

# Effects of Forms 1040-X and 1120-X Post-filing Adjustments on SOI Estimates

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## Introduction

Historically, Statistics of Income (SOI) research has been based on data collected from initial tax return filings.<sup>1</sup> Although initial tax return filings are often final, taxpayers may elect to amend their income tax returns.<sup>2</sup> Common reasons for amending an initial return include tax over- or underassessments, or the taxpayer might file an amendment after identifying errors on the original return.<sup>3</sup>

Taxpayers have an option to amend their initial return after the tax filing period has ended. Under Internal Revenue Code (IRC) § 6511, taxpayers must file a claim for a credit or refund within 3 years from the time the initial tax return was filed or 2 years from the time the tax was paid, whichever is later. In some instances, extensions may be granted for filing an amended return.

Post-filing changes can influence net revenue, which consequently impacts fiscal research and policy. However, to publish statistics in a timely manner, SOI does not wait for the processing of amended return data. Thus, amendments are excluded from the SOI survey population sampling frame and are not reflected in SOI estimates. Additionally, incorporating these changes into SOI statistics would require substantial SOI resources in terms of time and labor, which may not be justifiable depending on the magnitude of the impact.

Nevertheless, it may be valuable to IRS stakeholders to understand the difference between currently published statistics and taxpayers' finalized tax statistics. This study aims to contribute to a better understanding of the difference by measuring the impact of including amended returns to a subset of SOI products.

Information in this article is presented as follows: first the scope of the project is defined and previously published data are summarized. Next, new results are presented for amendments for both individual and corporate income tax returns. Conclusions, as well as a discussion on the limitations to this study and suggestions for future work, follow. Additional information, data tables, and graphs are listed in the appendices.

## Scope of Project

This study aims to estimate the effect of including amended tax returns into SOI products. It focuses on individual and corporate

returns—*U.S. Individual Income Tax Return* (Form 1040) or a *U.S. Corporation Income Tax Return* (Form 1120)—filed in a selected tax year that were amended using either an *Amended U.S. Individual Income Tax Return* (Form 1040-X) or an *Amended U.S. Corporation Income Tax Return* (Form 1120-X).<sup>4</sup>

The base year for this study is SOI Year 2013. This means that this study measures changes made in subsequent years to returns that were filed for SOI Year 2013. SOI Year 2013 was chosen because it is a relatively recent year with 3 years of post-filing data. There are a number of exemptions to the general rule of 3 years, so this study identified all amendments to SOI Year 2013 returns at the time the data were pulled.

This study uses IRS Master File-level data as well as the SOI samples to capture changes to individual and corporate returns. Tax adjustments were identified in the Master File data and linked to tax returns in the individual and corporate SOI samples. The matched data were weighted using the respective sample weights from the individual and corporate studies to represent adjustments in the overall population. Finally, the weighted sample estimates were compared to total changes in the population data to verify the appropriateness of SOI sample weights for this study.

## Existing Estimates and Published Data

The estimates reported in this section are examples of published data that include information on amendments.

The IRS annually reports data about Forms 1040-X and 1120-X filings in *Calendar Year Return Projections for the United States and IRS Campuses* (Publication 6186).<sup>5</sup> This publication includes the number of returns that are processed during the given calendar year as well as prior years, and projections of returns to be filed for future years.<sup>6</sup> As reported in the 2014 release of Publication 6186, the IRS processed 145,851,813 individual income tax returns and 6,685,423 corporation income tax returns in Calendar Year 2013. For this same calendar year, the IRS processed 3,951,923 amended individual income tax returns (Forms 1040-X) and 7,000 amended corporation income tax returns (Forms 1120-X).

The data published in Publication 6186 provide estimates for the number of amended returns processed (based on Forms 1040-X and 1120-X) in a given year. However, the amended

<sup>1</sup> For some studies, SOI replaces initially filed tax returns with superseding returns that are filed within the same SOI study year.

<sup>2</sup> Taxpayers can add, delete, update, or change their income, exemptions, deductions, credits, filing status, etc., reported on their original tax returns, including claiming tax credits and deductions that were not previously claimed.

<sup>3</sup> In some cases, post-filing adjustments may start out as an overassessment and turn into an underassessment (or vice versa).

<sup>4</sup> Although there are other ways to amend Forms 1040 and 1120, this study is limited to Forms 1040-X and 1120-X for amendment estimates.

<sup>5</sup> Publication 6186 reports the number of tax returns filed for the United States and IRS processing campuses by major return categories for each calendar year. Data on amended returns can be found in Table 2, "Total Number of Returns Filed by Type for the United States."

<sup>6</sup> The calendar year runs from January 1 to December 31.



returns reported on in this publication could be associated with initial filings from any prior tax year. Currently, no published data reflect the number of amended returns associated with a fixed initial filing tax year. Existing studies do not follow the returns from a fixed initial filing tax year to capture the related amended returns. Therefore published data cannot shed light on how these changes would affect SOI's tax year estimates.

## Methodology

Datasets containing original population data for individuals and corporations were selected from Master Files and other IRS databases. These datasets contain multiple years of transactions regarding filed income tax returns, including data on subsequent adjustments to the initial filings. Master File data on Forms 1040-X and 1120-X include net total tax change amounts.

Population data were matched to the SOI Form 1040 and Form 1120 sample data. The data for individual income tax returns were matched using the Taxpayer Identification Number (TIN). The data for corporation income tax returns were matched using a corporation's Employer Identification Number (EIN) and accounting period.<sup>7</sup> It is necessary to use accounting period in addition to EIN since some corporations could have multiple original returns in a file due to short tax year corporate returns<sup>8</sup> or other reasons. The SOI sample data for this research were used to produce the 2013 *Individual Income Tax Returns Complete Report* (Publication 1304) and the 2013 *Corporation Income Tax Returns Complete Report* (Publication 16), otherwise known as the *Complete Reports* for individual and corporation returns.

The individual sample selection occurred during Calendar Year 2014. This study included all filed Forms 1040-X that corresponded to a return selected for the 2013 individual sample. The corporate sample selection differs from the individual sample selection. The corporate sample selection occurred during the period July 2013 to June 2015, which allowed for the capture of returns filed in different accounting periods, as well as those that had changes within the limitation period, including filing extensions. By limiting the accounting period in accordance with the SOI sample, this study sought to include filed Forms 1120-X that corresponded to returns selected for the 2013 SOI corporate sample.<sup>9</sup>

## Results

The following estimates are based on Master File data that were not edited or reviewed for quality. Where results are presented in this section, Forms 1040-X and 1120-X are referred to as amended individual and corporate returns, and Forms 1040 and

1120 are referred to as individual tax returns and corporate tax returns. Similarly, Form 1040 and Form 1120 filing populations are referred to as individual and corporate filing populations, respectively.

