



December 2022

CORPORATE INCOME TAX

Effective Rates before and after 2017 Law Change

Why GAO Did This Study

In 2016, prior to TCJA's passage, GAO reported that, from 2008 to 2012, between 18 percent and 24 percent of all profitable large corporations had no federal income tax liability. GAO also reported that those same corporations generally had effective tax rates between 13 percent and 16 percent of pretax book income.

GAO was asked to provide an update on effective tax rates after TCJA was enacted. In this report, GAO describes (1) the percentage of large corporations that had no federal income tax liability, (2) average effective tax rates of large corporations, and (3) changes in TCJA that may have affected corporate effective tax rates.

To conduct this work, GAO reviewed relevant literature, and analyzed IRS data for tax years 2014 to 2018 (the most recent data available). This includes the financial and tax information that corporations report on Schedule M-3. GAO also interviewed IRS officials and subject matter experts.

View [GAO-23-105384](#). For more information, contact Jessica Lucas-Judy at (202) 512-6806 or LucasJudyJ@gao.gov.

CORPORATE INCOME TAX

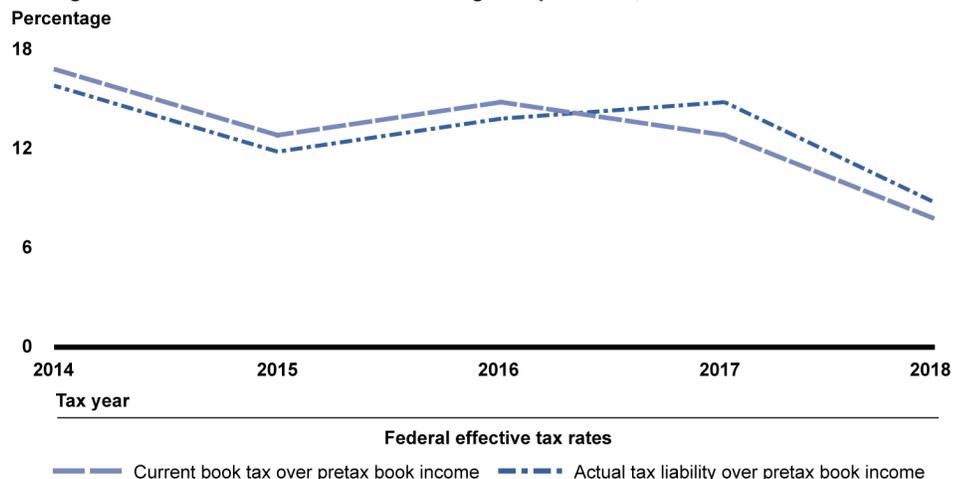
Effective Rates before and after 2017 Law Change

What GAO Found

In each year from 2014 to 2018, about half of all large corporations had no federal income tax liability. For the purposes of this report, GAO considers "large corporations" to be those that filed Internal Revenue Service (IRS) Schedule M-3. This form is required for corporations with \$10 million or more in assets. Among profitable large corporations, on average, 25 percent had no tax liability. Corporations may have no federal income tax liability for a number of reasons. For example, not all corporations are profitable in any given year or may have losses or credits from other years that can be used to offset current-year tax liabilities. Among large corporations, from 2014 through 2018, an average of approximately 44 percent reported a loss in a given year.

Effective tax rates measure tax liability as a proportion of income and are typically lower than the statutory tax rate because they reflect deferrals, credits, and other tax benefits. Among profitable large corporations, average effective tax rates varied between 2014 and 2018. The effective tax rates based on actual tax liability was as high as 16 percent in 2014 and as low as 9 percent in 2018. Tax rates based on corporations' financial reports (known as book tax) followed similar trends.

Average Effective Tax Rates for Profitable Large Corporations, 2014 to 2018



Source: GAO analysis of Internal Revenue Service Statistics of Income data for Schedule M-3 filers. | GAO-23-105384

In December 2017, Congress passed Public Law 115-97—commonly known as the Tax Cuts and Jobs Act (TCJA). Among many changes, TCJA lowered the top statutory corporate tax rate from 35 percent to 21 percent. While effective tax rates decreased in 2018, total tax liability among profitable large corporations was slightly higher in both 2017 (\$278 billion) and 2018 (\$267 billion) than it was in 2016 (\$262 billion). TCJA increased foreign-sourced income subject to tax in the U.S. and increased repatriations of income previously held offshore. However, TCJA often taxed this income at reduced rates. These changes may have contributed to a lower effective tax rate in 2018, but also generated tax liability from income that was previously not taxable under U.S. law.

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Abbreviations

BEAT	Base Erosion and Anti-Abuse Tax
CFC	Controlled Foreign Corporations
ETR	Effective Tax Rate
FDII	Foreign-Derived Intangible Income
GAAP	Generally Accepted Accounting Principles
GILTI	Global Intangible Low-Taxed Income
IRC	Internal Revenue Code
IRS	Internal Revenue Service
NOL	Net Operating Loss
TCJA	Tax Cuts And Jobs Act of 2017
SOI	Statistics of Income

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December 14, 2022

The Honorable Bernard Sanders
Chairman
Committee on the Budget
United States Senate

The Honorable Ron Wyden
Chairman
Committee on Finance
United States Senate

Congressional deliberations regarding the level of U.S. corporate taxation can be informed by data describing how much income tax corporations actually pay. We have previously reported on the share of corporations that owe no federal income tax, as well as the effective tax rates (ETR) of corporations that filed IRS Schedule M-3 (for the purposes of this report, we refer to these as large corporations).¹ ETRs are equal to the amount of income tax corporations pay divided by their pretax income.

Since we previously reported on this topic, Public Law 115-97, known as the Tax Cuts and Jobs Act of 2017 (TCJA) significantly changed the way the federal government taxes corporations.² These changes include lowering the top statutory income tax rate from 35 percent to 21 percent and altering the way foreign-sourced income is recognized and taxed.

You asked us to update our prior work assessing the extent to which U.S. corporations pay federal income tax, including the percentage that had no

¹IRS Schedule M-3 is used by corporations to reconcile their financial statement net income to taxable net income. Corporations with \$10 million or more in assets are required to file Schedule M-3. Smaller corporations are allowed to file it as well. According to IRS officials, in 2018, approximately 20 percent of Schedule M-3 filers had less than \$10 million in total assets. The mean assets of a Schedule M-3 filer were approximately \$2 billion, and the median assets were approximately \$85 million. Throughout this report, when we refer to Schedule M-3 filers, we are referring to corporations that file Form 1120 with Schedule M-3 attached. For our prior work on corporate effective tax rates, see GAO, *Corporate Income Tax: Most Large Profitable Corporations Paid Tax but Effective Tax Rates Differed Significantly from the Statutory Rate*, [GAO-16-363](#) (Washington, D.C.: Mar. 17, 2016) and *Corporate Income Tax: Effective Tax Rates Can Differ Significantly from the Statutory Rate*, [GAO-13-520](#) (Washington, D.C.: May 30, 2013).

²Pub. L. No. 115-97, 131 Stat. 2054 (2017).

federal income tax liability and the average ETRs corporations pay. You also asked us to describe changes in corporate ETRs in the context of changes in tax law. In this report, we describe (1) what percentage of large corporations had no federal income tax liability for each year from 2014 through 2018, the most recent years of tax data available;³ (2) the average effective tax rates for each year from 2014 through 2018 for large corporations calculated under different methodological approaches; and (3) what is known about changes in TCJA and subsequent COVID-19 relief legislation, including loss carryback modifications, that may have substantially affected corporate effective tax rates for each year from 2014 through 2018.⁴

To calculate the percentage of corporations that had no federal income tax liability, we analyzed data from the Internal Revenue Service's (IRS) Statistics of Income (SOI) *Corporation Income Tax Returns Complete Report*. To calculate the percentage of large corporations that had no federal income tax liability, we used data from IRS's SOI Division, limited to corporations that filed Schedule M-3. We report data for years 2014 through 2018.

To describe average ETRs, we computed a variety of such rates using income and expense data that corporations report on Schedules M-3 and compiled by SOI. We also reviewed literature and spoke with six subject matter experts to better understand methodologies concerning effective tax rate calculations and to understand how those methodologies might be affected by TCJA.⁵ We used these data to compare and estimate U.S. and worldwide effective tax rates on the income of entities included in the

³Corporations may have accounting periods that do not align with the calendar year. IRS SOI aggregates data into years that align with calendar year filers, whose accounting periods run from January 1 to December 31, but also include non-calendar year filers whose accounting periods may begin both before and after January 1. For example, the 2018 data includes non-calendar year filers whose accounting periods began as early as August 1, 2017 and ended July 31, 2018, and filers whose accounting periods began as late as July 1, 2018 and ended June 30, 2019.

⁴Loss carrybacks allow corporations to take losses from the current year and carry those back to deduct from income in prior years, lowering the prior year's tax liability.

⁵See appendix I for our expert selection methodology.

federal income tax return.⁶ Schedule M-3 allowed us to compute tax rates based on both measures of tax reported on financial statements, and actual tax liability reported to IRS.

The financial statement data reported on the Schedules M-3 for worldwide income and tax expenses—including federal, foreign, and U.S. state and local income taxes—are limited to the entities that are included in the U.S. taxpayer’s federal tax return. Consequently, the scope of the corporate entities included in our analysis can differ from that included in publicly filed financial statements. This is because not all foreign entities represented in those statements are included in a federal tax return. In addition, our estimates of effective tax rates remain limited to corporations that filed Schedule M-3, which is required for corporations with assets of \$10 million or more.

The Schedule M-3 data provided by IRS are aggregated, and allow us to report data either for all large corporations or profitable large corporations. We cannot track individual corporations over time.⁷ As a result, we were unable to present information on the distribution of ETRs across corporations. Instead, we estimated ETRs based on total tax and total income across the population, effectively estimating an average ETR weighted by income (see appendix I for a detailed discussion of our methodology including data limitations).

We also reviewed and summarized the relevant economic and accounting literature on ETRs published between September 2015 and February

⁶We report worldwide tax rates in our report, which includes U.S. federal taxes, state and local taxes, and taxes paid to foreign governments. However, our data are limited to entities included in the U.S. tax return. Thus they may not include income and taxes from foreign subsidiaries, even if such income and taxes are included in a U.S. corporation’s financial statement.

⁷For the purposes of this report, we consider large corporations profitable if they reported a positive amount for *Net income (loss) per income statement of includible corporations* on their Schedule M-3. This field is the result of corporations starting with the worldwide income from their financial statements and then following a series of steps. These steps include subtracting out income and losses of foreign and U.S. entities that are included in the financial statements, but not in consolidated tax returns; adding in the income and losses of entities that are included in consolidated tax returns but not in financial statements; and making other adjustments to arrive at the book income of entities included in the federal tax return.

2022.⁸ In addition, we discussed our methodology with the six subject matter experts identified from our literature search.

To describe what is known about changes in TCJA and subsequent COVID-19 relief legislation, we interviewed agency officials, reviewed published literature, interviewed subject matter experts, and analyzed IRS data.

To assess the reliability of the data and estimates, we reviewed agency documentation and interviewed agency officials. While there are limitations to the data provided on the Schedules M-3 and general reporting problems with tax return data, we determined that the data were sufficiently reliable to meet our reporting objectives.

