# Reducing the Savings Gap

Adding information architecture to
the behavioral economics toolkit

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Savings gaps are a longstanding societal problem, with gaps persisting across many demographic factors, including income, race and gender. In recent decades, policymakers and financial institutions have sought ways to narrow these savings gaps, and ensure that all workers have the opportunity to save and invest in their future.

To address these savings gaps, prior work has employed various choice architecture tools. For example, auto-enrolling employees into a retirement plan raised participation rates from approximately 37% to 86%. Auto-enrollment also dramatically reduced participation gaps between men and women and various ethnic groups.[1] In addition, auto-escalation features have helped millions of workers steadily raise their savings rates.

Reducing savings gaps through choice architecture and auto-enrollment
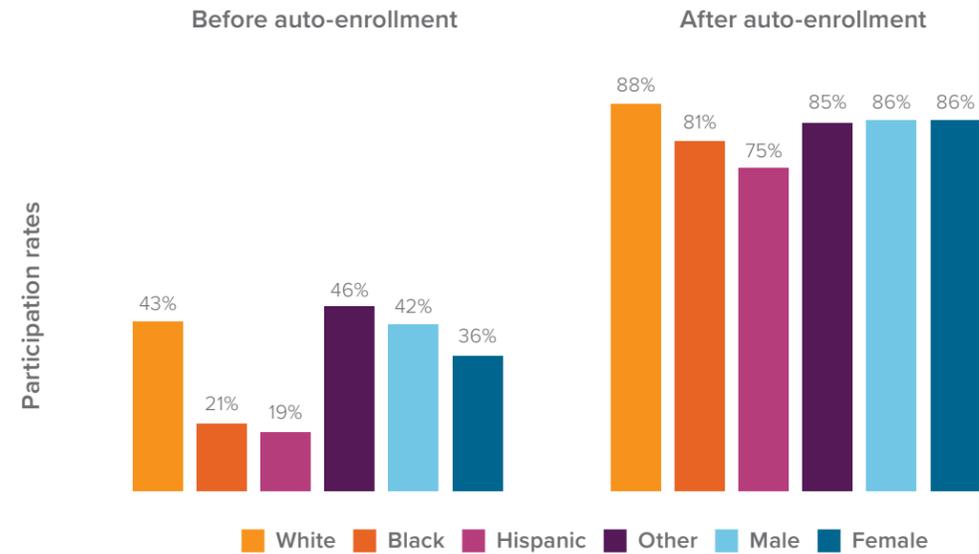
While auto-enrollment and auto-escalation are generally the best way to reduce savings gaps, they are not feasible for all plans.[2] For instance, many public-sector plans are prohibited from using auto-enrollment.

This means we need to expand our toolkit to make continued progress in reducing these savings gaps. To address opt-in plans, it's helpful to consider another category of behavioral tools: information architecture, or the framing and design of relevant information.

How can information architecture reduce these savings gaps? Let's start with the problem with the current information architecture used when workers are choosing a savings rate, which is to describe the rate in percentage terms. Unfortunately, research suggests that a large number of people are not able to properly calculate percentages. In one study of numeracy among educated subjects, less than 25% got the following question right: "In the ACME publishing sweepstakes, the chance of winning a car is 1 in 1,000. What percent of tickets win a car?"[3] (The correct answer is 0.1%.)

To reduce the impact of innumeracy, and help all workers better understand the benefits of saving for retirement, Steve Shu, Hal Hershfield, Richard Mason and Shlomo Benartzi tested a novel intervention.[4, 5] Instead of featuring the savings rate as a percentage, they described it in terms of pennies per dollar earned. For example, a 7% savings rate would be expressed as saving "7 pennies" for every dollar earned.

