How Did the Reintroduction of the *Social Security Statement* Change Workers' Expectations and Plans?

by Philip Armour*

This article examines how the reintroduction of Social Security Statement *mailings from September 2014 through December 2016 affected recipients' expectations about Social Security benefits and their benefit claiming decisions. During the reintroduction period,* Statements *were mailed to workers reaching multiple-of-5 ages, enabling a comparison of results for 2016 recipients, 2014/2015 recipients, and reintroduction-period nonrecipients. I fielded a specialized American Life Panel (ALP) survey to elicit recall of and reactions to receiving the* Statement *and used earlier ALP modules to control for respondents' prior Social Security knowledge. I find that recipients remember and value the information provided in the* Statement, *although the effects quickly diminish after receipt. Recipients were likelier than nonrecipients to expect future benefits but were also more likely to expect Congress to enact future benefit cuts. Married female recipients were more likely to expect spousal benefits, and recipients overall were more likely to change their planned claiming age.*

Introduction

Workers who pay Social Security payroll taxes can become insured against the loss of earnings because of retirement or disability, but what kinds of benefits do they expect to receive? Moreover, how do the Social Security Administration's (SSA's) communications shape these expectations?

This article aims to answer these questions by analyzing how the reintroduction of automatic *Social Security Statement* mailings, which took place from September 2014 through December 2016, affected recipients' expectations. During that period, approximately two-fifths of working-age adults in the United States received personalized *Social Security Statements*, with information on their coverage status and projected benefit amounts, by mail. The brief reintroduction of *Statement* mailings provided a research opportunity with which to field a new survey in the RAND Corporation's American Life Panel (ALP) that would follow up on previous ALP surveys on respondents' Social Security knowledge, expectations, and plans. Using

the follow-up survey, which was fielded in 2017, this analysis estimates how Social Security expectations and plans *changed* among those who had recently received a *Statement*, relative to those who had not.

I find that respondents who received a *Statement* in the mail were more likely than nonrecipients to expect any Social Security benefits and, for married women, to expect spousal benefits. *Statement* recipients were also more likely to change their planned Social Security benefit claiming age.

However, these changes were not uniform: The less knowledge respondents had about Social Security before the *Statement*'s reintroduction, the more the *Statement* affected their benefit expectations. Although

Selected Abbreviations	
ALP	American Life Panel
HRS	Health and Retirement Study
SSA	Social Security Administration

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this finding may not be surprising—those who are well-informed about Social Security are already aware of whether they are covered, regardless of having recently received a *Statement*—the change in expected Social Security claiming age after *Statement* receipt *was not* reduced by greater prior knowledge. Further, *Statement* recipients did not change their expected claiming age in a single direction—roughly similar proportions increased and decreased their expected claiming age after receiving a *Statement*, resulting in zero net effect. Finally, all the estimated effects of *Statement* receipt diminished quickly: Results were strongest among those who received the *Statement* in the past year, but were statistically indistinguishable from zero for those who received the *Statement* 2 or more years prior.

Overall, these results point to a strong role for SSA communications in shaping individuals' expectations about their future benefits; in particular, whether they will receive benefits at all and at what age they plan to claim them. Individuals value this information highly, whether in the form of the *Social Security Statement* or an online *my* Social Security account, and the magnitude of the results implies that SSA communications can be influential, but with varying effects. Accurately assessing their effect requires a rich knowledge of individuals' expectations before and after the introduction of such campaigns.

Knowledge, Expectations, and *the* Social Security Statement

Social Security provides income support for retired and disabled workers, and for many such beneficiaries, Social Security is the primary source of income (Bee and Mitchell 2017). Current workers' understanding of program incentives shapes their expectations and their work and saving decisions, which in turn affect their economic security during retirement; but workers may harbor misperceptions about their entitlements (Rohwedder and van Soest 2006). In the last 10 years, a range of studies have sought to quantify not only the level of Social Security knowledge and expectations of future benefits, but also how SSA's communications can affect such knowledge and expectations. The most widely distributed communication from SSA is the subject of this analysis: the *Social Security Statement*.

In 1988, SSA began providing standard-format benefit statements for individuals who requested them, and in October 1994, SSA initiated automatic *Statement* mailings, targeting different age groups in different years (Smith and Couch 2014b).[1] From 2000

to 2011, *Statements* were sent annually to all individuals aged 25 or older who were not receiving Social Security benefits and whose mailing addresses were available from tax filings.[2] As they do today, the *Statements* contained personalized information about:

- Old-Age, Survivors, and Disability Insurance benefits, including projected retirement benefit levels if claimed at the earliest eligible age (62), the full retirement age (65 to 67, depending on birth year), and age 70 (the maximum age for delayed retirement credits);
- the monthly Disability Insurance benefit to which the worker, if covered, was currently entitled; and
- estimated survivor benefits for the workers' family.

To estimate the benefits, SSA used the individual's earnings history, current to the calendar year before the *Statement*'s release.

Consistent with the scale of the mailings, the accuracy of recent addresses reported on tax forms, and the salience of receiving a document from SSA with personalized benefit information, sizable majorities of *Statement* recipients in the 1990s remembered receiving it, according to prior research. Greenwald and others (2010) estimated that more than two-thirds of individuals to whom *Statements* were sent recalled receiving them.[3] Of those who recalled receipt, 83 percent to 90 percent reported having read it carefully, with over 90 percent remembering that it contained personalized benefit calculations. Findings from the General Accounting Office (1996, 1997, 1998, 2000) and Government Accountability Office (2005) were consistent with those of Greenwald and others.

Not only did people remember receiving the *Statement*: Their knowledge about Social Security benefits increased as well. Several studies exploited the phased rollout of *Statement* mailings in the late 1990s to compare results among different groups and infer its causal effect. Mastrobuoni (2011) found that the expected future retirement-benefit levels of Health and Retirement Study (HRS) participants were more accurate after receiving a *Statement*. Smith and Couch (2014a) found that younger workers' knowledge of Social Security rose after the *Statement*'s introduction, but those workers exhibited persistent gaps in knowledge on topics not specifically covered in the *Statement*. Cook, Jacobs, and Kim (2010) found that the *Statement* increased recipients' knowledge about and confidence in Social Security.

Furthermore, information about Social Security benefits can affect behavior: Armour (2018) found that

Disability Insurance application rates increased among those who received a *Statement*, particularly among those with preexisting work-limiting health conditions. Liebman and Luttmer (2015), implementing their own information intervention as a randomized controlled trial in an Internet panel survey, found that employment among older respondents increased after they were informed about the structure of the Retirement Earnings Test.