We conducted this performance audit from August 2021 to December 2022 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

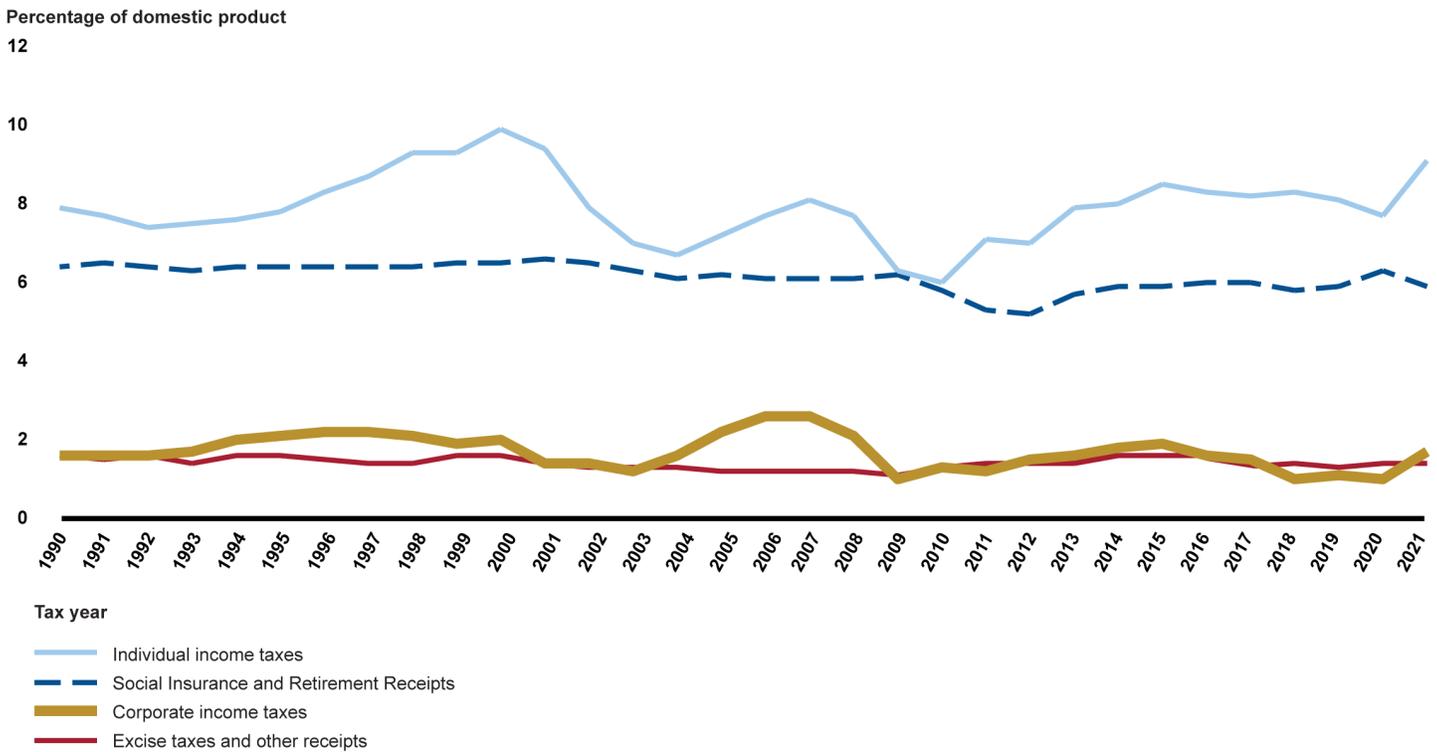
Corporate Income Tax Overview

The base of the federal corporate income tax includes net income from business operations (receipts, minus the costs of purchased goods, labor, interest, and other expenses). It also includes net income that corporations earn in the form of interest, dividends, rent, royalties, and realized capital gains.

Corporate income taxes contribute to federal revenue. Between 1990 and 2021, corporate income taxes made up approximately 10 percent of federal revenue, and were between 1 percent and 3 percent of gross domestic product (see figure 1).

⁸See appendix II for a summary of studies that estimate average effective tax rates.

Figure 1: Federal Tax Revenues as a Percentage of Gross Domestic Product, Between 1990 and 2021



Source: GAO representation of Office of Management and Budget data. | GAO-23-105384

Enacted near the end of 2017, TCJA significantly changed how the federal government taxed corporations. This included major changes to statutory corporate tax rates.⁹ Before TCJA, the statutory rate of tax on net corporate income ranged from 15 percent to 35 percent, depending on the amount of income earned. After TCJA was implemented, a single tax rate of 21 percent became standard on net corporate income.¹⁰

TCJA also substantially changed how the federal government taxes U.S. corporations' international activities. Before TCJA, income earned by controlled foreign corporations of domestic corporations was generally not taxed until that income was repatriated to the United States in the form of dividends paid by the controlled foreign corporation (CFC) to the U.S.

⁹Statutory rates determine the amount of tax liability (before any credits) relative to taxable income.

¹⁰Pub. L. No. 115-97, § 13001(a), 131 Stat. at 2096, *codified at* 26 U.S.C. § 11(b).

parent corporation.¹¹ A tax credit was provided for foreign taxes paid on the income from which the dividends were paid.¹² TCJA generally exempted foreign dividends from U.S. federal income tax; however, it also introduced provisions that subject certain foreign income to taxation in the United States without requiring this income be repatriated.

TCJA included the following provisions that we discuss as part of our analysis in this report:

Dividend deduction. A new 100 percent deduction for dividends received by a U.S.-based corporation's foreign subsidiaries is available for U.S. firms owning at least 10 percent of the foreign firm.¹³ No foreign tax credit is allowed for foreign taxes paid on the income generating the eligible dividend, as that income is generally not subject to tax due to the deduction.

Transition tax. A one-time tax (also known as the Section 965 transition tax) on the deemed repatriation of the accumulated deferred foreign income (generally, previously-untaxed earnings that accrued between 1986 and 2017).¹⁴ U.S. corporations could elect to pay the transition tax in installments over 8 years. Prior to TCJA, earnings of controlled foreign subsidiaries (other than those taxed under Subpart F, which prevented deferral of U.S. taxes on certain passive or mobile income) were generally not taxed until distributed as a dividend to a U.S. corporation, allowing corporations to defer U.S. taxes on such earnings. TCJA deemed those earnings to have been repatriated to the United States. Thus, they were subject to U.S. taxation. However, TCJA taxed the

¹¹A CFC is any foreign corporation for which more than 50 percent of the vote or value is owned—directly, indirectly, or constructively—by U.S. shareholders. For purposes of this definition, a U.S. shareholder is a U.S. person who owns at least 10 percent of the CFC. 26 U.S.C. §§ 951(b), 957(a). Certain passive and mobile income, known as Subpart F income, was and still is taxed in the U.S. at the full statutory rate in the year it is earned. This is regardless of whether or not the income is repatriated, net of a credit for foreign taxes paid on this income. 26 U.S.C. §§ 951–965 Interest the corporation may earn on foreign bank deposits is an example of Subpart F income.

¹²26 U.S.C. § 901. For additional information on the tax treatment of foreign-source income in the United States and other selected countries before TCJA, see GAO, *International Taxation: Study Countries That Exempt Foreign-Source Income Face Compliance Risks and Burdens Similar to Those in the United States*, [GAO-09-934](#) (Washington, D.C.: Sept. 15, 2009).

¹³Pub. L. No. 115-97, § 14101, 131 Stat. at 2189–2192, *codified at* 26 U.S.C. § 245A.

¹⁴Pub. L. No. 115-97, § 14103, 131 Stat. at 2195–2208, *codified at* 26 U.S.C. § 965.

earnings at a lower rate than they would have been had they been repatriated prior to TCJA.

While the pre-TCJA top marginal tax rate was 35 percent, the transition tax rates were generally 15.5 percent of the U.S. shareholder's specified foreign corporations' cash or cash equivalent assets and 8 percent of earnings that exceeded the aggregate foreign cash position. A reduced foreign tax credit applies to the income inclusion under the transition tax.

Inclusion of global intangible low-taxed income (GILTI) and the corresponding deduction. Generally, the net income earned by a U.S. CFCs in excess of the net deemed tangible income return of such CFCs is taxed, subject to a 50 percent deduction.¹⁵ Before TCJA, such earnings generally would have been taxed at the full U.S. rate, but only when included under the Subpart F anti-deferral regime or repatriated. However, GILTI is currently included in the U.S. shareholder's taxable income. Because of the deduction, this income is taxed at half of the domestic rate, subject to the foreign tax credit limitation. Eighty percent of foreign taxes are permitted to offset U.S. tax on GILTI.

Deduction for foreign-derived intangible income (FDII). A deduction of 37.5 percent for income earned in the United States from certain foreign-derived sales of property or services in excess of 10 percent of tangible assets.¹⁶ Foreign-derived income is generally income derived from sales of property to foreign persons for foreign use or services provided with respect to persons or property located outside the United States. The FDII deduction applied to the 21 percent statutory rate results in a tax rate of approximately 13.1 percent until 2025. At that time, the FDII deduction

¹⁵The net deemed tangible return is generally 10 percent of tangible depreciable assets owned and used in a trade or business by those CFCs over the interest expense taken into account in determining the net income. For purposes of GILTI, the net income of a CFC, also called net tested income, excludes certain types of income, such as subpart F income, related-party dividends, and foreign oil and gas extraction income. Pub. L. No. 115-97, § 14201, 131 Stat. at 2208–2213, *codified at* 26 U.S.C. § 951A. A U.S. corporation generally has a GILTI inclusion with respect to a foreign subsidiary if it is a U.S. shareholder (as defined in section 951(b)) and the foreign subsidiary is a CFC. The deduction is provided by 26 U.S.C. § 250. The GILTI deduction is 50 percent for tax years beginning between December 31, 2017, and December 31, 2025, and 37.5 percent thereafter.

¹⁶The FDII deduction is 37.5 percent for tax years beginning between December 31, 2017, and December 31, 2025, and 21.875 percent thereafter. Pub. L. No. 115-97, § 14202, 131 Stat. at 2213–2216, *codified at* 26 U.S.C. § 250.

is scheduled to decrease, resulting in a tax rate of approximately 16.4 percent.

Base erosion and anti-abuse tax (BEAT). A minimum tax of 10 percent of modified taxable income on corporations that have reduced their taxable income in the United States beyond a specified threshold through base erosion payments.¹⁷ Examples of base erosion payments include payments by a U.S. parent corporation to a related foreign affiliate for services, including royalty payments, and interest payments. BEAT taxes payments made from a U.S. corporation to its related foreign affiliates that have deductions (and certain other amounts treated as base erosion tax benefits) paid or accrued to foreign related affiliates that are 3 percent or more of their total deductions (2 percent in the case of certain banks or registered securities dealers). BEAT applies to corporations with gross receipts averaging \$500 million or more annually over the preceding 3 years.

TCJA made additional changes to the corporate income tax. They include rules for expensing, limitations on deductions for interest expense, and net operating losses (NOL) carried over from other tax years.¹⁸ An NOL occurs when a taxpayer's allowable deductions exceed its gross income for a tax year and is allowed to be used to reduce taxable income in other tax years.

In 2020, COVID-19 relief legislation also changed how the federal government taxes U.S. corporations. The CARES Act and other subsequent COVID-19 relief laws included tax measures to help businesses by reducing certain tax obligations.¹⁹ Although the CARES Act generally affected tax laws beginning in 2020, it retroactively changed

¹⁷The tax rate was 5 percent in 2018, and increases to 12.5 percent after 2025. Modified taxable income is the taxpayer's taxable income plus base erosion tax benefits and certain net operating loss deductions. Pub. L. No. 115-97, § 14401, 131 Stat. at 2226–2234, *codified at* 26 U.S.C. § 59A.

¹⁸Pub. L. No. 115-97, §§ 13201, 13301, 13302, 131 Stat. at 2105–2108, 2117–2123.

¹⁹Pub. L. No. 116-136, §§ 2301–2307, 134 Stat. 281, 347–359 (2020). Other COVID-19 relief laws include the Consolidated Appropriations Act, 2021, and the American Rescue Plan Act of 2021. Pub. L. No. 116-260, 134 Stat. 1182 (2020); Pub. L. No. 117-2, 135 Stat. 4 (2021). For more information about COVID-19-related tax relief for businesses, see GAO, *COVID 19: Significant Improvements Are Needed for Overseeing Relief Funds and Leading Responses to Public Health Emergencies*, [GAO-22-105291](#) (Washington, D.C.: Jan. 27, 2022).

the treatment of NOLs for tax years 2018 to 2020 as well, which we discuss more below. The Inflation Reduction Act of 2022 also made changes to corporate taxes, including a new alternative minimum tax, which may affect corporate tax rates in future years.²⁰

Financial and Tax Reporting Requirements for Corporations

Corporations may record the income they earn and the expenses (including taxes) they incur each year according to two separate standards— one for financial reporting and one for tax purposes. In the case of publicly traded companies, they are required to produce financial statements in accordance with generally accepted accounting principles (GAAP) to provide certain information to investors and creditors. The income and expense items reported in these statements are commonly known as book income and book expenses. Publically traded corporations are required to follow GAAP. Other corporations may use different accounting standards.

