer would only be initiated when a threshold was met (i.e. Only save when there is $500 in the checking account).

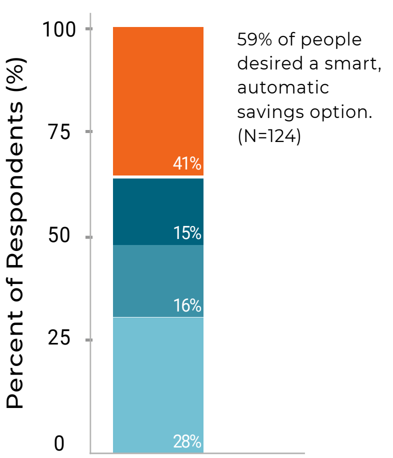
» Users could sign up for automatic transfers and "approve the transfer before they happen," where users would be sent a notification before a transfer was initiated and they could approve or deny it.

» Users could sign up for "manual transfers", the traditional option offered by all banks.

Results

While the most commonly chosen answer was the traditional manual option, results also indicate that the majority of users wanted some type of "smarter" automatic savings option. Of these options, "Save on Payday" was the most popular. "Approving Savings" and "Save Off The Top" were selected at relatively similar rates.

Desired Savings Options



Narmi also provided data on users savings rates and deposit amounts. We observed a small but significant negative correlation between people who preferred manual savings and total deposit amount. People who had lower deposit balances were more likely to select the "manual savings" option. While correlational, these observations are in line with previous findings that suggest lower-net-worth users may be more reluctant to use automatic savings tools.

We plan to continue working with Narmi going forward to launch an experiment with new credit unions or banks that encourages users to save more money using automatic transfers in a way that alleviates the fear of overdrafting. Based on our survey, we hypothesize that defaulting users into a program that automatically contributes money to a savings account on payday will increase savings rates and more people will opt-in to and stay in automatic savings plans.

CASE STUDY

Offering Overdraft Protection to Encourage Automatic Transfers

Earn

Partner Type	Tech
Partner Cohort	2018
Project Type	Optimization
Project Status	In Field

Background

Having a small cushion of savings to fall back on is critical to someone's financial well-being and security, yet far too many people struggle to build sufficient savings. There are many reasons why we find saving difficult, but one important reason is that saving feels painful. Building savings requires sustaining motivation over time and regularly making contributions to savings, effectively giving up some amount of spending in the short-term.

To explore how we might make saving a little easier, we partnered with a non-profit organization called EARN. EARN adopts the philosophy that small savings can make a big difference and works to help low-income Americans build healthy savings habits in order to achieve financial security. Specifically, EARN offers a program called SaverLife that incentivizes saving by paying users $10 every month if they save at least $20 themselves every month for up to six months.

While the financial incentive increases savings behavior, some evidence suggests that making incentives contingent upon ongoing performance – such as paying people for successfully saving – can "crowd out" people's willingness to continue the behavior after the incentive is taken away. We worked with EARN to see if we could increase the number of users who reached their monthly savings goal during SaverLife's six-month term and continued to do so after the program ended.

Key Insights

One of the most effective ways to help people save regularly is to have them set up an automatic transfer to their savings. Automatic transfers work because setting one up is a decision someone only has to make once, but this decision locks them into a behavior that is painful in the short term but good for them in the long-term. While automatic transfers make sense in theory, they are practically difficult for several reasons:

- Setting up automatic transfers is more difficult if someone has irregular or variable income.

CASE STUDY

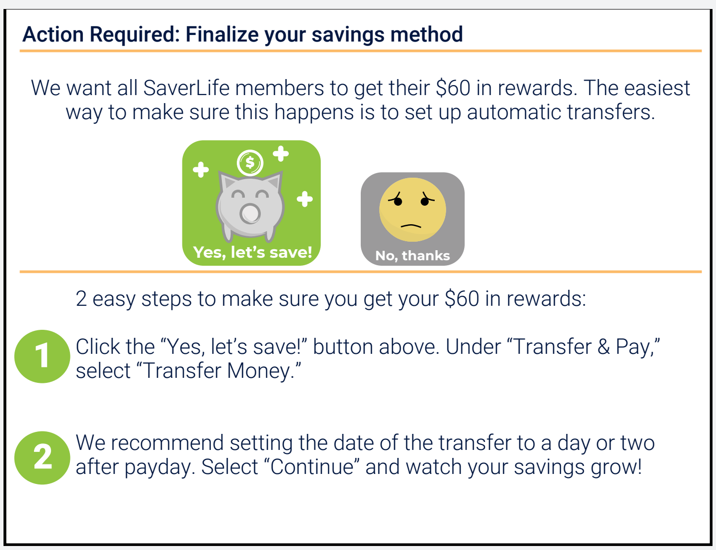
- When people set up automated payments, they tend to set them up for smaller amounts. This is problematic because people feel a sense of achievement: they are making consistent progress. In reality, they are slower to achieve their longer-term savings goals.
- Low-income individuals are at greater risk of overdraft fees. Since the consequences can be high, many fear automated transfers for savings.

Experiment

We are testing our hypothesis that reducing the consequences of overdraft will increase uptake of automated savings transfers by sending SaverLife users two different emails.

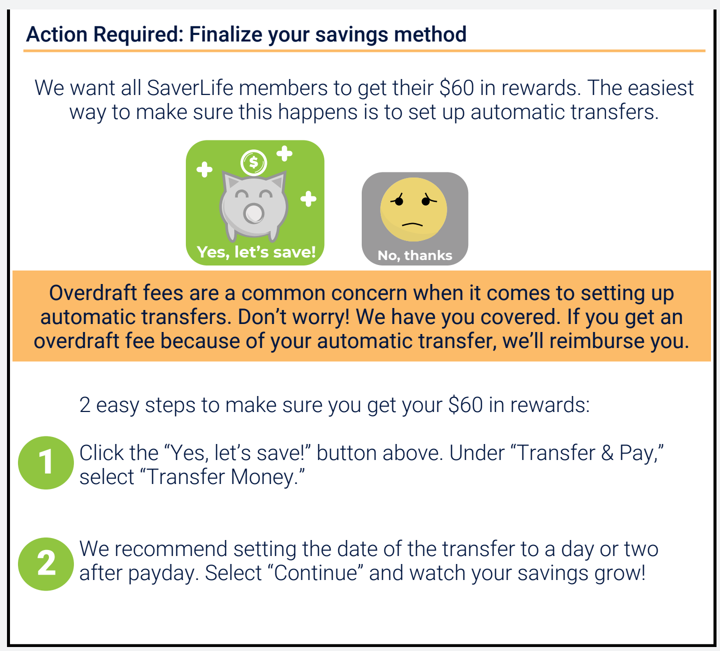
Condition 1.
Standard automatic transfer messaging

This email encourage EARN's SaverLife users to sign-up for an automatic transfer to ensure they receive the additional $10 monthly savings bonus from EARN.



Condition 2.
Overdraft protection messaging

This email notes that EARN will cover any possible overdrafts that occur because of an automatic transfer as they participate in the SaverLife program.



Results

Our experiment is set to launch into the field in early 2019. We plan to measure which automatic transfer email leads to higher interest in automatic transfers, higher sign-up rates, higher SaverLife goal completion rates, and greater deposits into tracked savings accounts. We anticipate results will be shared in 2019.

CASE STUDY

Using an annual bonus as a savings moment

Credit Human Credit Union

Partner Type	Credit Union
Partner Cohort	2017
Project Type	Optimization
Project Status	Completed

Background

Finding ways to build a cushion of short-term savings is a critical part of our financial well-being, but making ongoing, regular contributions to savings is difficult to do. In addition to creating a system that makes saving more automatic, many researchers have pointed to savings "moments" as important opportunities for people to set aside savings.

Tax time is the most common "moment" where people may feel better able to save, but a tax refund is not the only such opportunity. For example, receiving an annual bonus at work is another chance to build a cushion of savings. We partnered with Credit Human Federal Credit Union, a credit union based in Texas, to explore how we might take advantage of employer bonuses to help employees save.

Key Insights

There are many reasons why someone might not save some or all of their annual bonus. To understand how these barriers affect saving and to look for opportunities to nudge employees to save, we conducted interviews with employees and evaluated the current process employees go through in order to receive the bonus. Three barriers stood out as especially relevant:

» There was no prompt for Credit Human employees to save their bonus. Even if employees want to save part of their bonus, when it actually arrives, an employee might be faced with short-term needs and temptations and forget about their previous intention.

» There is no mechanism for Credit Human Employees to save their bonus. If a Credit Human employee was inclined to save their bonus, they would need to take several steps and make several decisions in order to do so.

» Employees may treat their bonus as different from their normal income, which research suggests makes saving windfalls particularly challenging.

Experiment

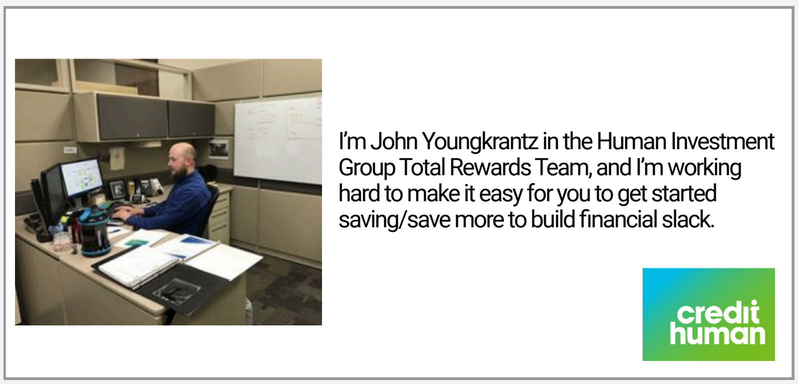
We worked with Credit Human to send eligible employees an email that invited the employee to pre-commit to save their bonus before the bonus was actually received.

CASE STUDY

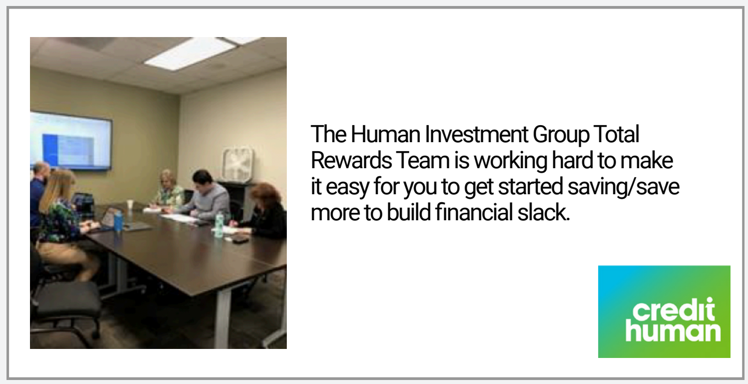
The prompt also gave the employees a deadline and a short time-frame for acting to avoid procrastination. The actual savings mechanism that was developed was a partially pre-populated online form.

Employees randomly received an invitation email. There were two versions of the email testing the messenger effect, or the idea that who delivers the message impacts the response. In both versions, Credit Human noted that there was hard work behind the effort to make it easy for employees to start saving.

Condition 1. Identifiable Person
The email showed someone from the Human Investment Group and included a picture of him at work at his desk.



Condition 2. Group
The email showed the who Human Investment Group working at a table and referenced their group efforts.



Results

Only about 4% of employees enrolled in the Bonus Savings Program, and neither version of the email significantly changed enrollment in the program.

Of those who decided to save some of their bonus, about 36% opted to save all of their bonus. 21% saved 50% of their bonus and a little more than 17% saved at least 10%. Employees who signed up to save their bonus were sent a survey about the experience and the response was positive. Interestingly, some employees requested more support from Credit Human for savings. This suggests that there are likely more opportunities to explore bonuses not just as an employee retention tool but as another "moment" to encourage savings and improve employee financial health.

CASE STUDY

Creating an autumn savings fest with savings reminders

IH Mississippi Valley Credit Union

Partner Type	Credit Union
Partner Cohort	2017
Project Type	Optimization
Project Status	Completed

Background

Annual bonuses and tax refunds represent important moments when people have a relatively easier time saving because the windfall gives them more liquidity and slack in their budget. Although important, these savings moments are irregular. They don't help people smooth their income to match the ups and downs of expenses in the same way regularly setting aside some part a paycheck might.

There are opportunities for employers to play an influential role in helping their employees engage in positive financial behaviors like setting aside savings. This not only has benefits for the employee – some research suggests that improving financial health positively affects work productivity as well. We partnered with IH Mississippi Valley Credit Union (IHMVCU), which is based in the Quad Cities, to explore how an employer might encourage positive financial behaviors like savings.

Key Insights

Recent research has found that people tend to spend more immediately after payday. The inflow of income makes sustaining self-control and not giving into temptations more difficult. As a result, many people have a tendency to splurge when they get paid and then have little left over at the end of the month to save. This project drew on two aspects of behavioral research to help encourage savings:

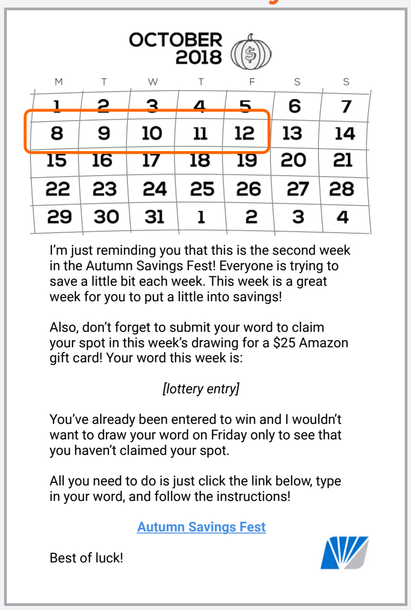
- Previous research shows that reminders can help people sustain their self-control. This body of research also suggests that the closer a reminder is to the desired behavior, the more potent it is.
- To overcome our bias for the status quo, people often need a shock or something that feels special or out of the ordinary to break the inertia of our habits. Creating a new or special context can make it more likely for people to adopt a new behavior.

Experiment

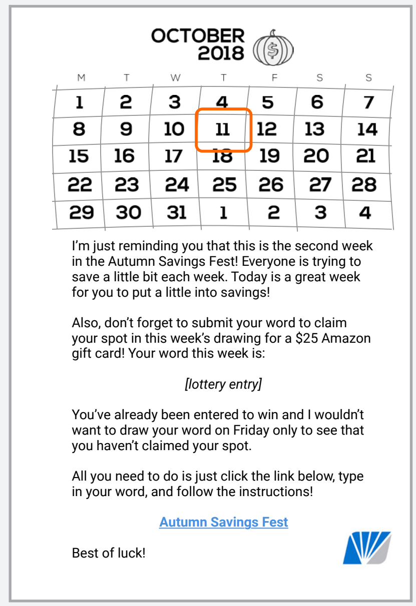
We hypothesized that creating a special "savings event" would encourage more employees to start saving. We also hypothesized that aligning reminder emails with an employee's payday would make remembering to save easier. Together with IHMVCU, we created an "Autumn Savings Festival" where employees were encouraged by senior leadership to save a little bit each week in October. Each week, employees received a reminder email prompting them to save.

Employees were randomly assigned to either receive a reminder email on Monday or on Thursday, which is when employees are paid each week. Embedded in the email were randomly generated entries that employees could use each week to play a lottery for a $25 gift card. Employees could win the gift card regardless if they saved or not – all they had to do was record if they saved that week.

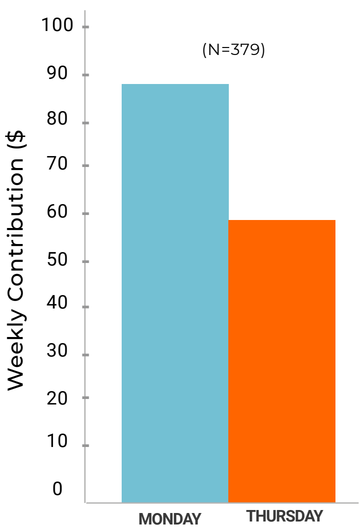
Condition 1. Monday reminder



Condition 2. Thursday reminder



Average Savings Contributions Between Groups



Results

More than 20% of all employees reported saving at least once during the Autumn Savings Festival and employees saved more than $18,600 in total. The median savings contribution was $50, while the average was a bit higher at almost $90. There was no statistically significant difference between Monday or Thursday reminders on whether people decided to save or not.

Interestingly, however, people recieving reminders on Monday saved about $30 more than those recieving reminders on Thursday. We expected that aligning reminders with payday would encourage people to save more, but they actually saved less.

It could be that on Monday, people feel close to their next paycheck and willing to put aside more. On Thursday, people may already looking ahead and planning for the weekend and therefore more conservative in their savings amount.

CASE STUDY

Finding the right savings nudge for a website pop-up

Lake Trust Credit Union

Partner Type	Credit Union
Partner Cohort	2018
Project Type	Optimization
Project Status	In Field

Background

While the evidence suggests that setting up automatic transfers is an effective way to encourage people to build savings, there are times when automating savings is not feasible. In many cases, interventions to build savings instead must find ways to motivate people to actively and manually contribute to savings.

We partnered with Lake Trust Credit Union, a credit union based in Michigan, to explore ways we might help their members build short-term savings. Specifically, we were interested in whether incorporating a simple nudge when customers login to the website would encourage more people to save. Lake Trust already had the capability to present members with a pop-up message after they login; the only question was what kind of message would be the most motivating.

Key Insights

As we began designing the message to motivate members to save, there were two specific questions that we wanted to explore:

» Is thinking of saving for a spontaneous, fun activity more motivating than thinking of saving for a serious emergency? On one hand, many people think of savings behavior as a serious domain. Therefore, encouraging savings in service of something serious may be more effective because it fits the way most people conceptualize savings. Alternatively, people experience greater motivation and goal success when pursuing tasks they "want-to" do rather than they "have-to" do. In this case, a hedonic frame may be more effective at encouraging people to save.

» Is providing a specific example more motivating than a general reminder to save? We generally believe that concrete action plans can improve the likelihood of success in goal pursuit. On the other hand, a concrete example may only be effective when the individual feels like the goal is relevant and closely related to their circumstances. In this case, a general reminder to save may be more broadly applicable.

Experiment

In order to answer these questions, we developed an experiment where members would be presented with multiple versions of the online pop-up. Lake Trust created a list of approximately 115,000 members with online accounts and randomly assigned them to 1 of 6 groups.

One group did not receive any prompt. A second group received a generic recommendation to save. The remaining four groups received the experimental pop-ups shown below.

After the member sees the pop-up once, it will not be shown again. Members can choose “Transfer now” or “No thanks” in the pop-up. We will measure click behavior on the pop up as well as how many members made at least one transfer to a savings account after seeing the message. Lake Trust anticipates about 80,000 unique members will log in over that time.

Condition 1. Hedonic and specific

Condition 2. Hedonic and general

Condition 3. Serious and specific

Condition 4. Serious and general

Results

The pop-up experiment began running in late October 2018 and will run for one month. At the time of this writing, the test is still in the field. We will run the pop-up message test through late November and plan to complete our analysis in early 2019.

CASE STUDY

Learning about member needs using a financial health survey

Lake Trust Credit Union

Partner Type	Credit Union
Partner Cohort	2018
Project Type	Optimization
Project Status	Completed

Background

For financial institutions, helping people save – and to achieve a greater degree of financial well-being generally – revolves around creating products that actually meet people's financial needs. However, financial institutions may not know what those needs are and finding ways to engage with members to ensure that new products actually fit the financial needs of their members is not always easy.

We partnered with Lake Trust to help them learn more about the needs of their membership and to develop new products that match those needs. Lake Trust Credit Union recently was certified as Michigan's largest Community Development Financial Institution (CDFI). Like other CDFI's, Lake Trust is dedicated to being responsive to the needs of their membership and developing products that serve those needs, particularly their members with low- and moderate-incomes. The first step was to encourage their members to get their CFSI Financial Health Score.

Key Insights

We needed to give members a reason to take the survey. There were certainly long-term benefits to the member: getting products that better serve their needs. However, those benefits by themselves are not very compelling because they are abstract and far off in the future. Instead, we know that there are several ways we might use findings from behavioral science to increase response rate:

» Provide a short-term benefit to the member for taking survey (get a score) rather than long-term benefit.

» Tell members they will learn how their financial health score compares to other people (social norms).

» Be clear and specific about what the "ask" is. Let member know how much time the survey will take (rather than the number of questions).

CASE STUDY

Experiment

E-mails encouraging member participation were sent to all 80,000 Lake Trust members with emails on record. Members were randomly assigned to receive one of two versions:

Condition 1. Personal Benefit	**Condition 2. Social Comparsion**
Members received an email that communicated how they could benefit from getting a financial health score.	Members received an email that communicated how they could find out how their score compared to others.

Results

Lake Trust reported a record high open rate compared to similar email campaigns, which may be due in part to the subject lines that we helped them design. Across the credit union's whole membership, 25% opened the survey (over 20,000 members). However, there were no significant differences in open rates based on email version or significant differences in click-through rates.

Lake Trust gained valuable insights from the survey results, however, including that "saving" and "planning" were the areas where members had the biggest needs.

CASE STUDY

Encouraging credit union members to re-engage with a savings CD

Lake Trust Credit Union

Partner Type	Credit Union
Partner Cohort	2018
Project Type	Optimization
Project Status	Completed

Background

When we think about how we might encourage people to save, we commonly offer financial incentives or increased interest rates. People can take advantage of these incentivized savings products to earn more on their savings. Unfortunately, many of these beneficial products go underutilized.

To explore how we might use behavioral science to increase uptake and utilization of these kinds of specialty products, we again partnered with Lake Trust Credit Union. Lake Trust had recently launched the Aspire CD. The Aspire CD has features that encourage savings such as allowing members to make interest earning deposits into the CD during the two-year CD term. A key feature is that members create a savings goal amount when they open the CD. If the member meets their goal amount, they can withdraw the money early without penalty.

While the Aspire CD attracted interest initially, deposit activity among members with the CD was markedly bimodal. Some members were highly engaged: 26% of members with the CD made six deposits or more. However, 30% never made another deposit after the initial opening. Together with Lake Trust, we worked to see if we might encourage people in this second group, who opened the account but have not used it, to re-engage with the account.

Key Insights

Opening the account takes around ten minutes or longer and requires members to deposit a minimum of $50. Why were some individuals not taking advantage of the CD even though they invested the initial deposit in order to open Aspire CD?

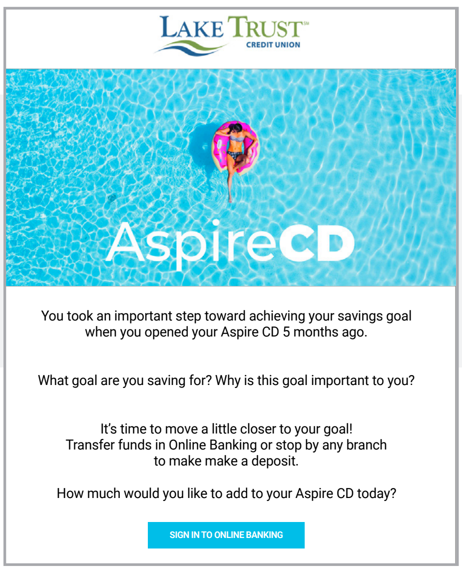
The idea that someone plans to do something and then doesn't follow through is referred to as the intention-behavior gap. Despite one's best intentions, without additional support, goal pursuit may end in failure. We identified two possible psychological barriers to deposit activity despite account opening.

» The environment in which members open the account is very different from the environment in which they make deposits for the account. The account opening process generally takes place at the branch and often includes a personal conversation about one's financial and life goals. Subsequent deposits are likely online and impersonal, and so it may be difficult for people to connect deposit activity to their goal.

» There is no urgency, accountability, or structure to help the member work towards their goal and make deposits. Aspire CD holders do not receive follow-up reminders to contribute, so the account could simply be forgotten or ignored.

Experiment

We hypothesized that simply asking members to think about the specific goal they had in mind when they opened the account would increase the likelihood they would re-engage with the account. A simple prompt with instructions can be an effective path to action in its own right. However, we expected that including an additional prompt to think about one's original goal and its importance would increase deposit behavior.



Emails were sent to all 286 Aspire CD account holders with active email addresses. Members were randomly assigned to receive one of two versions of the email:

» **A control version** that reminded members of the account and asked them "How much would you like to add to your account?"

» **An experimental condition** that also prompted members to remember why they opened their account. Specifically, these members were asked, "What goal are you saving for? Why is this goal important to you?"

In both conditions, the email prompted the member to make a deposit and gave clear instructions as to how to do that, including a direct link to a deposit page.

Results

Just about 35% of the 286 recipients opened the email. Of the 100 members who saw the email in total, only 7 total members clicked through between both conditions. There were no significant differences between the two groups.