## Individual Income Tax Returns

For Tax Year 2013, taxpayers filed 142.9 million individual income tax returns, of which 3.2 million (2.3 percent) were amended at least once after the initial return was filed (Table 1). Of the amended returns, tax increases totaled \$2.5 billion and tax decreases totaled \$4.6 billion, resulting in a net decrease of \$2.1 billion.

Incorporating these adjustments from amended individual income tax returns into SOI statistics decreased the estimated total amount of reported tax liability from Form 1040 filers by 0.16 percent for Tax Year 2013.

In the analysis by adjusted gross income (AGI), taxpayers were separated into two groups, married filing jointly and filing nonjointly (i.e., single, married filing separately, head of household, and qualifying widow(er)).<sup>10</sup>

## Population demographics

With respect to filing status, single, married filing separately, and widowed taxpayers represented roughly the same proportion of amended individual tax returns (Forms 1040-X) as they did individual tax returns (Forms 1040) (Figure A). Married filing jointly taxpayers filed 44.8 percent of all amended individual returns (Forms 1040-X) for Tax Year 2013, despite comprising 53.4 percent of the population of individual tax returns (Forms 1040) for the year. Conversely, head of household filers represented 16.6 percent of amended individual returns but only comprised 10.8 percent of individual tax returns.

Certain filing statuses are more likely to amend their initial returns (Figure B). Specifically, 4.6 percent of returns filed by qualifying widow(ers) were amended, compared to 2.9 percent of returns filed by those married filing separately and 2.5 percent filed by a head of household, versus only 1.7 percent of returns filed by single filers and 1.4 percent of returns filed by those married filing jointly.

The age distribution among individual taxpayers who filed amended returns is roughly the same as those filing initial tax returns (Figure C). Taxpayers between ages 30 and 70 represented a marginally higher proportion of amended returns than individual tax returns. Individuals in the under 30 and over 70 age categories comprised a marginally lower proportion of amended returns than individual tax returns. The largest difference was in the age 40-under-50 group; these taxpayers filed 19.7 percent

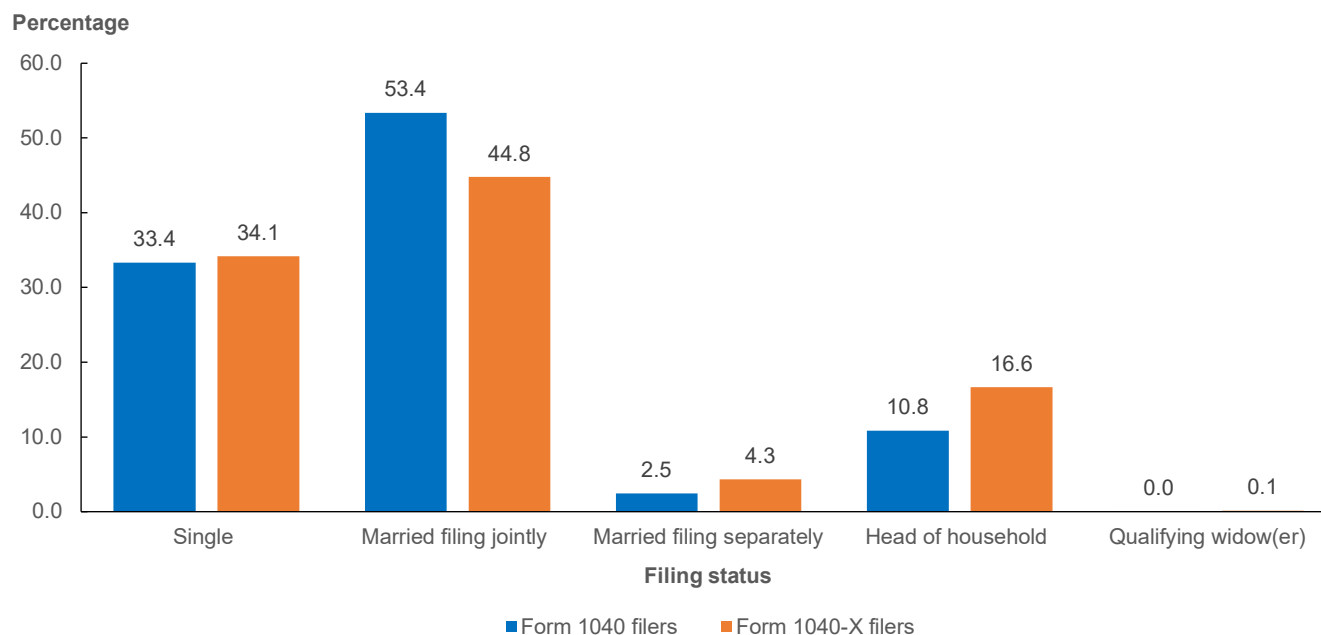
<sup>7</sup> Corporations can choose to adopt a calendar year, fiscal year, or 52-53-weeks year. If a corporation adopts the calendar year, it should maintain its books and records and report income and expenses from January 1st through December 31st of each year. A fiscal year is 12 consecutive months ending on the last day of any month except December 31st. This study considers 52-53-weeks year filers as fiscal year filers.

<sup>8</sup> A short tax year is a tax year of less than 12 months. A short period tax return may be required when a corporation is not in existence for an entire tax year, or it decides to change an accounting period. Tax on a short period tax return is figured differently for each situation.

<sup>9</sup> This study was unable to categorically exclude superseding corporate returns.