Corporations must also file corporate income tax returns on which they report income, expenses, and tax liabilities, according to rules set out in the Internal Revenue Code (IRC) and associated Department of the Treasury regulations. The IRC generally requires that a corporation's taxable year and overall method of accounting conform to those standards used for financial reporting purposes.²¹ Specific differences are permitted (and, in some cases, required). These are known as book-tax differences. We previously reported on some of the specific sources of book-tax differences, and found that they could be in the tens or hundreds of billions of dollars annually.²²

As one example of a book-tax difference, accelerated depreciation permits businesses to depreciate qualified capital assets for tax purposes much more rapidly than they are permitted to do under financial accounting rules. As a result, taxable income will be reduced by a greater amount than will book income for the initial years in which the depreciation is increased. However, in later years (until the asset is completely depreciated), book income will be reduced by greater amounts than will taxable income.

²⁰Pub. L. No. 117-169, § 10101, 136 Stat. 1818, 1818–1822 (2022).

²¹26 U.S.C. §§ 446, 451, 461.

²²[GAO-13-520](#).

To reconcile these book tax differences, corporations with assets that equal or exceed \$10 million are required to report these differences to IRS on the Schedule M-3 of their income tax returns.²³ A Schedule M-3 filer is required to report the worldwide income of the entities represented in its financial statements and then follow a defined series of steps:

- subtract income and losses of foreign and U.S. entities that are included in the financial statements but not in consolidated tax returns;
- add income and losses of entities that are included in consolidated tax returns but not in financial statements; and
- make other adjustments to arrive at the book income of entities included in the federal tax return.²⁴

Effective Tax Rates

Effective tax rates (ETR) on corporate income can be defined in several ways, each of which can provide certain insights into the function and effects of the tax regime. This report focuses on average corporate ETRs. ETRs are generally computed as the ratio of taxes paid or tax liabilities accrued in a given year over the pretax book income the corporation earned that year.²⁵

Average ETRs attempt to measure taxes paid or tax liabilities as a proportion of economic income. By contrast, the marginal ETR focuses on the tax burden associated with a specific marginal investment (usually over the full life of that investment). This makes it a better measure of how taxes affect incentives to invest.

Statutory tax rates determine the amount of tax liability (before any credits) relative to taxable income. Taxable income is defined by tax law and reflects tax benefits and subsidies built into the law. For example,

²³Corporations that are not required to file Schedule M-3 may still voluntarily do so.

²⁴For example, CFCs are not entities included in the federal tax return of the U.S. taxpayer.

²⁵The average ETRs we present in this report are averages in multiple senses. First, the rate reflects the average tax liability on every dollar of a corporation's net income (as opposed to the tax on the marginal dollar of income earned). Second, given that we had access to only aggregated IRS data, our ETR estimates represent averages across all of the corporations in our different populations of analysis. The income we use as our denominator is based on the net income of includible corporations from IRS Schedule M-3, with tax expenses added, to create a measure of pretax book income.

Congress may create a deduction to incentivize business investment. This lowers the total tax liability of corporations engaged in business investment by lowering their taxable income while keeping the rate unchanged. As previously noted, in 2017 and earlier, the highest corporate statutory tax rate was 35 percent. In 2018, the statutory corporate tax rate was 21 percent.²⁶

To calculate average effective tax rates, analysts need two components: a measure of tax liability as the numerator and a measure of income as the denominator. Measures of tax liability to use as the numerator can include:

- current book tax expense, including either only federal taxes or worldwide taxes—federal, foreign, and U.S. state and local income;
- total book tax expense, which includes the sum of current and deferred taxes (again, either federal only or worldwide); and
- actual tax liability, which is what corporations report as their income tax liability after credits.²⁷

For the denominator, it is common to use pretax book income from financial statements rather than taxable income. Taxable income is itself a product of the tax laws. There may be some situations where income from financial statements does not align perfectly with the income that is being taxed in the numerator. For this report, we use pretax book income as the denominator to get a measure of book income before tax expenses are removed. To calculate pretax book income, we added the net income of includible corporations from Schedule M-3 to the tax expenses from Schedule M-3.

²⁶For corporations whose accounting period included parts of both 2017 and 2018, their tax liability was based on a blended rate that used a weighted average of the pre- and post-TCJA rates. See 26 U.S.C. § 15(a).

²⁷Deferred taxes represent estimated taxes that will be paid (or refunded) in a future year as timing differences between book and tax reporting reverse themselves and unused losses and credits that have been carried forward are recognized. Taxes that are reported as deferred in one tax year are included in current tax expenses in future years (which is why some studies choose to exclude deferred taxes from their ETR measures).

Between 2014 and 2018, the Share of Profitable Large Corporations with No Tax Liability in a Given Year Increased

As shown in figure 2, in each year between 2014 and 2018, approximately 68 percent of all corporations had no federal income tax liability after credits.²⁸ This level remained stable throughout the time period, remaining within a percentage point of the 5-year average. A lower share of large corporations, of which there are approximately 50,000 in each year of our data, had no federal income tax liability in each year from 2014 through 2018.²⁹ Over the 5-year period, an average of 51 percent of large corporations had no federal income tax liability. However, this share increased from a low of 47 percent in 2014 to a high of 58 percent in 2018.

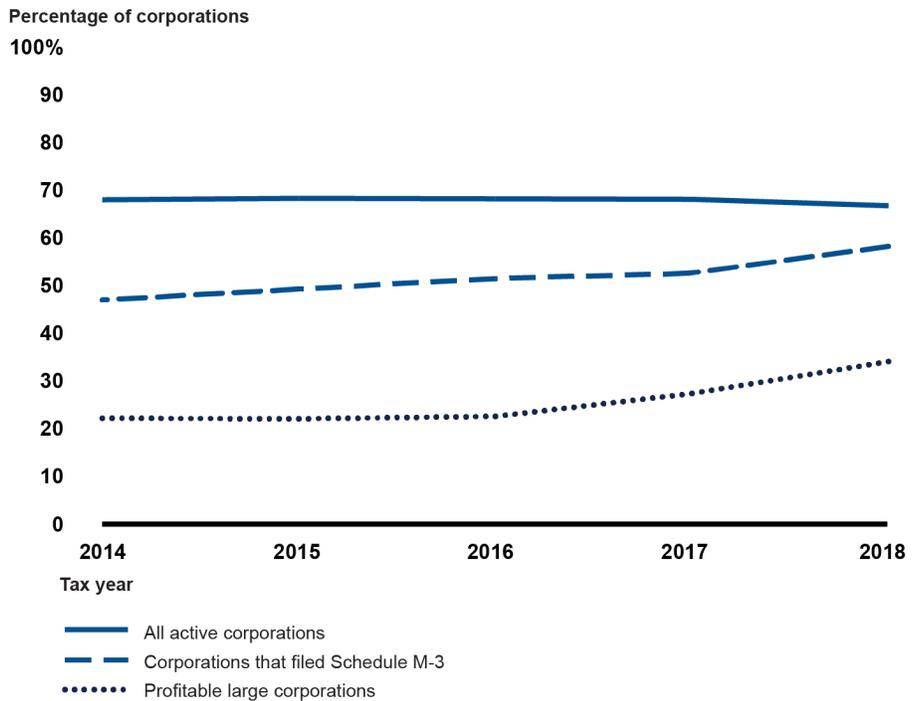
A still lower share of profitable large corporations had no federal income tax liability in each year from 2014 to 2018.³⁰ The share of profitable large corporations owing no federal income tax after credits increased from approximately 22 percent to approximately 34 percent between 2014 and 2018, averaging 25 percent over the 5-year period. The number of profitable large corporations in the data ranged between approximately 25,000 and 35,000 between 2014 and 2018.

²⁸Here, all corporations refer to both public and private corporations filing tax forms 1120 (U.S. Corporation Income Tax Return), 1120-L (U.S. Life Insurance Company Income Tax Return), 1120-PC (U.S. Property and Casualty Insurance Company Income Tax Return), and 1120-F (U.S. Income Tax Return of a Foreign Corporation). In each year, there are approximately 1.5 million of these corporations in the data. Since the data we analyzed are aggregated, we are unable to determine the extent to which corporations paid no tax in several or all of the years.

²⁹As explained previously, we refer to corporations as “large corporations” if they filed IRS Schedule M-3.

³⁰For our purposes, we consider a Schedule M-3 filer to be profitable if it reported a positive amount for net income of includible corporations.

Figure 2: Percentage of Corporations That Reported No Federal Income Tax Liability after Credits, 2014 to 2018



Source: GAO analysis of Internal Revenue Service (IRS) data. | GAO-23-105384

Notes: Data on all active corporations come from IRS Statistics of Income Corporation Income Tax Returns Complete Report. The data include corporations filing tax forms 1120 (U.S. Corporation Income Tax Return), 1120-L (U.S. Life Insurance Company Income Tax Return), 1120-PC (U.S. Property and Casualty Insurance Company Income Tax Return), and 1120-F (U.S. Income Tax Return of a Foreign Corporation). We consider large corporations to be those that filed Schedule M-3 with IRS. Corporations with \$10 million or more in assets are required to file Schedule M-3. Smaller corporations may file it as well. Data for Schedule M-3 filers include only corporations filing tax Form 1120. The Schedule M-3 data are a subset of the data from the Corporate Complete Report. We consider a large corporation to be profitable if it reported a positive amount for net income of includible corporations on its Schedule M-3.

Our findings are generally consistent with our prior reports, with some variation.

- We previously found that between 2006 and 2012, the share of all U.S. corporations with no federal income tax liability was between 67

percent and 72 percent.³¹ This is consistent with what we observed for 2014 through 2018.

- For large corporations, from 2006 to 2012, between 34 and 50 percent of them had no federal income tax liability. This is somewhat lower than the 46 to 58 percent that had no federal income tax liability between 2014 and 2018.
- From 2008 through 2012, we found a range of 18 percent to 24 percent of profitable large corporations had no federal income tax liability in a given year, compared to a range of 22 percent to 34 percent between 2014 and 2018.

Corporations may have no federal income tax liability for a number of reasons. One important reason is that not all corporations are profitable. Among large corporations, from 2014 through 2018, approximately 44 percent were not profitable, based on net book income of includible corporations. Corporations without positive net book income typically have no tax liability. Among large corporations without positive net book income, only approximately 15 percent had federal income tax liability.

Corporations with positive net book income (which we equate with 'profitable' for purposes of this report) could still owe no federal income taxes if, for example, their taxable income was completely offset by net operating loss (NOL) deductions carried forward from prior tax years.³² Profitable corporations may also have their tax liability offset by tax credits, or tax deduction rules that differ from financial accounting rules. As mentioned above, for each year from 2014 through 2018, an average of 25 percent of profitable large corporations had no federal income tax liability.

³¹GAO, *Corporate Income Tax: Most Large Profitable U.S. Corporations Paid Tax but Effective Tax Rates Differed Significantly from the Statutory Rate*, [GAO-16-363](#) (Washington, D.C.: Mar. 17, 2016).

³²TCJA limited NOL deductions to 80 percent of taxable income. We did not have the data for years 2014 to 2018 to estimate the number of corporations that may have had their full taxable income offset by NOL deductions. We previously reported that between 2008 and 2012, approximately 15 to 19 percent of all active corporations had their taxable income completely offset by NOL deductions carried forward. See [GAO-16-363](#).

Across Multiple Measurement Approaches, Effective Tax Rates for 2018 Were Generally Lower Than 2014 through 2017

For 2018, profitable large corporations had an average effective tax rate (ETR) of approximately 9 percent of pretax book income, based on actual federal income tax liability (see figure 3 below).³³ This was lower than it had been in any year between 2014 and 2017 when ETRs ranged between 11 and 16 percent.