We also examined deposit activity in the month following the emails. Of the 100 people who opened the email, 42 made deposits in the following month. There were no statistically significant differences between conditions. These results suggest that simply reminding someone of their goal was as effective as our added behavioral nudge.

CASE STUDY

Reframing the benefits of a prepaid card savings wallet

Netspend

Partner Type	Startup
Partner Cohort	2018
Project Type	Optimization
Project Status	Completed

Background

While specialty savings CDs offer additional incentives for saving for banked consumers, many individuals are either unbanked or underbanked. Prepaid cards offer a secure and convenient alternative or complement to a bank account without a credit check. However, prepaid cardholders rarely take advantage of the savings features that are included by some card providers.

To help understand if and how prepaid cards could help consumers save, we partnered with prepaid card provider Netspend. Compared to other prepaid card providers, Netspend offers their users the highest interest savings account at 5.00% APY for balances of $1,000 or less. We explored how we might encourage more of their cardholders to take advantage of the available savings features.

Key Insights

There are several findings from behavioral science that we thought would be relevant to encouraging more cardholders to take advantage of the savings features associated with their card:

- Reframing messaging to add intrigue or mystery can make it more motivating. For example, we previously tested whether reframing messaging about calling to lower your credit card payment to "A Secret Money Hack" and "The APR trick you'll tell everyone." Adding this kind of intrigue increased call rates from 3.8% to 5.22%.
- Framing saving as "earning money" is more appealing. Not only was the 5%-interest rate a standout feature, but we know from our prior research that a value proposition to 'earn money' can be more appealing than a value proposition to 'save money.'

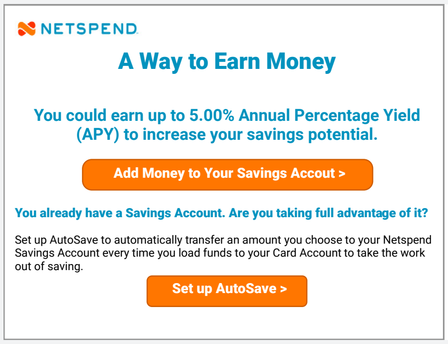
Experiment

We wondered if adding an element of secrecy to the Netspend messaging and reframing the savings features as opportunities to earn money would similarly entice cardholders to take action and save.

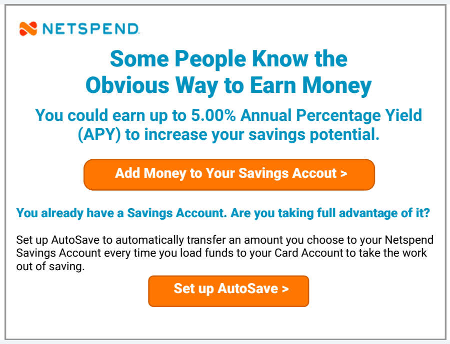
CASE STUDY

Netspend targeted more than 45,00 cardholders who had previously opened a savings account but had a balance of $0. These individuals were randomly sent one of three emails. All of the email body copy was identical except for the one headline which highlighted the secrecy messaging to encourage individuals to save.

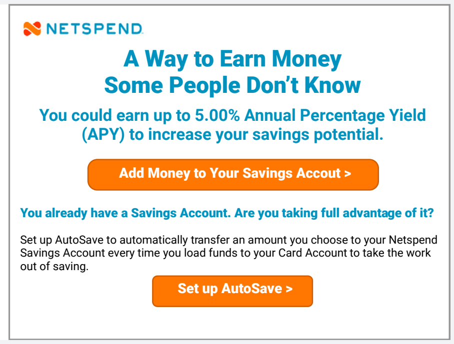
Condition 1. Earn Framing



Condition 2. Social Proof



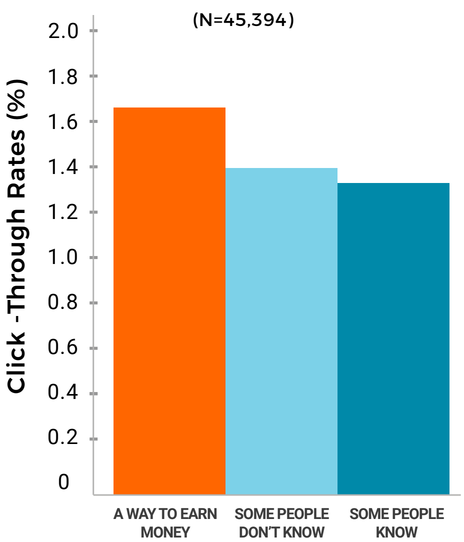
Condition 3. Unique Framing



Results

There was no effect between conditions on open rates. However, the average open rates among the experiment's conditions were 4-points greater – a 26% increase – than Netspend's average open rates for this type of email.

Average Click Rates Between Groups



We did see differences in click-through rates. Consistent with previous findings, the messaging "A Way to Earn Money" significantly outperformed the other two groups. People who opened the "intrigue" emails may have been expecting to see a 'secret,' only to be let down to discover it is a saving account. The earning frame was consistent between the subject and the body, which may be why it performed better.

Netspend also provided information on how many accounts had over a $5 balance after 60 days. While more people in the second condition had accounts with a balance, this was likely driven by people who would have saved regardless. When we look just at savings for people who opened the email, the differences go away.

We also found that 5.7% of people who opened the email started saving, compared to just over 4% of the those who did not open the email and therefore may be unaffected by the experiment. Therefore, it's possible that the email encouraged a few more people to start saving, but it could also be that the people who opened the email were more likely to save regardless of an email.

Overall, the findings reinforce the idea that email interventions are unlikely to drive significant uptake in prepaid card savings behavior. We would encourage future research to focus on interventions that integrate within the user experience. For example, we could imagine changing the sign up flow to include saving account set up or helping users make a saving allocation after their first deposit.

LAB STUDY

Learning from the lab: message granularity and saving beliefs

Partner Type	N/A
Partner Cohort	2018
Project Type	Lab Learning
Project Status	Completed

Background

Many people fail to take full advantage of sponsored savings accounts, even when an outside party provides financial incentives to encourage contributions. These sponsored savings accounts an under-used opportunity to increase overall savings. They can also establish a routine and build a habit of regularly depositing money into a savings account.

One possible reason why people fail to make use of such accounts is because they aren't weighing potential benefits of saving for the future properly. We designed an experiment to see if we could make progress on this issue by increasing how important people think it is to save for the future.

Key Insights

Previous research around the concept of anchoring has shown that bigger numbers create a greater impact in memory and perception. This concept might provide a way to help people recognize the benefits of saving and change how important they believe it to be.

We hypothesized that people would believe saving to be more important when shown descriptions of savings programs that highlighted how much money could be gained over a longer time-period (e.g., over a period of two years), compared to same amount but described in a way that highlighted how much money could be gained over a shorter amount of time (e.g., over a single day).

Experiment

Online participants read about a hypothetical government-sponsored savings program. Across four conditions, they were told how much money they could save per day, per month, per year, or per two years (only conditions 1 and 2 are shown below). Participants were from the UK, so savings were displayed in terms of pounds they could save. Afterwards, participants were asked how important they believed saving for the future to be.

Condition 1. Daily Framing

Great news! You are eligible to earn up to 82p per day. Our records indicate that you qualify for a new government-sponsored savings account that helps make saving easier. Your deposits will be matched 50p on the £1, for up to £50 per month. Once registered, your acount will remain active for 4 years. That means if deposit the full £50 each month, you'll earn up to 82p per day.

Condition 2. Bi-Yearly Framing

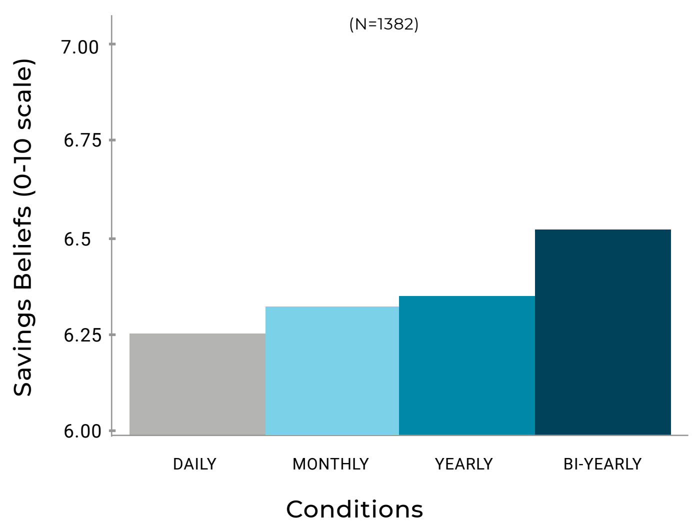
Great news! You are eligible to earn up to £600 every 2 years. Our records indicate that you qualify for a new government-sponsored savings account that helps make saving easier. Your deposits will be matched 50p on the £1, for up to £50 per month. Once registered, your acount will remain active for 4 years. That means if deposit the full £50 each month, you'll earn up to £600 every 2 years!

Results

Across three online studies with over 1300 participants, participants who read about the money they could save over a two-year period consistently believed that saving for the future was more than important than those who read about how much they could save in a shorter time period. These results suggest that one way to encourage people to see saving as important, and potentially encourage greater use of savings programs, is to place people in a long-term mindset that highlights the large amounts of money they may gain over a longer period of time.

Beliefs about the importance of saving for the future increased by 4% when participants saw how much savings could accumulate over a long time period (two years) than shorter time periods (one day, one month, one year). We will continue to explore if this increase in perceived importance actually translates to behavior.

Beliefs About the Importance of Saving



Increasing Long-Term Savings

Short-term savings are important for helping people manage the ups and downs of life. Long-term savings, though, help people to reach goals that are meaningful to them. Maybe that means helping finance college for their children, purchasing a home, or retiring and living comfortably.

Unfortunately, the evidence suggests that most people are not making progress towards their long-term financial goals. Take saving for retirement, for example. Despite increases in retirement savings rates, most people in the U.S. still have dramatically under-saved or not saved for their retirement at all. The gap in retirement savings could potentially triple the number of impoverished retirees needing public financial support in coming years.

People are finding other goals, like financing a child's college education, increasingly difficult to attain. The cost of attending college has increased each year faster than inflation, growing by 5.73% per year since 1990. Put another way, a $20,000 college tuition in 1990 now costs $95,223 in 2018. In the face of rising costs, families need to start saving and planning for college as early as possible. The evidence suggests that child savings accounts (CSA's) or 529 plans offer families an effective way to start saving for college and cultivate a "college-bound identity" in their children. Sadly, however, only 16% of parents used savings from a 529 savings account to help pay for college, which suggests these accounts are highly under-utilized.

Over the past year, we worked with four organizations to develop interventions to encourage people to take advantage of programs that help them save either for retirement or for their child's future education. Our work with those organizations approached increasing long-term savings in two ways.

1. Design supports that help them account for future costs and benefits more accurately.

We don't know exactly what our life will be like in the far future or how we will think and feel. Costs and benefits in the far future are much less tangible for us than those costs and benefits in the near term. We can help improve the decisions people make by design tools or supports that make it easier or more attractive for them to make decisions that align with their long-term financial well-being.

With OregonSaves, we designed a decision aid that addresses some of the short-term concerns that people likely overvalue when deciding if they should start saving for retirement. We also nudged them to start saving by using short vignettes or narratives from other savers to send an implicit recommendation that others started saving.

In our partnership with College Kids, a college savings program offered by the St. Louis Office of Financial Empowerment, we tried to encourage more people to start planning for their child's education using messaging that came from a trusted source and helped users visualize a faster progression of time.

Another way to encourage people to engage in future-oriented behavior is to add short-term benefits that might provide more motivation to do so. In our project with San Francisco's Kindergarten to College program, we designed a tool that helps people monitor their progress toward long-term savings goals. The tool reminds people of their desire to provide for their children and encourages people sustain their motivation over time.

> *“*
>
> ***One way to make saving a little easier is to simply make savings automatic. When we don’t have to think about it, saving is less painful.***

2. Capture people’s attention.

People are often caught up taking care of daily tasks that require their immediate attention and involvement rather than reflecting on how to achieve long term goals. They tend to procrastinate working on nebulous and complicated activities with impacts far in the future. When it comes to long-term savings, though, procrastinators can be seriously disadvantaged since they lose out on the power of compound interest to build their nest eggs.

We piloted two projects designed to capture potential savers’ attention at opportune moments to get them to start saving for long-term savings goals now.

In another experiment with St. Louis Office of Financial Empowerment, we tried to tie saving using a CSA to tax time. The intervention tried to leverage the motivation and attention people already give their tax refund to increase their engagement with CSAs.

With the PA Treasury, we tested different types of messaging to see if one approach was more effective at capturing people’s attention. We tested if addressing the message to the child rather than the parent made people notice the messaging more. We also explored if who the sender is matters and tested whether changing the institutional logo changed how people perceived the program.

CASE STUDY

Using narrative decision aids to encourage retirement savings

Oregon State Treasury

Partner Type	Government
Partner Cohort	2018
Project Type	Optimization
Project Status	In field

Background

People are most likely to be unprepared for their financial future when it is not possible for them to save for their retirement through their work. Unfortunately, this is the reality for millions of people, including those who work at small businesses or who work part-time jobs. Oregon has become the first state to address this issue by introducing OregonSaves, a retirement savings option for employees in the state who did not have the option to save through their employer.

Employers in the state must offer the program to their workers if they don't offer another retirement option, but employees are free to opt-out if they choose to do so. The OregonSaves program looks to maximize employee participation: both to ensure more individuals in the state of Oregon are saving for retirement but also to ensure the program is financially viable and self-sustaining. We partnered with OregonSaves to explore how we might encourage more employees to start saving with the program.

Key Insights

A lot of work has already been done to understand why people struggle to save for their future, but we wanted to understand how those barriers affected people within this specific context. We began by conducting in-depth interviews with individuals in Oregon who would be eligible to enroll. Three barriers emerged as especially relevant:

» Many people who are eligible for OregonsSaves want to feel in control of their money and often aren't comfortable sacrificing short-term liquidity, even when they could save small amounts.

» Some people are wary of a program managed by the government. This was not the case with everyone we spoke with, but some felt the state had mismanaged other things in the past like state pensions.

» Many people felt torn about enrolling because they would like to save but they aren't sure if they are able to or if this is the right time to save. People look for cues, especially cues from how other people behave, as to what they should do when they are uncertain or unfamiliar with something.

Experiment

We hypothesized that by providing timely program information that addresses important barriers to enrollment and presents that information as vignettes might shape people's early impressions of the program and might send an implicit, social recommendation to enroll.

To test this hypothesis, we are asking employers to circulate a short survey among their employees as they become eligible to enroll in the program. In the survey, the employees are either randomly presented with a control or one of the following decision aids.

Condition 1. Null Recommendation

A null recommendation version where only 3 of the 4 vignettes enroll. Including a null recommendation might make potential savers view the implicit recommendation offered by the decision aid as more legitimate.

Worried that you can't afford to save?

Patricia was too.
Is she enrolled?

☑ **Yes**

Between bills and supporting her family, the idea of saving just felt out of reach for Patricia.

But OregonSaves lets her save to meet her needs, as little as 1% of her paycheck.

She can also access her savings if something comes up. She can even stop saving if she wants, which makes the choice to start saving less stressful.

Worried about debt like a payday loan?

Josh was too.
Is he enrolled?

☒ **No**

Josh took out a payday loan a couple of months before and was struggling to repay it.

He decided that his savings were better spent repaying that high-interest debt.

Balancing high-interest debt and saving for the future can be difficult. Fortunately, Josh can start saving with OregonSaves as soon as he is ready.

Worried about changing jobs soon?

Madeline was too.
Is she enrolled?

☑ **Yes**

Madeline was switching careers when she was offered a chance to start saving.

Fortunately, the OregonSaves account is portable, meaning she can easily take her money with her when she starts her new job.

Her account can also be rolled into a 401(k), if her new employer offers one.

Worried that it's too late to start saving?

Gustavo was too.
Is he enrolled?

☑ **Yes**

Gustavo had put off saving for retirement for years. When OregonSaves came along, he felt bad at first that he hadn't started when he was younger.

It is never too late to start saving.

Gustavo decided to give it a shot anyways. Even if he puts away just a little bit, that will be a big help later.

Condition 2. Social Proof

A social proof version where all 4 of the vignettes enroll. Showing everyone enrolling might send a stronger implicit recommendation that most people enroll and start saving.

Worried that you can't afford to save?

Patricia was too.
Is she enrolled?

☑ **Yes**

Between bills and supporting her family, the idea of saving just felt out of reach for Patricia.

But OregonSaves lets her save to meet her needs, as little as 1% of her paycheck.

She can also access her savings if something comes up. She can even stop saving if she wants, which makes the choice to start saving less stressful.

Worried about debt like a payday loan?

Josh was too.
Is he enrolled?

☑ **Yes**

Josh had taken out a payday loan a couple of months before and was struggling to repay it.

With OregonSaves he could start saving when he was ready.

Balancing high-interest debt and saving for the future can be difficult. After Josh repaid his loan, he was able to start investing in his future.

Worried about changing jobs soon?

Madeline was too.
Is she enrolled?

☑ **Yes**

Madeline was switching careers when she was offered a chance to start saving.

Fortunately, the OregonSaves account is portable, meaning she can easily take her money with her when she starts her new job.

Her account can also be rolled into a 401(k), if her new employer offers one.

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It is never too late to start saving.

Gustavo decided to give it a shot anyways. Even if he puts away just a little bit, that will be a big help later.

Results

This experiment is currently in the field. The deadline for employers to register their employees – thus making them eligible for the program and to participate in this study – is in mid-December 2018. We will continue tracking field resopnses through the end of February or until we reach our full target sample.

In the final analysis, we will measure how willing people are to seek information about the program and how likely they say they are to enroll in the program. We also will measure how trustworthy the program seems to be to employees, and most importantly, the actual enrollment decisions that employees make.

CASE STUDY

Presenting employers with a pseudo-active choice to increase registration

Oregon State Treasury

Partner Type	Government
Partner Cohort	2018
Project Type	Optimization
Project Status	Completed

oregonsaves®

Background

In addition to focusing on maximizing employee participation in the OregonSaves program, we again partnered with OregonSaves to encourage employers to register their business in a timely manner. Employers in Oregon who don't currently offer retirement benefits to their employees must offer access to the OregonSaves program. There are several steps that employers must take to do so, including logging into the OregonSaves online portal, registering their business and adding their employees.

Registering their business and adding employees are critical steps to OregonSave's process – the information that employers provide jumpstarts the process for reaching out and connecting to their employees. Currently, OregonSaves sets a deadline by which employers should register. However, some employers don't register their business by the deadline.

Key Insights

There are a number of reasons why people procrastinate, and several of those are potentially relevant for why employers put off registering their employees.

- To register their business, employers must log into the system and input information. Then, they must upload information about their employees. OregonSaves has taken a lot of steps to make this process easy. Even still, when people perceive something as a hassle, they are more like to put it off.
- Some employers may not fully understand the program. For example, some might think they are exempt when in reality they are not, or they might be unsure of what is required of them. This uncertainty also increases the likelihood that some will procrastinate.
- Others may simply forget. Employers have 30 days to register their business, which may feel like a long time, but in reality that is plenty of time to put the task off and forget about it.

Experiment

We hypothesized that by making the employer requirement and deadline more salient, more employers would register their employees within the deadline. We also hypothesized that presenting the choice as a "pseudo-active choice" would convey to employers that they have to take some action, thus encouraging even more employers to respond by the deadline.

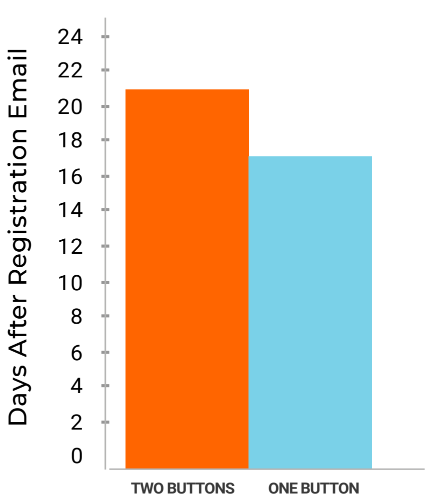
To test our hypotheses, we first re-designed and simplified the initial notice that the program sends to employers. We simplified the language, made the "Respond Today" button larger, and tried to make the the deadline more salient. We also tested a second version which aimed to reinforce the idea that a response was required. We split the "Respond Today" button into two buttons – "Register for OregonSaves" and "Certify Exemption." We thought two buttons might signal to employers that they must choose one or the other; they cannot choose to ignore the process.

Condition 1. Re-designed Control

Condition 2. Pseudo-Active Choice

Average Number of Days Before Responding

(N=1125)



Results

We did not see any statistically significant differences between the total rate of registration between the two versions of the employer notice. In fact, employers who received the notice that presented a pseudo-active choice may have actually taken longer to respond compared to those receiving the single button version. Employers receiving the registration email with one button responded, on average, 4 days ealier than those receiving the email with two buttons. We saw this increase was mostly driven by a much higher registration rate on the first day they received the notice.

Presenting employers with two buttons was intended to signal that they needed to make a choice. Instead, providing two options may have signaled that taking an action required them to make a decision. Employers who should register instead hesitated and then procrastinated - we saw that the version with two buttons had a higher bounce rate and these employers were slightly more likely to register just before the deadline. Providing just one option makes just starting the process easier.

CASE STUDY

Adding choice to defaults in a retirement savings account

Self-Help Credit Union

Partner Type	Credit Union
Partner Cohort	2016
Project Type	Optimization
Project Status	Completed

Background

In the United States, the lowest wage earners have limited access to retirement savings programs. According to the Bureau of Labor Statistics, of the lowest 10% of U.S. wage earners, only 34% had access to, and only 15% were participating in, employer-sponsored retirement savings programs. These statistics indicate low-income individuals are having a particularly difficult time saving for retirement.

We partnered with Self-Help Credit Union (SHCU) to help its members that are not currently saving for retirement. SHCU is a financial service provider that is focused on community development and the improvement of the financial well-being of its members. Many SHCU members are not currently saving for retirement.

Therefore, SHCU decided to create a new Retirement Savings Account (RSA) that serves as a substitute for traditional employer-based retirement plans. The RSA is funded using automatic contributions from checking deposits and contains a free $100 for all members who do not close the account or withdraw from it in the first year. We partnered with SHCU to test the efficacy of the RSAs at a branch in Western North Carolina.

Key Insights

Qualitative and quantitative analyses represented the foundation for our behavioral diagnosis. We conducted a series of eight in-depth interviews with SHCU staff, members, and one non-member. Additionally, we consulted relevant academic literature on defaults and reviewed historical savings trends for SHCU members. Online surveys were also administered to measure preferences for product features such as product name, automatic contribution percentage, and withdrawal penalties. The behavioral diagnosis led to two key insights.

- Many members lack or have limited plans for retirement. In our qualitative interviews, many members indicated that they suffered from a lack of planning or had no plans for retirement whatsoever. Members did not have specific retirement goals, and many were not currently saving for their retirement.
- Many members valued the ease and simplicity of automatic savings. The members were in favor of making the retirement savings process as easy as

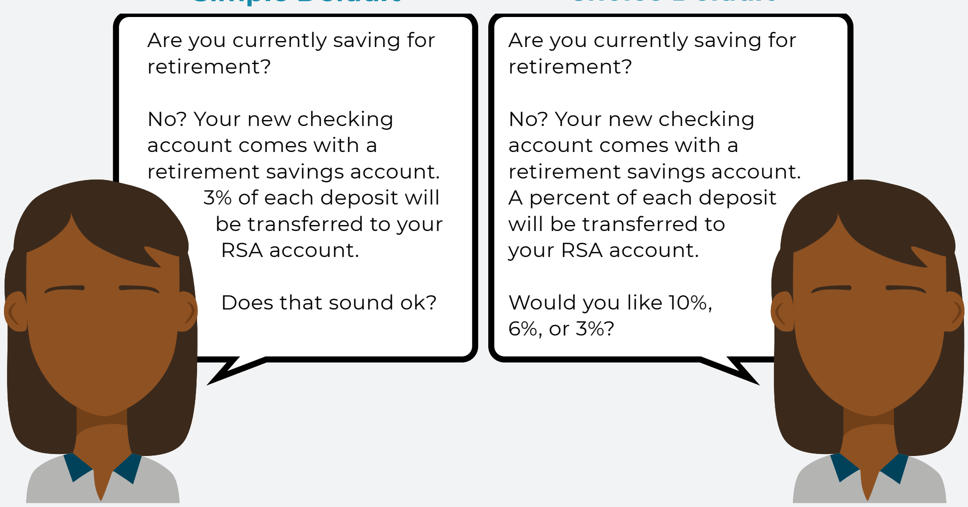
possible. The RSA allows members to save for retirement without changing any of their financial habits. After the RSA is established, savings will accumulate effortlessly and without much thought.

