

Risks to the U.S. Tax Base from Pillar Two

Alan Cole Senior Economist
Cody Kallen Research Fellow

August 2023

Key Findings

- Pillar Two, an international tax agreement, is intended to incentivize countries to set corporate income tax rates at 15 percent or higher. This agreement threatens the U.S. tax base in two ways: potential lost revenue and limitations on Congress's ability to set its own tax policy.
- We analyze the revenue effects of other countries adopting Pillar Two-compliant minimum taxes, though these estimates are subject to considerable uncertainty. U.S. corporations will be able to take larger foreign tax credits, reducing U.S. corporate tax revenues by \$64.3 billion over 10 years, but they will also likely report more of their income in the U.S., raising U.S. revenues by \$99.3 billion. On net, we estimate that foreign Pillar Two adoption increases U.S. corporate tax revenues by \$34.9 billion over 10 years.
- However, the agreement would also result in significantly lower post-corporate-tax incomes for U.S. shareholders. This would reduce U.S. individual income tax collections from taxes on dividends, capital gains, and retirement plan distributions. Accounting for this effect and for modeling uncertainty, the full net impact of foreign Pillar Two adoption on the U.S. fiscal system is ambiguous.
- Modifying U.S. international provisions to become more compliant with Pillar Two does not necessarily increase revenues. Pillar Two's country-by-country system raises more revenue than the U.S. blended system. However, Pillar Two's substance carveouts are more generous to taxpayers in the early years of the agreement.
- Pillar Two relies on an extraterritorial enforcement mechanism, the Undertaxed Profits Rule (UTPR) to encourage adoption. This rule threatens to allow foreign countries to tax U.S. companies on U.S. income, and further, to effectively negate tax policies passed by Congress.
- The UTPR may not be effective at curbing low corporate income taxes, and businesses and legislatures may expend valuable resources circumventing it.

Introduction

A growing international tax agreement known as Pillar Two, brokered by the Organisation for Economic Co-operation and Development (OECD) presents two new threats to the U.S. tax base. First, the agreement is likely to increase foreign taxes on U.S. firms. This may reduce both U.S. shareholders' income and U.S. corporate tax revenues. Second, it has enforcement mechanisms that may result in higher tax burdens or compliance costs for U.S. firms, even on their U.S. income, and threatens Congress's ability to set domestic tax policy.

The agreement addresses legitimate tax policy issues, but many of its dynamics work particularly to the disadvantage of the U.S. Treasury and U.S. corporations. While the Treasury Department has engaged with and even encouraged the agreement, Congress has yet to enact a legislative response.

Importantly, many of the agreement's downsides could come from policy changes by the rest of the world alone; the U.S. cannot avoid the consequences of the agreement by simply leaving its own policies unchanged. Therefore, a legislative response is likely necessary before the end of 2026 to mitigate those downsides.

Background: OECD And U.S. Tax Systems

OECD Agreement Background

The OECD project, the Inclusive Framework on Base Erosion and Profit Shifting (BEPS), is the product of multilateral negotiations involving more than 140 countries, and it attempts to address challenges resulting from the digitalization of the global economy.

In recent decades, economic activity has become less physical and more virtual. Intangible objects like software or patents, which lack a clear geographic location, were difficult to assign to specific tax jurisdictions. A multinational enterprise (MNE) with a footprint in many countries could therefore attempt to locate its intangibles, and the profits derived from them, in the jurisdictions with the most favorable tax treatment. This activity (often labeled "profit shifting") in turn created an incentive for jurisdictions to reduce corporate income tax rates to attract more profit shifting, in a dynamic sometimes called a "race to the bottom," even as reductions in statutory corporate income tax rates leveled off in the low 20 percent range.¹

The project contains two main policy approaches, or "pillars," aimed at addressing these dynamics. Pillar One aims to address apportionment, allocating some taxable income to end-market jurisdictions by formulaic rule. Pillar One will not be further addressed in this paper. Pillar Two aims to establish a global minimum tax rate of 15 percent on multinational businesses with revenues of at least €750 million (roughly \$800 billion) per year, and it relies on a series of taxes designed to enforce that aim. If successful, it could arrest the competitive forces that incentivize jurisdictions to set rates below that target.

¹ Cristina Enache, *Corporate Tax Rates around the World, 2022*, Tax Foundation, Dec. 13, 2022, <https://taxfoundation.org/data/all/global/corporate-tax-rates-by-country-2022/>.