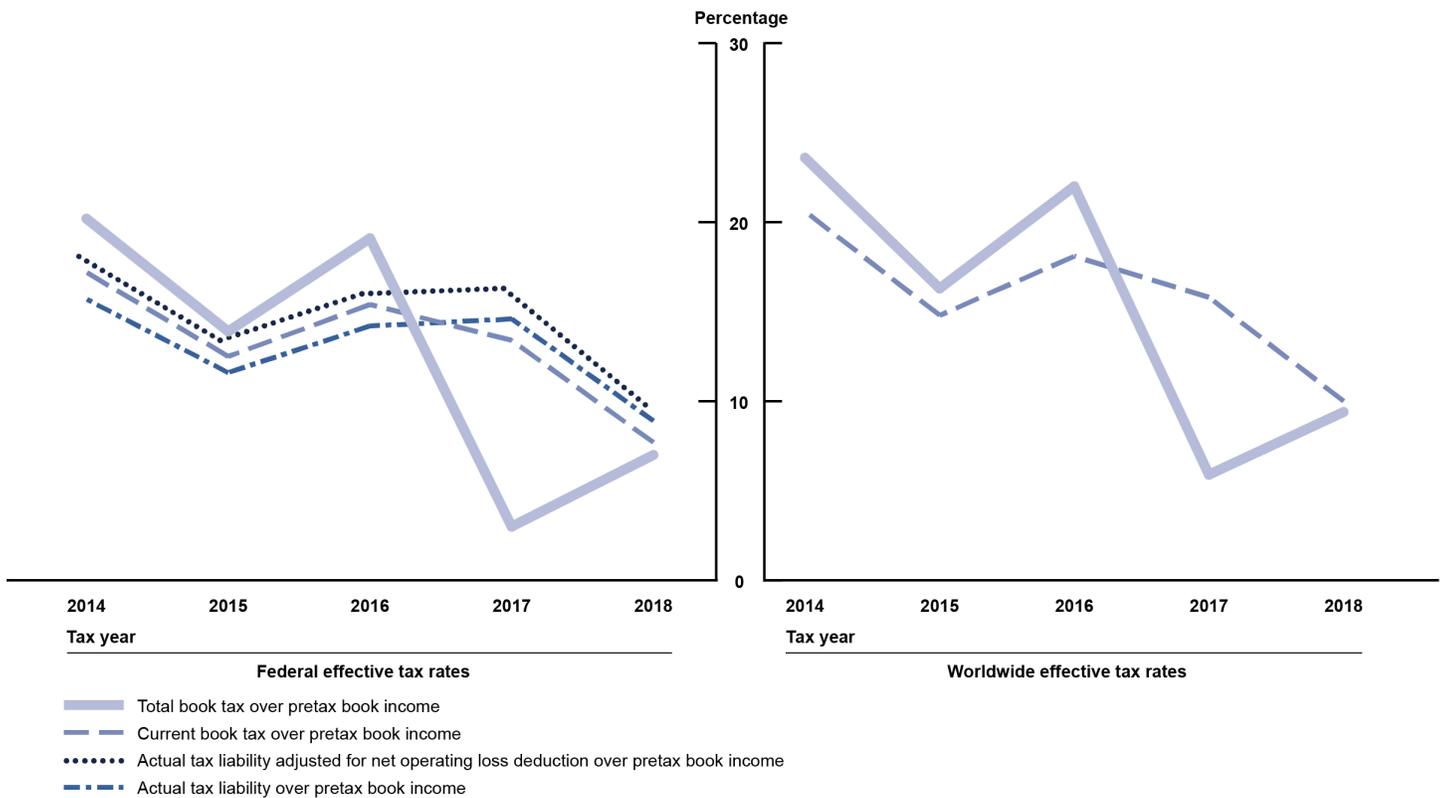
Figure 3 also presents other measures of ETRs using different values in the numerator; in all cases the denominator was the same pretax book income.³⁴ Besides actual tax liability, the other numerators used to calculate ETRs were current book tax, total book tax, and actual tax liability adjusted for NOL deductions.³⁵ In some years the ETRs based on book tax were lower than ETRs based on tax liability. In other years, they were higher. The largest change in rates came from total book tax, which is based on both current and deferred tax expenses. We discuss this further below, including the role that deferred tax expenses played in the divergence of total book tax in 2017.

³³Corporations may have accounting periods that do not align with the calendar year. IRS *Statistics of Income* aggregates data into years that align with calendar year filers, whose accounting periods run from January 1 to December 31, but also include noncalendar-year filers whose accounting periods may begin both before and after January 1. For example, the 2018 data include noncalendar-year filers whose accounting periods began as early as August 1, 2017, and ended July 31, 2018, and filers whose accounting periods began as late as July 1, 2018, and ended June 30, 2019.

³⁴See appendix IV to see these data presented in tables.

³⁵We made the adjustment for NOL deductions by multiplying the level of the NOL deductions in a given year by the top corporate tax rate for that year (35 percent for 2014 to 2017, and 21 percent for 2018) and adding this amount to taxes in the numerator. Making this adjustment increased tax rates by approximately 1-to-3 percentage points, depending on the year.

Figure 3: Average Effective Tax Rates for Profitable Large Corporations, 2014 to 2018



Source: GAO analysis of Internal Revenue Service (IRS) Statistics of Income data for Schedule M-3 filers. | GAO-23-105384

Notes: We consider large corporations to be those that filed Schedule M-3 with IRS. Schedule M-3 is a form filed with IRS that reconciles financial statement net income with taxable net income. It is required for corporations with \$10 million or more in assets. Smaller corporations may file it as well. We consider a corporation to be profitable if it reported a positive amount for net income of includible corporations on its Schedule M-3. The worldwide effective tax rates are based on the worldwide book income and tax expenses—including federal, foreign, and U.S. state and local income taxes—of entities included in the federal tax return. The denominators are based on the same pretax book income as federal effective tax rates. Book income and book tax refer to measures of income and tax for financial reporting purposes.

We previously found that between 2008 and 2012, ETRs based on actual tax liability ranged between approximately 13 percent and 16 percent.³⁶

Figure 3 also presents worldwide tax rates. These include federal, foreign, and U.S. state and local income taxes. Because actual tax liability

³⁶GAO-16-363.

for state and local or foreign jurisdictions is not required to be reported to IRS, for worldwide rates we present effective tax rates based only on book tax.³⁷ Additionally, worldwide income is limited to the entities that are included in the U.S. taxpayer's federal tax return. Consequently, the scope of the corporate entities included in our analysis can differ from the scope of the entities included in publicly filed financial statements. That is because not all foreign entities represented in those statements are included in a federal tax return. Compared to the domestic tax rates, average worldwide tax rates are higher than the federal tax rates, by approximately 3 percentage points, using book tax as the numerator. For more information on how these rates were calculated, see appendix I.

The data presented in figure 3 are limited to corporations with positive net book income in that particular year. Sometimes it is unclear how to interpret average effective tax rates for populations that include some corporations with positive net book income and others with net book losses for a given year. When averaging tax rates across corporations with positive net book income and those with losses, the measured tax rates in a given year may appear to be higher in some years and lower in others than the long-run averages paid by individual corporations.³⁸

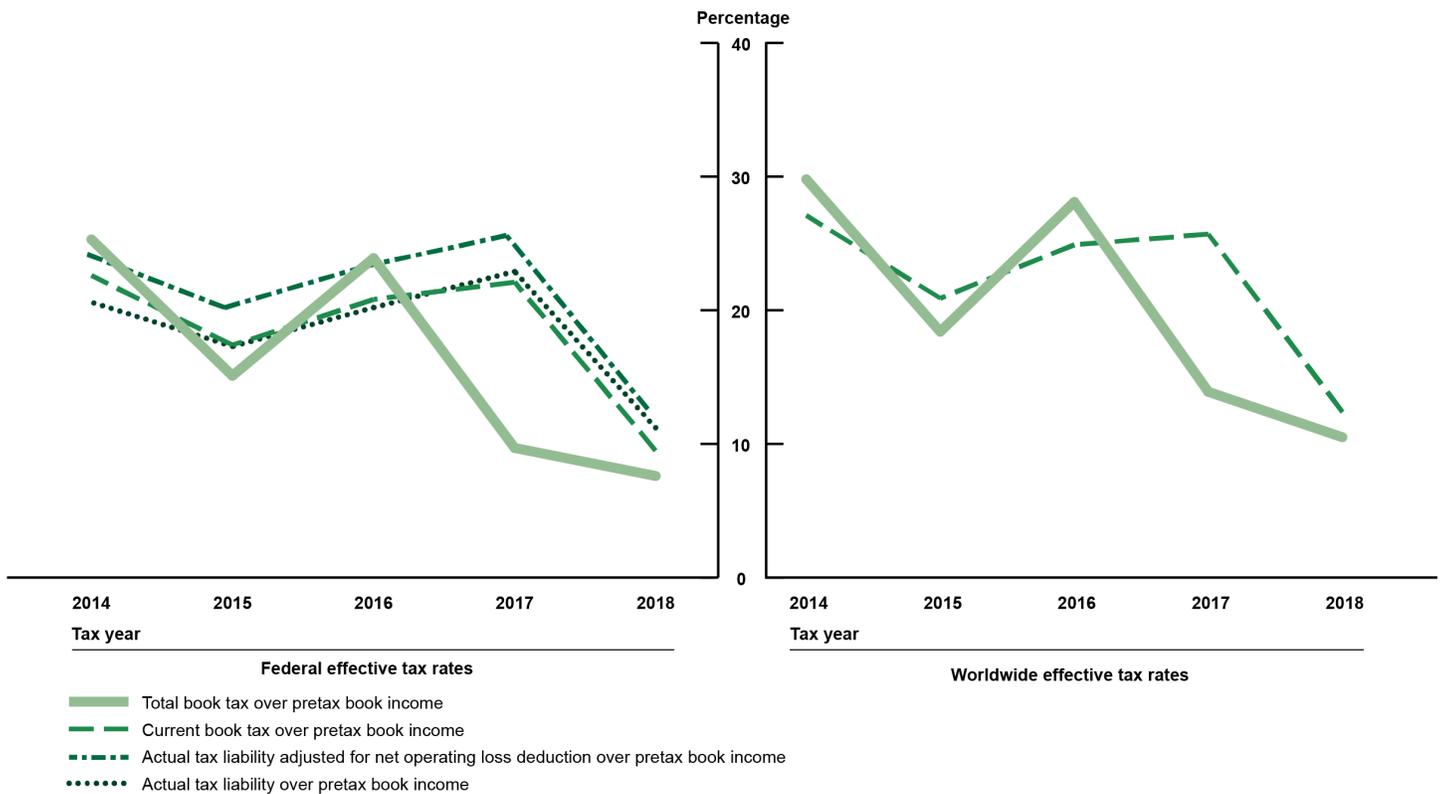
For completeness, we present the ETRs for all large corporations, including those without positive net book income in a given year, in figure 4 below.³⁹ Compared to the ETRs calculated with only profitable corporations, the inclusion of corporations with negative net book income raises U.S. effective tax rates between approximately 1 percent and 10 percent, depending on the year and the measure.

³⁷We previously used foreign tax credits as a proxy for actual foreign taxes paid. However TCJA either reduced or eliminated foreign tax credits for certain income from controlled foreign corporations. Thus, this measure would no longer be consistent across the different years in our data. [GAO-16-363](#).

³⁸For more details on issues that arise from calculating ETRs from a population that includes firms that suffered losses, see [GAO-16-363](#).

³⁹See appendix IV to see these data presented in tables.

