

# Retirement Savings Laboratory



## SMS to increase voluntary retirement savings in low-income populations

### WHAT IS IT?

Although workers in Colombia are required to contribute to the social security system, in 2018, 35% of employees of private firms and 67% of self-employed workers did not contribute to their pension. This is partly because 44% of Colombians have incomes below the minimum wage, and the minimum contribution to the system would represent a very high percentage of their income. For these workers, the Colombian government created the *Beneficios Económicos Periódicos* (BEPS) program, a voluntary old-age savings mechanism that is adapted to the irregular and low incomes that informal workers tend to have.

However, saving voluntarily for old age in BEPS is not easy. Account holders face multiple barriers, including psychological biases such as limited attention or in-

action in the face of complex problems. Tools to overcome these barriers have been tried in other contexts. For example, reminders via SMS or email can minimize the role of limited attention. It has also been shown that suggesting savings goals can help people solve the problem of how much they should save, resulting in action.

With the dual purpose of motivating BEPS affiliates who were not saving before the experiment (inactive) to start saving, and those who were saving (active) to save more, an SMS reminder strategy with behavioral components was proposed to encourage savings. To study the ability of SMS reminders to generate savings habits, groups that would stop receiving messages on different dates were chosen.

The messages were adjusted every five months depending on the performance of the different content.



### IMPACT

**1.** After 15 months, BEPS affiliates who were saving before the intervention saved 2.8%, 9.3% or 14.1% more than the control group depending on whether they received the SMS reminders for 5, 10, or 15 months. This translated into increments of 10.71, 17.36 and 15.87 dollars of savings obtained for every dollar invested in SMS reminders during 5, 10, or 15 months.

**2.** After 15 months, BEPS affiliates who were not saving before the intervention saved 14% or 12.4% more than the control group depending on whether they received the SMS for 10 or 15 months. This translated into 1 or 0.55 dollars of savings obtained for every dollar invested in SMS reminders during 10 or 15 months.

**3.** Getting a BEPS affiliate who was not saving to begin saving cost \$102 in personal calls, \$34 in SMS, or \$9 in interactive pre-recorded calls. This is largely due to differences in the costs of having a person make calls, sending text messages, or automatically sending prerecorded calls. A single prerecorded call was as effective as 15 months of SMS in motivating inactive affiliates to begin saving. None of these methods are cost effective.

### TITLE

SMS to increase voluntary retirement savings in low-income populations.

### TAGLINE

Text (SMS) messages increase voluntary retirement savings of low-income people who were already saving, but do not incentivize new savers. Messages that recommend savings goals have higher impact and help create a savings habit.

### FIELD OF WORK

Long-term pension savings.

### SUBTOPICS

Information.

### YEAR

2018

### AUTHORS

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### SUMMARY AUTHOR

Gustavo Caballero.

### AIM

Increase voluntary retirement savings for low-income individuals with text messages designed from a behavioral perspective.

### BEHAVIORAL TOOLS

Simple reminders, messages against behavioral barriers to long-term savings, and suggested goals.

### EXECUTING AGENCIES

Colombian Pensions Administrator, *Colpensiones* (state agency).

### TARGET POPULATION

Adults enrolled in the *Beneficios Económicos Periódicos* (BEPS) program.

### DELIVERY MECHANISM

SMS

### SAMPLE SIZE

391,758 adults enrolled in the BEPS program.

### EVALUATION DESIGN

Nimble Randomized Controlled Trial (Nimble RCT).

### FUNDING SOURCE

IDB Lab and MetLife Foundation.

### COST

SMS: US\$ 36,600



## CHALLENGE

A large proportion of Colombian workers do not regularly contribute to the pension system, especially those with volatile or very low incomes. As a response to this reality, in 2015 the Colombian government created the voluntary retirement savings program Beneficios Económicos Periódicos (BEPS). At the beginning of this intervention, in August 2017, BEPS had 808,000 people enrolled in the program, of which 214,716 (26.6%) were actively saving. Furthermore, only 19% of savers were regularly saving: they had either saved at least COP 147,500 (approx. US\$ 115 PPP) in 2017 or they had made more than six deposits over the course of the year, which were requirements to be able to access subsidized life insurance in 2018. This intervention studies how to create a habit of saving through SMS reminders. It was carried out with support from the Colombian Pensions Administrator (Colpensiones),

in collaboration with the Inter-American Development Bank (IDB), and Innovations for Poverty Action (IPA).

There are many factors that explain limited long-term voluntary savings. On the one hand, many people prefer to not save due to incompatibilities between their productive activities and the design of the pension system (approximately 50% of Colombian workers' income is less than one minimum wage, which is the floor to contribute to the pension system). On the other hand, there are psychological biases that can be highlighted, which range from overconfidence in the ability to continue working in old age or to generate income in other ways, to inaction when facing the uncertainty of aging, and therefore postponing the decision to save. Another important psychological bias is a limited attention span, which makes people tend to focus on more immediate matters.

