Shrinking the Tax Gap: Approaches and Revenue Potential

Natasha Sarin & Lawrence H. Summers, *taxnotes*, November 18, 2019

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In this report, Sarin and Summers argue that more resources for conducting IRS examinations (particularly of high-income earners), increasing cross-party reporting requirements, and overhauling outdated IRS technology would enable the agency to shrink the tax gap by around 15 percent in the next decade.

The IRS recently released its most recent estimates on the tax gap — the difference between what was due to the IRS and what it collected.[1] Between 2011 and 2013, the IRS estimates that it failed to collect more than $380 billion in taxes per year, across all tax categories.

Extrapolating this estimate to the present to allow for inflation and income growth, in 2020 the IRS will fail to collect more than $630 billion, or nearly 15 percent of total tax liabilities, and that the tax gap will total $7.5 trillion over the 2020 to 2029 period.[2] The sheer magnitude of the tax gap suggests that there is substantial revenue-raising potential from shrinking it through well-targeted enforcement measures. Even so, recent policy discussions on how best to reform the tax code tend to ignore this most straightforward approach to revenue-raising — ensuring that the IRS collects taxes already owed.

It's impossible to calculate with precision how much of this could be collected. Our estimates suggest that it's reasonable to anticipate that with feasible changes in policy, the IRS could aspire to shrink the tax gap by around 15 percent. This would require increased investment in compliance efforts in the range of previous IRS budget outlays. Assuming immediate implementation, our estimates suggest it would be possible to generate around $1.1 trillion in additional revenue in a decade.[3]

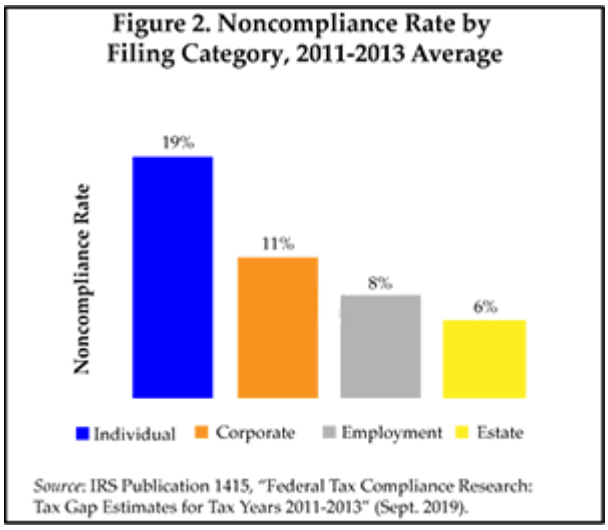
This short article represents an attempt to quantify the benefits of substantial investment in tax compliance. We proceed in three parts. We first provide background on the tax gap, noting that the benefits of noncompliance accrue most to high-income earners, and that the resources the IRS has at its disposal to tackle noncompliance are at historic lows. This suggests that there is substantial low-hanging fruit to be garnered from adequate investment in the IRS, and that investments in reducing noncompliance are likely to be progressive. We then argue that adding resources for examinations (particularly of high-income earners), increasing cross-party reporting requirements, and overhauling outdated IRS technology will enable the IRS to shrink the tax gap by around 15 percent in

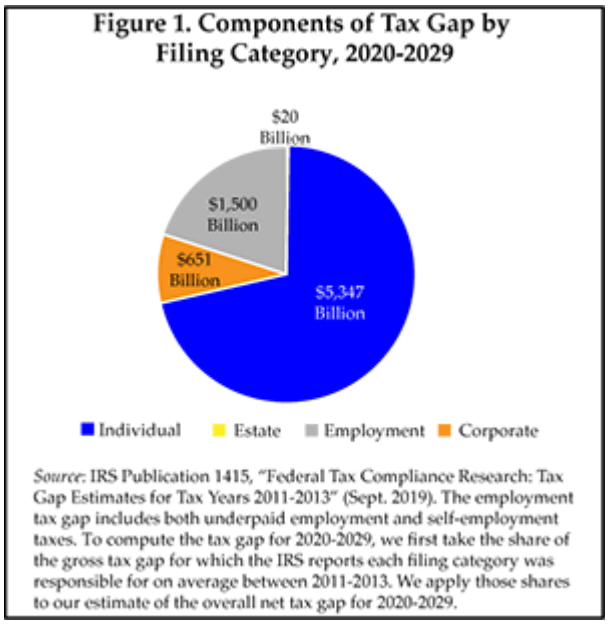
the next decade. These estimates seem substantially optimistic relative to what the Congressional Budget Office estimates an increase in IRS appropriations would raise; however, we show the two can be reconciled. Further, we point out that agency scorekeeping guidelines discourage compliance investment by limiting the extent to which the gains from additional tax collections can be included in official scores of enforcement initiatives. We conclude by noting that our estimation is naïve and that more formal revenue estimates are desirable. However, we find it probable that scorekeepers will come to the same basic conclusion: Restoring the IRS budget to previous levels is likely to pay for itself many times over.

I. Background on the Tax Gap

A. Tax Gap Benefits Primarily High-Income

In each filing category — for individual income, corporate income, employment,[4] and estate tax filers — most of the benefits of noncompliance accrue to high-income earners. Individual tax returns make up the largest share of the tax gap (more than 70 percent) and have the highest rate of noncompliance (nearly 20 percent).[5] The sources of the individual income tax gap are primarily high-income individuals because more of their income accrues in opaque categories like dividend income, capital gains, and proprietorship income. In some of those categories, taxes are paid on only 55 percent of income earned.





We illustrate this point using data on individual income filers' underreporting rates, which are available by category of income. Underreporting accounts for around 80 percent of the total tax gap (the remaining 20 percent comes from nonfiling or underpaying taxes due[6]). In Table 1 we attempt a rough estimation of misreporting rates by income level. We compute average underreporting rates for individual filers based on the share of their income that accrues to them in each of the available individual income categories. Underreporting is more than five times as high for individuals who earn $10 million or more annually than it is for those who make less than $200,000 per year.

	Average Underreporting Percentage[b]
Under $200,000	2.6%
$200,000 to under $500,000	4.5%
$500,000 to under $1 million	6.7%
$1 million to under $5 million	9.1%
$5 million to under $10 million	11.1%
$10 million or more	13.9%

	Average Underreporting Percentage[b]

[a]To arrive at this average, we multiply the share of income that accrues in each income category by the net misreporting percentage for income in that category reported by the IRS. For example, individuals who earn $10 million + ≈ 17 percent income from salary and wages * 1 percent misreporting + 13 percent dividends * 5 percent misreporting + 18 percent partnership * 11 percent misreporting + 47 percent capital gains * 23 percent misreporting.