Figure 4: Average Effective Tax Rates for All Large Corporations, 2014 to 2018

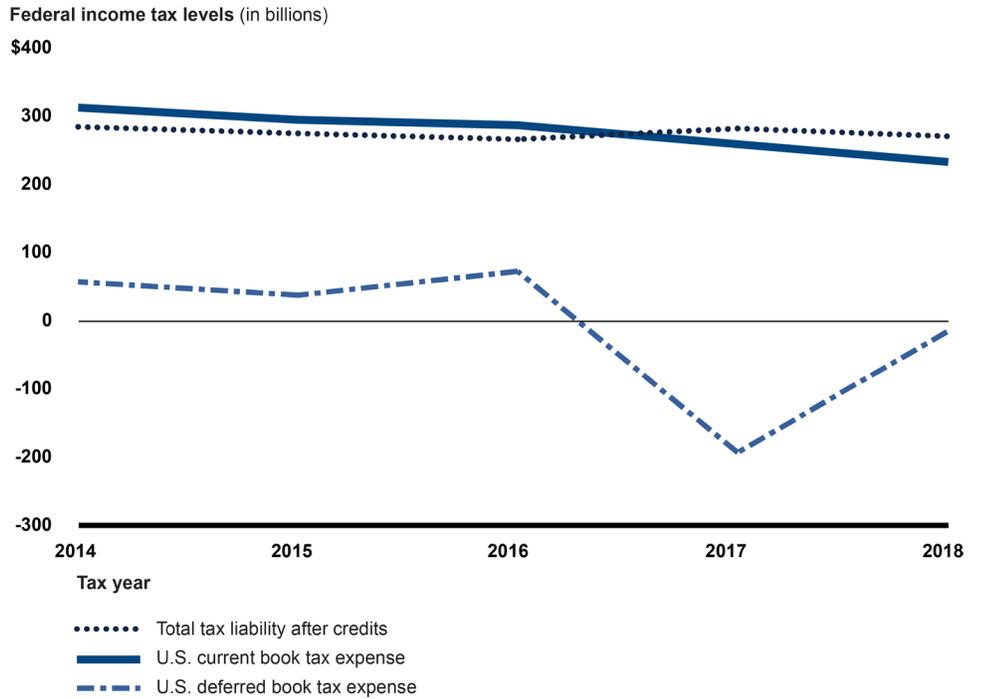


Source: GAO analysis of Internal Revenue Service (IRS) Statistics of Income data for Schedule M-3 filers. | GAO-23-105384

Notes: We consider large corporations to be those that filed Schedule M-3 with IRS. Schedule M-3 is a form filed with IRS that reconciles financial statement net income with taxable net income. It is required for corporations with \$10 million or more in assets. Smaller corporations may file it as well. The worldwide effective tax rates are based on the worldwide book income and tax expenses—including federal, foreign, and U.S. state and local income taxes—of entities included in the federal tax return. The denominators are based on the same pretax book income as federal effective tax rates. Book income and book tax refer to measures of income and tax for financial reporting purposes.

While corporate ETRs changed over time, some measures of the corporate income taxes themselves were more stable. Others experienced larger changes. For example, as shown in figure 5, actual federal tax liability after credits of profitable large corporations remained relatively stable over the 5-year period from 2014 to 2018, staying between approximately \$260 billion and \$280 billion annually. Between 2017 and 2018, the level of actual tax liability fell by less than the ETR based on actual tax liability. This is explained by the fact that pretax book income, the denominator of the ETR calculation, increased by nearly 60 percent between 2017 and 2018.

Figure 5: Corporate Federal Income Tax Liability for Profitable Large Corporations, 2014 to 2018



Source: GAO analysis of Internal Revenue Service (IRS) Statistics of Income data for Schedule M-3 Filers. | GAO-23-105384

Notes: We consider large corporations to be those that filed Schedule M-3 with IRS. Schedule M-3 is a form filed with IRS that reconciles financial statement net income with taxable net income. It is required for corporations with \$10 million or more in assets. Smaller corporations may file it as well. We consider a corporation to be profitable if it reported a positive amount for net income of includible corporations on its Schedule M-3. Book tax expense refers to measures tax for financial reporting purposes.

The largest change in the rates observed in figure 3 was between 2016 and 2017 from the rate using total book tax as the numerator. Total book tax is itself the sum of current and deferred book tax. From 2016 to 2017, current book tax remained relatively stable, while deferred book tax decreased significantly. We discuss this further in the following section of the report.

TCJA Changed the Tax Treatment of Corporations in 2017 and 2018, Expected to Continue Affecting Corporate Tax Rates

TCJA Reduced the Top Marginal Tax Rate on the Net Income of Corporations from 35 Percent to 21 Percent

One major change from TCJA was the corporate tax rate reduction. TCJA was passed in December 2017. Although many provisions did not take effect until 2018, TCJA affected both the 2017 and 2018 effective tax rates.⁴⁰ Starting January 1, 2018, the statutory tax rate changed from a graduated rate schedule with a maximum of 35 percent to a single rate of 21 percent.⁴¹ All six of the subject matter experts we spoke to said that of all the changes from TCJA, the statutory rate change likely affected corporate ETRs most significantly.⁴²

TCJA Provisions Affected the Values of Corporations' Deferred Tax Expenses

When TCJA changed the tax code, corporations were required to revalue their deferred tax assets and liabilities for financial reporting purposes.⁴³ Deferred taxes represent estimated taxes that will be paid or refunded in a future year as the timing differences between book and tax reporting reverse themselves and unused losses and credits that have been carried forward are recognized. Taxes that are reported as deferred in one tax year are generally included in current tax expenses in future years.

⁴⁰For more details on the timing of TCJA provisions, see appendix III.

⁴¹Corporations whose accounting periods included months both before and after the January 1, 2018, effective date paid a blended rate based on the weighted average of their 2017 and 2018 tax rates. Such corporations were included in both 2017 and 2018 data. Though we do not have the exact distribution of blended rates for firms in our sample of profitable large corporations, based on accounting period data from all corporations, we estimate the average statutory tax rates weighted by income subject to tax were approximately 34.5 percent in 2017 and 21.2 percent in 2018.

⁴²In 2017, the Joint Committee on Taxation estimated that this change would reduce federal revenue by \$1.3 trillion over 10 years. See Joint Committee on Taxation, *Estimated Budget Effects of the Conference Agreement for H.R. 1., The Tax Cuts and Jobs Act*, JCX-67-17 (Washington, D.C.: Dec. 18, 2017).

⁴³U.S. Securities and Exchange Commission. "17 CFR Part 211." In *Staff Accounting Bulletin No. 118*, 2018. Accessed September 22, 2022. <https://www.sec.gov/oca/staff-accounting-bulletin-118>.

For an example of a deferred tax asset, a net operating loss (NOL) of \$100 that was carried forward before TCJA might have been valued as a \$35 deferred tax asset (\$100 multiplied by the 35 percent top marginal tax rate). After TCJA, that same NOL would be re-valued at \$21—the new statutory corporate tax rate. This would show up as an increase in the corporation’s deferred tax expense in the first financial and tax filings that were submitted after TCJA was passed, even though the NOL deduction had not yet been claimed. Deferred tax liabilities, which corporations would expect to pay in future years, would similarly be reduced in value by the lower tax rate. The deferred tax expense, as reported on the corporations’ financial statements, represents the net change in deferred tax assets and liabilities for the year.

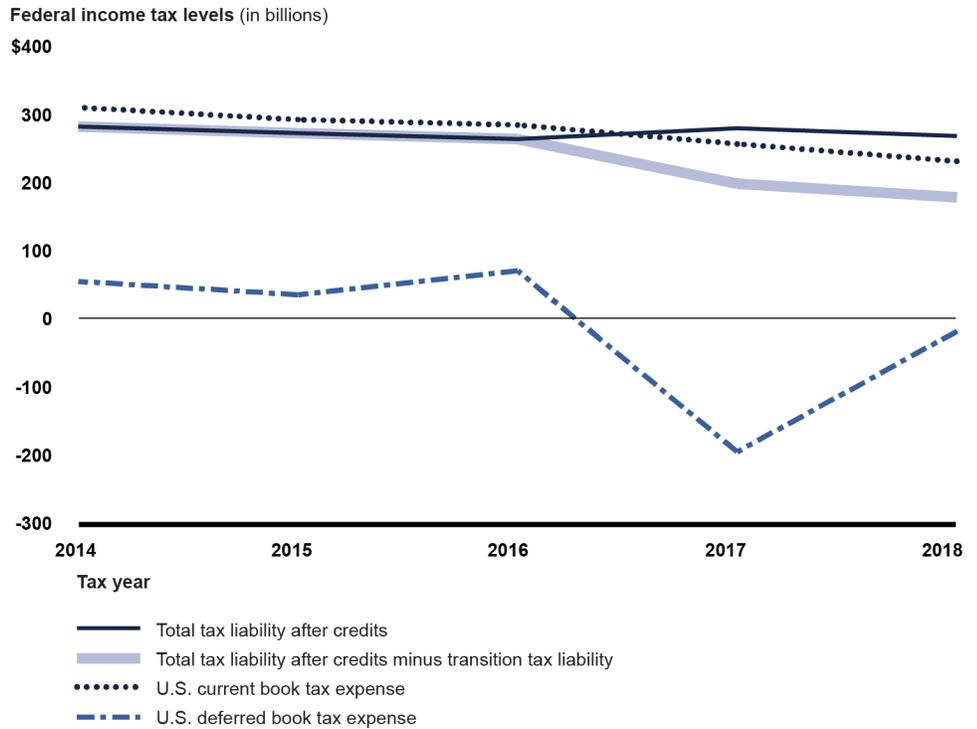
As shown previously in figure 5, U.S. deferred tax expenses experienced the most significant change from TCJA provisions. Among profitable large corporations, U.S. deferred taxes fell by approximately \$270 billion from 2016 to 2017, then increased by approximately \$180 billion from 2017 to 2018.

TCJA’s International Provisions Significantly Affected the Measured Tax Rates in 2017 and 2018

ETR measures in 2017 and 2018 reflect a one-time transition tax. Even though TCJA generally allows U.S. corporations to elect to pay the transition tax in installments over 8 years, the one-time transition tax liability was recognized on affected corporations’ tax filings and financial statements, in their last tax year beginning before January 1, 2018. Therefore, corporations’ transition tax liabilities were present in both the 2017 and 2018 data, based on the accounting periods of the respective corporations and their specified foreign corporations.

Figure 6 below presents the same tax levels as shown in figure 5, along with an additional line that reflects total tax liability minus the transition tax. Total tax liability was approximately \$262 billion in 2016, the year before TCJA was passed. Including the transition tax, tax liability was higher in 2017 (\$278 billion) and 2018 (\$267 billion). Without the transition tax, tax liability was approximately \$197 billion in 2017 and \$177 billion in 2018.

Figure 6: Corporate Federal Income Tax Liabilities for Profitable Large Corporations, with and without Transition Tax, 2014 to 2018



Source: GAO analysis of Internal Revenue Service (IRS) Statistics of Income data for Schedule M-3 Filers. | GAO-23-105384

Notes: We consider large corporations to be those that filed Schedule M-3 with IRS. Schedule M-3 is a form filed with IRS that reconciles financial statement net income with taxable net income. It is required for corporations with \$10 million or more in assets. Smaller corporations may file it as well. We consider a corporation to be profitable if it reported a positive amount for net income of includible corporations on its Schedule M-3. The transition tax refers to the tax imposed on previously deferred income of foreign subsidiaries. 26 U.S.C. § 965. Book tax expense refers to measures tax for financial reporting purposes.

TCJA’s other international provisions of global intangible low-taxed income (GILTI), foreign-derived intangible income (FDII), and base erosion and anti-abuse tax (BEAT) had mixed effects on tax liability in 2018.⁴⁴ We previously reported that TCJA’s international provisions are

⁴⁴Estimates are aggregate. Individual corporations may have their own tax liability affected in ways that do not correspond to the aggregate pattern. Due to timing differences with corporations’ fiscal years, not all corporations in the 2018 data would have been subject to these provisions in the 2018 data. As such, the effect of these provisions is likely understated compared to future years.

one of many factors influencing business planning decisions.⁴⁵ TCJA sought to limit the tax advantages of profit shifting by U.S.-based corporations to countries with lower tax rates. The tax on GILTI and deduction for FDII both work to align the tax treatment of income from intangibles in the United States and abroad.⁴⁶ This resulted in the following provisions having varied effects on corporations' tax liabilities in 2018.⁴⁷

- Tax on GILTI increased tax liability by approximately \$16 billion in 2018 across all corporations, based on our calculations using IRS Statistics of Income (SOI) data.⁴⁸ This was approximately 6 percent of the total tax liability for all large corporations.
- The deduction for FDII reduced tax liability by approximately \$11 billion in 2018 across all corporations, based on our calculations using IRS SOI data.⁴⁹ This was approximately 4 percent of the total tax liability for all large corporations.
- The BEAT increased tax liability by approximately \$1.8 billion in 2018 across all corporations, according to IRS SOI data. This makes up less than 1 percent of the total tax liability for all large corporations.⁵⁰

Income taxed by GILTI and the transition tax may not have been subject to U.S. federal income taxes previously, unless repatriated. As a result, they increased federal income tax liability, but may have also reduced ETRs. Both GILTI and the transition tax taxed income at lower than the

⁴⁵GAO, *Tax Cuts and Jobs Act: Future Rulemaking Should Provide Greater Detail on Paperwork Burden and Economic Effects of International Business Provisions*, [GAO-21-277](#) (Washington, D.C.: Apr. 28, 2021).

