Factors Affecting Revenue Estimates of Tax Compliance Proposals[1]

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From 2008 through 2010, the average annual tax gap—the difference between the total amount of Federal taxes that taxpayers should have paid on or before the due date and the amount they actually paid on time—was $458 billion, according to estimates by the Internal Revenue Service (IRS).[2] From the perspective of many commentators, closing the tax gap would help reduce the budget deficit, which totaled $587 billion in Fiscal Year (FY) 2016.

However, savings from compliance initiatives might not reduce the deficit as much as some commentators would hope.[3] The effects on both the deficit and the tax gap would be affected by the IRS's ability to implement those initiatives given the agency's available resources and taxpayers' ability to adjust their behavior to continue evading taxes. Some proposals—such as those that would simplify the tax code or establish safe harbors—could increase the deficit even while reducing noncompliance. Budget scorekeeping guidelines also constrain the amount of savings that the Congressional Budget Office (CBO) and the staff of the Joint Committee on Taxation (JCT) include in their estimates of the budgetary effects of compliance initiatives contained in legislative proposals.

Responsibility for estimating the revenue effects of compliance initiatives generally falls to CBO when changes to the IRS's appropriations are being considered and to JCT when proposals involve changes to the Internal Revenue Code. The two agencies often coordinate, in part because of the links between changes to the IRS's authority and its resources.

This paper examines the various factors that affect the two organizations' estimates of the budgetary savings from compliance proposals. Affecting the current law baseline, against which proposed changes are measured, are the size of the tax gap and the amount of IRS resources. Other considerations that affect the revenue estimates for either appropriations proposals or changes to the tax code include the distinction between detection and deterrence, the budget scorekeeping guidelines, and the constraints faced by the IRS when trying to obtain a higher return on investment from new initiatives than from the activities allowed under current law. In addition to those common considerations, there are factors unique to proposals to increase funding and to those that would expand the IRS's enforcement tools allowed under the tax code. Those unique factors are illustrated by two examples: first, the Administration's proposal to increase funding for IRS enforcement actions that was included in its FY 2016 budget submission; and second, legislation enacted in 2016 to reduce identity fraud in the tax system.

Tax Gap

The tax gap includes shortfalls in individual income taxes, corporate income taxes, employment taxes, estate taxes, and excise taxes. The IRS periodically conducts studies to estimate the size of the tax gap. Those studies use data generated by the IRS National Research Program (NRP) and other sources. Findings from the most recent study covered the period from Tax Years (TYs) 2008 through 2010 and were released in April 2016.

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1 This work embodies work undertaken for the staff of the Joint Committee on Taxation, but as members of both parties and both houses of Congress comprise the Joint Committee on Taxation, this work should not be construed to represent the position of any member of the Committee.

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2 Internal Revenue Service (2016b).

3 See, for example, Hanlon (2011).

Size of the Tax Gap

The IRS estimates that the annual gross tax gap, on average, was $458 billion from 2008 through 2010 (Table 1). In some instances, taxpayers eventually paid some or all of the amounts that they owed to the IRS—either voluntarily but after the due date, or as a result of the IRS's enforcement activities. The annual net tax gap—after accounting for those late payments and enforcement—was $406 billion, on average. Adjusted for inflation, the gross and net tax gaps were, respectively, $504 billion and $447 billion in 2016 dollars.[4] With total tax liabilities of $2.5 trillion per year, on average, during that 3-year period, the voluntary compliance rate was 81.7 percent, and the net compliance rate was 83.7 percent.[5]

TABLE 1. Gross and Net Tax Gap, Selected Years

Tax Year	Gross Tax Gap			Net Tax Gap		
	Current Dollars (Billions)	2016 Dollars (Billions)*	Voluntary Compliance Rate (Percent)	Current Dollars (Billions)	2016 Dollars (Billions)*	Net Compliance Rate (Percent)
2001	345	451	83.7	290	379	86.3
2006	450	526	83.1	385	450	85.5
2008–2010	458	504	81.7	406	447	83.7

Source: Internal Revenue Service (2016b), Internal Revenue Service (2007)

* Amounts were adjusted by the authors to 2016 levels using the price index for personal consumption expenditures.

In its analysis, the IRS examined the sources of the gross tax gap by type of tax, by category of error, and by degree of independent verification. The findings were similar to those in past reports:

- The largest source of the tax gap was the individual income tax, followed by employment taxes and the corporate income tax. Those were also the three largest sources of Federal revenues, ranked in the same order of magnitude.
- Underreporting of individual income tax liabilities was the largest component of the tax gap. About 16 percent of the gross tax gap was attributed to unfiled tax returns and underpayment of tax liabilities.
- Compliance was greatest for sources of income—such as wages and salaries—that are reported by employers and other payers to the IRS and for which taxes are also withheld by third parties. Noncompliance was greatest for income—including self-employment income—and tax preferences for which third-party information is not separately reported to the IRS and is very difficult to obtain.

Both gross and net compliance rates fell relative to those in the previous compliance study of TY 2006 tax returns—by 1.4 and 1.8 percentage points, respectively. The two studies were conducted at very different points in the business cycle—near the peak of the cycle for the 2006 study and in the midst of a severe recession during the most recent study—which suggests a relationship between the state of the economy and tax compliance. However, the IRS attributes most of the decline in the estimates of compliance rates to changes in its methodology and inclusion of new tax gap components. As a result, the IRS does not find substantial evidence of an increase in noncompliance. Notably, the compliance rate is little changed from the rate in a similar study of TY 2001 tax returns.

Methodology

Measuring noncompliance presents challenges that the NRP studies cannot fully overcome.[6] As a result, there probably are errors—in both directions—in the estimation of the tax gap.

[4] Dollar amounts were adjusted to remove the effects of inflation using the price index for personal consumption expenditures.

[5] The voluntary compliance rate is the amount of tax voluntarily paid on time divided by total true tax liability. The net compliance rate is the amount of tax paid, after accounting for late payments and enforcement, divided by total true tax liability.

[6] Brief discussions of the methodology used in the studies are found in Internal Revenue Service (2016a), Internal Revenue Service (2012), Bennett (2006), and Plumley (2006).

Data sources. The IRS researchers used several different types of data to estimate the components of the tax gap. For the major component of the tax gap—underreporting of individual income taxes—the IRS collected information each year from examinations of a random sample of about 13,000 taxpayers under the NRP. The main advantage of a random sample was that it included individuals who would not normally have been selected for a regular IRS audit—thus providing the IRS with more information on compliant taxpayers as well as on noncompliant taxpayers who would not be identified through the existing IRS detection tools.