The field study included 2,255 eligible workers in opt-in retirement savings plans across dozens of organizations. The workers were randomly assigned to two different conditions. In the percentage condition, they were shown the typical retirement screen, in which savings is framed as a percentage of salary. In the pennies condition, savings was framed in terms of a specific number of pennies for every dollar earned.
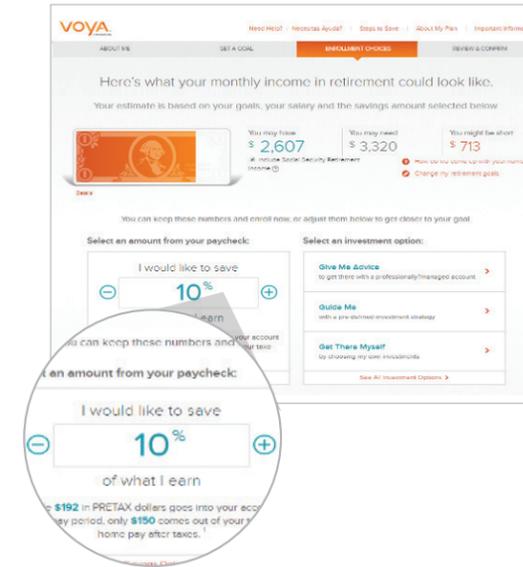
Percent condition   Pennies condition
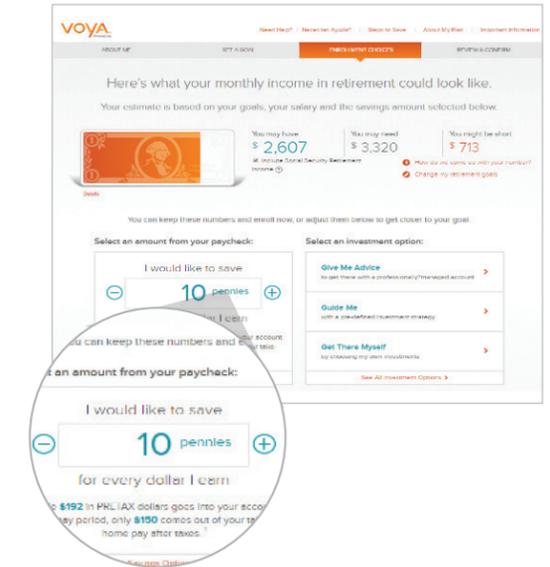
This change in information architecture had a significant impact on savings behavior. Most notably, it dramatically reduced the income savings gap, as those workers in the lowest income group (with an average income of $32,000) boosted their savings rate by 115 basis points. In the percent condition, low-income workers had an average savings rate of 6.88%; in the pennies condition, workers had an average savings rate of 8.03 percent. To put this in perspective, this savings rate is nearly as high as the savings rate of participants in the highest income group, who saved 8.5% of their salary. (These higher income workers had a mean salary of $115,000.)

