

Impact of Filing Reminder Outreach on Voluntary Filing Compliance for Taxpayers with a Prior Filing Delinquency

*Stacy Orlett, with Rizwan Javaid, Vicki Koranda, Maryamm Muzikir (IRS, Small Business/Self-Employed Division), and Alex Turk (IRS, Research, Applied Analytics, and Statistics)*¹

Introduction

Alternative outreach methods can improve the efficiency of tax administration if the outreach can promote voluntary compliance at a lower cost. Outreach focused on taxpayers at risk of further noncompliance may be able to improve compliance and help the taxpayer avoid unnecessary noncompliance costs. This is particularly important when the Internal Revenue Service (IRS) does not have the resources to intervene with enforcement treatments. The IRS is exploring alternative approaches for promoting voluntary filing, reporting, and paying of tax liabilities. Encouraging the taxpayer to voluntarily meet their tax responsibilities reduces the burden on support and enforcement resources.

In this paper, we report results from IRS outreach that reminded individual taxpayers of their filing obligation. Two separate field tests were conducted exploring alternative methods of promoting voluntary filing compliance among taxpayers with prior filing delinquencies. The alternative treatment included various filing reminder correspondence. Taxpayers treated in the test were sent at least one reminder letter or postcard during the filing season encouraging them to file their return. The first pilot addressed taxpayers where the Automated Substitute for Return (ASFR) process recently brought the taxpayer back into filing by securing a delinquent return. The second pilot addressed taxpayers who had recently not filed a return, and the IRS did not have the resources to take enforcement actions. We found positive effects associated with both the reminder letters and postcards.

Background

The IRS (the Collection organization, working with Research, Applied Analytics, and Statistics (RAAS)) developed two pilot studies to test alternative treatments to promote voluntary filing compliance amongst individuals. Both pilots tested filing reminder correspondence for taxpayers who have had past filing compliance issues.

- **Pilot 1** included taxpayers who went through the ASFR process and whose case was resolved by the taxpayer filing a delinquent tax return in Calendar Year 2015. The objective of this pilot was to determine if the letter and/or postcard could enhance the impact of the ASFR process on subsequent voluntary filing compliance.
- **Pilot 2** included taxpayers who had a requirement to file a Tax Year (TY) 2013 return, but were identified as not having done so in the Individual Case Creation Nonfiler Identification Process (CCNIP), given that the IRS had not started the delinquent return notice process during 2015 due to limited resources.

¹ The views and opinions presented in this paper reflect those of the authors. They do not necessarily reflect the views or the official position of the Internal Revenue Service.

Filing compliance issues are addressed in a variety of ways at the IRS. In general, the universe of individual nonfilers will include those who have not filed a tax return by the Return Due Date.² The IRS can identify a portion of those with a potential filing requirement after gathering income and other information reported by third parties to the IRS on information returns (e.g., Form W-2).³ Using this information, the IRS can prioritize and select a portion of these known nonfilers for enforcement action.

The nonfilers who are thus selected, will enter the Return Delinquency notice process and receive up to two notices requesting them to file their tax return. Nonfilers who do not respond may enter the Taxpayer Delinquency Investigation (TDI) process, where they may receive enforcement action from various functions such as the Automated Collection System or call site (ACS), Field Collection (FC), or the ASFR program, to name a few.

Automated Substitute for Return (ASFR)

The ASFR program is highlighted within this paper as it relates to Pilot 1. Cases must meet certain criteria to be assigned to the ASFR program.⁴ The ASFR program prioritizes cases by Refund Hold, Tax Year and Net Tax Due.⁵ A Refund Hold case has highest priority because the service is holding the taxpayer's refund associated with a recently filed return. The Service has only a limited amount of time to hold the refund. The taxpayer is notified that the Service is holding their refund, and the taxpayer is requested to resolve the delinquent return(s) before the IRS will release the refund. Holding the refund provides a motivation for the taxpayer to file that is different from a non-Refund Hold case. Therefore, Pilot 1 was separated into two groups: (a) Refund Hold ASFR starts; and (b) non-Refund Hold ASFR starts.

If the taxpayer does not respond to the requests by the Refund Hold program to file the delinquent return(s), then the case may be assigned to the ASFR program for additional enforcement. Cases started by the ASFR program are sent a 30-day letter (Letter 2566 or Letter 2566R for non-Refund Hold and Refund Hold cases, respectively). If the taxpayer does not respond timely to the 30-day letter, then a Statutory Notice of Deficiency (also referred to as the 90-day letter) is issued. If the taxpayer does not respond and resolve the issues, then the ASFR program will make a "substitute for return" assessment (default assessment) of tax based on the information documents received from third parties.

Optimally, the taxpayer will respond to the ASFR letters by filing the return or otherwise resolving the issue. This pilot focused on the taxpayers where the ASFR program was successful at securing a delinquent return. The reminder letter or postcard was designed to encourage subsequent voluntary filing compliance.

During Calendar Year 2015, prior to the TY 2015 filing season, we identified approximately 80,000 taxpayers where the ASFR program successfully secured a delinquent return.

- 67 percent were a non-Refund Hold ASFR start,
- 33 percent were a Refund hold ASFR start.