Experiment

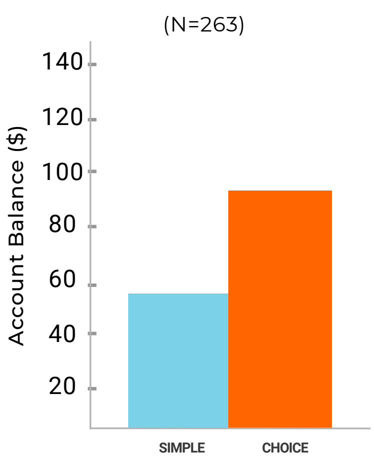
We designed a simple experiment to test which way of presenting the RSA to memebers would lead to the greatest uptake and retirement savings. Members who were not currently saving for retirement and had just opened a new checking account with SHCU were randomly assigned to recieve a simple default or a choice default. Participants presented with the simple default were told 3% of all checking deposits would be transferred to their RSA. The choice default participants were asked to select between automatic transfer rates of 10%, 6%, or 3%.

Condition 1. Simple Default

Condition 2. Choice Default



Average RSA Balances Between Groups



Results

The RSA intervention was launched in June 2017. Through the end of June 2018, all eligible SHCU members were offered the RSA. Approximately 36% enrolled in the account and over 24% have maintained active accounts. Interestingly, members were marginally more likely to have opened the account and still keep the account active if they were in the choice-default rather than the simple-default condition. Further, members saved marginally more for retirement in the choice-default condition than did members in the simple-default condition. Across both groups, members have cumulatively saved over $25,000 for retirement during our intervention.

The Common Cents Lab is now working with Self-Help Credit Union to rollout the RSA to more branches and is currently designing an RSA 2.0 to test in 2019.

LAB STUDY

Learning from the lab: reframing social security retirement benefits

Partner Type	N/A
Partner Cohort	2018
Project Type	Optimization
Project Status	Completed

"Each year that someone delays claiming Social Security, their benefits will grow by about 8%, which can mean thousands of additional dollars in retirement income each year.

Background

Americans are worried about having enough money to retire. Many Americans aren't saving for retirement or haven't saved enough. Furthermore, those that do have savings are faced with a terribly difficult decision — when to claim their benefits? People that claim their benefits too early leave extra money on the table. People that claim their benefits too late, though, might not get the most from their savings. Like Goldilocks and her fabled porridge, American retirees need to claim their benefits when it is "just right".

Finding the age that's "just right" is difficult – the majority of Americans likely do not know when they should claim their benefits. Instead, most are claiming Social Security as soon as they are eligible to do so. People may be claiming too early because they rely on heuristics or environmental cues when deciding when to claim their retirement benefits.

Key Insights

We hypothesized that perhaps the Social Security Administration is framing information about benefits in a way that encourages people to claim social security as early as possible. According to the US Social Security Administration, there are early, full, and delayed retirement ages. At these three ages, respectively, retirees born between 1943-1954 are entitled to 75%, 100%, or 132% of their retirement benefits.

The percentages are intended to convey that your savings will grow as you delay your claim, but framing them as more than 100% may lead people to treat delaying differently than if it simply summed to 100%. People might just want the full amount they are entitled to, and are less motivated to wait for a "bonus." Therefore, we designed two experiments to investigate how the framing of "full retirement benefits" affects people's preferences for when to claim their benefits.

Experiment

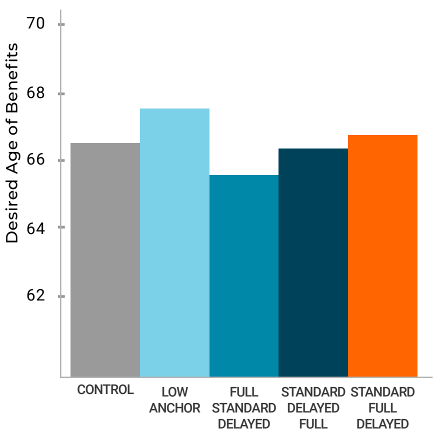
To test our hypothesis, we designed two experiments where participants viewed different presentations of key retirement ages and were asked when they desired to claim their social security benefits.

In the first experiment, we varied the names of age categories to be either “Full, Standard, Delayed”, “Standard, Full, Delayed”, or “Standard, Delayed, Full.” Some participants were also randomly shown either a control, where the percentages and names aligned with the way the SSA currently displays retirement benefits information, or a low anchor, where percentages were reframed so that retirement benefits would only reach 100% at age 70.

The second experiment was a follow-up to the first. In this study, participants were again randomly assigned to the control condition or the low-anchor condition from the first study. Here we added a third, high-anchor, condition where retirement benefits were presented so that someone would reach 100% of their retirement benefits at the earliest retirement age (62). If they waited to age 70, they were eligible for 176% of their retirement benefits. Afterwards, participants were again asked at what age they desired to claim their benefits.

Study 1. Average Ages People Would Claim Benefits

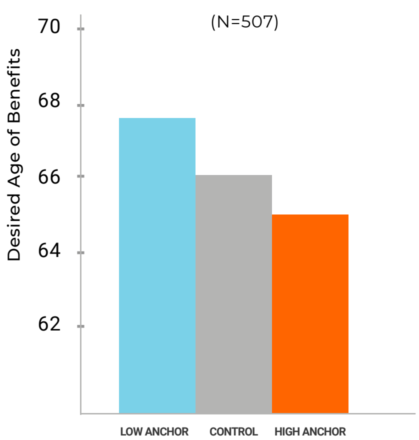
(N=294)



Results

In study 1, participants in the low-anchor group reported that they would wait the longest to claim their benefits. This difference was statistically different from two of the name groups. There were no differences, however, in claiming ages between control and all other conditions. Given these differences, it appeared that the framing of percentages in retirement benefits uniquely affected participants’ preferences.

Study 2. Average Ages People Would Claim Benefits



In study 2, participants who were told they would reach 100% of their benefits at age 70 were willing to wait about a year longer before claiming their retirement benefits compared to the control. Participants who were told that they reached 100% of their retirement benefits at age 62 were willing to wait about 1 year less than the control.

Taken together, these results suggest that how we communicate retirement benefits can significantly influences peoples’ social security claiming preferences. Moreover, the way that the SSA currently frames benefits likely encourages people to claim their retirement benefits at or before age 66.

CASE STUDY

Using progress tracking to increase college savings deposits

San Francisco City and County

Partner Type	Government
Partner Cohort	2018
Project Type	Optimization
Project Status	In field

Background

Research has shown when low- and moderate-income students have even a little money saved for college, they are over three times more likely to enroll and four-times more likely to graduate than students with no savings. Further, research from the SEED for Oklahoma Kids Experiment demonstrates that offering automatic enrollment can ensure that nearly everyone has access to a savings account.

The San Francisco Kindergarten to College (K2C) Program is a college savings program run by the City and County of San Francisco in partnership with the San Francisco Unified School District (SFUSD). The K2C program automatically opens accounts for each SFUSD student entering kindergarten or a participating program year. Each account starts with $50 and families have the opportunity to earn an additional $90 in incentives over the year. This incentive structure makes it easy for families to save $200 in college savings by making six $10 deposits (although any level of deposit and interaction with the account is encouraged).

Even still, many families do not take advantage of the incentives offered through their K2C account. We partnered with San Francisco Kindergarten to College program (K2C) to try to increase participation and deposits in the K2C program. While all children receive an account, not all parents are aware of the program.

Key Insights

We began by conducting a behavioral diagnosis to identify the channels that K2C connects with eligible parents, which includes K2C's Welcome Letter to parents. We learned that K2C's opportunities to remind parents of the program and their ability to encourage them to make deposits are primarily communicated via a letter at the beginning of the school year. This letter is distributed to new children enrolled in grades K - 6 in the San Francisco Unified School District. Previous studies by the Common Cents Lab have shown this delivery-by-backpack method to be effective in increasing savings rates.

CASE STUDY

We focused the majority of our efforts on optimizing the initial letter. There were primarily two behavioral insights that informed our design.

- Previous work we conducted showed that savings reminders lead to more savings deposits.
- Additionally, applied research conducted by Common Cents lab and other lab research suggests that showing progress increases the likelihood of goal competition.

Experiment

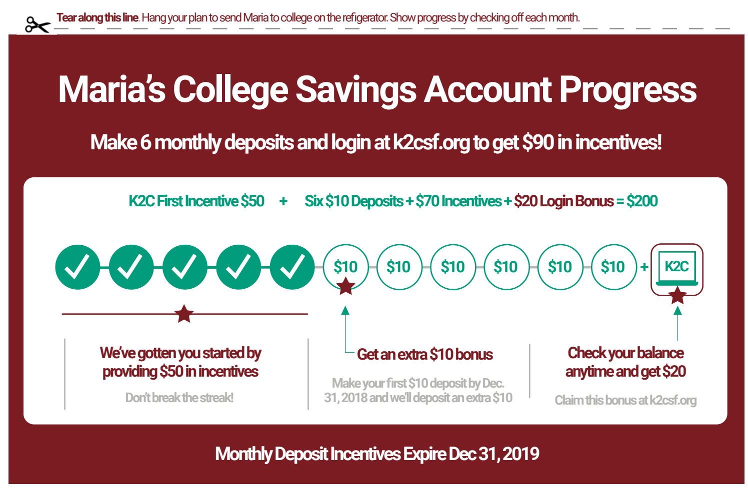
We hypothesized that making savings progress salient would provide reminders to save. We designed two versions of the welcome letter and randomly assigned parents to receive one version.

Condition 1. Informational Control

Parents were informed of the additional incentives they could receive by logging in to the account and making additional deposits.

Condition 2. Progress Tracker

Parents were given the same information as in the control, along with a progress bar to depict their deposits and a prompt to tear off the progress bar and place it on their fridge.



Results

We hope that the increased saliency of the progress bar will serve as a constant reminder for parents to save. These letters were distributed to children beginning in December 2018. We will then track sign up and deposit behavior for a six-month period after the letters are distributed.

CASE STUDY

Using the messenger effect and time progression to increase CSA engagement

St. Louis OFE

Partner Type	Government
Partner Cohort	2018
Project Type	Optimization
Project Status	Completed

Background

According to the College Board, tuition at four-year public colleges has risen more than 100% since 2001. In recent years, financial aid packages have not kept up with rising tuition costs. In the face of rising costs, families need to start saving and planning for college as early as possible. Saving for college through a 529 College Saving Plan or a College Savings Account (CSA) offers families tax-exempt savings and often other benefits, such as matched savings and student attendance rewards. Sadly, only 16% of parents use savings from a 529 savings account to help pay for college, suggesting these accounts are highly underutilized.

We continued our partnership with the St. Louis Office of Financial Empowerment (OFE) to specifically focus on how to encourage greater engagement with the child savings accounts. Through the St. Louis OFE's College Kids program, every kindergarten student receives a children's savings account (CSA) with a $50 seed deposit, as well as other incentives. In 2018, in these studies, CSA engagement is defined by deposit amount and frequency, as well as return of a consent form that allows deposits into their child's CSA based on school attendance, if returned.

Key Insights

There has been a lot of work done already to explore what prevents families from making use of CSAs. However, we conducted upfront work to see how these factors manifested here– these included qualitative interviews with parents, analyzing administrative data, and a co-creation design session with parents, teachers, coordinators and school coordinators. We identified several, especially relevant factors to understanding why so few families save with the College Kids program.

- Parents may lack sufficient trust in the program. Trust is a common issue faced by CSA programs that are offering "free money" to families. Many people are hesitant to take a deal that feels a little too easy.
- People think myopically about the future. Encouraging parents with young children to start preparing financially is difficult because the benefits of doing so are not easy to immediately understand, and they will only materialize a long time off in the future.

Experiment

Research suggests who delivers a message and how it is delivered can change how the message is received. For example, people respond more favorably to a message when it is delivered by experts, authority figures, or people they know and trust. We hypothesized that using a trusted source to send messages that emphasized the progression of time would increase CSA engagement.

To test our hypothesis, we sent parents text messages to remind them to take actions on their accounts. These messages were sent in combination with a start-of-year packet to inform parents about the program. Note that everyone who received an SMS actually received two messages – one that arrived the same day as the packet and one that arrived a week later.

Parents were randomly assigned to receive text messages as if they were sent from different figures of authority: either the school principal (the name varied by school) or the city treasurer (a well-known public figure). Another set of parents were randomly assigned not to receive any text message at all. This question of who should offer information about the program – the school or the city – is one that is ubiquitous across college savings programs, so testing this may offer scalable insights in the field.

Results

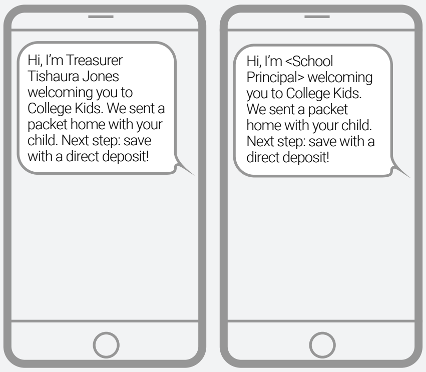
In total, our sample consisted of 8,341 parents. This sample included parents from all participating school years with an active mobile phone number on file. Due to a technical issue, parents from public schools received the SMS messages before the start-of-year packets; however, in our analysis we found no difference in deposit rates by school type, suggesting that the delay did not have any effect.

Overall, deposit rates were very low. Only 53 people (<1%) made deposits during the experimental period. While no differences were statistically significant, we observed that the time progression messages from the principal may have performed better than the control.

Interestingly, among the 53 parents who made a deposit, parents who received a message from the school principal saved an extra $30 on average. While the total deposits were very low, this leads to a $0.29 increase in the average first deposit when this is expanded to the whole population, which is statistically significant. However, with so few deposits, saying anything definitively about this effect is difficult. Nevertheless, this calls for further investigation into the effect of messenger on savings behavior.

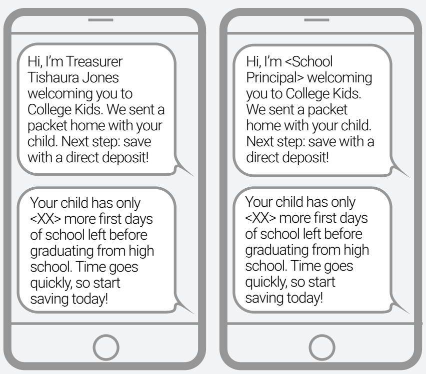
Conditions 1 & 2. Messengers

Direct asks from School Principal and from a Recognizable Public Figure



Conditions 3 & 4. Time Progression

Adding time progress to the direct asks.



> ***"Among the parents who made deposits, those receiving texts from the school principle deposited around $30 more than those recieving texts from a recognizable public figure.***

CASE STUDY

Linking college savings to tax time and paydays

St. Louis OFE

Partner Type	Government
Partner Cohort	2018
Project Type	Optimization
Project Status	Completed

Background

Beyond overcoming the psychological barriers that make saving for future educational costs difficult, many CSA programs also struggle to capture the attention of parents and get to top of mind. Often finding the right moment to connect with parents about saving for college is difficult. This is especially true if CSA programs are reaching out to parents at the beginning of the school year, when their attentions are often focused on more immediate challenges.

We continued our partnership with the St. Louis Office of Financial Empowerment (OFE).In these two experiments, we attempted to couple college savings nudges with two earnings-related events: tax time – when many families receive sizeable tax refunds – and paydays.

Key Insights

There are several reasons why coupling college savings with tax time and with someone's paycheck is more likely to be effective than presenting information about the CSA separately.

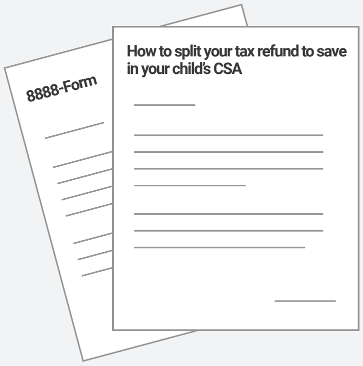
- People are already likely to pay attention to their paycheck and their tax refund. Using these channels is a way of connecting with families when the program is more likely to capture their attention.
- Parents are likely to find it easier to set aside some money for their child's future education right when they are paid or when they receive a tax refund. A previous study we carried out with Digit – a fintech company –showed that asking an individual to pre-commit to saving a portion of their tax refund before they receive it can increase tax-time savings.

Experiment 1. Saving at Tax Time

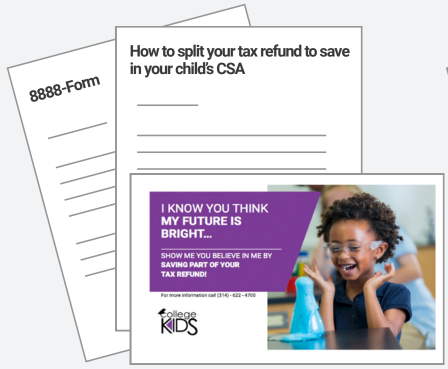
We hypothesized that making it easier for families to contribute to a CSA at tax-time would increase CSA engagement. We utilized the IRS Form 8888, which allows US taxpayers to split part their refund for savings. Families were randomly sent one of four packets, and some families served as a control - which did not receive anything. We used an additive research design, which means each subsequent condition builds on the last condition.

Condition 1.
A general letter explaining how to split a tax refund.

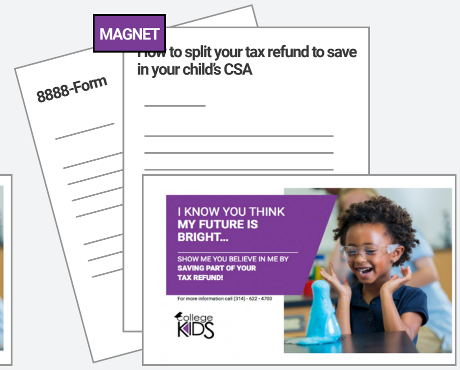
Condition 2.
The same general letter and a blank 8888-form needed to split a tax refund.



Condition 3.
The same general letter, the blank 8888-form, and a designed flyer.



Condition 4.
The same general letter, a blank 8888-form, a designed flyer, and a magnet to attach the forms to the refigerator.



Results

In total, our sample consisted of 8,324 families, roughly evenly split between each of the five conditions. Across everyone, we observed only 11 families make at least one deposit during the study period. Of those who saved anything, total deposits ranged from $25 to a little more than $250.

We found no significant differences in deposit rates across the conditions. We believe that many low- to moderate-income families file their taxes as soon as they can to receive their refunds. Our interventions, however, were sent a few weeks into tax season. Parents may have already completed the tax filing process before receiving our intervention, which may have contributed to the low deposit rates.

Experiment 2. Quick Enroll on Payday

We hypothesized that by reducing friction in the savings process and making it easier for someone to save at payday would increase the number of direct-deposit enrollments to the College Kids program. To test this hypothesis, we piloted a program with the City of St. Louis where employees would receive a quick enroll form for automatic deposits into any College Kids CSA.

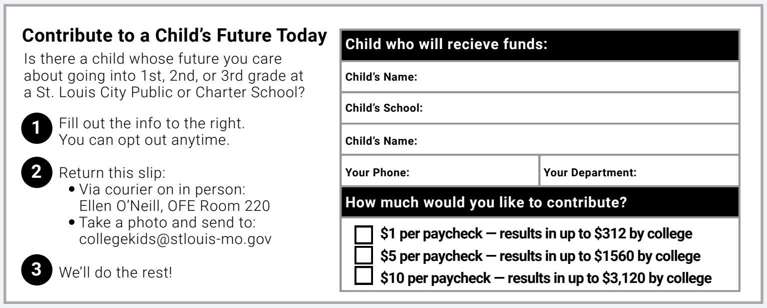
We designed an enrollment form that would be easier for city employees to complete and return. Employees are still paid by paper checks on a biweekly basis, so we distributed the forms by attaching them directly to their paychecks. We randomly assigned departments to either receive a quick-enroll form or not, making sure that both conditions included departments with different amounts of employees.

CASE STUDY

We ran two rounds of the experiment, one with each of two paydays. In the first round, we tested the presence and absence of a quick-enroll form; in the second round we added handwritten and printed sticky notes to the quick-enroll forms.

Condition 1. Quick Enrollment Form

The quick enrollment form was sent with city employees' paychecks. All they needed to do was fill out the form to set up an automatic deduction



Contribute to a Child's Future Today

Is there a child whose future you care about going into 1st, 2nd, or 3rd grade at a St. Louis City Public or Charter School?

1. Fill out the info to the right. You can opt out anytime.
2. Return this slip:
   - Via courier on in person: Ellen O'Neill, OFE Room 220
   - Take a photo and send to: collegekids@stlouis-mo.gov
3. We'll do the rest!

Child who will recieve funds:

Child's Name:

Child's School:

Child's Name:

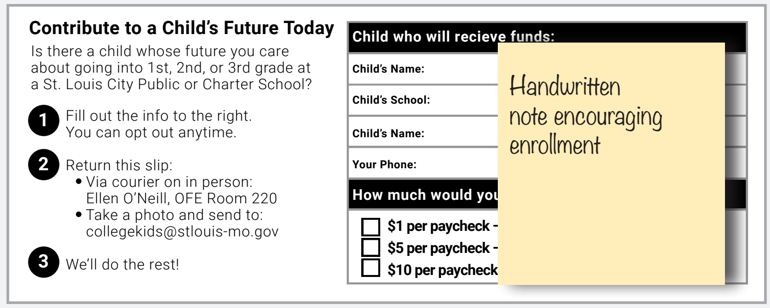
Your Phone: | Your Department:

How much would you like to contribute?

- ☐ $1 per paycheck — results in up to $312 by college
- ☐ $5 per paycheck — results in up to $1560 by college
- ☐ $10 per paycheck — results in up to $3,120 by college

Condition 2. Quick Enrollment Form + Handwritten Note

In addition to the quick enrollment form, employees in this condition also recieved a handwritten note on the form encouraging enrollment.



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Child who will recieve funds:

Child's Name:

Child's School:

Child's Name:

Your Phone:

How much would you

- ☐ $1 per paycheck -
- ☐ $5 per paycheck -
- ☐ $10 per paycheck

Handwritten note encouraging enrollment

Results

Enrollment into automatic deposits did not vary between conditions. The findings in this experiment are limited due to the lack of quick-enroll form returns – as in the other two experiments, we observe very low baseline savings activity.

> ***"***
>
> ***Tying college savings to savings moments – whether that's payday or at tax-time – did not yield a meaningful increase.***
>
> ***The nature of saving for college makes it an especially difficult and complicated behavior to encourage.***

We suspect that there was a limited response in part because few parents had or knew of children who were enrolled in the program. Nevertheless, we still expected more engagement than we saw. Together, both the findings from this experiment and from the tax experiment suggest that timing of the ask may not affect college savings, at least in relation to tax time and payday.

One interesting avenue that did emerge from this was that several people anecdotally expressed an interest in sponsoring a child's college savings account, similar to how one would with charitable giving. Overall though, our thinking is moving toward more structural changes to increase deposit activity – for instance, looking for ways we might re-design the incentive structures for CSA accounts to be more appealing or motivating.

CASE STUDY

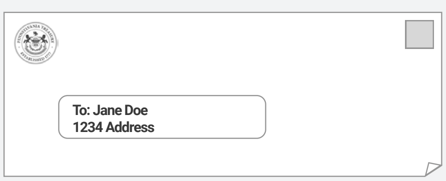
Priming parents with their newborn child to encourage CSA engagement

Pennsylvania Treasury

Partner Type	Government
Partner Cohort	2018
Project Type	Optimization
Project Status	Completed

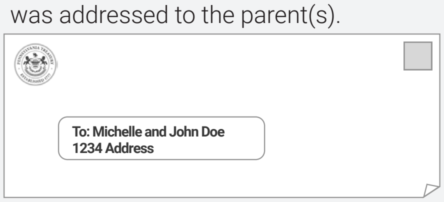
Condition 1. Child Name

The see through window on the envelope was addressed to the child.



Condition 2. Parent Name

The see through window on the envelope was addressed to the parent(s).



Background

While cities like San Francisco and St. Louis offer their own CSA's to their residents, most families have access to CSA's that are offered through state agencies. A majority of states now offer CSA's, and several have even begun to offer universal accounts to all children born in the state.

