BOND Implementation and Evaluation

Extending the Final Evaluation Report: Results through 2019

Deliverable 24f.4

December 30, 2022

Submitted To:
Social Security Administration
Attn: Ms. Monisha Martinez Pardo
Office of Research, Demonstration, and Employment Support
6401 Security Boulevard
Baltimore, MD 21235

Contract No. SS00-10-60011

MATHEMATICA
Policy Research, Inc.

Prepared By:
Judy Geyer
Daniel Gubits
Michelle Wood

Report Context

SSA's Benefit Offset National Demonstration (BOND) randomly assigned SSDI beneficiaries to treatment and control groups to estimate the impacts of alternative SSDI program rules governing work—including a benefit offset policy. BOND included two stages: a large nationally representative sample of beneficiaries in Stage 1 and a smaller sample of volunteers in Stage 2. Previous BOND reports presented findings on main outcomes through 2016.

This new analysis examines the impact of assignment to treatment during a follow-up period through 2019 in which most BOND treatment beneficiaries were no longer subject to the experimental benefit offset policy. These impacts represent the combined effect of having the past experience of the benefit offset policy (for treatment subjects whose benefit rules have reverted to current law) and the current experience of the benefit offset policy (for the few treatment subjects still under the benefit offset policy).

The new analysis also examines impacts on exploratory outcomes not analyzed previously—TWP completion, benefit termination, and benefit reinstatement. Lastly, the new analysis examines how the earnings and benefits of treatment subjects who used the benefit offset evolved after their benefit rules reverted from the benefit offset rules to current law.

Work

Previous analysis did not find statistically significant evidence of an impact of the benefit offset policy on earnings during the 2011 to 2016 period (Gubits et al. 2018, Geyer et al. 2019, and Hoffman et al. 2019). Similarly, the longer-term analysis reported here finds no impact of assignment to treatment on earnings in 2017, 2018, or 2019.

Previous analysis found that the benefit offset increased employment and the proportion of beneficiaries with annual earnings above the annual equivalent of substantial gainful activity. Consistent with the hypothesis that impacts would diminish as treatment subjects' benefits rules revert to current law, we find no evidence of effects on employment in 2017, 2018, or 2019 for either stage.

In Stage 1, we find no evidence of impacts on the proportion with earnings above the annual equivalent of substantial gainful activity (the BOND Yearly Amount) in 2017–2019. However, we find evidence of a small reduction in the proportion with earnings above two times the BOND Yearly Amount in 2017 and 2018, which is consistent with earlier study findings. In Stage 2, we find evidence that assignment to treatment increased the proportion with earnings above the BOND Yearly Amount in 2017 and 2018, consistent with previous findings for 2013–2016. We cannot definitively determine how much of, if any, of these effects are attributable to the past experience of the benefit offset policy as opposed to the current experience of the benefit offset policy.

For Stage 1 and Stage 2 treatment subjects who earned enough to use the offset in at least one year, we found that average earnings and the proportion with annual earnings above the BOND Yearly Amount decreased after the end of the BOND participation period. Among Stage 1 treatment subjects who had used the offset, we also found that employment decreased after the end of the BOND participation period. In both stages, among those who had used the offset, the proportion with any SSDI benefits due dropped by more than 25 percentage points after the end of the BOND participation period.

In Stage 1, we find no statistically significant evidence that assignment to the BOND offset policy affected TWP completion in any year from 2011 to 2019. For Stage 2, we find that assignment to the offset policy increased TWP completion by 2–3 percentage points among those who had not already completed TWP at study enrollment.

Benefits

The observed increase in benefits due among BOND treatment subjects through 2015 (presented in earlier reports) persisted through 2019.

Persistent impact on the percent of beneficiaries with any benefits due in the year can be explained by the proportion of treatment subjects who continued to be subject to the benefit offset policy through 2019.

The benefit offset policy virtually eliminated benefit termination due to work. As treatment subjects returned to current law, benefit termination due to work resumed. In Stage 1, the treatment group had a higher rate of benefit termination than the control group in 2016 and 2017. For Stage 2, the same effect was observed in 2018.

Conclusion

Evidence from the longer-term analysis shows that treatment subjects and control subjects had similar average earnings in later years, but treatment subjects still had higher average benefits due.

This analysis underscores that Gubits et al. (2018) remains the most important source for understanding the impacts of the BOND benefit offset. As Gubits et al. (2018) concluded, the benefit offset policy did not affect average earnings and increased the average amount of SSDI benefits due to beneficiaries.

Table of Contents

List of Exhibits

Acronyms Used in This Report

BOND	Benefit Offset National Demonstration
BPP	BOND Participation Period
BYA	BOND Yearly Amount (equal to 12 × the monthly SGA amount)
CDR	Continuing Disability Review
EWIC	Enhanced Work Incentives Counseling
SGA	Substantial Gainful Activity
SSA	Social Security Administration
SSDI	Social Security Disability Insurance
T1	Stage 1 treatment subjects (subject to the offset rules and offered WIC counseling)
T21	Stage 2 treatment subjects subject to the offset rules and offered WIC counseling
T22	Stage 2 treatment subjects subject to the offset rules and offered EWIC counseling
TTW	Ticket to Work
TWP	Trial Work Period
WIC	Work Incentives Counseling

1. Introduction

This report summarizes findings from longer term, extended analysis of the effects of the $1 for $2 benefit offset tested in the Benefit Offset National Demonstration. The report expands the follow-up period for three to four years beyond that covered in previous BOND reports. Gubits et al. 2018 presented impacts on SSDI benefits due outcomes through 2015. Geyer et al., 2019 and Hoffman et al., 2019 presented impacts on earnings outcomes through 2016. This report presents impacts on those outcomes through 2019. This introduction chapter describes the demonstration, summarizes previous findings, and discusses the new analyses.

1.1. Overview of BOND

The Benefit Offset National Demonstration (BOND) tested changes to Social Security Disability Insurance (SSDI) program rules governing work and other supports. BOND incorporated a $1-for- $2 benefit offset allowing beneficiaries to retain some of their monthly cash benefit while working. BOND also tested an enhanced benefits counseling intervention.

BOND included two stages.

- ***Stage 1*** tested how a national benefit offset would affect earnings and program outcomes for the entire SSDI population. In this stage, the demonstration randomly assigned beneficiaries into either a treatment group "T1" (subject to benefit offset rules and offered Work Incentives Counseling [WIC]) or a current-law control group "C1".
- ***Stage 2*** tested the impact of the offset for those expected to be most likely to use the offset—recruited and informed volunteers. Stage 2 also tested the extent to which enhanced counseling (EWIC) affects impacts. In Stage 2, the demonstration randomly assigned volunteers into one of three assignment groups: a treatment group "T21" (benefit offset rules and offered WIC, or "Offset plus WIC"), a second treatment group "T22" (benefit offset rules and offered EWIC, or "Offset plus EWIC"), or a current-law control group "C2".

The policy objective of the $1 for $2 benefit offset was to encourage beneficiaries who can earn more than the substantial gainful activity (SGA) amount to increase their earnings and reduce their reliance on benefits. The benefit offset was expected to increase the earnings of some who would otherwise earn less than the SGA amount or might not work at all. If such individuals engaged in SGA under the benefits offset rules, their SSDI benefits would be partially reduced. The reduction from full benefits to partial benefits for these beneficiaries created the possibility that the benefit offset policy could reduce the total cost of the SSDI program.

There are, however, opposing effects on earnings and benefits for a small, but important, subgroup of beneficiaries: those who would earn more than the SGA amount under current law. Many of those beneficiaries who would regularly earn more than the SGA amount under current law (and so have suspended benefits) were eligible for a partial SSDI benefit under the offset rules, in effect providing them with a windfall for no change in behavior. In addition, some beneficiaries who would earn more than SGA under current law were expected to choose to earn less when subject to the benefit offset. Such individuals could achieve the same level of income—earnings plus SSDI benefits—with lower earnings.

Thus, the net impact on mean earnings and benefits of all beneficiaries depended on the size of the impacts for beneficiaries who would not earn more than the SGA amount under current law relative to the size of the impacts for those who would earn more than SGA

SSDI Current Law Rules	BOND Benefit Offset Rules
SSDI beneficiaries lose all SSDI benefits after a sustained period of substantial earnings and risk potential loss of other (non-SSDI) benefits. Specifically, SSDI benefit payments are lost if, after completing a nine-month Trial Work Period (TWP) and a three-month grace period (GP), a beneficiary's countable monthly earnings exceed the monthly Substantial Gainful Activity (SGA) amount—in 2022, $1,350 per month for non-blind and $2,260 for blind beneficiaries. For the first 36 months after the TWP is completed (except in the three GP months), SSA suspends benefits when earnings exceed the SGA amount. After these 36 months, SSA terminates SSDI entitlement if any month's earnings exceed the SGA amount. The rules create a "cash cliff" at the SGA threshold, where beneficiaries who earn even slightly above the threshold lose their entire SSDI benefit.	BOND tested a $1 for $2 benefit offset applied to annual earnings above the BOND Yearly Amount (BYA)—the annual equivalent of SSDI's monthly SGA amount. Specifically, after BOND treatment subjects completed the TWP, they entered the BOND Participation Period (BPP), which continued for 60 months. During the BPP, after the beneficiary completed the Grace Period, the benefit offset reduced benefits by $1 for every additional $2 in earnings above the BYA. Beneficiaries who did not complete the TWP by September 30, 2017, lost the opportunity to use the benefit offset. SSA did not terminate SSDI entitlement because of work during the BPP, even if benefits fell to zero because of earnings that were well above the BYA. After the BPP ended, beneficiary engagement in SGA resulted in termination of entitlement to SSDI. In place of the "cash cliff," the benefit offset created a "ramp" at the BYA threshold, gradually lowering SSDI benefits as earnings increased.

1.2. BOND Evaluation

Lead contractor Abt Associates, with its study partner Mathematica and a team of more than 25 other subcontractors, implemented and evaluated the demonstration. The BOND Evaluation encompassed four studies.

- The process analysis described the BOND interventions, evaluated demonstration implementation, and assessed the fidelity of the implementation to the original design.
- The participation analysis described BOND subjects' use of BOND benefits counseling services, work effort, and use of the $1 for $2 benefit offset. The participation analysis examined patterns of participation by subgroups and characteristics that distinguished offset users from other subjects. For Stage 2, the participation analysis also analyzed recruitment, to identify beneficiary characteristics associated with volunteering for the demonstration.
- The impact analysis measured the net impact of the opportunity to use the $1 for $2 benefit offset on BOND subjects' employment, earnings, SSDI benefits, and other outcomes. For Stage 2, the impact analysis also measured the impact of EWIC compared to WIC.
- The benefit-cost analysis compared the benefits and costs of the $1 for $2 benefit offset policy to current SSDI rules. For Stage 2, the benefit-cost analysis also documented the costs and benefits of EWIC. The analysis examined costs and benefits from multiple perspectives; society as a whole, SSDI beneficiaries, the DI Trust Fund, and other government entities.

1.3. Previous Results

Gubits et al., 2018 reported findings for impacts through calendar year 2015, about five years after random assignment for Stage 1, and about four years after random assignment for Stage 2.[1]

- The evaluation found no statistically significant evidence of an impact of the benefit offset policy on average earnings either in the nationally representative Stage 1 sample or in the Stage 2 sample of volunteers. In contrast, the evaluation found that the benefit offset policy increased the average amount of SSDI benefits due to beneficiaries.

- In the nationally representative Stage 1 sample, the benefit offset increased average SSDI benefits by $143 per year (or about $12 per month) during the five-year period. This impact is an increase of slightly more than 1 percent over the current-law average benefits. In the Stage 2 sample, the benefit offset increased average SSDI benefits by $450-$500 annually during the four years. This impact is an increase of about 4 percent over the current-law average benefits.

- Of the Stage 1 sample, 3.6 percent of the treatment group earned enough to trigger the offset, resulting in a reduction in their benefits, in at least one year during the follow-up period, and 2.2 percent did so in the final year examined, 2015.

- The share of beneficiaries in the Stage 2 sample who responded to the offset was higher, as expected. About 15 percent of the treatment groups earned enough to trigger partial benefit payments in any year during the follow-up period, and 10 percent did so in 2015.

Geyer et al., 2019 and Hoffman et al., 2019 examined impacts of the benefit offset on earnings and SSDI benefits paid through calendar year 2016. The evaluation team did not include 2016 in the follow-up period covered by Gubits et al., 2018 because some treatment subjects ended their BOND participation period and reverted to current law during 2016. Nevertheless, most treatment subjects remained under the treatment condition in 2016, making impact analysis for that time period potentially informative for policy.

For about 0.8 percent of Stage 1 treatment subjects, and 10 percent of the Stage 2 treatment subjects, rules governing benefits reverted from BOND benefit offset rules to current law in 2016. Economic theory predicts that reversion to current law would cause some treatment subjects to reduce their annual earnings below BYA while causing others to increase their annual earnings to more than two or three times BYA. Some beneficiaries who were earning above BYA under the offset policy may reduce their monthly earnings below the SGA amount under current law to maintain benefit eligibility. Other beneficiaries who were earning above BYA under the offset policy may increase their earnings under current law to compensate for the loss of partial benefits (an income effect) and in response to the fact that increases in earnings are no longer partially offset by a benefit reduction (a substitution effect). To determine whether such impacts occurred in 2016, the evaluation team estimated impacts for a new subgroup pair, identified

[1] More precisely, Gubits et al., 2018 reported findings for impacts spanning four years and 8 months for Stage 1. Stage 2 enrollment was from March 2011 to September 2012, so follow-up ranged from 3.25 to 5 years (Gubits et al., 2018).

using pre-randomization characteristics: the pre-BOND TWP completers and their complement—those who did not complete the TWP before BOND.

2016 Results for Stage 1

For Stage 1, the pattern of findings in 2016 for the two confirmatory outcomes (earnings and SSDI benefits paid)[2] was similar to the pattern in each of the previous five years, despite reversion to current law.

- Similar to findings from all previous years, the BOND benefit offset did not have a statistically significant impact on total earnings in 2016.
- The analysis found strong evidence that the benefit offset increased SSDI benefits paid in 2016. (The analysis did not examine SSDI benefits due.[3])

2016 Results for Stage 2

For Stage 2, despite the reversion to current law, the full sample 2016 impacts were not statistically different from the 2015 impacts.

- Similar to all prior years of the demonstration, for the full sample, Geyer et al., 2019 reported no confirmatory evidence that the offset plus WIC or the offset plus EWIC had an impact on earnings in 2016.
- The analysis found no statistically significant evidence that EWIC had a different impact on earnings than WIC.
- Similar to the prior findings, Geyer et al., 2019 found that the offset plus WIC and the offset plus EWIC increased benefits paid in 2016. The analysis again found no evidence that EWIC had a different impact on benefits paid than WIC.

Roughly four percent of the person-months in the Stage 2 treatment group fell under current law instead of the offset rules, due to some treatment subjects' reversion to current law for at least one month in 2016. For treatment subjects most likely to use the offset (those who had completed a TWP prior to random assignment), the analysis found some exploratory evidence that reversion to current law resulted in smaller impacts on the proportion with earnings above BYA. This suggests that reversion to current law may have dampened the Stage 2 full sample impact estimates for 2016. Any dampening effect was small, however.

---

[2] Previous BOND reports considered the impact estimates for earnings and SSDI benefits as confirmatory evidence and the tests for statistical significance of these estimates as confirmatory statistical tests. The analysis adjusted the p-values for these statistical tests for the multiple comparisons. We consider the evidence presented in this report as exploratory and we do not apply a multiple comparisons correction to the results.

[3] See Gubits et al., 2018, Volume 2, Appendix A for a discussion of the differences between the benefits paid and benefits due measures.

1.4. Topics Addressed in this Report

This report presents findings about the impacts of the benefit offset through 2019, a longer follow up period than examined previously. The report also explores the impacts of the $1 for $2 benefit offset on new outcomes not analyzed previously.

This analysis addresses five research questions:

1. What was the impact of assignment to treatment on earnings, employment, and benefits due through calendar year 2019 for the nationally representative Stage 1 sample and the Stage 2 volunteer sample?

2. What was the impact of the benefit offset policy on TWP completion?

3. What was the impact of the benefit offset policy on benefit termination due to work and benefit reinstatement?

4. For those who completed their TWP after random assignment, how did the benefit offset policy affect earnings after TWP completion?

5. How did offset users' average earnings and benefits change when SSDI benefits rules reverted from the BOND benefit offset policy to current law?

To address these questions, this report details findings from five new analyses, described below.

- We examined the pace of reversion to current law in 2016–2019 (Chapter 2).