Case Creation Nonfiler Identification Process (CCNIP)

The Case Creation Nonfiler Identification Process⁶ is highlighted within this paper as it relates to Pilot 2. The CCNIP is the main process for identifying individual nonfilers with a likely tax filing requirement based on significant income reported by third parties to the IRS, or taxpayers who filed in one year but not in the next (i.e., stop-filers). Due to resource constraints, the IRS is unable to pursue every known case of nonfiling. As mentioned earlier, the pool of nonfilers identified via CCNIP is prioritized using a variety of characteristics or policies, and a portion are selected for enforcement action. Each potential delinquent return is categorized and prioritized based on the case characteristics.⁷

² Internal Revenue Service. Internal Revenue Manual 5.19.2.1 (01-16-2015) "What is the IMF Return Delinquency Program?"

³ Internal Revenue Service. Internal Revenue Manual 5.19.2.4.1 (01-16-2015) "IRP Income?"

⁴ Internal Revenue Service. Internal Revenue Manual 5.18.1.3.1 (12-09-2014) "ASFR Criteria."

⁵ Internal Revenue Service. Internal Revenue Manual 5.18.1.3.2 (06-20-2012) "ASFR Prioritization."

⁶ Internal Revenue Service. Internal Revenue Manual 5.19.2.2 (01-16-2015) "IMF Return Delinquency Case Creation."

⁷ Internal Revenue Service, Document 6209. Section 11–Collection. https://www.irs.gov/pub/irs-utl/6209_section11_2015.pdf (accessed May 2017).

The cases selected can be separated into two general groups based on a Primary Code “B” designation, referred to as PCB and non-PCB in this paper. A PCB case will receive up to two notices and will remain in the notice status if the taxpayer does not respond. The PCB cases generally have a lower priority or risk compared to non-PCB cases. Therefore, Pilot 2 was separated into two groups: (a) PCB; and (b) non-PCB.

After planning and prioritizing the pool of nonfilers and identifying which cases to treat in a given year, the IRS is not always able to start the delinquent return process because of varying workload demands and resource availability. This was true for the Tax Year 2013 cases. Thus, the Return Delinquency program was not able to start as many cases as originally planned. There were approximately 1.9 million nonfilers for the 2013 Tax Year that were identified to be treated but were not, due to changes in resources.

- 16 percent were designated as PCB, and
- 84 percent were designated as non-PCB.

This pool of nonfilers was the focus of Pilot 2. Given that these taxpayers had a potential filing delinquency with their 2013 Tax Year return, this pilot was aimed at identifying a less resource-intensive treatment protocol, which focused on nudging the taxpayer to return to filing timely. The filing reminder outreach was designed to encourage subsequent voluntary filing compliance. The results for Pilot 2 were used to determine if the reminder correspondence could improve voluntary filing compliance on cases where the IRS does not have the resources to take enforcement actions on past noncompliance.

Pilot 1 measured which type of correspondence—letter or postcard—had a bigger impact. Pilot 2 measured how both the message and the frequency of correspondence would impact taxpayer behavior. Pilot 2 had a group that received one postcard and a group that received two postcards.

In addition to these tests, Pilot 2 had two versions of postcards; one postcard was the same one that was used in Pilot 1, while the other postcard had a URL for submitting Form 4506T, which could be used to request tax document transcripts from prior years. The impact of the two different types of postcards was also measured.

Related Research

There is a variety of research from around the world regarding an individual’s tax filing compliance. Recent studies explored the impact of preemptive treatments on voluntary filing compliance behavior.

Guyton, *et al.* (2016) was the foundation for our pilots. This study took place during filing seasons in 2014 and 2015, and was comprised of taxpayers who were potentially eligible to claim the Earned Income Tax Credit (EITC) or were otherwise lower-income nonfilers for the 2011 and 2012 Tax Years. There was a control group that received no correspondence and six treatment groups. The treatment groups received correspondence in the form of a preemptive, informative postcard or brochure on voluntarily filing current and prior returns. The correspondence included information on how to file and how to claim the EITC. There were positive results from the treatments with increases to filing rates for those receiving EITC refunds and those who had a balance due. The study also revealed how continued reminders increase the rate of compliance, but that receiving a reminder one year and not the next can potentially lead to recidivism.

Meiselman (2016) conducted a controlled experiment to isolate the effect of message content in mailed communication on income tax nonfiler behavior. The experiment was designed and conducted by the author in collaboration with the City of Detroit. The main outcome of interest was response rate, the rate at which mailings elicited a tax return from taxpayers who had previously failed to file a Tax Year 2014 city income tax return. Other outcomes measured were the amount of remittances, the likelihood of claiming a refund rather than admitting tax due and the number of back-year returns that were filed with the Tax Year 2014 return. The message types included penalty salience, punishment probability, compliance cost, civic pride and the combined penalty salience/punishment probability. The control group consisted of two groups, one group received no contact, and the other group received treatments (postcard and letter) with the prominent message box omitted. This was done to address the phenomenon observed in other studies where taxpayers respond to any contact from the tax agency because they are aware authorities are monitoring their activity.