In 2018, the Pennsylvania Treasury launched Keystone Scholars program, which began by offering all parents of newborn babies in six eligible counties the opportunity to claim a $100 grant within the year after their child is born. However, not everyone claims the $100 and, by not doing so, they forgo the benefits of the account. We partnered with the PA Treasury to increase the number of mailer open rates, and thus, the number of families that go online to claim their $100 grants.

Key Insights

Currently, the PA Treasury sends mailers to new parents that communicate the benefits of the pilot program and provide information about how parents can claim the $100 grant. To better understand this process, we began by talking with PA Treasury staff and mapping out all of the necessary steps required of parents to claim their account. We also spoke with new parents to understand the barriers that make it less likely they will open and act on the mailer.

» Responses to direct mail are already very low. People tend to overlook letters, and even when they do open their mail, they may put off responding until a later date.

» The experience of parenthood is, in itself, a big barrier for people opening the account. Being a new parent is a very busy time and we tend to let a lot of things fall to the wayside. New parents are likely not opening mailers they are receiving a few months after their baby is born.

Experiment 1. Mailers

We hypothesized that addressing the mailer to the parent's newborn child rather than to the parent would draw more attention to the mailer. By capturing more of parents' attention, we hoped to increase the likelihood that they would open the letter and, ultimately, motivate them to claim their child's account. We ran two experiments testing our hypothesis. In the first experiment, we targeted new parents who had not yet claimed the $100 grant nor opened the account. Parents randomly received one of two letters: addressed to them or addressed to their child.

Results

Letters were sent to 4,343 individuals and a total of 503 claimed accounts across conditions. We found that individuals who received a letter addressed to their newborn were slightly more likely to claim their account compared to individuals who received a letter addressed to the parent. However, these differences were not statistically significant after controlling for the demographics of the parent.

Specifically, we find parents who have completed college or a professional degree, who are married, and who are white are more likely to claim the account. These correlations suggest that claiming may be associated with the parents' own background and educational history.

Experiment 2. Emails

In a second experiment, we targeted parents who had already claimed their $100 Keystone grant but had not yet opened a PA 529 college savings account. Instead of direct mail, in this experiment we tested different email subject lines in an attempt to elicit attention. Parents were randomly assigned to receive one of two emails using the same ideas as the letters: one email's subject line referenced the name of the parent's newborn , whereas the other subject line referenced the parents.

Results

Of the 435 individuals that received emails, only 20 parents – 7 parents in the parent name condition and 13 parents in the baby name condition – opened a 529 account. This difference is not significant.

> ***"We found that parents were equally likely to claim the $100 grant regardless of whether the messaging was addressed to them or to their child.***

When looking just at email open rates, we do see a larger portion of individuals in the condition addressed to the parent's name opened the email compared to the portion of individuals in the condition addressed to the baby's name (61% to 47%). While interesting to pursue further, this difference is not statistically significant.

Both the email and mailer experiment suggest that getting parents attention is not enough to motivate them to either claim the Keystone grant or open a 529 - both complex financial behaviors. Moving forward we hope to pursue more structural changes that might make these benefits an easier choice for parents. For instance, this could include bundling the 529 or Keystone grant with the packet of documents that every new parent interacts with after their child is born.

CASE STUDY

Changing perceptions of a CSA program with different insitutional logos

Pennsylvania Treasury

Partner Type	Government
Partner Cohort	2018
Project Type	Optimization
Project Status	Completed

Background

Many CSA programs that are offered as a public initiative have moved towards developing a distinct brand and identity that is separate from their sponsoring government agency. Whether this approach to branding is effective is still up for debate. For instance, creating a distinct brand may allow the program to distance themselves from some negative perceptions of government. Alternatively, doing so may unintentionally lead people to see the program as less official than they would if it were more closely connected to a government agency like the treasury.

To explore this question, we again partnered with the Pennsylvania Treasury. Within the context of their Keystone Scholars program, we investigated whether their aesthetic branding beneficially effects perceptions of credibility and trustworthiness of the program.

Key Insights

To better understand how people perceived the Keystone Scholar branding, we first conducted qualitative work with mothers in Pennsylvania. As a part of that work, we presented the mothers with the current Keystone Scholars marketing communications and solicited their reactions.

- Some mothers who encountered the eye-catching branded version of the Keystone program flier had reservations about the program and worried it might be a scam. They felt that an offer for a free $100 from an unknown brand might be too good to be true.
- When we are presented with something new, we look for cues about how we should think about it. This was the case with the Keystone Scholar program – when the program was noticed to be a part of the PA Treasury, it was viewed differently than when it was presented by itself. This different reaction is consistent with research into the halo effect, which has shown our overall impressions of someone or something can color how we think and feel about their specific actions or aspects.

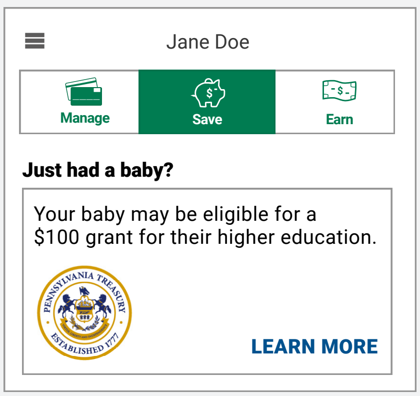
CASE STUDY

Experiment

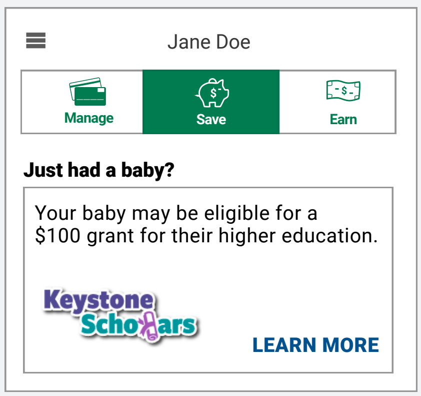
Given what we observed from the interviews, we felt that we could use the existing perceptions of the PA Treasury to overcome some of the reservations eligible parents may have about the program. We hypothesized that associating the Keystone Scholars program more closely with the PA Treasury would make the program seem more credible and trustworthy. Ultimately, we hoped that increasing perceptions of trustworthiness would increase interest and participation in the program.

To test our hypothesis, we worked with Propel, a fintech company that operates, Fresh EBT, a free financial services tool to help low-income individuals manage their EBT SNAP benefits. We identified Fresh EBT users in geographic areas eligible for the Keystone Program and randomly presented advertisements with one of three different institution logos.

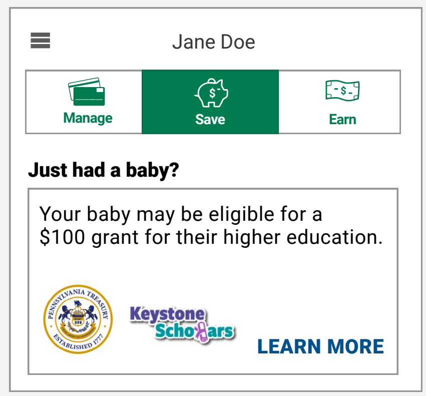
Condition 1.
Treasury Logo



Condition 2.
Keystone Scholars Logo



Condition 3.
Combination of Both Logos



Results

Although a total of 2,255 individuals saw the advertisement, a smaller portion those were new parents and therefore eligible for the program. Of eligible parents, 84 individuals clicked on the advertisement to learn more. While the difference was not statistically significant, the combination of both logos was the most successful at enticing individuals to click. The advertisement that presented people with just the PA Treasury logo condition recorded the second highest number of unique clicks, while the Keystone Scholars logo condition was the least attractive.

Fresh EBT is a free smartphone app used by over 1.5 million EBT cardholders each month. Fresh EBT empowers EBT cardholders to manage their benefits and improve their financial health though balance checking and transaction history within a mobile app, similar to a mobile banking app you'd get from a consumer bank. In addition to balance checking, Fresh EBT introduces users to other ways that they can improve their financial health, ranging from grocery coupons to a map of EBT-authorized farmers markets to income earning opportunities. A recent study by Harvard Business School found that Fresh EBT helped its users eliminate one day of extreme hunger per month. Propel, the builders of Fresh EBT, are a social enterprise founded in 2014 through Blue Ridge Labs, a program now run by the Robin Hood Foundation.

Managing Cash Flow

An estimated 55 million people in the United States have nothing saved in an emergency fund. Approximately, 38% of households have revolving credit card debt. For many people, a significant barrier to savings or paying off debt is feeling like they just don't have enough. Ultimately, this means that households need to either spend less or earn more. In order to figure out which of these two options to follow, almost everyone recommends creating a budget. This is in spite of the overwhelming lack of evidence of effectiveness, innovation, or experimentation around how to optimize the budget setting and monitoring process.

We typically think of cash flow management as an orchestrated calculation of in-flows and out-flows, assessing assets and liabilities. However, research from Brian Baugh and Jialan Wang find that the timing of those in-flows and out-flows can also be important in avoiding financial shortfalls.

With over 7.4 million people in the U.S. working multiple jobs, 70% of employers paying workers weekly or bi-weekly, and the vast majority of expenses either every few days (like groceries and transportation), monthly (like rent, utilities, and loan payments), or irregular (like car repairs, gifts, and trips to Urgent Care), it is no wonder that people make mistakes calculating how much they have or how much they need.

This year, we partnered with 11 organizations and companies to design 14 experiments to help households better manage their cash flow. To date, only five have finished with mixed results. We have also run several lab studies to better understand and create better practices around budgeting.

The interventions centered around the following strategies.

1. Swap the monthly budget for behavior-based rules of thumb

We have several learnings from the lab this year that challenge assumptions around traditional monthly budgeting. In one study, we examined the impact of categorical budgeting (i.e. $200 for groceries) versus temporal budgeting (i.e. $30 this week) versus no budget on hypothetical spending. In another lab study, we looked at the impact of a short vs long-form budget on perceived accuracy, financial confidence, and control.

We have partnered with Clarity Money to redesign the budget-setting process. We will test the differences of just providing simple information, creating a general budget, or creating a category-by-category budget on actual spending.

2. Make it easier for employees pick up extra hours or work

With Homebase, we designed two interventions within their scheduling software aimed to make it easier for workers to plan ahead. The first encouraged workers to set how many hours they want to work each week as a signal to their managers. The second encouraged employers to publish work schedules earlier so their employees have more time and flexibility to plan for the future. Both interventions were designed to connect with employers and employees in the moment their motivation was highest.

3. Provide simple, timely information to avoid or reduce expenses

We partnered with United Way of Tucson and Southern Arizona to encourage people to switch from paid tax preparers to using VITA, a free tax preparation service in low-income communities. We used door-hangers with various messages about savings, social proof, and a simple decision-aid in neighborhoods that were close to a VITA office.

With UpTrust, we also investigated how providing reminders and timely information might reduce the costs people face in they interact with the criminal justice system, like those people face when they fail to attend court-ordered classes. We developed a system that used SMS messages to help ensure defendants sign-up and attend their classes.

With Freedom First, we focused on how we might use SMS reminders to help members avoid unnecessary overdraft and non-sufficient fund fees. When a member's balance got low, we sent them a text message with the hopes that doing so would alert them that the balance was low and communicate the cost of overdrafting.

With the Vera Institute for Justice, we designed a financial capability calculator that quickly records a defendant's income and expenses before their arraignment hearing. This information can be presented to judges as they are making decisions about someone's bail – a decision that often has significant financial implications for the defendants and their families.

4. Prompt planning to optimize spending

We partnered with Propel, a technology company that allows SNAP recipients to easily check their electronic benefit transfer card balance and transaction history. We pushed prompts to encourage people to plan their grocery shopping on days that traditionally have the best deals.

Together with the St. Louis Housing Authority, we developed a program that sends regular texts to housing voucher recipients who have expressed an interest in moving. The program focuses on getting people to start planning sooner for their move and provides nudges to encourage them to move out of areas with high poverty.

With Vouchers 4 Veggies, we are exploring how we might incentivize voucher recipients to form implementation intentions to purchase fresh, healthier food more regularly. By helping people form stronger habits around purchasing vegetables, we might help them to avoid longer-term costs associated with poor health.

With Chime, we focused on how we might change people's spending behavior to avoid unnecessary overdrafting and non-sufficient fund fees. While sometimes people overdraft without knowing it, other times people intentionally overdraw their account for certain purchases. We wanted to test if providing people with clear rules would help limit unnecessary overdraft attempts.

5. Encourage people to identify with their future-self

With the Local Initiative Support Corporation (LISC), we explored how we might use a visual goal-setting exercise to help clients imagine their future –self as a way to encourage continued participation in financial coaching. We are also exploring ways to use technology to encourage more financial coaching clients to engage and commit to the program. Financial coaches provide accountability and guidance that, over time, helps people to make better routine financial decisions.

Also with Chime, we explored whether priming people to think about their future self as one who saves more would increase sign-ups for Chime, a no-fee bank.

LAB STUDY

Exploring how budget categories and opportunity costs affect overspending

Partner Type	N/A
Partner Cohort	2018
Project Type	Lab Learning
Project Status	Completed

Background

Generally speaking, a budget refers to some system of financial categorization – we designate some portion of our income as relevant or applicable to some type of expense. This designation is helpful because it gives us insight into how much we are spending on groceries versus buying food out, but it also, potentially, helps us to make tradeoffs between categories. Most budgeting tools – from paper notebooks to phone apps – approach budgeting by accounting for expenses within categories (e.g. rent, groceries, entertainment, etc.).

The categories within a budget can vary a lot from one person to the next. We wondered whether the categories that someone uses in their budget might serve as a reminder of what other things you can buy with your money. In this study, we specifically investigate whether making opportunity costs more salient is likely to encourage someone to overspend on discretionary expenses.

Key Insights

We started exploring the connection between budgeting by conducting a literature review. We found that:

» People manage their finances using both implicit labels and "real" labels in their mental accounting systems for expenditures (e.g. housing, food, etc.)

» People are willing to reclassify expenses in order to justify spending. We are less willing to overspend on expenses that are unambiguous and harder to shift from one account to the next.

Experiment

The existing evidence would suggest that when budget categories are more salient, reclassifying expenses is more difficult. Therefore, we hypothesize that increasing the saliency of an unambiguous expense's opportunity cost will decrease participant's likelihood to overspend on this temptation expense.

LAB STUDY

Participants were then presented with a summary of their recent expenses and asked how likely they were to purchase a take-out delivery order, even though doing so would put them over their budget for dining out when they have groceries at home. We randomly presented two different versions of the summary of their recent expenses to 400 participants.

Description of the expense	Amount
A local band	$22
A beer	$4
A salad for lunch	$10
The Incredibles 2	$8
A cocktail	$9
A latte	$10

Control Condition
Participants were simply told they were on a trend of overspending.

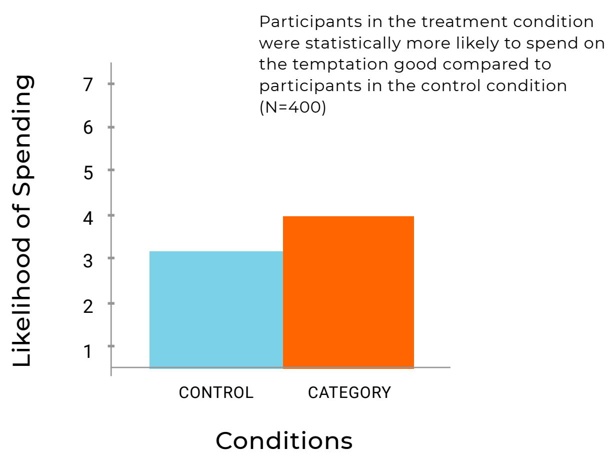
Budget Category	Description of the expense	Amount
Movies & Shows	A local band	$22
Bar	A beer	$4
Nonessential Food	A salad for lunch	$10
Movies & Shows	The Incredibles 2	$8
Bar	A cocktail	$9
Coffee or Tea	A latte	$10

Category Condition
Participants were told they were on a trend of overspending. Participants in this condition were also shown the relevant budget categories for each expense and explicitly reminded that spending on this new temptation good would require individuals to steal $5 from another budget.

Results

We found that participants in the treatment condition were significantly more likely to spend on the temptation good compared to the control condition. In this case, increasing the saliency of account categories did not make participants less likely to overspend their budget. Instead, providing the relevant categories may have served as a reminder that people can adjust spending in other categories to license spending more now.

Beliefs About the Importance of Saving



LAB STUDY

Testing if budgeting makes us more willing to change our behavior?

Partner Type	N/A
Partner Cohort	2018
Project Type	Lab Learning
Project Status	Completed

Background

Imagine you've signed up to meet regularly with a financial coach or a financial counselor to help you improve your financial situation. Likely one of the first things that you'll do is create a budget based on your current spending. Changing how we manage our finances can feel overwhelming, but creating a budget is seen as an important first step to making other positive changes to our finances.

Practitioners also find budgeting useful. They often use an initial budget exercise to get a general sense of someone's financial situation and to bring up specific problem areas that they can address together. In a financial coaching session. For example, the coach might use a budget to figure out if there are changes that the client can make so that they can start saving for a long-term financial goal.

However, practitioners will tell you that the initial budget is rarely accurate. People's financial lives are complicated and volatile, which makes budgeting difficult. Furthermore, people just don't remember the specifics of their spending. An accurate budget is useful because it makes problem areas easy for clients to see. However, on a deeper level, budgeting might also change the way we interact with our finances. If this is the case, perhaps having clients create a budget is more valuable than just getting a sense of their financial circumstances – budgeting might make us more willing and receptive to changing our behavior.

Key Insights

As we set out to redesign the budgeting exercise that practitioners give their clients, we hypothesized that budgeting might have a couple of other psychological benefits.

» Budgeting might strengthen our self-efficacy and encourage us to believe that we are going to be able to manage our finances in ways to support our financial well-being.

» Budgeting might make us more confident and comfortable engaging with our finances. Dealing with financial problems can be painful, so perhaps budgets make us less likely to avoid issues.

» Budgeting might make us feel like we have more control over our own finances. This sense of control is important to forming intentions to change our behavior, but it can also make us feel better about our finances in its own right too.

Experiment

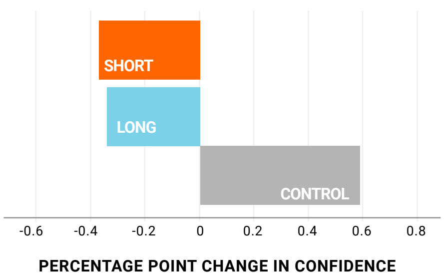
We wanted to test whether the extra time spent getting a very detailed budget would make people perceive the budget as more accurate and whether it had any other psychological benefits. We randomly assigned 462 respondents to one of three conditions.

» **A short budgeting exercise:** participants completed a budget that required less specificity, asking for only 17 fields of information.

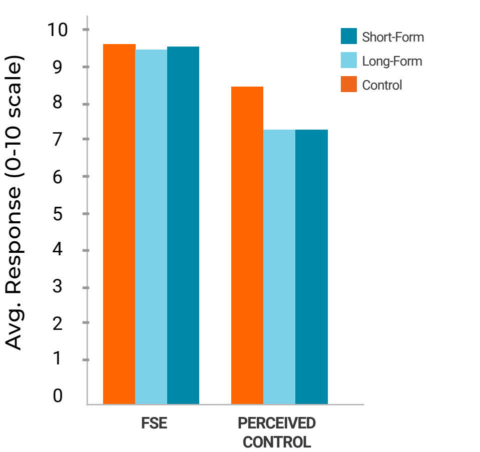
» **A long budgeting exercise:** participants completed a budget that was much more granular, asking for 83 different fields of information.

» **A control** where participants read an article about budgeting.

Changes in Confidence After Budgeting



Financial Self-Efficacy and Perceived Control Between Groups



Results

We initially saw that people tended to view the more intensive budget as more accurate, but that differences disappeared after controlling for other factors, like how often they use a budget in their own life. We did not find that people felt any differently about their finances after completing the simple budget compared to the more intensive budget.

Our analysis does suggest that participants who created either type of budget felt significantly less confident and significantly less in control of their finances. We asked all participants about their confidence managing their finances before and after the budgeting exercises. All three groups had similar levels of confidence before the exercise. People who read about budgeting actually saw about a 6% increase in self-confidence. People who went through a budgeting exercise on the other hand experienced about a 3.5% decrease in self-confidence.

Taken together, this suggests that the process of budgeting does not make people more willing to change the way they manage their finances. On the contrary, this evidence suggests that budgeting may actually make people less likely and receptive to change. Budgets may still be a helpful tool for guiding or informing our choices, but this study suggests that our assumption that people ought to make a budget before they consider other changes to their finances may be misguided.

CASE STUDY

Investigating whether traditional budgeting is effective

Clarity Money

Partner Type	Tech
Partner Cohort	2017
Project Type	Optimization
Project Status	In design

Background

Among financial educators and within personal finance circles, budgeting – both tracking expenses and planning how much to spend in a specific category of expenses – is heralded as a way to reduce expenses and focus spending on areas of personal importance. However, much remains unclear about the best ways to structure budgets, as well as how to help people adhere to them. Furthermore, the extent to which budgeting actually helps people to reduce expenses even in the short-term, let alone the longer-term, is equally uncertain, especially given the behavioral challenges associated with creating and adhering to a budget.

We partnered with Clarity Money to explore how people approach and use budgets to guide their financial behavior. Clarity is a fintech company that offers insights into their user's finances with the aim of giving them a greater sense of control and improving their financial behavior. Together, we explored whether traditional-style budgeting is effective at changing behavior and how we might use findings from behavioral research to improve budgets.

Key Insights

We began by researching budgeting first through in-person interviews and auditing financial education courses. We wanted to learn how people think about budgets and how efforts to encourage budgeting suggest that people begin to use them. We also conducted online surveys and analyzed engagement and behavior through the Clarity Money app.

This background work highlighted several behavioral challenges that people face when budgeting.

- » Just sitting down and thinking through a budget requires significant self-control and time. Getting started on a budget is a daunting activity and procrastinating is easy – busy people already find it difficult to carve out time for things that they actually want to do. People easily push off the planning until tomorrow, and then six months have passed with no progress.

CASE STUDY

- Once you have undertaken the seemingly monumental task of creating a budget, the self-control has only begun since then you must actually adhere to that budget.
- Creating a budget and adhering to a budget requires combatting information aversion. Budgeting forces you to take stock of previous financial decisions and reflect on life decisions that might be unpleasant to revisit. On top of that, if you do not follow your budget, chances are you do not want to be reminded – or worse, feel shame – that you did not spend your money as you had planned.
- Creating a budget also requires fighting inattention and forgetting. Once a budget is actually created, you must remember how much spending is allowed in a particular category over the budget period. You must also track and be able to recall how much has been spent so far across all categories for a month (or more) at a time.

Experiment

Together with Clarity we developed several approaches to budgeting, and we are testing them to see how people spend after completing the budget. Using anonymized behavioral data, we are running a three-condition experiment with Clarity Money. In the experiment, we are testing the following conditions:

- **An informational control** where people are just offered generic information about budgeting and why it is important.
- **An overall budget-setting condition** where people are guided to set up a general budget.
- **A category-by-category budget setting condition** where people are guided to set up a budget, one category of expenses at a time.

We hypothesize that creating a budget, category by category, will increase how much people engage with their initial budget. However, we hypothesize that there will be no difference in spending across conditions over the full experimental period, and there will be no difference across conditions in lasting effects in spending after the experiment concludes. We will track how budgeting affects subsequent spending behavior to see if budgeting helps participants to reduce their expenses.

Results

We initially reported the study in 2017, but launching the study was delayed. We expect results in 2019.

CASE STUDY

Prompting managers to publish employee schedules sooner

Homebase

Partner Type	Tech
Partner Cohort	2018
Project Type	Optimization
Project Status	In field

Background

Managing finances and planning for income volatility is especially difficult for people working jobs with schedules that may change from one week to the next. Not only do their employment circumstances create more severe spikes and troughs in income, but their erratic schedules also create uncertainty about when the ups and downs in their income will occur. Employers often publish schedules on short notice – some even as short as on a Friday for the following week. Without more notice, workers' lives are far less stable because they can't plan for the future, and they have less flexibility to adjust if an unforeseen event arises.

We partnered with Homebase to find ways of making planning for the future a little easier. Homebase works with thousands of businesses, particularly in industries where most workers are hourly and have variable schedules. Homebase helps businesses manage scheduling and allows workers to view their hours, trade shifts, and request covers. By making changes to the scheduling software, Homebase potentially can influence when managers publish schedules and, therefore, how much advanced notice employees have before their next shifts.

Key Insights

We began this project by conducting an in-depth analysis of notice time among over 8,000 Homebase businesses and more than 23,000 schedules that they published over a 3-week period between May and June 2018. We found that most employees had around 3 to 4 days' notice. This means that a majority of schedules were published on Thursday or Friday for the following week. We even found many schedules were published on Sunday, the day before a worker's shift started.