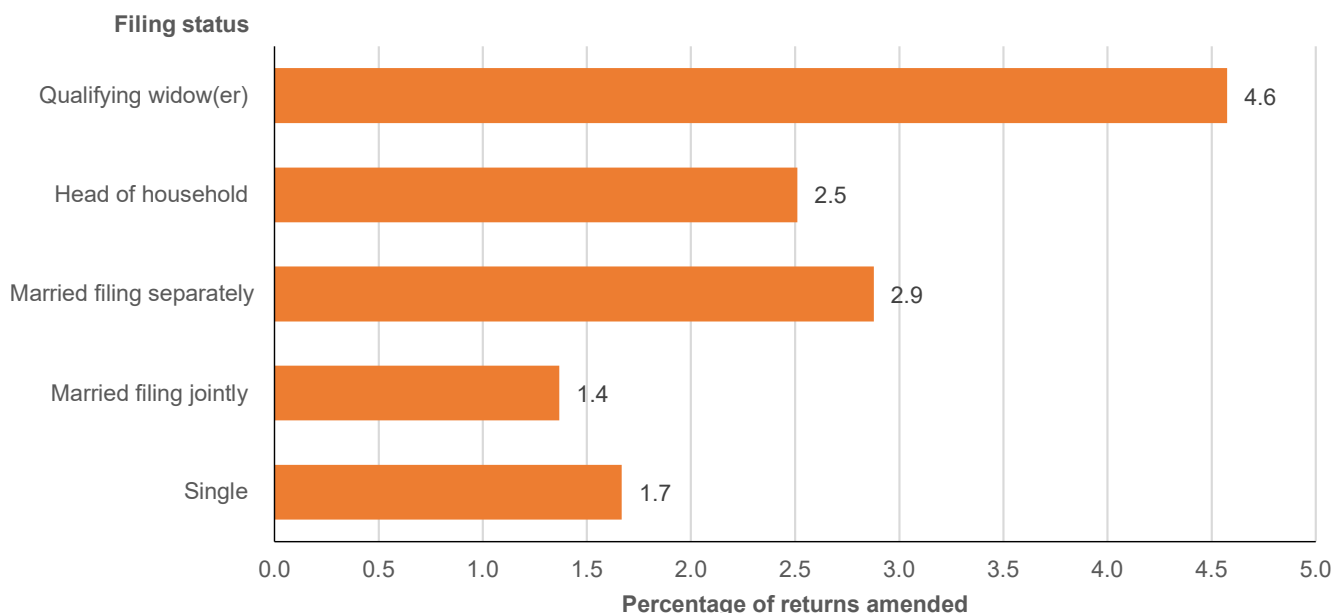
<sup>10</sup> The data were divided into married filing jointly and otherwise to avoid miscounting or erroneous interpretations. A married filing jointly couple with \$60,000 in AGI cannot be counted as two taxpayers who each make \$60,000, nor as one taxpayer who makes \$60,000, nor as two taxpayers who make \$30,000 each.

**Figure A**  
**Proportion of Form 1040 and Form 1040-X Returns Filed by Filing Status, Tax Year 2013**



SOURCE: IRS, Statistics of Income, Weighted Sample, February 2021.

**Figure B**  
**Form 1040-X Filing Rates by Filing Status, Tax Year 2013**



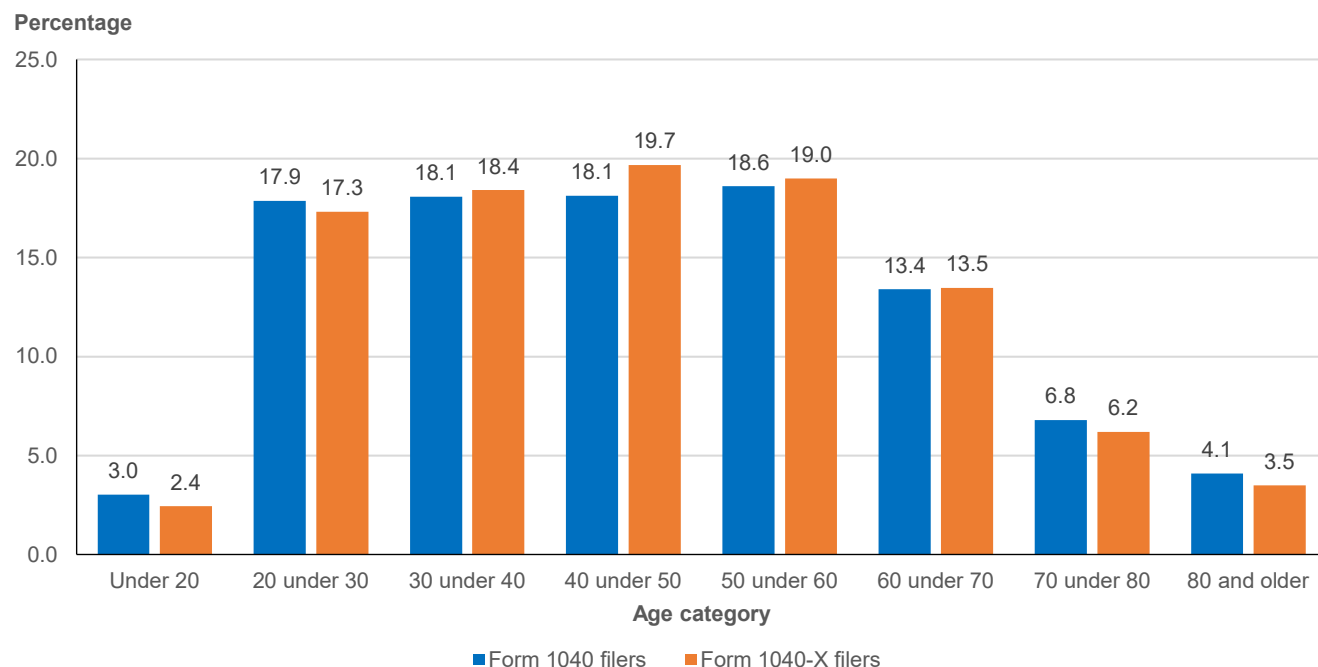
SOURCE: IRS, Statistics of Income, Weighted Sample, February 2021.

of the amended returns and 18.1 percent of the individual tax returns for Tax Year 2013. There were no age groups whose returns were markedly more likely to be amended (Figure D).