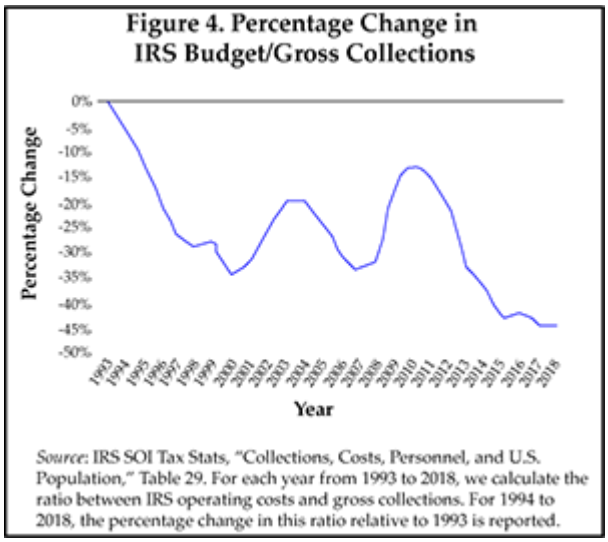
[b]At first glance it may appear surprising that the average underreporting percentages broken down by income category are each less than the headline 18 percent underreporting across individual filers. This is in fact expected and reflects the difficulty in such a calculation. The approach to calculating these percentages normalizes by a mass greater than 100 percent of taxable filer income, in the case of offsets and losses, the subcategories are calculated as underreported amount divided by the absolute value of quantities that should have been reported. We also lack information on underreporting for every individual income category, so necessarily omit some individual income. Our weights are also constructed from reported income. Ideally, we would do this exercise with true income, as this approach underweights categories with the highest underreporting percentages.

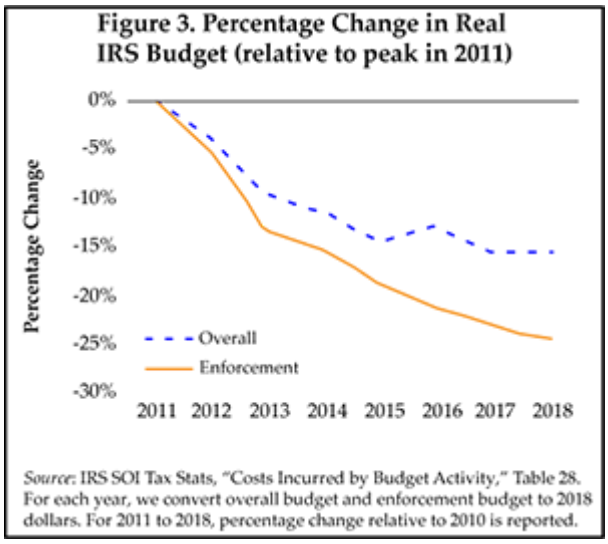
Table 1. Average Net Misreporting for Individual Income Tax Filers by Income Level[a]

Statistics on reporting rates for other filing categories — like corporate taxes, employment taxes (for example, Social Security and Medicare taxes, for employers and those self-employed), and estate taxes — are unavailable by income level. However, it seems likely that the beneficiaries of tax evasion by other types of tax filers are also disproportionately the wealthy.[7] In the case of corporate taxes, Treasury and the Joint Committee on Taxation estimate that at least 75 percent of the burden of the corporate tax falls on corporate shareholders or owners of capital. And only estates of the wealthiest 0.1 percent are even eligible for estate taxation, meaning they are the sole beneficiaries of the $1.5 billion in estimated annual estate tax avoidance.[8]

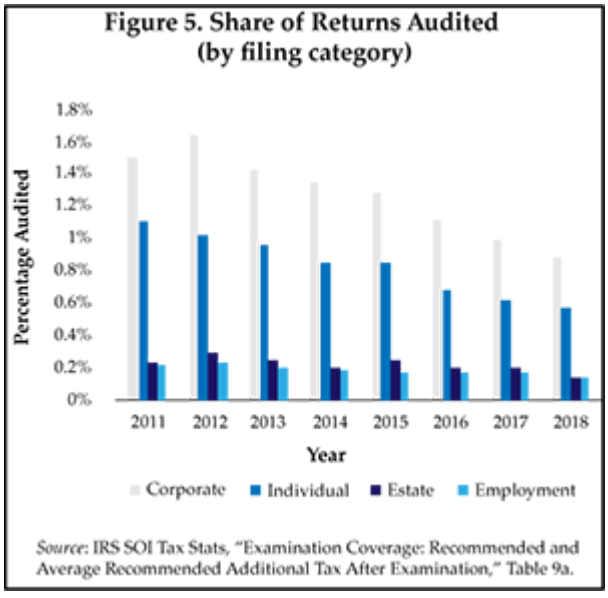
B. IRS Resources Declining Over Time

While it is true that outright elimination of any tax gap is impossible, the magnitude of the gap is a function of the resources at the IRS's disposal to detect and punish individuals, corporations, estates, and tax avoiders across other filing categories. These resources have decreased over time: The IRS budget has decreased (in real terms) by nearly 15 percent since 2011. Its enforcement budget has dropped by 25 percent during this period. Another way to appreciate the extent to which the IRS today is handicapped relative to longer-term historical norms comes from examining its budget as a share of gross collections. The share of tax revenue that is reinvested in the IRS has decreased steadily over the last 25 years, from its peak of 0.6 percent in 1993 to its trough of 0.34 percent today.[9] Since 2011 the ratio of its budget to collection activity has fallen by 34 percent.[10] This results in sizeable direct losses to the IRS. But such a lax enforcement regime also has sizable indirect effects, because previously law-abiding filers realize that there are substantial gains and little cost to noncompliance.





Because of this decrease in enforcement resources, today the IRS has fewer auditors than it had at any point since World War II. In 2018 the Criminal Investigation division brought fewer than 800 cases in which tax fraud was the primary crime, a decline of almost 25 percent over this decade.[11] Its workforce declined by essentially that proportion over this same period.