The author found that “penalty salience” mailings were the most effective at raising response rates, increasing back-year returns filed and returns that admitted tax due. “Punishment probability” was the second most effective. The combined message (punishment probability/penalty salience) was slightly less effective than the penalty salience message alone. The author presented this as evidence supporting the conclusions from prior literature that simplicity is important when communicating with taxpayers. The remaining message types had smaller positive effects, except “civic pride,” which had no effect on response rates relative to the basic mailing, which contained no message. The author also did not find evidence of an effect of treatment mailings on the filing behavior of geographic neighbors. This finding was consistent with the notion that networks such as families and coworkers are more relevant to the treated than geographic proximity.

The author also found that mailings were most effective for first-time nonfilers, higher-income taxpayers, and older taxpayers. The author conducted a cost-benefit analysis and determined that there would be a positive improvement to net revenue and welfare if the most effective message treatment—penalty salience—were applied to the entire Detroit income tax nonfiler population. Additionally, net revenue and net welfare could be further improved if the treatment was targeted to higher-yielding demographics (older, higher income, and non-chronic nonfilers).

Kettle (2015) conducted a similar study that took place in Guatemala in early 2014 using preemptive treatments to encourage filing compliance with the 2013 Tax Year. Since tax evasion is a pervasive issue in the country (involving nearly 64% of individuals and businesses), a study with reminder notices was developed to increase voluntary compliance and payments. A control group was created with taxpayers who would not receive any notice, another group received a simple notice to declare/file, and another four groups received letters with different types of behavioral cues. While two of the behavioral letters were the most effective, the simple reminder group also experienced a 3.6 percentage point increase in compliance for an overall 31 percent increase.

A study conducted in the United Kingdom by the Behavioural Insights Team focused on a reminder letter’s impact on taxpayers’ payment compliance and that they needed to self-assess their tax by a defined date. Taxpayers were separated into three groups based on their past payment compliance: (1) taxpayers who missed their first payment; (2) taxpayers who had been late on payments several times in the past; and (3) taxpayers late on payments in the past, but made their last payment on time. Taxpayers were separated into control and treatment groups. The treatment groups received a letter 10 days prior to the deadline. Groups that received letters all had significantly higher rates of payment. Despite this study focusing on payment compliance, it still drives home the point that there are benefits from receiving a reminder.

The final study we want to highlight was conducted by Chirico (2015) in 2014. The study was conducted in Philadelphia focusing on property owners who were late in paying property tax. Property tax payments are due on March 31st of every year, and if not paid, taxpayers receive a common reminder letter every two months until paid. In this experiment, taxpayers who still had not made any payment by November of that year were selected to receive an alternate reminder. There were four treatment groups: (1) a control group that received the same reminder letter with the addition of a Spanish version; (2) a “Threat” letter that notified taxpayers that their property could be seized or sold by the city; (3) a “Public Service Appeal” letter that notified taxpayers that their tax would be used to fund public services; and (4) a “Civic Duty” letter that notified taxpayers that 9 out of 10 of their neighbors have paid their taxes. While this study focused on payment compliance, it also showed that reminder letters can be effective. Results showed that the “Public Service Appeal” letter was most effective by bringing in an additional \$152/letter. The “Civic Duty” letter added \$82/letter and the “Threat” letter added \$41/letter.

Methodology

We used randomized control trials to test the impact of various preemptive correspondence treatments on filing behaviors of specific ASFR and nonfiler taxpayer groups. Pilot 1 tested a letter versus a postcard and Pilot 2 tested postcard messages and frequency.

Treatments

The following are descriptions of the preemptive correspondence types tested in the experiments:

Letter: The Letter was a generic letter reminding the taxpayer to file a 2015 tax return. The letter included a URL for the IRS website and a toll-free customer service number for the IRS if the taxpayer needed to seek assistance.⁸

Postcard 1 (no Form 4506T reference): Postcard 1 was a generic postcard reminding the taxpayer to file a 2015 tax return. The postcard included a URL for the IRS website if the taxpayer needed to seek assistance.⁹

Postcard 2 (Form 4506T reference): Postcard 2 was a generic postcard reminding the taxpayer to file a 2015 tax return. The postcard included a URL for the IRS website if the taxpayer needed to seek assistance. It differed from Postcard 1 because, in addition to the content of Postcard 1, it also included a URL for the taxpayer where they could submit form 4506T¹⁰ to request tax documents for prior years.¹¹

Experimental Design

Pilot 1 tested whether sending a preemptive Letter or Postcard 1 affected the filing behavior of taxpayers previously treated by the ASFR program. Separate experiments were conducted for the Refund Hold and Non-Refund Hold ASFR groups. Random samples were selected to receive a treatment, Postcard 1 or Letter, and a control group sample was selected that was untreated. The correspondence treatments were mailed via the U.S. Postal Service on March 1, 2016.

Pilot 2 tested whether sending preemptive postcards containing different content and the frequency of receiving these postcards affected the filing behaviors of PCB and Non-PCB nonfilers. Separate experiments were conducted for the PCB and Non-PCB nonfiler groups. Pilot 2 treatments also began mailing on March 1, 2016. Treatment groups receiving two postcards were sent a second mailing on April 1, 2016. Like Pilot 1, each group within Pilot 2 also had a control group that was untreated. Random samples of taxpayers were selected to receive one of four types of treatments:

- one mailing of Postcard 1,
- two mailings of Postcard 1,
- one mailing of Postcard 2, and
- two mailings of Postcard 2.

