

## Does Understanding the Relationship Between Retirement Contributions and Future Monthly Income Encourage Savings?

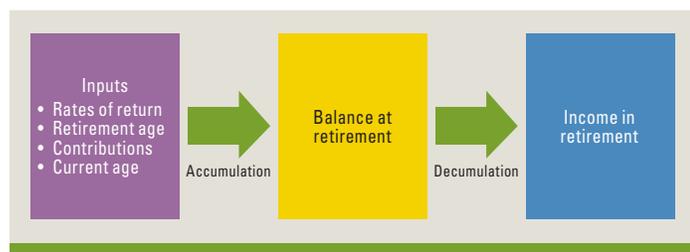
**W**orking Americans must decide whether and how much to contribute to a defined contribution (DC) retirement plan, such as a 401(k) or an Individual Retirement Account, to furnish income in retirement.

Understanding the relationship between chosen saving levels during work years and target retirement income is challenging, requiring that one understand complex relationships among many factors, including contribution rates, investment returns, and retirement age (Figure 1).

Concerns about Americans' ability to accurately gauge the savings needed to fund desired retirement

income has prompted the U.S. Congress to consider the Lifetime Income Disclosure Act. This bill would require DC plan administrators to provide plan participants with quarterly projections of expected income streams during retirement based on individuals' current assets and contribution rates. Yet the effects of this kind of projection have not been studied. Would such projections help Americans adjust their savings to better achieve their retirement-income goals? Or, would the projections be ignored either because they are already understood or are too complex to be understood? Finally, how will the assumptions used in the projections affect Americans' saving behavior? A new study from the Financial Literacy Center addresses these questions.

**Figure 1. Relationship Between Saving and Income in Retirement**



### Study Approach: Experimental Design

To address the study questions, the team conducted a large-scale field experiment involving employees at the University of Minnesota. The sample consisted of 16,881 employees across five University of Minnesota campuses who were employed in October 2010 and May 2011. For

the study, the team used administrative data from employees eligible to participate in two employer-sponsored voluntary DC plans, to which employees can make tax-deferred contributions in addition to their mandatory saving plans if they desire. Some of the employees in the study were already participants in the DC plans, but some were not. The experiment tested how different levels of information about retirement savings and post-retirement income would affect employees' decisions on (1) whether to participate in the employer-sponsored DC plans and (2) how much to contribute.

To test these effects, the employees were randomly assigned to either a control or a treatment group. The treatment group was sent an informational intervention, but nothing was sent to the control group. The intervention contained a customized projection of the additional account balance and retirement income that would be achieved from different hypothetical additional contribution levels; these projections were customized based on the employee's current age. Figure 2 displays a sample.

To illuminate how the intervention's effects might differ depending on the projection assumptions used, the researchers randomized the assumptions used across individuals. The assumed investment return was either 3 percent, 5 percent, or 7 percent. Two retirement ages were assumed: 65 or 67. The set of hypothetical additional contributions used was either { \$0, \$50, \$100, \$250 } or { \$0, \$100, \$200, \$500 } per pay period. The informa-

tional intervention also prompted individuals to think about their retirement goals and provided a step-by-step guide explaining how to either enroll in the DC plan for the first time or change one's current contribution level.