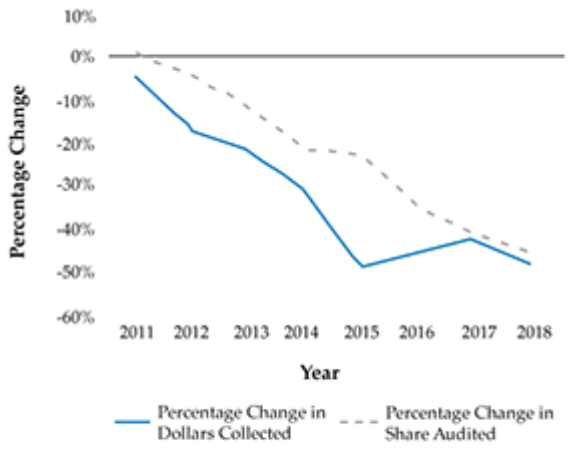


Consequently, the share of returns that are examined declined by around 45 percent since 2011. There has been a steep decline across filing categories: the share of individual returns, corporate returns, employment returns, and estate returns examined decreased by between 37 percent and 46 percent during this period.

One might argue that reducing enforcement resources is benign for multiple reasons. It's plausible that technological developments have made the IRS more efficient so that it no longer needs large outlays to police tax evasion. Further, if the IRS successfully targets resources at examining the most egregious evaders' returns, a steep decline in the share of audits performed will have a much lesser impact on audit revenue.

The fact that we observe an essentially 1:1 relationship between the resources that the IRS has at its disposal and the revenue generated from examinations casts doubts on those theories. As Figure 6 illustrates, since 2011 the share of returns audited (across all filing categories) fell by 45 percent, and the additional taxes collected from audits fell by nearly 50 percent. The same is true for audits of high-income individual returns, which generate substantial revenue for the IRS: Audit rates for individuals making $1 million or more annually peaked in 2011 at 12.5 percent. Since then, they have fallen: In 2018 only 3.2 percent of returns of these high-income individuals were audited. Consequently, the additional revenue generated from examination of millionaires' individual income tax filings declined by a similar amount (70 percent) over that period. These patterns suggest that it is unlikely that there would be diminishing returns to a substantial increase in IRS examination resources.

Figure 6. Percentage Change in Audits and Additional Tax Liability Imposed (all filing categories, relative to 2010)



Source: IRS SOI Tax Stats, "Examination Coverage: Recommended and Average Recommended Additional Tax After Examination," Table 9a. For each year, we convert additional tax liability to 2018 dollars. For both audit levels and additional tax liability, in years 2011 to 2018, percentage change relative to 2010 is reported. Note that these estimates are for additional tax liability imposed post-examination and leave out civil penalties assessed to tax evaders.

II. Potential Reforms

Here we estimate the revenue-raising potential of specific reforms to shrink the tax gap by (1) increasing enforcement resources and targeting high-income individuals for audit scrutiny; (2) improving information reporting; and (3) making greater investments in IT. It seems likely that these changes could raise more than $1 trillion in the coming decade, shrinking the tax gap by around 15 percent.

Tax gap	$7.5 trillion
Approaches to shrinking tax gap	
(1) Enhanced enforcement resources	$715 billion
(2) Improved information reporting	$350 billion
(3) IT investment	$100 billion
Total revenue raised	~$1.15 trillion
Percentage decrease in tax gap, net of costs	15%

Table 2. Summary of Revenue-Raising Potential of Compliance Efforts, 2020-2029

A. Increasing Examination Rates

1. Increasing examination rates for individual income tax filers.

The likelihood that an individual return will be audited has been falling since 2011, when it peaked at 1.1 percent. In 2018 only 0.5 percent of individual returns were audited.

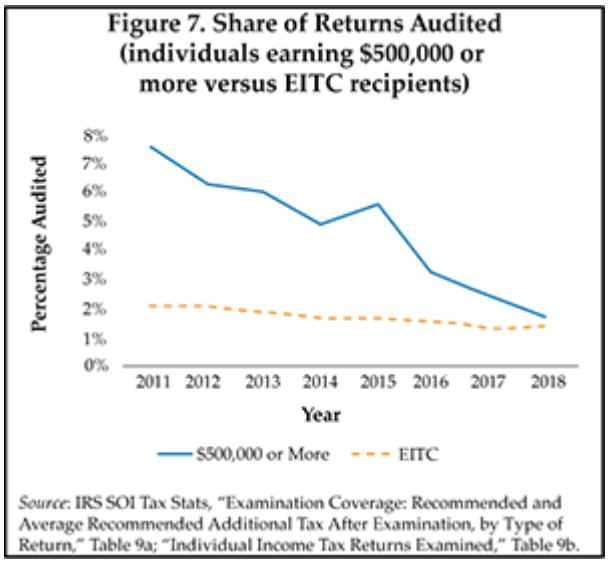
Had audits in 2018 been performed at 2011 rates, the IRS would have audited 775,000 more individual returns. This would have generated nearly $14 billion in additional revenue in 2018, and around $180 billion in additional revenue if audit rates were at this level for the coming decade (2020 through 2029).[12]

A. Additional 2018 audits	775,000
B. Revenue raised per audit	$17,900
Additional 2018 revenue (A * B)	$14 billion
Additional 2020-2029 revenue	$180 billion

Table 3. Revenue Potential of Return to 2011 Individual Audit Rates

This understates the revenue-raising potential of adequate and appropriately targeted enforcement resources because it does not account for the efficiency gains from tilting individual audits toward high-income earners, for which returns on investment are highest. Had the IRS audited individuals in 2018 at 2011 rates, nearly 95 percent of this increase in individual examinations would have been audits of those making $200,000 or less a year, who are primarily ordinary wage earners with near-perfect compliance. Audit rates for multimillionaires would remain at low levels: around 8 percent for the 30,000 individuals earning $5 million to $10 million, and 12.5 percent for the 15,000 individuals earning $10 million or more.[13]

Increasing the IRS's enforcement resources would substantially increase tax collections, but reconsidering how the resources at its disposal are allocated would also be consequential. In 2013 the IRS estimated that an extra hour spent auditing someone who earns $200,000 annually generated only $650. An extra hour spent auditing someone who earns $5 million or more per year generated around $4,900.[14] It is thus hard to explain from an efficiency perspective why in 2018 individuals who made $500,000 or more were audited at similar rates as earned income tax credit recipients whose top income is below $50,000.[15]



To understand the revenue-raising potential of focusing examination resources on high-income earners, consider the following: The IRS spent more than $8 billion in 2018 on its 75,000-person workforce.[16] Assuming a 40-hour work week, the average IRS employee earns around $55 per hour. Even if overhead costs for audits of individuals who earn $1 million or more annually are five times this size, an extra hour spent auditing a high-income individual amounts to a 1,800 percent return on investment.