- For the full Stage 1 and Stage 2 samples, we used the same impact analysis methodology as Gubits et al. (2018) to estimate the impact of assignment to treatment on earnings- and benefit-related outcomes in 2017–2019. A declining proportion of treatment beneficiaries were subject to benefit offset rules in 2017–2019. Any impact of assignment to treatment in later years reflects a combination of two phenomena. For beneficiaries who would continue to be subject to the benefit offset policy during this period if assigned to the treatment group, the difference is attributable to the effect of the benefit offset policy relative to current law. For beneficiaries who would no longer be subject to the benefit offset during this period if randomly assigned to the treatment group, the difference is attributable to the experience of having been subject to the benefit offset policy in the past. It is possible that a behavior change due to the benefit offset policy (such as being induced to increase annual earnings above the BYA threshold) might have continued even after that policy reverted back to current law. Chapter 4 presents impacts of assignment to treatment on earnings for the period 2017 through 2019, Chapter 5 presents impacts of assignment to treatment on SSDI benefits due for the period 2016 through 2019.

- For the full Stage 1 and Stage 2 samples, we used the same impact analysis methodology to examine new exploratory outcomes not analyzed previously—TWP completion, benefit termination due to work, and benefit reinstatement—for the period 2011 through 2019. Chapter 4 presents impacts on TWP completion and Chapter 5 presents impacts on benefit termination due to work, and reinstatement.

- We examined how beneficiaries' earnings evolve after TWP completion (Chapter 4).
- We examined how beneficiaries' earnings (Chapter 4) and SSDI benefits outcomes (Chapter 5) evolve after the end of the BPP.

2. Reversion to Current Law

This chapter describes the timing of treatment subjects' reversion to current law and how the timing affects interpretation of estimated impacts for annual earnings and benefits measures between 2016 and 2019. Reversion to current law may have influenced 2016-2019 impacts if treatment subjects altered their earnings in response to the change in work incentives under current-law relative to offset rules. To maintain benefit eligibility, some beneficiaries who were earning above BYA under the offset rules may have chosen to reduce their earnings below the SGA amount when they reverted to current law. Other beneficiaries who were earning above BYA under the offset rules may have chosen to increase their earnings when their benefit rules reverted to current law to compensate for the loss of partial benefits.

The benefit offset was a time-limited opportunity. After treatment subjects completed a TWP, they entered the BPP which continued for 60 months. During the BPP, after the beneficiary completed the Grace Period, the benefit offset reduced annual benefits by $1 for every additional $2 in annual earnings above the BYA. Beneficiaries who did not complete the TWP by September 30, 2017, lost the opportunity to use the benefit offset. Given that the majority of treatment subjects had not completed a TWP by September 2017, most treatment group members reverted to current law by October 2017. However, some treatment group members were subject to the benefit offset rules as late as September 30, 2022, five years after the TWP completion cut-off date of September 30, 2017. Therefore, some treatment group members were still subject to the benefit offset rules through 2019, the last year of the follow-up period examined in this report. Exhibit 2-1 shows the proportion of treatment subjects who experienced the benefit offset rules in at least one month of the year for years 2016 through 2019. The red line in Exhibit 2-2 shows the percentage of T1 person-months that were subject to the BOND offset policy in each year. Exhibits A-1 and A-2 in the Appendix show the same trend for the T21 and T22 subjects, respectively.

- For Stage 1 treatment subjects, 68 percent of person-months were subject to the BOND offset policy in 2017, declining to 2 percent of person-months in 2019.
- For Stage 2 treatment subjects, 67 percent of person-months were subject to the BOND offset policy in 2017, declining to 6 percent of person-months in 2019.

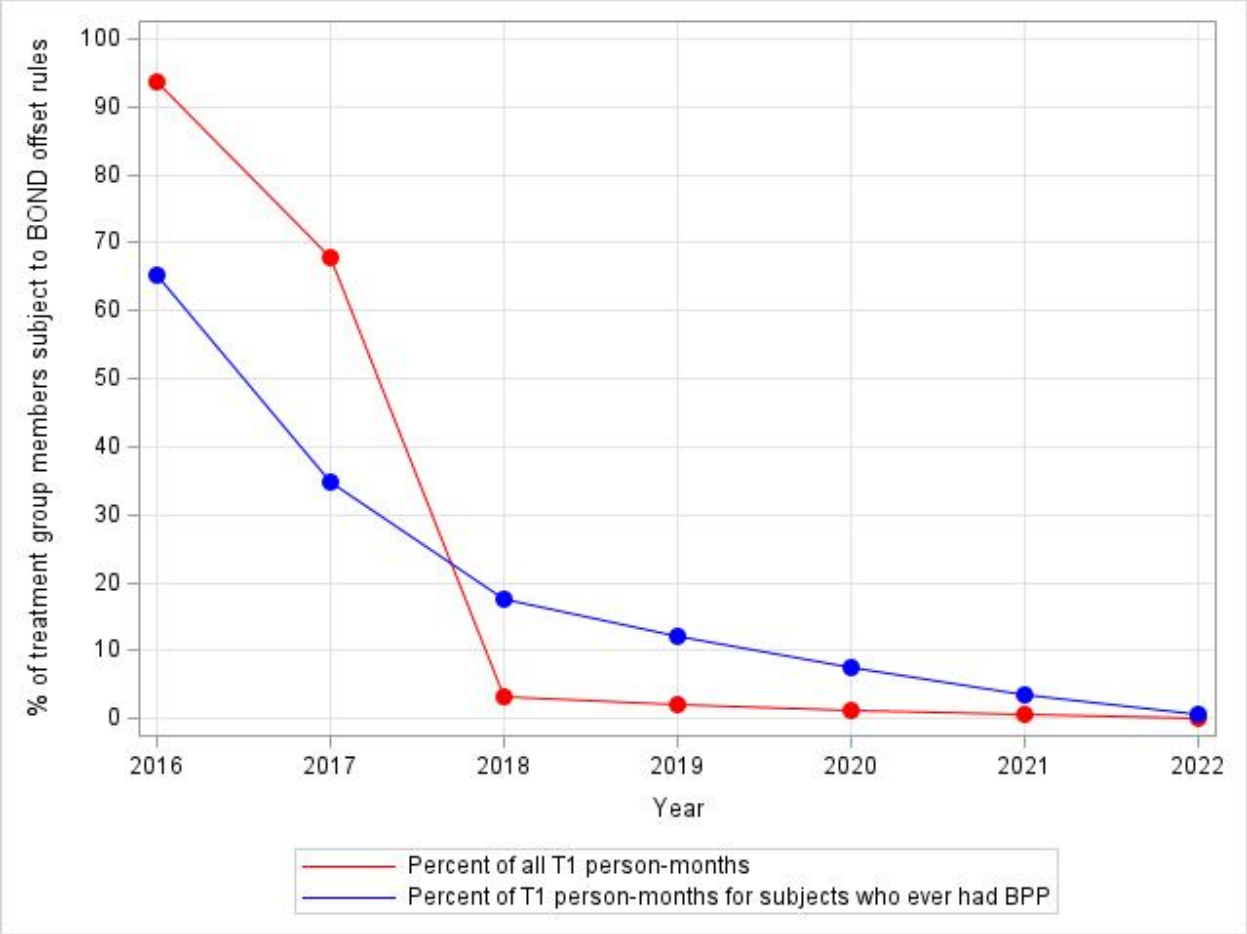
The proportion of treatment group members subject to the benefit offset rules declined steeply but impacts of the benefit offset may not have decreased at the same rate. Compared to treatment subjects who did not start a BPP, treatment subjects in a BPP may have had the largest influence on the full sample impacts. The percentage of person-months subject to the benefit offset policy for those with a BPP declined more slowly than the percentage of person-months subject to the benefit offset policy for all treatment subjects. The blue line in Exhibit 2-1 shows that the decline in the percentage of person-months subject to the BOND offset policy for those with a BPP was slower (less steep) than for the full treatment group, but still resulted in percentages lower than 20 percent in 2018 or 2019.

Exhibit 2-1. Percentage of Treatment Subjects Under the Benefit Offset Rules for at Least One Month of the Year

	T1	T21	T22	T21+T22
2017	88.5	89.1	88.3	88.8
2018	3.1	11.9	11.8	11.8
2019	2.2	7.5	7.0	7.3

Source: BTS data.
Note: These proportions are weighted to aid in interpretation of the weighted impact estimates in Chapters 4 and 5 of this report. For Stage 1, weights are used to ensure that the BOND subjects who met analysis criteria are representative of the national beneficiary population in the month of random assignment. For Stage 2, weights are used to ensure that the BOND subjects who met analysis criteria are representative of the national population of SSDI-only beneficiaries who would volunteer for study enrollment.

Exhibit 2-2. Percentage of T1 Person-months Subject to the Benefit Offset Policy Between 2016 and 2022



Source: BTS data.
Note: This exhibit shows the percentages of person-months, for which the denominator is 12 times the number of T1 subjects (77,101). If all beneficiaries were subject to the benefit offset policy in all 12 months of the year, the measure would be 100 percent. The percent of T1 person-months subject to the BOND benefit offset rules was 0.12% in 2022 (more than 0%), and 0.65% for T1 subjects who ever had a BPP.

3. Data and Methods

The goals of the new analyses reported here were to (a) estimate impacts of the benefit offset on earnings outcomes in 2017 to 2019 and benefit outcomes in 2016 to 2019; (b) estimate impacts on new outcomes from 2012 to 2019; (c) describe how the benefit offset affected earnings after TWP completion; and (d) describe how earnings and benefits evolved for offset users after their BPP ended. While it introduces new outcomes, this report does not introduce new data sources. This report relies on updated extracts from data sources used in earlier BOND reports.

3.1. Data Sources

This report uses administrative data from SSA and from the BOND Implementation Team. Earnings are measured from the SSA Master Earnings File (MEF) extracted in June 2022. The MEF contains longitudinal information on wages (from employer W-2 forms) and self-employment income reported to the Internal Revenue Service (IRS). The MEF records were considered complete for calendar years 2017 to 2019 when SSA extracted them for this report. The report also uses data from the Disability Analysis File (DAF) to measure TWP completion and several benefits measures—benefits due, suspension, termination due to work, and reinstatement. The DAF contains SSA administrative data pertaining to program participation and benefits for SSDI and SSI beneficiaries who have received disability benefits in any month since 1996. The DAF data for later years (especially 2019), likely overstate benefits due and understate TWP completion and benefit suspensions and terminations. This reflects the fact that the data in the 2020 DAF reflect what was known as of December 2020, only a year after the 2019 time points, and that the time needed for CDR processing creates substantial delays between when earnings trigger changes to benefits and when these changes are reflected in the data. This report also uses March 2022 extracts from the Beneficiary Tracking System from the BOND Implementation Team. These data sources are summarized in Exhibit 3-1.

Exhibit 3-1. Data Sources Used in the BOND Evaluation

Data Source	Description	Information Provided and Used in This Report
From Demonstration Operations		
BOND Operations Data System (BODS) and Beneficiary Tracking System (BTS)	• Data management system developed for BOND. • The Beneficiary Tracking System (BTS) documents beneficiaries' contacts with the demonstration and information from SSA regarding SGA cessation and use of the benefit offset.	• Random assignment result • Use of offset • BPP information *Used to study the timing of reversion to current law.*
From Administrative Data Systems		
Master Earnings File (MEF)[4]	• Longitudinal information on wages and self-employment income reported to the IRS. • MEF measures Social Security Earnings, earnings that are taxable for Social Security purposes.	• Annual earnings for all BOND subjects *Used to measure impacts of BOND interventions on earnings outcomes*
Disability Analysis File (DAF)	• The DAF contains information about SSDI beneficiaries' benefits due, benefits paid, benefits receipt status, benefit termination reasons, number of months in the TWP, dates of TWP completion, and death date.	• SSDI benefits due for all BOND subjects • Death • TWP completion • Benefit suspension • Termination due to work • Reinstatements *Used to measure impacts of BOND interventions on TWP completion and benefit outcomes.*
Master Beneficiary Record (MBR)	• The MBR contains information about SSDI beneficiaries' claim, payment amounts, and payee information for the benefits.	• Demographic information for the full BOND sample (date of onset, duration receiving SSDI, primary impairment) *Used to construct covariates used in the impact analysis.*

3.2. Methodology

We used the same methodology as Gubits et al., (2018) to estimate the impacts of assignment to treatment on earnings, employment, and TWP completion (Chapter 4); and benefits due, termination due to work, and reinstatement (Chapter 5) for the years covered in this report. Specifically, the impact estimation methodology addresses the first three research questions of this report:

[4] Because the data are collected by the IRS and are therefore subject to IRS access rules, SSA staff have direct access to MEF data, but contractors do not. Consequently, qualified SSA staff accessed the data; submitted programs developed by the BOND Evaluation Team to estimate impacts, reviewed output to ensure that it complied with privacy requirements, and then transmitted the output to the evaluation team. The MEF earnings data are updated annually. The earnings data for this report were extracted in January 2022.

1. What was the impact of assignment to treatment on earnings, employment, and benefits due through calendar year 2019 for the nationally representative Stage 1 sample and the Stage 2 volunteer sample?

2. What was the impact of the benefit offset policy on TWP completion?

3. What was the impact of the benefit offset policy on benefit termination due to work and benefit reinstatement?

For analysis of outcomes in 2016, 2017, 2018, and 2019, the impact estimates from the Gubits et al., (2018) methodology represent the combined effect of having the past experience of the benefit offset policy (for those whose benefit rules have reverted to current law) and the current experience of the benefit offset policy (for those still under the benefit offset policy—see Exhibit 2-1). The reason we continue to use the Gubits et al., (2018) approach is that no alternative satisfactory inference approach can isolate the impact of the past experience of the benefit offset policy on a nationally representative sample of DI beneficiaries who were eligible for BOND in 2011/2012, nor isolate the impact of the benefit offset on those would still be subject to the benefit offset in 2017, 2018, or 2019 if they had been randomly assigned to the treatment group. Such an alternative inference approach would need to identify which beneficiaries assigned to the control group would be subject to current law, or the benefit offset policy, in 2017, 2018, and 2019 if they had, alternatively, been assigned to the treatment group.

- The statistical method for studying Stage 1 generates inferences about the impact of assignment to treatment if it had been applied to all SSDI beneficiaries in the nation who met the BOND eligibility criteria as of May 2011. The randomized control design of the demonstration supports the production of unbiased impact estimates and their standard errors for that nationwide population.
- The statistical method for studying Stage 2 generates inferences about the impact of assignment to treatment among all DI beneficiaries who would be eligible to participate in BOND and would volunteer to participate in BOND. The method compares mean outcomes for the T21, T22 and C2 groups in three pairwise comparisons:

  (1) T21 vs C2;
  (2) T22 vs C2; and
  (3) T21 vs T22.

Instead of using the impact methodology, we used a trend analysis to answer research question four (Section 4.2):

4. For those who completed their TWP after random assignment, how did the benefit offset policy affect earnings after TWP completion?

Focusing only on the sample of treatment and control beneficiaries who completed a TWP after random assignment, we used linear regression to study trends in earnings before and after TWP completion while controlling for individual fixed effects. In the regression models for analyzing TWP completion, we included terms for the interaction of assignment group with year relative to TWP completion. In the TWP completion analysis, we tested for whether the year relative to TWP completion was associated with a difference in the control group average. We implemented this test by comparing each year relative to

TWP completion with the year of TWP completion (year "0"). We also tested whether these associations between year and outcome were different for the treatment group than they were for the control group.

We used a different trend analysis to answer research question five (Section 4.3 and 5.4):

5. How did offset users' average earnings and benefits change when SSDI benefits rules reverted from the BOND benefit offset policy to current law?

Specifically, we used interrupted time series models that compared the outcome trends in the three years leading up to the year of BPP completion to outcomes in the year of BPP completion, the first year after BPP completion, and the second year after BPP completion. If the mean value of an outcome in the year of BPP completion or in the two years after is statistically significantly different from the trend established in the three years before the year of BPP completion, we conclude that the reversion from the benefit offset policy to current law had an effect on some treatment subjects.

For all analyses in this report, we consider the results to be exploratory. Therefore, we do not apply a multiple comparisons adjustment to *p*-values for the purpose of hypothesis testing.

4. Earnings

This chapter presents impacts of assignment to treatment on earnings-related outcomes in 2017, 2018, and 2019. These impacts represent the combined effect of having the past experience of the benefit offset policy (for those whose benefit rules have reverted to current law) and the current experience of the benefit offset policy (for those still under the benefit offset policy—see Exhibit 2-1). We expect that the effect of having past experience of the benefit offset policy is between zero (because changes in behavior caused by the benefit offset policy change back when benefit rules revert to current law) and a similar magnitude and direction of the impact estimates reported by Gubits et al., (2018) (because changes in behavior caused by the benefit offset policy continue even after benefit rules revert to current law). As more treatment beneficiaries' benefit rules revert to current law, we hypothesized that average impacts of assignment to treatment would wane (i.e., that the effect of the past experience of the benefit offset policy would be smaller than the contemporaneous effect of the benefit offset policy that was observed in prior periods) and that no new differences in earnings and employment would emerge.