These results confirmed earlier findings that not all workers fully understand their Social Security benefits, and that information outreach can both increase their knowledge *and* change their behavior. However, these studies had limited information on individuals' knowledge and expectations about Social Security before *Statement* receipt. Such measures are needed for accurate estimation of the *Statement*'s effect for two reasons. First, the *Statement*'s effect is likely to be strongest among those least knowledgeable before they receive it. Averaging the effects over an entire population will thus tend to bias any estimates toward zero. Second, the *Statement*'s effect on expectations will depend on what expectations an individual held before *Statement* receipt. The latter point is not just one of bias: If similarly sized fractions of the population overestimate and underestimate benefits, then averaging the estimates could suggest a zero effect, even if the *Statement* strongly affected all recipients' expectations. However, such repeated measures of knowledge and expectations were not available during the *Statement*'s introduction in the late 1990s.

Now, by contrast, such measures are available. Although SSA stopped mailing the *Statement* in March 2011 for budgetary reasons, the Joint Explanatory Statement to the Consolidated Appropriations Act of 2014 directed SSA to develop a plan that would "include a significant restoration of the mailing of statements." Instead of restoring the previous dissemination strategy of mailing a *Statement* to every adult worker aged 25 or older every year, SSA restricted the mailings to workers aged 25, 30, 35, 40, 45, 50, 55, and 60 or older who did not have an online *my* Social Security account, beginning in September 2014 (Smith 2015).[4] This reintroduction provided an opportunity to compare pre- and post-2014 measures of Social Security knowledge and benefit expectations among ALP respondents, and to design a new ALP survey module to uncover differences in expectations between those who received a *Statement* during its reintroduction and those who did not.

Data

To measure the *Statement*'s effect on workers' expectations about Social Security, I fielded a new ALP survey module in 2017. The ALP is a nationally representative Internet panel survey of adults aged 18 or older. Begun in 2006, it had more than 6,000 active participants as of January 2020. In contrast with other surveys that field a "core" questionnaire at regular intervals, the ALP offers respondents new survey modules as researchers develop them, with 532 such modules fielded to date. The ALP thus presents two advantages pertinent to this analysis: First, researchers can merge a given respondent's answers across every module that the respondent has completed; and second, a researcher can target a module to certain respondents based on the specific prior modules they have completed. I thus fielded a 2017 module targeted to respondents who completed both a 2010 module testing respondents' knowledge of Social Security and a 2013 module eliciting respondents' expectations about Social Security benefits.[5] The 2010 and 2013 modules allow for observation of expectations and knowledge before the *Statement*'s 2014 reintroduction, and the 2017 module provides measures of how expectations changed after the brief reintroduction period, in which some individuals received *Statements* and others did not.

The 2010 module included a seven-question sequence on general Social Security knowledge. I follow Greenwald and others (2010) in constructing a Social Security Literacy Score, ranging from 0 to 7, measuring each respondent's knowledge about Social Security along a number of dimensions such as types of eligibility, claiming age, benefit taxation, and inflation adjustment. The 2010 Literacy Score provides a baseline measure of Social Security knowledge among all respondents at the time automatic *Statement* mailings to all workers aged 25 or older were ending. Because the information in the *Statement* should theoretically have a larger effect on those who are least knowledgeable about Social Security, this baseline measure enables me to estimate *Statement* effects for individuals with different initial levels of knowledge. Prior *Statement* research was limited to a single estimate, regardless of how much a *Statement* recipient might already have known about Social Security.

The 2013 module asks respondents whether they expect to receive Social Security benefits, and if so, when they expect to claim them and how large they expect their benefits to be. It also asks for respondents'

views on the likelihood that Congress will cut Social Security benefits in the next 10 years. These questions allow measurements not available in prior research: Identifying the size and direction of the *Statement*'s effect should depend on its recipients' prior expectations. For example, information on future benefits is entirely novel for individuals who did not think they were covered by Social Security until receiving the *Statement*, and we would expect the *Statement* to have its largest effect on such individuals.

I restricted my target sample to individuals who had completed the 2010 and 2013 modules, had a sufficient work history to be covered by Social Security, and had not been receiving Social Security benefits in 2013. The resulting set of 875 respondents completed my ALP module on Social Security knowledge, expectations, and communications in August or September of 2017. Respondents whose ages reached a multiple of 5 from September 2014 through December 2016 received a *Statement* in the mail and all other respondents did not receive a *Statement* in the reintroduction period. For all respondents, I observed Social Security knowledge and expectations before *Statement* mailings were reintroduced. These circumstances allow me to estimate how Social Security knowledge and expectations *changed* among the general population, how it changed differently for those who had recently received a *Statement*, and how the changes varied by personal characteristics and prior Social Security knowledge.

The 2017 module also included questions on access to SSA knowledge more generally: For example, "have you registered for an online *my* Social Security account that allows you to observe your earnings history and projected benefit?" "Have you accessed this account in the past year?" "Have you received a *Social Security Statement* in the mail in the past year?"

At the end of the survey, respondents were prompted to provide open-ended comments. Few respondents did so, but their comments provided qualitative evidence of how some individuals interact with the information provided by SSA. For example:

- "After SSA stopped sending the yearly statement I signed up online so I could view the information and create a PDF to save."

- "I didn't ever use the site or telephone info or stop by the local office until I was already on the verge of retirement, so the info I got was more in line with finding out what my status was, not for use in planning future activities."

Methodology and Results

My research design reflects the circumstances of the *Statement*'s reintroduction. After ceasing automatic mailings in March 2011, SSA resumed mailings in September of 2014, with two important changes. First, individuals with *my* Social Security accounts would receive reminder emails once a year to view their *Statement* online in place of a paper *Statement* in the mail. Second, individuals without *my* Social Security accounts would receive a paper *Statement* in the mail 3 months before every fifth birthday at ages 25 through 55, or every annual birthday at ages 60 or older until benefits were claimed (Smith 2015). Because the ALP survey respondents report their ages and whether they have *my* Social Security accounts (and when they signed up for them), I can determine how recently they were mailed a *Statement*.[6]

The information available to two individuals can vary, even if they are the same age and neither has a *my* Social Security account. For example, consider two otherwise identical individuals who differ only in the month they were born. One turned 30 in December 2014, and hence received a *Statement* for the first time in almost 4 years in September 2014, just as *Statement* mailings were reintroduced. The other turned 30 in November 2014 and, under the original reintroduction-period mailing plan, would not receive a *Statement* until August 2019, 3 months before turning 35; that is, almost 5 years later, and nearly 8 years after the 2011 cessation of universal *Statement* mailings.[7] Because their circumstances otherwise are the same and they face the same economic and informational environments, any difference in how their Social Security expectations changed from 2013 to 2017 can be attributed to the *Statement*.