Nonjoint returns with an AGI between \$1 and \$25,000 made up a smaller proportion of amended returns than they did

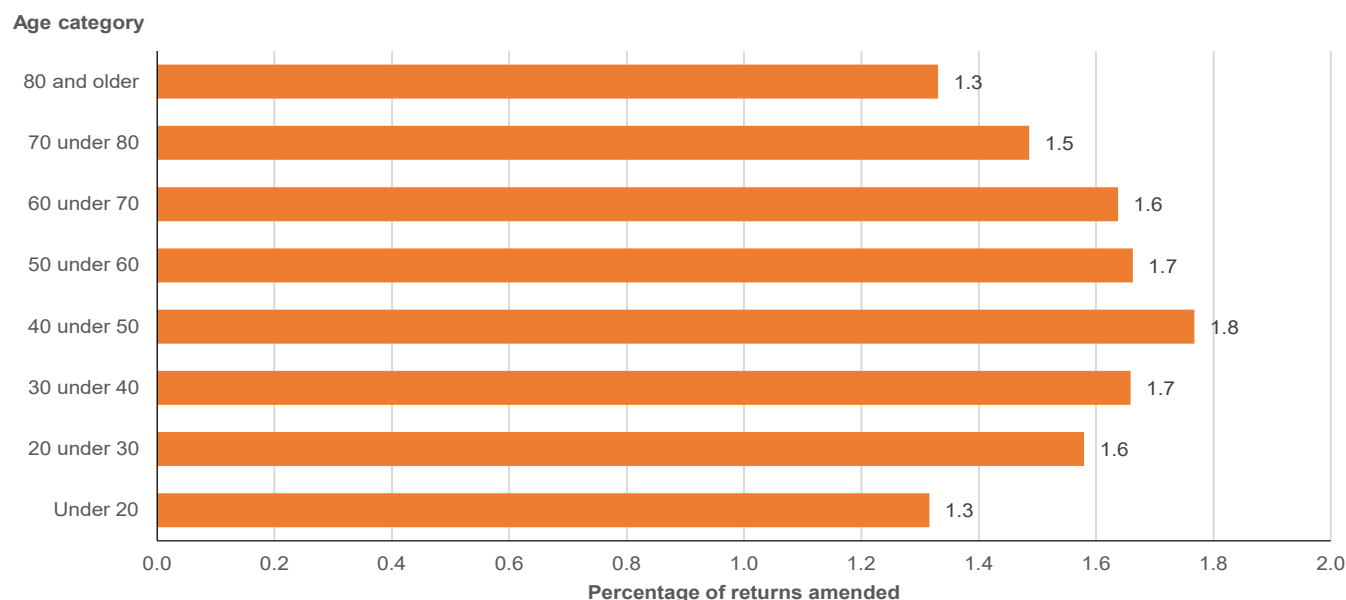
individual tax returns, accounting for 48.5 percent of amended returns and 52.5 percent of individual tax returns for the year (Figure E). Individual filers with an AGI less than \$1 filed amended returns in nearly the same proportion as individual tax returns, 1.4 percent and 1.5 percent, respectively. Nonjoint

**Figure C**  
**Proportion of Form 1040 Filers and Form 1040-X Filers by Age of Taxpayer, Tax Year 2013**



SOURCE: IRS, Statistics of Income, Weighted Sample, February 2021.

**Figure D**  
**Form 1040-X Filing Rates by Age of Taxpayer, Tax Year 2013**



NOTE: Percentage labels were rounded and therefore may not align exactly with the vertical percentage lines.  
SOURCE: IRS, Statistics of Income, Weighted Sample, February 2021.

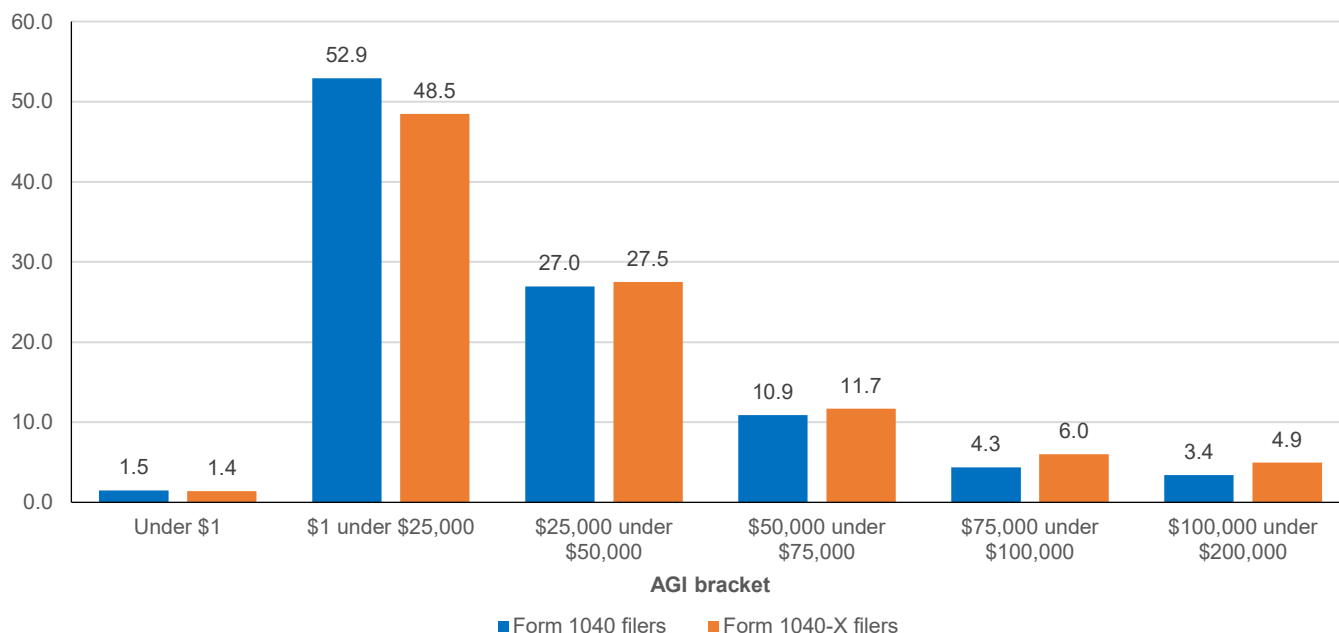
returns with an AGI in the \$100,000-under-\$200,000 category were more likely to be amended (2.8 percent of filers) than returns of other AGI groups (Figure F). Filers with an AGI between \$1 and \$25,000 were the least likely to amend their returns (1.7 percent of filers).