Some of that advantage, however, was mitigated by the extent of communication with taxpayers. For the most complicated returns (for example, where self-employment income was reported), the IRS conducted a full-scale audit, requiring either an in-office interview or a field audit (possibly at the taxpayer's workplace) with an examiner or revenue agent reviewing most of the return. In many other cases, however, the IRS identified only a few questionable items on the tax return—such as a claim for a tax credit—and sent taxpayers a letter requesting documentation supporting their claim; no office visit was required. In the simplest cases, the IRS compared the taxpayers' returns to information available from third parties and did not contact the taxpayers at all. Varying the degree of taxpayer interaction with the complexity of the return markedly reduced the study's cost to the IRS as well as the burden imposed on taxpayers—especially those who were compliant and who would not typically be selected for an audit.[7] However, some errors—both overpayments and underpayments—would not have been detected through reliance solely on third-party information and correspondence audits. Relying only on information from third parties, for example, the IRS probably did not observe when taxpayers would have owed less than they paid if they had itemized their deductions rather than used the standard deduction or if they had not claimed tax credits for which they were eligible.

Estimates of other sources of noncompliance were based either on administrative data or the findings of earlier studies. For example, the IRS used administrative data from operational audits to estimate underreporting of corporate income taxes; unlike the examination of individuals, those companies were not selected randomly. Various econometric techniques are used to adjust for the statistical bias resulting from use of a nonrandom sample, but the IRS notes that there is considerable uncertainty about those results because of data limitations. Yet another approach was used to determine underreporting of payroll taxes (other than self-employment income taxes). In the absence of more recent audit data, the IRS applied estimated compliance rates from a study released in 1993 to the reported taxes over the 2008–2010 period. In both of those cases, the findings provide an incomplete picture of current compliance behavior.

Complexity. Some sources of noncompliance are not easily observable because of the complexity of the tax code. For example, income from partnerships and S corporations is passed through to the owners, who are then responsible for paying the taxes owed on that income. To some extent, the IRS can detect underreporting of that income by matching the amounts reported by taxpayers on their tax returns with the totals reported by the business to both taxpayers and the IRS on information returns (K-1s). More challenging is determining the extent to which taxpayers' underreporting of income is a result of receiving erroneous information from the firms.[8]

Tax evasion can also be masked through networks of entities that are linked—either because one taxpayer is the majority owner in each business or because the businesses share common partners or shareholders. Networks can consist of corporations, flow-through firms, sole proprietorships, and tax-exempt entities. The complicated structure of such networks makes it difficult to track income and payments between related entities—especially when IRS researchers focused separately on the different components of the tax system.[9]

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7 Earlier IRS compliance studies—referred to as the Taxpayer Compliance Measurement Program (TCMP)—were based on comprehensive in-office audits of a random sample of taxpayers. In those audits, taxpayers were required to provide documentation in support of every item on the tax return. The last TCMP examined TY 1988 tax returns. Public opposition to the TCMP grew because of concerns about the burden imposed on taxpayers in the sample. The IRS canceled its plans to conduct another TCMP in 1995. The less burdensome NRP replaced the TCMP, beginning with the TY 2001 study.

8 Government Accountability Office (2014b).

9 Government Accountability Office (2010).

Auditors' skills. Not all auditors are equal in their ability to detect noncompliance, particularly on each line of the tax form. Some may be hindered by the lack of available information to verify taxpayers' claims. To correct for errors not detected by some auditors, the IRS employs "detection-controlled estimation."[10] An underlying premise of that method is that the best auditors are the ones who identify the greatest amount of noncompliance, and the results of other audits should be adjusted upward to reflect what those superior auditors would have identified if they had conducted the audits themselves. To the extent that some of the auditors with the largest yields are also the most aggressive, however, it is possible that their assessments would be successfully challenged by taxpayers.

Taxpayers' intent. One question unanswered by the NRP was the motives underlying the errors that taxpayers made. The auditors did not probe into the reasons why taxpayers claimed the wrong amounts, although such information could be beneficial in designing strategies to combat noncompliance. For example, simplifying the tax code may be a less costly way to achieve greater compliance than audits, if the source of the error is taxpayer confusion rather than fraudulent intent.

Using data from past compliance studies, some researchers have applied econometric techniques to distinguish between intentional and unintentional errors by claimants of the earned income tax credit (EITC), beginning with the premise that a correlation between the size of the credit and noncompliance suggests errors are intentional. Those studies found that about 30 percent of EITC errors were intentional, with the remaining errors either unintentional or due to other unobserved factors (such as unobserved variations in expected penalties).[11] Tax legislation in the 1990s aimed at reducing EITC errors typically combined expansion of IRS enforcement tools with provisions aimed at simplifying the rules applicable to the tax credit.[12]

Taxpayers' disputes with IRS. As a result of an audit, examiners may recommend that taxpayers be assessed additional taxes. But taxpayers can challenge the auditor's recommendation. Over the period from 2008 through 2010, taxpayers disagreed with the IRS on about half of the recommended additional taxes.[13] To some extent, taxpayers were successful in challenging the IRS and had their assessments reduced. However, because the audits do not detect all errors, the amount ultimately assessed does not reflect the theoretical notion of "true tax liability." Therefore, IRS tax gap estimates are based on the auditors' recommendations—not the final resolution between the IRS and the taxpayer.

IRS Funding

From FY 2001 through FY 2009, funding for the IRS hovered around $12.2 billion, measured in 2016 dollars (Figure 1). But the relative stability of the tax gap estimates over that period and the IRS's budget is probably a coincidence. The IRS faced different challenges at various points during that period, largely as a consequence of tax legislation enacted in 2001, 2003, 2008, and 2009.[14] For example, the IRS was required to temporarily pay out refundable tax credits within months of passage of tax acts in 2001, 2003, and 2008; no such requirement was in force in the other years for which compliance studies were conducted. Typically, such provisions would not take effect until the year following enactment, giving the IRS more time to develop the systems necessary to support the payment of a new tax credit to millions of taxpayers.

Measured in 2016 dollars, the agency's funding climbed to $13.2 billion in FY 2010, but by FY 2016, the IRS's appropriations had fallen to $11.2 billion—15 percent below the 2010 amount. The biggest cutbacks were in enforcement, although that activity still receives the largest share of the IRS's budget: In 2016, more than 40 percent of the funds were allocated to enforcement activities, including investigations, examinations, and collections. About one-third of funding was for operations support, and nearly all of the remaining appropriation financed taxpayer services such as taxpayer assistance programs (Figure 2).

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10 Feinstein (2004).