This large payoff from high-income audits has several components. Mechanically, those who are wealthier have larger tax liabilities, so discrepancies between what is owed and what is paid tend to be larger in magnitude. Further, high-net-worth individuals have more

complex returns, and their income tends to accrue in opaque categories in which information reporting, and thus compliance, is lowest. Moreover, high-income individuals have the most motivation and resources to invest in lowering tax liability.

Given the significant returns from audits of high-income individuals, imagine that the IRS directs new examination resources to focus on those returns: Auditing 50 percent of individuals who earn $10 million or more; 33 percent of those who earn between $5 million and $10 million; and 20 percent of those who earn $1 million or more. In 2018 this would have corresponded to roughly 70,000 additional audits of those earning $1 million or more annually.

Because the returns of the high-income are most complex, these examinations are most costly and most time-consuming.[17] We thus assume that it takes 10 times as long to audit someone above the millionaire threshold as someone below it. Consider a scenario in which instead of restoring audit rates for those earning $200,000 or less annually to 2011 levels, the IRS increases audit rates for those earning $1 million or more annually. This would have generated nearly $41.5 billion in additional revenue in 2018. If these additional examinations are performed from 2020 through 2029, the additional tax revenue collected from that approach would be nearly $535 billion.

Additional Revenue Raised (billions of dollars) From Greater Enforcement

	(1) 2018 if Audit Rates at 2011 Levels	**(2) 2018 if Focus on High-Income Audits**
Under $200,000	$6.6	$0
$200,000 to $1 million	$2.4	$2.4
$1 million to $5 million	$3.8	$32
$5 million to $10 million	$0.6	$4.1
$10 million and more	$0.5	3
2018 total	**$13.9**	**$41.5**
2020-2029 total	**~$180**	**~$535**

Additional Revenue Raised (billions of dollars) From Greater Enforcement

	(1) 2018 if Audit Rates at 2011 Levels	(2) 2018 if Focus on High-Income Audits

[a]IRS SOI Tax Stats, "Examination Coverage: Recommended and Average Recommended Additional Tax After Examination, by Type of Return," Table 9a; "Individual Income Tax Returns Examined," Table 9b; "Civil Penalties Assessed and Abated, by Type of Tax and Type of Penalty," Table 17.

To arrive at these estimates in Column (1), from a return to audit rates at 2011 levels, we take the total across individual income categories estimated from returning to 2011 individual audit rates (about $14 billion) and distribute it among income categories based on the share of additional tax liability each income group was responsible for in 2011. We divide this total by the number of additional audits that would be performed if the IRS returned to 2011 levels, to arrive at an estimate for the average additional tax collection (including civil penalties) for each additional audit performed, by income level.

Note that the distribution of additional tax liability is available only in broad income groups (under $200,000, $200,000 to $1 million, more than $1 million). We thus are forced to assume that all audits of those earning greater than $1 million generate equivalent average additional revenue. In Column (2), we use the average additional revenue per audit computed to evaluate the consequence of a shift toward higher-income auditing. Practically, because we assume an extra high-income audit will take 10 times as long as that of an individual earning $200,000 or less annually, this means that rather than performing about 730,000 additional audits of low-income earners (as would be required to return to 2011 levels), the IRS instead performs only 3,600 additional low-income audits, shifting most resources toward those earning more than $1 million.

Table 4. Revenue-Raising Potential of Increasing Audits to 2011 Levels Across Income Categories Versus Targeting Enforcement Resources to High-Income Taxpayers[a]

2. Increasing examination rates for estate, employment, and corporate tax returns.

Had the IRS examined returns at 2011 levels in 2018, it would have also audited around 11,500 more corporations. Although less than 2 percent of the increase in individual audits (by number), these audits would have generated substantial revenue because in 2011, each corporate audit averaged around $1 million in additional tax liability and civil penalties imposed.

The audit rates for other filing categories, like estate and employment returns, have decreased substantially as well. Since 2011 the share of returns audited across all filing categories has fallen from 0.9 percent to 0.5 percent. Increasing examination rates to 2011 levels for estate, employment, and corporate returns, as well as increasing audits of individual tax filers, focused particularly on the high-income earners, could generate more than $700 billion in additional tax revenue between 2020 and 2029.

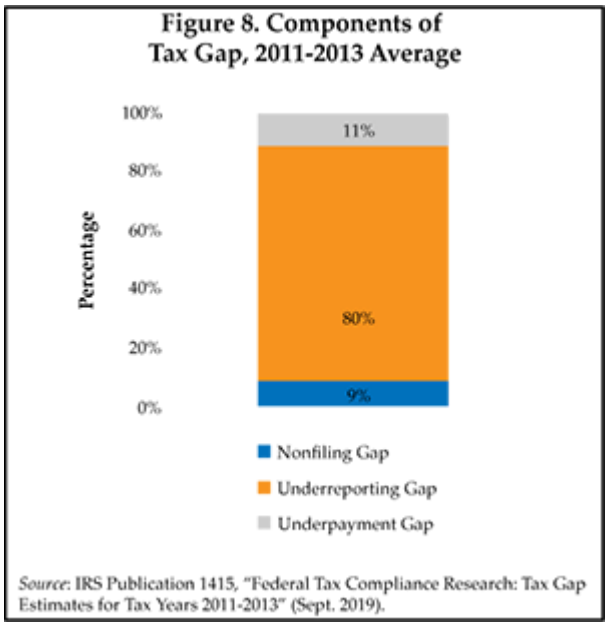
	2011 Audit Rate	2018 Audit Rate	Extra 2018 Audits if 2011 Rates	Extra revenue 2018 if 2011 Rates (billions of dollars)	Extra Revenue 2020-2029 if 2011 Rates (billions of dollars)
Individual income tax filers, *tilting toward high-income audits*	1.1%	0.6%	130,732	$41.5	~$535
Corporate tax filers	1.5%	0.9%	11,458	$11.1	~$143
Estate and trust income tax	0.1%	0.05%	1,446	$0	~$0.4
Estate tax	18.2%	8.6%	3,243	$1.3	~$17
Employment tax	0.22%	0.14%	25,100	$1.6	~$20.1
Total from 2011 audit levels				**$55.5**	**~$715.5**

[a]Note that for all filing categories except individual income tax filers, extra investment would return to 2011 audit rates. For individual filers, extra resources would be tilted toward the wealthy, with overall audit rates increasing only 0.7 percent. But audit rates for those earning $1 million to $5 million would increase 20 percent; for those earning $5 million to $10 million, 33 percent; and for those earning greater than $10 million, 50 percent.