Table 1 lists the treatment and control samples drawn for Pilot 1 and Pilot 2.

TABLE 1. Sample Design for Preemptive Correspondence Pilots

Taxpayer Groups	Pilot 1: ASFR Treated Taxpayers		Pilot 2: TY 2013 Nonfilers	
	Refund Hold	Non-Refund Hold	PCB	Non-PCB
Control	8,142	7,946	7,041	6,550
Letter	8,142	7,946		
Postcard 1 (one mailing)	8,142	7,946	7,041	6,549
Postcard 1 (two mailings)			7,041	6,549
Postcard 2 (one mailing)			7,041	6,549
Postcard 2 (two mailings)			7,041	6,549
Total Sample Size	24,426	23,838	35,205	32,746

⁸ An example of the letter can be found in the Appendix.

⁹ An example of Postcard 1 can be found in the Appendix.

¹⁰ Form 4506T is a form for requesting tax return information. <https://www.irs.gov/pub/irs-pdf/f4506t.pdf> (accessed May 2017).

¹¹ An example of Postcard 2 can be found in the Appendix.

Analysis and Modeling

We conducted regression analysis to estimate the treatment effects of the preemptive contacts on taxpayers timely filing their Tax Year 2015 income tax return or filing for an extension. Data were compiled for each taxpayer in the pilot using the IRS Compliance Data Warehouse (CDW).

The dependent variable for all the models was a dichotomous outcome. A taxpayer received a “1” if the taxpayer timely filed a return for Tax Year 2015 or filed for an extension to file an individual income tax return, and a “0” if not. A “timely filed return” is one that was filed by the return’s due date (e.g. April 15, 2016). In addition, we also explored whether the taxpayer filed a prior tax return for years 2011, 2012, 2013 or 2014 during the 2016 filing season.

The independent variables in the models included:

- a treatment dummy for each treatment, respective to the pilot;
- an indicator for undeliverable mail to identify taxpayers with correspondence that came back as undeliverable; and
- a variety of case characteristics derived from information from the Individual CCNIP, the most recent filing information (prior to TY 2015), accounts receivable activity at the beginning of the filing season and one year prior, and delinquent return activity information during the year prior to the start of the filing season.

The treatment dummy variables were defined as “1” if the taxpayer was in the treatment group and had a deliverable mailing address, and “0” if not. The following is a list of the preemptive treatment dummies tested in each pilot:

Pilot 1 (ASFR): 2 Treatment Dummies

1. Postcard 1
2. Letter

Pilot 2 (TY 2013 Nonfilers): 4 Treatment Dummies

1. Postcard 1 (one mailing)
2. Postcard 1 (two mailings)
3. Postcard 2 (one mailing)
4. Postcard 2 (two mailings)

Two-Step Modeling Approach: Accounting for Undeliverable Mail

As with any treatment that involves mailing correspondence to taxpayers, there was a risk that the address on file with the IRS was not accurate, resulting in instances where mail was returned to the Service as undeliverable. In these pilots, there was a portion of taxpayers in each test group whose treatment correspondence was returned to the IRS as undeliverable mail. Unfortunately, we cannot determine which taxpayers in the control group would also have had an invalid address (because they were not sent a mailing). Since invalid addresses do not occur at random and are likely correlated with filing propensity, this can potentially bias our estimated treatment effects.

For both pilots, there were several taxpayers in the treatment groups who had postcards/letters that were returned marked “undeliverable” by the Postal Service (see Table 2). Given that the treatment group was selected at random, we can expect that there are “undeliverable” taxpayers in the control groups, as well, and the taxpayers in the treatment groups would be good surrogates for the “undeliverable” taxpayers in the control.

TABLE 2. Number of Taxpayers with Undeliverable Treatments

Taxpayer Groups	Pilot 1: ASFR		Pilot 2: TY 2013 Nonfilers	
	Refund Hold	Non-Refund Hold	PCB	Non-PCB
Control	n/a	n/a	n/a	n/a
Letter	390	435		
Postcard 1 (one mailing)	450	394	637	576
Postcard 1 (two mailings)			612	508
Postcard 2 (one mailing)			645	570
Postcard 2 (two mailings)			679	553
Total	840	829	2,573	2,207

Our analysis needed to capture the effect of undeliverable mail in the estimated effects of the preemptive correspondence treatments on taxpayer behavior. We used a two-step modeling approach and an instrumental variable for taxpayers with undeliverable mailing addresses. These controls allowed us to estimate unbiased marginal impacts of the preemptive treatments.

For each pilot, we estimated a logistic regression of the likelihood of a taxpayer’s correspondence being returned as “undeliverable” among the taxpayers identified for treatment. We used geography as instruments. These model parameter estimates were then used to calculate the “probability of being undeliverable” for all cases (including the control group), and this was included as an independent variable in the second-step logistic regression model, which measured the impact that the preemptive treatments have on taxpayers timely filing TY 2015 returns or extensions.

For the second-step model, a taxpayer with an “undeliverable” preemptive treatment was moved to the control group. This allowed us to compute both the impact of the treatment as well as the marginal impact based on the “intent to treat” the taxpayer.

Findings

The findings are presented for each pilot separately. Because we classified taxpayers as untreated when the correspondence was not delivered, our parameter estimates reflect the impact of the treatment. We also calculated the marginal impact based on the “intent to treat” the taxpayer. This is relevant for tax administration because it reflects the success of the treatment overall.