Married filing jointly taxpayers with an AGI of less than \$1 through the under \$100,000 AGI category filed a proportionally lower volume of amended returns than individual tax returns (Figure G). A significantly larger proportion of couples with an AGI of over \$200,000 filed amended returns, comprising

**Figure E**

## Proportion of Form 1040 and Form 1040-X Filers, Nonjoint Returns, by Selected Adjusted Gross Income Bracket, Tax Year 2013

Percentage

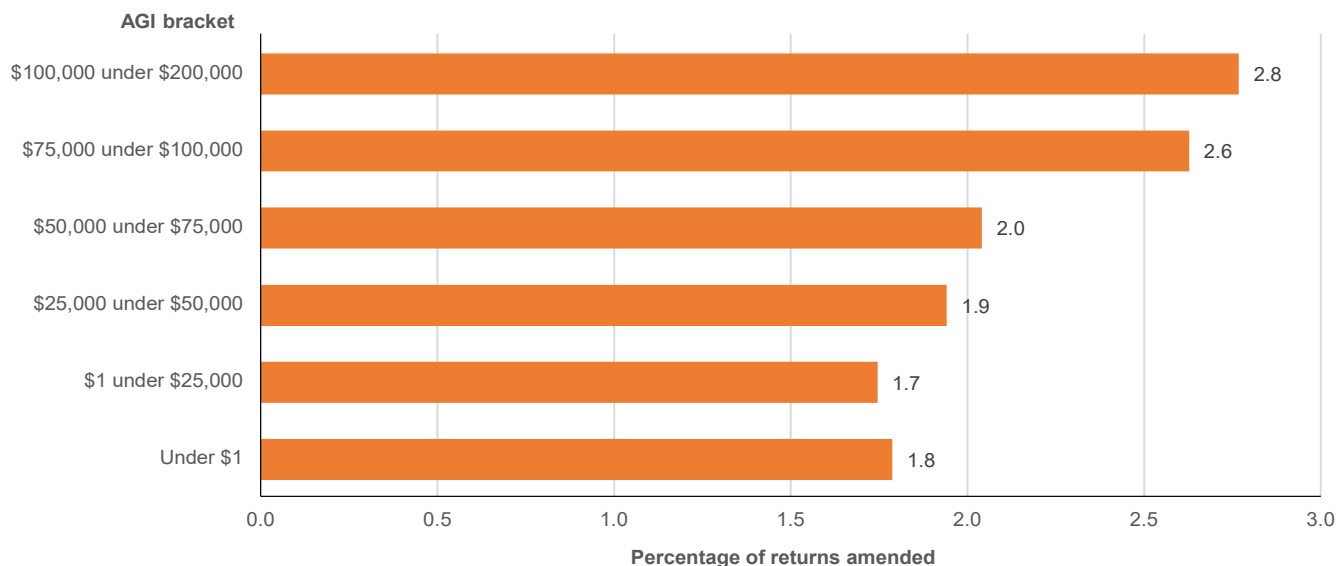


NOTES: This figure excludes married filing jointly filers. This figure only includes filers with a marital status of single, head of household, widow(er), and married filing separately. Taxpayers whose AGI exceeds \$200,000 were excluded from this analysis due to too few returns in that category.

SOURCE: IRS, Statistics of Income, Weighted Sample, February 2021.

**Figure F**

## Form 1040-X Filing Rates, Nonjoint Returns, by Selected Adjusted Gross Income Bracket, Tax Year 2013



NOTES: This figure excludes married filing jointly filers. This figure only includes filers with a marital status of single, head of household, widow(er), and married filing separately. Percentage labels were rounded. Taxpayers whose AGI exceeds \$200,000 were excluded from this analysis due to too few returns in that category.

SOURCE: IRS, Statistics of Income, Weighted Sample, February 2021.

14.0 percent of all amended returns and 8.9 percent of individual tax returns. These same taxpayers were more likely to file an amended return (around 2.2 percent of returns in this AGI group) than other AGI groups (Figure H).

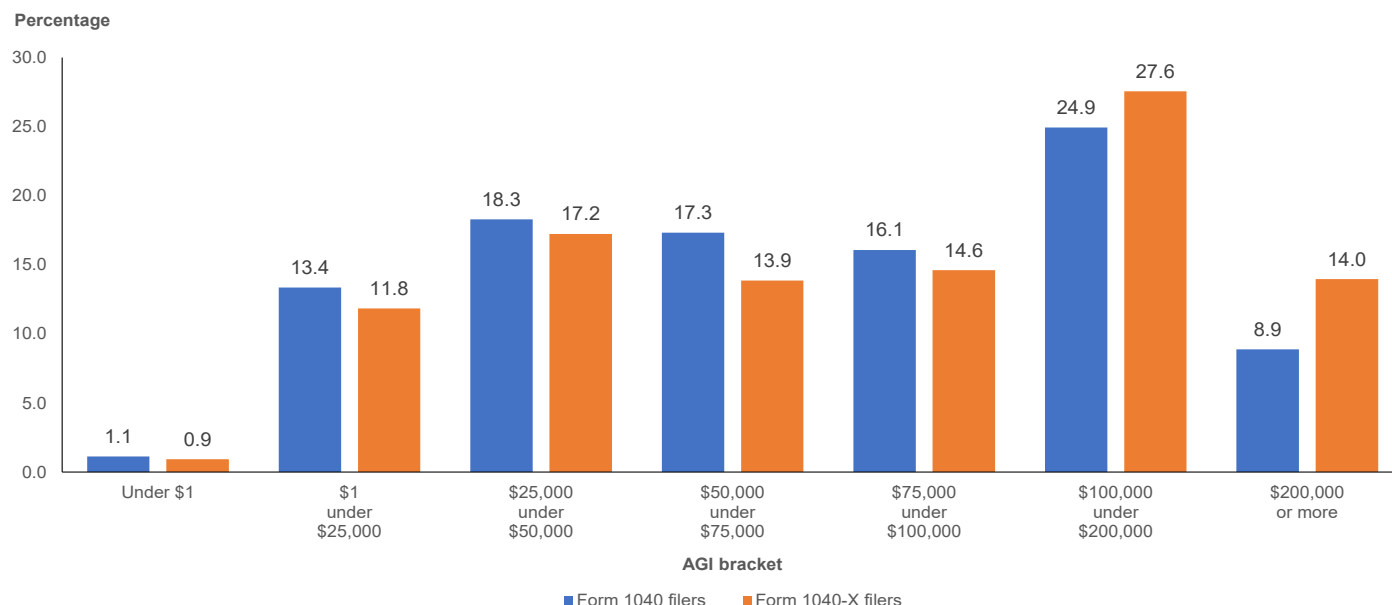
## Corporate Income Tax Returns

Of the 1.6 million corporate tax returns included in the 2013 SOI study year, 8,200 (0.52 percent) were amended after the initial

return was filed (Table 2). These filers reported a net tax overpayment of \$87.8 million. Tax increases for 1,300 amended corporate tax returns totaled \$30.4 million while tax decreases for 1,800 returns totaled \$118.2 million. There were 5,100 amended corporate tax returns with no tax change. Incorporating adjustments from amended returns into SOI statistics would decrease the estimated total amount of taxes paid by these filers by \$87.8 million (0.03 percent) for Tax Year 2013.