⁴⁶Though both FDII and GILTI have the word intangible in their names, they generally identify intangible income based on returns higher than 10 percent of depreciable assets.

⁴⁷The estimates reflect the direct effects of these provisions, but do not reflect behavioral effects. For example, if a corporation reduced the allowable deductions it claimed and increased its U.S. tax liability to avoid being subject to BEAT, that increased revenue collection would not be reflected in our estimate of the increased tax liability from BEAT.

⁴⁸GILTI tax liability is not restricted to corporations filing Schedule M-3. Additionally, our estimate neither includes GILTI liability from corporations with current tax losses, nor some GILTI which may have been recorded as passive income. Thus, it may be understated.

⁴⁹FDII tax liability is based on all corporations, some of which may not file Schedule M-3.

⁵⁰BEAT only applies to corporations with gross receipts averaging \$500 million or more annually over the preceding 3 years, all of whom should file Schedule M-3. The BEAT rate doubled after 2018; however, even at double the 2018 amount, BEAT's overall effect on average corporate ETRs would be small.

statutory rate. Additionally, corporations could now repatriate this income without additional tax liability. To the extent the income associated with these taxes was repatriated in 2018, it may have pushed down ETRs.

According to IRS SOI data, beginning in 2018, there was a significant increase in two categories of income from large corporations. The first is Subpart F and other similar inclusions, which would include GILTI and the transition tax in 2018. This represents income from controlled foreign corporations that is taxed in the current year, but is not included in net book income of includible corporations on Schedule M-3. This category creates tax liability in the U.S. but does not add to the net book income in the denominator of our ETR calculations.

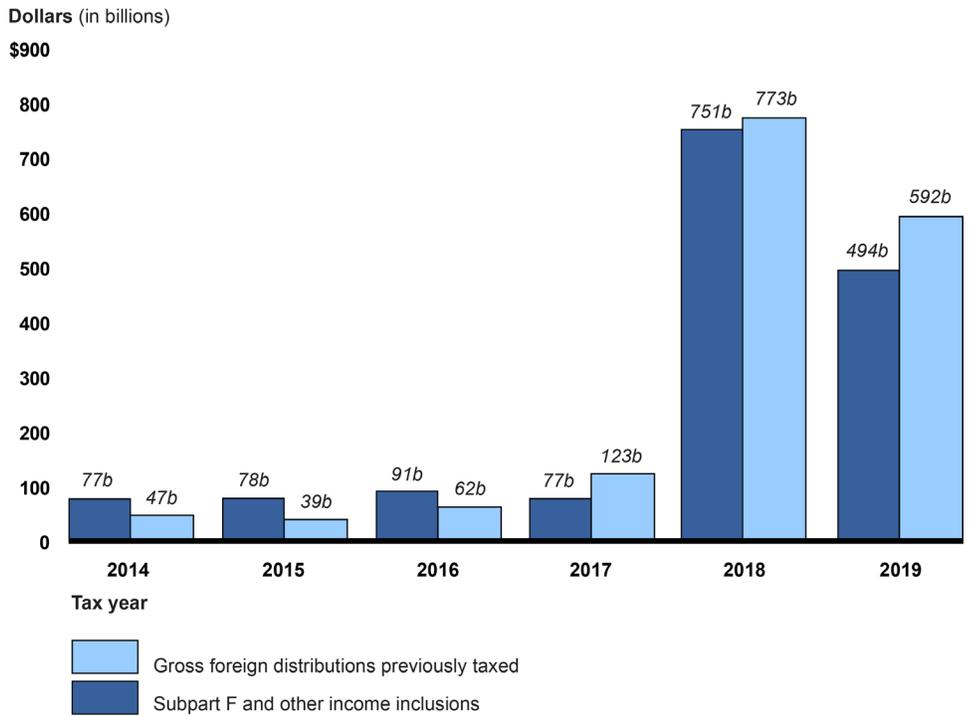
The other category is gross foreign distributions previously taxed. This is foreign income that has been previously taxed—such as under Subpart F, the transition tax, or GILTI—but is then repatriated to the United States. This category is included in net book income and is added to the denominator of our ETR calculations, but may not be included in the current year's tax liability.

In some cases, these two categories of income may correspond to each other if a corporation repatriates income that has been taxed in the current year under the transition tax, GILTI, or Subpart F, but that is not necessarily the case. To the extent these income sources diverge, in either magnitude or income source, they may distort some measures of ETRs.

Figure 7 below shows how these two categories grew substantially from 2017 to 2018, and remained elevated above the 2017 level in 2019.⁵¹

⁵¹These data are from IRS SOI Corporation Income Tax Returns Line Item Estimates, and do not correspond exactly to the data we used to calculate ETRs.

Figure 7: Comparison of Subpart F and Other Inclusions to Gross Foreign Distributions Previously Taxed among Large Corporations, 2014 to 2019



Source: GAO analysis of Internal Revenue Service (IRS) Line Item Estimates M-3 data. | GAO-23-105384

Notes: We consider large corporations to be those that filed Schedule M-3 with IRS. Schedule M-3 is a form filed with IRS that reconciles financial statement net income with taxable net income. It is required for corporations with \$10 million or more in assets. Smaller corporations may file it as well. Gross foreign distributions previously taxed, recorded on Schedule M-3, represents income that is included in income for financial reporting purposes but not included in taxable income. Subpart F and other income inclusions, recorded on Schedule M-3, is income that is included in taxable income but not included in income for financial reporting purposes. In 2018 and 2019, Subpart F and other income includes global intangible low-taxed income and income included under the transition tax. Inclusion from the transition tax for Tax Year 2018 was not reported on corporate tax forms for most taxpayers with accounting periods ending before Dec. 31, 2018 and thus is understated.

In general, an increase in Subpart F and other similar inclusions increases ETRs, while an increase in gross foreign distributions previously taxed would decrease ETRs. As discussed previously, there was a significant increase in book income between 2017 and 2018. This increase explains why the ETR fell by more than the tax liability. Based on the data used for figure 7 above, approximately two-thirds of the increase in net book income from 2017 to 2018 is associated with the increase in gross foreign distributions previously taxed.

If income is taxed under Subpart F, GILTI, or the transition tax and repatriated in the same year, the ETR will reflect the current-year tax on that income. To the extent that these sources of income differ, or income is repatriated in a year other than the year in which it was taxed, ETR estimates will be less reflective of the current-year tax rates of corporations.

Also, under TCJA, foreign-sourced income was taxed by the transition tax and GILTI at rates lower than the U.S. statutory rate. Prior to TCJA, U.S. taxes on such income may have been deferred indefinitely. If such income had been kept abroad to defer U.S. taxes, it would not have appeared in either the numerator or denominator of the pre-TCJA ETR estimates. While there is increased risk of misalignment between the numerator and denominator of the ETR calculation, to the extent that ETRs are lower following TCJA, some of this may be due to the expansion of certain taxes on foreign-sourced income. This may contribute to higher overall tax liability even at lower ETRs.

Other Provisions in TCJA and the CARES Act May Affect 2018 and Future Years' Tax Rates

TCJA changed the treatment of net operating loss (NOL) deductions in tax years beginning after 2017 by disallowing carrybacks and limiting the deduction of NOL carryforwards to 80 percent of taxable income.⁵² The CARES Act in 2020 subsequently and retroactively changed the treatment of NOLs for tax years 2018 to 2020. It removed the 80 percent limit and allowed carrybacks for up to 5 years.⁵³ NOL carryback refunds are typically claimed on amended tax returns; however, IRS SOI data do not include amended returns. As such, we lacked the data to identify how NOL carrybacks affected effective tax rates.

Carrybacks would generally reduce measured effective tax rates by reducing the taxable income and tax liability in prior years. However, the retroactive carryback changes in the CARES Act could both reduce some years' ETRs, and increase future ETRs. For example, a corporation with an NOL in 2018 would have originally carried that forward, potentially offsetting income in 2019 and lowering the 2019 ETR. When the law changed, that corporation could have amended its prior returns to carry that loss back from 2018 instead, lowering earlier years' tax rates, but increasing its 2019 ETR.

⁵²Pub. L. No. 115-97, § 13302, 131 Stat. at 2121–2123. Before TCJA, NOLs could be carried back for up to 2 years.

⁵³Pub. L. No. 116-136, § 2303, 134 Stat. at 352–356.

TCJA made other changes for which we do not have data to estimate their effect. According to subject matter experts we met with, some provisions which likely impacted ETRs in 2018 were:

- **Temporary full expensing for certain assets (also called bonus depreciation).** Bonus depreciation refers to an income tax deduction that allows a taxpayer to accelerate the recovery of the cost or other basis of certain property, such as transportation equipment. Under this provision, 100 percent of the cost of capital can be deducted when acquired for the period of 2018 to 2022 rather than as it depreciates.⁵⁴ The allowance begins to reduce by 20 percent in 2023 and decreases an additional 20 percent each subsequent year until reaching zero in 2027.

This provision would have decreased tax liability in 2018, but could result in more tax collection in later years as corporations would then be unable to claim deductions for items already fully depreciated. According to a subject matter expert we spoke with, the bonus depreciation increase generated more deferred tax liability sooner than it would have otherwise. The deferred liability would have been valued at 35 percent in 2017 before falling in accordance with the rate drop to 21 percent.⁵⁵

- **Interest deduction.** TCJA placed a limit on the interest deduction for corporations, lowering it to 30 percent of adjusted taxable income.⁵⁶ This would have the effect of raising ETRs in 2018 and beyond. The CARES Act subsequently modified the computation to allow for 50

⁵⁴Pub. L. No. 115-97, § 13201, 131 Stat. at 2105–2108. In addition to adjusting a company's depreciation schedule, affected taxpayers may elect to waive eligible deductions entirely to avoid triggering BEAT, according to Department of the Treasury and IRS regulations. 85 Fed. Reg. 64346, 64349–64353 (Oct. 9, 2020). Doing this may have further implications for a company's tax affairs. This illustrates how tax planning to avoid BEAT may interact with other tax provisions.

⁵⁵In 2017, the JCT estimated that bonus depreciation would decrease federal revenue by \$86 billion from 2018 to 2027. See Joint Committee on Taxation, *Estimated Budget Effects of the Conference Agreement for H.R. 1., The Tax Cuts and Jobs Act*, JCX-67-17 (Washington, D.C.: Dec. 18, 2017).

⁵⁶Pub. L. No. 115-97, § 13301, 131 Stat. at 2117–2121, *codified at* 26 U.S.C. § 163(j).

percent of adjusted taxable income instead of 30 percent for tax years beginning in 2019 and 2020.⁵⁷

Agency Comments

We provided a draft of this report to the Commissioner of Internal Revenue for review and comment. IRS provided technical comments, which were incorporated, as appropriate.

As agreed with your offices, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the report date. At that time, we will send copies to the appropriate congressional committees, the Acting Commissioner of Internal Revenue, and other interested parties. In addition, the report is available at no charge on the GAO website at <https://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-6806 or lucasjudyj@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs are available on the last page of this report. Key contributors to this report are listed in appendix V.

Jessica Lucas-Judy
Director, Strategic Issues

⁵⁷Pub. L. No. 116-136, § 2306, 134 Stat. at 358–359. Taxpayers may still choose to use 30 percent of adjusted taxable income and not 50 percent to calculate and take their 2019 and 2020 business interest expense deduction, as it may affect other credits or deductions. Taxpayers may also elect to use 2019 adjusted taxable income in computing their 2020 business interest expense deduction.

Appendix I: Objectives, Scope, and Methodology

In this report we describe (1) what percentage of large corporations had no federal income tax liability for each year from 2014 through 2018, the most recent years of tax data available; (2) the average effective tax rates for each year from 2014 through 2018 for large corporations under different methodological approaches; and (3) changes in Public Law 115-97, known as the Tax Cuts and Jobs Act of 2017 (TCJA)¹ and subsequent COVID-19 relief legislation,² including loss carryback modifications, that may have substantially affected corporate effective tax rates for each year from 2014 through 2018.