For the years 2011 through 2016, the evaluation had found no statistically significant evidence of an impact of the benefit offset policy on average earnings either in the nationally representative Stage 1 sample or in the Stage 2 sample of volunteers (Gubits et al. 2018; Hoffman et al. 2019; Geyer et al. 2019). With no previous statistically significant evidence of an impact of the benefit offset policy on average earnings and with a decreasing proportion of treatment subjects under the offset rules in 2017–2019, we do not expect to observe impacts on earnings in these years.

Analysis through 2015 found that, consistent with theory, the benefit offset increased employment in both stages (Gubits et al. 2018). The 2016 analyses did not detect an impact of the benefit offset policy on employment in Stage 1 or in the Stage 2 offset plus WIC versus control comparison but did find that the benefit offset plus EWIC increased employment relative to current law (Hoffman et al. 2019; Geyer et al. 2019). With a decreasing proportion of treatment subjects under the offset rules in 2017–2019 than in previous years, we expect any impacts of assignment to treatment on employment to wane over time.

As with employment, analysis through 2015 found theoretically-predicted positive impacts of the offset on annual earnings above BYA in both stages (Gubits et al. 2018). This analysis also found evidence that the benefit offset reduced the proportion of beneficiaries with annual earnings above two and three times BYA in Stage 1, but neither effect was found in Stage 2. The 2016 Stage 1 analysis found no impacts on the proportion of subjects with earnings above one, two, or three times BYA (Hoffman et al. 2019), therefore we do not expect any impacts of assignment to treatment on these outcomes for Stage 1 in 2017-2019. The 2016 Stage 2 analysis did detect a positive impact on the proportion of subjects with annual earnings above BYA for each treatment group compared to the control group for 2016, but no impacts at the two and three times BYA thresholds (Geyer et al. 2019). If there is an effect of past experience of the benefit offset policy, the impact of assignment to treatment in Stage 2 on the proportion with annual earnings above BYA during 2017–2019 could continue at the two-percentage-point level (the size of the observed impacts in 2016). However, if assignment to treatment only has an effect on those currently under the benefit offset policy, we would expect that impacts of assignment to treatment on annual earnings above the BYA thresholds would wane because of the decreasing proportion of treatment subjects under offset rules.

This chapter also presents impacts of the benefit offset on TWP completion for the years 2011 through 2019. The benefit offset may have enticed treatment subjects to complete a TWP, because they had to complete a TWP to take advantage of the benefit offset.

Finally, this chapter describes trends in earnings, employment, and substantial gainful activity among treatment subjects who completed a BPP and used the offset at least once. Economic theory predicts that some offset users would reduce earnings at the end of their BPP to avoid termination due to work. Theory also predicts that others would remain employed and increase their earnings in response to benefit termination due to work. Combining these two types of offset users, it was not clear whether one effect would dominate the other.

4.1. Earnings, Employment, and Substantial Gainful Activity

There is no statistically significant evidence that assignment to treatment had an impact on annual earnings in 2017, 2018, or 2019 for either Stage 1 or Stage 2. This finding is consistent with previous findings. Exhibits 4-1 and 4-2 present impact estimates on earnings for Stage 1 and Stage 2, respectively.

Exhibit 4-1. Estimated Impacts of Assignment to Treatment on Annual Earnings in 2017-2019 for Stage 1 Subjects

Outcome	T1 Mean	C1 Mean	Impact Estimate	Standard Error
Total earnings ($ for Year)				
2017	$1,810	$1,811	$-0	($32)
2018	$1,896	$1,917	$-21	($33)
2019	$1,997	$2,010	$-13	($40)

Source: SSA administrative records from the MEF and MBR.
Notes: The impact of assignment to treatment is the combined effect of the past experience of the benefit offset policy (for those whose benefit rules have reverted to current law) and the current experience of the benefit offset policy (for those still under the benefit offset policy). All earnings outcomes are based on a measure of earnings subject to Social Security taxes. Weights are used to ensure that the BOND subjects who met analysis criteria are representative of the national beneficiary population in the month of random assignment. Means and impact estimates are regression-adjusted for baseline characteristics. All dollar amounts are inflation-adjusted to 2016 dollars using the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W). Unweighted sample sizes: T1 = 77,101; C1 = 891,429.
*/**/*** Impact estimate is significantly different from zero at the .10/.05/.01 levels, respectively, using a two-tailed t-test with 9 degrees of freedom (resulting from a research design involving 10 study sites) and with no multiple-comparisons adjustment.

Exhibit 4-2. Estimated Impacts of Assignment to Treatment on Annual Earnings in 2017-2019 for Stage 2 Subjects

Outcome	T21 Mean	T22 Mean	C2 Mean	Estimated Impact: T21 vs. C2	T21 vs. C2 SE	Estimated Impact: T22 vs. C2	T22 vs. C2 SE	Estimated Impact: T22 vs. T21	T22 vs. T21 SE
Total earnings ($ for Year)									
2017	$5,335	$5,338	$5,015	$321	($287)	$323	($287)	$3	($289)
2018	$5,362	$5,509	$5,138	$224	($272)	$370	($307)	$146	($304)
2019	$5,445	$5,483	$5,262	$183	($354)	$222	($313)	$39	($319)

Source: SSA administrative records from the MEF, MBR, and the Stage 2 Baseline Survey.
Notes: The impact of assignment to treatment is the combined effect of the past experience of the benefit offset policy (for those whose benefit rules have reverted to current law) and the current experience of the benefit offset policy (for those still under the benefit offset policy). All earnings outcomes are based on a measure of earnings subject to Social Security taxes. Weights are used to ensure that the BOND subjects who met analysis criteria are representative of the national population of SSDI-only beneficiaries who would volunteer for study enrollment. Standard errors are in parentheses. Means and impact estimates are regression-adjusted for baseline characteristics. All dollar amounts are inflation-adjusted to 2016 dollars using the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W).
Unweighted sample sizes: T21 = 4,854, T22 = 3,041, C2 = 4,849.
*/**/*** Impact estimate is significantly different from zero at the .10/.05/.01 levels, respectively, using a two-tailed t-test with 9 degrees of freedom (resulting from a research design involving 10 study sites) and with no multiple-comparisons adjustment.

There is also no evidence of an impact of assignment to treatment on employment levels in 2017, 2018, or 2019 for either Stage (Exhibits 4-3 and 4-4). This finding is consistent with the hypothesis that any impacts of assignment to treatment would fade over time due to the sharply declining proportions in the treatment groups that were subject to the benefit offset rules.

Also consistent with the hypothesis that impacts of the benefit offset would fade over time, there is no evidence of impacts of assignment to treatment on the proportion with earnings above BYA in 2017, 2018, and 2019 for Stage 1 (Exhibit 4-3). We did find evidence that assignment to treatment reduced the proportion of beneficiaries with annual earnings above two times BYA in 2017 and 2018, but not in 2019. Reduction in the proportion with earnings above two times BYA is consistent with theory and is consistent with evidence of small reductions in this proportion as reported for 2011-2015 (Gubits et al, 2018). We did not, however, detect a statistically significant impact of assignment to treatment on the proportion with annual earnings above three times BYA in any year 2017–2019.

Among Stage 2 subjects, assignment to treatment increased the proportion of subjects with annual earnings above BYA in 2017 and 2018, but not in 2019 (Exhibit 4-4). Assignment to the offset combined with WIC increased the proportion with earnings above BYA in 2017 and assignment to the offset combined with EWIC increased the proportion with earnings above BYA in 2017 and 2018 (Exhibit 4-4). It is possible that these impacts provide evidence that past experience of the benefit offset could affect employment and whether earnings levels exceed BYA after reversion to current law, but it is also plausible that the impact is generated partly by treatment subjects still in their BPP and thus subject to the benefit offset policy. For Stage 2, we did not detect an impact of assignment to treatment on the proportion of subjects with annual earnings above two and three times BYA in any year 2017–2019.

Exhibit 4-3. Estimated Impacts of Assignment to Treatment on Employment and Earnings at BYA Thresholds in 2017-2019 for Stage 1 Subjects

Outcome	T1 Mean	C1 Mean	Impact Estimate	Standard Error
Employment during period (%)				
2017	15.08	14.89	0.19	(0.16)
2018	14.96	14.94	0.01	(0.16)
2019	14.57	14.72	-0.15	(0.16)
Earnings above BYA during year				
2017	3.59	3.56	0.02	(0.08)
2018	3.93	3.93	0.00	(0.08)
2019	4.19	4.13	0.06	(0.10)
Earnings above 2xBYA during year				
2017	1.62	1.73	-0.11*	(0.05)
2018	1.81	1.93	-0.13**	(0.06)
2019	1.97	2.06	-0.09	(0.07)
Earnings above 3xBYA during year				
2017	0.89	0.91	-0.02	(0.04)
2018	0.96	1.03	-0.06	(0.04)
2019	1.03	1.08	-0.04	(0.06)

Source: SSA administrative records from the MEF and MBR.

Notes: The impact of assignment to treatment is the combined effect of the past experience of the benefit offset policy (for those whose benefit rules have reverted to current law) and the current experience of the benefit offset policy (for those still under the benefit offset policy). All earnings outcomes are based on a measure of earnings subject to Social Security taxes. Weights are used to ensure that the BOND subjects who met analysis criteria are representative of the national beneficiary population in the month of random assignment. Means and impact estimates are regression-adjusted for baseline characteristics. All dollar amounts are inflation-adjusted to 2016 dollars using the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W). Unweighted sample sizes: T1 = 77,101; C1 = 891,429.

*/**/*** Impact estimate is significantly different from zero at the .10/.05/.01 levels, respectively, using a two-tailed t-test with 9 degrees of freedom (resulting from a research design involving 10 study sites) and with no multiple-comparisons adjustment.

Exhibit 4-4. Estimated Impacts of Assignment to Treatment on Employment and Earnings at BYA Thresholds in 2017-2019 for Stage 2 Subjects

Outcome	T21 Mean	T22 Mean	C2 Mean	Estimated Impact: T21 vs. C2	T21 vs. C2 SE	Estimated Impact: T22 vs. C2	T22 vs. C2 SE	Estimated Impact: T22 vs. T21	T22 vs. T21 SE
Employment during period (%)									
2017	36.58	37.55	35.39	1.20	(1.03)	2.17	(1.21)	0.97	(1.32)
2018	35.29	35.21	34.35	0.94	(1.03)	0.86	(1.17)	-0.08	(1.18)
2019	33.84	33.08	33.42	0.42	(1.03)	-0.35	(1.25)	-0.76	(1.53)
Earnings above BYA during year									
2017	11.83	11.81	10.16	1.68*	(0.83)	1.65*	(0.79)	-0.03	(0.83)
2018	12.12	12.57	10.70	1.42	(0.78)	1.87**	(0.82)	0.45	(0.84)
2019	12.39	12.53	11.44	0.95	(0.76)	1.10	(0.83)	0.15	(0.85)
Earnings above 2xBYA during year									
2017	5.76	5.49	5.25	0.51	(0.59)	0.24	(0.58)	-0.27	(0.59)
2018	5.91	6.31	5.84	0.06	(0.53)	0.46	(0.61)	0.40	(0.61)
2019	6.19	6.67	6.05	0.13	(0.54)	0.62	(0.71)	0.48	(0.64)
Earnings above 3xBYA during year									
2017	2.59	2.58	2.30	0.29	(0.39)	0.28	(0.42)	-0.01	(0.41)
2018	2.84	3.17	2.95	-0.12	(0.37)	0.22	(0.44)	0.34	(0.44)
2019	2.73	2.94	3.10	-0.37	(0.45)	-0.16	(0.49)	0.22	(0.43)

Source: SSA administrative records from the MEF, MBR, and the Stage 2 Baseline Survey.
Notes: The impact of assignment to treatment is the combined effect of the past experience of the benefit offset policy (for those whose benefit rules have reverted to current law) and the current experience of the benefit offset policy (for those still under the benefit offset policy). All earnings outcomes are based on a measure of earnings subject to Social Security taxes. Weights are used to ensure that the BOND subjects who met analysis criteria are representative of the national population of SSDI-only beneficiaries who would volunteer for study enrollment. Standard errors are in parentheses. Means and impact estimates are regression-adjusted for baseline characteristics. All dollar amounts are inflation-adjusted to 2016 dollars using the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W).
Unweighted sample sizes: T21 = 4,854, T22 = 3,041, C2 = 4,849.
*/**/*** Impact estimate is significantly different from zero at the .10/.05/.01 levels, respectively, using a two-tailed t-test with 9 degrees of freedom (resulting from a research design involving 10 study sites) and with no multiple-comparisons adjustment.

Synthesizing across Stage 1 and Stage 2, we find some evidence of effects of assignment to treatment in 2017–2019. But we cannot determine how much of, if any, of these effects are attributable to the past experience of the benefit offset policy as opposed to the current experience of the benefit offset policy. Earlier impacts on employment for Stage 1 and on the proportion with annual earnings above BYA for Stage 1 did not persist in later years. Still, we find that assignment to treatment reduced the proportion of beneficiaries with annual earnings above two times BYA in 2017 and 2018 for Stage 1. The effect magnitude of a tenth of a percentage point is small enough to allow the possibility that this impact was generated solely by the 88.5 percent and 3.1 percent of T1 subjects under the offset rules for at least one month in 2017 and 2018, respectively (Exhibit 2-1). It is possible, however, that this impact stemmed from the past experience of the offset. For Stage 2 subjects, 2012–2015 impacts on employment did not persist in 2017, 2018, and 2019. However, assignment to treatment increased the proportion with annual earnings above BYA in 2017 and 2018 by 1.5–2 percentage points, which is more than half of the impact on the proportion with annual earnings above BYA in years 2013–2016 (2–3 percentage points; Gubits et al. 2018, Geyer et al. 2019). By 2018, only 11.8 percent of Stage 2 treatment subjects were under the

offset rules for at least one month, so the estimated impact of just under 2 percentage points could be, in whole or in part, plausibly generated by treatment subjects' whose past experiences of the benefit offset affected their earnings behavior after their benefit rules reverted to current law. On the other hand, it is also possible that the Stage 2 treatment subject still under the offset rules in 2017 and 2018 accounted for the entire impacts of assignment to treatment on the proportion with annual earnings above BYA in these years.

4.2. TWP Completion

For this report, we estimated impacts on an outcome that was not previously examined: TWP completion. A forward-looking treatment beneficiary who had not already completed a TWP at the time of study enrollment might complete a TWP because they are enticed by the prospect of using the benefit offset in the future. We find no statistically significant evidence that the BOND offset policy had an impact on Stage 1 beneficiaries' rates of TWP completion, but there is statistically significant evidence that the BOND offset policy increased Stage 2 beneficiaries' rates of TWP completion. Exhibits 4-5 and 4-6 display annual impacts and the proportion that completed the TWP since random assignment for Stage 1 and Stage 2 subjects ("TWP completers"), respectively. We restrict the analysis to beneficiaries who had not already completed a TWP prior to random assignment. In Stage 1, similar proportions of beneficiaries in the treatment and control groups completed the TWP over time:

- 5.0 percent of the Stage 1 control group completed a TWP between random assignment and 2016, as did 5.1 percent of the Stage 1 treatment group.
- 6.6 percent of the Stage 1 control group completed a TWP between random assignment and 2019, also 6.8 percent for the Stage 1 treatment group.

In Stage 2, the benefit offset policy caused an increase in TWP completion among those who had not already completed a TWP prior to random assignment.

- 19.0 percent of the Stage 2 control group completed a TWP between random assignment and 2016 compared to 20.9 and 21.7 percent for T21 and T22, respectively. This represents an increase of roughly 2 percentage points and the increase is statistically significant in the T21 vs. C2 comparison. The cumulative difference through 2015 in the T22 vs. C2 comparison (about 2 percentage points) is also statistically significant. These statistically significant increases in TWP completion reflect the impact of the benefit offset policy.
- 22.3 percent of the Stage 2 control group completed a TWP between random assignment and 2019 compared to 24.6 and 25.1 percent for T21 and T22, respectively. This is an increase of over 2 percentage points and the increase is statistically significant for both T21 vs. C2 and T22 vs. C2. These differences reflect the impact of the benefit offset policy when treatment subjects were under the benefit offset policy and any impact the past experience of the benefit offset policy may have had on treatment subjects after their benefit rules reverted to current law.

The lack of an impact on TWP completion in Stage 1 indicates that, on average, a nationally representative sample of DI beneficiaries who would not complete a TWP under current law were not spurred by the benefit offset opportunity to sustain earnings above the TWP threshold for nine months.