## INTERVENTION DESIGN

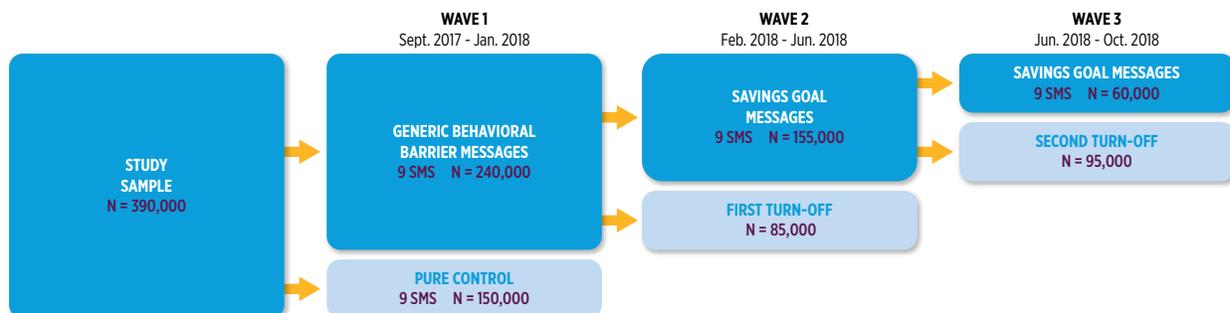
In September 2017, approximately 390,000 eligible BEPS account holders were assigned to receive an SMS message every other week for a period of 9, 18, or 27 weeks (labeled as 5, 10, or 15 months). As this was a Nimble Randomized Controlled Trial, predetermined dates were established, during which a partial evaluation of results was carried out to adjust between waves of messages. In total, 150,000 program affiliates were assigned to the control group, 60,000 were assigned to receive SMS messages for 15 months, 95,000 for 10 months and 85,000 for 5 months. Of those who received the text messages, a total of 82,000 were already saving, and 158,000 did not save prior to the study initiation.

During the first wave, a standard reminder was compared against messages that sought to make retirement more tangible, show how common savings were in the program (by reporting the number of people who were already saving in the program), and decrease the feeling of loss upon saving (by letting affiliates know about the short-term benefits they

received for saving in the program.) We also assessed whether there was any difference in addressing a single or multiple psychological barrier.

Since there were no significant differences between messages that addressed one or multiple barriers and simple reminders after the first wave, in the second wave, messages with suggested savings goals that were compared with simple reminders were introduced. These messages were maintained in the third wave and were found to be more effective than the simple reminder, which, however, was maintained to explore whether message content was also important in generating a savings habit. In the third wave, in addition to sending SMS messages, four types of calls were tested in order to encourage those who had not made any savings so far to save. The calls were prerecorded or live, with a fixed or interactive script. In prerecorded and interactive calls, the system allowed affiliates to move through different topics with the help of the telephone's numeric keypad.

FIGURE 1. PILOT IMPLEMENTATION SUMMARY



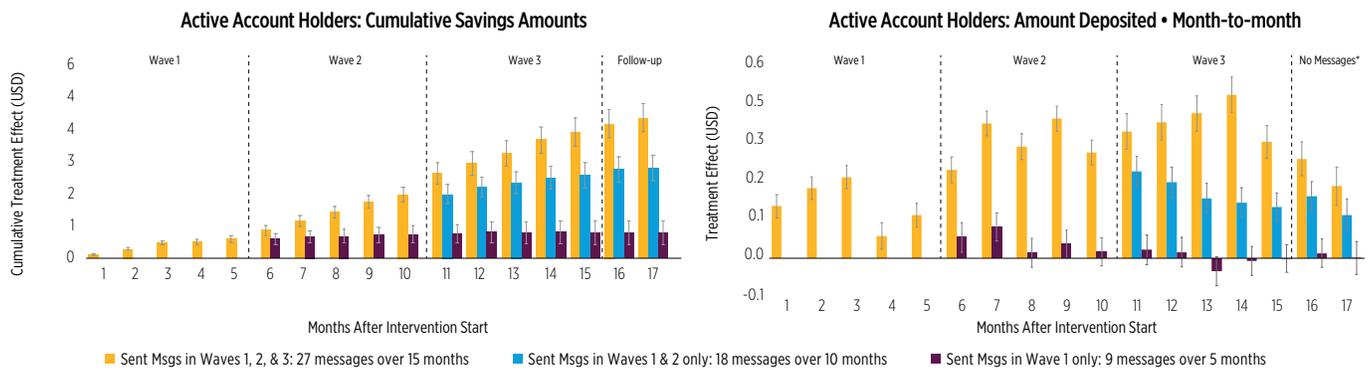


## IMPACT

The messages had a significant impact on increasing the savings of those who were already saving, especially if they received messages throughout the intervention. Figure 2, on the left, shows the aggregate average effect over time of being assigned to one of the three treatment groups. On the

right, the month-to-month effects of treatment are shown. After 15 months, affiliates who had been saving before the intervention saved 2.8%, 9.3%, or 14.1% more than the control group, depending on whether they received the SMS for 5, 10, or 15 months.