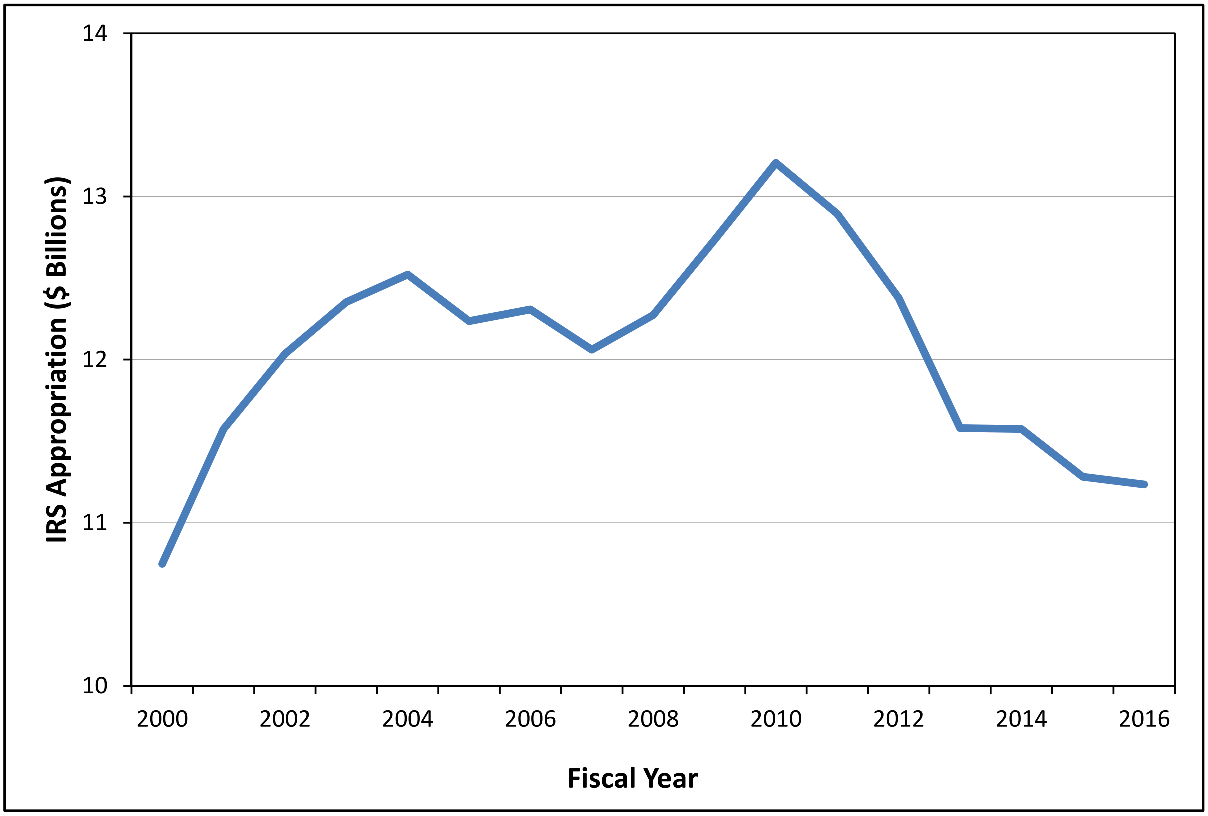
11 McCubbin (2000) and Liebman (2000).

12 Holtzblatt and McCubbin (2004).

13 Internal Revenue Service *Data Book* (various years), Table 10.

14 Public Laws 107–16, 108-27, 110–185, and 111–5.

FIGURE 1. Appropriations for the Internal Revenue Service, FYs 2000–2016



Source: Congressional Budget Office

NOTE: Amounts were adjusted to 2016 levels using the price index for personal consumption expenditures.

Without more recent estimates of the tax gap, the relationship between the drop in IRS appropriations and compliance is not observable. With less money, the IRS cut the audit rate (from 0.9 percent in 2010 to 0.7 percent in 2015 for most types of tax returns and from 1.1 percent to 0.8 percent for just individual income tax returns) and answered fewer phone calls from taxpayers seeking help with their tax returns (from 72 million in 2010 to 56 million in 2015).[15] Plus, the IRS picked up more responsibilities following enactment of the Foreign Account Tax Compliance Act (FATCA) and the Affordable Care Act (ACA) in 2010; those included the processing of reports of foreign financial assets under FATCA, the administration of new tax credits for health insurance coverage, and the enforcement of health coverage mandates.[16]

As part of its responsibilities for estimating the current-law budget baseline, CBO projects the IRS's budget over the next decade. Funding for all discretionary programs, including the IRS's budget, is set each year by appropriations. CBO does not make any assumptions regarding whether the Congress will continue to cut IRS funding. Section 257 of the Balanced Budget and Emergency Deficit Control Act of 1985 requires CBO to project future funding for discretionary programs solely by applying inflation rates to the most recently enacted appropriations.[17] Under those assumptions, the IRS's total funding is projected to rise to $15.5 billion (in current dollars) by FY 2026.

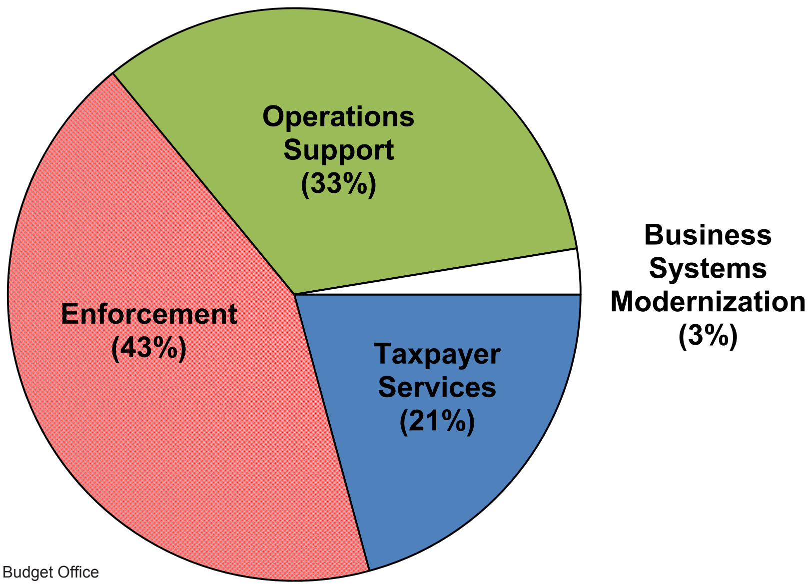
[15] Internal Revenue Service *Data Book* (various years), Table 9a and Table 19.

[16] Beginning in 2013, FATCA (Public Law 111-147) requires certain individuals to report foreign financial assets in excess of specified thresholds. Those thresholds range from $50,000 for an unmarried filer living in the United States to $400,000 for a married couple filing a joint return and living abroad. Eventually, some entities will face similar reporting requirements. As a result of the ACA (Public Law 111-148), the IRS is providing tax credits to individuals and small businesses as well as enforcing insurance coverage requirements faced by individuals and large employers.

[17] The law further specifies the type of indexes to be used to adjust for inflation—the employment cost index for personnel costs and the gross domestic product chain-type price index for all other discretionary appropriations.

One challenge in forecasting the IRS's future resources, however, is the caps specified in the Budget Control Act of 2011 for defense and nondefense discretionary budget authority.[18] CBO's projections of total outlays account for the constraints imposed by those caps, including the reductions in the caps that are required under the law's automatic enforcement procedures. Those caps remain at about the 2016 level in both 2017 and 2018 and then rise by about 2.5 percent per year from 2019 through 2021. For years after 2021, total appropriations for programs that are constrained by the caps are assumed to grow with inflation from the amounts projected for 2021. Funding for the IRS is subject to those caps, but CBO does not allocate the effects of the caps to specific programs in its baseline estimates.