Pillar Two measures tax rates through its own rules, the Global Anti-Base Erosion (GloBE) rules, or Model Rules.² These Model Rules are not necessarily identical to those of individual countries, which may measure income, tax, or both concepts differently. Therefore, a 15 percent rate under a country's domestic system does not necessarily imply a 15 percent rate under the Model Rules.

To ensure that their domestic taxes are compliant with Pillar Two, participating countries can add a Qualified Domestic Minimum Top-up Tax (QDMTT), which would be calculated after domestic corporate taxes are paid. The calculation evaluates the MNE's tax rate under the Model Rules and adds tax if necessary in order to reach the 15 percent minimum.

If the 15 percent rate is not paid through domestic corporate income taxes or QDMTT, the agreement has a second tax as a backstop, at the level of the ultimate parent entity (UPE). Under the Model Rules, participating countries can also tax the controlled foreign corporations (CFCs) of their MNEs through an Income Inclusion Rule (IIR). If the effective tax rate for the entities in a particular jurisdiction is below the 15 percent minimum, then the Pillar Two rules are triggered and the group must pay a top-up tax to bring its rate to 15 percent. If the home country of the UPE adopts an IIR, it effectively guarantees that the MNE will pay 15 percent in every jurisdiction in which it is located.

Finally, and most unusually, Pillar Two includes an extraterritorial enforcement mechanism known as the Undertaxed Profits Rule (UTPR). If an MNE is located in a country that has not adopted an IIR and/or QDMTT, and its rate falls below the 15 percent minimum, then any country with a footprint of the MNE can assess the top-up to 15 percent instead, almost as if standing in for a home country with an IIR. If multiple countries are eligible to levy the UTPR, the top-up revenues would be allocated among those countries by a formula based on their share of the company's assets and employees.

This trio of taxes works redundantly and sequentially to enforce the 15 percent minimum. If they have the intended effect, the IIR and UTPR should create an incentive for countries to create QDMTTs of their own, or otherwise bring their domestic tax rates to 15 percent under the Model Rules. As any MNE headquartered in an IIR country will pay top-up tax, and any MNE with any footprint in a UTPR country will pay top-up tax, the reasoning goes, a jurisdiction might as well collect that top-up tax for itself.

Pillar Two contains some problems that apply universally to the framework as a whole: it incentivizes countries to converge on the OECD's chosen tax base, with no guarantee that the specified tax base is the most efficient or principled. It contains arbitrary rules that differentiate among types of subsidies; it counts some subsidies as increases in taxable income and some as reductions in tax, and it treats these two categories quite differently even when their economic effects are identical. It creates additional compliance costs for a new tax system parallel to preexisting corporate tax regimes.

² OECD, *Tax Challenges Arising from the Digitalisation of the Economy – Global Anti-Base Erosion Model Rules (Pillar Two)*, <https://www.oecd.org/tax/beps/tax-challenges-arising-from-the-digitalisation-of-the-economy-global-anti-base-erosion-model-rules-pillar-two.htm>

But perhaps the primary critique of Pillar Two coming from some U.S. policymakers and scholars is the loss of fiscal sovereignty it entails, and the extraterritoriality of the UTPR.³ Domestic economic tax incentives may be canceled out through the application of a QDMTT, IIR, or UTPR. And the UTPR, which allows jurisdictions to tax profits neither earned in the jurisdiction nor earned by a corporation headquartered in that jurisdiction, is unprecedented in international law.

These general downsides apply to virtually all countries, but there are also U.S.-specific downsides that are best understood in the context of the U.S. tax system and economy.

U.S. Tax System Background

The U.S. federal tax system has not adopted any Pillar Two provisions. The most recent major overhaul of its system for taxing MNEs, the Tax Cuts and Jobs Act of 2017 (TCJA), was enacted prior to the Pillar Two agreement taking shape. The international system under the TCJA is not completely compliant with the Model Rules, though it contains some common elements.

The U.S. statutory corporate income tax rate of 21 percent is higher than Pillar Two's 15 percent threshold. However, corporations may face lower rates for several reasons, potentially driving U.S. MNEs' tax rates below 15 percent under the Model Rules. The U.S. tax system has different accounting conventions than those used by the Model Rules, and its policy makes ample use of nonrefundable tax credits to incentivize certain behaviors by businesses. Furthermore, a category of income known as Foreign-Derived Intangible Income (FDII) is eligible for reduced rates as part of the international reforms. These measures, especially in combination, could result in domestic U.S. rates below the 15 percent threshold set by Pillar Two.