To calculate the percentage of all corporations and large corporations that had no federal income tax liability for a given year between 2014 and 2018, we analyzed Internal Revenue Service (IRS) Statistics of Income (SOI) data. To calculate this percentage for all corporations, we used data from IRS SOI's annual Corporation Income Tax Return Complete Reports for each year from 2014 to 2018. To calculate this percentage for all large and profitable large corporations, we used IRS SOI data from Form 1120 filers who also filed Schedule M-3 (required for corporations with assets of \$10 million or more). We consider a Schedule M-3 filer to be profitable if it reported a positive amount for net income of includible corporations on their Schedule M-3.

To describe the average effective tax rates (ETR) for large corporations using different methodological approaches, we used IRS SOI data from Form 1120 filers that also filed Schedule M-3. We also reviewed literature and spoke with six subject matter experts to better understand methodologies concerning ETR calculations and to understand how those methodologies might be affected by TCJA.

We used the SOI data from Form 1120 and Schedule M-3 to estimate U.S. and worldwide effective tax rates on income of entities included in

¹Pub. L. No. 115-97, 131 Stat. 2054 (2017).

²Pub. L. No. 116-136, §§ 2301–2307, 134 Stat. 281, 347–359 (2020). Other COVID-19 relief laws include the Consolidated Appropriations Act, 2021, and the American Rescue Plan Act of 2021. Pub. L. No. 116-260, 134 Stat. 1182 (2020); Pub. L. No. 117-2, 135 Stat. 4 (2021). For more information about COVID-19-related tax relief for businesses, see GAO, *COVID-19: Significant Improvements Are Needed for Overseeing Relief Funds and Leading Responses to Public Health Emergencies*, [GAO-22-105291](#) (Washington, D.C.: Jan. 27, 2022).

the federal income tax return.³ Form 1120 and Schedule M-3 allow us to compute tax rates based on both measures of tax reported on financial statements, and actual tax liability reported to IRS. The Schedule M-3 data provided by IRS are aggregated, either by all large corporations or profitable large corporations.⁴ As a result, we were unable to present information on the distribution of ETRs across corporations. Instead, we estimated ETRs based on total tax and total income across the population, effectively estimating an average ETR weighted by income.

From the literature, we also developed a comparison of other corporate ETRs calculated, and the various methodologies leading to those results (see appendix II). We initially conducted a literature search using EBSCO, ProQuest, Google, and Scopus based on key words and phrases we used in our prior work, and updated these terms to include additional terms related to TCJA. These were designed to capture studies that calculated ETRs for the United States, or otherwise discussed ETRs in the context of TCJA. We looked for literature published between September 2015 and February 2022.

From the studies we identified in our literature search, we also identified six subject matter experts. We discussed methodologies concerning effective tax rate calculations and how those methodologies might be affected by TCJA with the subject matter experts. These subject matter experts were identified based on the relevance of their published work on corporate ETRs, and the overall breadth of their research on corporate taxation more broadly. The experts represented a range of institutions including academia, government, and the private sector. We conducted semi-structured interviews with the six experts that we determined had conducted research relevant to our methodological approach and analysis. We also offered these subject matter experts an opportunity to review and comment on an early draft of this report, and received comments from four of the six subject matter experts.

To describe what is known about changes in TCJA and subsequent COVID-19 relief legislation that may have substantially affected corporate effective tax rates for each year from 2014 to 2018, we used interviews

³Though we report worldwide tax rates, because our data are limited to entities included in the U.S. tax return, they do not correspond to the full worldwide income or taxes of corporations that may be included in financial data.

⁴For the purposes of this report, we consider Schedule M-3 filers profitable if they reported a positive amount of net income of includible corporations on their Schedule M-3.

with agency officials, the published literature we had identified, our interviews with subject matter experts, and analysis of IRS data.

To assess the reliability of the data and estimates, we reviewed agency documentation and interviewed agency officials. While there are limitations to the data provided on the Schedules M-3 and general reporting problems with tax return data, we determined that the data were sufficiently reliable to meet our reporting objectives.

Discussion of Effective Tax Rate Methodology

For U.S. corporations, we calculated four different measures of the federal income tax liability used in the numerator. These measures are current book tax, total book tax (which includes both current and deferred book tax), actual tax liability, and actual tax liability adjusted for net operating losses (NOL). The final measure is to estimate what tax rates would be in the absence of NOL deductions, representing income reduced from prior years' losses. In this case, we multiplied the value of the total NOL deductions by the tax rate (35 percent for years 2014 to 2017 and 21 percent for 2018) and added that to the numerator.

For each of the four ETR measures, we used pretax book income from Schedule M-3 as the denominator. We computed it by taking the net income of includible corporations and adding to it the current and deferred book tax expenses. This includes U.S. federal current and deferred tax expenses, state and local tax expenses, foreign current and deferred tax expenses, and foreign withholding tax expenses.

We calculated two measures for worldwide tax rates, current book tax expense, and total book tax expense. For the numerator of current worldwide book tax expense, we use the sum of U.S. federal current tax expense, state and local tax expenses, foreign current tax expense, and foreign withholding tax expense. For the numerator of total worldwide book tax expense, we added to the current worldwide book tax expense U.S. federal deferred tax expense, state and local deferred tax expense, and foreign deferred tax expense. The denominator for these worldwide tax rates is the same as the one for our calculations of federal tax rates.

Our calculations of worldwide tax rates were limited to entities included on federal tax returns and included on Schedule M-3. Our calculations did not cover the full worldwide income and taxes of a corporation that may be reported on financial statements. These measures did not include income earned by foreign subsidiaries or the taxes that those foreign subsidiaries pay, except in the cases where that income is repatriated to

U.S. corporations in the form of dividends or falls into certain categories of income that are taxed immediately under federal tax rules.

Rules concerning what is included in U.S. taxable income from foreign subsidiaries changed in 2018 with TCJA. Prior to TCJA, U.S. corporations that owned stock in a controlled foreign corporation were not taxed on income earned by the corporation when it was earned (unless taxed under Subpart F's anti-deferral regime, discussed below). Rather, they were taxed when it was distributed to the taxpayer, such as in the form of dividends. This allowed U.S. corporations to defer paying taxes on the earnings of their foreign subsidiaries.

However, the Internal Revenue Code (IRC) has and had, both before and after TCJA, anti-deferral provisions which limited deferral in certain circumstances. For example, if a foreign entity is a controlled foreign corporation, as defined in statute, then certain U.S. shareholders, such as parent corporations, are taxed on their share of certain income earned by the controlled foreign corporation when it is earned. The income of a controlled foreign corporation to be included in U.S. shareholders' income includes the income defined in subpart F (often called Subpart F income) and, prior to TCJA, also included the earnings of the controlled foreign corporation invested in U.S. property. Major types of Subpart F income include income from passive investments, income from transactions with entities related to the controlled foreign corporation (CFC), and insurance income as well as certain other easily manipulated income, which are ineligible for deferral. TCJA introduced the global intangible low-taxed income (GILTI) provision, effective beginning in 2018 for some corporations, which made additional income from CFCs included in the income of U.S. shareholders.

When income is deemed to be received by a U.S. corporation in this way, it may have already been taxed in the foreign country where it was earned. The IRC allows U.S. parent corporations to claim a foreign tax credit for taxes paid to other countries on this income. This results in U.S. corporations paying federal income tax on foreign-source income only to the extent that the federal income tax on that income exceeds the foreign tax credit. However, only 80 percent of the foreign taxes paid on GILTI may be claimed as a foreign tax credit. Section 78 of the IRC requires U.S. corporations electing to claim the foreign tax credit to "gross-up" (i.e.,

increase) their foreign-sourced income by the amount associated with foreign tax credits.⁵

With the enactment of TCJA, U.S. corporations may claim a deduction for dividends received from foreign corporations, if the U.S. corporation owns at least 10 percent of the foreign corporations' shares, but does not receive a foreign tax credit on these dividends. As a transition to the new tax system where foreign income could be repatriated without additional U.S. tax liability, the previously untaxed earnings from specified foreign corporations between 1986 and 2017 were subject to a one time transition tax, beginning in 2017. U.S. corporations can still claim a deduction for foreign tax credits associated with Subpart F and GILTI.

Both before and after TCJA, there is some misalignment between the numerator and denominator of our tax rate calculations regarding international income that may affect the ETRs and how they are interpreted. This misalignment is caused, in part, by certain income that is deemed to be included in the U.S. tax base, including Subpart F, the transition tax, and GILTI. Corporations pay tax on this income, but it does not appear in our denominator. If corporations repatriate this income in a later year, the income would appear in the denominator of our calculations, but would not show up as tax in our numerator in that year. These two discrepancies work in opposite directions; however, their magnitude increased with the passage of TCJA. The transition tax and GILTI created new sources of income that are taxed whether or not they have been repatriated. As shown in figure 7 earlier, income related to Subpart F, GILTI, and other inclusions increased substantially in 2018, as did distributions of previously taxed foreign income.

There are further complications with these measures, however. Due to changes with IRS forms, in 2017, income associated with the transition tax on 2017 forms was not recorded in the category for Subpart F and other inclusions, although it was in 2018.⁶ However, according to IRS officials, corporations with transition tax liability in 2017 would have likely waited until 2018 to repatriate those earnings without additional tax liability. Some of the distributions of previously taxed foreign earnings in 2018 may have corresponded to 2017 transition tax liability, but could

⁵26 U.S.C. § 78.

⁶Depending on their accounting periods, some corporations in the 2018 data may have filed with 2017 forms, and would not have included income under the transition tax in this category.

have also been from 2018 transition tax liability, Subpart F, or GILTI. Additionally, IRS officials told us that based on their research, distributions of previously taxed foreign earnings may be understated. There is no U.S. federal tax liability associated with this income and corporations may not account for it as accurately as other fields on Schedule M-3.

We conducted this performance audit from August 2021 to December 2022 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix II: Summary of Selected Past Estimates of Average Effective Tax Rates

From our literature review, we selected studies that contained original estimates of average effective tax rates (ETR) for time periods before and after the implementation of Public Law 115-97, commonly known as Tax Cuts and Jobs Act of 2017 (TCJA).¹

We identified 10 studies that present rates pre-TCJA and four that calculate ETRs post-TCJA. The studies, some of which include rates pre- and post-TCJA, are listed below.

- Chyz, James A., LeAnn Luna, and Hannah E. Smith. 2021. "Implicit Taxes of U.S. Domestic and Multinational Firms during the Past Quarter Century." *The Journal of the American Taxation Association* 43 (2): 37-61.
- Donahoe, Michael P., Gary A. McGill, and Edmund Outslay. 2019. "The Geometry of International Tax Planning After the Tax Cuts and Jobs Act: A Riff on Circles, Squares, and Triangles." *National Tax Journal* 72 (4): 647-670. doi:<https://doi.org/10.17310/ntj.2019.4.01>.
- Dyreng, Scott D., Michelle Hanlon, Edward L. Maydew, and Jacob R. Thornock. 2017. "Changes in corporate effective tax rates over the past 25 years." *Journal of Financial Economics* 124: 441-463. doi:<http://dx.doi.org/10.1016/j.jfineco.2017.04.001>.
- Garcia-Bernardo, Javier, Petr Jansky, and Thomas Tørsløv. 2021. "Multinational Corporations and Tax Havens: Evidence from Country-by-Country Reporting." *International Tax and Public Finance* 28: 1519-1561. doi:<https://doi.org/10.1007/s10797-020-09639-w>.
- Gardner, Matthew, Lorena Roque, and Steve Wamhoff. 2019. "Corporate Tax Avoidance in the First Year of the Trump Tax Law." Institute on Taxation and Economic Policy.
- Henry, Erin, and Richard Sansing. 2020. "Corporate Tax Preferences Before and After the Tax Cuts and Jobs Act of 2017." *National Tax Journal* 73 (4): 1065-1086. doi:<https://doi.org/10.17310/ntj.2020.4.07>.
- Lahav, Yaron, and Galla Salganik-Shoshan. 2017. "Measuring and Characterizing the Domestic Effective Tax Rate of US Corporations ." *Advances in Taxation* 23: 33-57. <https://doi.org/10.1108/S1058-749720160000023001>.
- Lee, Namyoung, and Charles Swenson. 2016. "Effects of Overseas Subsidiaries on Worldwide Corporate Taxes ." *Journal of International*

¹Pub. L. No. 115-97, 131 Stat. 2054 (2017).