FIGURE 2: Internal Revenue Service Appropriations in FY 2016, By Budget Activity Share



Source: Congressional Budget Office

Common Considerations for Estimating the Revenue Effects of Compliance Proposals

To a large extent, both CBO and JCT take into account the same considerations when estimating the revenue effects of compliance proposals—whether the proposals would provide more funding or expand the IRS's statutory authority. Those common considerations include the components of compliance savings, the budget scorekeeping guidelines for estimating the budgetary effects of legislative changes, the IRS's goals for tax enforcement, and the constraints the agency faces.

Components of Compliance Savings

Compliance effects of legislative proposals are divided into two components: the detection of erroneous items on tax returns and the deterrence of noncompliant behavior. The two are related: greater detection of noncompliant behavior will, to some extent, spur greater voluntary compliance. Over time, however, taxpayers may find new ways to evade taxes.

Detection and deterrence. The effects of improvements in detection are direct: an increase in funding of compliance activities or an enhancement in enforcement tools can prevent more erroneous refunds from be-

[18] Public Law 112-25, and later amended.

ing paid out and enable the IRS to collect additional unpaid taxes. The increased revenues are observable, even if estimators must control for other changes occurring at the same time. The deterrence effects—the improvement in taxpayer compliance behavior in response to increased audits or enhanced enforcement tools—are indirect and more difficult to measure, although past experience and academic studies can provide useful insight.

Both JCT and CBO take into account detection effects in their estimates of compliance proposals. However, only JCT includes deterrence effects in its estimates of compliance initiatives included in the tax code. The deterrence effects of increases in IRS appropriations are more uncertain than changes to the tax code—especially because appropriations are annual, and funding for an enforcement initiative may not extend to future years.

Learning curves. Both taxpayers and the IRS learn from experience and modify their behavior over time. Observing where the IRS has concentrated its enforcement tools will cause some taxpayers to adopt new methods of tax evasion. Observing how taxpayers adjust their behavior will spur the IRS to adjust its enforcement detection tools to the extent allowed under the tax code.[19] Estimators make a judgment regarding the timing of taxpayer and IRS adjustments.

Budget Scorekeeping Guidelines

Over time, the House and Senate Budget Committees, CBO, and the Office of Management and Budget developed scorekeeping guidelines. Those guidelines were formalized in the conference report for the Balanced Budget Act of 1997. The guidelines are updated upon agreement by the House and Senate Budget Committees, CBO, and the Office of Management and Budget. The purpose of those guidelines is to ensure consistent budgetary treatment across programs and over time.[20]

Two guidelines are especially relevant to CBO's and JCT's estimates of compliance legislation. First, scorekeeping Rule 3 states the following:

> Revenues, entitlements and other mandatory programs (including offsetting receipts) will be scored at current law levels … unless Congressional action modifies the authorizing legislation.

The second relevant guideline is scorekeeping Rule 14, which states:

> No increase in receipts or decrease in direct spending will be scored as a result of provisions of a law that provides direct spending for administrative or program management activities.

Rules 3 and 14 were adopted in part to avoid situations where hoped-for but quite uncertain savings are used to offset near-term certain spending increases or revenue decreases in the same legislation.

Those two rules substantially limit the extent to which CBO and JCT would include savings from a tax compliance initiative in their estimates of the budgetary effects. Giving the IRS additional funding in an appropriations bill to obtain and match information returns from third parties to tax returns, for example, would potentially increase compliance—both directly by enabling the IRS to better identify noncompliance through independent sources and indirectly by encouraging people to comply. CBO's estimate of the bill's cost would include the additional funding for the reporting and matching initiative. Under Rules 3 and 14, however, CBO would exclude any revenue increases from the new initiative in its estimates of the bill's total costs.

Nonetheless, to the extent possible, CBO and JCT provide the Congress with information on revenue savings from compliance proposals. First, even though CBO and JCT would not include revenue effects in their

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19 McCubbin (2004).

20 Conference Report (1997) and Office of Management and Budget (2015).

estimates of a change in IRS appropriations or other legislation providing funding for the IRS, they still may provide the Congress with an estimate of a "nonscorable" effect that is not added to their estimate of the total costs. Second, the scorekeeping rules do not apply to CBO's baseline budget projections or to CBO's and JCT's estimates of the President's budget submission. If an appropriations bill or another bill containing increased funding for IRS enforcement was enacted, CBO would include the revenue effects in its next estimate of the budget deficit under current law. Additionally, the President's budget has often contained compliance initiatives—including "program integrity" proposals to increase IRS funding—and CBO and JCT have added the revenue effects of those proposals in their analysis of the President's budget released every spring.

The IRS's Goals and Constraints

In its estimates of compliance proposals, both CBO and JCT start with the same premise: that IRS allocates its existing resources and statutory tools to the activities that yield a higher return on investment than other activities allowed under current law—subject, however, to two constraints. The first constraint—consistent with the budget scorekeeping guidelines—is that the IRS is limited by the scope of its statutory authority. A second constraint is the availability of resources to the IRS—including the access to up-to-date technology and the number and skills of staff. CBO's and JCT's revenue estimates will reflect each organization's judgment regarding the state of the IRS's infrastructure and its impact on the timing and scope of implementation. A related consideration is the ability of both the IRS and taxpayers to adjust to a new initiative. That ability will depend, in part, on the extent to which the IRS can shift its resources and the complexity of new spending initiatives or changes to the tax code.

Technology. The IRS's ability to adjust to legislative changes is closely linked to the state of its computers and the long-term challenges of the IRS's computer modernization program. A 2016 report from the Government Accountability Office found that the IRS's individual master file and business master file still rely on computer programming language developed more than 50 years ago. That outdated language is increasingly difficult to write and maintain.[21] Integration of new legislation into old computer systems will, to some extent, slow implementation.

But beyond computer modernization, legislation that imposes new—and sometimes unfamiliar—responsibilities often requires establishment of new systems. Both FATCA and the ACA were enacted in 2010, but implementation of most of the major provisions in those acts did not become effective for several years to allow time for the IRS and businesses to build the information infrastructure necessary to operate new systems. Such statutory deadlines would be reflected in the estimates of legislation. Although those two laws were largely implemented as scheduled (see an exception below), estimators generally consider the extent to which similar deadlines in other tax laws will be met successfully.