Among beneficiaries who would volunteer for BOND Stage 2, the benefit offset spurred volunteers to sustain earnings above the TWP threshold and complete their TWP. Among Stage 2 volunteers, the offset increased TWP completion by 2–3 percentage points, roughly an eleven percent increase in the

probability of TWP completion compared to the control group. This finding is consistent with the hypothesis that for those inclined to work and those interested in participating in BOND (i.e., Stage 2 volunteers), the benefit offset policy would be an inducement to complete the TWP.

To explore whether the offset has an effect after TWP completion, we analyzed the outcomes of post-random assignment TWP completers relative to their year of TWP completion. Exhibits 4-7 and 4-8 show the average earnings in the year leading up to TWP completion, the year of TWP completion (year 0), and years after TWP completion for Stage 1 and Stage 2 subjects, respectively.

Exhibit 4-5. Estimated Impacts of Assignment to Treatment on TWP Completion Since Random Assignment in 2011-2019 for Stage 1 Subjects

Outcome Year	T1 Mean	C1 Mean	Impact Estimate	Standard Error
Completed Trial Work Period Since Random Assignment				
2011	0.71	0.77	-0.06	(0.04)
2012	1.85	1.82	0.04	(0.06)
2013	2.77	2.70	0.06	(0.08)
2014	3.60	3.50	0.09	(0.08)
2015	4.41	4.29	0.11	(0.09)
2016	5.07	5.00	0.07	(0.10)
2017	5.69	5.62	0.07	(0.11)
2018	6.33	6.19	0.10	(0.14)
2019	6.77	6.61	0.15	(0.13)

Source: SSA administrative records from the DAF and MBR.
Notes: From 2011–2015, the impact of assignment to treatment represents the impact of the benefit offset policy. From 2016–2019, the impact of assignment to treatment represents the combined effect of the past experience of the benefit offset policy (for those whose benefit rules have reverted to current law) and the current experience of the benefit offset policy (for those still under the benefit offset policy). Weights are used to ensure that the BOND subjects who met analysis criteria are representative of the national beneficiary population in the month of random assignment. Means and impact estimates are regression-adjusted for baseline characteristics.
Unweighted sample sizes: T1 = 69,195; C1 = 779,559. Sample is restricted to T1 and C1 subjects that had not already completed a TWP prior to random assignment. These numbers are slightly different than those used by Hoffman et al., 2019 because they rely on updated data.
*/**/*** Impact estimate is significantly different from zero at the .10/.05/.01 levels, respectively, using a two-tailed t-test with 9 degrees of freedom (resulting from a research design involving 10 study sites) and with no multiple-comparisons adjustment.

Exhibit 4-6. Estimated Impacts of Assignment to Treatment on TWP Completion Since Random Assignment in 2011-2019 for Stage 2 Subjects

Outcome Year	T21 Mean	T22 Mean	C2 Mean	Estimated Impact: T21 vs. C2	T21 vs. C2 SE	Estimated Impact: T22 vs. C2	T22 vs. C2 SE	Estimated Impact: T22 vs. T21	T22 vs. T21 SE
Completed Trial Work Period Since Random Assignment									
2011	0.63	0.97	0.85	-0.22	(0.22)	0.12	(0.29)	0.34	(0.28)
2012	6.37	6.63	5.67	0.70	(0.55)	0.96	(0.64)	0.26	(0.65)
2013	11.66	12.79	10.56	1.09	(1.06)	2.22*	(1.04)	1.13	(0.92)
2014	15.08	15.78	14.02	1.06	(1.21)	1.76	(1.00)	0.70	(0.95)
2015	18.15	18.67	16.61	1.54	(0.96)	2.06*	(1.11)	0.52	(1.03)
2016	20.90	21.70	19.02	1.89*	(0.98)	2.69	(1.48)	0.80	(1.39)
2017	22.65	23.23	20.33	2.32**	(1.01)	2.89*	(1.40)	0.58	(1.17)
2018	23.79	24.39	21.56	2.23*	(1.03)	2.83*	(1.50)	0.60	(1.19)
2019	24.59	25.14	22.28	2.31*	(1.04)	2.86*	(1.43)	0.56	(1.20)

Source: SSA administrative records from the DAF, MBR, and the Stage 2 Baseline Survey.
Notes: From 2011–2015, the impact of assignment to treatment represents the impact of the benefit offset policy. From 2016–2019, the impact of assignment to treatment represents the combined effect of the past experience of the benefit offset policy (for those whose benefit rules have reverted to current law) and the current experience of the benefit offset policy (for those still under the benefit offset policy). Weights are used to ensure that the BOND subjects who met analysis criteria are representative of the national population of SSDI-only beneficiaries who would volunteer for study enrollment. Standard errors are in parentheses. Means and impact estimates are regression-adjusted for baseline characteristics.
Unweighted sample sizes: T21 = 3,762, T22 = 2,364, C2 = 3,772. The sample is restricted to Stage 2 beneficiaries who had not completed a TWP prior to random assignment.
*/**/*** Impact estimate is significantly different from zero at the .10/.05/.01 levels, respectively, using a two-tailed t-test with 9 degrees of freedom (resulting from a research design involving 10 study sites) and with no multiple-comparisons adjustment.

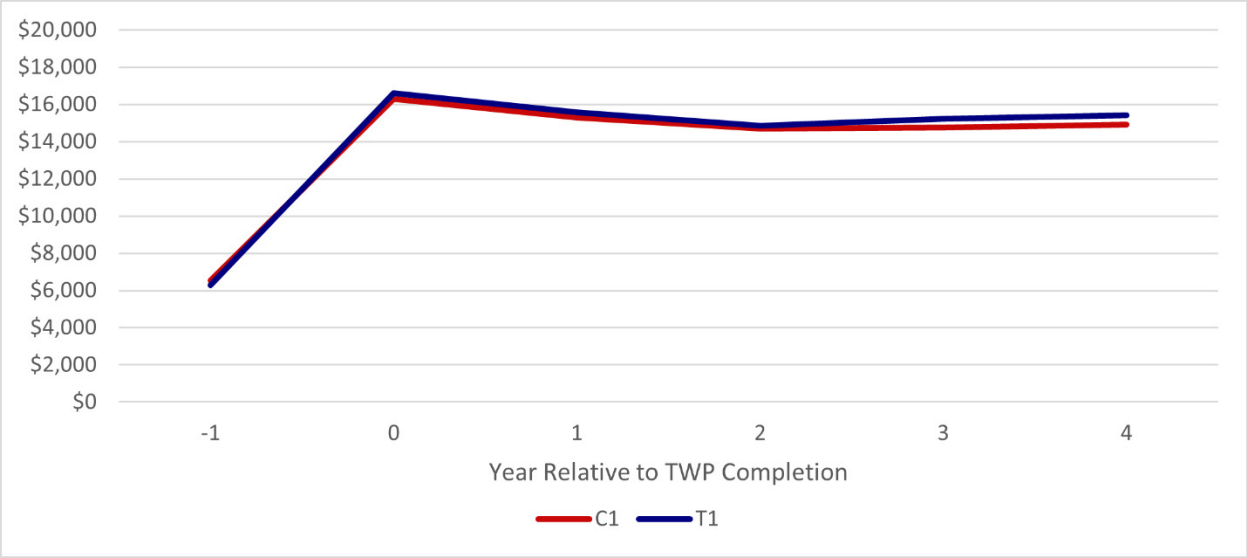
Next, we examined earnings patterns of beneficiaries before and after they completed TWP. Among control group beneficiaries subject to current law, we may expect three types of reactions after TWP completion: some beneficiaries might increase their earnings to make up for the loss of benefit income when benefits are suspended; others might sustain their earnings (if earnings are between the TWP and SGA thresholds); and others might decrease their earnings (if earnings are above the SGA threshold) to avoid benefit suspension. Combining these three types across all TWP completers, average earnings may increase or decrease after TWP completion. We found that relative to the year of TWP completion, average earnings were lower in the first few years after TWP completion. For the Stage 1 control group, average earnings in the third and fourth years after TWP completion remained below average earnings in the year of TWP completion (Exhibit 4-7). This finding is consistent with the explanation that the effect of some beneficiaries decreasing their earnings to avoid benefit suspension dominates the effect of other beneficiaries increasing their earnings to make up for benefit suspension. However, for the Stage 2 control group, average earnings in the third and fourth years after TWP completion were higher than in the year of TWP completion (Exhibit 4-8). This finding is consistent with an explanation that among work-interested beneficiaries, the effect of some beneficiaries increasing their earnings to make up for current-law benefit suspension dominates the effect of other beneficiaries sustaining or decreasing their earnings to avoid benefit suspension at three and four years after TWP completion.

Economic theory does not provide a clear prediction for whether treatment group beneficiaries who are completing a TWP should have higher or lower average earnings than their control group counterparts. For those who would increase earnings after TWP completion under current law, the benefit offset would

have a negative impact on earnings, since partial benefits would ameliorate the need to increase earnings (i.e., economic theory predicts earnings would increase less under the benefit offset than under current law for this type of beneficiary). For those who would sustain earnings after TWP completion under current law, the benefit offset should have no effect on earnings because earnings are between the TWP and SGA thresholds and full SSDI benefits continue to be paid. And for those decreasing earnings after TWP completion under current law, the benefit offset should have a positive impact on average earnings since we expect some beneficiaries of this type will prefer a combination of above-SGA earnings plus partial benefits (as determined by the benefit offset) over below-SGA earnings plus full benefits. Therefore, it is not clear whether we should expect treatment group average earnings to be higher or lower than control group earnings after TWP completion.

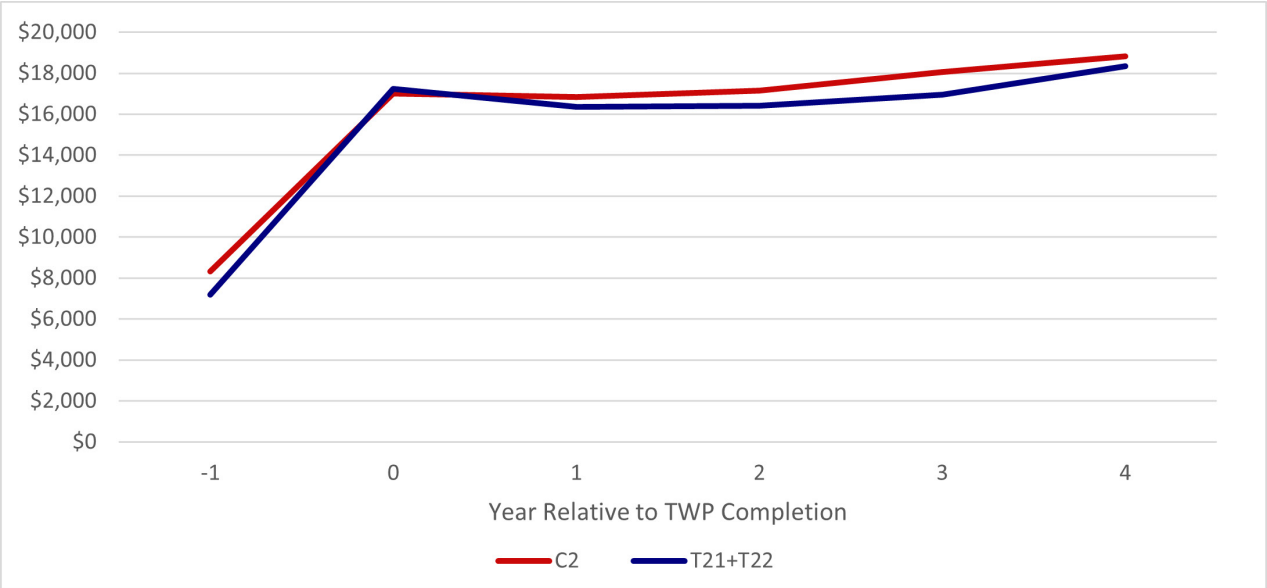
We tested whether there was a difference in average earnings after TWP completion between the treatment and control groups. We found that for both stages, average earnings of treatment subjects who completed a TWP were not statistically significantly different from the average earnings of control subjects who completed a TWP at any point in the year of TWP completion in the years after TWP completion (Exhibit 4-7 and Exhibit 4-8). Therefore, we found that the benefit offset did not have an effect on earnings after TWP completion. This finding is consistent with the possible explanations that the benefit offset had opposing effects for those who would increase earnings under current law and those who would decrease earnings under current law, and those opposing effects cancel each other when computing the combined average effect.

Exhibit 4-7. Average Earnings Leading Up To, and After, TWP Completion: Stage 1



Source: SSA administrative data for 2011 to 2019 from the DAF and MEF.
Note: Sample is Stage 1 beneficiaries with a TWP completion date between January 1, 2012, and December 31, 2015 (2,990 T1; 26,379 C1). All dollar amounts are inflation-adjusted to 2016 dollars using the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W). Weights are used so that the averages represent the average earnings of the national population of DI beneficiaries who would meet the sample criteria for this descriptive analysis. The analysis is descriptive and should not be interpreted as the impact of the benefit offset policy. Values are regression-adjusted to control for time fixed effects and beneficiary fixed effects. Differences are tested for statistical significance. There is no statistically significant difference between the comparison group and the treatment group in any year relative to TWP completion.

Exhibit 4-8. Average Earnings Leading Up To, and After, TWP Completion: Stage 2



Source: SSA administrative data for calendar years 2011 to 2019 from the DAF and MEF.
Note: Sample is Stage 2 beneficiaries with a TWP completion date after random assignment or January 1, 2012 (whichever came later) and December 31, 2015 (767 T1, 481 T22, 663 C2). All dollar amounts are inflation-adjusted to 2016 dollars using the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W). Weights are used so that the averages represent the average earnings of DI beneficiaries who would have volunteered for BOND if given the opportunity and who would meet the sample criteria for this descriptive analysis. The analysis is descriptive and should not be interpreted as the impact of BOND. Values are regression-adjusted to control for time fixed effects and beneficiary fixed effects. Differences are tested for statistical significance. The only statistically significant difference between the comparison group and the treatment (T21+T21) group is for one year before the year of TWP completion (-1 on the horizontal axis; p = 0.02).

4.3. Offset Users' Response to End of BPP

After treatment subjects completed a TWP, they entered the BPP which continued for 60 months. During the BPP, after the beneficiary completed the Grace Period, the benefit offset reduced annual benefits by $1 for every additional $2 in annual earnings above the BYA. At the end of the BPP, the rules that determined treatment subjects' benefits reverted from the offset rules to current law. BOND treatment subjects who had not completed a TWP at the time of random assignment had until September 2017 to complete a TWP in order to begin the 60-month BPP.

The number of treatment subjects who started a BPP peaked in the first two years of the demonstration. Exhibit 4-9 shows the number of treatment subjects who started a BPP in each year from 2011 to 2017. The vast majority who started a BPP within a year of random assignment were subjects who had already completed a TWP prior to random assignment. In the few years after random assignment, roughly two-thirds of subjects who started a TWP were subjects who had begun receiving DI within three years prior to random assignment: "short duration" beneficiaries. Exhibit 4-5 establishes that the offset did not have an impact on TWP completion and Exhibit 4-6 establishes that the TWP completion rate among C2 was only slightly behind the TWP completion rate of Stage 2 treatment subjects. TWP completion among the control group increased more rapidly in the few years after random assignment than in later years. This fact could be explained by an improving economy drawing those SSDI beneficiaries with the ability to work back into the workforce after the 2008 recession.

Exhibit 4-9. Number of Treatment Subjects Who Started a BPP In Each Year

	Number who started a BPP	Percent who had completed a TWP prior to random assignment	Percent who had not completed a TWP prior to RA and were short duration	Percent who had not completed a TWP prior to RA and were not short duration
Stage 1 treatment subjects who started a BPP				
2011	7,582	90.7%	6.8%	2.5%
2012	3,450	0%	67.7%	32.3%
2013	836	0%	68.8%	31.2%
2014	652	0%	65.7%	34.3%
2015	632	0%	67.6%	32.4%
2016	453	0%	63.2%	36.8%
2017	222	0%	61.8%	38.2%
Total	**13,605**	**49.6%**	**34.1%**	**16.3%**
Stage 2 treatment subjects who started a BPP				
2011	646	93.4%	4.4%	2.2%
2012	1,427	61.3%	29.4%	9.4%
2013	442	0%	78.4%	21.6%
2014	233	0%	77.1%	22.9%
2015	206	0%	68.1%	31.9%
2016	121	0%	61.3%	38.7%
2017	40	0%	67.4%	32.6%
Total	**3,115**	**47.1%**	**39.3%**	**13.7%**

Source: BTS data.
Note: For this table, we interpret a BPP start date that coincides with month of random assignment to indicate that a beneficiary had completed a TWP prior to random assignment. Short duration beneficiaries had begun receiving SSDI benefits 36 months or fewer before random assignment.