I compare results not only between 30-year-olds and 31-year-olds, but also between individuals who received a *Statement* from September 2014 to December 2016 and those who did not—respectively accounting for about 53 percent and 47 percent of the sample—across the age distribution. Additionally, I observe pre-*Statement* Social Security knowledge from the 2010 ALP module discussed above. I fit linear probability models to estimate the differential effects of receiving a *Statement* in 2014 or 2015, receiving one in 2016, and not receiving one since the discontinuation of universal mailings in 2011.[8] I control for a range of demographic characteristics, establish a baseline level for Social Security knowledge, and isolate the effect of *Statement* receipt on respondents' benefit

expectations. Furthermore, because the effect of the *Statement* should depend on how informed individuals are *prior to receipt*, I include prior knowledge both as a control and as a mediating influence, allowing the effect of the *Statement* to differ by level of knowledge before *Statement* receipt.

The intuition behind my analysis is that although respondents' expectations may naturally change between 2013 and 2017, the only reason that the changes should *differ* among the groups that received *Statements* in this period is receipt of the *Statement* itself. This conclusion will hold if the pattern of resuming *Statement* mailings in late 2014 to individuals who are about to reach multiple-of-5 ages is as good as an experiment in which *Statements* are randomly sent out, because reaching a multiple-of-5 age is

unrelated to any of the outcomes of interest. I test this assumption to the extent I can by comparing respondents' pre-2014 socioeconomic and demographic characteristics with their *Statement* recipient category, and I find no statistically significant or quantitatively large differences.[9]

Receipt and Expectations of Social Security Benefits by Statement-Receipt Group

Table 1 presents respondents' expectations about Social Security benefits, as of both 2013 and 2017, by information category (*my* Social Security account-holder, reintroduction-period *Statement* nonrecipient, 2014/2015 *Statement* recipient, 2016 *Statement* recipient). Descriptive statistics, some of which are shown in Table 1 and in Appendix Table B-1, suggest that

Table 1.
Social Security benefit expectations of 2013 nonbeneficiaries, as of 2013 and by exposure to SSA communications as of 2017

				2017		
					Individuals without a *my* Social Security account	
			my Social Security account-holders	No *Statement* received since 2011	*Statement* received in—	
Measure	2013	All			2014 or 2015	2016
Values						
Percentage receiving benefits in 2017	. . .	12	20	10	3	15
Individuals not receiving benefits Percentage expecting to receive benefits in the future	62	69	70	64	71	78
Expected age at first benefit receipt (years)	65.7	66.4	66.7	66.3	66.1	66.6
Expected monthly benefit amount ($) [a]	1,407.67	1,521.21	1,665.44	1,412.35	1,465.65	1,567.14
Standard deviations						
Percentage receiving benefits in 2017	. . .	32	40	30	16	35
Individuals not receiving benefits Percentage expecting to receive benefits in the future	49	46	46	48	46	42
Expected age at first benefit receipt (years)	4.5	3.4	3.4	3.3	3.6	3.4
Expected monthly benefit amount ($) [a]	776.00	927.99	803.96	919.62	1,126.04	784.92
Observations	875	875	316	277	171	111

SOURCE: Author's calculations based on various ALP survey modules.

NOTES: Data are weighted averages.

. . . = not applicable.

a. If benefits are expected.

my Social Security accountholders[10] are systematically distinct from the general population: They are more likely to be receiving Social Security benefits, more knowledgeable about Social Security, more likely to expect to receive disability benefits, and generally more educated. They likewise were more knowledgeable about Social Security in 2010, before *my* Social Security accounts were introduced. I present statistics for them here for general comparison, but as mentioned in note 6, I omit them from the causal analysis of the effect of the *Statement* given their inherent differences from nonaccountholders.

As shown in Table 1, only 12 percent of 2013 nonbeneficiaries claimed Social Security benefits as of 2017.[11] Although I do not directly report an analysis of the *Statement*'s effect on claiming Social Security benefits, receiving a *Statement* had no statistically measurable effect on new receipt of Social Security income. However, the relatively small sample sizes in this study are not well suited to estimating such an effect, given both the low rate of Disability Insurance entry in the sample and the strong correlation of claiming retired-worker benefits with specific age groups.[12]

This study instead focuses on the *Statement*'s effect on *expectations*, with the most direct measure being whether an individual expects *ever* to receive Social Security benefits. Table 1 shows that the likelihood of expecting any Social Security income increases among those who more recently received a *Statement*, from 64 percent for those who had not received a *Statement* since 2011, to 71 percent among those who received one in 2014 or 2015, to 78 percent for those who most recently received one, in 2016. The amount of expected Social Security income, conditional on expecting any, also increases among respondents who more recently received a *Statement*. Expected claiming age does not exhibit a consistent pattern; however, these comparisons of means do not control for any other covariates—in particular, pre-*Statement* expectations or prior Social Security knowledge.

Although I limited my sample specifically to respondents who have worked enough to be fully insured for Social Security benefits (determined by using prior ALP modules eliciting earnings histories), more than 30 percent of respondents nevertheless reported in 2017 that they did not expect ever to receive any Social Security benefits. One potential explanation for this discrepancy is mismeasurement. The prior ALP modules did not distinguish whether earnings were covered by Social Security. Some state and local government employees, for example, are not covered by Social Security; also, some earnings may be informal and unreported. Nevertheless, Social Security covers nearly 96 percent of the workforce (Whitman, Reznik, and Shoffner 2011), suggesting that mismeasurement alone could not reasonably account for such a large fraction of respondents not expecting to receive any benefits. In contrast with prior research using only the HRS's queries on Social Security expectations, I therefore included a question on *why* these individuals did not expect to receive any Social Security benefits. Respondents could select multiple reasons and provide their own in a comment box.[13] To illustrate *why* individuals might not expect benefits, and hence the mechanisms by which the *Statement* might affect whether individuals ever expect to receive them, the responses among those who did not receive a *Statement* during the study period are listed below:

1. I won't have worked enough (27 percent)

2. My occupation isn't eligible (15 percent)

3. I won't live long enough (1 percent)

4. Social Security won't be around long enough (53 percent)

5. Other (10 percent; notably, all respondents who selected "other" indicated that they either were not currently receiving benefits or were in the process of claiming benefits, suggesting a misunderstanding of the question as asking whether they expected benefits in the *immediate* future rather than *at any time* in the future)

Recall that this study sample consists of individuals whose reported work histories are sufficient to qualify them for benefits—yet more than one-quarter of those who did not expect benefits thought they had not worked enough to be eligible. The *Statement* may contain novel and useful information for this group because it lists their earnings history and indicates their coverage status. A few individuals either misunderstood the question, considered their mortality risk high enough that they will not be able to claim Social Security benefits, or reported working in an ineligible occupation; it is not clear whether the *Statement* could affect expectations in these groups. However, the majority of respondents who did not expect to receive benefits thought that Social Security will "not be around long enough" for them to collect benefits. That is, despite having paid Social Security payroll taxes long enough to qualify them for benefits, they did not think they would receive *any* benefit. The *Statement* notes that projected payroll taxes will be sufficient to

provide about 75 percent of scheduled future benefits even if Congress does not enact changes to replenish the Social Security trust funds. Thus, to the extent that the *Statement* alters perceptions about the program's continued existence, or informs individuals that their work history is sufficient to entitle them to benefits, it may increase the likelihood that these individuals will expect a Social Security benefit in the future.