Accounting, Auditing, and Taxation 26: 47-59.
doi:<http://dx.doi.org/10.1016/j.intaccudtax.2016.02.001>.

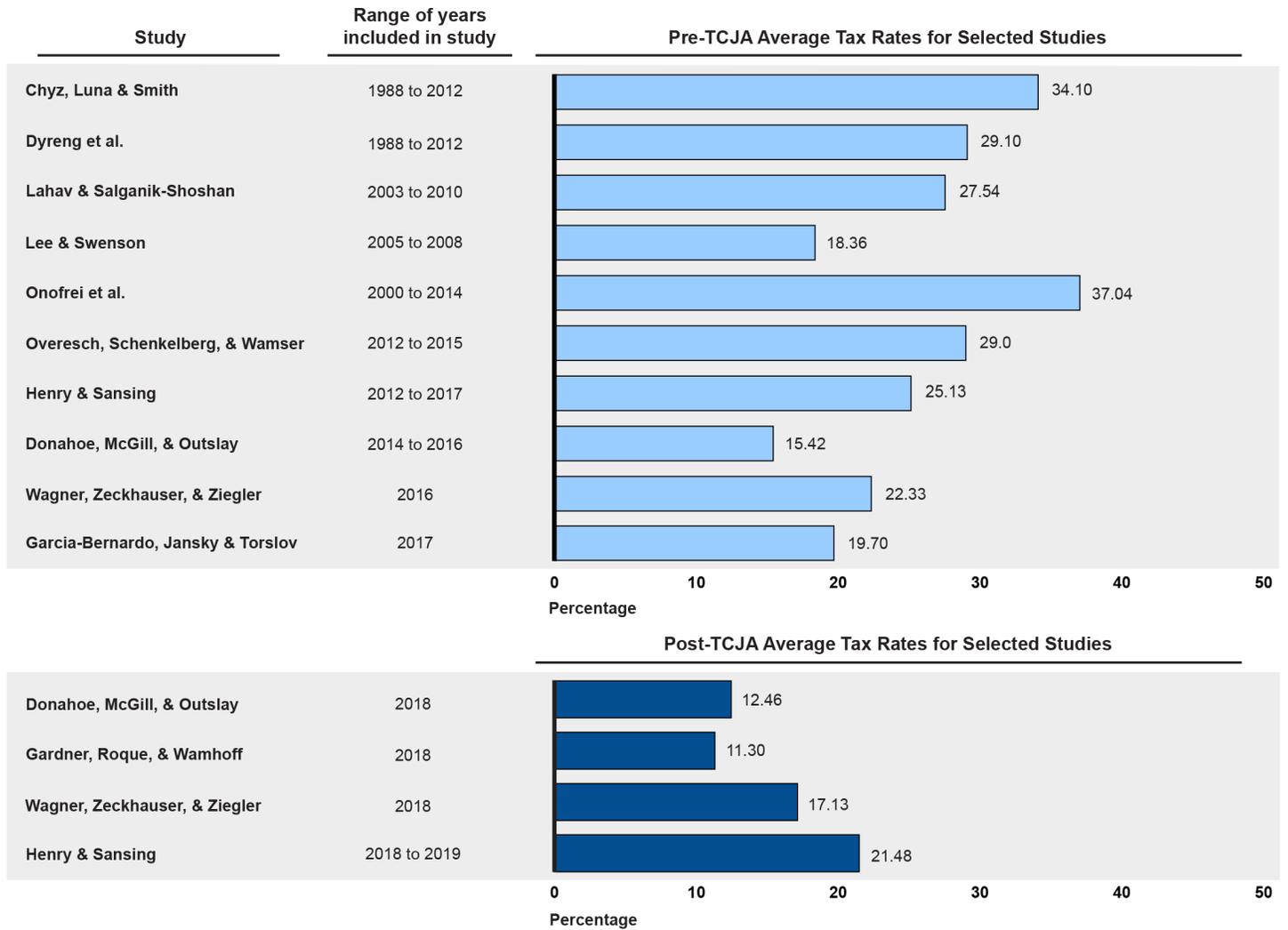
- Onofrei, Mihaela, Georgeta Vintila, Stefan Cristian Gherghina, and Radu Alin Paunescu. 2016. "Empirical Study Towards the Drivers of Effective Corporate Tax Rate ." Transformations in Business & Economics 15 (3C): 413-430.
- Overesch, Michael, Sabine Schenkelberg, and Georg Wamser. 2018. "Do US Firms Pay Less Tax than Their European Peers? On Firm Characteristics, Profit Shifting Opportunities, and Tax Legislation as Determinants of Tax Differentials." Munich Society for the Promotion of Economic Research- CESifo Working Papers (Munich Society for the Promotion of Economic Research).
- Wagner, Alexander F., Richard J. Zeckhauser, and Alexandre Ziegler. 2020. "The Tax Cuts and Jobs Act: Which Firms Won? Which Lost?" NBER Working Paper No. 27470. Cambridge: National Bureau of Economic Research.

Figure 8 presents our selected studies, divided into two tables showing rates calculated both pre- and post-TCJA enactment. The average rates listed in the pre-TCJA bar chart are organized in such a way that is meant to display a broad trend of ETRs in years prior to TCJA.

These rates were calculated using a variety of measures in their numerators ranging from worldwide or federal cash taxes paid and total current tax. Due to these different methodologies, we do not draw any definitive conclusions by comparing the rates. However, presenting a range of different calculations encountered in the relevant literature along with the calculations from our report illustrate how measures of ETRs can vary depending on the methodology used and variables included.

**Appendix II: Summary of Selected Past
Estimates of Average Effective Tax Rates**

Figure 8: Summary of Selected Past Estimates of Average Effective Tax Rates before and after Enactment of the Tax Cuts and Jobs Act of 2017 (TCJA)



Source: GAO analysis of selected studies. | GAO-23-105384

Appendix III: Timing of Select Tax Cuts and Jobs Act of 2017 Provisions

Table 1: Timing of Select Tax Cuts and Jobs Act of 2017 Provisions

Provision	When Provision Went Into Effect	When Provision Appeared in the Data
21 Percent Corporate Rate	First taxable year including January 1, 2018. Corporations whose fiscal years include months in both 2017 and 2018 would pay a blended rate based on the weighted average of up to 35 percent and 21 percent.	Initial blended rates could appear in 2017 data. The lower rate for most corporations would appear in the 2018 data.
Transition Tax	Last taxable year of a foreign corporation that begins before January 1, 2018.	Depending on the timing, transition tax liability could appear in either 2017 or 2018. Corporations could elect to pay this tax over 8 years.
Current-year inclusion of global intangible low-taxed income by U.S. shareholders and the corresponding deduction (GILTI)	First taxable year of foreign corporations, beginning after December 31, 2017, and to taxable years of U.S. shareholders in which or with which such taxable years of foreign corporations end.	Initially appears in 2018 data, although not in effect for some 2018 corporations.
Deduction for foreign-derived intangible income (FDII)	First taxable year beginning after December 31, 2017.	Initially appears in 2018 data, although not in effect for some corporations in 2018.
Base erosion and anti-abuse tax (BEAT)	First taxable year beginning after December 31, 2017.	Initially appears in 2018 data, although not in effect for some corporations in 2018.

Source: GAO Analysis of Tax Cuts and Jobs Act of 2017 and Internal Revenue Service Statistics of Income Data. | GAO-23-105384

Note: Because the 2018 data cover accounting periods beginning between August 1, 2017, and July 1, 2018, some corporations in these data were not subject to GILTI, FDII, or BEAT in 2018. The Tax Cuts and Jobs Act of 2017 is the common name for Pub. L. No. 115-97, 131 Stat. 2054 (2017).

Appendix IV: Supporting Tables

The following present the data from figures 2 to 4 in tabular form.

Table 2: Percentage of Corporations That Reported No Federal Income Tax Liability after Credits, between 2014 and 2018

Percentage of Corporations That Reported No Federal Income Tax Liability after Credits	2014	2015	2016	2017	2018
All Active Corporations	67.8%	68.1	68	67.9	67.1
Large Corporations	46.8	49.1	51.3	52.4	58
Profitable Large Corporations	22	21.9	22.4	27.2	33.9

Source: GAO analysis of Internal Revenue Service (IRS) data. | GAO-23-105384

Note: Data on all active corporations come from IRS Statistics of Income Corporation Income Tax Returns Complete Report. These data include corporations filing tax forms 1120 (U.S. Corporation Income Tax Return), 1120-L (U.S. Life Insurance Company Income Tax Return), 1120-PC (U.S. Property and Casualty Insurance Company Income Tax Return), and 1120-F (U.S. Income Tax Return of a Foreign Corporation). We consider large corporations to be those that filed Schedule M-3 with IRS. Corporations with \$10 million or more in assets are required to file Schedule M-3. Smaller corporations may file it as well. Data for Schedule M-3 filers include only corporations filing tax Form 1120. The Schedule M-3 data are a subset of the data from the Corporate Complete Report. We consider a large corporation to be profitable if they reported a positive amount for net income of includible corporations on their Schedule M-3.

Table 3: Average Effective Tax Rates for Profitable Large Corporations, 2014 to 2018

Federal Effective Tax Rates	2014	2015	2016	2017	2018
Total book tax over pretax book income	20.2%	13.9	19.1	3	7
Current book tax over pretax book income	17.2	12.5	15.4	13.4	7.7
Actual tax liability over pretax book income	15.7	11.6	14.2	14.6	8.9
Actual tax liability adjusted for net operating loss deduction	18.1	13.4	16	16.3	9.8
Worldwide Effective Tax Rates					
Total book tax over pretax book income	23.6	16.3	22	5.9	9.4
Current book tax over pretax book income	20.6	14.8	18.1	15.8	10

Source: GAO analysis of Internal Revenue Service (IRS) Statistics of Income data for Schedule M-3 Filers. | GAO-23-105384

Note: We consider large corporations to be those that filed Schedule M-3 with IRS. Schedule M-3 is a form filed with IRS that reconciles financial statement net income with taxable net income. It is required for corporations with \$10 million or more in assets. Smaller corporations may file it as well. We consider a corporation to be profitable if it reported a positive amount for net income of includible corporations on its Schedule M-3. The worldwide effective tax rates are based on the worldwide book income and tax expenses—including federal, foreign, and U.S. state and local income taxes—of entities included in the federal tax return. The denominators are based on the same pretax book income as federal effective tax rates. Book income and book tax refer to measures of income and tax for financial reporting purposes.

Appendix IV: Supporting Tables

Table 4: Average Effective Tax Rates for All Large Corporations, 2014 to 2018

Federal Effective Tax Rates	2014	2015	2016	2017	2018
Total book tax over pretax book income	25.3%	15.1	23.9	9.7	7.6
Current book tax over pretax book income	22.6	17.4	20.8	22.1	9.5
Actual tax liability over pretax book income	20.6	17.3	20.2	22.9	11.2
Actual tax liability adjusted for net operating loss deduction	24.3	20.2	23.3	25.6	12.6
Worldwide Effective Tax Rates					
Total book tax over pretax book income	29.8	18.4	28.1	13.9	10.5
Current book tax over pretax book income	27.1	20.9	24.9	25.7	12.4

Source: GAO analysis of Internal Revenue Service (IRS) Statistics of Income data for Schedule M-3 Filers | GAO-23-105384

Note: We consider large corporations to be those that filed Schedule M-3 with IRS. Schedule M-3 is a form filed with IRS that reconciles financial statement net income with taxable net income. It is required for corporations with \$10 million or more in assets. Smaller corporations may file it as well. The worldwide effective tax rates are based on the worldwide book income and tax expenses—including federal, foreign, and U.S. state and local income taxes—of entities included in the federal tax return. The denominators are based on the same pretax book income as federal effective tax rates. Book income and book tax refer to measures of income and tax for financial reporting

Appendix V: GAO Contact and Staff Acknowledgments

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Staff Acknowledgments

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