Another consideration is the timing of the enactment of tax legislation. Often, tax legislation is not enacted until December or the start of the following year. The American Taxpayer Relief Act (ATRA), for example, was enacted on January 2, 2013, but extended many provisions that had expired on December 31st and contained other new provisions that were effective on January 1st.[22] For the IRS, updating and developing tax forms and rewriting and testing computer programs to reflect legislation enacted in late November or December for the following tax year coincides with the ongoing testing of their systems for the upcoming filing season; enactment at the beginning of the tax year means that changes to the forms and computer programs must occur during the busiest period of the year. As a consequence, the IRS may delay the beginning of the filing season for some, if not all, taxpayers or put a temporary hold on the processing of certain returns. Estimators consider the likelihood of such delays and their impact on reporting and on taxpayers making use of the provisions affected by the legislation. Those effects are compounded by delays in the issuance of guidance by the IRS.

Staff. With new responsibilities, the IRS may require additional staff or the reallocation of personnel. Either action probably requires on-the-job training. The extent of new training will slow full implementation of a new law or targeted appropriations, which affect the timing of CBO's and JCT's estimates of savings.

[21] Government Accountability Office (2016a).

[22] Public Law 112-240.

Recent trends in the IRS's staffing also affect revenue estimates of compliance initiatives. Along with the decline in the IRS's appropriations, the number of the agency's employees has fallen over the past two decades—from 113,931 in 1995 to 79,890 in 2015.[23] The IRS's staff has also aged—with more than half of its employees over the age of 50 in 2015 and a quarter eligible to retire in 2016.[24] In the short term, the aging of the IRS's workforce is probably associated with an increase in productivity and an ability to adapt to new responsibilities because of the experience of the older workers. Replacing the retired workers with younger staff, however, will initially result in a loss of institutional knowledge, additional training costs, and a reduction in productivity—all factors that reduce savings relative to a scenario where the majority of the workforce is experienced. As the new hires gain experience and skills over time, productivity is generally anticipated to rise.

Flexibility. Legislation can enable the IRS to shift resources from one activity to another with a higher return from the same amount of funding. For example, when the IRS finds an error on a tax return, it generally must either accept the return or file a notice of deficiency, which starts the audit process and consumes resources. However, if the error falls within the IRS's mathematical or clerical error authority, the IRS can correct the error without starting an audit. Expanding that authority potentially yields a higher return than more labor-intensive audits, even if fewer dollars are gained per return—largely because the IRS can detect many more erroneous refunds and prevent them from being paid out at far less cost per return than would be the case with audits. However, the people who are highly skilled auditors are generally not the same people who can write new programming language or build the large-scale data sets necessary to detect erroneous claims during the processing of returns. That lack of flexibility may reduce the estimates of savings, at least in the short term.

Complexity. The complexity of a provision affects its implementation. The ACA, for example, requires employers with 50 or more full-time employees to make an employer shared responsibility payment to the IRS if (1) they did not offer minimum essential health insurance to 95 percent of their full-time employees or (2) at least one of their employees received a premium tax credit for purchasing health insurance through the health insurance exchanges. To enable the IRS to administer those requirements, employers must report to the IRS information each year on the health insurance coverage offered to their full-time workers. Confusion and concern by employers about the administration of those provisions—especially the new reporting requirements—caused the IRS to delay implementation of the employer responsibility payments for a year to allow additional time to discuss with taxpayers ways to simplify those rules.[25] That transition relief was extended for another year for employers with fewer than 100 employees.[26]

Implementation of provisions can be delayed by lags in the release of regulations, rules, notices, and other types of guidance from the IRS.[27] To the extent that estimators can anticipate such delays, projected savings from initiatives can be slowed.

Specific Issues in Estimating the Revenue Effects of IRS Appropriations

Nearly everything that the IRS does can be characterized as a way to improve compliance:

- Customer service—such as answering taxpayers' questions over the telephone, through the IRS website, or in person at Taxpayer Assistance Centers—can help taxpayers avoid errors on their tax returns that can result in either underpayments or overpayments.
- Increasing enforcement—through expansions of information reporting, audits, criminal investigations, and collection—would lead to improvements in detection and deterrence.
- Computer modernization would support expansions of customer service and enforcement.

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23 Internal Revenue Service *Data Book* (various years), Table 30.

24 Koskinen (2015).

25 Internal Revenue Service (2013).

26 Internal Revenue Service (2014).

27 The IRS provides other types of guidance to taxpayers through various documents and publications. For more information of those forms of IRS guidance, see Internal Revenue Service (2016c).

Despite the potential contributions of each of those activities to compliance, CBO estimates the revenue savings only from expansions of enforcement. Improvements in compliance as a result of customer service or computer modernization are not easily observed and thus difficult to measure.

Methodology

As a starting point in its analysis of requests for more funding of IRS enforcement activities, CBO generally relies on the IRS's estimates of the return on investments (ROIs) for specific types of initiatives. Those ROIs are estimated by economists in the IRS Office of Research who have access to detailed confidential data found in the Enforcement Revenue Information System (ERIS), which is part of the IRS's Compliance Data Warehouse. ERIS tracks the amount and timing of revenue from all the IRS's enforcement functions, along with the number of hours spent on cases, where available. The estimates are limited to the direct effects of enforcement activities that result in collections of unpaid taxes; they do not include the effects of other actions (such as math error procedures) that prevent erroneous refunds from being paid or the improvements in compliance associated with deterrence. For any given set of initiatives in a particular year, the IRS forecasts that revenues will be collected over a 10-year period. The collection ratios are derived from past initiatives, with collection data from the most recent initiatives given a greater weight than data from initiatives implemented further in the past.

The IRS's measures of ROI for new initiatives are derived from the average savings per dollar of funding for similar existing activities. When estimating the revenue savings from a new initiative, however, the appropriate measure is not the average ROI but the marginal ROI—that is, the additional amount of revenues received from an additional dollar of funding. The IRS makes one adjustment to the average rates to move the ROIs closer to being marginal measures: That adjustment is made to the first three years of an initiative and reflects the amount of time it takes to hire and train new staff.

In CBO's judgment, the IRS's estimates of ROIs do not account for other factors that affect the marginal estimates of ROIs from compliance initiatives. In the past, CBO has adjusted the ROIs to account for changes in the composition of the caseload over time, taxpayers' adjustments to their evasion methods, and the IRS's modifications to its detection algorithms in response to taxpayers' adoption of new forms of noncompliance.

Example: IRS Program Integrity Proposal in the President's Budget for 2016

The caps on discretionary spending are automatically adjusted to accommodate additional appropriations for certain program integrity (compliance) initiatives for the IRS and various government transfer programs. In recent years, the Administration has included program integrity proposals in its budgets. CBO previously released a description of its analysis of the Administration's proposal for an IRS program integrity initiative in its FY 2012 budget.[28]

The President's FY 2016 budget included a program integrity proposal that would have increased funding of IRS enforcement initiatives by $421 million in FY 2016 (Table 2). Those funds would have been used to finance 10 new initiatives, five of which—with a total cost of $333 million in FY 2016—were expected to raise immediate and measurable revenues:

- Increase audit coverage ($151 million) by hiring more field employees; boosting coverage of employment tax returns and estate and gift tax returns; expanding examinations; improving document matching programs; and extending support activities.
- Enhance collection coverage ($123 million) by addressing growing inventories resulting from past reductions in staff; increasing coverage of employment tax cases among business taxpayers; improving service to taxpayers in delinquencies; and extending support activities.
- Address international and offshore compliance issues ($41 million) by expanding coverage of entities with undisclosed offshore accounts to ensure their compliance with required U.S. tax reporting.