» We followed this analysis up by designing our own online survey and conducting qualitative interviews with both managers and employees that use Homebase. These analyses echoed the trends we saw in the data – most workers receive less than a week's notice before their next schedule. Additionally, these analyses brought to light another key insight about why employers may publish schedules on such short notice.

» There is no norm around how far in advance schedules should be published. Many managers simply don't think to publish schedules earlier. Many managers who publish on 3 days-notice did not see any issue with doing so. With neither a descriptive norm nor an injunctive social norm of publishing schedules in advance, managers are unlikely to change their practices.

Experiment

Homebase developed a feature called "Jump Start" We hypothesized that regularly displaying a sidedrawer on the page that managers use to build their schedules will remind them to publish schedules and encourage them to do so earlier. We also hypothesized that coupling the reminder with an easy way to allow managers to copy an existing schedule would further encourage them to publish their employees' schedules quickly.

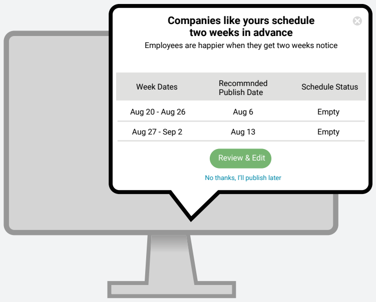
Homebase users were randomly assigned to see one of four different sidedrawers when they navigated through the schedule builder page

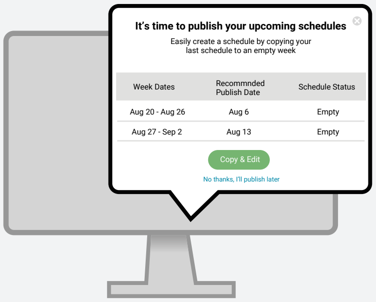
Condition 1. Social Proof
Create a descriptive norm for publishing schedules sooner

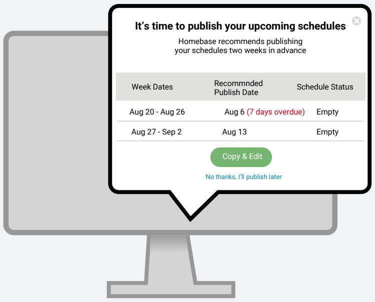
Condition 2. Prepopulated
Make it easier for managers to copy an existing schedule

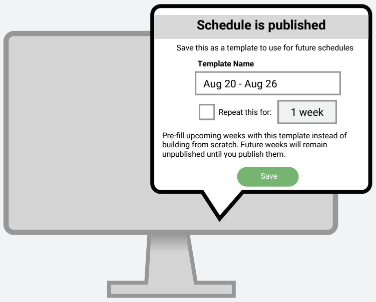
Condition 3. Overdue
Create an injunctive norm for publishing schedules sooner

Condition 4. Templates
Allow managers to use recently published schedules as a template for future schedules.









Results

These sidedrawers will be compared to a control condition where employers did not receive any sidedrawers. The experiment launched in November 2018 and will run for 3 months. To evaluate how effective our different conditions are, we plan to compare companies using the amount of time between when schedules are published and when they go into effect.

We are also planning on tracking the number of times that each schedule is published to track how often managers republish schedules because they make changes to them. This creates an additional burden for managers, so our intervention will be more sustainable if it creates little to no change in the the rate that employers republish their schedules.

CASE STUDY

Asking for hours: encouraging employees to communicate their desired hours each week

Homebase

Partner Type	Tech
Partner Cohort	2018
Project Type	Optimization
Project Status	Completed

Background

Managing finances and planning for the future is especially difficult for people working jobs with variable hours often because they have little direct control over when their shifts are. Managers have the responsibility of setting schedules, which often results in hours that do not match the preferences of their employees.

We again partnered with Homebase to explore how we might make it easier for these workers to plan for the future. Homebase currently allows employees to set how many hours they would ideally work each week. However, we found that this feature was underutilized – only 26% of workers have entered desired hours.

Together with Homebase, we worked to encourage more employees to communicate how many hours they would want to work each week. By facilitating communication between employees and their managers, we hope managers will try to create schedules that more closely and consistently matched their employees' desired number of hours.

Key Insights

To better understand what might prevent workers from setting their hours, we analyzed data from Homebase users. Among employees that set their desired hours, most indicated that they would like to work around 30 hours a week, although a substantial portion said they would prefer as many as 40 hours a week. Yet, employees were scheduled to work only 22 hours in an average week.

Our analysis suggested two reasons why employees may not have set their desired hours:

- » Employees may not enter them because they think that their manager either can't give them as many hours as they would like, or the manager simply won't consider their request.
- » Setting the desired number of hours is a hassle. Doing so requires multiple steps, and the entry field was slightly hidden under the employee profile, which people often don't visit after they have signed up.

CASE STUDY

Experiment

Provided these insights, we designed an experiment to encourage existing employees to enter how many hours they would like to work each week, and we advised Homebase to display that information more prominently to managers. We moved the desired hours question to the central employee dashboard and tested several behavioral approaches to encourage employees to enter desired hours. We selected over 90,000 existing Homebase employees who had not entered their desired hours but who had worked in the last month. These employees were randomly assigned to either a control or one of four experimental conditions.

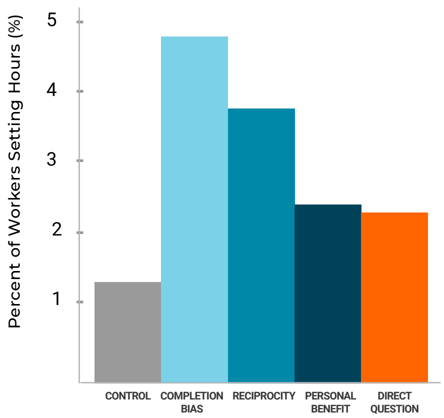
Condition 1. Completion Bias	Condition 2. Reciprocity	Condition 3. Personal Benefit	Condition 4. Direct Question
Employees were shown their desired hours as missing information.	Employees were told to "Do a favor for your manager."	Employees were told to "Get the best hours for you."	Employees were asked "Do you want to work a different number of hours?"

Results

We found that prominently moving the desired hours prompt from under the profile settings to on the dashboard increased the number of employees who entered their desired hours by at least 58%. The two lowest performing conditions – the personal benefit condition and the question condition – encouraged 495 and 490 people to enter hours, compared to only 70 people in the control.

Percent of Employees that Set Desired Hours

(N=93,665)



Asking employees to do a favor for their manager increased the number of entries further to 854 people. The most effective framing, though, was the completion bias condition. Framing the desired hours as "missing information" encouraged 1018 people to enter hours – more than tripled entries compared to control. Leveraging the idea of missing information is a powerful motivator because people feel motivated to correct the error.

Overall, our intervention increased the percentage of Homebase employees with entered hours by 14.7% from 25.7% to 29.5%. As a result of this work, Homebase moved the desired hours screen into the new employee onboarding flow, guaranteeing that every new employee who downloads their app will be prompted to enter their desired hours.

Once more employees have entered their hours, Homebase wants to display this information, along with the number of hours the employee worked in the past week, more prominently to managers at the point of scheduling.

CASE STUDY

Using doorhangers to increase use of vita services

United Way of Tucson and Southern Arizona

Partner Type	Non-Profit
Partner Cohort	2017
Project Type	Optimization
Project Status	Completed

Background

The IRS's Volunteer Income Tax Assistance (VITA) program sponsors sites around the nation where low- to moderate-income (LMI) filers can have their taxes prepared for free. However, only about 3% of qualifying returns were prepared at VITA sites. Over 60% of filers use a paid preparer, which means that many people are paying an average of $273 to have their taxes done by a paid preparer. Switching people from a paid tax preparation service to VITA would represent a significant cost savings for those individuals and would potentially help connect them to other kinds of financial services offered through VITA sites.

To explore how we might increase VITA use, we partnered with United Way of Tucson and Southern Arizona (UWTSA). Each year, UWTSA serves approximately 2,500 taxpayers in the Tucson area through their VITA sites. Together, we aimed to develop a community-level intervention to encourage more community residents to switch from paid tax preparers to VITA services.

Key Insights

People may stick with using paid tax preparers even when there are free alternatives simply because we tend to stick with the status quo and keep doing things the way we have done them before. Breaking people away from the status quo can be difficult and often requires some kind of shock or impetus for change. There are four insights from behavioral science that informed our messaging approach for encouraging people in the community to switch from paid preparers to VITA.

» People are motivated by a fresh start. People often feel more motivated to make changes or engage in a new behavior when they are presented at natural milestones or transition points, such as the New Year.

» People evaluate the options that are presented to them relative to other existing options.

» People look for cues from others and are motivated to behave in the same way that others around them are behaving.

» Presenting people with an extreme version on an opinion is more effective at capturing people's attention than more mild versions of the same opinion.

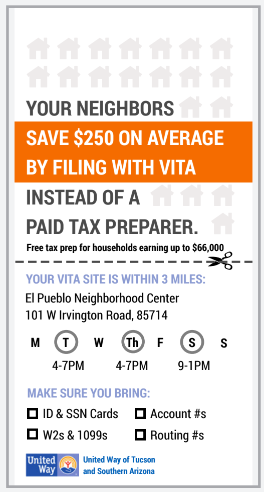
Experiment

We hypothesized that presenting taxpayers with messaging drawing from these behavioral insights would motivate more to switch from paid tax preparation to VITA services. We tested different messages using doorhangers that we, along with staff and volunteers from UWTSA, placed on household doors. We targeted three zip codes in Tucson that usually have lower VITA use but were within three miles of a VITA site. Households were randomly assigned to one of five conditions: four of the conditions received one of the doorhangers and the fifth did not (a control).

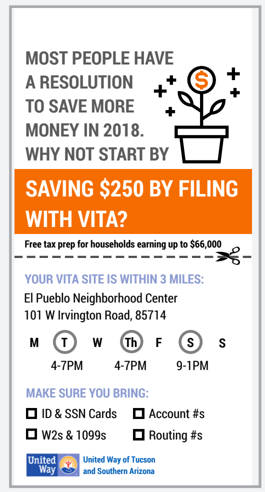
Control. No Hanger

Condition 1. Extreme Opinion

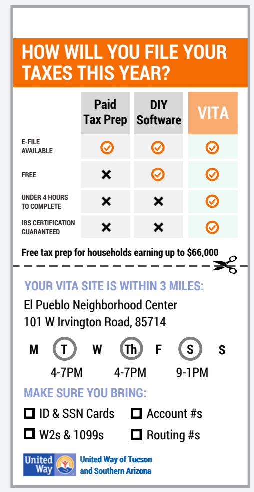
Condition 2. Social Proof



Condition 3. Fresh Start



Condition 4. Decison Aid



> “
>
> ***Across all of the doorhanger conditions, we saw between 0.75% and 1.5% of people file their taxes at a VITA site.***

Results

We did not see any significant differences in VITA uptake between conditions. Only about 0.7% of households in the control condition, but the rate doubled to 1.43% and 1.45% of households on the extreme opinion and the decision aid condition. The fresh start condition performed slightly worse, with 1.14% of households using VITA and the social proof condition performed about as well as the control, with 0.86% of households using VITA.

Taken together, the results suggest that there are likely stronger barriers that keep people from switching from paid preparers to VITA sites. Perhaps people view paying for tax preparation as a way of ensuring a quicker refund. Alternatively, they may also feel that paying for tax preparation is paying for a higher quality service.

CASE STUDY

Using reminders to increase attendance at court-ordered classes

Uptrust

Partner Type	Tech
Partner Cohort	2018
Project Type	Optimization
Project Status	In design

Background

Nevada is among several states that require court-ordered classes for many charges, including low-level misdemeanors. If defendants fail to complete these classes, they run the risk of going to jail. Yet, even with the risk of jail time, many defendants do not complete their court-ordered classes. As a result, defendants are given thousands of avoidable nights in jail.

Using text reminders has been shown to be effective at encouraging people to come to their court dates. While public defender clients may have transient living situations, text messages typically are an effective way to reach defendants because most have a cell phone that can receive text messages. For example, Uptrust reduced failure-to-appear (FTA) rates by 75% in some jurisdictions through an automated text intervention that reminded defendants about upcoming court dates. In another text message intervention, ideas42 reduced FTA rates by 26%.

These interventions support the idea that low-income defendants miss court not because they purposefully avoid showing up, but because they often have stressful lives and forget about their court dates. We partnered with Uptrust and the Clark County Public Defender office to explore whether this same idea held true for court-ordered classes and if similar strategies might work in this context as well.

Key Insights

We conducted a behavioral audit, sat in on arraignment hearings in the Las Vegas Justice Court, interviewed public defenders, and examined class providers. Our experience led to the following insights:

- Court-ordered classes are expensive. Defendants must finish paying for the classes before they are able to get a certificate of completion. The costs of the most common classes ranged from $350-$850. For public defender clients, who are low-income by definition, these costs are prohibitive. Although defendants can negotiate with class providers for a lower rate, many of them are unaware that they have that option.
- Defendants are given little guidance on how and where to sign up for the

classes. If a defendant does not sign up during the first week after their sentence, they run the risk of not being able to complete the classes in the required amount of time. The onus is often on the defendant to call a class provider, negotiate the class cost, and attend every class for as long as twelve months. Despite the complexity, there are no reminders that help navigate the complex landscape.

» Defendants have chaotic lives. Most clients assigned to a public defender live below the poverty line and may be struggling with food insecurity, homelessness, unemployment, or addiction. Keeping track of paperwork or attending a weekly class is difficult when you're worried about coming up with enough money for food or figuring out where you will sleep that night.

» Defendants might procrastinate because they focus on the immediate costs of attending classes (both the high monetary cost and the time cost and inconvenience). The cost of going to jail if they fail to complete the classes, on the other hand, is in the future and more likely to be discounted.

Experiment

Building on the success of using text messages to reduce FTA rates, we decided sending people texts messages that incorporate different behavioral insights might be an effective way to help low-income defendants both sign up for and attend their classes. Defendants were randomly assigned to be in one of four conditions.

Control. Current Process	**Condition 1. Free Classes**	**Condition 2. Accountability**	**Condition 3. Opportunity Costs**
The control condition that mimics the current process, in which classes are not subsidized and defendants receive no reminders about their classes.	Defendants were offered free classes in order to test whether the high cost was the main barrier to signing up for and attending classes.	Defendants in this condition received text messages that reminded them that the judge is counting on them and is tracking their progress.	Defendants in this condition received text messages that reminded them that they would be giving up many hours of their life, a large sum of money, etc..

The text messages in reminder conditions followed the same structure. They included an initial sign up text, followed by reminders to sign up for classes and a confirmation once they had signed up. Along the way, participants also received reminders to attend classes and progress updates at key points every few weeks. If defendants had missed a class, they received reminders to catch up.

Results

Our experiment is launching in Q1 2019. We plan to compare the effectiveness of the four conditions versus control by tracking sign up rates, class attendance rates, and whether or not jail time is imposed in all conditions.

CASE STUDY

Sending reminders to reduce money wasted on overdraft fees

Freedom First Credit Union

Partner Type	Credit Union
Partner Cohort	2017
Project Type	Optimization
Project Status	Completed

"According to the CFPB, "If a consumer borrowed $24 for three days and paid the median overdraft fee of $34, such a loan would carry a 17,000 percent annual percentage rate (APR)."

Background

Americans paid an estimated $34 billion in overdraft fees last year. The Consumer Financial Protection Bureau (CFPB) finds that the majority these fees were incurred on transactions of $24 or less and were repaid within three days. Most banks charge steep fees for overdrafting, making the overdraft operate like a very small loan with a very high interest rate. According to the CFPB, "If a consumer borrowed $24 for three days and paid the median overdraft fee of $34, such a loan would carry a 17,000 percent annual percentage rate (APR)." What's more, the overdraft fee is often charged by overdraft incident, rather than proportional to overdraft amount, causing consumers to rack up fees faster than they may realize.

This research suggests that most overdraft fees are incurred unnecessarily and come at an exorbitant cost, especially for low-income consumers. To understand what can be done to reduce unnecessary overdrafting and non-sufficient funds (NSF) fees, we partnered with Freedom First Credit Union, a Community Development Financial Institution (CDFI) credit union based in Virginia.

As a CDFI dedicated to helping their credit-challenged members build up their finances through programs like financial coaching and a Payday Relief Loan, Freedom First was eager to explore ways of helping members to avoid unnecessary overdraft fees. Freedom First already offers a robust money management platform including online banking, overdraft protection services, and the ability to limit debit card transactions that would cause accounts to go into overdraft. Together, we were interested in building on this success to further enable their members' financial success.

Key Insights

To gain a better understanding of factors that lead to members overdrafting and incurring NSF fees, we conducted site visits to Freedom First branches, interviewed staff members, and analyzed fee data for all 4,207 Freedom First members who had overdrafted or incurred NSF fees in the previous six months. The behavioral diagnosis revealed that different groups of members overdrafted and incurred NSF fees for different reasons:

- Some members called into the Freedom First branches to complain when they were charged these fees. These members were often unaware they were being charged fees for overdrafting or were unaware that their account balance was low.
- However, over 250 members had more than 50 instances of overdraft or NSF fees in the previous six months. These customers were clearly suffering from deeper financial issues that could not be solved by a heightened awareness of fees or low account balances.

Experiment

We hypothesized that providing members with a reminder when their balance was low would help more members navigate their finances in ways that avoided unnecessary overdrafts. We randomly selected 5,200 credit union members and assigned them to one of three conditions.

- **A control** where the member did not receive a reminder.
- **A balance reminder** that highlighted fees to take advantage of loss aversion.
- **An "opportunity cost" reminder** that prompted them to think of other things the money could be spent on.

Those in the treatment groups received one of two different text message reminders if their balances dropped below $100. Reminders were sent no more than once every two weeks, to avoid overloading those who have continually low account balances. To account for the different customer groups identified in the behavioral diagnosis, we implemented three different treatment conditions, along with a control.

Results

After a few weeks of running the experiment, Freedom First shut down the pilot in response to reports of problems occurring on January 23rd. There was a high volume at the call center related to the text messages, and given the available data, it seems that customers may not have received prior overdraft warnings as scheduled and perhaps multiple text messages were delivered on January 23rd. Not all of the calls were negative (some people called in to transfer money to the account that was low, which was the purpose of the text), but the call volume for the two hours after the messages were released was surprising.

Lessons Learned

While obviously the way our experiment about using reminders to prevent overdrafting ended was disappointing, it also creates an important learning opportunity. Here are several important lessons learned:

» **Include testing staff on the recipient list** so that they can see the actual version that people in the test see. If we had been included on the send lists, we would have realized early on that the messages were not going out as planned in the early weeks. We also didn't have clear evidence of what actually happened on January 23rd that caused the phone calls, and being on the recipient list could have helped clarify that.

» **Pre-test with a small pilot if possible.** Running the test with a hundred participants first might also have helped us to identify the sending errors earlier. A small pilot might have also brought to light some important data collection errors from the vendor early on, and then we could have fixed the issues in time for the larger test.

» **Vet multiple vendors.** The vendor that Freedom First used to execute the test had not previously run any broad text messaging services before. They were very eager to help and to build out new texting capabilities for their client, but ultimately their platform was not prepared for this volume or this test design. Freedom First already had an existing relationship with this vendor so chose to continue to work with them. In hindsight, we should have either found a vendor with ample experience and flexibility in text messaging or learned the limitations of the existing vendor to design a test within those constraints.

» **Anticipate reactions to any change.** The call center staff had been notified about the text messaging test but was not intimately familiar with the details. Surprisingly, the high call volume came several weeks into the test (we think because prior scheduled messages had not actually been sent) but having more details available about the test, particularly during the scheduled launch date, may also have helped prepare staff who are more peripherally involved in the test.

CASE STUDY

Shifting how judges set bail

Vera Institute of Justice

Partner Type	Non-Profit
Partner Cohort	2018
Project Type	Optimization
Project Status	In field

Background

Across the United States, 70% of the those under arrest are awaiting trial. Many of these people are in jail simply because they could not afford to post bail. In New York State alone, over 16,000 are incarcerated due to their inability to post bail, costing taxpayers over $350 million a year. The average bail for a misdemeanor in New York City is $1,000; yet, we have seen that most people don't have enough saved to cover even a less costly unexpected expense.

To understand this problem, we partnered with Vera Institute of Justice. Vera focuses on building and improving justice systems that ensure fairness, promote safety, and strengthen communities.

Key Insights

We began by first sitting in on arraignment hearings in New York City and interviewing public defenders, judges, and policy experts. Our experience led to the following high-level insights:

» Judges do not focus on the defendant's ability to pay when they set bail. At arraignment hearings, judges can decide to proceed with a defendant in one of three ways. If they believe the defendant will show up for their court date, they can release a defendant on their "own recognizance." They can also choose to detain the defendant without bail, or they can set a bail amount. In deciding how to proceed, a judge will take into account several factors, but they do not formally consider a defendant's financial capability.

» Judges only set a "cash bail." The full amount of a cash bail must be paid to the court, which is then returned to the defendant if they show up to court. However, most people are unable to cover the full amount, and, instead, families usually have to go to a bail bondsman. Typically, bail bondsmen charge families 10% of the total bail amount, which is never returned to the defendant. Judges are allowed to set other types of bail. A partially secured bail, for example, allows the defendant to pay the court only a certain percentage of the total bail. This type of bail allows more families to avoid using bail bondsman, but most judges do not utilize this option.

» There is limited time. The courtrooms are usually very busy, allowing for just a few minutes per defendant. This environment creates feelings of scarcity and does not promote a closer consideration of personal finances.

> **"**
>
> ***The environment within a courtroom can be hectic and fast-paced, which encourages people to stick with the status quo.***
>
> ***Tools and reminders that present information in the moment that it is relevant are more likely to be effective than simply providing information beforehand.***

Experiment

With these insights in mind, we decided to build a financial capability calculator that quickly records a defendant's income and expenses before their arraignment hearing. The results of the calculator are then presented to a judge, including a recommended bail amount and bail form.

Public defenders could request a financial assessment for their client. The financial assessment usually takes five-to-seven minutes and is conducted by a trained professional who then presents recommendations to the judge.

The financial assessments were only conducted on Tuesdays and Thursdays, and no financial assessments were conducted on Mondays, Wednesdays or Fridays. These days served as a comparison, which allowed us to assess the impact of our recommendations quasi-experimentally. In each case, the judge's final bail decision was recorded, and we were able to measure how judges set bail with and without a financial assessment recommendation.

Results

Our experiment launched in 2018 in the Bronx and Queens and is still in the field. We expect to get back results in 2019.

CASE STUDY

Sending reminders to help people save money while shopping for groceries

Propel

Partner Type	Tech
Partner Cohort	2016
Project Type	Optimization
Project Status	Completed

Background

The Supplemental Nutrition Assistance Program (SNAP) is the most effective antihunger safety net program. SNAP is an integral part of the American hunger safety net – with 42 million people, roughly one in seven Americans, currently receiving SNAP benefits. Sadly, most SNAP participants do not receive enough to cover their grocery bills: the average family uses up 80% of their benefits in just two weeks.

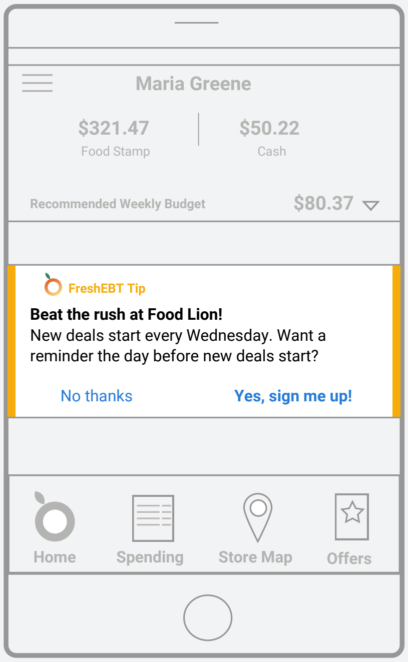
What's more, SNAP participants tend to purchase food from smaller, local retailers rather than grouping their food purchases into several larger, less frequent trips, which would save them money. We have found previously that SNAP recipients go food shopping 14 times per month on average, and that 26% of their transactions are under $6.