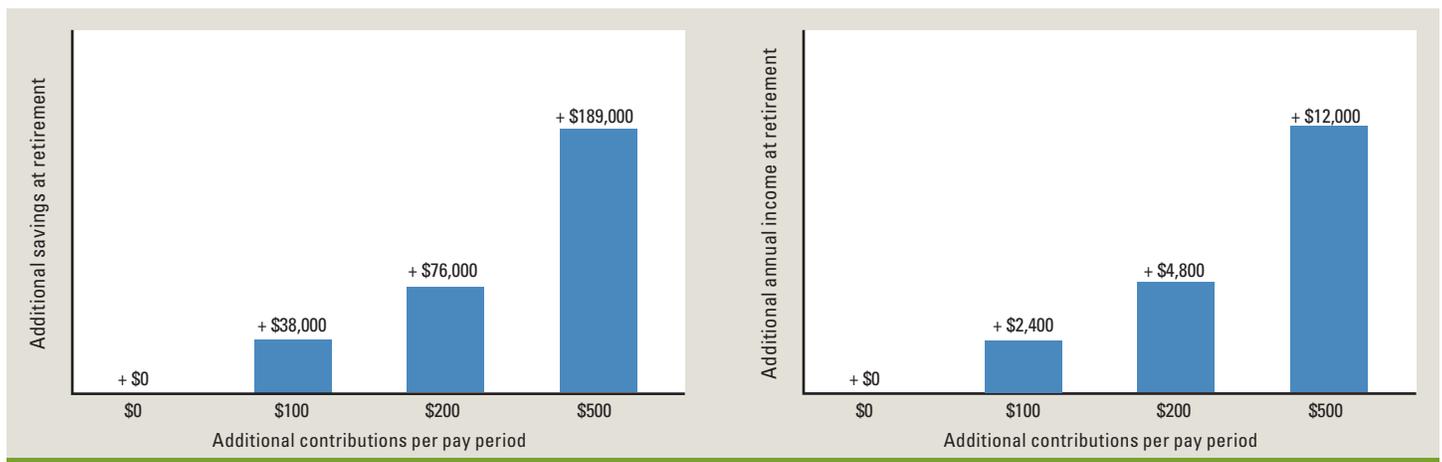
## Findings

### Providing Projection Treatment Leads Individuals to Change Their Participation Status and Their Contribution Amounts

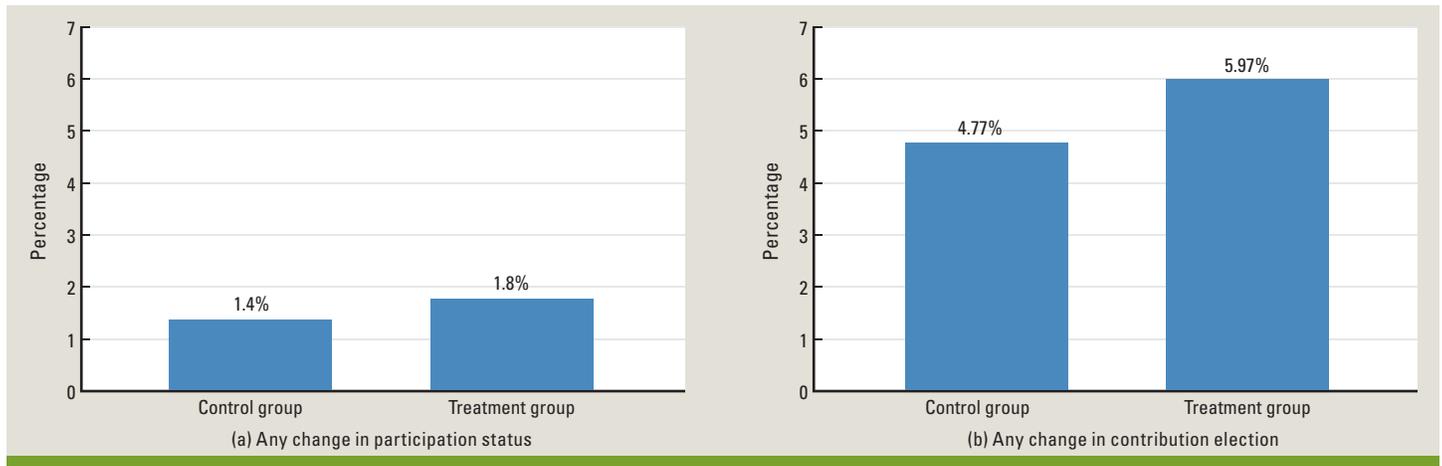
Using employer administrative data, the researchers measured how the intervention affected changes in employer-sponsored DC plan participation as well as changes in contribution levels. Figure 3 shows the percentage of employees in the control and treatment groups who changed their participation status or their contribution election, adjusting for differences in gender, age, salary, tenure, faculty status, and campus location across the two groups.

*The informational intervention had effects on saving behavior.* 1.8 percent of people in the treatment group changed their participation status compared to 1.4 percent of people in the control group, a 29 percent difference. Conditional on participating in a plan, 6 percent of people in the treatment group made a change in the amount they contributed compared to 4.8 percent of people in the control group, a 25 percent difference.

