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.

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.

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.

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:

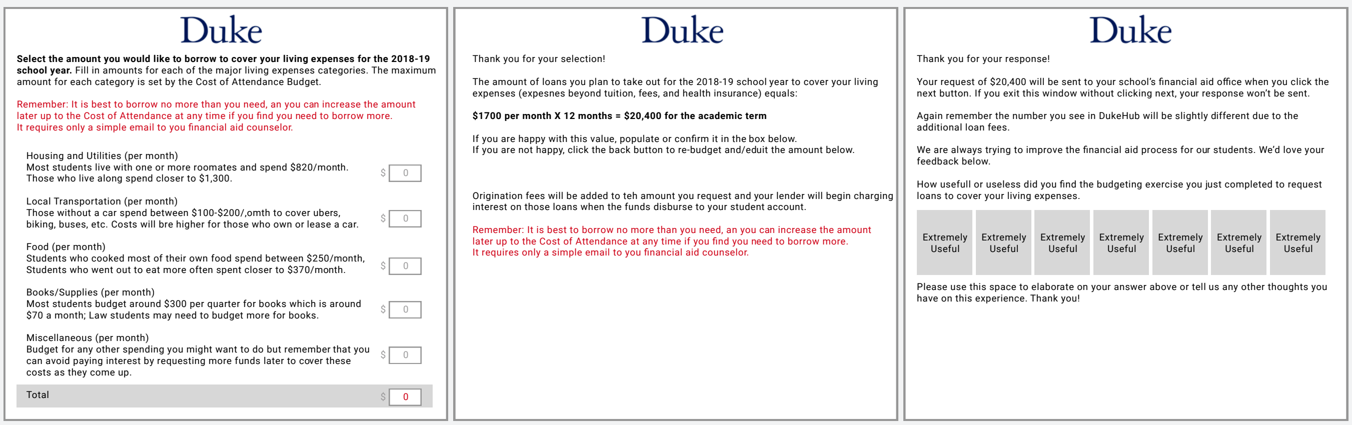
- Duke's PeopleSoft user interface made accepting all loans look like the default behavior to most students, and the fact that students could reduce the loans in their offer was not clear.
- Loans for the full Cost of Attendance (living expenses plus fixed costs like tuition) are all awarded together, 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 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.

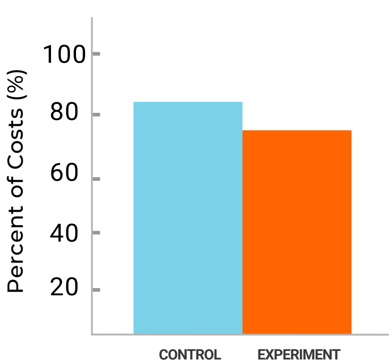
How usefull or useless did you find the budgeting exercise you just completed to request loans to cover your living expenses.

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:

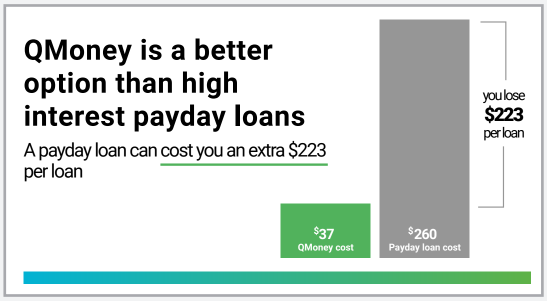
- Members might not consider going to their financial institution as an alternative to a payday lender. People categorize financial products and services to match their financial needs. Once people organize their financial lives, breaking through the status quo can be difficult.
- Members do not accurately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

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:

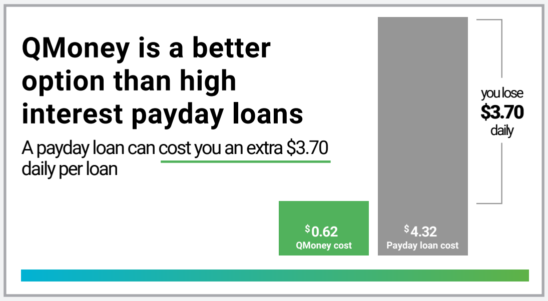
Condition 1. Lump Sum

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.



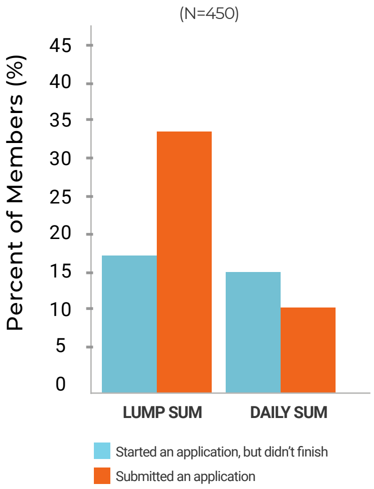
Results

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

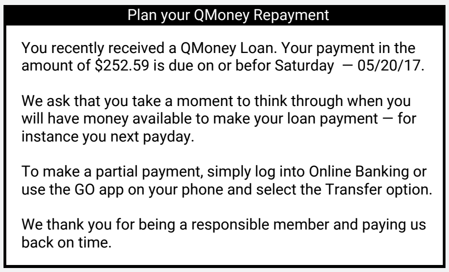
A lot of work has been put in to understand how we might encourage more people to successfully repay their debt. When we began to think about intervening to encourage higher repayment on QMoney loans, there were two findings that we felt were particularly relevant in this case.