**Figure G**

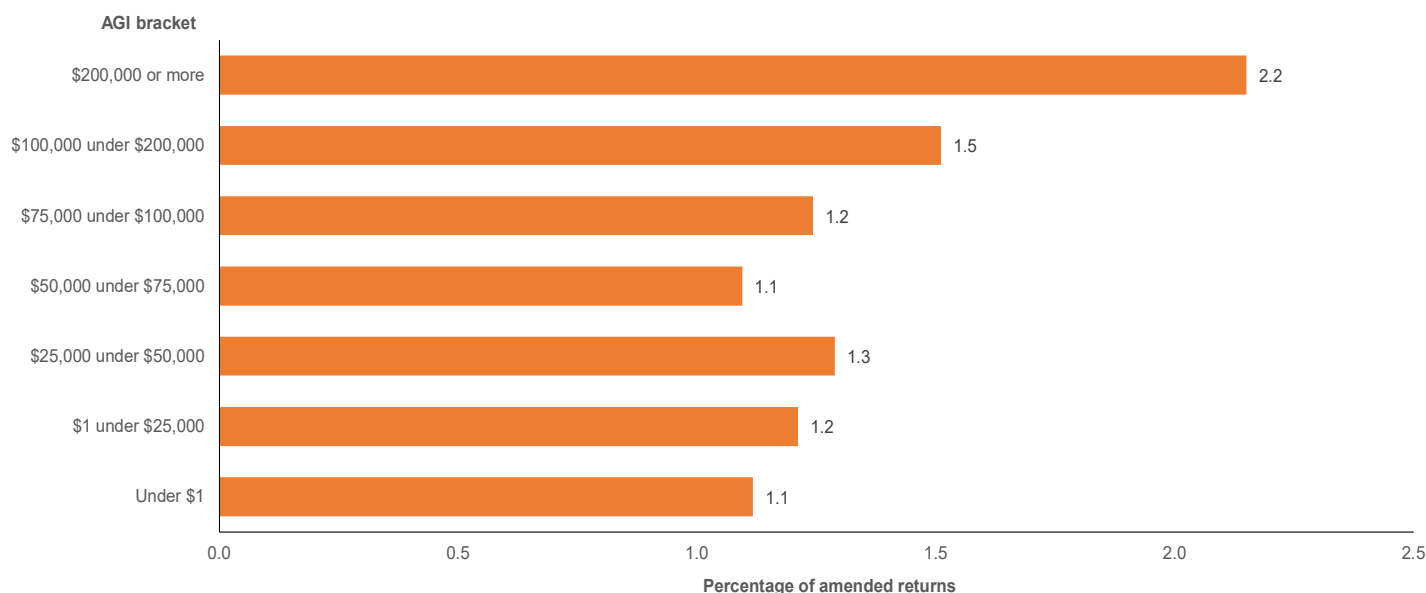
**Proportion of All Married Filing Jointly Form 1040 Filers and Form 1040-X Filers by Adjusted Gross Income Bracket, Tax Year 2013**



SOURCE: IRS, Statistics of Income Division, Weighted Sample, February 2021.

**Figure H**

**Form 1040-X Filing Rates, Married Filing Jointly Filers, by Selected Adjusted Gross Income Bracket, Tax Year 2013**



NOTE: Percentage labels were rounded.

SOURCE: IRS, Statistics of Income Division, Weighted Sample, February 2021.

## Classification

The majority of amended corporate income tax returns were electronically filed. IRS requires that if the original Form 1120 is e-filed then the Form 1120-X must also be e-filed. Approximately 70 percent of Forms 1120 were e-filed compared to 74 percent of Forms 1120-X.

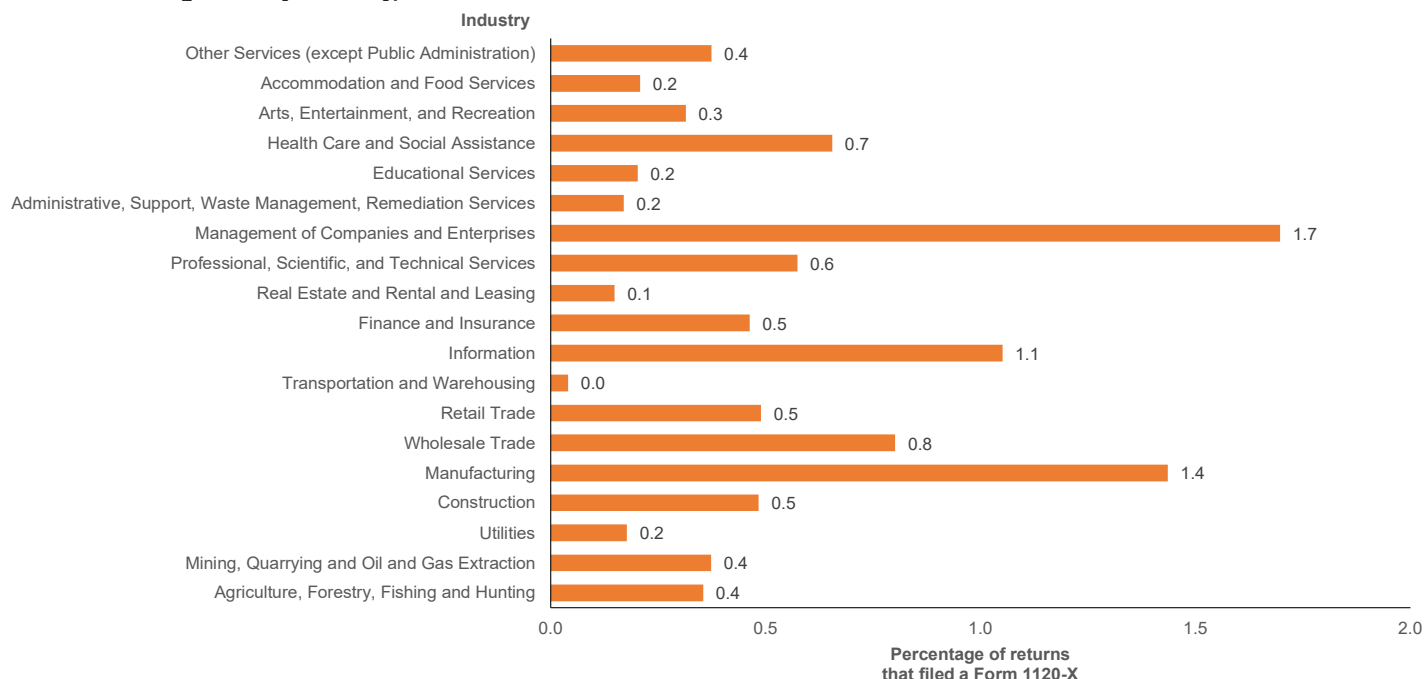
Based upon SOI-assigned industry codes, the industrial sectors that had the highest rates of amended corporate tax returns