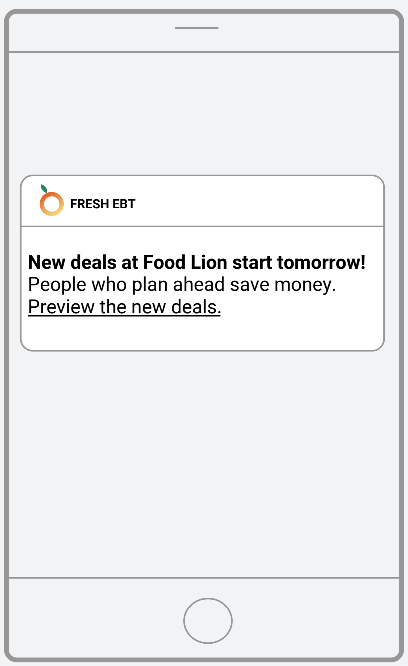
We continued our partnership with Propel, a fintech company that makes a mobile app called Fresh EBT. Fresh EBT allows SNAP participants to easily check their electronic benefit transfer (EBT) card balance and transaction history. Last year, we wanted to test whether we could help SNAP recipients stretch their benefits by using reminders to anchor them on a specific day to go shopping for groceries.

Key Insights

This project with Propel began with an analysis of the spending patterns of over one million users in their database – how often they go shopping and on which days – and conducted over a dozen qualitative interviews with SNAP recipients. This work led to insights that ultimately informed our experiment.

- SNAP participants may be overspending due to insufficient planning. People may be going to the corner store at the last minute because they are unable to plan their grocery trips ahead of time. We decided to focus on helping SNAP participants save money by helping them plan their trips.
- Users don't have a strongly preferred day of the week for grocery shopping. They are equally likely to shop on each day of the week. This indicates that we could anchor them to a specific day.





Experiment

We hypothesized that sending reminders about upcoming deals and letting users know that they can take advantage of day-specific deals might encourage people to plan ahead. As a result, we hoped users might save money by making fewer, less frequent trips to the grocery store.

Together with Propel, we designed a "Fresh EBT Tip" displayed in the app that encouraged users to enroll for weekly reminders of upcoming shopping deals. About 17,600 users were randomly assigned to either receive the offer to enroll or not.

Results

We did not see that, as a group, those who were offered a chance to receive the reminders spent their SNAP benefits any differently from the control group – both had the same percentage of small purchases and both tended to spread their shopping out across the week.

Of the 8,856 in the treatment group, about 20% opted-in for reminders and an even smaller group actually opened the reminder that was sent. However, we did find that this group of people who opted to receive reminders and who opened the first reminder spent significantly more at Food Lion than the control group.

However, this could be that the people who opted to receive reminders are different than those who ignored the offer. When we looked at them over time, there were noticeable differences in their spending behavior in the past. We used a propensity score model to try to create a comparison group that most resembled the group of people who opted for reminders. Compared to this group, we saw that the reminders appeared to encourage people to shop at Food Lion on Wednesday , though the effect of the reminder was likely not as strong as it initially seemed.

Ultimately, though, we did not see any differences in the percentages of small purchases made with SNAP benefits. As a result, the reminder likely was not strong enough to significantly change the way SNAP recipients use their benefits.

CASE STUDY

Using reminders to help plan for moving

St. Louis Housing Authority

Partner Type	Government
Partner Cohort	2018
Project Type	Optimization
Project Status	In field

ST. LOUIS HOUSING AUTHORITY

Background

Housing vouchers are a powerful way to transition families out of high poverty, high crime neighborhoods, particularly compared to traditional public housing approaches. However, even the landmark 1994 "Moving to Opportunity" study found that positive effects of vouchers – including better physical and mental health – only accrued to recipients who actually used their voucher to move.

We partnered with the St. Louis Housing Authority to help housing voucher recipients make the most of their desire to move. A baseline analysis of SLHA data indicated that only around 41% of recipients who stated an intention to move two months before their leases expired actually successfully moved on time. The remainder either did not move or moved more than 7 days after their leases expired, often at great financial cost. Our goal was to help voucher recipients, who expressed the intention to move, to do so on time and to a lower poverty area.

Key Insights

To better understand the barriers facing housing voucher recipients, we interviewed voucher recipients and housing authority staff. We also reviewed case files for a randomly drawn sample of 367 voucher recipients to understand rates of missed appointments and estimate the move rate. We found that:

» Voucher recipients are really only prompted to start thinking of moving during their recertification appointment, which occurs around 2-3 months before their current lease end date. While that may feel like a lot of time, 81 days was actually the median amount of time most successful movers needed to find a home and complete housing authority paperwork.

» Voucher recipients face many costs when trying to move, including paying application fees, security deposits, and paying for moving services. Especially given the tight two-month timeline, many families lean on family, friends, or debt to overcome these financial challenges.

» Voucher recipients who had tried to move either successfully or unsuccessfully in the past were the most likely to successfully move in the future. These recipients deeply understood the idiosyncrasies of moving with a voucher in a way first time movers likely do not.

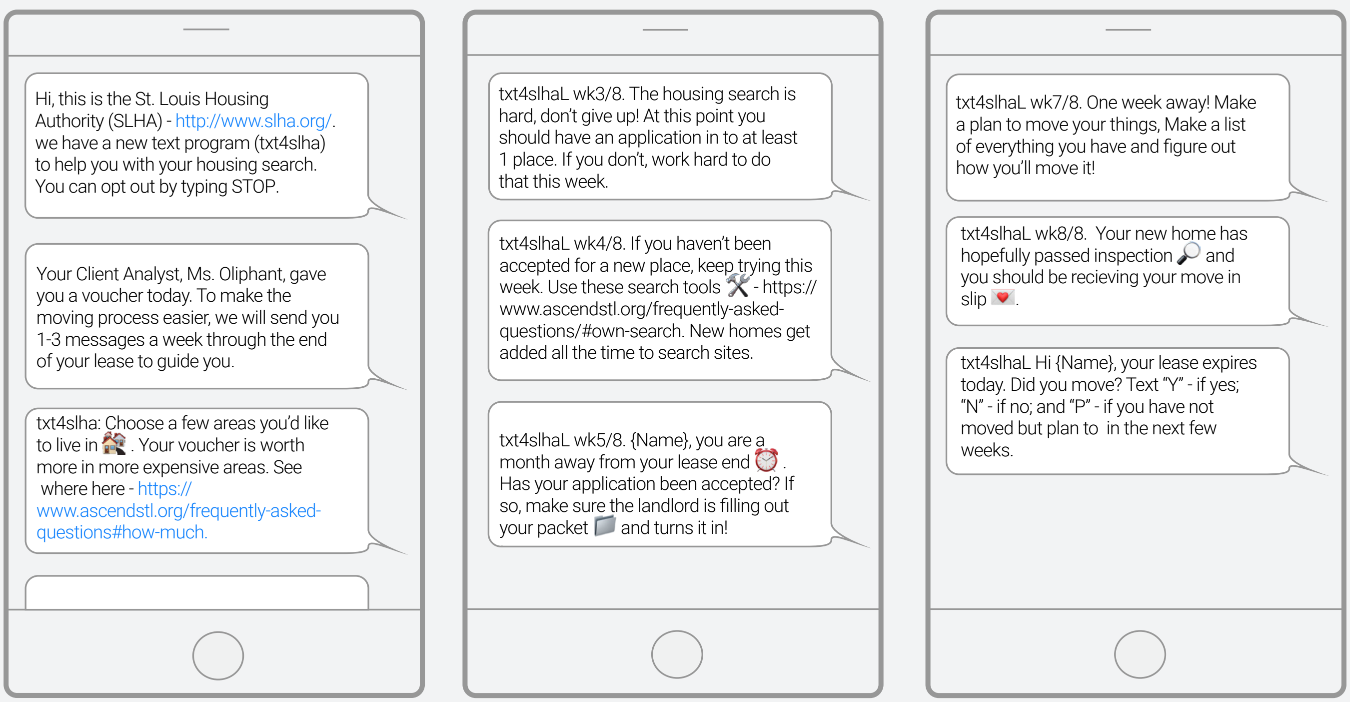
» Only about 50% of those that did successfully move, moved to areas with 5-10% lower poverty rates. Many were unaware that their voucher would be worth more – meaning they could move to a more expensive home – in lower poverty areas of St. Louis.

Experiment

We hypothesized that creating a two-month-long text message program to give recipients weekly reminders of what they must do that week to successfully move on time would both remind recipients to start working on their move early and give them much needed insight into the housing authority's process.

To test our hypothesis we identified all housing voucher recipients who stated that they planned to move at their recertification appointment. We then randomly assigned half of these recipients to get our two-month-long series of moving tips via text. The other half got no communication. Below is a sample of the types of messages we sent recipients.

Selection of texts from the txt4slha program



Results

This experiment was launched in December 2018 and is still in the field. It will run for approximately 4 months and include 426 voucher recipients.

CASE STUDY

Using implementation intentions to improve voucher program habit formation

Vouchers 4 Veggies

Partner Type	Tech
Partner Cohort	2018
Project Type	Optimization
Project Status	In design

Background

Nearly 40 million adults and 6.5 million children face food insecurity in the US in 2017, according to the USDA. Food insecurity and eating an unhealthy diet are directly intertwined: families that struggle to provide enough to eat often turn to unhealthy foods because they are cheaper and more filling than healthier food. Over time, food insecurity and poor diets not only affect people's health, but they also further undermine people's financial well-being as they grapple with paying higher costs tied to obesity, diabetes, and other chronic diseases.

Only 26% of American food-related spending is on fruit and vegetables, with a much lower percentage for lower-income Americans. To address these challenges, Vouchers 4 Veggies (aka V4V or EatSF in San Francisco) provides vouchers to low-income San Franciscans for fresh produce to improve their health and well-being.

Key Insights

To understand how V4V participants use their vouchers and to identify areas where we might promote habit formation around long-term fruit and vegetable consumption, we first conducted extensive observational research. For example, we observed interactions in clinics, single-room occupancy hotels (SROs), and the V4V offices in the Tenderloin and Bayview neighborhoods of San Francisco. We visited the places people buy food, such as corner stores, supermarkets, and farmers' markets, to understand how people purchase fresh food. We also conducted qualitative interviews with individuals and V4V participants from these communities.

Out of this research, we developed several hypotheses about voucher use, which we further validated by analyzing quantitative program data and qualitative methods. We find that fruit and vegetable consumption are impacted by:

- Cooking ability/preference for cooking;
- Access to a kitchen; and
- Cultural factors related to food consumption and cooking knowledge.

This investigative research also brought to light several key barriers that prevent recipients from using their vouchers to build habits around fruits and vegetables consumption.

> ***People tend to categorize the vouchers differently from other kinds of income. This is consistent with research on mental accounting, which has found that the way we recieve income significantly influences how we use it.***

» People treat vouchers as different from normal purchases and often made specific trips solely to use them. Even people who routinely shopped at supermarkets which accepted the vouchers would make separate trips to use the vouchers and would not purchase anything else. The allure of getting something for free drives people to make these trips. These one-off trips are not a sustainable way to incorporate more fruit and vegetable into an V4V user's diet. After the voucher program ends, participant easily stopped making these one-off trips and would often stop buying more fruit and vegetable.

» Recipients perceive vouchers as opportunities to buy "treats," or fruit and vegetables that they enjoy and will eat. Consequently, there is high consumption of the fruit and vegetables purchased and little food waste. However, these "treats" might be priced higher than recipients would purchase with their own money. This creates another hurdle to longer-term increases in fruit and vegetable consumption because recipients form unsustainable purchasing habits.

Experiment

We hypothesize that helping voucher holders form implementation intentions will lead to stronger habit formation. By providing stronger recommendations around purchase behavior at the program outset, voucher recipients will continue to purchase more fruits and vegetables even after the voucher stops.

We are currently developing an experiment that will change how the incentives are deployed in the hopes of changing both short and long-term behavior. Specifically, the experiment will incorporate two aspects:

» Encouraging program participants to use their vouchers at the stores that they typically purchase their food in to develop the habit of buying fruit and vegetables there.

» Nudging program participants to buy fruit and vegetables that are relatively affordable (in addition to being both delicious and nutritious), so that V4V program participants would be more likely to purchase them at the conclusion of the program.

CASE STUDY

Creating responsible overdraft protection

Chime

Partner Type	Tech
Partner Cohort	2018
Project Type	Optimization
Project Status	In design

Background

While evidence suggests that most overdraft fees are incurred unnecessarily, there are times when people need to overdraft in order to make critical purchases. In these circumstances, some amount of overdraft protection would be beneficial because consumers have the flexibility to make important purchases without racking up very expensive fees.

However, the CFPB also reports that offering overdraft protection comes with risks of moral hazard – consumers with overdraft protection are more likely to overdraft than those without it. Thus, overdraft protection that builds in some amount of flexibility would likely be beneficial to consumers. However, we also need to find ways to discourage customers from making unnecessary overdraft attempts..

To explore what this kind of responsible overdraft protection might look like, we continued our partnership with Chime. In this study, we were interested in designing a responsible overdraft protection feature that still gave consumers some flexibility in how they managed their finances.

Key Insights

To better understand what a new system of overdraft protection might look like, we first wanted to know more about why people overdraft and the context in which they do so. We began by listening to interviews of people going through the Bank Fee Finder tool that Chime created. That qualitative work helped bring to light several important insights about why people overdraft:

- Many people are not aware that they are about to overdraft.
- Not all overdraft transactions are necessary transactions.
- People underestimate the cost of overdrafting.

Experiment

With these insights in mind, we partnered with Chime to explore ways to protect consumers from overdrafting while still allowing for some flexibility. Together, we designed and built a pro-consumer overdraft tool called SpotMe.

CASE STUDY

The way the SpotMe program works is as follows:

- Users are given the option to enroll in SpotMe, which allows them to draw their account negative up to -$25 .
- Any negative balances are automatically deducted from their next deposit.
- At that point, they are asked to “tip” Chime an amount that they think is fair (instead of the typical $35 overdraft fee charged by ohter banks).

To evaluate if there were ways to avoid the same risks of moral hazard that come with other types of overdraft protection, we designed a two-condition experiment. Chime users will be randomly assigned to be presented a chance to opt-in to SpotMe in two different ways.

- **A control condition** where consumers are asked to “opt-in” and then told that all transactions will be covered up to $25.

- **An experiment condition** where consumers are also asked to “opt-in”, and then told that the feature should only be used for food and gas transactions.

We hypothesize that the experimental condition will signal to consumers that intentional overdraft transactions should be limited to necessary expenses, and thus reduce the number of overall overdraft attempts.

Results

Our experiment is still in design and will launch in Q4 2018.

CASE STUDY

Using visual goal setting and a postcard to future-self to increase retention

LISC

Partner Type	Non-Profit
Partner Cohort	2017
Project Type	Optimization
Project Status	Completed

Background

Financial coaching represents a promising strategy to help individuals change their behavior in service of long-term goals. Participants who attend more sessions are more likely to find a job, keep their job after 180 days, and establish a credit history. The problem is, however, that not everyone that starts coaching sticks with the program and many drop out before achieving the full benefits of their engagement.

Finding ways to improve retention and engagement among financial coaching participants would increase the impact of the programs. Over the past 18 months, we have partnered with Local Initiative Support Corporation (LISC) to tackle just this problem. Working with their network of Financial Opportunity Centers (FOCs), we explored behaviorally informed strategies to improve the retention of financial coaching programs.

Key Insights

Before we began designing interventions, we conducted in-depth, qualitative research at 29 FOCs across five different states. During these trips, we had one-on-one interviews with financial coaching participants about their experiences with the program. We also spoke with financial coaches about where in the process they see clients struggle and what kind of strategies they use to engage them. In addition to the qualitative work, we also analyzed administrative data provided by LISC to look for trends in retention. From this work, we identified a number of barriers that might prevent a financial coaching participant from fully engaging with the program. We think two barriers are especially important:

- Financial coaching offers value that materializes in the future, but many participants are focused on short-term problems. This mismatch means that some participants may not fully connect with the long-term goals they set as part of the coaching process.
- Some participants put off working with a financial coach until a certain point in the future, such as when they secure employment. This means that some participants may drop off more quickly during the early sessions.

Experiment

Based on these insights, we developed a visual goal setting exercise where participants were presented with a set of eight photos and then asked to select one that represented what they wanted their financial future to feel like. This prompted a conversation about why they identified with the picture that they selected.

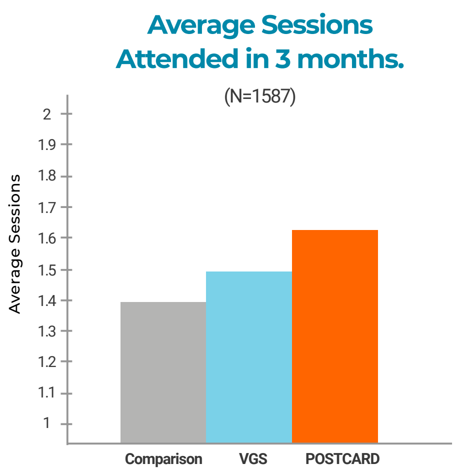
By structuring a long-term goal setting exercise around visuals, participants were able to connect with their goals in a more meaningful and emotional way. Furthermore, we purposefully selected eight photos that were conceptual, allowing participants to give them their own meaning.

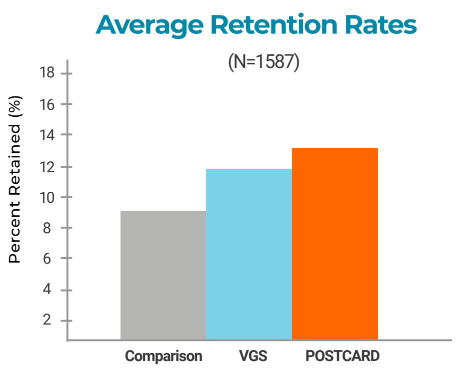
Half of the financial coaching participants were asked only to pick a photograph. The other half were asked to use their answers from the visual goal setting exercise to fill out a postcard to themselves in the future. They were unaware of the fact that they would receive the postcard the next time they missed a meeting. Reminders such as the postcard can play an important role in making our previous intentions more salient by bringing us back to the moment when we set those intentions. The postcard not only serves as a reminder of the motivation participants felt during the session, but it also makes the coach's contact information readily available.

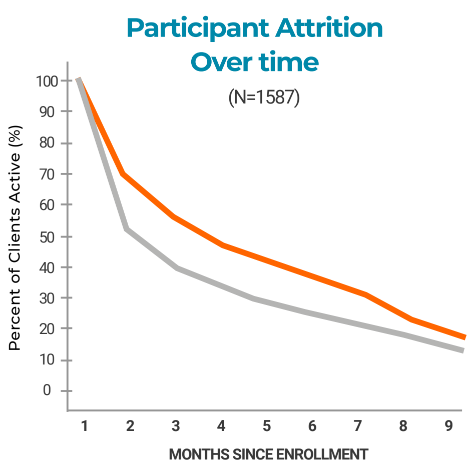
Visual Goal Setting Photographs

Results

We found that both the visual goal setting exercise and the postcard significantly increased participants' willingness to attend sessions. Participants who went through the visual goal-setting exercise with their coaches attended 6% more sessions within the first three months than the comparison group. Participants who also used the postcard attended 16% more and 10% more than just the visual goal setting.







We also found that the interventions significantly increased retention. About 9% of the comparison group met were retained. About 12% of the participants who went through the visual goal setting exercise and about 13% of the participants who also used the postcard were retained after 3 months.

Interestingly, while participants that wrote the postcard did have marginally better engagement compared to those who only went through the visual goal setting exercise, it was not because it worked as a reminder. Instead, we think that simply being forced to take the time to reflect and summarize the conversation may make the visual goal setting exercise more meaningful.

At 6 months after we finished collecting data, we were able to go back and see if the effect of the intervention persisted over time. We found that there were more clients attending sessions even after six months. However, we also saw no differences in session attendance between any group for clients who were retained at the 3-month mark.

Indeed, when we look at attrition rates, we see that the only moment when the interventions make a significant difference is early in a participant's engagement. We found that some of this effect just resulted in displaced attrition – someone dropped out of the program at month 4 instead of month 2. However, the evidence also suggests that a significantly higher number of participants deeply engage and continue attending coaching sessions well into the future.

Taken together, this experiment suggests that retention is built during a participant's early engagement. If a participant engages with coaching and derives social, emotional, or financial value during the first sessions, they are more likely to sustain their engagement over time.

CASE STUDY

Using technology to increase retention in financial coaching

LISC

Partner Type	Non-Profit
Partner Cohort	2017
Project Type	Optimization
Project Status	In Design

Background

Building off our success using the visual goal setting exercise and the postcards participants wrote to themselves in the future, we continued our partnership with the Local Initiative Support Corporation (LISC) and their network of Financial Opportunity Centers. This project also explores how we might further encourage greater engagement by financial coaching participants.

In this project, we specifically are interested in understanding how technology might offer new strategies to increase retention and create opportunities for coaches to connect with clients in meaningful ways. Together with LISC, we worked together to design and develop a novel digital tool that supports financial coaches as they engage and work with clients.

Key Insights

We began designing our digital tool by first reviewing our previous research to identify points of drop-off. This research identified a number of additional barriers that likely prevent clients from fully engaging with financial coaching programs.

- The relationship between the coach and the client is very important to their long-term engagement. However, coaches have to build trust and a good rapport with clients very quickly. If a coach is able to connect with a client early in their engagement, they are more likely to keep coming back.
- Clients who make progress early in their engagement towards some financial goal are more likely to continue attending sessions. On the other hand, clients who do not have these small wins are more likely to drop off.
- Financial coaches are occupied with data collection. Financial coaches have a limited amount of time, so they are forced to make a trade-off between data collection and other activities that are more directly related to coaching or related to outreach to re-engage their clients.

As we set out to design a new digital tool, we felt technology could support financial coaching in several ways. First, technology can help relieve some of the burden that coaches face related to collecting and entering data. By automating some of the data entry, coaches would have more time to invest in their clients and potentially have greater capacity to work with more clients.

Technology can also provide coaches with information about their clients even before the first session. This information might build the relationship between the coach and the client because it puts coaches in better positions to have more meaningful conversations with clients from the very first session.

Lastly, we think technology creates opportunities to structure the activities that clients are asked to do. For example, technology could provide greater continuity and additional touchpoints to give clients a greater sense of progress early in their engagement with financial coaching.

Experiment

Our development focused first on how we might digitize some of the burdensome data collection and entry that coaches are asked to do. We designed a webpage and embedded intake surveys and the budgeting task that all participants must fill out. Everything connected directly with LISC's database. We then worked with coaching programs to tweak their processes to feature the new, digital data collection.

In addition to collecting data, the tool also prompts clients to immediately schedule a session with coaches. We ultimately want the tool to go ahead and auto-schedule clients into a series of three sessions rather than just one.

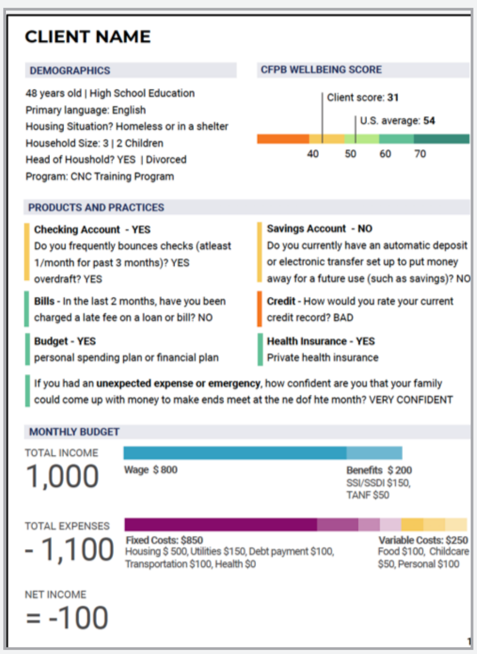
Then, we used the intake data that clients provide to create a summarized report that is sent to coaches before the session. The client report provides coaches with an "at-a-glance" view of their client's financial circumstances and provides "conversation starters" for the coach. The idea is to prime coaches to have meaningful, personalized conversations with their coaches from the very first session.

Lastly, we will design the digital tool to provide a series of interactions for clients over the course of their first three sessions. Coaches often provide some type of homework or "to-dos" for clients between sessions. We would like to incorporate technology that ensure that these exercises are designed to encourage further engagement by providing a maximum sense of progress.

Results

We have launched the new tool at two financial coaching programs in Chicago. We are looking to expand to additional sites in early first quarter of 2019. We will then test and evaluate the effect of the new technology on client engagement and retention. We expect final results by next fall.

Coaches Report
Coaches are emailed a summary of their new client. The report has demographics and "Conversation Starters" to help coaches ask more meaningful questions and tailor even the very first session to the specific needs of their client.