Table 5. Revenue-Raising Potential of Increased Examinations Across Different Tax Types[a]

B. Improved Information Reporting

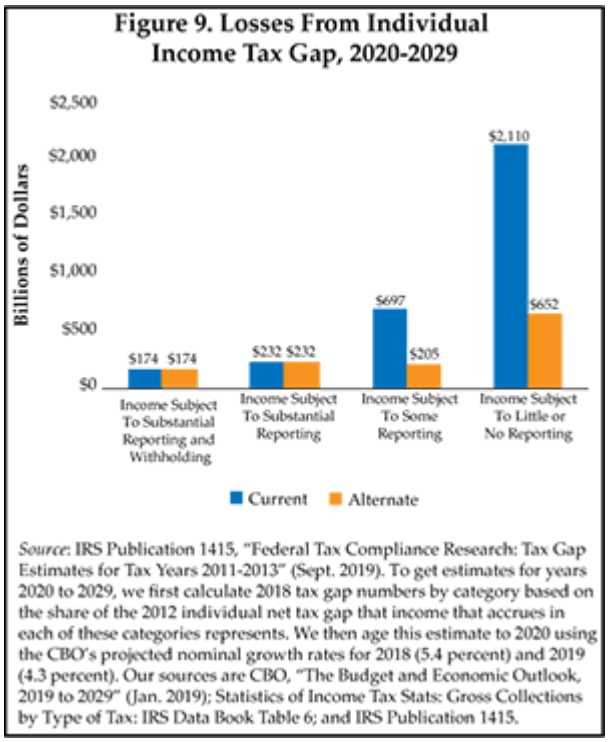
Around 80 percent of the tax gap accrues from underreporting of tax liabilities on filed returns. Underreporting is most common in categories of income that are less visible to the IRS — like sole proprietorship income, partnership income, and self-employment returns — as these are subject to relatively little information reporting and not automatically withheld. Substantial revenue could be raised from an increase in information reporting requirements that decreases the ability of tax filers to misreport their income.



We first consider the revenue potential of efforts to shrink the individual income tax gap through increased information reporting. When a salaried employee files her taxes, income is correctly reported and taxes are appropriately paid about 99 percent of the time. This is because her tax payments are in a sense automated by withholding requirements and easily verified by the simultaneous reporting of her employer. Misreporting remains low (5 percent) for income not automatically withheld but still subject to strong cross-party reporting, like pension income. It jumps to 17 percent for income subject to only light reporting requirements, like partnership income. And it reaches 55 percent for income subject to essentially no cross-party reporting requirements, like sole proprietor income or rental and royalty income.[18]

Increasing information reporting is regarded as a highly effective way to increase tax compliance. The Government Accountability Office and the IRS suggest that reporting requirements are one of the "few means of sizably increasing the compliance rate."[19] And the JCT has highlighted the success of increases in third-party reporting requirements on compliance, noting that a 2011 increase in small business reporting requirements resulted in substantially more accurate reporting of business receipts.[20]

Despite widespread consensus on the desirability of increasing reporting requirements for less-transparent income sources, there are relatively few estimates of the potential revenue that could be raised by such reforms. We offer a naïve approach: Based on the 2019 tax gap statistics, increasing reporting requirements for individual income categories subject to "some" information reporting (like partnership or S corporation income) to the "substantial" reporting level of pensions and annuities would generate nearly $40 billion in additional tax revenue in 2020. Increasing requirements for income subject to little or no information reporting (like non-farm proprietor income, rents, and royalties) to the "some" information reporting level would generate an additional $115 billion in 2020. Between 2020 and 2029, an increase in reporting requirements for the two most opaque categories of income would generate nearly $2 trillion in additional tax revenue.[21]



This is an optimistic sum, and it's difficult to be confident about how effective information reporting requirements would be across varied and complex income sources. Additionally, investments made to increase reporting will not reap their full benefits for years because it will take time to develop and implement changes. But even if in the coming decade an increase in information reporting allows us to capture only 15 percent of the $2 trillion estimated, that would mean gains of $300 billion in the next decade from individual income tax filers alone.

It's also likely that an increase in information reporting could help address the large and growing self-employment tax gap.[22] Today, misreported self-employment taxes represent around 10 percent of the tax gap, and non-reported self-employment taxes represent an additional 1 percent. This is at least in part attributable to the growth in self-employment filers in the gig economy. In many cases, platforms do not file information reports unless workers earn at least $20,000 annually. Estimates suggest this means that for more than 50 percent of income (by dollars) and 95 percent of returns (by number), the IRS is not provided information by employers about the income earned by workers who file self-employment returns.[23] Mandating information reporting for all independent contractors would increase compliance. Although it's hard to predict the precise magnitude, our reasoning is as follows: Self-employment tax misreporting contributes around 11 percent to the net tax gap, relative to around 70 percent for individual filers. We predict that an increase in information reporting could shrink the individual tax gap by around 5 percent. A comparable decrease in the self-employment tax gap would mean nearly $50 billion in additional revenue in a decade.

Share of Total Tax Gap	Projected Tax Gap 2020-2029 (billions of dollars)	Potential Gains From Info Reporting (billions of dollars)

	Share of Total Tax Gap	Projected Tax Gap 2020-2029 (billions of dollars)	Potential Gains From Info Reporting (billions of dollars)
Individual	71%	$5,347	$300
Self-employment	11%	$827	$46

[a]Note that for all filing categories except individual income tax filers, extra investment would return to 2011 audit rates. For individual filers, extra resources would be tilted toward the wealthy, with overall audit rates increasing only 0.7 percent. But audit rates for those earning $1 million to $5 million would increase 20 percent; for those earning $5 million to $10 million, 33 percent; and for those earning greater than $10 million, 50 percent.