FIGURE 2. EFFECTS ON THE GROUP OF ACTIVE AFFILIATES

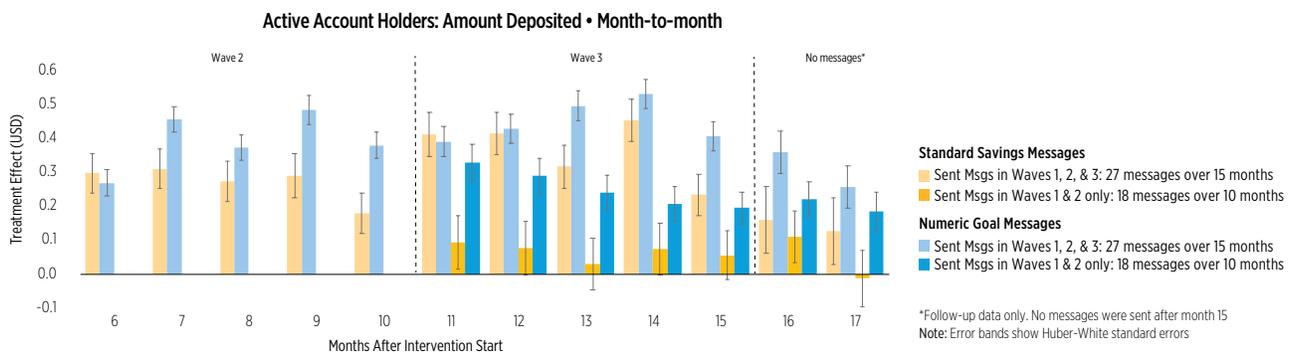


\*Follow-up data only. No messages were sent after month 15. Note: Error bands show Huber-White standard errors.

Creating a savings habit was only possible for affiliates who were given a concrete savings goal. The increase in savings in the group that received messages for 5 months was due to additional savings made only during those months, since after a couple of months without receiving messages this group does not demonstrate any differences from the control group. However, affiliates who stopped receiving SMS reminders after 10 and 15 months continued to save more than the control group after they stopped receiving

messages (thus creating a habit of saving beyond the intervention). In fact, the 10-month group continued to do so even seven months after they stopped receiving reminders. It is worth noting that affiliates who continued receiving SMS during the 15 months saved more than those who stopped receiving messages after 10 months. The observed effects translate into savings increases of 10.71, 17.36, and 15.87 dollars for each dollar invested in SMS reminders during 5, 10, or 15 months.

FIGURE 3. EFFECTS BY SMS CONTENT, GOALS VS SIMPLE REMINDERS



\*Follow-up data only. No messages were sent after month 15. Note: Error bands show Huber-White standard errors.

Figure 3 shows the differential effects, after the first five months, of messages with goals, and simple reminders. Affiliates who received simple reminders for 10 or 15 months stopped saving more than the control group two months after

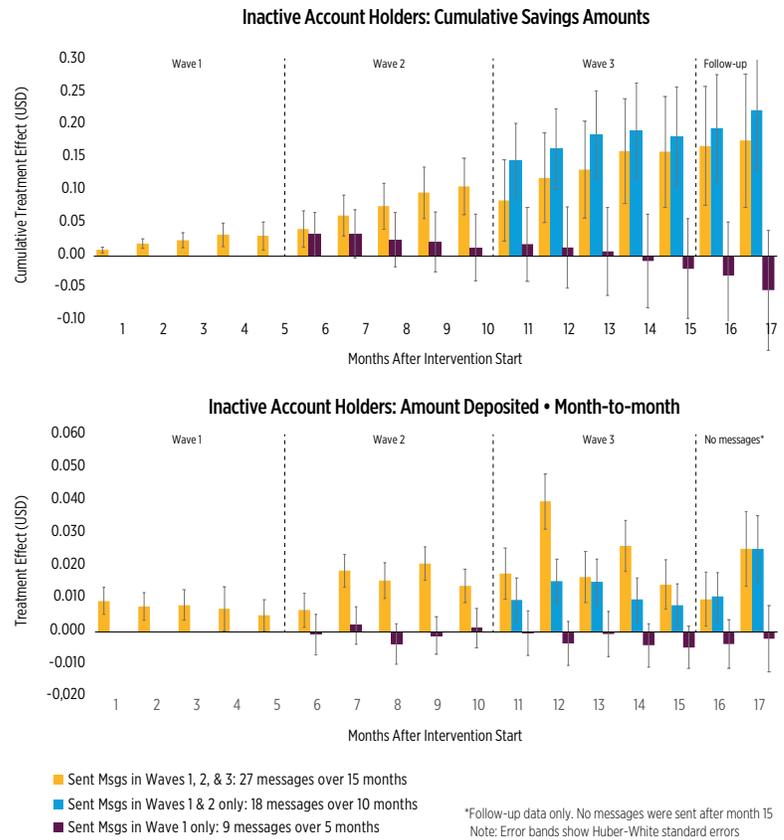
they stopped receiving the reminder. Those who received messages with suggested goals continued to save more than the control group, seven months after they stopped receiving SMS reminders.