Did individuals who were sent a *Statement* remember receiving one? Chart 1 shows that 73.5 percent of all respondents who should have been sent a *Statement* in the 2014–2016 reintroduction period recalled receiving one. However, the recall rate varied by age, rising with increasingly older age groups. Less than half of *Statement* recipients younger than 40 recalled receipt, whereas 95 percent of recipients aged 60 or older recalled receipt. Future research may explore the possible reasons for this difference, which could include less accurate current addresses for younger workers, lower likelihood of opening or reading paper mail among younger workers, or simply closer attention to SSA communications among older workers nearing retirement.

Chart 2 shows that *Statement* recipients are similarly more likely to recall receiving it if it was sent more recently. Recollection of *Statement* receipt is

approximately 10 percentage points higher among 2016 recipients than for 2014/2015 recipients.

I also asked respondents whether and how they found either the *Statement* or their *my* Social Security account useful (as applicable). Sixty-one percent found the *Statement* useful for retirement planning or claiming decisions, and 74 percent of *my* Social Security accountholders found the account useful for those purposes (not shown). Twelve percent of *Statement* recipients and 17 percent of *my* Social Security accountholders found their respective resources useful for claiming disability benefits, and 12 percent of *Statement* recipients and 14 percent of *my* Social Security accountholders found them useful for claiming Social Security auxiliary (that is, survivors or dependents) benefits.

In summary, individuals generally report high levels of *Statement* receipt; most *Statement* recipients report that the information therein is useful for planning purposes; and, for a majority of those not expecting ever to receive Social Security benefits, the information in the *Statement* may be particularly relevant. With these results in hand, I turn to causal estimates of the effect of the *Statement*'s reintroduction on expectations of Social Security benefits.

Chart 1.
Percentage of ALP respondents who were mailed a *Statement* and recall receiving it, by age
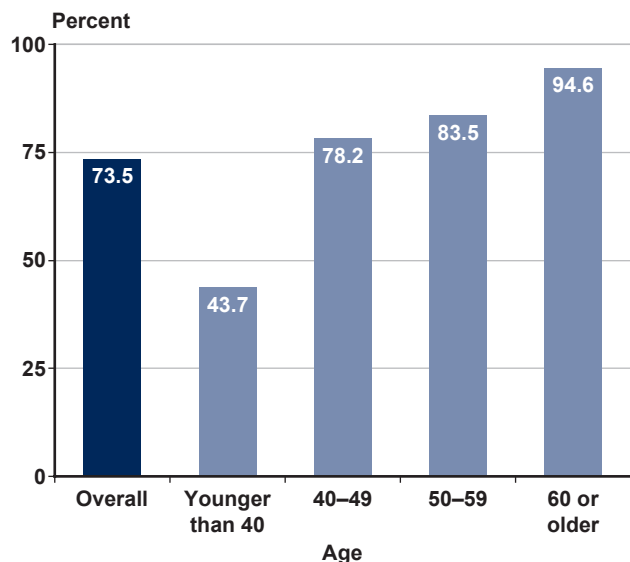
SOURCE: Author's calculations based on various ALP survey modules.

Chart 2.
Percentage of ALP respondents who were mailed a *Statement* and recall receiving it, by year sent
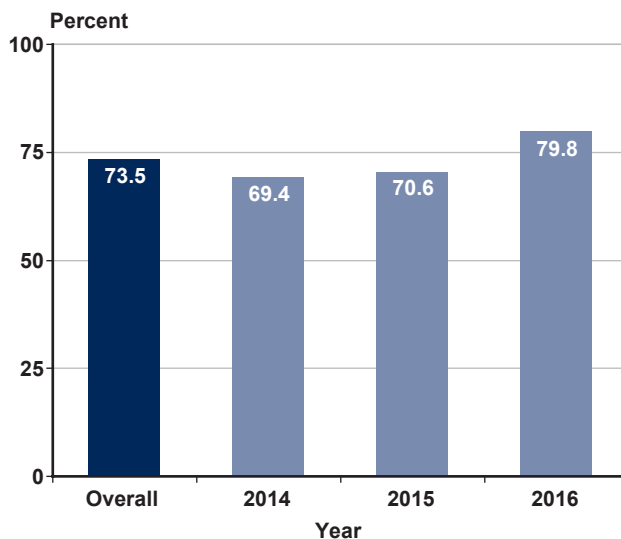
SOURCE: Author's calculations based on various ALP survey modules.

Causal Effect of the Statement's Reintroduction on Expectations

Table 2 presents evidence toward answering the questions: (1) Does sending a *Statement* increase the recipient's expectation of ever receiving Social Security benefits, and (2) Does it change the age at which people expect to claim those benefits? The results indicate that the answer to both questions is yes, although with two important caveats: The *Statement*'s effect on expectations diminishes quickly, and prior expectations and knowledge mediate its effect.

Each model specification controls for a range of sociodemographic variables and 2010 knowledge of Social Security. For all nonbeneficiary respondents, the first column shows the effect of receiving a *Statement* on the expectation of ever receiving Social Security benefits, estimated using a weighted linear probability model. The central finding: Respondents who received a *Statement* in 2016 were nearly 33 percentage points more likely to expect to receive Social Security benefits in the future than those who had not recently received a *Statement*. This effect is large and

Table 2.