[28] Congressional Budget Office (2011).

- Improve audit coverage of large partnerships ($16 million) by increasing the number of agents with specialized knowledge of partnership law and strengthening enforcement activities related to flow-through entities.
- Prevent identity theft and refund fraud ($3 million) by providing staffing and advanced technologies to handle the increased workload associated with identity theft and refund fraud.

TABLE 2. Components of Proposed Funding Increase for Enforcement Initiatives and Returns on Investments, FY 2016

2016 IRS Enforcement Initiative	Cost in 2016 (Millions of Dollars)	Revenue in 2016 (Millions of Dollars)	Return on $1 of Investment (Dollars)
Increase Audit Coverage	150.7	397.5	2.6
Enhance Collection Coverage	122.8	345.9	2.8
Address International and Offshore Compliance Issues	40.7	49.3	1.2
Improve Audit Coverage of Large Partnerships	16.2	44.5	2.7
Prevent Identity Theft and Refund Fraud	2.7	24.2	9.0
Other Initiatives	87.5	0.0	0.0
All	**420.6**	**861.4**	**2.0**

Source: Internal Revenue Service (2015)

In addition to the $421 million for IRS enforcement initiatives, the proposal to lift the cap in FY 2016 also included $5 million for enforcement activities at the Alcohol and Tobacco Tax and Trade Bureau and $241 million to fund investments in IRS infrastructure. The President proposed to continue the 2016 initiatives over the 10-year budget window.

For the IRS's enforcement activities proposed to begin in 2016, CBO projected the same initial return on investment as estimated by the Administration for the first 3 years of an initiative. In the first year, the estimated returns on investments were under $3 for each $1 of additional funding for most of the IRS's enforcement initiatives; however, the ROI was as low as $1 to $1 for the international tax initiative and as high as $9 to $1 for the initiative to prevent identity theft and refund fraud (Table 2). The overall ROI for the 2016 initiative (including the provisions that were not expected to raise revenue) was estimated to be $2 to $1 in 2016 and was projected to rise to $6 to $1 by 2018, when full implementation was expected (Table 3). For later years, CBO estimated a lower return on investment than the Administration expected. CBO projected that the return on added spending would decline over time as taxpayers shifted to other less-detectible forms of tax evasion, causing revenue collections to fall. Thus, the ROI for the 2016 initiative was estimated to fall by 19 percent from the 2018 rate by the end of the decade.

TABLE 3. Components of Proposed Funding Increase for Enforcement Initiatives and Returns on Investments, FY 2018

2016 IRS Enforcement Initiative	Cost in 2018 (Millions of Dollars)	Revenue in 2018 (Millions of Dollars)	Return on $1 of Investment (Dollars)
Increase Audit Coverage	158.5	1,266.7	8.0
Enhance Collection Coverage	131.2	1,179.7	9.0
Address International and Offshore Compliance Issues	43.1	159.6	3.7
Improve Audit Coverage of Large Partnerships	16.9	129.1	7.6
Prevent Identity Theft and Refund Fraud	3.1	63.8	20.6
Other Initiatives	81.8	0.0	0.0
All	**434.6**	**2,798.9**	**6.4**

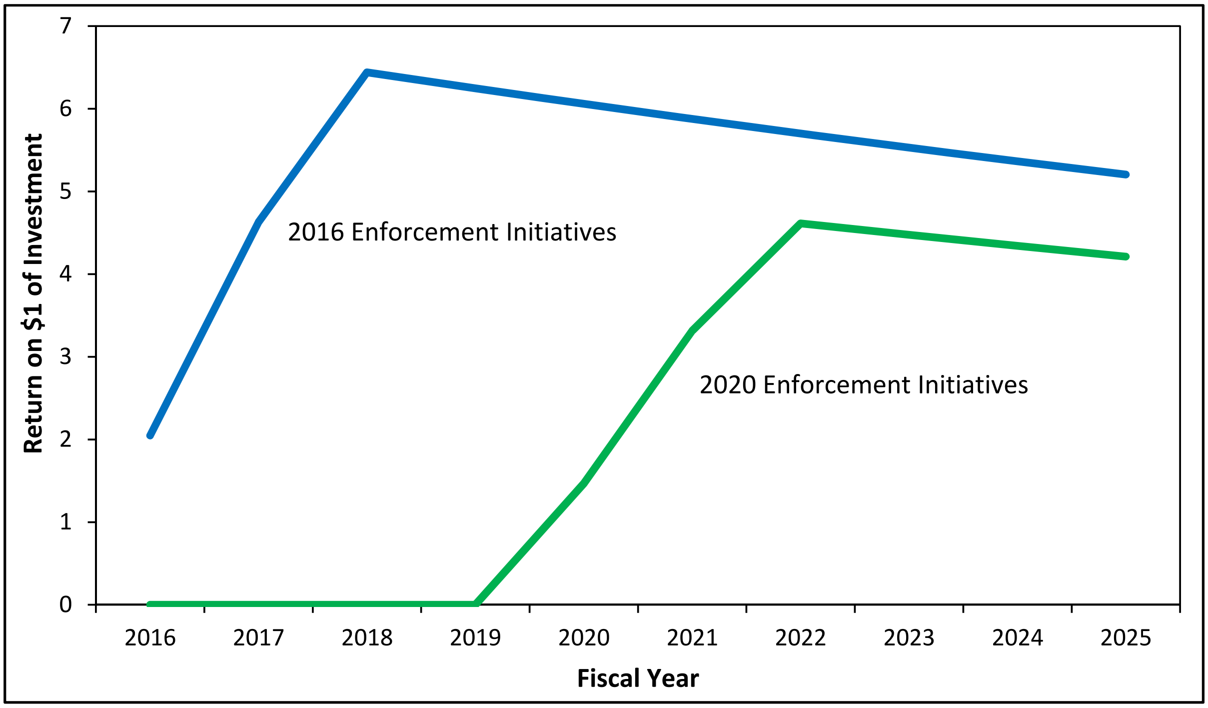
Source: Internal Revenue Service (2015)

The FY 2016 budget also increased discretionary spending by additional amounts through FY 2020 to fund other new IRS enforcement initiatives. The Administration, however, did not provide any details on those future initiatives. In CBO's judgment, the IRS was anticipated to tackle the areas of noncompliance with the highest ROI first (that is, begin with the "low-hanging fruit"). Thus, CBO estimated that the ROIs on the FY 2017 initiative would be lower than the rates for the 2016 initiative. In each of the following 3 years, the ROIs would continue to fall as the IRS dealt with increasingly more difficult areas of noncompliance. Because the IRS would not be able to maintain the same return as spending was ramped up, the return on investment for the 2020 initiative was 25 percent lower in the first year, compared with the 2016 initiative, according to CBO's estimates (Figure 3). When fully implemented in the third year, the ROI for the 2020 initiative was estimated to be 28 percent lower than the comparable rate for the 2016 initiative.