Pilot 1: Refund Hold and Non-Refund Hold ASFR Taxpayers

Pilot 1 measured the impact of two types of correspondence—a letter and a postcard—on taxpayer behavior among those who filed a delinquent return during the 2015 calendar year following the ASFR process. We found a higher rate of timely filed returns or extensions for the TY 2015 return among the ASFR Refund Hold group compared to the non-Refund Hold taxpayers. Table 3 provides the percentage of taxpayers within each group that timely filed their TY 2015 return or filed for an extension. For the control group, we also computed an adjusted filing rate. This is an estimate of the filing rate for the cases that would have likely received the treatment in the control group by using the undeliverable cases in the treatment group to estimate the number of undeliverable cases in the control group. The adjusted filing rate is calculated as:

$$\text{Adjusted filing rate} = R N / N_d - R_u N_u / N_d,$$

where R is the overall rate in the control group, N is the number of cases, R_u is the average rate for the undeliverable cases in the treatment group, N_u and N_d are the estimated number of undeliverable cases in the control and the treatment group, respectively.

TABLE 3. Pilot 1: ASFR—Percentage of Taxpayers with a Timely Filed TY 2015 Return or Extension To File

Taxpayer Groups	Refund Hold		Non-Refund Hold	
	Number of Taxpayers	Percent Timely Filed TY 2015 or Extension	Number of Taxpayers	Percent Timely Filed TY 2015 or Extension
No Treatment	8,982	77.7%	8,775	58.6%
Control	8,142	78.4%	7,946	59.9%
Control (adjusted filing rate)		78.8%		60.7%
Undeliverable	840	71.1%	829	46.0%
Letter	7,752	81.4%	7,511	64.2%
Postcard 1 (one mailing)	7,692	79.6%	7,552	61.0%

SOURCE: IRS, Compliance Data Warehouse, Individual Return Transaction File, Individual Master File Status and Transaction History, Individual Accounts Receivable Dollar Inventory, and Case Creation Nonfiler Identification Process. Data Extracted September 2016.

Table 4 contains the regression results for ASFR Refund Hold and non-Refund Hold taxpayers in our study. In this regression, we measured the effect of receiving a post card or a letter on the timely filing a Tax Year 2015 return or filing for an extension.

For both the Refund Hold and non-Refund Hold groups, there were significant, positive impacts of both the postcard and the letter on voluntary filing. There was just slightly more than a one percentage point increase in the propensity to file when a taxpayer received a postcard. However, receiving a reminder letter to file resulted in a statistically significant increase in the propensity to file the TY 2015 return that was twice as large (relative to a postcard) for the Refund Hold cases and three times as large for the Non-Refund Hold.

There is anecdotal evidence that many taxpayers with compliance issues don't open correspondence from the IRS. Thus, sending a postcard could overcome the "fail to open" barrier when nudging taxpayers towards compliance. These results are not consistent with that notion. One possible explanation is that a barrier exists for taxpayers who know they have an issue. Since these ASFR taxpayers in the study came back into filing compliance, they may have been alarmed when they received a letter because they did not think they had an issue. Alternatively, we have no way of knowing if the taxpayer opened the letter. It could be that receiving the letter prompted the taxpayer to respond, and the postcard was more likely to go unnoticed.

TABLE 4. Pilot 1 Regression Results for ASFR Taxpayers Dependent Variable: Taxpayer Timely Filed TY 2015 or Filed for an Extension

Explanatory Variables	Refund Hold			Non-Refund Hold		
	Estimate	Marginal Effect of Treatment	Marginal Effect of Intent to Treat	Estimate	Marginal Effect of Treatment	Marginal Effect of Intent to Treat
Intercept	-0.354* (0.116)			-0.515* (0.066)		
Post Card Treatment	0.099* (0.040)	0.013	0.013	0.083* (0.035)	0.011	0.010
Letter Treatment	0.198* (0.041)	0.027	0.025	0.244* (0.035)	0.033	0.031
Probability Undeliverable Mail	-2.519* (1.088)			-4.878* (0.754)		
Log Likelihood	-11,435			-13,972		
Number of observations	24,368			23,431		

* Indicates significance at the 95% level.

NOTE: Not all explanatory variables are shown. Standard errors are reported in parentheses.

SOURCE: IRS, Compliance Data Warehouse, Individual Return Transaction File, Individual Master File Status and Transaction History, Individual Accounts Receivable Dollar Inventory, and Case Creation Nonfiler Identification Process. Data Extracted September 2016.

Pilot 2: Nonfiler PCB and Non-PCB Taxpayers

Pilot 2 was conducted to explore how the content and the frequency of the preemptive correspondence can improve voluntary filing compliance on cases that were potential nonfilers in the past but have not been contacted. The analysis is conducted separately for PCB and non-PCB potential nonfilers. There were four treatments:

- Treatment A: Postcard 1 (one mailing, *same version used for Pilot 1*)
- Treatment B: Postcard 1 (two mailings, *same version used for Pilot 1*)
- Treatment C: Postcard 2 (one mailing, *version with Form 4506T reference*)
- Treatment D: Postcard 2 (two mailings, *version with Form 4506T reference*)

We found a similar rate of timely filed returns or extensions for TY 2015 between the PCB and the non-PCB TY 2013 potential nonfilers. Table 5 provides the percentage of taxpayers within each group who timely filed their Tax Year 2015 return or filed for an extension.