Table 6. Revenue-Raising Potential of Information Reporting Increase for Individual and Self-Employment Tax Types[a]

C. Technological Advancement

1. IRS relies on antiquated technology.

Although the potential usefulness of technology in helping to identify tax evaders increased dramatically in the last two decades, the IRS has decreased, rather than increased, its IT outlays. Indeed, in 2018 the IRS spent only $2.5 billion on IT investments. By comparison, Bank of America spent around $16 billion but serves only a quarter of Americans.[24]

The IRS's low budget is not the natural byproduct of modernization decreasing IT costs. Rather, the IRS underinvests in technology, and the effects are evident: By the end of 2017, nearly 60 percent of IRS hardware was past its useable life, and 26 percent of software was two or more releases behind the most up-to-date version.[25] According to the GAO, the IRS Individual Master File and Business Master File systems date back to 1960 and are the two oldest IT systems in the federal government.[26] The national taxpayer advocate has warned that outdated technology is a threat to the stability of the tax system: "By analogy, the IRS has erected a 50-story office building on top of a creaky, 60-year-old foundation, and it is adding a few more floors each year. There are inherent limitations on the functionality of a 60-year-old infrastructure, and at some point, the entire edifice is likely to collapse."[27]

Outdated technology creates delays for taxpayers: In 2017 the IRS had to extend the filing deadline after a server crash. Further, the IRS fails to timely match many taxpayer filings with information returns filed by third parties, which can verify the accuracy of reports.

2. Greater investment in analytics can increase efficiency and raise revenue.

The IRS piloted the use of data analysis for the identification of suspicious tax returns in 1962. The audit selection process today remains fairly similar to that first implemented in 1969: Each return is given a score based on the probability of noncompliance, and IRS personnel then manually screen returns to ensure that audit selection is appropriate.[28]

In recent years, the IRS has advanced on this front, with early stage analysis that targets identifying and quickly resolving deficiencies before resources are spent on full examinations. These advances have been made possible by the dramatic increase in electronic filings (by 2016, almost 90 percent of returns were filed electronically — a decade earlier, this share was only 54 percent), as well as the greater availability of data, for example from credit card companies and third-party processors on payments routed through their networks.[29]

A recent success is the IRS's return review program (RRP) that automatically identifies discrepancies with information returns to prevent the issuance of invalid refunds. In 2017 RRP saved the IRS $4.4 billion[30] and cost only $90 million.[31] That is around a 50:1 return.

Significant untapped potential remains. The ability to match taxpayer filings with third-party information returns increases tax collection: In 2018 the IRS closed 3 million cases in which it identified a discrepancy between the taxpayer's return and third-party information, which resulted in an additional $5.3 billion in tax revenue.[32]

However, the actual volume of mismatches is likely significantly larger than the 3 million cases that were closed. This is both because the IRS is unable to identify all mismatches and because it lacks the capacity to collect additional tax revenue even from the discrepancies it identifies. In 2010, when data were last made available, the IRS identified almost 24 million mismatches on returns but worked only about 5.3 million (22 percent) of these cases.[33]

The IRS hopes to expand RRP to detect fraud in other filing categories, for example, business income and partnership returns, in which noncompliance is rising. It could also be leveraged to help select the most suspicious returns for examination by improving the match between information reports and taxpayer returns. If the IRS expands information reporting, better matching will have even greater revenue potential.

It is difficult to speculate about potential gains. Assume that marginal investments in IT, including the expansion of RRP, have much lower returns — perhaps 10:1. This suggests that spending $10 billion on investment in a decade would generate $100 billion in additional tax revenue.

III. Benchmarking With Scorekeeper Estimates

There are reasons to believe that the estimates we offer above are too optimistic. We do not take account of the behavioral effects of our proposals: the fact that as enforcement efforts rise, tax evaders will become more sophisticated about sheltering revenue. Also,

we do not consider the relationship between the different components of our compliance program: For example, greater information reporting will increase voluntary tax compliance, and thus reduce the returns to additional examinations. And there are potentially diminishing returns to compliance investment.

But, there are also reasons to believe our estimates are overly conservative. As one example, we do not consider the revenue that can be generated by a substantial increase in penalties for tax evaders, which would both increase revenue directly and deter illegal avoidance schemes. Also, if, as we suspect, the IRS is not currently well-equipped to identify the most suspicious returns for audit attention, then concerns about diminishing marginal returns to extra compliance efforts are less pronounced. This hypothesis is supported by the fact that audit rates and tax collection from examinations decreased 1:1 in recent years.

As a check on our estimation and the feasibility of the substantial investments in compliance we recommend, we compare our estimate of substantial investment in tax compliance to the CBO/JCT's estimate of a much smaller increase in audits and collection efforts. The CBO recently estimated that a $20 billion investment in 2019 would generate $55 billion in additional tax collections between 2019-2028.[34] At first glance, our estimates appear substantially more optimistic than this.

This is largely because the CBO approach is based on a program that is far more modest in scale and scope. Returning the IRS to historical budget levels (as a share of total collections) would involve an expansion more than four times the increase that the CBO proposes. Also, the CBO's focus is primarily on returns to more aggressive auditing overall. The approaches we consider are better targeted: We consider an expansion of IRS high-income audits where returns are highest. They are also broader: We also consider an increase in IT investment and information reporting that the CBO does not, although it acknowledges this is likely to be an efficient way to raise additional tax revenue.

Still, the CBO estimate provides a useful baseline for extrapolation. If the IRS budget increased to the 2010 share of gross collections, this would mean nearly $100 billion in greater IRS expenditure between 2020-2029. Treasury reports that indirect effects of compliance-oriented investment are likely to be more than three times as large.[35] Augmenting the CBO estimate to incorporate deterrence effects results suggests that restoring IRS budget outlays to historical levels would generate around $1.1 trillion. This is quite close to our estimate ($1.15 trillion) of the total revenue-raising potential of our compliance proposals.

This comparison is in some sense spurious because our approach above does not consider indirect deterrence effects, but this omission may well be counteracted by overly optimistic estimation. On balance, the CBO estimate does not lead us to doubt that a substantial investment in the IRS has the potential to shrink the tax gap by at least $1 trillion in the coming decade.

Revenue From Increasing IRS Budget 2020-2029	2019 Revenue if 2010 Levels
A. Increase in budget (2020-2029)	$100 billion
B. Direct effect (= A * $2.75, extrapolating CBO estimate)	$275 billion
C. Indirect effect (= B * 3, per Treasury)	$825 billion
D. Total impact (= B + C)	$1.1 trillion
E. Net of costs (= D - A)	~ $1 trillion

[a]Direct effects estimated based on the CBO revenue option outlined in CBO, "Increase Appropriations for the Internal Revenue Service's Enforcement Initiatives" (Dec. 13, 2018).