The combined effect of the initiatives implemented over the FY 2016–2020 period would be a ramping up of spending on tax administration by nearly $19 billion over the FY 2016–2025 period. CBO estimated that the Administration's request would yield $55 billion in additional revenues over that latter period. That estimate does not include collections resulting from those initiatives but not received by the IRS until after 2025. The estimate of $55 billion in additional revenues also does not include any potential effects on voluntary tax compliance from the proposed sustained increases in enforcement spending. Without additional specification of the policies, especially beyond 2016, CBO had no basis for estimating such effects. (The Administration also did not include such effects in its estimate presented in the budget.) On net, after accounting for the increased spending, the initiative would have reduced the deficit by nearly $37 billion over the 10-year budget window.

The estimated increases in revenues represented the cumulative impact over time of appropriations for IRS enforcement activities in the amounts proposed in the President's budget. But those appropriations would be enacted one year at a time. Therefore, even if the added funding was provided for 2016, CBO's revenue baseline for the 2016–2025 period would not immediately change by the $55 billion estimated but rather would increase in steps as the additional investment provided by each year's appropriation was accounted for—assuming no new information was later identified that would change the estimated effects.

FIGURE 3. Return on $1 of Investment from Proposed Funding Increases for the Internal Revenue Service's Enforcement Initiatives, FYs 2016 to 2025



Source: Congressional Budget Office

Estimating the Effects of Legislative Changes

The types of compliance proposals analyzed by JCT can be classified into four broad types. As data can be scarce and the IRS's response uncertain, JCT follows a set of principles to consistently estimate these proposals.

Types of Legislative Proposals

Proposals to reduce noncompliance include simplification of the tax code, new enforcement tools, new statutory authority, and mandates requiring the IRS to use its existing authority.

Simplification. Some simplification proposals, such as providing safe harbors for businesses or extending eligibility for a deduction or credit, might simultaneously reduce taxpayer errors but increase the deficit. Allowing small corporations to make estimated payments based on the prior year's tax reduces errors in having to estimate the current year's tax and would be expected to result in lower estimated payments. Legislation in 1991 eliminated the support test and household maintenance test from the eligibility criteria for the EITC, and subsequent legislation in 2004 extended those changes to other child-related tax preferences.[29] Those simplification provisions reduce noncompliance by expanding eligibility for those preferences to many people whose claims were erroneous under prior law.

New enforcement tools. Information reporting is a tool that JCT has scored as raising significant revenue over the last decade, with prominent present-law examples including reporting on payment card and third-party payment transactions and basis reporting on publicly traded securities.[30] Other new tools include allowing the IRS to exchange information with other Federal agencies, State and local governments, prisons, and even agencies in foreign countries.

[29] Public Law 101-508 and Public Law 108-311.

[30] Public Law 110-289, section 3091, and Public Law 110-343, section 403, respectively.

New authority. Statutory authority is important in determining how efficiently the IRS can act on information gained from enforcement tools. As described above, mathematical or clerical error authority allows the IRS to correct certain errors without an audit. Examples of mathematical or clerical errors include computational errors shown on returns, certain entries exceeding statutory limits, and omissions of required taxpayer identification numbers for claiming certain credits. The Administration's proposed expansion of math error authority to include "correctable errors," such as information reported by taxpayers on a tax return not matching information received by the Social Security Administration and shared with the IRS, but not within the IRS's current math error authority to correct, is an example of new authority.[31] Changes to deficiency procedures and increases in penalties are other examples.

Mandate use of existing authority. Some proposals mandate the IRS to undertake a specific activity that it is already within its authority. As discussed in detail below, a recent legislative change requiring the IRS to delay payment of certain refunds is an example.

Methodology

As described above, JCT assumes that the IRS generally allocates its resources in order to maximize revenues. In addition, when estimating compliance proposals, JCT assumes that the IRS's resources are fixed. Thus, for example, if a new tool or new authority is less efficient than existing tools or authority, JCT does not score it as raising revenues. If a provision requires the IRS to do something new that diverts funds from more efficient uses, JCT scores it as losing revenues.

Data related to compliance proposals can be scarce, but several sources are frequently useful. When estimating the revenue effect of an information reporting proposal, JCT is often guided by the IRS's reports on the tax gap. JCT combines that information with its projections for how much income is covered by the proposal and its estimates of the effective tax rates on that income. For proposals related to penalties, JCT is informed by the data found in ERIS. Studies done by the Government Accountability Office (GAO), the Treasury Inspector General for Tax Administration, and outside experts (such as academic economists) are often helpful for a variety of compliance estimates.

Example: Legislation To Reduce Identify Fraud by Accelerating Reporting Requirements

The Consolidated Appropriations Act of 2016 accelerated the filing dates of W-2s and Forms 1099-MISC related to nonemployee compensation to January 31 (from March 31 for electronic submission and from February 28 or 29 for paper submission). The law also requires the IRS to hold refunds to claimants of the EITC or the additional child tax credit (ACTC) until February 15.[32] The first part is a new tool. The second part requires the IRS to do something that it already has authority to do. Both parts take effect beginning in the 2017 filing season.

In estimating the effects of that provision, JCT focused primarily on the potential of the provision to raise revenues by reducing refund fraud related to identity theft. Under prior law, the IRS did not match information from W-2s and Forms 1099-MISC until July or later.[33] At that point, the IRS used information reporting to detect tax fraud related to identity theft. By July, however, most refunds of withholding and payments of refundable tax credits had been paid. JCT does not have access to information on the detection methods used by the IRS, but given the IRS's demonstrated ability to detect fraudulent returns in the post-filing season, receiving information returns earlier, in JCT's judgment, should allow increased detection of fraud before paying refunds.

JCT's quantitative starting point for the revenue estimate was the IRS's estimate that it had paid $5.8 billion in refunds associated with identity theft during the 2013 filing season, as reported by GAO.[34] Using the Auto-

[31] For a more complete description of the Administration's proposed expansion of math error authority, see "Provide the IRS with Greater Flexibility to Address Correctable Errors" in Department of the Treasury (2016), pp. 225–226.

[32] Public Law 114-113, division Q, section 201.

[33] See Figure 1 in Government Accountability Office (2014a).

[34] Government Accountability Office (2015).

mated Underreporter (AUR) program, which matches information returns to tax returns and thus is likely to involve W-2 or Form 1099-MISC, the IRS identified $3 billion in erroneous refunds. Another $2.8 billion in identity theft was detected before the start of the AUR program by another IRS filter that flags when more than one person files a return with the same Social Security number. Some of that fraud probably would have been identified later by the AUR program if it had not been flagged at the duplicate return stage, so JCT factored that into its estimate.