We examined offset users' average earnings and employment when they returned to current law SSDI rules. Analyzing offset users' outcomes around the time of reversion to current law is policy relevant, as the offset policy likely affected them more than other treatment group subjects. The changes in offset users' outcomes around the time of reversion to current law also provides context for understanding why full sample impacts on benefits diminished over time (Chapter 5 presents benefit impacts). Therefore, we analyzed offset users' average earnings and employment in the three years leading up to the year of BPP end, and in the two years after the year of BPP end. Our analysis sample only included treatment subjects who had a BPP, ended a BPP in 2016 or in 2017; did not die before BPP end; and earned enough during the BPP to trigger benefit adjustment according to the benefit offset rules. [5] Using an interrupted time series model, we estimated average trends in outcomes leading up the BPP completion and tested for statistically significant differences in expected outcomes and actual outcomes in the year of BPP completion, the first year after BPP completion, and the second year after BPP completion.

Of the beneficiaries who were using the offset when their BPP ended, some might have continued to engage in SGA, have their benefit entitlement terminated due to work, and increase earnings in response

[5] We include beneficiaries who completed a BPP in 2016 and 2017 because these beneficiaries have three years of follow-up data (years 0, 1, and 2) in the graph.

to their loss of benefits. Others might have reduced earnings to avoid termination due to work. Therefore, there was no clear prediction of how average earnings would change after the end of the BPP. However, there was a clear prediction that the end of BPP would reduce the proportion with annual earnings above BYA because of those reducing their earnings to avoid benefit termination. Theory also predicts that some of those inclined to reduce earnings would stop working entirely. This leads to the expectation that the end of BPP would also reduce employment.

- Average earnings of Stage 1 treatment group offset users declined after BPP end (red line, Exhibit 4-10). The slight decline in earnings in the year of BPP completion is not statistically significantly lower than expected based on the pre-BPP completion trend in earnings. However, the decline in earnings by the first and second years after BPP completion are statistically significantly lower than expected based on the pre-BPP completion trend in earnings. Therefore, we interpret the decline as evidence of a change in average earnings due to the end of the BPP.

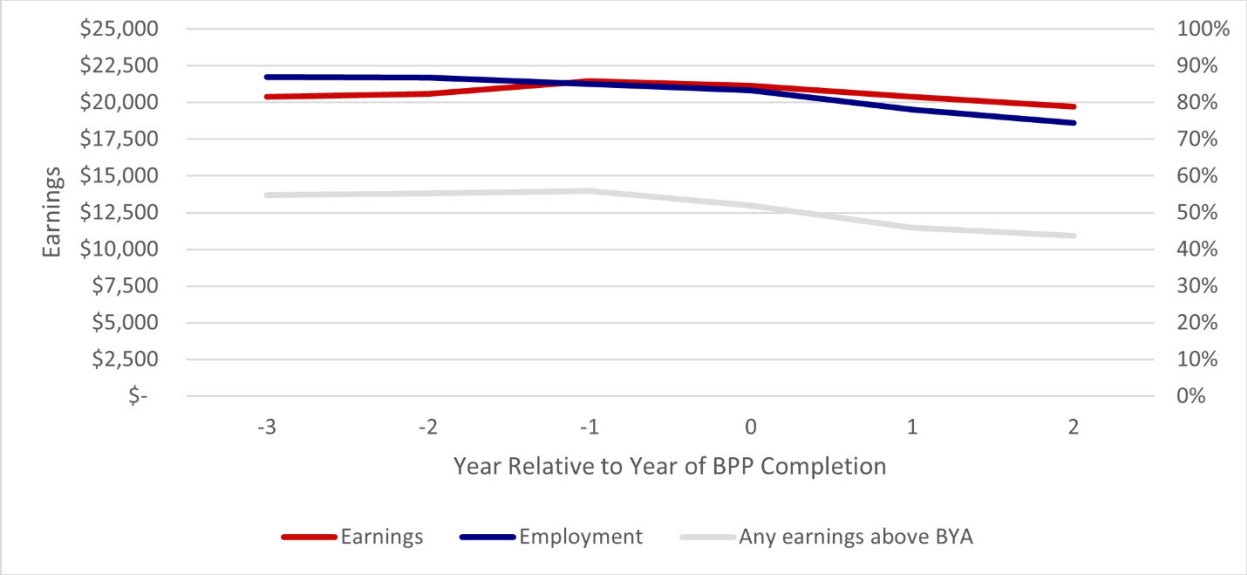
- Average earnings of Stage 2 treatment group offset users declined after BPP end (red line, Exhibit 4-11). The decline in earnings in the year of BPP completion and in the first and second years after BPP completion are statistically significantly lower than expected based on the pre-BPP completion trend in earnings. Therefore, we interpret the decline as evidence of a change in average earnings due to the end of the BPP.

- Employment declined over time among Stage 1 offset users. The slight decline in employment in the year of BPP completion is not statistically significantly lower than expected based on the pre-BPP completion trend in employment. However, the decline in employment by the first and second years after BPP completion are statistically significantly lower than expected based on the pre-BPP completion trend in employment. Therefore, we interpret the decline as evidence of a change in employment due to the end of the BPP.

- Employment declined steadily over time among Stage 2 offset users. However, the declines in and after the year of BPP completion are not statistically significantly lower than expected based on the pre-BPP completion trend in employment. Therefore, for the Stage 2 volunteers, we interpret this finding as no evidence of a change in employment due to the end of the BPP.

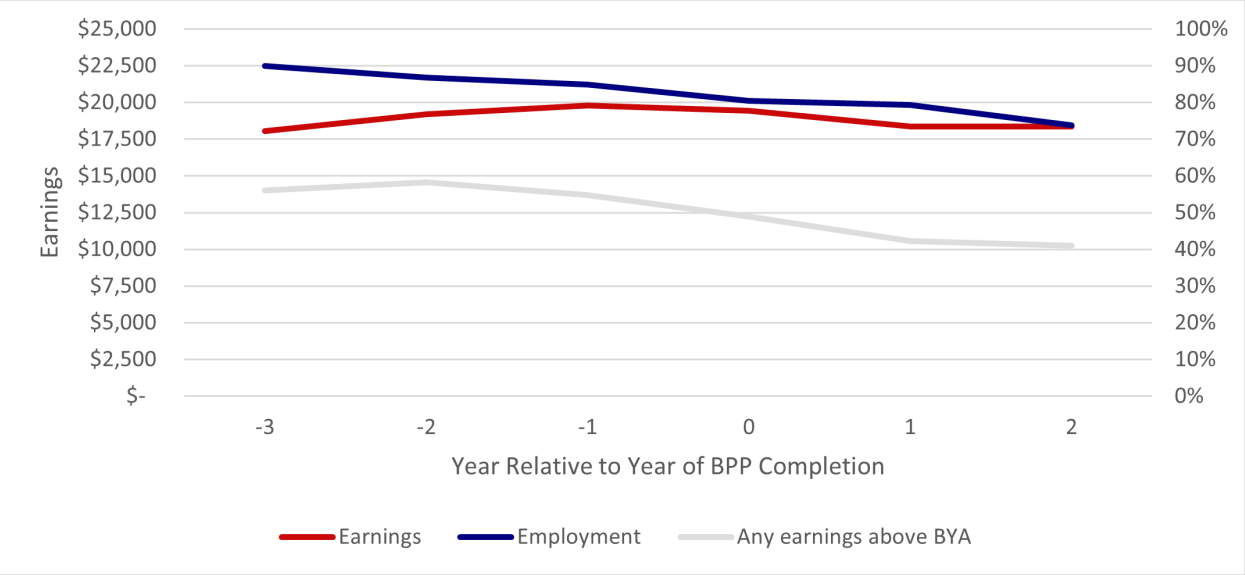
- The proportion with annual earnings above BYA declined among Stage 1 and Stage 2. The declines in and after the year of BPP completion are statistically significantly lower than expected based on the pre-BPP completion trend in the proportion with annual earnings above BYA. Therefore, we interpret the decline as evidence of a change in the proportion with earnings above BYA due to the end of the BPP.

Exhibit 4-10. T1 Offset Users' Earnings, Employment, and Earnings Above BYA Around Time of BPP Completion



Source: SSA administrative data from the MEF and BTS data.
Notes: Unweighted sample size is 2,270. The sample is treatment subjects who had a BPP, earned enough during the BPP to trigger the benefit offset, ended a BPP in 2016 or 2017, and did not die before BPP end. Year of BPP completion is Year 0.
Compared to the trend in earnings in the years prior to the year of BPP completion, average earnings are statistically significantly lower in years 0, 1 and 2.
Compared to the trend in employment in the years prior to the year of BPP completion, employment is statistically significantly lower in years 1 and 2.
Compared to the trend in the proportion with earnings above BYA in the years prior to the year of BPP completion, the proportion with earnings above BYA is statistically significantly lower in years 0, 1, and 2.
All statistical tests control for person fixed effects. Weights are used to ensure that the BOND subjects who met analysis criteria are representative of the national beneficiary population in the month of random assignment. Earnings data span from 2013 to 2019. All dollar amounts are inflation-adjusted to 2016 dollars using the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W).

Exhibit 4-11. T21 and T22 Offset Users' Earnings, Employment, and Earnings Above BYA Around Time of BPP Completion



Source: SSA administrative data from the MEF and BTS data.
Notes: Unweighted sample size is 889. The sample is treatment subjects who had a BPP, earned enough during the BPP to trigger the benefit offset, ended a BPP in 2016 or 2017, and did not die before BPP end. Year of BPP completion is Year 0.
Compared to the trend in earnings in the years prior to the year of BPP completion, average earnings are statistically significantly lower in years 1 and 2.
Compared to the trend in employment in the years prior to the year of BPP completion, employment is not statistically significantly different in years 0, 1 or 2.
Compared to the trend in the proportion with earnings above BYA in the years prior to the year of BPP completion, the proportion with earnings above BYA is statistically significantly lower in years 0, 1, and 2.
All statistical tests control for person fixed effects. Weights are used to ensure that the BOND subjects who met analysis criteria are representative of the national population of SSDI-only beneficiaries who would volunteer for study enrollment. Earnings data span from 2013 to 2019. All dollar amounts are inflation-adjusted to 2016 dollars using the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W).

This descriptive analysis supports the hypothesis that, on average, offset users changed their work and earnings behavior as a result of reversion to current law. After BPP completion, the average annual earnings of Stage 1 offset users were lower than what they would have been had the pre-BPP-completion time trend continued. In addition, their levels of employment and proportion with annual earnings above BYA were also lower than what they would have been had pre-BPP-completion trends continued. In Stage 2, after BPP completion, the mean annual earnings and proportion with annual earnings above BYA of previous offset users were lower than what they would have been had their pre-BPP-completion trends continued. The one measure for Stage 2 where we did not observe a change associated with BPP completion was employment. The Stage 2 levels of employment after BPP completion of previous offset users were not statistically significantly different from the downward trend established before BPP completion.

5. Benefits

In the nationally representative Stage 1 sample, previous analysis found that the benefit offset increased average SSDI benefits due by $143 per year (or about $12 per month) during the five-year period from 2011 to 2015 (Gubits et al., 2018). This impact represented an increase of slightly more than 1 percent over the current-law average benefits. In the Stage 2 sample, the benefit offset increased average SSDI benefits by $450-$500 annually during the four years from 2012 to 2015 (Gubits et al., 2018). This impact represented an increase of about 4 percent over the current-law average benefits.

This chapter presents impacts of assignment to treatment on SSDI benefits due in calendar years 2016–2019.[6] This chapter also presents impacts of assignment to treatment on benefit termination due to work and benefit reinstatement. We report impacts for calendar years 2011-2019 because this report is the first among BOND reports to analyze these outcomes.

For the years 2011–2015, the impact of assignment to treatment represents the impact of the benefit offset policy. Starting in 2016, an increasing proportion of treatment subjects had their benefit rules revert back to current law (see Exhibit 2-1). Thus, for the years 2016–2019, the impacts of assignment to treatment represent the combined effect of having the past experience of the benefit offset policy (for those whose benefit rules have reverted to current law) and the current experience of the benefit offset policy (for those still under the benefit offset policy). In Chapter 4, we hypothesized that behavior change that occurred as a result of the benefit offset policy could continue even after a beneficiary's benefit rules reverted back to current law. The same phenomenon is possible for benefit-related outcomes. However, Gubits et al. 2018 concluded that the observed impacts in 2011–2015 on benefit-related outcomes were largely driven by the mechanical effect of the benefit offset providing partial benefits, rather than behavior change (e.g., inducing beneficiaries to earn more than the BYA threshold in a year). Therefore, we hypothesize that the decreasing proportion of treatment subjects under the benefit offset policy in 2016–2019 will result in waning impacts on benefit-related outcomes.

Prior to reporting impacts, this chapter first describes trends in benefit receipt in the control group.

5.1. Trends in Benefits Receipt Among Control Group Subjects

In this section, we describe benefit receipt trajectories for control group members from 2011 through 2019 to provide context for impacts presented later in this chapter. The experiences of control group subjects represent the counterfactual experiences that BOND treatment subjects would have had under current law.

From 2011 to 2019, the proportion of BOND subjects who remained SSDI beneficiaries declined due to death, medical recovery, and benefit termination due to work. Exhibit 5-1 illustrates that the proportion of the Stage 1 control group ("C1") subjects receiving DI declined from nearly 100 percent at the end of 2011, to 79 percent by the end of 2019. Exhibit 5-2 illustrates a similar decline in the proportion of Stage

[6] This report includes 2016 because the previous 2016 analysis examined SSDI benefits paid but not SSDI benefits due. Benefits paid is the sum of the monthly benefit checks a beneficiary received in a year. The measure is limited because it includes reconciliation of improper payments in earlier years and does not reflect retroactive adjustments to benefits. The benefits due measure excludes reconciliation of earlier years' improper payments and reflects retroactive adjustments.

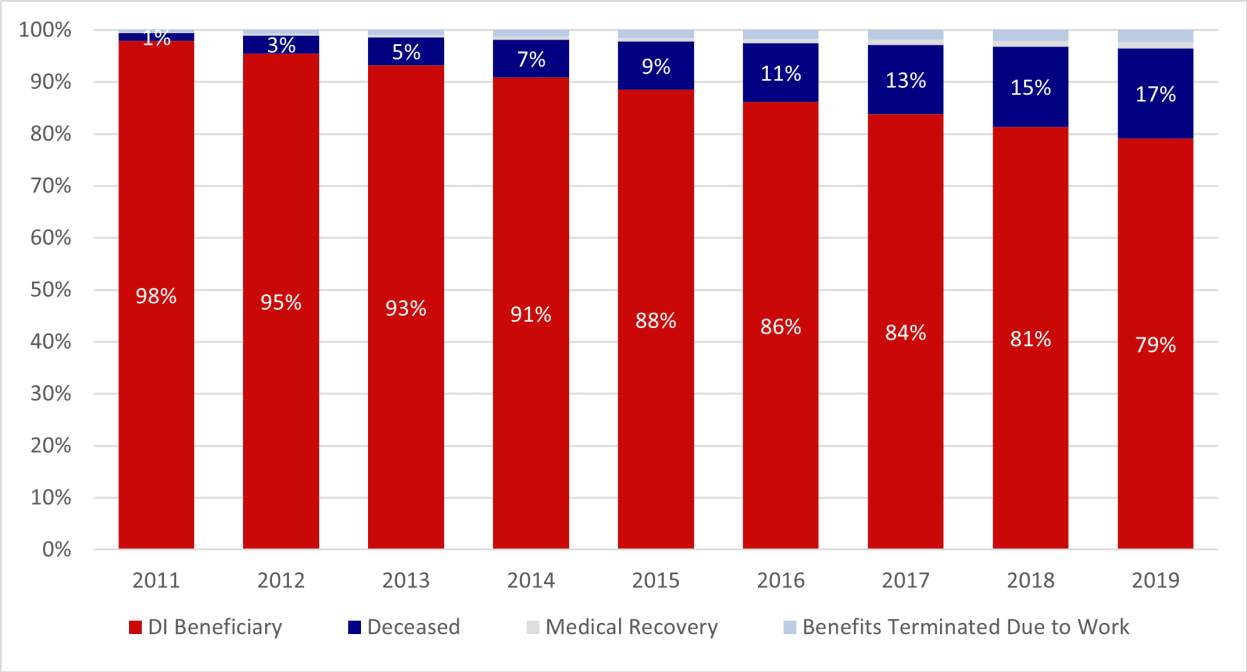
2 control group ("C2") subjects receiving DI. The similar declines in Stage 1 and Stage 2 were driven by different phenomena.

- Death rates were higher for control group members in Stage 1 than in Stage 2, consistent with the fact that Stage 2 volunteers were, on average, younger than the national population of beneficiaries represented in Stage 1.