Table 7. Revenue-Raising Potential From Substantial Enforcement Investment[a]

Comparing these two estimates is in a sense spurious because our estimation of the revenue-raising potential of increased examinations, more information reporting, and greater IT investment does not consider deterrence effects.

However, there are reasons to believe that the estimates we offer are overly optimistic, which offsets the failure to account for deterrence directly. We do not take account of the behavioral effects of our proposals: The fact that as enforcement efforts rise, tax evaders will become more sophisticated about sheltering revenue. Also, we don't consider the relationship between the different components of our compliance program. For example, greater information reporting will increase voluntary tax compliance and thus reduce the returns to additional examinations. And there are potentially diminishing returns to compliance investment.

On the other hand, there are also reasons to believe our estimates are overly conservative, which suggests that our total may best be viewed as a lower bound on the revenue potential of increased investment in tax compliance. As one example, we don't consider the revenue that can be generated by heightened penalties for tax evaders, which would both increase revenue directly and deter illegal avoidance schemes. Moreover, if, as we suspect, the IRS is not well-equipped to identify the most suspicious returns for audit attention, concerns about diminishing marginal returns to extra compliance efforts are less pronounced. This hypothesis is supported by audit rates and tax collection from examinations decreasing 1:1 in recent years.

On balance, the CBO estimate does not lead us to doubt that a substantial investment in the IRS has the potential to shrink the tax gap by more than $1 trillion — and potentially more — in the coming decade. Extrapolating from the CBO and Treasury data suggest that $1 of investment in the IRS leads to $11 of additional revenue, which suggest that a $1.1 trillion increase in tax collections — shrinking the tax gap by around 15 percent — could be achieved by increasing IRS outlays by $100 billion.

As the earlier discussion illustrates, we offer only rough back-of-the-envelope revenue approximations. Before policy is pursued in this vein, it will be valuable to have professional scorekeepers like those at the CBO, the JCT, and other major agencies weigh in on the likely returns on investment in the tax compliance proposals we outline.

It's important to highlight that these agencies' scorekeeping guidelines limit their ability to account for revenue gains from compliance efforts when they provide official scores of proposals to increase the IRS budget. These guidelines were put into place in response to legitimate criticisms of congressional leaders' reliance on tax compliance initiatives to stop-gap last-hour budget gaps. This practice became discredited, and the revenue from increased enforcement efforts came to be excluded from official scorekeeping. To the extent possible, professional scorekeepers still give Congress information on potential revenue effects[36] — for example, by estimating "nonscorable" gains from greater enforcement efforts. But what is counted counts. When credit is not given for revenue that will be collected from increased spending on compliance efforts, it's unsurprising that such spending is neglected. The constraints imposed by the budget scorekeeping guidelines in this context relate to a broader debate about what kind of feedback effects should be considered in revenue estimates for changes to federal budget policy, long an area of controversy. We suggest that the revenue gains from investments in tax compliance are likely to be substantial — and thus the consequences of the scoring guidelines significant — with stakes in the same range as those at play in the debate on dynamic scoring.

IV. Conclusion

We hope to emphasize that the revenue significance of decisions about the scale of the IRS is comparable to the revenue significance of much of the debate about changes in tax provisions. Further, improving revenue collection from better tax enforcement has the potential to improve efficiency by focusing resources in areas where avoidance is easy. Compliance efforts will also increase the progressivity of the tax system, because noncompliance is greatest among high-income taxpayers.

FOOTNOTES

[1] IRS Publication 1415, "Federal Tax Compliance Research: Tax Gap Estimates for Tax Years 2011-2013" (Sept. 2019).

[2] To get this number, we first estimate the 2018 tax gap, assuming the net compliance rate of 85.8 percent from the most recent IRS projections as follows: Taxes Owed = Gross Collections/Net Compliance Rate; and Tax Gap = Taxes Owed - Gross Collections. We

then age that total to 2020 using the Congressional Budget Office's projected nominal growth rates for 2018 (5.4 percent) and 2019 (4.3 percent). Our sources are CBO, "The Budget and Economic Outlook, 2019 to 2029" (Jan. 2019); Statistics of Income Tax Stats: Gross Collections by Type of Tax: IRS Data Book Table 6; and IRS Publication 1415, *supra* note 1. To extrapolate our estimates, we rely on the most recent CBO budget projections, which report that average nominal GDP growth will be around 3.85 percent annually between 2020 and 2029. *See* CBO, "The Budget and Economic Outlook," *supra*, at Table 2-3. We use this approach for all extrapolations to the decade 2020-2029.

[3] Since we prepared this report, Sen. Elizabeth Warren, D-Mass., released her Medicare for All proposal, which includes $2.3 trillion in additional federal revenue from tax compliance efforts. We note that if we have made errors in the estimation offered, we believe they are more likely to be on the side of optimism than pessimism.

[4] Employment taxes include withheld Social Security and Medicare taxes, federal unemployment taxes, and self-employment taxes (Social Security and Medicare taxes owed by individuals who work for themselves). *See* IRS Publication 1415, *supra* note 1, at section 4.2.3.

[5] Between 2011 and 2013, the net tax gap for individual income taxes averaged $271 billion. Total true tax liability averaged $1.398 trillion. So there was a 19.4 percent net noncompliance rate. *Id.*

[6] Unfortunately, data on noncompliance by income category are reported only for the underreporting tax gap, not for nonfiling or underpayment. As such, the information in tables 1 and 2, *infra*, relies on data on the underreporting tax gap. For ease of discussion, we assume that noncompliance rates overall across income categories are comparable to misreporting rates for underreported income.

[7] We are unaware of estimates of the incidence of employment tax noncompliance. High-income earners avoid employment taxes by setting up passthrough businesses, and estimates suggest that more than 10 percent of gig economy workers simply do not report their income for tax purposes.

[8] In 2018 the number of estates eligible for estate taxation fell to less than 2,000 (from around 5,000 previously). *See* Howard Gleckman, "Only 1,700 Estates Would Owe Estate Tax in 2018 Under the TCJA," Urban-Brookings Tax Policy Center (Dec. 6, 2017); and Heather Long, "3,200 Wealthy Individuals Wouldn't Pay Estate Tax Next Year Under GOP Plan," *The Washington Post*, Nov. 11, 2017.