TABLE 5. Pilot 2: Percentage of Taxpayers with a Timely Filed TY 2015 Return or Extension to File Among TY 2013 Potential Nonfilers

Taxpayer Groups	Primary Code B		Non-Primary Code B	
	Number of Taxpayers	Percent Timely Filed TY 2015 or Extension	Number of Taxpayers	Percent Timely Filed TY 2015 or Extension
No Treatment	9,614	42.6%	8,757	45.9%
Control	7,041	46.5%	6,550	49.7%
Control (adjusted filing rate)		47.9%		51.1%
Undeliverable	2,573	32.2%	2,207	34.9%
Postcard 1 (one mailing)	6,404	49.0%	5,973	52.0%
Postcard 1 (two mailings)	6,429	49.3%	6,041	53.0%
Postcard 2 (one mailing)	6,396	49.2%	5,979	51.9%
Postcard 2 (two mailings)	6,362	49.5%	5,996	51.9%

SOURCE: IRS, Compliance Data Warehouse. Individual Return Transaction File, Individual Master File Status and Transaction History, Individual Accounts Receivable Dollar Inventory, and Case Creation Nonfiler Identification Process. Data Extracted September 2016.

Table 6 shows the regression results for the potential Tax Year 2013 nonfilers receiving treatments A, B, C and D. For **PCB taxpayers**, all the estimates were positive, but Treatment A was not statistically significant; however, Treatment B (sending two of the Pilot 1 postcards) was statistically significant. Both mailing frequencies for Postcard 2 positively impacted filing propensity, but again sending two had a larger impact. This suggests that multiple contacts may be needed for the lower priority cases.

For **non-PCB taxpayers**, all treatments resulted in a statistically significant increase in the number of delinquent returns filed by these taxpayers. However, it appears there was less of an impact with a second postcard. Interestingly, the Pilot 1 postcard appears to be more effective. The Postcard 2 contained more information and referenced how to request transcripts of prior tax years. Thus, the nudge toward filing appears to be more effective without the extra information. It could be that the Postcard 1 message was clearer to the taxpayer and thus more effective. It also could be that alluding to past potential noncompliance makes the taxpayer more hesitant to file, perhaps because they are afraid they will then be contacted about the unfiled return. This is a behavioral response that could be tested further.

TABLE 6. Pilot 2 Regression Results for Tax Year 2013 Potential Nonfilers Dependent Variable: Taxpayer Timely Filed TY 2015 or Filed for an Extension

Explanatory Variables	Primary Code B			Non-Primary Code B		
	Estimate	Marginal Effect of Treatment	Marginal Effect of Intent To Treat	Estimate	Marginal Effect of Treatment	Marginal Effect of Intent To Treat
Intercept	-1.393* (0.055)			-1.916* (0.139)		
Treatment A—Postcard 1 (1 mailing, same version used for Pilot 1)	0.0589 (0.041)	0.010	0.009	0.110* (0.042)	0.017	0.016
Treatment B—Postcard 1 (2 mailings, same version used for Pilot 1)	0.1447* (0.041)	0.024	0.021	0.140* (0.041)	0.022	0.020
Treatment C—Postcard 2 (1 mailing, version refers to Form 4506T)	0.1038* (0.041)	0.017	0.015	0.087* (0.042)	0.014	0.013
Treatment D—Postcard 2 (2 mailings, version refers to Form 4506T)	0.1293* (0.041)	0.021	0.019	0.084* (0.042)	0.013	0.012
Probability of Undeliverable Mail	1.878* (0.422)			-2.086* (0.494)		
Log Likelihood	-16,629			-16,320		
Number of observations	33,259			32,421		

* Indicates significance at the 95% level.

NOTE: Not all explanatory variables are shown. Standard errors are reported in parentheses.

SOURCE: IRS, Compliance Data Warehouse. Individual Return Transaction File, Individual Master File Status and Transaction History, Individual Accounts Receivable Dollar Inventory, and Case Creation Nonfiler Identification Process. Data Extracted September 2016.

Table 6 also shows that PCB taxpayers for whom we don't have a good address (i.e., *Probability of Undelivered Mail*) had a statistically significant positive impact on whether the taxpayer filed a delinquent return in TY 2015. This is counter-intuitive. This may be because these taxpayers have already been predetermined to not be a high-priority case (hence the PCB designation) because they were less likely to have a filing requirement. It seems possible that there are more bad addresses for cases where the taxpayer does not have a requirement to file.

Prior Tax Return Filings

An ancillary benefit of the preemptive outreach is that some taxpayers may also file past delinquent returns. Thus, we identified prior tax returns that were filed during the TY 2015 filing season. A prior return was identified using data on the IRS Compliance Data Warehouse through the end of August 2016 (or cycle 34). Any taxpayer from a treatment group marked as undeliverable was moved to the Control group for this exercise. This helped identify the impact of the treatment on filing prior tax returns.