CASE STUDY

Priming an association to one's future self (or dissociations from one's past self) to drive sign-ups

Chime

Partner Type	Tech
Partner Cohort	2017
Project Type	Optimization
Project Status	Completed

Background

While overdraft fees and other fees can be detrimental to someone's overall financial health, people continue to underestimate how much they pay in bank fees. Instead of fighting uphill to motivate people to avoid these bank fees, perhaps we can simply encourage them to opt-in to a system where there are no fees to begin with. To help people not have to pay these fees, we partnered with Chime, an online bank with no monthly fees, no minimum balances, no foreign transaction fees, no overdraft fees or transfer fees.

Key Insights

To help more consumers sign up for Chime, we conducted an in-depth behavioral audit of their sign-up flow, analyzed their conversion data to identify significant drop-off points, and conducted in-depth interviews with Chime employees.

Our analysis led us to two key findings:

- There's a limited emphasis on benefits. Their sign-up flow focused on simplifying the amount of inputs a user has to read and process. This is generally a good practice, but our behavioral analysis also found little callout to the benefits of opening a Chime account, that may have attracted applicants in the first place.
- There's a long delay before being able to use the card. Due to the time constraints of physically mailing a debit card, and the technical restrictions of Automated Clearing House (ACH) transfers, it takes a couple of days for a user to receive their Chime debit card and activate their account. We know that motivation decreases sharply with time, which was reflected in the data as a sharp drop-off in the number of users who continued on to the activation step.

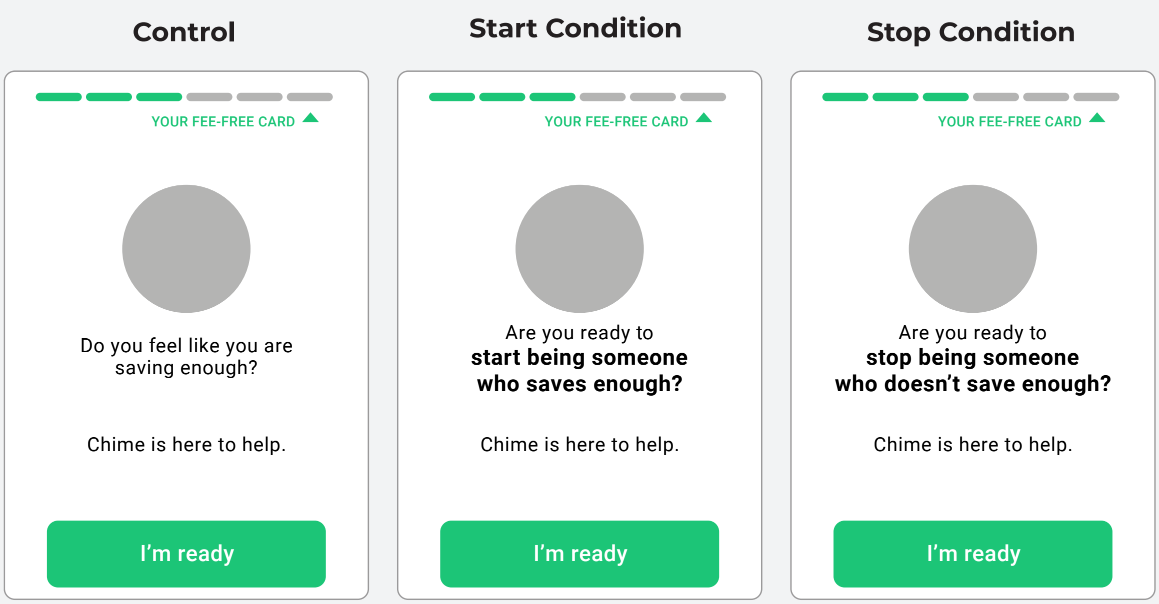
Experiment

Together with Chime, we designed an experiment with the goal of increasing conversion, and ultimately savings, through their enrollment flow.

CASE STUDY

Past research from Dan Bartels and Lance Rips has shown that a closer association with one's future self can increase one's desire to save. Similarly, it may be the case that disassociating from one's past self can increase one's desire to avoid past sub-optimal financial behaviors. With this in mind, we ran an experiment within their enrollment process.

We tried to leveraged this research by randomly presenting new Chime users with either a control screen or one of two experimental screens that force respondents to respond whether they are ready to start or stop being a kind of person.



Results

Just over 31,000 people were shown either the control screen or one of the experimental screens during their sign-up. We did not see any differences in sign-up rates between the three different conditions.

Although we did not measurably change behavior with this experiment, we did learn that adding two extra screens to an enrollment flow did not significantly reduce completion rates of the flow.

Decreasing (Bad) Debt

In 2018, total household debt in the United States topped $13.2 trillion, meaning that the average household has nearly 20% more debt than they had at the height of the financial crisis in 2008. Debt, in itself, is not negative. Indeed, some debt is "good" in that it allows people to make important investments in the future. Mortgages, for example, can be a powerful asset and serve as the foundations for a family's future financial well-being.

However, the sheer amount of debt that many families carry represents a significant burden on their household balance sheets. Student loans, which ostensibly represent a positive investment in education that unlocks higher earning potential, climbed past $1.4 trillion in 2018 with as many as 30% of borrowers struggling to make payments after six years.

In other cases, debt can be good when it allows families to cope with financial emergencies and to smooth out income and expenses. However, far too often debt is not used to cover temporary emergencies but rather as a strategy to meet chronic shortfalls. In these cases, consumers resort to costly sources of credit that can trap people in cycles of debt that can be very difficult to break.

Over the past year, we worked with 3 organizations to help develop interventions to decrease bad debt. Our work with those organizations centered around three strategies to help people either take out less debt or repay their debts successfully.

"

The environments in which they choose to take on debt are designed to encourage them to take on more than they can handle.

1. Change the defaults of how debt is offered.

One of the reasons that many people become burdened with debt is that the environments in which they choose to take on debt are designed to encourage them to take on more than they can handle. In other cases, the default options – like when a payment is due – exacerbate income and expense volatility, making managing debt significantly harder.

There are clear ways that we can change the default options related to loans that both reduce the total amount of debt that someone takes on and helps them repay that debt. We explored ways we might realize these changes in two of 2018's partnerships.

Personal Finance@Duke

In partnership with Duke's Office of Personal Finance, we designed a novel way of presenting the choice architecture for graduate students to accept loans. Simply splitting the total loan package into two bundles – one covering costs like tuition and the other covering variable expenses like the cost of living – we nudged students to take out less debt.

beneficial state bank

We also partnered with Beneficial State Bank to design a new way of offering auto loans. Instead of defaulting people to pay their car payment on the day they buy the car, the new system allows borrowers to align their payment with when they get paid. Allowing for a more flexible payment date may reduce the mismatch between income and expenses, thus improving rates of repayment.

earnup

Lastly, we partnered with EarnUp to explore how we might encourage more people to "overpay" in order to pay off on their existing loans faster. While our nudges did not shift significanly more users towards a faster repayment, simply providing a choice set that included multiple repayment options encourage users to opt into those repayment plans.

2. Help people to plan ahead.

In moments of crisis or when people come up short at the end of the month, all of their attentions are focused entirely on solving the immediate crisis. This kind of scarcity can make it even more difficult for people to take into account future costs. Take payday loans as an example: payday loans provide quick access to credit for people when something comes up. In reality, though, many borrowers of payday loans end up taking out multiple loans just to repay the first.

Even outside of payday loans, borrowers would benefit from strategies and new tools that encourage them to make decisions about debt beforehand. We had three projects over the last year that were geared towards helping people plan ahead.

In our partnership with Credit Human, we ran two experiments related to their payday loan alternative, QMoney. We explored how we might encourage members who have previously taken a payday loan to consider QMoney before they needed it. The idea was that in the moment people are more likely to stick with what they've done in the past. We also ran a second experiment that encouraged members who took QMoney loans to set implementation intentions around their repayment.

We also developed our own Auto Loan Calculator. It aims to help people consider all of the ongoing, monthly costs that we so often overlook when buying a car. The calculator is designed around the idea that we often pay too much for our cars because in the moment it is too easy to focus on immediate, salient costs and forget about all of the variable costs we face in the future.

CASE STUDY

Changing the Choice Architecture to Reduce Student Borrowing

Duke Personal Finance

Partner Type	Non-Profit
Partner Cohort	2018
Project Type	Optimization
Project Status	Completed

Personal Finance@Duke

Background

Student loans are the second largest form of US debt. While focus has centered on undergraduate borrowing, 40% of American's $1.3 trillion student loan debt has financed graduate degrees, and that number is growing. In fact, from 2008 to 2016, the share of graduate students with over $100,000 in loans doubled.

We partnered with Duke's Office of Student Loans and Personal Finance to reduce the amount graduate students borrow, particularly for living expenses. While tuition, fees, and health insurance are fixed, direct costs, "living expenses" (i.e. housing, food, transportation, and other similar expenses) can vary greatly based on student lifestyle choices. Nevertheless, initial analyses of Duke's financial aid data showed that most students simply accept Duke's full loan offer.

Key Insights

Duke students learn about their financial aid options after being accepted to their chosen graduate program. Students receive an email and/or letter about loans and scholarships for which they are eligible. After accepting Duke's offer, they accept their aid package via a PeopleSoft lending portal. We began by auditing this process, which brought to light several key insights into how graduate students usually accept loans:

» Duke's PeopleSoft user interface made accepting all loans look like the default behavior to most students, and the fact that students could reduce the loans in their offer was not clear.

» Loans for the full Cost of Attendance (living expenses plus fixed costs like tuition) are all awarded together, making it impossible for students to distinguish how much they are borrowing for direct vs. indirect costs.

Experiment

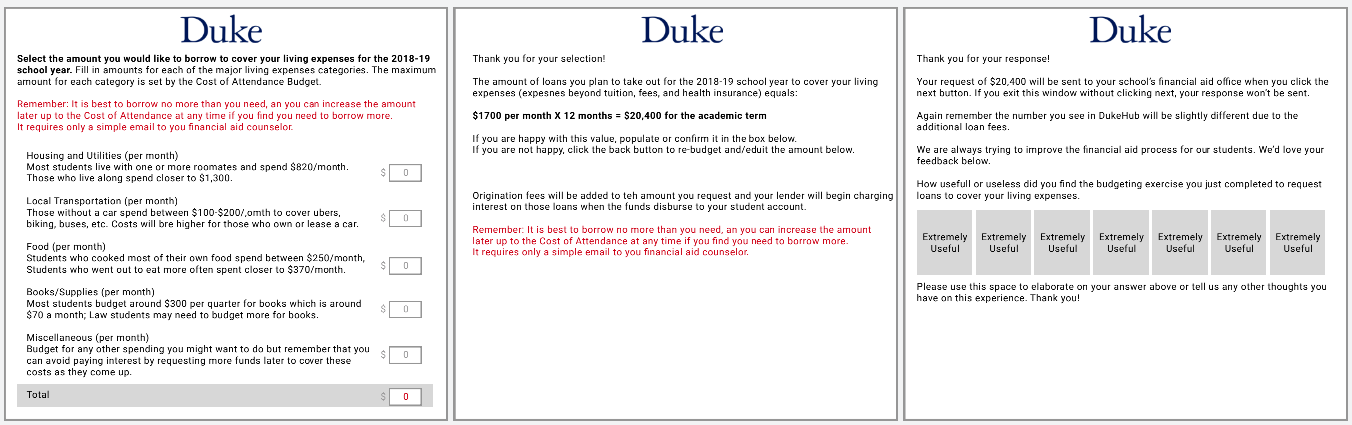
Drawing on these insights, we hypothesized that we could reduce student borrowing if we partitioned the decision about borrowing into two decisions.

Working with the Duke Personal Finance Office, admitted students within six Duke graduate programs were randomly assigned to receive either a loan offer for the

CASE STUDY

full COA (standard operating procedure within most financial aid offices) or an offer for direct costs only. In this case, we defaulted students into covering direct costs but made the default for living expenses to borrow nothing. Students who received the second offer just covering direct costs were prompted to use a tool that let them estimate their likely monthly living expenses to generate a custom living expenses loan. Their financial aid officers received an email with that loan amount and then students could log back into the Duke Lending portal and accept it. We measured whether students reduced their initial borrowing behavior and are continuing to track whether they borrow less over the full school year. We also tracked how students used the living expenses estimation tool.

Examples of the budgeting exercise for living expenses.



Duke

Select the amount you would like to borrow to cover your living expenses for the 2018-19 school year. Fill in amounts for each of the major living expenses categories. The maximum amount for each category is set by the Cost of Attendance Budget.

Remember: It is best to borrow no more than you need, an you can increase the amount later up to the Cost of Attendance at any time if you find you need to borrow more.
It requires only a simple email to you financial aid counselor.

Housing and Utilities (per month) Most students live with one or more roomates and spend $820/month. Those who live along spend closer to $1,300.	$ 0
Local Transportation (per month) Those without a car spend between $100-$200/,omth to cover ubers, biking, buses, etc. Costs will bre higher for those who own or lease a car.	$ 0
Food (per month) Students who cooked most of their own food spend between $250/month, Students who went out to eat more often spent closer to $370/month.	$ 0
Books/Supplies (per month) Most students budget around $300 per quarter for books which is around $70 a month; Law students may need to budget more for books.	$ 0
Miscellaneous (per month) Budget for any other spending you might want to do but remember that you can avoid paying interest by requesting more funds later to cover these costs as they come up.	$ 0
Total	$ 0

Duke

Thank you for your selection!

The amount of loans you plan to take out for the 2018-19 school year to cover your living expenses (expesnes beyond tuition, fees, and health insurance) equals:

$1700 per month X 12 months = $20,400 for the academic term

If you are happy with this value, populate or confirm it in the box below.
If you are not happy, click the back button to re-budget and/eduit the amount below.

Origination fees will be added to teh amount you request and your lender will begin charging interest on those loans when the funds disburse to your student account.

Remember: It is best to borrow no more than you need, an you can increase the amount later up to the Cost of Attendance at any time if you find you need to borrow more.
It requires only a simple email to you financial aid counselor.

Duke

Thank you for your response!

Your request of $20,400 will be sent to your school's financial aid office when you click the next button. If you exit this window without clicking next, your response won't be sent.

Again remember the number you see in DukeHub will be slightly different due to the additional loan fees.

We are always trying to improve the financial aid process for our students. We'd love your feedback below.

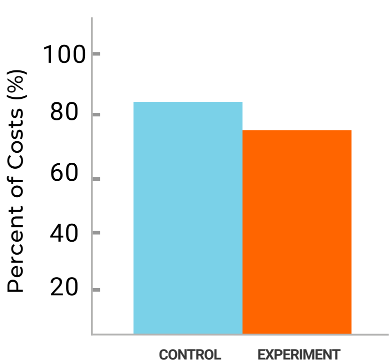
How usefull or useless did you find the budgeting exercise you just completed to request loans to cover your living expenses.

Extremely Useful	Extremely Useful	Extremely Useful	Extremely Useful	Extremely Useful	Extremely Useful	Extremely Useful

Please use this space to elaborate on your answer above or tell us any other thoughts you have on this experience. Thank you!

Percent of Costs Students Cover With Federal Loans

(N=289)



Results

In total our experiment launched to 439 graduate students. We found that in the control condition, 28% of students accepted the full loan amount while in our experimental condition only 13% did – a signficant, 65% reduction in the odds of taking on all offered debt. Furthermore among students who did choose to take on some debt (N=289), those in the experimental condition borrowed 8.4% less than those in the control. For the average student, in our experimental condition this could mean a $5,472 decrease in their overall debt and an over $2,000 savings in interest over the life of the loan.

CASE STUDY

Encouraging uptake of a payday alternative

Credit Human Credit Union

Partner Type	Credit Union
Partner Cohort	2017
Project Type	Optimization
Project Status	Completed

Background

Payday loans provide relief for an immediate need, but this relief comes at the cost of triple digit interest rates and exorbitant fees. According to research from the Pew Charitable Trusts, about 12 million people in the United States take out payday loans. Furthermore, borrowers who cannot afford to repay loans within two weeks are often forced to take out more loans to cover existing ones. Borrowers incur even more fees and get trapped in a downward cycle of debt.

To explore how we might move away from payday loans to lower-cost alternatives, we again partnered with Credit Human Federal Credit Union. Credit Human saw that their members and even some employees were using payday lenders for short-term cash needs. As a response, Credit Human developed QMoney – a lower fee, lower interest payday loan alternative. Like a payday loan, QMoney also offers member money "on the spot" – members can go online and request a loan for up to $500 at any time without a credit check. We worked together to develop a pilot of the QMoney program and to explore how we might present QMoney to members in a way that motivated them to switch from payday loans to QMoney.

Key Insights

QMoney was designed to help members improve their financial health. By encouraging members who use payday loans to switch to QMoney, people would be less likely to get caught in the predatory cycle of borrowing payday loans. Although QMoney loans are a better alternative, there are several reasons why people may not switch:

» Members might not consider going to their financial institution as an alternative to a payday lender. People categorize financial products and services to match their financial needs. Once people organize their financial lives, breaking through the status quo can be difficult.

» Members do not accurately assess the cost of payday loans. When people take out payday loans, they are focused on solving short-term problems. This makes it harder to accurately weigh the future costs associated with repaying.

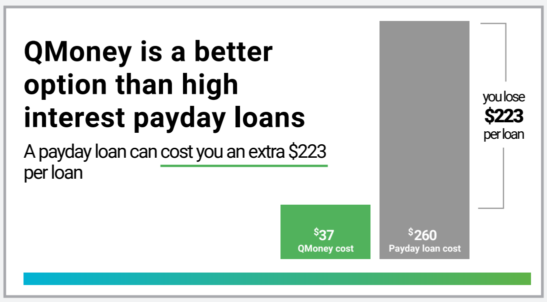
CASE STUDY

Experiment

We hypothesized that providing visuals of the dollar amount savings that explicitly compared QMoney and payday loans would lead members to be more likely to see QMoney as a viable alternative to payday loans. We developed marketing materials (postcards) and follow up emails, which we piloted with 450 Credit Human members who we identified as having previously taken out a payday loan. These members were randomly assigned to receive one of two different messaging conditions around QMoney loans:

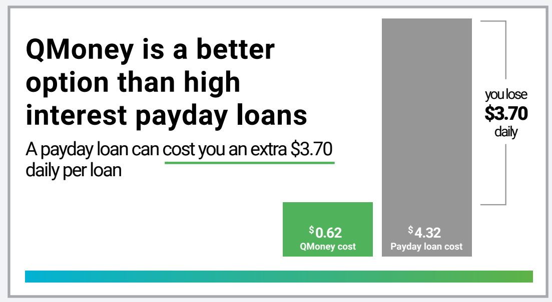
Condition 1. Lump Sum

Emphasized total savings over the course of the two-month loan period ($223 dollars).



Condition 2. Daily Sum

Emphasized the savings per day over the course of the loan of $3.70.



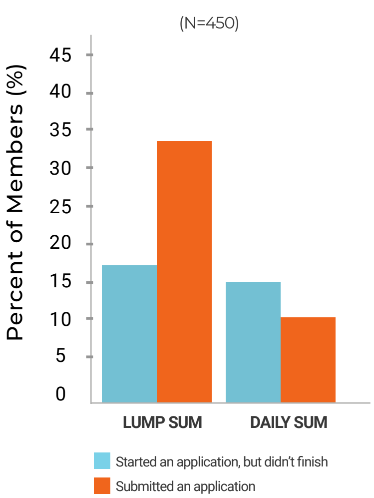
Results

During the two-month long pilot, about 16% of members who were identified as having previously used a payday lender took out a QMoney loan. We found that more people who were presented the lump sum amount may have started and submitted a QMoney loan application, although these findings are not statistically significant with the small number of people in the pilot.

Interestingly, we did see an interaction with email opening such that participants presented with the lump who opened up the follow-up email were significantly more likely to submit a QMoney loan application. We also found that between late July and late October, 27% of members in our sample took out a payday loan. Although not statistically different, members in the lump sum condition were slightly less likely to take out a payday loan and borrowed slightly less money after the intervention.

Across the board, the lump sum condition may have performed better than the daily sum condition. The results from the pilot study were encouraging enough to roll out the program at a larger scale. We are in the process of re-launching a second iteration of this test to 2,500 people where we will be better able to pick up differences between groups.

Starting and Completing a QMoney Application



CASE STUDY

Using reminders to encourage repayment

Credit Human Credit Union

Partner Type	Credit Union
Partner Cohort	2017
Project Type	Optimization
Project Status	Completed

Background

Payday loans are costly, not only because of the high interest rates they charge but also because they are designed to trap consumers in a cycle of debt. People who are unable to pay back a payday loan are offered a new loan. The Center for Responsible Lending finds that the majority of borrowers need multiple loans just to repay their first loan and a typical borrower may take as many as 10 loans per year.

Payday alternatives, like Credit Human's QMoney, ensure that the loans are not cyclical – members cannot take out a second loan until they have paid off the first. However, whether or not such products are successful and beneficial alternatives to payday loans requires a repayment rate much higher than most payday loans. We continued our partnership with Credit Human Federal Credit Union to look at ways we might encourage more borrowers to repay their QMoney loan.

Key Insights

A lot of work has been put in to understand how we might encourage more people to successfully repay their debt. When we began to think about intervening to encourage higher repayment on QMoney loans, there were two findings that we felt were particularly relevant in this case.

» Most people do not think about when they will have money to make the next loan payment. Despite good intentions, many people fail to follow through on important plans such as taking medication, exercising, voting and paying a loan on time. There is an increasing amount of evidence showing that prompting people to make specific plans in advance makes them more likely to follow through.

» People tend to anchor on deadlines and wait until the very end before making a payment. This behavior might make sense from a purely rational economic perspective, but from a behavioral perspective, members might be better served by making a partial payment when they have funds available. QMoney loans accrue daily interest, which adds up over time. If a member doesn't pay off their loan when they have money, they may be tempted to spend it elsewhere.

Experiment

We launched an experiment aimed at increasing QMoney loan repayment rates. The 1017 members who took out a QMoney loan were randomly assigned to either the control or planning prompt conditions. We hypothesized that prompting the member to think and plan about their repayment in advance of the payment deadline would encourage more people to follow through on their intention to repay.

Condition 2. Planning Prompt

Plan your QMoney Repayment

You recently received a QMoney Loan. Your payment in the amount of $252.59 is due on or befor Saturday — 05/20/17.

We ask that you take a moment to think through when you will have money available to make your loan payment — for instance you next payday.

To make a partial payment, simply log into Online Banking or use the GO app on your phone and select the Transfer option.

We thank you for being a responsible member and paying us back on time.

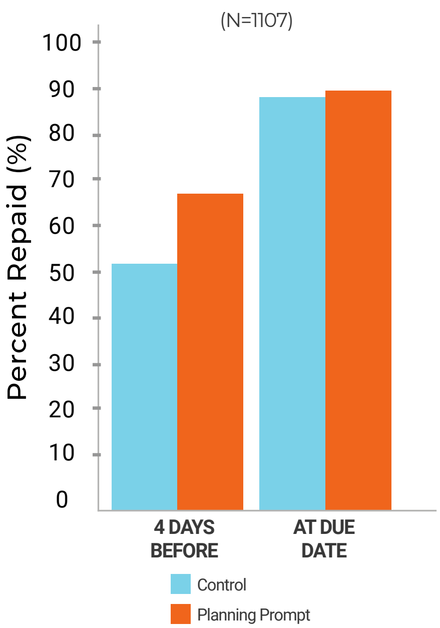
» **A control condition** where member received payment reminders 3 days before the 1st and 2nd month payment due date as they would normally would.

» **A planning prompt condition** that included an additional email a few days after the loan was taken out prompting members to plan their payment in advance

Results

During the test period, 1017 members took out QMoney loans. There was no statistically significant difference between conditions with regards to repayment. In both conditions, a suprising 90% of members successfully paid back their first loan.

Repayment Rates By Group



However, the planning prompt email led people to pay back their first loan slightly sooner. Before both conditions received their usual reminder before the deadline, a significantly higher proportion of people had already paid back their loan in the group who received the planning prompt. This suggests that while people who were paying late didn't switch to paying on time, people who were already paying on time ended up paying back their loan slightly sooner.

Not all members took just one loan, though. As soon as members pay off their QMoney loan, they are eligible to take out another one. Of the 1017 members who took out QMoney loans during the test period, 599 members took out multiple loans. Members who took out multiple loans were generally more likely to repay their loans sooner and much less likely to repay their loans after the due date or be charged off.

Overall, these results suggest that the planning prompts encouraged people to think about and plan their monthly finances. Given the high baseline repayment, the intervention likely is not strong enough to encourage greater repayment. As such, we are planning to replicate this work with loan types that have a lower baseline repayment and larger volumes.

CASE STUDY

Accelerating loan repayment by making savings more concrete

EarnUp

Partner Type	Fintech
Partner Cohort	2017
Project Type	Optimization
Project Status	Completed

"In our behavioral diagnosis, tested what kind of messaging would be the most motivating comparison. We found that concrete and tangible rewards motivated the most effort while a large number of small prizes (like an extra 1,000 coffees) was the least motivating.