Estimated effect of receiving a *Statement* on the expectations of 2013 nonbeneficiaries about future Social Security benefits, by respondent's prior knowledge and expectations: 2017 ALP respondents

| Variable | Likelihood that respondent expects future Social Security benefits | | Likelihood that married female respondent expects future spousal benefits | Average reported change in expected claiming age (in years) [b] | Likelihood that respondent has changed expected retirement age [a,c] |
	All respondents [a]	Respondents who in 2013 did not expect benefits [a]			
			Coefficients		
Respondent received a *Statement* in—					
2014 or 2015	0.0937	0.1640	0.1460	-0.0854	0.1400
2016	0.3280***	0.4850*	0.2890**	-0.1070	0.2900**
Prior knowledge about Social Security [d]					
Overall (including nonrecipients)	0.0451***	0.0524**	0.0190	0.2100	-0.0190
2014 or 2015 *Statement* recipients	-0.0221	0.0010	-0.0434	-0.2530	-0.0045
2016 *Statement* recipients	-0.0492**	-0.0665	-0.0544*	0.1030	-0.0260
			Standard errors		
Respondent received a *Statement* in—					
2014 or 2015	0.1200	0.1550	0.1530	1.0700	0.1640
2016	0.1190	0.2600	0.1250	1.3660	0.1390
Prior knowledge about Social Security [d]					
Overall (including nonrecipients)	0.0143	0.0243	0.0202	0.1880	0.0233
2014 or 2015 *Statement* recipients	0.0218	0.0348	0.0259	0.2850	0.0416
2016 *Statement* recipients	0.0223	0.0538	0.0270	0.2470	0.0357
Observations	515	162	168	443	336
Mean value among *Statement* nonrecipients	0.75	0.54	0.19	66.10	0.51
R-squared	0.228	0.220	0.105	0.160	0.100

SOURCE: Author's calculations based on various ALP survey modules.

NOTES: Sample excludes pre-September 2014 *my* Social Security accountholders.

Coefficients indicate the effects relative to the reference variable (no *Statement* received since 2011).

All models include demographic controls (age, age squared, sex, race/ethnicity, marital status, and educational attainment).

Standard errors are clustered at the age level.

* = statistically significant at the $p < 0.10$ level; ** = statistically significant at the $p < 0.05$ level; *** = statistically significant at the $p < 0.01$ level.

a. Weighted linear probability regression estimates.

b. Weighted least squares regression estimates.

c. Among respondents who expected future benefits and reported an expected claiming age in both 2013 and 2017.

d. Estimated effect for each additional point on the Greenwald and others (2010) 7-point knowledge scale.

statistically significant, especially in comparison with the pre-*Statement* average of 38 percent of respondents not expecting to receive benefits (indicated in Table 1).

However, the effect was less pronounced among *Statement* recipients who had scored higher on the test of Social Security knowledge in 2010. For each additional point on the 7-point scale, the *Statement*'s effect was reduced by 4.9 percentage points among 2016 recipients. For those with the maximum possible knowledge score of 7, the *Statement* therefore had no statistically significant effect on expecting benefits. For a respondent with the average literacy score of 3.7 out of 7, the estimated effect of receiving a *Statement* was slightly less than 15 percentage points,[14] or a 19 percent increase from the baseline of *Statement* nonreceipt (not shown) in the likelihood of expecting to receive Social Security benefits.

In addition to the strong mediation of prior knowledge on the *Statement*'s effect, the recency of *Statement* receipt mattered. The *Statement*'s estimated effect on the expectation of benefits for those who received one in 2014 or 2015—9.4 percentage points—was substantially smaller than the effect for 2016 recipients (32.8 percentage points) and not statistically significant, indicating that the effect diminishes quickly as time passes after *Statement* receipt.

Prior expectations also mattered. The second column shows results of the same analysis for the subset of 162 respondents who in 2013 did not expect to receive future Social Security benefits. Although the small sample size limits the statistical precision, the estimated effect for the subset is even larger than that for all respondents: Among those who in 2013 did not expect to receive benefits in the future, receiving a *Statement* in 2016 increased the likelihood of expecting benefits by nearly 49 percentage points. Greater prior knowledge mitigated the effect among 2016 recipients, although the estimated interaction effect was not statistically significant. As with all 2013 nonbeneficiaries, recency of receipt affected expectations: The effect among 2014/2015 *Statement* recipients (16 percentage points, and not statistically significant), was lower than that for 2016 recipients.

The sample sizes for these analyses limit the statistical significance of any single estimate; however, a consistent general pattern emerges: More recent *Statements* increase the likelihood of expecting benefits, particularly among those who did not previously expect to receive benefits and those with low prior levels of knowledge about Social Security. Table 2's third column shows results of a similar estimation of *Statement*

effects on expectations of spousal benefits among married female respondents. The *Statement* appears to increase expectation of receiving spousal benefits, with the effect again attenuated by level of prior knowledge and time since *Statement* receipt. The magnitude of these estimated effects implies that *frequent* mailings of *Social Security Statements* can substantially increase the share of individuals who expect ever to receive benefits, especially for those who initially were least knowledgeable about Social Security and those who might claim benefits based on others' earnings histories.

Did the *Statement* change the age at which people expected to claim benefits? The fourth column of Table 2 shows the results of tests of whether the expected claiming age differs for recent *Statement* recipients—for example, by leading individuals to plan to claim later—compared with those who have not recently received a *Statement*. I do not find a sizable or statistically significant effect of *Statement* receipt on respondents' average expected claiming age. However, there is no predictive theory about how the *Statement* would affect average claiming age: It could either increase or decrease expected claiming age because individuals could overestimate or underestimate the monthly benefit reduction from early claiming or the credits from delaying claiming.

The fifth column of Table 2 therefore reports not the changes in expected age itself, but *whether* the respondent changed his or her expected claiming age—in either direction—between the 2013 survey and the 2017 survey. To measure whether the *Statement* changed the expected claiming age, I limit the sample to those who, in both 2013 and 2017, expected to receive Social Security benefits and reported an expected claiming age.[15] The result is markedly different: Receiving a *Statement* in 2016 increased the likelihood that the respondent changed his or her expected Social Security claiming age by 29 percentage points, a large and statistically significant effect. The estimated effect for those who received a *Statement* in 2014 or 2015 was both smaller and not statistically significant. Further analyses, unreported here because of statistical power concerns but available on request,[16] found that the changes consisted of similar, offsetting fractions of respondents who raised and who lowered their expected claiming age, which is consistent with the absence of a significant overall average effect in the fourth column.

The *Statement* provides personalized information on the recipient's *scheduled* benefits; however, it also emphasizes that actual future benefits may be lower,

with the following text on its first page, in a section titled "About Social Security's future…":

> [T]he Social Security system is facing serious financial problems, and action is needed soon to make sure the system will be sound when today's younger workers are ready for retirement… We need to resolve these issues soon to make sure Social Security continues to provide a foundation of protection for future generations.