were Management of Companies and Enterprises (1.7 percent), Manufacturing (1.4 percent), and Information (1.1 percent) (Figure I). The sectors with the lowest amendment rates were Transportation and Warehousing (0.04 percent), Real Estate and Rental and Leasing (0.1 percent), and Utilities (0.18 percent).

Corporations with assets between \$100,000 and \$250,000 had the lowest amendment rate (0.5 percent, Figure J). The amendment rates rose as assets increased up to the peak—corporations

**Figure I**

### Form 1120-X Filing Rates by Industry, SOI Year 2013

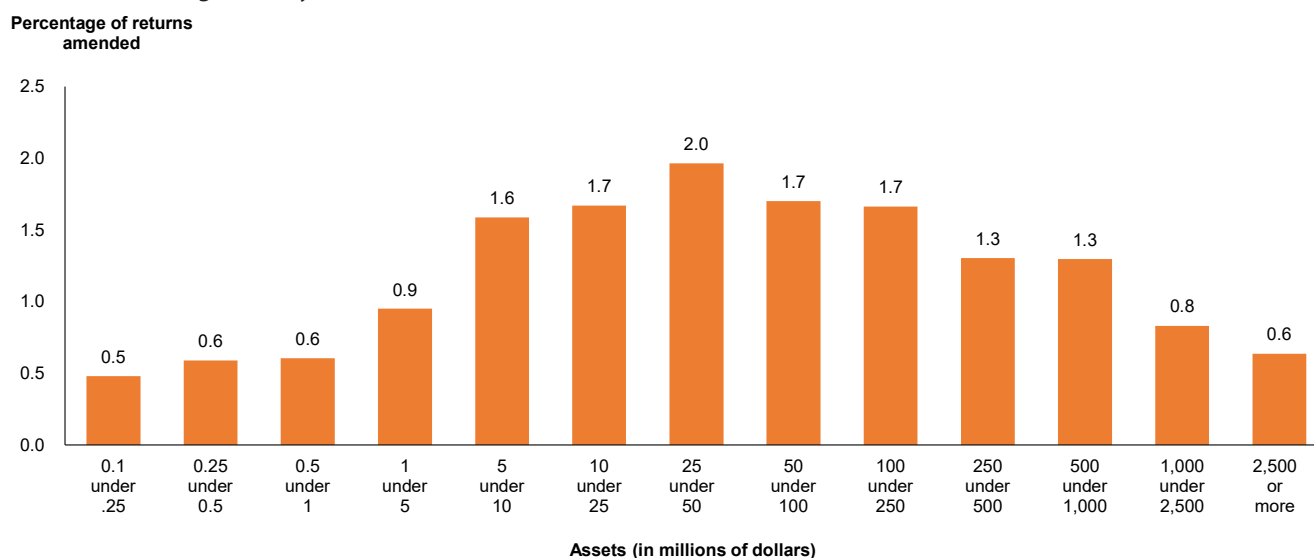


NOTE: Percentage labels were rounded.

SOURCE: IRS, Statistics of Income Division, Weighted Sample, February 2021.

**Figure J**

### Form 1120-X Filing Rates by Size of Total Assets, SOI Year 2013



NOTE: Percentage labels were rounded.

SOURCE: IRS, Statistics of Income Division, Weighted Sample, February 2021.



with reported assets between \$25 and \$50 million—where the amendment rate was approximately 2 percent, and then declined from there.

## Conclusion/Summary

In conclusion, this study sought to measure the impact that amendments would have on SOI tax return statistics. Based on the results, there is an important observation about SOI estimates that can be made for individual and corporate income returns. In this preliminary study looking at 2013, some 2.3 percent of individual income tax returns (Forms 1040) and 0.52 percent of corporate income tax returns (Forms 1120) were amended (using Forms 1040-X and 1120-X). These amendments decreased the estimated total tax from individual filers by only \$2.1 billion (0.16 percent) and decreased the estimated total tax from corporate filers even less, by \$87.8 million (0.03 percent).

Thus, the study's review of individual and corporate tax returns from 2013 suggests that while SOI tax return statistics would be affected by post-filing adjustments, current SOI statistics do not significantly change.

## Discussion

### Study challenges/limitations

There are a number of legal requirements, data quality issues, and other study limitations that may affect the quality of the results. This section discusses some of these limitations, but is not exhaustive, and focuses on the adjustments to corporation income tax returns.

Legislative and regulatory changes in years after 2013 could affect adjustments to 2013 returns if later changes in tax liability are carried back to 2013. In such cases a corporation may request a Tentative Allowance of a carryback of a credit or loss within the statutory period of limitation. Typically, corporations use *Corporation Application for Tentative Refund* (Form 1139) for this purpose.<sup>11</sup> There are some cases when the taxpayer prefers to file Form 1120-X over Form 1139. Although some Forms 1120-X might include both a carryback adjustment and a general tax adjustment claim, only a general tax adjustment is within the scope of this study. Thus, the carryback adjustments are not included in the study calculations.

At this time, some data posted to the IRS Master File do not clearly distinguish recommended changes from paid amounts. In the tables used as part of this study, the posted tax change is a recommendation, not a paid amount. In some postings, the information posted is part of an installment payment (and does not reflect the full amount). In processing, there may be tax adjustments which are posted in multiple installments (*i.e.*, a partial tax adjustment is posted and later the remainder of the tax adjustment is posted).