- 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.

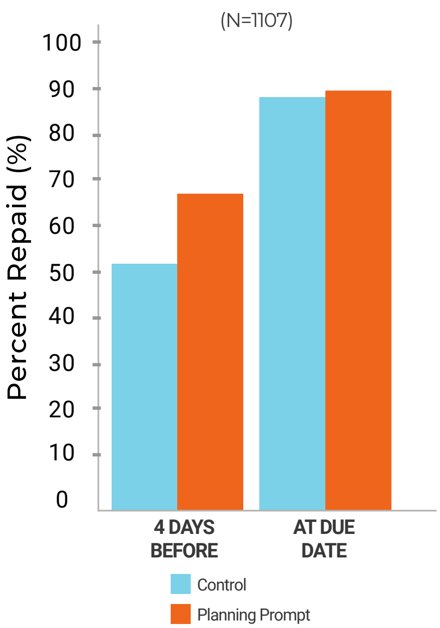
- **A control condition** where member received payment reminders 3 days before the 1st and 2nd month payment due date as they would normally would.
- **A planning prompt condition** that included an additional email a few days after the loan was taken out prompting members to plan their payment in advance

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.

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.

Repayment Rates By Group



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

earnup

"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.

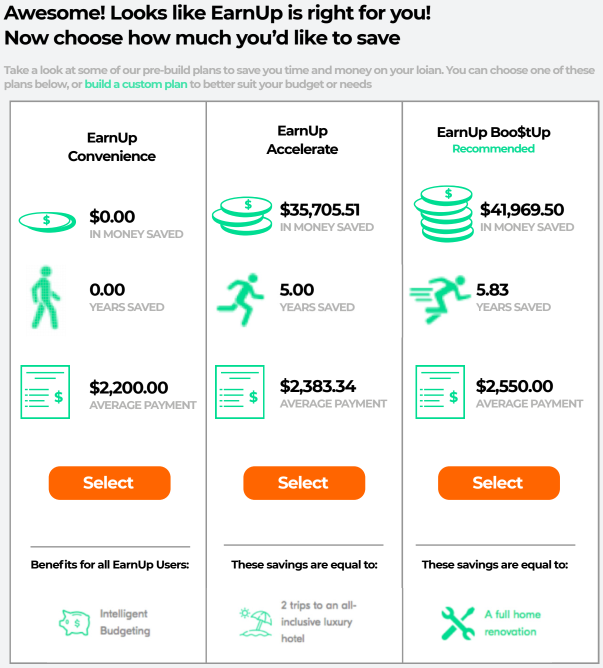
Experiment

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.

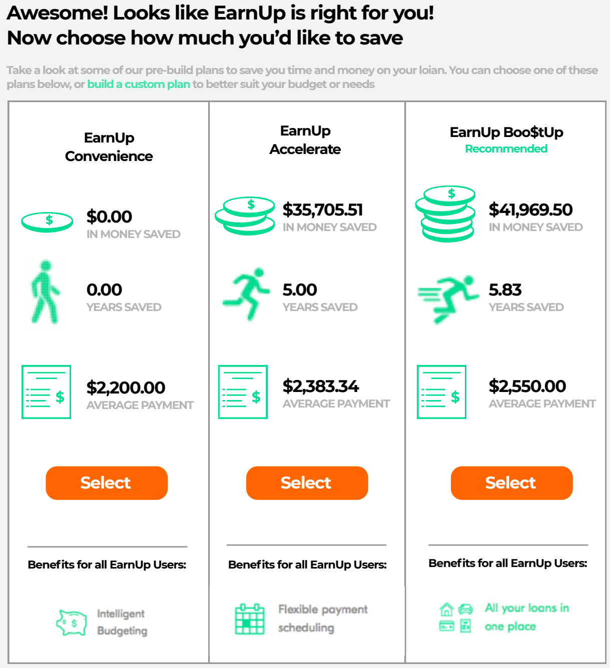
Users were presented different payment plan options. In "Accelerate", users were prompted to overpay by one additional payment per year, spread over 12- months. In BoostUp, users were prompted to overpay by the same one additional payment, plus an additional 5%. That total was then rounded to the closest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