Background

Beginning in 2017, we partnered with EarnUp, a technology platform that helps consumers to automate their debt payments and get out of debt faster. Together, we tried to encourage people to accelerate debt repayment by nudging more people to "overpay" on their outstanding loans.

Key Insights

While accelerating debt even a little every month can help consumers save thousands of dollars, understanding the impact of these large savings on our future self can be difficult.

» We often define and ascribe value to options or choices by comparing it to other alternatives. The importance of relative comparions often means when we struggle to accruately value abstract numbers - like the value of the future savings from a faster debt repayment - without some kind of comparison or point of reference.

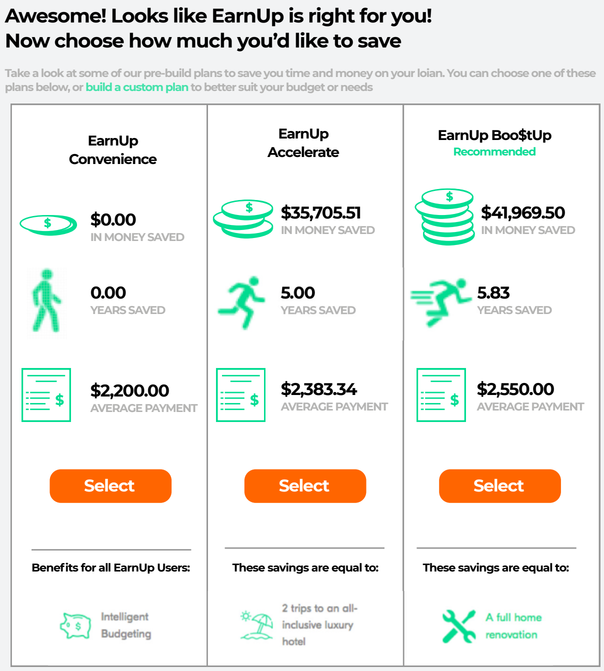
Experiment

We hypothesized that by giving the savings amount a reference point, it will help people internalize the value of EarnUp's product and increase roundup rates. To test our hypothesis we recruited 257 people to go through EarnUp's sign up flow to go through a savings calculator. Of the 257, 83% completed the savings calculator and clicked to sign up for a monthly payment plan.

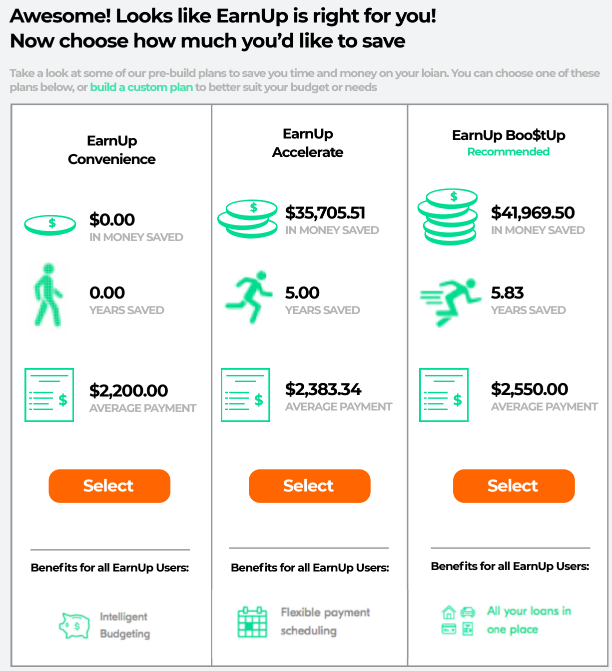
Users were presented different payment plan options. In "Accelerate", users were prompted to overpay by one additional payment per year, spread over 12- months. In BoostUp, users were prompted to overpay by the same one additional payment, plus an additional 5%. That total was then rounded to the closest $50.

In the experimental condition, the savings accrued from a faster repayment was presented in concrete terms (two vacations or a home renovation). In the control condition, users were told the benefits of EarnUp.

Experimental condition providing relative comparisons



Control condition



Results

Overall, people were more likely to choose "accelerate" (55%) over boostup (45%), although the difference was not statistically different. 78% of participants picked monthly payments that were above their current loan payment. Among those who chose "savings", total savings across the group would have been $3,117,618. However, these savings were not realized because none of the participants fully completed the full EarnUp sign up the flow, which involves syncing bank account, inputting loan account details and adding social security number.

Interestingly, people in the control condition were 12% more likely to choose a payment plan that offered them savings (71% compared to 83%). This result holds when we include people who saw the monthly payment options, but did not click anything. Controlling for loan size, interest rate and payment amount hads no effect on the experiment results..

Why didn't our hypothesis work? There are reasonable behavioral hypothesis to consider, but further research will be needed.

LAB STUDY

Exploring debt repayment and scope insensitivity

Partner Type	N/A
Partner Cohort	2018
Project Type	Lab Learning
Project Status	Completed

Background

According to Experian's State of Credit: 2017 report, the average balance on credit cards is $6,354 in 2017, and total credit card debt in the U.S. hit an all-time high of $1.021 trillion. With credit card interest rates at 15% or 25%, paying just the minimum due each month is not going to make a dent in paying the debt off.

We wondered whether there are better ways to structure credit card payments to encourage greater debt repayment. To explore this issue, we worked with three credit unions as part of Filene's i3 program. Specifically, we investigated if changing the timing and frequency of credit card payments might influence the amount paid each month.

Key Insights

Our experiment builds on a body of research that suggests that people's perceptions of their finances and their willingness to pay are influenced by the way their finances are framed.

» Recent research on scope insensitivity and debt repayment by Daniel Mochon indicates that making smaller, more frequent payments may be a more appealing structure than less frequent, larger payments.

» From our work with Propel, we also saw that reframing the monthly budget to a weekly budget impacted how people spent their SNAP benefits. The typical payment cadence for credit cards is monthly, so we wanted to investigate how a weekly payment option would change people's payment amounts.

Experiment

We designed an experiment to test the impacts of payment frequency using a survey of approximately 2,000 credit union members. Each member in the experiment was presented with the same situation:

» "Imagine that you have a credit card payment due at the end of the month. The minimum due is $72.00 and the total balance is $7,200, which you can't afford to pay in full right now. The interest rate is 12%."

LAB STUDY

After reading the prompt, respondents were then asked how much they would consider paying. However, the respondents were randomly divided and asked about payment in two different ways.

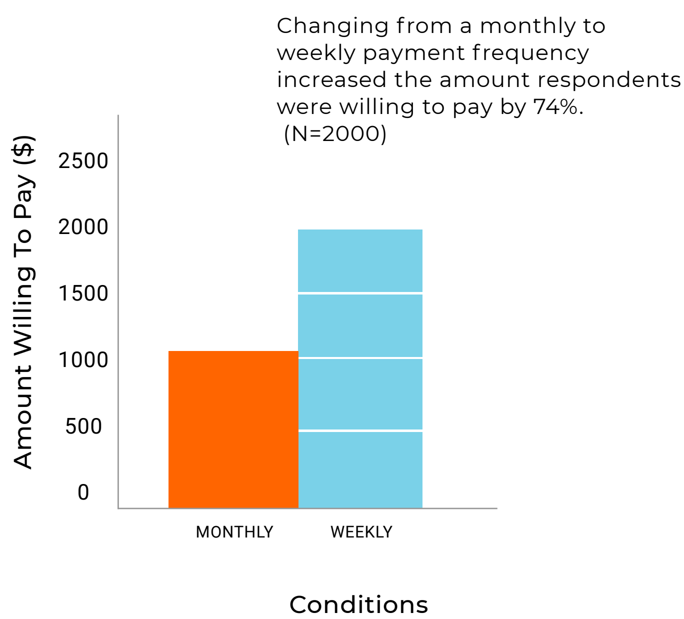
Condition 2. Monthly Payment	Condition 2. Weekly Payment
Respondents were asked: "If you were going to make just one payment for the month, how much would you choose to pay?"	Respondents were asked: "If the company allowed you to make your payment in 4 equal weekly installments, how much would you choose to pay each week?"

Results

We found that the respondents who were in the monthly payment condition said they would pay $1,154 for the month on average. The respondents who were in the 4 weekly payments condition, on the other hand, said they would pay $501 per week on average – which adds up to over $2,004 for the month. This difference is a 74% increase in payment, just by changing from a monthly to weekly payment frequency.

Furthermore, 58% of the respondents with credit card debt who are also paid biweekly said they would like to align their credit card payments with their income payment schedule. These results give us reason to believe that both increasing payment frequency and aligning payments with paydays could help people to pay down their credit card debt faster.

Total Payments Between Monthly and Weekly Schedules



LAB STUDY

Designing an auto loan calculator to improve car purchase decision making

Partner Type	N/A
Partner Cohort	2018
Project Type	Prototype
Project Status	Completed

> ***"Some dealerships employ a number of behavioral principles that encourage people to pay more, including first anchoring clients on higher priced models and cultivating a false sense of scarcity that push people to make faster judgements.***

Background

Data from the Federal Reserve shows that over four million Americans are more than 90 days late on their car loan payments. This is the highest late-payment rate since the height of the financial crisis. Auto loan delinquencies rose more than any other category in 2016, according to recent data from the American Bankers Association. Meanwhile, the number of auto loans issued per year has grown at a rate of over 60% since 2012.

Despite these statistics, car dealerships do not face stringent regulatory oversight. In 2013, the CFPB issued guidance to curb dealer incentives, but this was repealed by the House of Representatives and is currently off of the CFPB's top priority list. As an example of the misaligned incentives to dealers, one dealer in Massachusetts was found to have inflated or included unverifiable incomes in 10 out of 11 loan applications.

Key Insights

To better understand the broader context of auto-lending, we conducted field visits with debt collectors, listened to collections calls, and tried to buy used cars at a number of car lots. We found troubling evidence suggesting that many borrowers are being set up for failure.

- Car prices are obscured. In fact, car prices are often not shown and are also often framed and negotiated monthly with no reference to total cost. Any negotiated decreases in monthly cost may actually be offset by increases in interest rate, loan length, and total cost.
- Salespeople use powerful sales tactics. These tactics include anchoring car buyers to high car values, pushing test drives and leveraging the endowment effect to get people to "fall in love" with a car, and pressure sales when a sale looks unlikely or a customer begins to walk away. In other cases, dealers commit outright loan application manipulation.

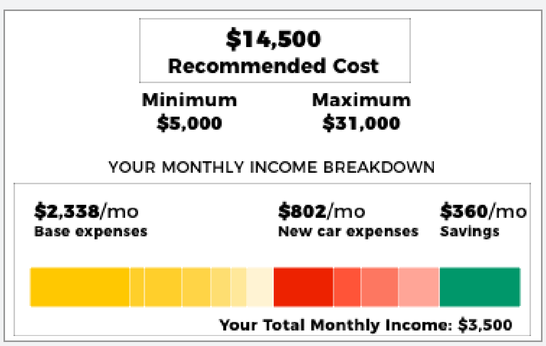
- Car buyers rarely – if ever – consider the full cost of owning a vehicle when deciding how much they should spend on a car. While buyers base their decision on upfront costs and the car payment, they forget to account for other ongoing costs like insurance, repairs and maintenance, and gas. This true cost of the car can significantly impact their ability to make monthly payments and meet other financial obligations in the future.

Experiment

We developed an auto loan calculator that uses a person's income and expenses to provide a recommendation for the price of a car that a borrower should buy. The recommendation includes the how much people should expect to pay for the various costs of car ownership, like gas, repairs and maintenance, and insurance.

To assess how the calculator changed people's expectations around purchasing a car, we conducted a between-subjects experiment with 1,500 participants. Each respondent was also randomly assigned to 1 of 3 conditions:

Summary of the Auto Loan Calculator and Recommendations



- **Cost Reflection** where participants were prompted to take 20 seconds to reflect on the costs of owning a car.
- **General Reflection** where participants were prompted to take 20 seconds to reflect on owning a car generally.
- **Control** where participants were not asked to reflect on anything.

Within each condition, we had respondents estimate the costs of car ownerships both before and after using the auto loan calculator to see how using the calculator changed their perceptions car ownership.

Results

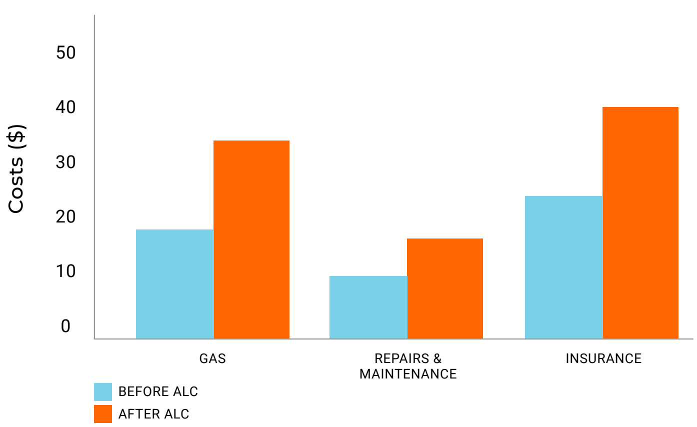
Interestingly, we found that reflection significantly increased estimates of gas, repairs and maintenance, and insurance even before people went through the auto loan calculator by $5-$6 per cost category ($p<0.05$). However, the Auto Loan Calculator offset these differences. We believe that both asking people to reflect on the cost and the Auto Loan Calculator increased cost estimates by reminding people that specific costs exist.

Using the auto loan calculator led respondents to increase their cost estimates from $50 to $89, which included increases in the cost of gas, repairs and maintenance, and insurance. In total, the auto loan calculator also reduced estimates on sticker price people thought they can afford from ~$15,000 to ~$12,500 (17% reduction).

Ideally, car dealerships would post monthly costs at the point of car purchase for car payments as well as expected gas, repairs and maintenance, insurance, and a total monthly car amount. We hope to partner with a credit union or tech platform to understand the impact of the Auto Loan Calculator on decisions at loan origination with a wider audience.

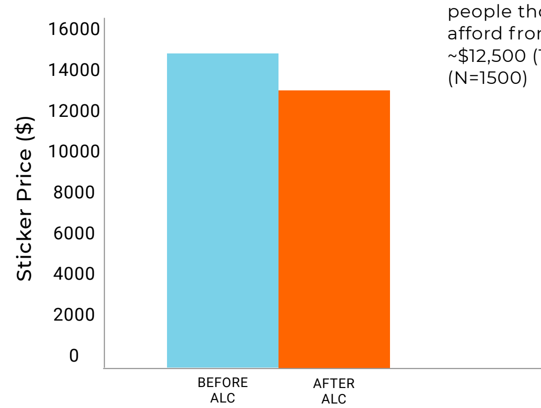
Component Cost Estimates Before and After Using the Calculator

Respondents increased their cost estimates from $50 to $89 for gas, repairs & maintenance, and insurance. (N=1500)



Total Sticker Price that Users Say is Affordable

The auto loan calculator reduced the sticker price people thought they can afford from ~$15,000 to ~$12,500 (17% reduction). (N=1500)



CASE STUDY

Matching recurring payments with income

Beneficial State Bank

Partner Type	Bank
Partner Cohort	2017
Project Type	Optimization
Project Status	In design

Background

Recognizing the flaws and biases in our decision-making that lead people to overpay for their car is critical to understand why people may struggle to pay their car loan. However, it is only part of the story. Underlying these trends are individual experiences of financial insecurity that strain household balance sheets and make keeping current on bills like a car payment difficult.

For example, someone might lose their job, get sick, or encounter an expensive car repair they can't afford. Underlying many of these unexpected expenses is income and expense volatility. For example, Brian Baugh and Jialan Wang found that financial shortfalls – as evidenced by people turning to payday loans and bank overdrafts – happen 18% more when there is a greater mismatch between the timing of someone's income and the bills they owe.

We partnered with Beneficial State Bank, a California-based community development bank, in 2017 in order to see how we might design solutions that help make repaying car loans easier. Over this last year, we worked to run a series of small-scale, exploratory studies to gain insights into how we might reduce the repayment burden on borrowers and lessen auto loan repayment delinquency and defaults.

Key Insights

We began with a behavioral diagnosis throughout the entire auto lending process to understand that process from the perspective of both the borrower and the loan issuer. Our behavioral analysis revealed a number of insights specific to Beneficial Bank's internal processes and barriers to repayment, as well as insights relevant to auto loan repayments broadly.

» Monthly loan repayments are almost universally due on the day that a borrower bought their car. In some cases, this arbitrary choice does not cause any problems. If their repayment due date falls far from a payday, though, this creates further disconnect between someone's expenses and income. Adding in unnecessary volatility may make it more difficult to come up with the money to pay off their car loan.

- While loan due dates always fell on specific dates (e.g. the 15th), many people were not paid on specific dates (e.g. every other Friday). Changing the date their payment is due might solve the problem for some people, but for many it also creates the risk of having income come just after their due date some months.

Experiment

We hypothesized that if borrowers could easily pay their car loan when they get paid, they would be less likely to default. To inform the design of an experiment to test this hypothesis, we ran a series of small-sample pretests during onboarding calls.

In the first pretest we worked with loan officers to ask, "As a courtesy, we ask you to select which date you would like to repay your loan and we will move your loan repayment date to that day." In 22 calls, 8 people changed the date their payment was due, and an additional 4 people had already been assigned a date that aligned with their income. Given that fewer people changed their payment when offered the opportunity, we felt that people may not have the intuition that matching their payment with their income matters.

In a second pretest, we again asked customers to select their own repayment due date but this time we nudged them to select a repayment date that matched up with when they get paid. In 15 calls, 9 people changed their payment date, and 5 people were assigned a due date that aligned with income. This small-sample pretest provided more evidence supporting our intuition: many people may not move the date of their payment on their own.

In a third pretest, we explored assigning due dates to match pay schedules that did not correspond to specific dates. We designed a form that would give customers the option to easily make recurring loan payments that were better timed with their income. We texted new customers a form during the customer onboarding call. In 37 calls, we found that 5 people (13.5%) signed up for recurring payments using the form, compared to Beneficial State's typical recurring payment sign-up rate of less than 4%.

Results

Our experiment will roll out another iteration of the form offered to people during third pretest. In the experiment, we will test how allowing people to time automatic payments with their payday changes their repayment behavior. The experiment is still under design, and we expect results in 2019.

The Form Texted to New Loan Recipients

beneficial state bank — **Recurring Payments**

Name ____________

Phone Num. ____________

Car Make ____________

Car Model ____________

Set up automatic payments that match when you get paid!

Monthly Car Payment ____

Times You Get Paid per Month ____

Amount per Payment (A÷B) ____

Paid when paychecks enter your account

1. THE SAME DAY OF THE WEEK

- [ ] Weekly on ____________
- [ ] Bi-Weekly on ____________
- [ ] Monthly on the ___ ____________

OR

2. ON SPECIFIC DATES

- [ ] 1x Monthly on the ____
- [ ] 2x Monthly on the ____ and ____

- [ ] I completed a welcome call & changed my monthly due date to match when I get paid.

Getting the word out

> “
>
> ***In 2018, we authored 10 bylines and were featured as expert contributors in an additional 30 articles.***

A core part of our mission is to disseminate our research and to share our behavioral science expertise broadly. We hope that through these activities we are able to amplify the impact we have by encouraging practitioners to adopt and apply our insights to their own work.

To accomplish this goal in 2018, we:

- » Hosted two workshops, gathering 77 industry experts from 35 financial organizations, including fin-tech companies, credit unions and nonprofits.
- » Published 10 bylines, which included articles synthesizing findings from our research, offering expert takes on emerging findings from behavioral science and trends in behavioral science. We also offered contributions to an additional 30 articles. In addition to our bylines and contributions, last year’s annual report garnered coverage from 5 different outlets, bringing our total media to 45 press activities.
- » Spoke at 29 high-impact conferences and events, reaching roughly 2000 practitioners. These events included running full-day and half-day workshops, speaking with specialized audiences, sharing our findings with industry expert audiences, and presenting at academic platforms.

As in years past, we held two conferences again this year. Together, these conferences reached 35 organizations and 77 practitioners.

Our first conference was the Behavioral Design Immersion Conference held in San Francisco, California on April 20-22, 2018. This conference was geared towards fin-tech companies across the United States. The second conference was held in Durham, North Carolina on September 10-12th..

Each company was instructed to send up to 4 representatives that are key decision-makers and have the capacity to enact change in their organizations. As in years past, the workshops focused on how we can use behavioral science to design solutions to challenges the organizations face. The first day of the conference was focused on learning, with interactive sessions around behavioral economics findings that impact financial behavior. The second day was spent guiding attendees through a process of applying behavioral economics principles to their products and services

Press and Content

Bylines		Date
The Impact of Inconsistency: Uncovering the Hidden Cost of Variable Work Schedules	Next Billion	10/30/2018
Six Simple Steps to a Solid Money Foundation	MoneyTips	8/10/2018
Payday Startups Are Increase Access to Wages, but is “Make Anyday Payday the Right Choice?	TechCrunch	9/3/2018
Seven Ways Behavioral Science Can Improve Customer Financial Health	CFO Tech Outlook	8/2018
Moving On Up	Scientific American	7/20/2018

Bylines		Date
Rethinking America's College Savings Programs	Standford Social Innovation Review	7/10/2018
HR Can Transform Employee Financial Wellness	HR Daily Advisor (2 of 2)	6/20/2018
HR Teams Power Transform America's Financial Health	HR Daily Advisor (1 of 2)	6/19/2018
Savings Accounts Need an Overhaul	American Banker	5/25/2018
Hourly Employees Need Reliable Schedules. Can Behavioral Science Help Companies Deliver?	Behavioral Scientist	3/5/2018

Press

For most people, higher yields don't inspire more saving — here's what could do the trick	Bankrate	11/29/2018
How to keep automated savings from resulting in an overdraft fee	Bankrate	11/23/2018
We're Closer to Getting Universal Savings Accounts, But They May Not Boost the Low Savings Rate	American Banker	10/30/2018
The End of the Two-Week Pay Cycle: How Every Day Can Be Payday	Marketwatch	10/29/2018
Six Simple Steps to a Solid Financial Foundation (infographic)	Journal Gazette and Times Courier	9/11/2018
Budgeting Basics: How to Save on Inconsistent Income	**Mint.com**	8/29/2018
How Fintech Is Changing Financial Services for Gig Economy Workers	**Bankrate**	8/15/2018
Plan to Work Two Years Longer Than You Thought Survey Suggests	**USA Today**	7/25/2018

Press

How Retirement Preparedness Varies by Profession	Think Advisor	7/03/2018
The Latest	American Banker	6/12/2018
Behavioral Nudges Timed to Certain Days are Effective Motivators	UCLA Anderson Review	6/6/2018
SoFi and Robinhood: How to Save Money	Buisness Insider	5/28/2018
The 5 Big Things I Learned After Leaving Money Magazine	Forbes	5/15/2018
Think Twice The Next Time you ChitChat	MyWebTimes	4/19/2018
How Do you Plan to Spend Your Tax Return This Year?	News 4 San Antonio	4/13/2018
Diapers to Diplomas	Tribune-Review	4/12/2018
Awkward Small Talk Banned at Parties	Buisness Insider	4/12/2018
Fix Your Finances By Comparing Your Spending Levels with Others	Bankrate	4/10/2018
Low Income Families are Getting Terrible Financial Advice Online	Marketwatch	4/4/2018
Save Money Using These Behavioral Finance Tricks	LifeHacker	3/15/2018
4 Easy Ways to Put More Money in Your Pocket	Forbes	3/14/2018
4 Easy Ways to Put More Money in Your Pocket	NextAvenue	3/14/2018

Press

How to Successfully Remove Barriers to Entry From Your User Experience	Alley Watch	3/14/2018
Behavioral Economists Have Calculated the Best Ways to Pay off Your Debts	Marketwatch	3/12/2018
Lotto Tickets are Nice Boss, But Can I have My Bonus?	New York Times	3/11/2018
Common Cents Report: Hacking Human Behavior Improves Financial Health	NextBillion	3/8/2018
Save Your Spare Change with These Apps	Bankrate	3/8/2018
4 Good Ways to Put Tax Refund to Work	Nerdwallet	3/5
Common Cents Releases Annual Report	Bankless Times	3/1/2018
This One Tax Move Could Make You $51,000 Richer	Money Magazine	3/1/2018
When a Tax Refund is a Lifeline, Not a Windfall	Associated Press (New York Daily News)	2/27/2018
From Restaurant Meals to Late Fees - Which Expense Is Your Biggest Waste of Money	Marketwatch	2/09/2018

Endnotes

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