Further, the "Your Estimated Benefits" section on the second page includes this text:

> Congress has made changes to the law in the past and can do so at any time. The law governing benefit amounts may change because, by 2033, the payroll taxes collected will be enough to pay only about 75 percent of scheduled benefits.[17]

In short, the *Statement* not only conveys personalized information about future benefit entitlements, but also reports the need for action to ensure entitlements for younger workers, because payroll tax revenue will not be sufficient to pay them in full. The *Statement* specifically mentions Congress's ability to change benefit amounts in response to the projected trust fund shortfall.

The question then arises: Does the *Statement* affect recipients' perceived probability of Social Security reform? Table 3 presents evidence that it does, based on 2017 ALP respondents' assessment of the likelihood, on a scale of 0 to 100, that Congress will make Social Security benefits less generous in the next 10 years. Respondents are asked their views on the likelihood of cuts to benefits in general—which I refer to as "overall"—as well as to their own. For example, a 61-year-old man may consider it unlikely that his own benefits will be reduced (reporting, for example, a 5 percent chance), while considering it very likely that benefits will be reduced for individuals currently in their 20s (reporting, for example, a 95 percent chance).

Table 3 shows estimated effects of recent *Statement* receipt on the *change* in the perceived probability of Congressional cuts to Social Security benefits. Among *Statement* nonrecipients, the perceived likelihood that Congress would reduce overall benefits declined by nearly 6.2 percentage points, on average, from 2013 to 2017. Similarly, among nonrecipients, the perceived likelihood of cuts to their own benefits dropped by an average of 15.2 percentage points. The general trend among nonrecipients was thus an increasing optimism about continuing the current level of benefits.

Although receiving a *Statement* did not measurably change the expected likelihood of cuts to overall benefits, it had a large and statistically significant effect on whether individuals thought their own benefits would be cut. Relative to 2013–2017 *Statement* nonrecipients, those who received a *Statement* in 2016 perceived an *increased* likelihood of future cuts to their benefits, by 9.2 percentage points. Among those who received a *Statement* in 2014/2015, the perceived likelihood

Table 3.

Estimated effect of receiving a *Statement* on the expectation that Congress will enact future cuts to Social Security benefits: Percentage-point change in perceived likelihood, 2013–2017

Variable	Benefits overall		Respondent's own benefits	
	Coefficient	Standard error	Coefficient	Standard error
Received a *Statement* in—				
2014 or 2015	-2.440	3.989	8.286**	3.459
2016	-1.969	3.988	9.195**	3.201
Statement nonrecipients	-6.2		-15.2	
Observations	463		312	
R-squared	0.113		0.193	

SOURCE: Author's calculations based on various ALP survey modules.

NOTES: Respondents were asked in 2013 and 2017 how likely, on a scale of 0 to 100, they thought a benefit cut was in the next 10 years.

Data for *Statement* recipients are weighted linear regression estimates. Data for nonrecipients are observed mean changes, provided as benchmarks for comparative purposes.

Sample is restricted to nonbeneficiaries who do not have a *my* Social Security account; regression estimates include demographic (age, age squared, sex, race/ethnicity, marital status, and educational attainment) and prior-knowledge controls.

** = statistically significant at the *p* < 0.05 level.

of future own-benefit cuts increased an estimated 8.3 percentage points relative to nonrecipients, also statistically significant. That is, the *Statement* led to a higher expected likelihood of Congressional cuts to one's own Social Security benefits, all else being equal. Yet the expected likelihood of own-benefit cuts among *Statement* nonrecipients *declined* by an even a larger amount, 15.2 percentage points. Thus, in the overall sample, the *Statement*—which contains text indicating that payroll taxes alone will not cover 100 percent of scheduled benefits if the trust fund reserves are depleted—did not so much *increase* recipients' perceived likelihood of Congress cutting benefits, but instead tempered the optimism among the general population that benefit levels will be maintained. It therefore plays a role in shaping public opinion about future Social Security reforms.

Discussion, Future Research, and Conclusion

The descriptive statistics and regression results point to measurable effects resulting from the *Statement*'s reintroduction. People remember receiving the *Statement* and find it useful. Before the reintroduction, more than 30 percent of survey respondents had reported that they did not expect ever to receive Social Security benefits, despite having qualifying work histories; but receiving a *Statement* reduced that proportion dramatically. Among respondents who in 2013 did not expect ever to receive Social Security benefits and who knew little about the program, receipt of a *Statement* led to an increase of nearly 49 percentage points in the expectation of receiving benefits in the future. That is, the *Statement* induced half of those respondents to expect future benefits.

The *Statement* also led to a greater likelihood of expecting spousal benefits among married women. Further, it led nearly one-third of recipients to change the age at which they expected to claim benefits. However, these effects diminished as time passed after the respondents received their most recent *Statements*. Although the estimated effects were both statistically significant and substantial among 2016 *Statement* recipients, no estimated effects among 2014 or 2015 *Statement* recipients were statistically significant.

The *Statement* also appears to have affected recipients' views on the likelihood of future Congressional cuts to Social Security benefits. Survey respondents overall were less likely in 2017 to expect such future cuts than they had been in 2013, but *Statement* recipients were not as optimistic as nonrecipients;

the former were 8.3–9.2 percentage points more likely to expect benefit cuts than the latter.

This analysis shows that the *Statement* can contribute to shaping peoples' expectations about their own benefits and when they plan to claim them, especially if it is sent annually. These estimated effects may also explain observed patterns of increasing Social Security knowledge from 2015 to 2017 (Alattar and others 2019). This analysis is a first step in using ALP data to analyze the effect of the *Statement*'s 2014–2016 reintroduction on individuals' expectations and behavior. Future analyses can take advantage of additional survey modules eliciting responses on claiming, retirement, and saving behavior to estimate the *Statement*'s effect on those outcomes, given that administrative records cannot provide data to explore such behavioral factors. This analysis clearly shows that workers find the information contained in the *Statement* useful, and that the information affects their own expectations and claiming plans. However, because the *Statement*'s effects dissipate quickly, both the content and the frequency of communication from SSA provide important policy levers with which the agency can change individuals' perceptions about future benefits and the Social Security program more broadly.

Appendix A: Data and Methodology Details

The data used in this analysis are from various modules of the ALP, an ongoing nationally representative Internet panel survey that began in 2006 and currently has over 6,000 active respondents. Estimating the *Statement*'s effects required the following baseline measures from before 2014, when the reintroduction began:

1. Social Security knowledge, elicited in "What Do People Know" (ALP module 137), administered in 2010.

2. Social Security expectations, elicited in ALP modules named for the HRS core modules they incorporate, "HRS 2012 Module J–M" and "HRS 2012 Module N–P" (ALP modules 324 and 334, respectively), administered in 2013.