- The proportion of control group members whose benefits were terminated due to work was higher in Stage 2 than in Stage 1, consistent with the fact that Stage 2 volunteers were, on average, more likely to be working at baseline and likely more interested in or ready to work than the national population of beneficiaries represented in Stage 1.

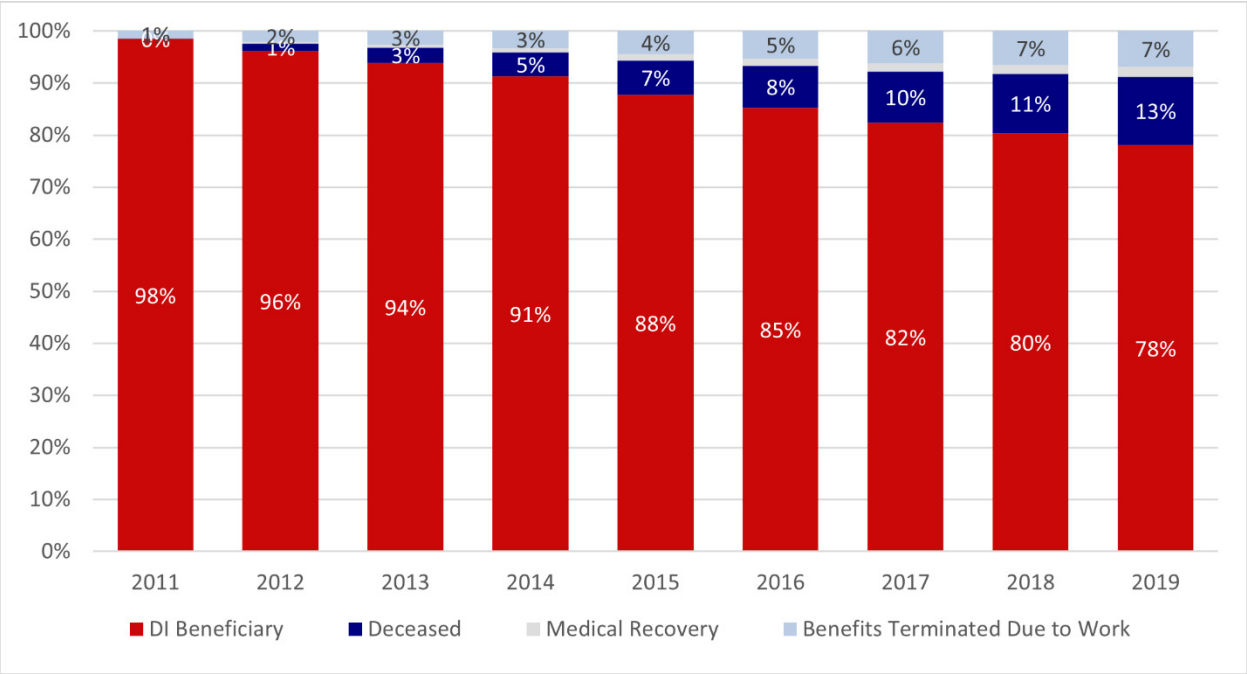
By the end of 2019, 17 percent of C1 subjects had died compared to 13 percent of C2 subjects. By that same time, 2.3 percent of C1 subjects had their benefits terminated due to work (number not shown in Exhibit 5-2) compared to 7.0 percent of C2 subjects.

Exhibit 5-1. Benefits Status of Stage 1 Control Subjects, 2011-2019



Source: SSA administrative data (DAF).
Note: "DI beneficiary" indicates the proportion of subjects not deceased by December 31 of the year and who did not have benefits terminated due to work or medical recovery by December 31 of the year. "Deceased" indicates deceased by December 31 of the year. "Medical Recovery" indicates that the beneficiary was marked as having benefits terminated due to medical recovery at some point during the year. "Benefits Terminated Due to Work" indicates that the beneficiary's entitlement to benefits were terminated during at least one month of the year due to earnings above SGA after the 36-month re-entitlement period of the Extended Period of Eligibility. Weights are used to ensure that the BOND subjects who met analysis criteria are representative of the national beneficiary population in the month of random assignment.
Unweighted sample sizes: 891,429.

Exhibit 5-2. Benefits Status of Stage 2 Control Subjects, 2011-2019



Source: SSA administrative data (DAF).
Note: "DI beneficiary" indicates the proportion of subjects not deceased by December 31 of the year and who did not have benefits terminated due to work or medical recovery by December 31 of the year. "Deceased" indicates deceased by December 31 of the year. "Medical Recovery" indicates that the beneficiary was marked as having benefits terminated due to medical recovery at some point during the year. "Benefits Terminated Due to Work" indicates that the beneficiary's entitlement to benefits were terminated during at least one month of the year due to earnings above SGA after the 36-month re-entitlement period of the Extended Period of Eligibility. Weights are used to ensure that the BOND subjects who met analysis criteria are representative of the national population of SSDI-only beneficiaries who would volunteer for study enrollment.
Unweighted sample size: 4,849.

In keeping with the BOND evaluation analysis plan, all BOND subjects remained part of the analysis sample regardless of the status of benefit receipt. Because the proportion receiving benefits decreased over time, BOND subjects' average annual benefit levels declined over time. The next section presents impacts of assignment to treatment on benefit levels.

5.2. Benefits Levels

In the nationally representative Stage 1 sample, assignment to treatment increased annual benefits due in each year from 2016 to 2019. We find that average benefits due in the treatment group are $116 higher per year than average benefits due for the control group during the four-year period from 2016 to 2019. Exhibit 5-3 shows that annual impacts appeared to decline over time, consistent with the hypothesis that impact of assignment to treatment is attenuated when subjects return to current law after the end of the BPP.

The impacts were driven by the persistent differences in the proportion of beneficiaries with any benefits due in the year, as shown in Exhibit 5-3. From 2016 to 2019, 1.7 to 0.7 percent more treatment subjects had any benefits due in the calendar year, compared to control beneficiaries. These impacts could plausibly be explained entirely by the proportion of Stage 1 treatment beneficiaries who were still subject to the offset rules. Specifically, the impacts could be explained by the benefit offset policy's elimination of benefit suspension due to SGA and elimination of termination of benefits due to work. The benefit

offset policy may have led to the continuance of benefits for a small percentage of treatment subjects who otherwise would have had their benefits suspended or terminated had they been assigned to the control group. In 2019, 2.2 percent of T1 beneficiaries were still subject to the offset rules for at least one month of the year (see Exhibit 2-1).

Trends for Stage 2 were similar: both treatment groups had higher annual benefits due in 2016 to 2019 compared to the control group and this finding can be tied to the persistent differences in the percent of beneficiaries with any benefits due in the year (Exhibit 5-4). These differences could plausibly be explained entirely by the fact that some treatment beneficiaries were still subject to the offset rules, which prevented suspension due to engagement in SGA and prevented termination of benefits due to work. The proportions of T21 and T22 subjects with at least one month under the benefit offset rules were still 7.5 percent and 7.0 percent, respectively, by 2019 (see Exhibit 2-1). These proportions are larger than 1.65 percent and 2.26 percent, the impact estimates on the proportion with any SSDI benefits due in 2019.

Exhibit 5-3. Estimated Impacts of Assignment to Treatment on DI Benefits Due in 2016-2019 for Stage 1 Subjects

Year	T1 Mean	C1 Mean	Impact Estimate	Standard Error
SSDI Benefits Due ($ for Year)				
2016	$10,923	$10,772	$151***	($24)
2017	$10,440	$10,320	$120***	($26)
2018	$10,131	$10,028	$103***	($27)
2019	$9,997	$9,907	$90**	($28)
Any SSDI Benefits Due (% in Year)				
2016	84.96	83.22	1.73***	(0.16)
2017	82.13	81.00	1.13***	(0.18)
2018	79.64	78.79	0.85***	(0.19)
2019	77.20	76.50	0.70***	(0.20)
Number of Months with SSDI Benefits Due				
2016	9.96	9.78	0.17***	(0.02)
2017	9.65	9.52	0.13***	(0.02)
2018	9.36	9.25	0.10***	(0.02)
2019	9.08	8.99	0.08***	(0.02)

Source: SSA administrative records from the MBR and DAF.
Notes: The impact of assignment to treatment is the combined effect of the past experience of the benefit offset policy (for those whose benefit rules have reverted to current law) and the current experience of the benefit offset policy (for those still under the benefit offset policy). Benefit outcomes are based on SSDI benefits due, corrected for retroactive adjustments made through December 2021. Weights are used to ensure that the BOND subjects who met analysis criteria are representative of the national beneficiary population in the month of random assignment. Means and impact estimates are regression-adjusted for baseline characteristics. All dollar amounts are inflation-adjusted to 2016 dollars using the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W). Proportion of control group with any benefits due in the year may be different than the percent reported as being DI beneficiaries in Exhibit 5-1, which shows the proportion of the control group not deceased and did not have benefits terminated.
Unweighted sample sizes: T1 = 77,101; C1 = 891,429.
*/**/*** Impact estimate is significantly different from zero at the .10/.05/.01 levels, respectively, using a two-tailed t-test with 9 degrees of freedom (resulting from a research design involving 10 study sites) and with no multiple-comparisons adjustment.

Exhibit 5-4. Estimated Impacts of Assignment to Treatment on DI Benefits Due in 2016-2019 for Stage 2 Subjects

Outcome	T21 Mean	T22 Mean	C2 Mean	Estimated Impact: T21 vs. C2	T21 vs. C2 SE	Estimated Impact: T22 vs. C2	T22 vs. C2 SE	Estimated Impact: T22 vs. T21	T22 vs. T21 SE
SSDI Benefits Due ($ for Year)									
2016	$12,289	$12,306	$11,582	$706***	($157)	$724***	($163)	$17	($161)
2017	$11,558	$11,537	$11,047	$511**	($183)	$490**	($169)	$-21	($220)
2018	$11,041	$11,143	$10,759	$282	($196)	$384*	($176)	$102	($197)
2019	$10,871	$10,996	$10,631	$239	($231)	$365*	($184)	$126	($220)
Any SSDI Payments Due in Year (%)									
2016	89.98	89.59	84.02	5.96***	(0.76)	5.57***	(0.85)	-0.39	(0.80)
2017	86.92	86.88	81.66	5.26***	(0.83)	5.22***	(0.98)	-0.05	(0.89)
2018	82.42	82.11	79.37	3.04***	(0.90)	2.74**	(1.01)	-0.30	(1.11)
2019	78.69	79.30	77.04	1.65	(0.95)	2.26*	(1.06)	0.61	(1.05)
Number of Months with SSDI Payments Due									
2016	10.57	10.54	9.77	0.80***	(0.09)	0.77***	(0.10)	-0.02	(0.10)
2017	10.01	9.96	9.48	0.53***	(0.11)	0.49***	(0.12)	-0.04	(0.11)
2018	9.49	9.54	9.25	0.24*	(0.11)	0.29**	(0.12)	0.05	(0.12)
2019	9.15	9.21	9.01	0.14	(0.13)	0.19	(0.13)	0.06	(0.13)

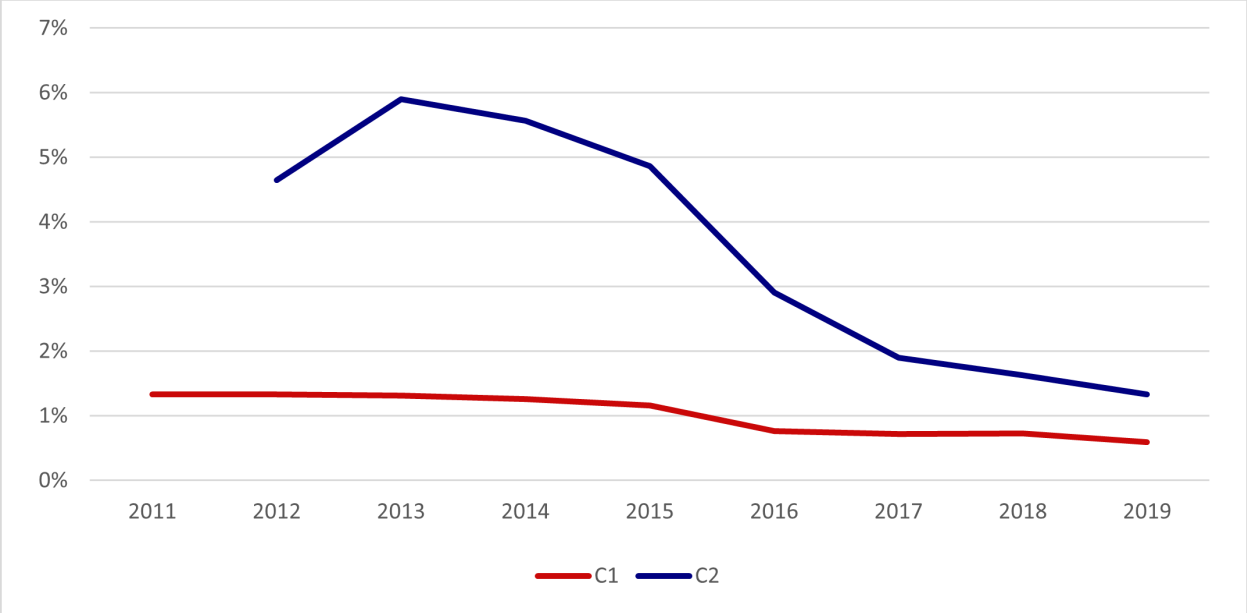
Source: SSA administrative records from the MBR, DAF, and the Stage 2 Baseline Survey.
Notes: The impact of assignment to treatment is the combined effect of the past experience of the benefit offset policy (for those whose benefit rules have reverted to current law) and the current experience of the benefit offset policy (for those still under the benefit offset policy). Benefit outcomes are based on SSDI benefits due, corrected for retroactive adjustments made through December 2021. Weights are used to ensure that the BOND subjects who met analysis criteria are representative of the national population of SSDI-only beneficiaries who would volunteer for study enrollment. Standard errors are in parentheses. Means and impact estimates are regression-adjusted for baseline characteristics. All dollar amounts are inflation-adjusted to 2016 dollars using the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W). Proportion of control group with any benefits due in the year may be different than the percent reported as being DI beneficiaries in Exhibit 5-2, which shows the proportion of the control group not deceased and did not have benefits terminated.
Unweighted sample sizes: T21 = 4,854, T22 = 3,041, C2 = 4,849.
*/**/*** Impact estimate is significantly different from zero at the .10/.05/.01 levels, respectively, using a two-tailed t-test with 9 degrees of freedom (resulting from a research design involving 10 study sites) and with no multiple-comparisons adjustment.

5.3. Benefit Termination Due to Work

Under current law, SSA suspends benefits in any month when earnings exceed the SGA amount during the first 36 months after the TWP is completed (except in the three grace period months). Exhibit 5-5 shows that just over one percent of the Stage 1 control group had their benefits suspended in any given year between 2011 and 2015. From 2016 through 2019, benefits suspension was less common but these data may reflect delayed CDR processing times because there is no factor intrinsic to the control group that would cause an abrupt decline in benefits suspension starting in 2016. Under the benefit offset rules,

SSA would not suspend benefits due to engagement in SGA or terminate entitlement to benefits as a result of engagement in SGA during the first 60 months after the TWP (i.e., the BPP).[7,8]

Exhibit 5-5. Benefit Suspense Due to Work in the Control Groups (C1 and C2).



Source: SSA administrative records from the DAF.
Notes: Weights are used to ensure that the BOND subjects who met analysis criteria are representative of the national beneficiary population in the month of random assignment. Benefit suspension due to work is defined as at least one month during the year of suspension due to SGA during the re-entitlement period (first 36 months) of the Extended Period of Eligibility. Estimates for 2019 are likely underestimates. The data source is the 2020 DAF, for which data from 2019 are likely not final.
Unweighted sample sizes: C1 = 891,429; C2 = 4,849

Under current law, after 36 months past TWP completion, SSA terminates SSDI entitlement if any month's earnings exceed the SGA amount. Under the offset rules, termination due to work is not possible during the BPP. Exhibit 5-6 displays the impact of assignment to treatment for Stage 1 beneficiaries. A little less than half of one percent of control beneficiaries had their benefits terminated due to work in each year 2012–2019. Consistent with the design of the offset policy, almost no T1 beneficiaries had their benefits terminated due to work during 2012–2015, when all T1 beneficiaries were under the offset policy. (The very few T1 beneficiaries whose benefits were terminated for work during 2012–2015 may have been terminated for engaging in SGA prior to assignment to the treatment group in 2011.) Returning to current law after the end of their BPP, some treatment subjects continued to engage in SGA and had their benefits terminated due to work. We would expect that control subjects who had sustained engagement in SGA would eventually be terminated due to work under current law, but similar treatment

7 Although SSA did not suspend SSDI benefits because of engagement in SGA for BOND treatment subjects during the BPP, if a treatment subject's earnings were sufficiently high, the monthly benefit payment would be $0. That is, if a treatment subject's estimated annual earnings exceeded BYA by more than two times their benefit amount they were said to be in "full offset" and not due any SSDI benefits.