Large changes after filing could result in a sample that is no longer weighted correctly to reflect the total population. Any

large post-filing season changes could affect the value of total assets or other amounts used in the weighting scheme. Therefore, it is important to identify alterations to the size of total assets, income, or gross receipts that could trigger a subsequent assignment of the return to a higher or lower sample class. For example, a reclassification to a higher sample class may result in the movement of returns from noncertainty strata to certainty strata, which initiates the process of recalculating the weights.

For this study, weights were not recalculated after amendments.<sup>12</sup> Instead, the weighted sample data were compared to the true population. This verified that the weights were appropriate for the study and that the strata were not significantly changed. Future studies should verify weights and consider recalculating them if the differences are significant. One impediment to recalculating weights is that there may be errors in the Master File data. SOI study weights are based on SOI data, which go through editing and quality review, but data posted to the IRS Master File are as reported by the taxpayer.

The Master File data used in this study were aggregated net total tax change amounts. This study does not look at individual record-level and/or item-level tax differences between the matched sample and amended return record. Doing such a comparison might produce a different adjustment estimate because of the changes that are made as part of the SOI editing process to the original return. Additional resources would be required to edit returns and follow the SOI study processes. In the meantime, this study can be used as a way to estimate and then to determine if record-level or item-level detailed research is necessary for a given year.

There are additional ways to amend Form 1120, but they are outside the scope of this study. The corporate part of this study only collected data from Form 1120-X to estimate amendments to Form 1120. Future studies may consider additional ways of filing an amendment.

## Appendix

### Sampling details

All dollar values and counts presented in the results section of this paper for individual and corporate returns are population estimates that have been weighted in accordance with the sample weighting scheme for the 2013 *Complete Reports* for individual and corporate returns.

### Individual sample

Individual income tax statistics for this article are based on a sample of individual income tax returns (Forms 1040, 1040A, and 1040EZ, including electronically filed returns) filed for Tax Year 2013. SOI stratified the returns in the sample based on the: (1) larger of positive income or negative income (absolute value); (2) size of business and farm receipts; (3) presence or absence of specific forms or schedules; and (4) usefulness of

<sup>11</sup> Corporations should file Form 1120-X or other amended return instead of Form 1139 when carrying back to years that have a section 965(a) inclusion ("a 965 year"); a prior year minimum tax credit released due to an NOL (net operating loss), or net capital loss carryback; a prior year foreign tax credit released due to an NOL or net capital loss carryback, a prior year general business credit released because of the release of the foreign tax credit, or an NOL for a year for which a corporation has a 965(a) inclusion.

<sup>12</sup> All corporate dollar values and counts presented in this paper are population estimates that have been weighted in accordance with the SOI 2013 corporate sample weighting scheme based in part on size of total assets.



returns for tax policy modeling purposes. SOI then selected returns at rates ranging from 0.10 percent to 100 percent.

## Corporate sample

Corporate income tax statistics for this article are based on a sample of corporate income tax returns (Forms 1120) filed during SOI Year 2013. SOI stratified the returns in the sample based on (1) the size of the total assets, and (2) the size of the “proceeds,” which is the measure of income for this form. SOI then selected returns for Form 1120 at rates ranging from 0.40 percent to 100 percent.<sup>13</sup>

## Definitions

**Amended return**—A return that was amended using Form 1040-X or 1120-X.

**Form 1040-X**—A form filed to change a previously filed Form 1040 or Form 1040-X. It must be filed on paper within 3 years of the original return’s filing date or within 2 years of the tax being paid, whichever is later. Special exemptions for the statute of limitations exist for net operating loss, loss carrybacks, foreign tax credits, and bad debt.

**Form 1120-X**—A form filed to change a previously filed corporate return. It can be either e-filed or paper filed within 3 years of the original return’s filing date or within 2 years of the tax being paid, whichever is later. In the event of bad debt or a worthless security, the statute of limitations is extended to 6 years.

**Publication 6186—Calendar Year Return Projections for the United States and IRS Campuses**—This publication provides the total number of returns filed historically and future projections of returns to be filed, ordered by form and type of return.

**Publication 1304—Individual Income Tax Returns (Complete Report)**—The Individual Complete Report publication contains complete individual income tax data. The statistics are based on a sample of individual income tax returns, selected before

examination, which represents the population of Forms 1040, 1040-A, and 1040-EZ, including electronic returns filed for a given tax year. The report contains data on sources of income, adjusted gross income, exemptions, deductions, taxable income, income tax, modified taxable income, tax credits, self-employment tax, and tax payments.

**Publication 16—Corporation Income Tax Returns (Complete Report)**—The Corporation Complete Report publication contains complete corporate income tax data. The statistics are based on a sample of corporate income tax returns selected before examination. The report contains data on the number of returns, total assets, total receipts, and net income (less deficit), income subject to tax, total income tax before credits, and total income tax after credits for active corporations.

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<sup>13</sup> See 2013 *Corporation Income Tax Returns Complete Report*, Section 3: Description of the Sample and Limitations of the Data. “Corporation Returns: Number Filed, Number in Sample, and Sampling Rates, by Selection Class,” <https://www.irs.gov/pub/irs-soi/13coccr.pdf>.

**Table 1. Effects of Post-filing Adjustments on Forms 1040, SOI Year 2013**

[Money amounts are in millions of dollars]

Item	Amendments [1]
	Recommended tax change
Increases to tax	\$2,500
Decreases to tax	\$4,600
<b>Net impact on SOI estimates [2]</b>	<b>\$-2,100</b>
<b>Percent effect on SOI estimates</b>	<b>-0.16%</b>

[1] Amendments refers to post-filing adjustments induced by a Form 1040-X.

[2] This row is calculated from approximately 3.2 million amended returns.

SOURCE: IRS, Statistics of Income Division, Weighted Sample, February 2021.

**Table 2. Effects of Post-filing Adjustments on Forms 1120, SOI Year 2013**

[Money amounts are in thousands of dollars]

Item	Amendments [1]	
	Number of returns	Recommended tax change
Increases to tax	1,251	\$30,397
Decreases to tax	1,778	\$118,200
<b>Net impact on SOI estimates [2]</b>	<b>3,029</b>	<b>\$-87,803</b>
<b>Percent effect on SOI estimates</b>	<b>0.16%</b>	<b>-0.03%</b>

[1] Strictly includes returns initially filed with Form 1120.

[2] Returns with no change to tax are not included.

SOURCE: IRS, Statistics of Income Division, Weighted Sample, February 2021.