Figure 2. Projections for an Individual in the Treatment Group



**Figure 3. Changes in Participation Status and Contribution Election Across Treatment Groups**



**Providing Income Disclosures Induces People to Increase Their Savings**

Figure 4 depicts the average changes in contribution amounts for the two groups, both as a change in the annual dollar amount contributed and a change in the percentage of salary contributed, adjusting for differences in gender, age, salary, tenure, faculty status, and campus location across the two groups.

*Individuals in the treatment group were significantly more likely to increase their annual contributions and their rate of contribution than were individuals in the control group.* The treatment group increased contributions by an average of about \$68 per year more than the control group

did, or by an additional 0.17 percent of salary. However, about 95 percent of individuals made no change over the six-month study period. Among those who made any change, those in the treatment group increased savings by about \$806 per year more than those in the control group.

**What Part of the Intervention Led to Higher Saving?**

To generate insight into which components of the treatment generated these effects, the researchers randomly assigned other employees into two separate partial-treatment groups in addition to the groups described thus far. The differences between these groups are highlighted in

**Figure 4. Change in Contribution Levels Across Treatment Groups**

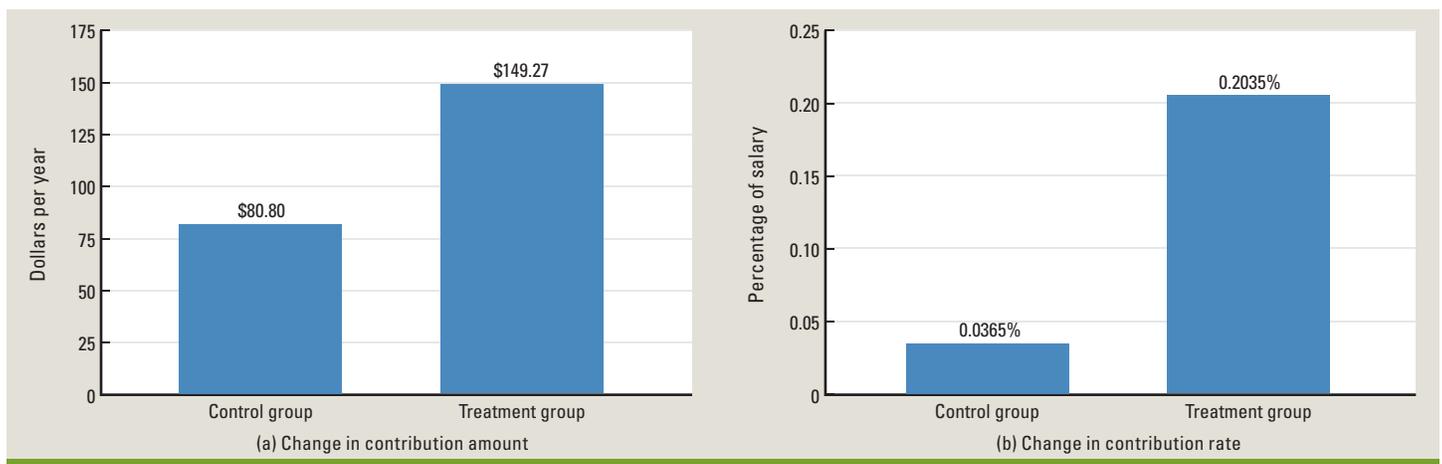


Table 1. Those in a *planning* treatment group were sent all the same general information on setting retirement goals and how to change one's current contribution level, but all personalized retirement balance or income information was omitted. Those in a *balance* treatment group were sent these same materials plus a projection of account balance at retirement (Figure 2, left panel), but the retirement income projection (Figure 2, right panel) was omitted. (The income group is the full treatment group described above.)

Individuals sent the partial or full treatments were more likely than those in the control group to make a change in their contribution election, suggesting the influence of more information on participation decisions. However, the planning group showed no evidence of a systematic increase in their level of savings and, although the balance group experienced a statistically significant increase, it was less than that experienced by the full treatment group. This suggests that access to annual retirement income was a critical factor driving changes in saving behavior.