[9] Considering the IRS budget as a share of gross collections is potentially problematic because changes in the tax code will affect collections, so the decrease we observe could hypothetically be related to an increase in owed tax liabilities. To alleviate that concern, we also examine the IRS budget as a share of cumulative adjusted gross income for all individual filers. This, too, reflects a similar trend, decreasing from a peak of 0.16 percent in 1996 to 0.11 percent in 2016 (the last year for which this data are available).

[10] The earliest-year data are available in the IRS Data Book Index of Tables. For some series, historical data exist in the SOI Tax Stats Archive. Unless we refer to it explicitly, our focus is on data that are available in the IRS Data Book Index of Tables, not the historical archives. The budget data come from IRS Data Book Table 28, "Costs Incurred by Budget Activity." In real terms, the IRS budget has been above the fiscal 2018 level every year since 2001. Unless noted otherwise, dollar estimates are presented in 2018 dollars. Data on real GDP from FRED.

[11] Jesse Eisinger and Paul Kiel, "After Budget Cuts, the IRS' Work Against Tax Cheats Is Facing 'Collapse,'" *ProPublica*, Oct. 1, 2018.

[12] To get this estimate, we take 2011 average revenue per audit (additional tax liability + civil penalties, net of abatements) * 775,000 additional individual audits. This gives us an estimate of how much additional revenue would have been collected in 2018 if audit rates were at the 2011 peak. We then extrapolate for 2020 to 2029 to adjust for growth and inflation as described in *supra* note 2.

[13] IRS SOI Tax Stats, "Examination Coverage: Recommended and Average Recommended Additional Tax After Examination, by Type of Return," Table 9a; "Individual Income Tax Returns Examined," Table 9b; "Civil Penalties Assessed and Abated, by Type of Tax and Type of Penalty," Table 17. To calculate this estimate, we use data from Table 9b to calculate the share of total audits performed within an income category in 2018. We then take the total number of additional audits that would be performed if the IRS returned to 2011 individual audit levels, and distribute that throughout the income distribution based on 2018 examination shares.

[14] Treasury Inspector General for Tax Administration, "Understanding the Tax Gap and Taxpayer Noncompliance" (May 9, 2019) (House Ways and Means Committee testimony). Estimates adjusted to 2018 dollars.

[15] The IRS recently reported to Congress that high numbers of EITC audits are in fact the most efficient use of the current resources at the agency's disposal because EITC audits are conducted mostly through mail and are performed by less-skilled auditors. Audits of the wealthy require senior specialists who the IRS has had trouble retaining. Thus, before more high-income audits can be performed, "Congress must fund and the IRS must hire and train appropriate numbers" of skilled, senior auditors capable of examining complex returns. Letter from IRS Commissioner Charles P. Rettig to Senate Finance Committee ranking member Ron Wyden, D-Ore. (Sept. 6, 2019). In 2019, for a single head of household to claim the EITC, income must be less than $50,162. IRS, "2019 EITC Income Limits, Maximum Credit Amounts and Tax Law Updates" (July 10, 2019).

[16] IRS SOI Tax Stats, "Costs Incurred by Budget Activity," Table 28; and "Personnel Summary, by Employment Status, Budget Activity, and Selected Type of Personnel," Table 30.

[17] They can also only effectively be performed by the skilled senior auditors, "revenue agents" who are the IRS's "most highly trained and experienced employees with substantial accounting skills." The average time to complete an audit of an individual earning $10 million or more annually is in the range of 50 to 250 hours. Rettig letter, *supra* note 15.

[18] IRS Publication 1415, *supra* note 1.

[19] James R. McTigue Jr., "Tax Gap: Multiple Strategies Are Needed to Reduce Noncompliance" (May 9, 2019) (congressional hearing statement of the GAO director of strategic issues); and Benjamin D. Herndon, "Understanding the Tax Gap and Taxpayer Noncompliance" (May 9, 2019) (written testimony of IRS chief research and analytics officer).

[20] JCT, "Overview of the Tax Gap," JCX-19-19 (May 8, 2019).

[21] IRS Publication 1415, *supra* note 1.

[22] Self-employment taxes are Social Security and Medicare taxes for individuals who work for themselves, similar to payroll taxes that are automatically withheld from employees.

[23] TIGTA, "Expansion of the Gig Economy Warrants Focus on Improving Self-Employment Tax Compliance" (Feb. 14, 2019).

[24] Between 2010 and 2018, Bank of America spent $25 billion, or $3.1 billion per year, on new technology initiatives, which surpasses the IRS's technology outlays and "include[s] reworking effectively all of [the bank's] major systems and adding innovative capabilities, while also building an internal cloud and software architecture for maximum efficiency and speed to market." Bank of America Annual Report 2018. We are grateful to Charles Rossotti for highlighting this comparison for us.

[25] Treasury and the IRS, "Congressional Budget Justification and Annual Performance Report and Plan, FY 2019."

[26] GAO, "Information Technology: IRS Needs to Take Additional Actions to Address Significant Risks to Tax Processing" (June 2018).

[27] National Taxpayer Advocate Annual Report to Congress 2018 (Feb. 2019).

[28] Kimberly Houser and Debra Sanders, "The Use of Big Data Analytics by the IRS: What Tax Practitioners Need to Know," 128 *J. Tax'n* (Feb. 2018).

[29] IRS Office of Compliance Analytics, "Making Analytics Pay, Making Analytics Mainstream," OECD Forum on Tax Administration (Nov. 29, 2011).

[30] GAO, "Tax Fraud and Noncompliance: IRS Could Further Leverage the Return Review Program to Strengthen Tax Enforcement" (July 2018).

[31] IRS, FY 2019 Capital Investment Plan (undated).

[32] IRS SOI Tax Stats, “Information Reporting Program,” Table 14.

[33] National Taxpayer Advocate Annual Report to Congress 2013 (Dec. 31, 2013) (“Fundamental changes to return filing and processing will assist taxpayers in return preparation and decrease improper payments.”).

[34] CBO, “Options for Reducing the Deficit: 2019 to 2028,” at Option 40 (Dec. 2018).

[35] The IRS reports in its 2019 budget request that the returns on enforcement are “likely understated, since the ROI estimate does not include the revenue effect of the indirect deterrence value of IRS enforcement programs, which is conservatively estimated to be at least three times the direct revenue effect.”

[36] JCT and CBO, “Factors Affecting Revenue Estimates of Tax Compliance Proposals,” JCX-90-16 (Nov. 29, 2016).