By the nature of the ASFR Refund Hold group, most of these taxpayers had recently filed a return for which the IRS held a refund because the taxpayer had an unfiled return for a different year. These taxpayers may likely not have as many prior returns to file compared to the other groups. In the non-Refund Hold ASFR group, we found a significant difference between the control and postcard groups in filing a prior return.

TABLE 7. Pilot 1: ASFR—Percentage of Taxpayers with at Least One Prior (TY 2011–2014) Tax Return During the TY 2015 Filing Season

Taxpayer Groups	Refund Hold		Non-Refund Hold	
	Number of Taxpayers	Percent Filed at Least One TY 2011–TY 2014	Number of Taxpayers	Percent Filed at Least One TY 2011–TY 2014
No Treatment	8,982	4.0%	8,775	11.6%
Control	8,142	3.8%	7,946	11.4%
Control (adjusted filing rate)		3.7%		11.3%
Undeliverable	840	5.5%	829	13.3%
Letter	7,752	3.8%	7,511	12.0%
Postcard 1 (one mailing)	7,692	3.8%	7,552	12.7%

SOURCE: IRS, Compliance Data Warehouse. Individual Return Transaction File, Individual Master File Status and Transaction History, Individual Accounts Receivable Dollar Inventory, and Case Creation Nonfiler Identification Process. Data Extracted September 2016.

A significant difference exists across all treatments in Pilot 2 involving the TY 2013 potential nonfilers, with a slightly larger percentage point difference among the PCB group. Thus, the simple comparison suggests that outreach may also be effective in resolving past delinquencies.

TABLE 8. Pilot 2: Percentage of Taxpayers Among TY 2013 Potential Nonfilers with at Least One Prior (TY 2011–2014) Tax Return During the TY 2015 Filing Season

Taxpayer Groups	Primary Code B		Non-Primary Code B	
	Number of Taxpayers	Percent Filed at Least One TY 2011–TY 2014	Number of Taxpayers	Percent Filed at Least One TY 2011–TY 2014
No Treatment	9,614	11.5%	8,757	14.6%
Control	7,041	12.1%	6,550	15.8%
Control (adjusted filing rate)		12.3%		16.2%
Undeliverable	2,573	9.7%	2,207	11.2%
Postcard 1 (one mailing)	6,404	13.7%	5,973	17.1%
Postcard 1 (two mailings)	6,429	13.7%	6,041	16.0%
Postcard 2 (one mailing)	6,396	13.9%	5,979	16.3%
Postcard 2 (two mailings)	6,362	13.6%	5,996	17.0%

SOURCE: IRS, Compliance Data Warehouse. Individual Return Transaction File, Individual Master File Status and Transaction History, Individual Accounts Receivable Dollar Inventory, and Case Creation Nonfiler Identification Process. Data Extracted September 2016.

Table 9 shows the percentage point difference between the portions of taxpayers in each treatment group filing at least one prior tax return (Tax Years 2011–2014) during the TY 2015 filing season compared to the untreated group.

TABLE 9. Percentage Point Difference From the No Treatment Group in the Portion of Taxpayers Filing at Least One Prior (TY 2011–2014) Tax Return During the TY 2015 Filing Season

Taxpayer Groups ^a	Pilot 1: ASFR Treated Taxpayers		Pilot 2: TY 2013 Nonfilers	
	Refund Hold	Non-Refund Hold	PCB	Non-PCB
Letter	-0.2	0.4		
Postcard 1 (one mailing)	-0.2	1.1*	2.3*	2.5*
Postcard 1 (two mailings)			2.3*	1.3*
Postcard 2 (one mailing)			2.4*	1.6*
Postcard 2 (two mailings)			2.2*	2.4*

^a Taxpayers with undeliverable treatments were moved to the Control group.

* Denotes a significant difference from the control group at the 95% level.

SOURCE: IRS, Compliance Data Warehouse. Individual Return Transaction File, Individual Master File Status and Transaction History, Individual Accounts Receivable Dollar Inventory, and Case Creation Nonfiler Identification Process. Data Extracted September 2016.

Conclusions and Direction for Further Research

In this paper, we showed that preemptively contacting taxpayers who have had a previous filing compliance issue can improve future filing compliance. The impacts were modest, but these impacts came at a very low cost. Our results suggest that a letter, at least for some taxpayers, may be more effective than a postcard. When using postcards to nudge taxpayers, lower risk taxpayers may need multiple nudges for the treatment to be effective. Our results also supported the notion that a clearer message may be more effective in increasing taxpayer response, at least in terms of voluntary filing. Also, we plan to extend the analysis of the impact of outreach on past compliance.

There are several areas where these results need to be extended. We need to fully understand the differing results from letters vs. postcards in a broader population of nonfilers. Previous work on EITC suggested that letters vs. postcard was not important, but perhaps it is important for the general population of potential nonfilers. Also, is the “opening” of the letter a real barrier or does just receiving the letter, even if unopened, have an impact on behavior?

The results also need to be extended further to understand to what degree, if any, trying to address past nonfiling is an impediment to fostering compliance in the future. If the tax authority does not have the resources to go back and enforce filing, is it better for them to “cut their losses” and focus only on the taxpayer’s future filing behavior? These behavioral tests for filing compliance and compliance in general could be addressed in field and potentially in laboratory experiments to explore the impact of policies that ignore past noncompliant behavior and rather focus on taxpayers making a fresh start toward compliance.