8 After the first 60 months after the TWP (or alternatively stated, after the BPP), the beneficiary's benefit rules would revert to current law. At that point, a single month of engagement in SGA would result in termination of benefits.

subjects would remain DI beneficiaries during their BPP's because of the offset rules. Once their BPP's ended, however, these treatment subjects would also be terminated due to work, in effect "catching up" to their control group counterparts. Aligned with this expectation, Stage 1 treatment subjects had significantly higher rates of benefit termination in 2016 and 2017 compared to the control subjects. There were no statistically significant differences in benefit termination due to work in 2018 and 2019.

Benefit termination due to work was more common among Stage 2 volunteers than Stage 1 subjects, which is expected because Stage 2 volunteers were more engaged in work.[9] From 2012–2017, between one and two percent of C2 beneficiaries had their benefits terminated due to work in each year (Exhibit 5-7). As in Stage 1, because of the offset policy, very few Stage 2 treatment beneficiaries had their benefits terminated due to work in 2012–2015. In 2016, the reversion from the benefit offset policy to current law for the Stage 2 treatment groups began and a little more than one-half of one percent of Stage 2 treatment beneficiaries had their benefits terminated due to work. In 2017, the proportion of Stage 2 treatment subjects who had benefits terminated due to work was similar to the proportion for the control group. In 2018 the "catch-up" effect appeared: Stage 2 treatment groups had higher rates of benefit termination due to work than the Stage 2 control group. By 2019, these differences were no longer statistically significant.

After benefit termination, former beneficiaries may be eligible for benefit reinstatement.[10] Of course, benefit reinstatement is only a relevant outcome for those whose benefits were terminated. The benefit offset reduced the proportion of beneficiaries whose benefits were terminated due to work between 2011 and 2015; therefore, the benefit offset was expected to reduce the proportion with benefit reinstatement. In Stage 1, as expected, the benefit offset decreased the proportion of beneficiaries who had benefits reinstated. For Stage 2 volunteers, the proportion of subjects with benefit reinstatement was lower in the treatment groups but the difference is not statistically significant in most years. The offset impact estimates were larger in Stage 2 than in Stage 1, so the lack of statistical significance in Stage 2 is likely due to the smaller Stage 2 sample size.

[9] The Stage 2 outreach and recruitment intended to produce a select sample of SSDI beneficiaries, distinct from the national SSDI caseload in their likelihood to use the benefit offset. Differences in 2011 employment rates confirm that the Stage 2 sample was indeed distinct from the Stage 1 sample. Altogether, 36 percent of C2 subjects were working in 2011, compared with 14 percent of C1 subjects (Gubits et el., 2018).

[10] Beneficiaries may apply for expedited reinstatement of benefits and might be eligible for provisional benefits while SSA reviews their application. But, unlike suspension during the re-entitlement period, the beneficiary must go through a reapplication and requalification process if he/she wants benefits to resume. Expedited reinstatement is available for the first 60 months after termination for SGA. Reinstatement takes time, as our dataset's analysis period ends in 2019 it does not observe all reinstatements that will eventually occur for BOND subjects.

Exhibit 5-6. Estimated Impacts of Assignment to Treatment on Benefit Termination due to Work and Reinstatement in 2011-2019 for Stage 1 Subjects

Year	T1 Mean	C1 Mean	Impact Estimate	Standard Error
Any Benefit Termination Due To Work				
2011	0.23[A]	0.53	-0.30***	(0.03)
2012	0.04[A]	0.43	-0.38***	(0.04)
2013	0.01[A]	0.40	-0.38***	(0.05)
2014	0.01[A]	0.44	-0.42***	(0.05)
2015	0.02[A]	0.43	-0.40***	(0.04)
2016	0.58	0.42	0.16**	(0.06)
2017	0.58	0.39	0.19***	(0.05)
2018	0.44	0.42	0.02	(0.03)
2019[B]	0.35	0.35	-0.00	(0.04)
Benefit Reinstatement				
2011	0.01	0.03	-0.01*	(0.01)
2012	0.02	0.07	-0.05***	(0.01)
2013	0.03	0.09	-0.05***	(0.01)
2014	0.02	0.09	-0.08***	(0.01)
2015	0.02	0.09	-0.07***	(0.01)
2016	0.03	0.11	-0.08***	(0.01)
2017	0.10	0.17	-0.07***	(0.01)
2018	0.19	0.17	0.02	(0.04)
2019[B]	0.11	0.14	-0.03*	(0.01)

Source: SSA administrative records from the MBR and DAF.

Notes: From 2011–2015, the impact of assignment to treatment represents the impact of the benefit offset policy. From 2016–2019, the impact of assignment to treatment represents the combined effect of the past experience of the benefit offset policy (for those whose benefit rules have reverted to current law) and the current experience of the benefit offset policy (for those still under the benefit offset policy). "Benefits Terminated Due to Work" indicates that the beneficiary's entitlement to benefits were terminated due to SGA after the 36-month re-entitlement period of the Extended Period of Eligibility. Weights are used to ensure that the BOND subjects who met analysis criteria are representative of the national beneficiary population in the month of random assignment. Means and impact estimates are regression-adjusted for baseline characteristics.

[A]Termination due to work is higher in 2011 than in 2012 because treatment subjects' benefits were under current law from January 1, 2011 through April 30, 2011. After random assignment, and through 2015, a very small number of treatment subjects had benefits terminated while under the benefit offset rules, which could have been due to retroactive adjustment.

[B]Estimates for 2019 are likely underestimates. The data source is the 2020 DAF, for which data from 2019 are likely not final.

Unweighted sample sizes: T1 = 77,101; C1 = 891,429.

*/**/*** Impact estimate is significantly different from zero at the .10/.05/.01 levels, respectively, using a two-tailed t-test with 9 degrees of freedom (resulting from a research design involving 10 study sites) and with no multiple-comparisons adjustment.

Exhibit 5-7. Estimated Impacts of Assignment to Treatment on Benefit Termination due to Work and Reinstatement in 2011-2019 for Stage 2 Subjects

Outcome	T21 Mean	T22 Mean	C2 Mean	Estimated Impact: T21 vs. C2	T21 vs. C2 SE	Estimated Impact: T22 vs. C2	T22 vs. C2 SE	Estimated Impact: T22 vs. T21	T22 vs. T21 SE
Any Benefit Termination Due To Work									
2012	0.52 [A]	0.58 [A]	1.49	-0.97***	(0.28)	-0.91**	(0.28)	0.06	(0.26)
2013	0.02[A]	0.14[A]	1.06	-1.04***	(0.21)	-0.92***	(0.25)	0.12	(0.10)
2014	0.13[A]	0.22[A]	1.37	-1.24***	(0.24)	-1.16***	(0.20)	0.08	(0.13)
2015	0.11[A]	-0.01[A]	1.85	-1.74***	(0.23)	-1.86***	(0.25)	-0.12	(0.11)
2016	0.52	0.71	1.75	-1.23***	(0.31)	-1.04***	(0.29)	0.19	(0.24)
2017	2.09	1.85	1.61	0.47	(0.40)	0.24	(0.35)	-0.24	(0.35)
2018	2.67	2.25	0.94	1.72***	(0.35)	1.31***	(0.34)	-0.42	(0.43)
2019 [B]	1.15	1.26	0.92	0.23	(0.24)	0.34	(0.31)	0.11	(0.29)
Benefit Reinstatement									
2012	0.18	0.13	0.24	-0.05	(0.12)	-0.11	(0.13)	-0.05	(0.11)
2013	0.28	0.11	0.36	-0.08	(0.17)	-0.25	(0.16)	-0.17	(0.12)
2014	0.07	0.18	0.18	-0.11	(0.10)	0.00	(0.11)	0.11	(0.10)
2015	0.22	0.13	0.41	-0.19	(0.17)	-0.28	(0.20)	-0.09	(0.16)
2016	0.06	0.01	0.45	-0.39**	(0.14)	-0.44***	(0.13)	-0.05	(0.08)
2017	0.10	0.25	0.57	-0.47***	(0.13)	-0.32	(0.24)	0.15	(0.15)
2018	0.55	0.47	0.55	0.00	(0.25)	-0.08	(0.18)	-0.08	(0.17)
2019[B]	0.50	0.56	0.43	0.07	(0.18)	0.13	(0.20)	0.06	(0.21)

Source: SSA administrative records from the MBR and DAF.

Notes: From 2011–2015, the impact of assignment to treatment represents the impact of the benefit offset policy. From 2016–2019, the impact of assignment to treatment represents the combined effect of the past experience of the benefit offset policy (for those whose benefit rules have reverted to current law) and the current experience of the benefit offset policy (for those still under the benefit offset policy). "Benefits Terminated Due to Work" indicates that the beneficiary's entitlement to benefits were terminated due to SGA after the 36-month re-entitlement period of the Extended Period of Eligibility. Weights are used to ensure that the BOND subjects who met analysis criteria are representative of the national population of SSDI-only beneficiaries who would volunteer for study enrollment. Standard errors are in parentheses. Means and impact estimates are regression-adjusted for baseline characteristics.

[A]Some treatment subjects' benefits were under current law for part of 2012, thus the treatment group has a higher benefit termination rate in 2012 than in 2013. Between 2013 and 2015, a very small number of treatment subjects had benefits terminated while under the benefit offset rules, which could have been due to retroactive adjustment.

[B]Estimates for 2019 are likely underestimates. The data source is the 2020 DAF, for which data from 2019 are likely not final.

Unweighted sample sizes: T21 = 4,854, T22 = 3,041, C2 = 4,849

*/**/*** Impact estimate is significantly different from zero at the .10/.05/.01 levels, respectively, using a two-tailed t-test with 9 degrees of freedom (resulting from a research design involving 10 study sites) and with no multiple-comparisons adjustment.

5.4. Offset Users' Response to End of BPP

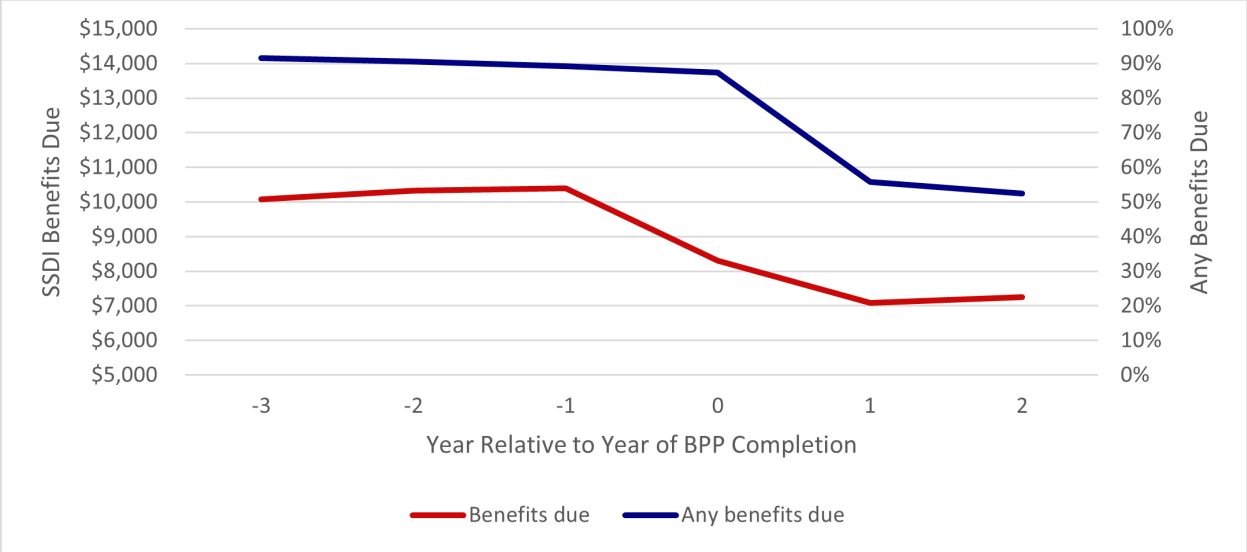
Finally, we examined how benefits due were affected by the end of the BPP for offset users. Gubits et al. 2018 showed that most offset users would have received zero benefits had they been randomly assigned to the control group. Therefore, it was these offset users who were responsible for the positive effect of the benefit offset on SSDI benefits due (by receiving partial benefits under the benefit offset policy when they would have received zero benefits under current law). After the BPP ended, beneficiary engagement in SGA resulted in termination of entitlement to SSDI. As offset users were hypothesized to be the most likely among treatment subjects to have benefits terminated due to work after their BPP ended, they were suspected to be a main driver of diminishing benefits impacts. Thus, to shed light on why full sample impacts on benefits diminished over time, we analyzed average benefits due and whether any benefits

were due in the three years leading up to the year of BPP completion, and in the two years after the year of BPP completion. Our analysis sample only included treatment subjects who had a BPP, completed a BPP in 2016 or 2017; did not die before BPP end; and earned enough during the BPP to trigger benefit adjustment according to the benefit offset rules.[11] Using an interrupted time series model, we estimated average trends in SSDI benefits due and the proportion receiving any SSDI benefits due in the three years leading up to the year of BPP completion. We tested for statistically significant differences in expected outcomes and actual outcomes in the year of BPP completion, the first year after BPP completion, and the second year after BPP completion.

Among Stage 1 and Stage 2 treatment group offset users who ended a BPP, the proportion with any benefits due declined sharply, by more than 25 percentage points, at time of BPP end. For T1, the percent of offset-using subjects with benefits due declined from 87 percent in the year of BPP completion (with presumably 13 percent of these offset users having high enough earnings such that SSDI benefits are fully offset) to 52 percent two years later. For the Stage 2 treatment groups, there was a similar decline from 91 percent in the year of BPP completion to 60 percent two years later. Average benefit levels also declined. Exhibit 5-8 and Exhibit 5-9 illustrate these declines for Stage 1 and Stage 2 treatment groups, respectively. Most likely, these declines are largely due to treatment subjects engaging in SGA after BPP end and having their benefits terminated. The decline in average SSDI benefits due and in the proportion with any benefits due among offset users help to explain the declining impacts on benefits due in the full sample. However, some of the roughly half of offset users who were still receiving SSDI benefits in the second year after the year of BPP completion may have had their work trajectories changed by the benefit offset policy. Under current law some of these offset users would have had benefits terminated at an earlier time, but by the time they completed their BPP, their circumstances had changed and they were able to keep their benefits by earning less.

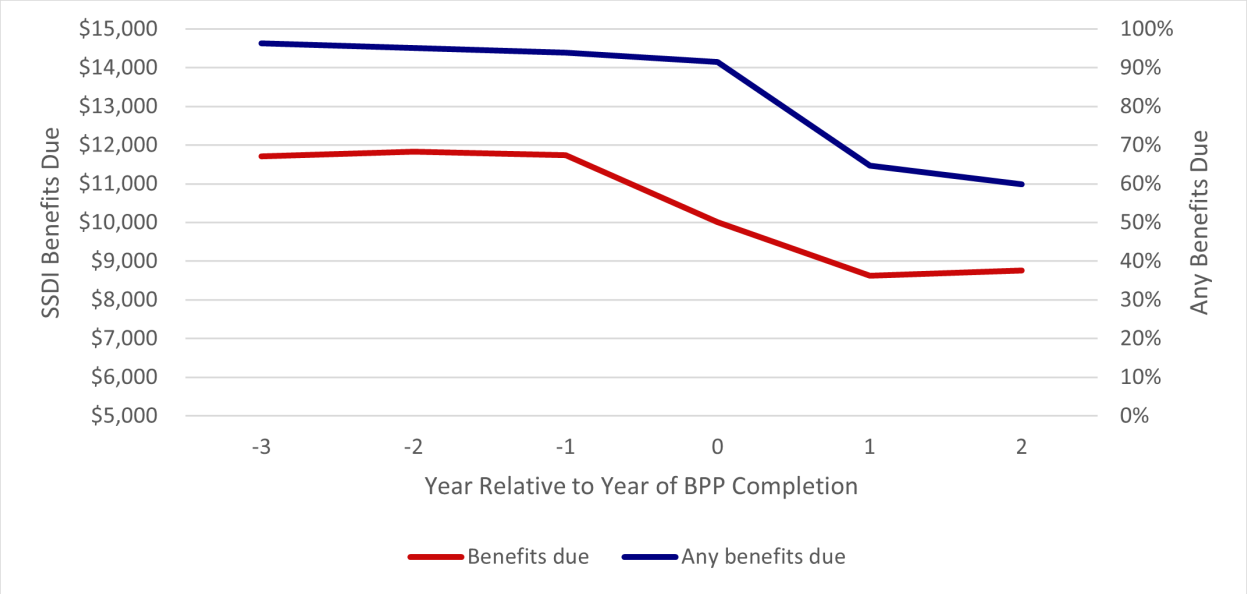
[11] We include beneficiaries who completed a BPP in 2016 and 2017 because these beneficiaries have three years of follow-up data (years 0, 1, and 2) in the graph.