Despite having positive effects on affiliates that did not save, this magnitude is very limited, and it is not effective. As shown in Figure 4, after 15 months, those who were not saving before the intervention saved 14% or 12.4% more than the control group depending on whether they received the SMS for 10 or 15 months. Those who received SMS for 5 months did not save more or less than the control group. This translated into 1, or 0.55 dollars of savings obtained for every dollar invested in SMS during 10 or 15 months.

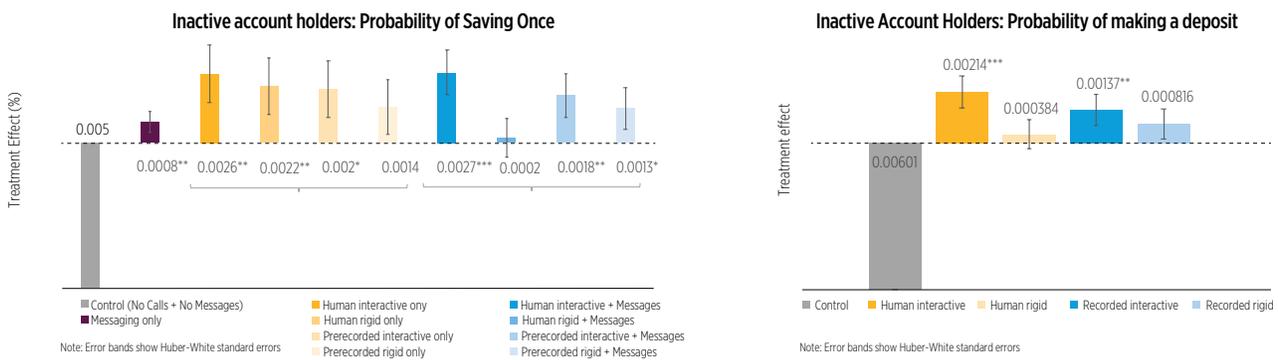
Complementary calls to affiliates who were not saving did not have a significant effect on increasing savings, but they can be much more cost effective than SMS if they are automated calls. To the left of Figure 5, the effect of calling inactive affiliates who had received messages or those who had not received messages is observed, and its effect is compared with those who only received SMS reminders. To the right of the same figure, the effect is shown according to the type of call, compared to not having received calls, even if they received SMS reminders. As shown in Figure 5, a short call campaign is almost as effective as 15 months of SMS, in terms of increasing the probability that inactive affiliates made at least one contribution. In fact, calls are more effective than 10 or 5 months of SMS. Combining calls with messages does not increase the probability of making at least one contribution more than each of the strategies independently. However, there are important

FIGURE 4. EFFECTS ON THE GROUP OF NON-SAVING (INACTIVE) AFFILIATES



cost differences, which affect the cost-effectiveness of the different strategies. Getting a non-saving affiliate to start saving costs \$102 for personal calls, \$34 for SMS, or \$9 when interactive prerecorded calls were used. This is largely due to differences in the costs of having a person make calls, sending text messages, or automatically sending prerecorded calls.

FIGURE 5. EFFECTS OF TELEPHONE CALLS AND SMS REMINDERS, INDEPENDENTLY OR COMBINED





## POLICY LESSONS

This study shows that text messages are a highly cost-effective tool to increase voluntary retirement savings among people who are already saving. The messages are not cost-effective for people who have not been saving. This experience also shows that the content of messages matters: Simple reminders have an immediate effect, but their effect quickly fades, and they do not seem to generate a savings habit, no matter how long they are received. In contrast, messages with suggested savings goals do have persistent effects, even after more than 6 months.

An important policy lesson is that pension administration institutions (in this case, *Colpensiones*) can increase beneficiaries' savings through much more active communication. Suggesting goals to affiliates who are already saving is highly effective in this context, while motivating those who do not save is expensive. This suggests that further experimentation is necessary to engage affiliates not currently saving with the act of saving.