3. Earnings histories, used in establishing Social Security coverage, elicited in either "Social Security Annuity Project" (ALP module 179), administered in 2011; or "Netspar Uncertainty" (ALP module 338), administered in 2013.

To measure changes from baseline levels, I fielded ALP module 479, "Social Security Expectations," in 2017. I limited the potential sample to currently active ALP respondents who had completed ALP

modules 137, 324, and 334, and at least one of ALP modules 179 or 338. I further limited the sample to those who were not receiving Social Security benefits and who did not report signing up for a *my* Social Security account prior to the *Statement*'s reintroduction. Of the 3,056 respondents who completed ALP module 137 in 2010, 2,392 completed both of the HRS modules in 2013, 2,096 also completed either of the work history modules in 2011 or 2013, and 1,260 completed ALP module 479 in 2017. Of those 1,260, I excluded 385 respondents who were current beneficiaries, to whom SSA does not send *Statements*. The resulting study sample comprised 875 nonbeneficiaries, of whom 515 were not *my* Social Security accountholders.

To determine "prior knowledge"—or more precisely, the measure of Social Security knowledge in 2010—I relied on ALP module 137's sequence of one multiple choice and six "True or False" questions about Social Security. The correct answer to the multiple-choice question "Which of the following best describes how a worker's Social Security benefits are calculated?" is "They are based on the average of a person's highest 35 years of earnings." The "True or False" questions and answers are:

1. Spouses can receive benefits even if they're not eligible under their own work histories (True).

2. The age at which an individual claims benefits affects the benefit amount (True).

3. Benefits are adjusted for inflation after retirement (True).

4. People have to claim benefits as soon as they stop working (False).

5. Benefits can be taxed if earnings or investment income is high enough (True).

6. Individuals can receive Social Security disability benefits (True).

I followed Greenwald and others (2010) in summing the number of correct answers to assign a Social Security Literacy Score from 0 to 7 as my measure of prior SSA knowledge.[18]

The 2013 ALP modules that include the 2012 HRS core questions provide baseline information on respondent expectations about Social Security benefits, both in general and for himself or herself. Respondents were asked if they were currently receiving Social Security benefits; if not, they were asked whether they expected to receive Social Security benefits in the future; if so, they were asked at what

age they expected to claim benefits and what they thought their benefit amounts would be. Respondents were also asked whether they expected Congress to make Social Security benefits overall less generous in the next 10 years, and whether they expected the same for their own benefits. I asked these same questions in the same sequence in ALP module 479, which opened to respondents in August 2017, to allow comparisons of the 2013 and 2017 responses. (The entire ALP module 479 questionnaire is available for download at https://alpdata.rand.org/index.php?page=data&p=showsurvey&syid=479.) In combination, the module on prior Social Security knowledge and the HRS modules elicited information in four broad categories:

1. views on Social Security benefits, including current receipt status, expectation of future receipt, expected benefit levels, and reason(s) for not expecting to receive benefits;

2. knowledge of how benefit levels change with different work histories and claiming ages;

3. recall and use of *my* Social Security accounts and *Social Security Statements*; and

4. general impressions of SSA communications and the Social Security programs and benefits.

Because I aim to ascribe differences in expectations to the causal effect of recently receiving a *Social Security Statement*, it is vital to control against any pre-2014 differences in characteristics among 2017 *my* Social Security nonaccountholders. Otherwise, the effects I ascribe to the *Statement* may instead be due to any such measurable differences. Fortunately, I found no statistically significant differences across sociodemographic characteristics (age, race/ethnicity, sex, marital status, education, and income), 2010 Social Security knowledge, or 2013 Social Security expectations between those who did not receive a *Statement* from 2014 through 2016, those who received one in 2014 or 2015, and those who received one in 2016. That is, the characteristics of individuals who received a *Statement* during the reintroduction period—nonbeneficiaries attaining a multiple-of-5 age—did not correlate with any measurable characteristics among those who did not.

However, the characteristics of 2017 *my* Social Security accountholders differed from those of nonaccountholders along a number of dimensions. Accountholders were 4.6 years older on average, suggesting that the higher levels of technological engagement typically observed among younger cohorts is more than offset by the importance of Social

Security benefits for older cohorts. Accountholders were also more likely than nonaccountholders to be men (51 percent versus 43 percent) and more likely to have any postsecondary education (77 percent versus 70 percent).

Moreover, among *my* Social Security accountholders (the vast majority of whom reported signing up within the preceding 5 years), knowledge of program details is systematically and statistically significantly higher than that of nonaccountholders in the 2010 module. On average, accountholders score almost 0.6 points higher than the overall mean of 3.7 on the 7-point knowledge scale. A substantial amount of selection thus underlies the opening of a *my* Social Security account, in that accountholders were more knowledgeable about Social Security *even before signing up*. This higher score is due mostly to greater knowledge of benefit eligibility: Accountholders were 10 percentage points more likely to know that claiming age can affect Social Security benefits, 11 percentage points more likely to know that spouses can receive benefits, 10 percentage points more likely to know that claiming age and retirement age can differ, and 11 percentage points more likely to know that Social Security benefits can be collected in the event of a disability. Because of these differences, my causal regression analysis excludes those who signed up for a *my* Social Security account before or during the reintroduction period.

The regression analyses use an Intention-to-Treat approach, which estimates an effect based on whether an individual *should have* been sent a *Statement* (that is, whether one attained a multiple-of-5 age), not on whether one was actually received and read—because the latter, conditional on being sent a *Statement*, might reflect inherent differences in Social Security knowledge and expectations. I therefore estimate the following linear equation,[19] with estimated treatment effects based on variables indicating whether an individual i was sent a *Statement* in year y, denoted by $1(Statement_{i,y})$:

$$Outcome_{i,2017} = \alpha + \beta_{2014-2015} 1\left(Statement_{i,2014-2015}\right)$$

$$+ \beta_{2016} 1\left(Statement_{i,2016}\right)$$

$$+ \gamma_{2014-2015} 1\left(Statement_{i,2014-2015}\right) \times Knowledge_{i,2010}$$

$$+ \gamma_{2016} 1\left(Statement_{i,2016}\right) \times Knowledge_{i,2010}$$

$$+ \delta \times Knowledge_{i,2010} + \Gamma X_{i,2013} + \varepsilon_{i,2017}$$

with standard errors clustered at the age-specific level.[20]

The covariates in *X* include age, age squared, race/ethnicity, sex, marital status, and education. *Knowledge* refers to the summed score of correct answers from the 2010 ALP survey module on Social Security knowledge, ranging from 0 to 7. Robustness checks, with separate indicators for correctly answering each question, are consistent with findings reported in this study and are available on request.