In GAO's view, the IRS's estimate of erroneous refunds due to identity fraud was highly uncertain. For example, GAO cites a sensitivity analysis done by the IRS that suggests that the AUR component could be as high as $78 billion or as low as $120 million. JCT was unable to find more granular information before estimating the provision.[35] Despite the uncertainty described above, JCT used the IRS's $5.8 billion estimate to produce a baseline for fraudulent refunds that were identified as being paid out. From there, JCT estimated the amount of revenue savings from detection and deterrence.

JCT estimated that some of the effect would come from the IRS using information from W-2s and Forms 1099-MISC to detect fraudulent returns filed by identity thieves. JCT assumed that the IRS would incorporate earlier receipt of the information into its fraud filters but that implementation would take several years until the IRS determined from filing season experience how to use that earlier receipt of the information optimally. The estimate of revenue savings was also constrained by the fact that the IRS had not received additional funds to implement the new system. The estimated revenue effect is therefore phased in over several years.

One key factor that JCT believed could have a large revenue effect was whether the IRS would change how quickly it pays refunds (apart from the mandated delay in EITC and ACTC refunds). Although the tax code allows the IRS to delay refunds until 45 days after April 15 without paying interest, the IRS's goal is to issue refunds quickly.[36] The earlier receipt of information returns appears to increase the benefit to the IRS of delaying refunds, but JCT was conservative in estimating to what extent the IRS might pay some refunds less quickly.

Nonetheless, there should be some effect, as the IRS procedure when it suspects identity theft is less resource-intensive than its procedures for auditing noncompliant returns from legitimate taxpayers. If the IRS suspects that a return was not filed by the true taxpayer, it is not subject to the usual rules involving notice of deficiency. Instead, it can simply deny a refund if the filer cannot verify his or her identity.

In addition to considering how the IRS might change its behavior in response to the provision, JCT also thought about how people engaging in identity fraud might change their behavior. If those filers believe that the IRS is unlikely to hold refunds until it can match the accelerated information returns to tax returns, they have an incentive to file returns earlier in the filing season, before information from W-2s and Forms 1099-MISC is integrated into fraud filters. Moreover, as the provision requires that the IRS delay paying refunds to EITC and ACTC claimants, JCT assumed that identity thieves would have some incentive to avoid claiming those credits in the event that claiming them would result in the IRS making use of the required delay to catch the fraud by matching information returns. Finally, identity thieves would have more incentive to avoid using identities that have W-2s or Forms 1099-MISC associated with them.

JCT considered that the provision might also have effects unrelated to identity fraud, such as reducing EITC or ACTC overpayments. Recent research provides evidence that under current law, some taxpayers overclaimed income to maximize refundable credits, especially starting in the mid-2000s.[37] To the extent that taxpayers are claiming wage income beyond what is shown on their W-2s, the provision might allow the IRS to detect overclaimed credits before paying refunds. However, unlike with identity theft, in the absence of the proposed expanded math error authority mentioned above, the IRS would have to file a notice of deficiency

[35] After the provision became law, the GAO testified that the IRS used a new methodology to estimate the amount of refunds associated with identity theft that was paid in 2014. With that new approach, the IRS's estimate for 2014—$3.1 billion—was just over half of its 2013 estimate. See Government Accountability Office (2016b).

[36] See Government Accountability Office (2014a), p. 5.

[37] Mortenson and Whitten (2016).

in order to deny a claim. As it is unlikely that the efficiency of such an audit would exceed the efficiency of the audit that it would replace, JCT did not include revenues from that effect in its estimate.

Combining all of the factors described above, JCT estimated that the provision would increase revenues by $779 million over the FY 2016–2025 period.[38] The estimated revenue effects were relatively small, though increasing, from FY 2017, when the provision will take effect, through FY 2019, reached a steady state in FY 2020 (when JCT assumed it would be fully implemented), and grew thereafter with CBO's projection of nominal GDP.

What Information Would Be Useful to CBO's and JCT's Estimators?

Revenue estimating is challenging, and analysts will always benefit from more data, more administrative details, and more research. To estimate the effects of compliance proposals, CBO and JCT would both benefit especially from more information regarding the IRS's estimates of the tax gap and returns on investment, the IRS's enforcement actions, and taxpayers' compliance behavior.

Tax Gap

More information about the measurement and sources of the tax gap would provide insight into the baseline for noncompliance. Additional details on the methodology used in the most recent NRP study would allow CBO and JCT to better evaluate the findings from that research. The current studies categorize errors by the degree of third-party verification applied to certain types of income or tax provisions—but more information on the amount of the tax gap related to specific types of income or tax provisions could inform the choice of parameters when estimating the effects of tax compliance provisions.

Returns on Investment

Through ERIS, the IRS has access to detailed information on their workforce's productivity for particular types of enforcement actions, and their economists rely on that data to generate ROIs. To some extent, the IRS has been able to share information on the factors that go into those estimates, but allowing CBO and JCT more access to its models would enable the Congressional estimators to test the sensitivity of ROIs to changes in the IRS's resources and the composition of its proposals.

A more difficult challenge for the IRS would be to expand its analysis of ROIs to include other types of IRS activities. Although the focus of its estimates is on actions that result in additional assessments of taxes owed to the IRS, the results of another type of enforcement action—the prevention of erroneous refunds—are not measured in the ROIs. An even more difficult expansion would be to examine the relationship between changes in taxpayer services and revenues—but that would probably be a long-term project requiring extensive analysis.

A third set of challenges involves the estimation of marginal ROIs. The return from an additional dollar of funding is likely to differ from the average ROI based on past funding. CBO adjusts the average ROIs estimated by the IRS to account for changes in the effectiveness of initiatives as funding increases, but more insight into the marginal effects would be useful.[39]

Details of the IRS Enforcement Activities—Current and Future

As with the ERIS data, the IRS is forthcoming with CBO and JCT regarding its current enforcement activities—but its willingness to share information is (understandably) tempered with caution about providing sensitive information that if more widely known could undermine its compliance strategies. Still, more information about the anticipated implementation of newly proposed initiatives would aid CBO and JCT in their estimation of those proposals. The most striking examples are the proposed program integrity initiatives beyond the first fiscal year. In their recent proposals, the Administration has provided an amount of funding

[38] See Line II.1. in Joint Committee on Taxation (2015).

[39] Hodge, *et al.* (2016) estimated marginal revenue/cost curves for several categories of correspondence audits.

for those future year initiatives and an expected ROI but left it to the Congressional analysts to make assumptions regarding the components of the proposal.

Another key question is the length of time that the IRS anticipates it would take to implement a new initiative or to use new statutory authority. Related questions concern the response time for taxpayers and the IRS and probably require more research: First, how long does it take taxpayers to learn that the IRS has new tools and to find new ways to evade taxes? And second, how long does it take the IRS to identify those new methods of evasion and shut those channels down with existing authority and resources?

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