### Response to Retirement Information Was Sensitive to the Assumptions Used in Projections

Although the goal of the policy is to improve participants' understanding of the accumulation and decumulation functions and not to influence their beliefs about rates of return or retirement age, all projections require

assumptions. Because assumptions about retirement age and the rate of investment return affect the magnitude of projected values, these assumptions could affect people's choices. In addition, the hypothetical contribution amounts used to illustrate the projections may anchor and affect the behavior of individuals.

For example, among those who received projections (the balance and income groups), people saved more when projected values were larger because of higher rates of return, later retirement age, or larger hypothetical contributions. For instance, presenting individuals with hypothetical contributions of { $\$0$ ,  $\$100$ ,  $\$200$ ,  $\$500$ } per pay period rather than { $\$0$ ,  $\$50$ ,  $\$100$ ,  $\$250$ } per pay period increased annual contributions by  $\$96$ , or  $\$1,008$  among changers.

### Several Characteristics Reduced These Effects

The team also conducted a follow-up survey with participants approximately four months after the intervention. The survey was designed to identify factors that might have influenced the intervention effects and to investigate the intervention's effect on other aspects of the saving process. The survey's response rate was 22 percent, so some caution is warranted as results among respondents could differ systematically from those that would be obtained from the entire sample. Among respondents, the follow-up survey results showed that three factors mitigated the effects of the income intervention: (1) a preference for valuing the present over the future, (2) a tendency to procrastinate, and (3) liquidity constraints. Individuals in the treatment group who expressed these attitudes were less likely to increase their contribution rates and totals.

### Those Sent Information on Retirement Income Reported Greater Engagement in the Saving Process

The survey also showed that participants in the treatment group reported increased levels of engagement in the saving process: They reported less difficulty finding information regarding retirement planning, felt better informed about retirement planning, and were more likely to have recently figured out how much to save. They were also more certain about their expected retirement income and rated themselves higher in overall financial satisfaction than those in the other groups.

**Table 1. Treatment Groups and Interventions**

Treatment Group	Intervention
Control group	None
Planning group	Received general information on saving for retirement, steps to sign up for or change contribution
Balance group	Received the same intervention as planning group, plus a customized projection that shows how hypothetical individual contributions would translate into <i>additional savings at retirement</i>
Income group	Received the same intervention as balance group plus a customized projection of the <i>additional annual retirement income</i> to be expected from additional contributions

## Conclusion

The shift toward DC retirement plans has increased the responsibility that individuals bear for their own retirement security and heightened their need to understand more clearly how retirement savings relate to income during retirement. This study's results suggest that people have difficulty understanding this relationship. When they are provided with more detailed projections about retirement income, participants on average increase their savings.

The study provides proof of concept for a policy that requires no additional mandate on individuals or subsidy for savings. Providing retirement income projections—an extremely low-cost intervention—can actually affect individuals' saving behavior. However, the effects were found in only a small share of the sample and were not large on average. Among those who made changes, effects were substantial, suggesting that similar policies may help individuals move closer to their retirement goals. But this policy is not going to lead to a revolution in savings.

The study also poses a challenge by demonstrating the sensitivity of saving behavior to projection assumptions. The concern is that individuals may be susceptible to any overly optimistic assumptions or perceived promises implied by projections and induced to oversave or, analogously, to undersave if projections are too pessimistic. The finding also suggests that simple projections based on a few sets of assumptions should be supplemented by acces-

sible tools that give people a greater chance to explore how outcomes depend on savings choices under a wide range of assumptions and uncertainty.

The study offers the first direct evidence of the potential value of the kind of intervention recently proposed by Congress. However, the intervention that was tested differs from the current congressional proposal in several ways:

- It was a one-time mailing sent via an employee's work mail, whereas the proposed initiative would likely include information in a quarterly statement sent to one's home address.
- In contrast to the proposed policy, which would require that projections be sent only to those with active DC accounts, this intervention was also sent to individuals not currently contributing.
- The researchers did not have access to current account balances and therefore could not provide total projected retirement income.
- The sample of employees at the University of Minnesota is more highly educated, more financially literate, and more engaged in higher levels of mandatory retirement saving than Americans generally.

Although there is room for debate, there are reasons to think that each of these factors might lead these study results to understate the true effects of the policy in the national population. ●