The two β's estimate the effect in 2017 of having been sent a *Statement* in either 2014/2015 or 2016, and the two γ's estimate the mediating role of 2010 Social Security knowledge on the effect of the *Statement* in those two time periods. The control group is thus those who had not received a *Statement* since early 2011.

All estimates are weighted using the ALP's raking weights, which are constructed to match the average sociodemographic statistics of the ALP respondents with those of the overall national population (see https://www.rand.org/labor/alp/panel/weighting.html for further information on the construction and use of these weights). Although point estimates based on unweighted values differ from those reported here, none of the changes are statistically significant.

I estimate separate effects for 2014/2015 and 2016 *Statement* recipients for two reasons. First, the recency of *Statement* receipt was associated with the likelihood of recalling its receipt, as reported in Chart 2, indicating that the effect of the *Statement* may diminish over time. Thus, differences in treatment effects by time since receipt are potentially strong. Second, exploratory analyses indicated that effects varied substantially by time since receipt of a *Statement*. Splitting the analysis of the September 2014–December 2016 reintroduction period into two groups allows a comparison of effects by time since receipt, whereas splitting the analysis into many groups could limit the power to allow for statistical inference of separate effects.[21]

Table B-1.

Types of future Social Security benefits expected by 2013 nonbeneficiaries who expect future benefits, by exposure to SSA communications as of 2017

| | | Individuals without a *my* Social Security account | | |
| | | No *Statement* received since 2011 | *Statement* received in— | |
Benefit type	*my* Social Security accountholders		2014 or 2015	2016
		Percentage of respondents who expect benefits		
Retirement	96	90	91	95
Disability	7	2	6	5
Spouse	13	8	12	13
Survivor	2	2	4	4
Dependent	0	1	1	0
Don't know	2	8	5	1
		Standard deviation		
Retirement	20	30	29	21
Disability	25	15	23	21
Spouse	33	27	33	34
Survivor	12	15	20	19
Dependent	0	8	11	0
Don't know	15	27	22	12
Observations	221	194	128	81

SOURCE: Author's calculations based on various ALP survey modules.

Notes

[1] Until 1999, SSA called the *Statement* the *Personal Earnings and Benefit Estimate Statement*. For brevity, I refer to both iterations as *Social Security Statements* or, simply, *Statements*.

[2] A facsimile sample *Statement* is available at https://www.ssa.gov/myaccount/assets/materials/SSA-7005-SM-SI%20Wanda%20Worker%20Near%20retirement.pdf.

[3] In this analysis, I find that just under 74 percent of those to whom SSA recently sent a *Statement* recall receiving it.

[4] The dissemination strategy would later change to eliminate *Statement* mailings to individuals younger than 60, effective January 2017.

[5] Appendix A describes each module and the construction of the analytic sample.

[6] Although I provide descriptive statistics on expectations among those with a *my* Social Security account, I exclude them from the regression analyses. Simply put, they differ from those without *my* Social Security accounts in multiple respects: age, education, income, and knowledge about Social Security. Furthermore, differences by 2017 *my* Social Security accountholder status are present even in the 2010 survey results, *before my* Social Security accounts were introduced. Including them as "controls" in a regression is thus not appropriate, as they differ so consistently from those who receive mailed *Statements*.

[7] In fact, SSA would change its original plan for reintroducing mailed *Statements* and discontinue *Statement* mailings to individuals younger than 60, effective January 2017. As a result, a person born in November 1984 who does not have a *my* Social Security account is now not scheduled to receive a *Statement* in the mail until shortly before turning 60 in 2044.

[8] For brevity, I use "recipients" to refer to all individuals who, by date of birth, should have been sent a *Statement*, whether they reported receiving one or not.

[9] Appendix A discusses comparisons across recipient groups and with *my* Social Security accountholders.

[10] Thirty-six percent of the sample (316 of 875) holds a *my* Social Security account—much higher than the prevalence among the entire working population. The difference may reflect the fact that ALP respondents have Internet access and frequently use it. To the extent that Internet connectivity increases interaction with online Social Security resources, the estimates in this study may understate the effect of the paper *Statement*.

[11] Note also that once individuals start receiving Social Security benefits, SSA no longer mails *Statements* to them.

[12] The average ages do not statistically differ across *Statement* recipient categories. However, the higher frequency of Social Security income among the 2016 recipients is, because of sampling variability, driven by a larger proportion in this sample of respondents who just turned 65 and claimed Social Security benefits, as well as those who have turned 60 and claimed survivor benefits. Controlling for age and clustering standard errors at the age level led to no statistically significant effect of *Statement* receipt on Social Security income receipt.

[13] Because this question was not included in prior modules, I cannot estimate the extent to which the *Statement* affected peoples' reasons for not expecting benefits, or if the *Statement*'s effect varied by reason. Furthermore, I do not use answers to this question to define the analytic sample, precisely because the *Statement* may have differential effects by the reason for not expecting benefits, especially if the reasons are mistaken. For example, individuals may correctly report that their current occupation is not covered by Social Security, but they may be eligible for retirement benefits based on past employment, or for spousal or survivors' benefits.

[14] This statistic combines the overall effect of 2016 *Statement* receipt (0.3280) and the interaction effect of the prior-knowledge measure, which is the product of the mean literacy score (3.7) and the per-point prior-knowledge effect for 2016 *Statement* recipients (-0.0492), or -0.18204. Thus, $0.3280 - 0.18204 = 0.14596$, rounded to 15 percentage points.

[15] That is, I estimate the *Statement*'s effect on the intensive margin.

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[17] This text varies slightly from year to year, with different projected years of trust fund reserve depletion and fractions of scheduled benefits to be paid, depending on current actuarial assumptions.

[18] Including each question as a separate indicator and interaction with *Statement* receipt does not qualitatively change the findings of this analysis, although doing so limits statistical power. Analysis of the principal components of the seven-question sequence indicates substantial correlation in correctly answering the first four True or False questions. Using one indicator for answering all of the first four correctly and separate indicators for correctly answering the remaining three questions also does not change the findings.

[19] Logit and probit analyses for binary outcomes produced statistically indistinguishable results and are available on request.

[20] Because the outcome measures reflect a static point in time (2017), age clustering is equivalent to clustering at the birth-year level.

[21] This approach also avoids placing a specific functional form on how the effect varies with time since *Statement* receipt and, unfortunately, sample size limitations prevent me from conducting a nonparametric estimation of how the *Statement*'s effect changes over time.

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