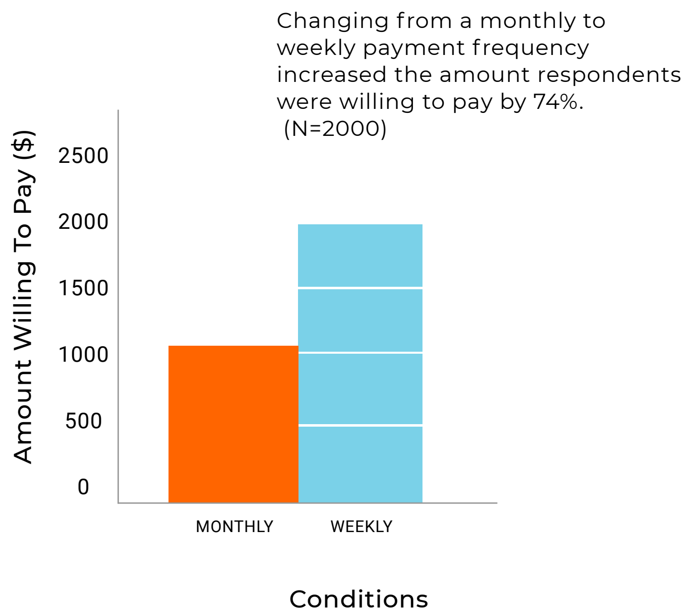
Condition 2. Monthly Payment	Condition 2. Weekly Payment
Respondents were asked: **"If you were going to make just one payment for the month, how much would you choose to pay?"**	**Respondents were asked:** **"If the company allowed you to make your payment in 4 equal weekly installments, how much would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

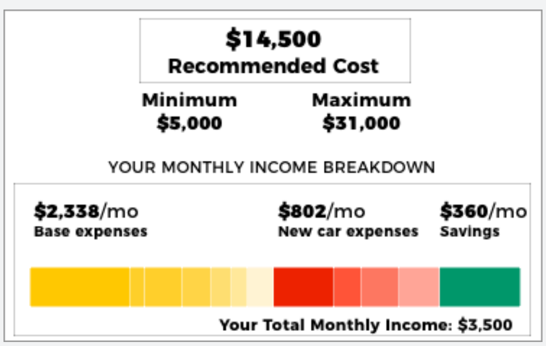
» Car buyers rarely – if ever – consider the full cost of owning a vehicle when deciding how much they should spend on a car. While buyers base their decision on upfront costs and the car payment, they forget to account for other ongoing costs like insurance, repairs and maintenance, and gas. This true 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.

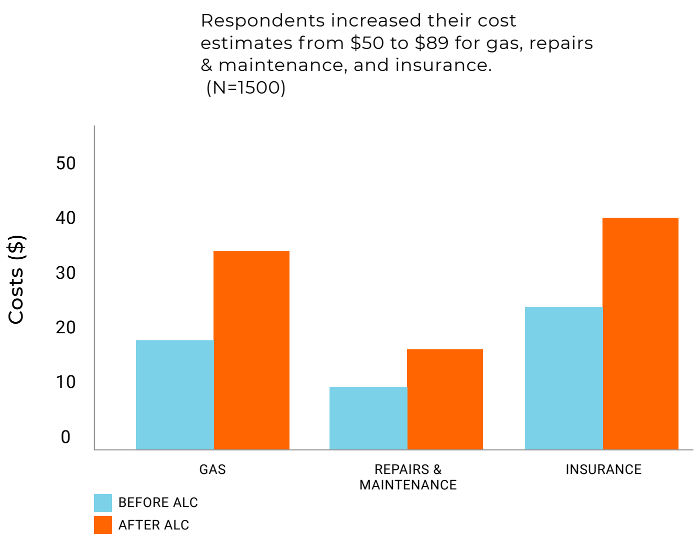
Results

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.

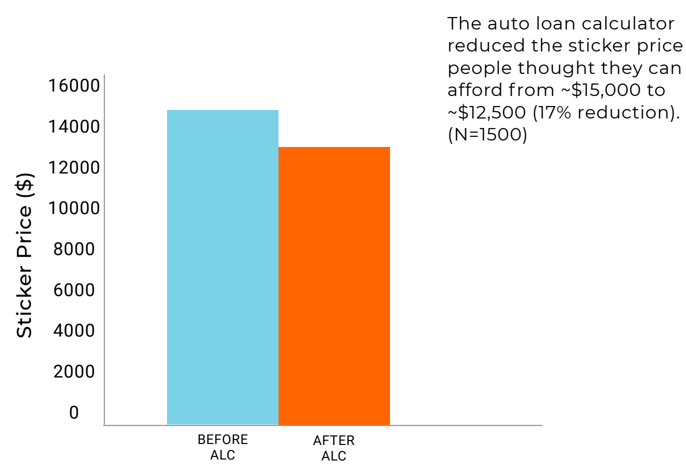
Using the auto loan calculator led respondents to increase their cost estimates from $50 to $89, which included increases in the cost of gas, repairs and maintenance, and insurance. In total, the auto loan calculator also reduced estimates on sticker price people thought they can afford from ~$15,000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



Total Sticker Price that Users Say is Affordable



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.

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.

» 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. his small-sample pretest supported our intuition that when provided with a rationale of why moving their loan due date could be beneficial to repayment, people were happy to.

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.

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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