Pennies framing: income and savings rates

[1] Madrian, Brigitte C., and Dennis F. Shea. "The power of suggestion: Inertia in 401 (k) participation and savings behavior." The Quarterly Journal of Economics 116.4 (2001): 1149-1187.
[2] Thaler, Richard H., and Shlomo Benartzi. "Save more tomorrow™: Using behavioral economics to increase employee saving." Journal of Political Economy 112.S1 (2004): S164-S187.
  Benartzi, Shlomo, and Richard H. Thaler. "Behavioral economics and the retirement savings crisis." Science 339.6124 (2013): 1152-1153.
[3] Lipkus, Isaac M., Greg Samsa, and Barbara K. Rimer. "General performance on a numeracy scale among highly educated samples." Medical decision making 21.1 (2001): 37-44.
[4] Shlomo Benartzi is grateful to George Fraser, a plan advisor, for suggesting the idea and inspiring this research.
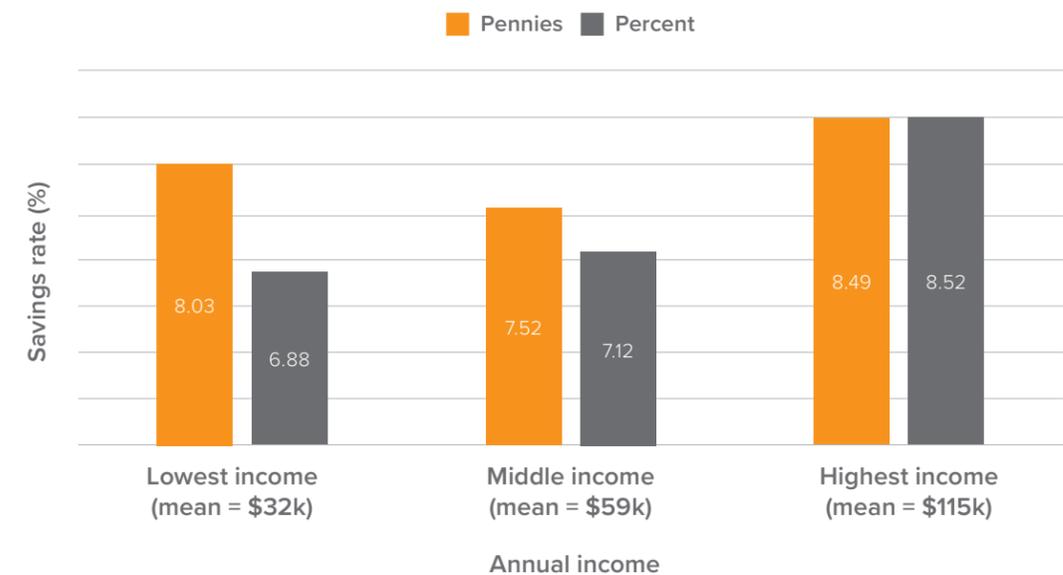[5] Shu, Stephen, Hal Hershfield, Richard Mason, and Shlomo Benartzi. "Reducing savings gaps through pennies versus percent framing." SSRN Working Paper (2022)

Further analysis reveals that workers with less than $50,000 in annual salary are the ones most helped by pennies reframing. By making savings rates more salient and understandable, the new information architecture was able to reduce longstanding gaps between the haves and have nots, and help workers take steps to enhance their future financial security. While this savings increase caused by pennies framing might seem modest, if implemented over the entire accumulation phase it would represent a boost of close to 20 percent in retirement income for those in the lowest income bracket.

This intervention provides another important tool that policy makers, retirement plans and companies can use to help close savings gaps. Previous research has shown that temporal reframing can also eliminate the savings gap among gig economy workers, who don't have access to an employer sponsored plan. In this study, workers were asked if they wanted to save $150 a month or $5 a day. Because the $5 a day condition felt less intimidating, it quadrupled the enrollment of low-income workers, and eliminated the income gap in participation in the recurring deposit program.[6]

Taken together, this research demonstrates the potential of behavioral research to democratize savings, identifying scalable digital interventions that can ensure all workers are given the opportunity to achieve financial security.

Takeaways:

1. If possible, plans should consider re-enrolling all employes periodically, as it will have the largest impact on savings gaps and retirement outcomes.[7]

2. If auto-features and re-enrollment aren't possible, retirement plans should consider the use of pennies framing, especially for disadvantaged groups.

3. This research focused on information architecture and retirement savings, but employers and their advisors and consultants should consider penny framing for other savings accounts, such as emergency savings, health savings accounts, and employee benefits.

    a. For instance, an emergency fund could be built through a combination of pennies framing and gradual escalation. Workers could be asked to save one penny out of every dollar earned for emergencies this year, two pennies next year and so on, until they have a viable reserve fund.

    b. Another approach could make it easy for workers to save a dime for every dollar they earn, with an automatic allocation of those funds to various accounts based on a personalization algorith. For instance, they could ask a participant to allocate six pennies for retirement, two pennies for emergencies, and two more pennies for health savings.

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