Exhibit 5-8. T1 Offset Users' Average SSDI Benefits Due Around Time of BPP Completion



Source: SSA administrative data from the MBR and DAF; BTS data.
Notes: Sample size is 2,270. The sample is treatment subjects who had a BPP, earned enough during the BPP to trigger the benefit offset, ended a BPP in 2016 or 2017, and did not die before BPP end. Year of BPP completion is Year 0.
Compared to the trend in average SSDI benefits due in the years prior to the year of BPP completion, average SSDI benefits due are statistically significantly lower in years 0, 1 and 2.
Compared to the trend in proportion with any SSDI benefits due in the years prior to the year of BPP completion, the proportion with any SSDI benefits due is statistically significantly lower in years 1 and 2.
All statistical tests control for person fixed effects. Weights are used to ensure that the BOND subjects who met analysis criteria are representative of the national beneficiary population in the month of random assignment. Data on SSDI benefits due span 2013 to 2019. All dollar amounts are inflation-adjusted to 2016 dollars using the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W).

Exhibit 5-9. Stage 2 Treatment Group Offset Users' Average Benefits Due Around Time of BPP Completion



Source: SSA administrative data from the MBR and DAF; BTS data.
Notes: Sample size is 889. The sample is treatment subjects who had a BPP, earned enough during the BPP to trigger the benefit offset, ended a BPP in 2016 or 2017, and did not die before BPP end. Year of BPP completion is Year 0.
Compared to the trend in average SSDI benefits due in the years prior to the year of BPP completion, average SSDI benefits due are statistically significantly lower in years 0, 1 and 2.
Compared to the trend in proportion with any SSDI benefits due in the years prior to the year of BPP completion, the proportion with any SSDI benefits due is statistically significantly lower in years 1 and 2.
All statistical tests control for person fixed effects. Weights are used to ensure that the BOND subjects who met analysis criteria are representative of the national population of SSDI-only beneficiaries who would volunteer for study enrollment. Data on SSDI benefits due span 2013 to 2019. All dollar amounts are inflation-adjusted to 2016 dollars using the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W).

6. Conclusion

This report extended the analysis of Gubits et al. (2018), Geyer et al. (2019), and Hoffman et al. (2019) by analyzing three additional years of BOND subjects' earnings and benefits outcomes, 2017-2019. Reversion to current law complicates the interpretation of estimates of the impact of assignment due to treatment for the years 2017–2019 because the policy contrast between the treatment groups and control groups faded during this time. The impacts of assignment to treatment in 2017, 2018, and 2019 represent the combined effect of having the past experience of the benefit offset policy (for those whose benefit rules have reverted to current law) and the current experience of the benefit offset policy (for those still under the benefit offset policy). Synthesizing across Stage 1 and Stage 2, we find some evidence of effects of assignment to treatment in 2017–2019. But we cannot definitively determine how much of, if any, of these effects are attributable to the past experience of the benefit offset policy as opposed to the current experience of the benefit offset policy.

The analysis found that there is no evidence of effects of assignment to treatment on earnings in 2017, 2018, or 2019 for either stage. These results were consistent with previous BOND reports that did not find an impact of the benefit offset policy on average earnings in either stage. Consistent with the hypothesis that impacts would fade over time, we do not find evidence of effects of assignment to treatment on employment in 2017, 2018, or 2019 for either stage.

For Stage 1 subjects, we also do not find evidence of effects of assignment to treatment on the proportion of beneficiaries with earnings above BYA in 2017, 2018, or 2019. However, in Stage 1, we find statistically significant evidence of a small negative impact on the proportion of beneficiaries with annual earnings above two times BYA in 2017 and 2018. These are consistent with findings in Gubits et al. 2018 for 2011 to 2015.

Among Stage 2 subjects, the analysis finds some evidence of positive impacts of assignment to treatment on the proportion of subjects with earnings above BYA in 2017 and 2018. We are unable determine how much, if any, of these 1.5–2 percentage point impacts are due to the past experience of the benefit offset policy as opposed to the current experience of the benefit offset policy.

For treatment subjects who used the offset, the reversion of benefit rules from the benefit offset to current law had a clear effect on earnings and employment. On average, Stage 1 and Stage 2 offset users reduced their earnings and were less likely to have earnings above BYA as a result of reversion to current law. Stage 1 offset users also had lower employment rates after reversion to current law, while employment rates among Stage 2 offset users did not change after reversion to current law. Some of these treatment subjects who used the offset continued to engage in SGA after the completion of the BPP. This is seen by the decrease in the proportion with any SSDI benefits due of more than 25 percentage points in both stages after the completion of the BPP.

One way that the BOND benefit offset policy might have led to lower average SSDI benefits was through inducing treatment subjects who had not already completed a TWP prior to random assignment to complete a TWP and consistently earn above BYA. While we know from Gubits et al. (2018) a relatively small proportion of treatment subjects was induced to earn above BYA, we had not previously known whether the offset policy had an impact on TWP completion. The new analysis reveals that the benefit offset policy had no impact on TWP completion in Stage 1 for those who had not completed a TWP before random assignment. In Stage 2, among those who had not completed a TWP before random

assignment, the offset policy increased TWP completion by 2.3 percentage points for T21 subjects compared to C2 subjects and 2.9 percentage points for T22 subjects compared to C2 subjects between random assignment through 2019.

Evidence presented in this report shows persistent impacts of assignment to treatment on benefits due in 2016 through 2019. The statistically significant but diminishing impacts were driven largely by the continuing difference in the proportion with any benefits due between treatment and control groups. Specifically, the impacts could be explained by the benefit offset policy's elimination of benefit suspension due to SGA and elimination of termination of benefits due to work. The benefit offset policy may have led to the continuance of benefits for a small percentage of treatment subjects who otherwise would have had their benefits suspended or terminated had they been assigned to the control group.

These findings are consistent with explanations offered by Gubits et al. (2018). As offset users' BPPs ended, "windfall" offset payments to those who would already engage in SGA under current law ceased. At the same time, the end of the benefit offset policy removed protection from benefit suspension and termination. Analysis of benefits due beyond 2019 would likely find that the differences in benefits due between the treatment and comparison groups disappear.

Gubits et al. (2018) remains the most important source for understanding the impacts of the BOND benefit offset because it analyzed a time during which all treatment subjects' benefits were governed by the BOND benefit offset rules. The findings of this report complement earlier findings. They show that the previously reported impacts of the benefit offset diminished as the treatment groups' benefits rules reverted to current law. The main impact findings of the BOND evaluation remain: (1) There is no evidence of an impact of the benefit offset on average earnings in either the nationally-representative Stage 1 or in the Stage 2 sample of volunteers; and (2) the benefit offset policy increased the average amount of SSDI benefits due to beneficiaries.

References

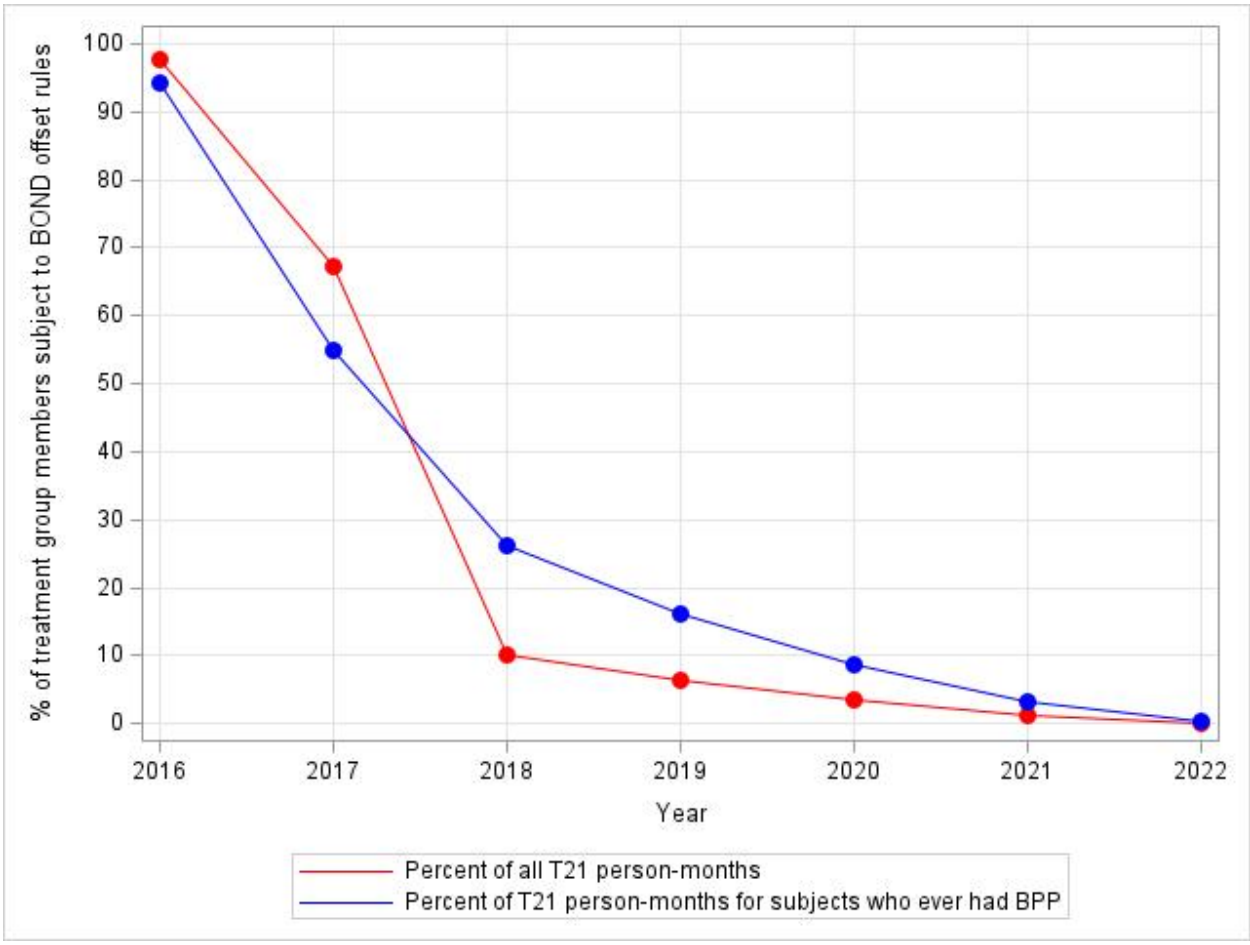
Geyer, J., Gubits, D., Hoffman, D., Stapleton, D., Bell, S. (2019) *BOND Implementation and Evaluation: Sixth-Year Snapshot of Earnings and Benefit Impacts for Stage 2.* Social Security Administration Contract No. SS00-10-60011 https://www.ssa.gov/disabilityresearch/offsetnational.htm

Gubits, D., Stapleton, D., Bell, S., Wood, M., Hoffman, D., Croake, S., Mann, D.R., Geyer, J., Greenberg, D., Nichols, A. and McGuirk, A., (2018) *BOND Implementation and Evaluation: Final Evaluation Report, Volumes 1 and 2*. Social Security Administration Contract No. SS00-10-60011 https://www.ssa.gov/disabilityresearch/offsetnational.htm

Hoffman, D., Mann, D., Stapleton, D., Gubits, D., Geyer, J., Sussman, M., Lukashanets, S. (2019) *BOND Implementation and Evaluation: Sixth-Year Snapshot of Earnings and Benefit Impacts for Stage 1.* Social Security Administration Contract No. SS00-10-60011 https://www.ssa.gov/disabilityresearch/offsetnational.htm

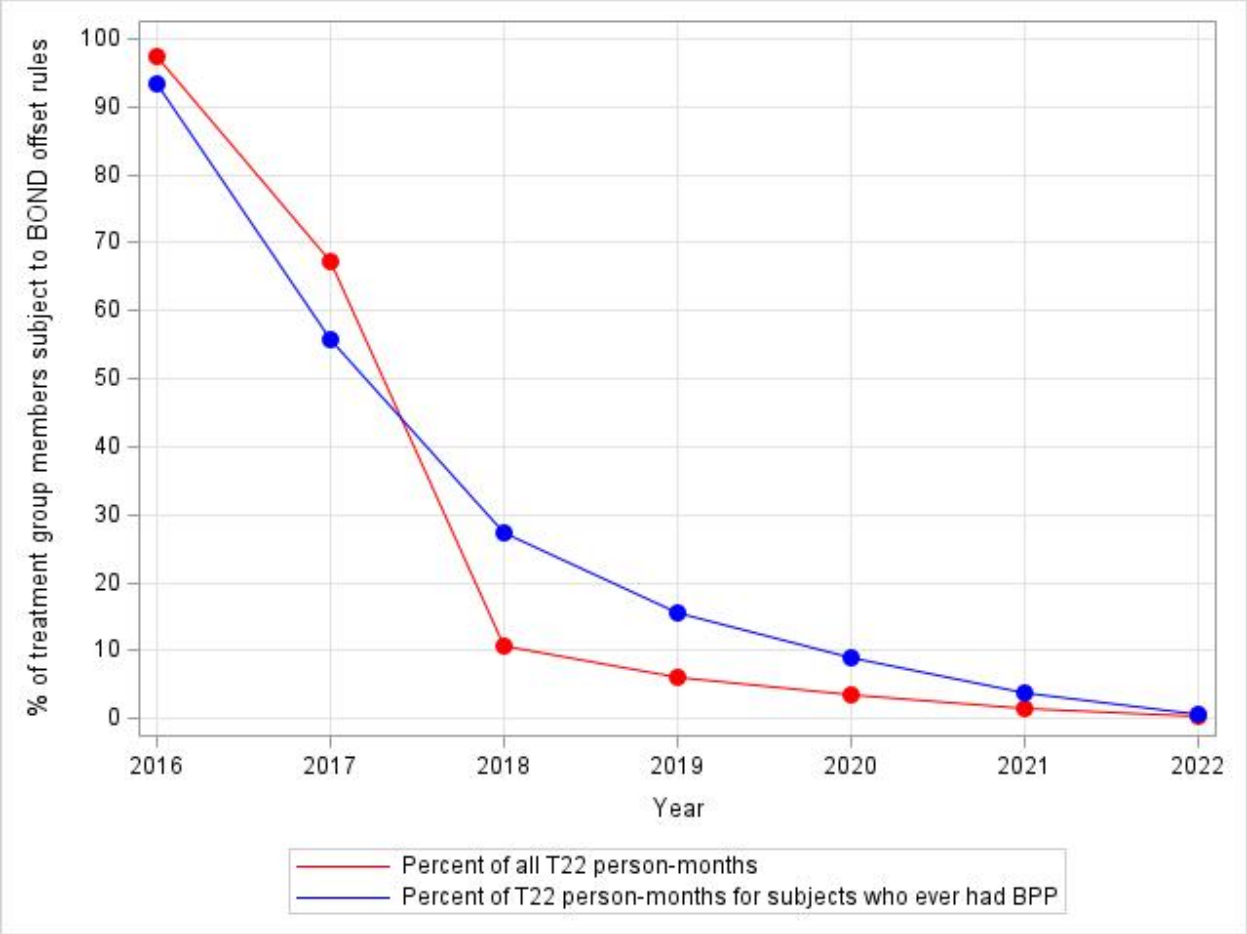
Appendix. Additional Exhibits For Chapter 2

Exhibit A-1. Percentage of T21 Person-months Subject to the BOND Offset Policy Between 2016 and 2022



Source: BTS data.
Note: This exhibit shows the percentages of person-months, for which the denominator is 12 times the number of T21 subjects (4,854). If all beneficiaries were subject to the benefit offset policy in all 12 months of the year, the measure would be 100 percent. The percent of T21 person-months subject to the BOND benefit offset rules was 0.15% in 2022 (more than 0%), and 0.38% for T21 subjects who ever had a BPP.

Exhibit A-2. Percentage of T22 Person-months Subject to the BOND Offset Policy Between 2016 and 2022



Source: BTS data.
Note: This exhibit shows the percentages of person-months, for which the denominator is 12 times the number of T22 subjects (3,041). If all beneficiaries were subject to the benefit offset policy in all 12 months of the year, the measure would be 100 percent. The percent of T22 person-months subject to the BOND benefit offset rules was 0.21% in 2022 (more than 0%), and 0.53% for T22 subjects who ever had a BPP.