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Appendix—Samples of Treatment Correspondence

Preemptive Letter (P5665)



Department of the Treasury
Internal Revenue Service
[Address Line 1]
[Address Line 2]
[Address Line 3]

Letter 5665
Date

[Taxpayer Name]
[Address Line 1]
[Address Line 2]
[Address Line 3]
[Address Line 4]

REMINDER

This is a reminder to file your 2015 tax return.

What you should know

If you are required to file this tax return:

- Please file by April 15, 2016.
- For more information on filing electronically, mailing your return, or getting an extension, go online to www.irs.gov/filing.

Please disregard this reminder if you have already filed this return:

- Thank you for filing.

If you don't file your return:

- The Internal Revenue Code sets strict time limits for claiming tax refunds.
- We may file the return for you and not allow credits or exemptions you could claim if you filed yourself.

Additional information

For tax forms, instructions, and publications, visit www.irs.gov or call 1-800-TAX-FORM (1-800-829-3676).

Letter 5665 (1-2016)
Catalog Number 67591A

Preemptive Postcard 1(P5235)

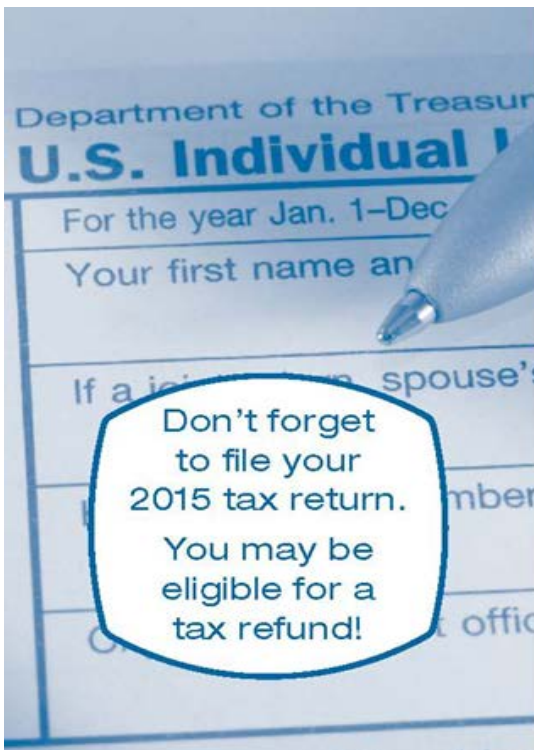
(front)



If you have not
already done so,
remember to file your
2015 tax return by
April 15, 2016.

- Did you know the average tax refund in 2014 was approximately **\$2,800**?
- You could be eligible for valuable tax benefits, but you must file to receive them.
- For more information about filing, or getting an extension to file, go online to www.irs.gov/filing.

(back)



Internal Revenue Service
c/o Westat
1600 Research Blvd, RW2634
Rockville, MD 20850-3129
RETURN SERVICE REQUESTED

Taxpayer's Address Here

Preemptive Postcard 2 (P5235A)

(front)



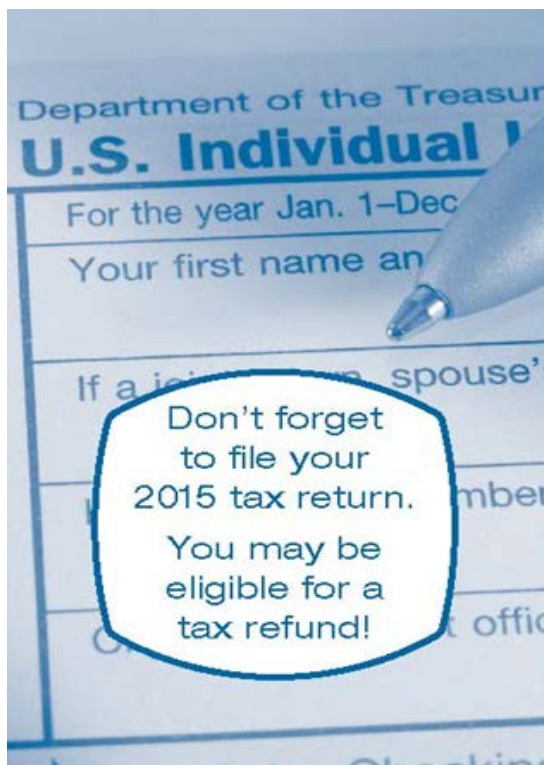
If you have not already done so, remember to file your 2015 tax return by April 15, 2016.

- Did you know the average tax refund in 2014 was approximately **\$2,800**?
- You could be eligible for valuable tax benefits, but you must file to receive them.
- For more information about filing, or getting an extension to file, go online to www.irs.gov/filing.

It's not too late to file returns for prior tax years.

- You can file late tax returns and claim tax refunds up to 3 calendar years after the April filing deadline. For example, you can claim a tax refund for 2012, if you file your tax return by April 15, 2016.
- To request transcripts of prior year W-2s and other tax documents, submit Form 4506T (from <http://www.irs.gov/uac/About-Form-4506T>).

(back)



Internal Revenue Service
c/o Westat
1600 Research Blvd, RW2634
Rockville, MD 20850-3129

RETURN SERVICE REQUESTED

Taxpayer's Address Here