The U.S. taxes the foreign profits of its multinationals via two primary channels: the Subpart F rules, which existed prior to the 2017 reform, and the Global Intangible Low-Taxed Income (GILTI) rules. Both of these require U.S. multinationals to include part of the income of their CFCs in the taxable income of their U.S. parent companies, with credits for foreign taxes paid on that income.

Under Subpart F, U.S. multinationals with passive, mobile income—such as interest and royalties—must include that income in their U.S. taxable income, regardless of where it is reported. In theory, Subpart F could remove any incentive for U.S. MNEs to shift profits between countries using these types of income. However, in practice, complex ownership structures between foreign subsidiaries make it possible to shield some income from Subpart F.

In the TCJA, the U.S. added the GILTI regime, a minimum tax on foreign income with a carve-out for the “normal” return on tangible capital. Under GILTI, a firm must include in its U.S. income 50 percent (62.5 percent, beginning in 2026) of its CFC-deemed intangible income, i.e., income in excess of 10 percent of its foreign tangible assets. The associated foreign tax credit faces a 20 percent haircut, resulting in a minimum tax rate between 10.5 percent and 13.125 percent today (13.125 percent and 16.4 percent beginning in 2026) on CFC-deemed intangible income.

³ See, e.g., U.S. House Committee on Ways & Means, *Tax Subcommittee Hearing: Biden's Global Tax Surrender Harms American Workers and Our Economy*, Jul. 19, 2023, <https://waysandmeans.house.gov/event/39854592/>.

As a minimum tax, GILTI is intended to reduce the incentive to shift profits to low-tax countries by imposing a penalty on such profit shifting. The TCJA paired it with a deduction for FDII reported in the U.S., which would be taxed at a 13.125 percent rate (16.4 percent beginning in 2026). The TCJA also created the Base Erosion and Anti-Abuse Tax (BEAT), a minimum tax intended to penalize interest, rent, and royalty payments from U.S. firms to their foreign affiliates.

GILTI has faced a number of critiques. First, the low minimum tax rate may not serve as a strong deterrent to shifting profits abroad. Second, the substance carveout may create an incentive to make new investments in physical capital abroad instead of in the U.S. Third, the GILTI calculations pool all foreign activities together, applying to profits reported abroad overall rather than specifically to profits reported in tax havens and low-tax countries.

During the debate over the Build Back Better Act and in recent budget proposals, the Biden administration and congressional Democrats proposed raising the GILTI rate (as well as raising the U.S. corporate tax rate), reducing or eliminating the substance carveout, and calculating GILTI on a country-by-country basis instead of on a worldwide basis. This country-by-country approach would more closely resemble a Pillar Two-compliant IIR.

Other complaints have focused on double taxation in GILTI, both by design and unintentionally. The 20 percent haircut on the GILTI foreign tax credit explicitly creates double taxation whenever foreign income is subject to tax at a rate below 13.1 percent (16.4 percent beginning in 2026). An unintended double taxation also arises from indirect expense allocation rules, which reduce the value of the foreign tax credit.

Finally, when created, GILTI was a novel tax regime, the first of its kind. Accordingly, it raised concerns about subjecting U.S. multinationals to special taxes on their foreign income not faced by their foreign competitors, potentially putting U.S. multinationals at a competitive disadvantage.

Rules for international income of any kind are especially important to the U.S., whether GILTI, an IIR, or otherwise, because the U.S. has an outsized share of the world's largest MNEs—for example, nine of the world's 10 largest publicly traded companies by market capitalization. And under either GILTI or IIR, the credit for foreign taxes paid creates an interaction effect between tax regimes: higher taxes abroad generally reduce tax revenues to the U.S. Treasury.

First Risk To U.S. Tax Base: Effects On Corporate Tax Revenue

In the text and tables below, we will attempt to quantify the effects of the Pillar Two agreement on U.S. tax revenues. Should foreign countries raise their taxes into Pillar Two compliance, the U.S. will experience a negative direct revenue effect from higher foreign tax credits. However, that negative effect may be offset by a positive indirect revenue effect from profit shifting. Importantly, while these effects are mixed and potentially offsetting for the U.S. Treasury, they are unambiguously negative for shareholders of U.S. firms.

The modeling results will consider both the results of foreign countries acting without the U.S. to implement Pillar Two provisions, and the potential results of U.S. moves to become more compliant with Pillar Two.

The Preliminary Nature of Pillar Two Revenue Estimates

While tax revenue effects can often be quantified with relative precision, especially for domestic provisions with well-understood data, the estimates below should be considered far more preliminary, contingent, and subject to behavioral assumptions and measurement error.

There are several reasons for this uncertainty. First, there is uncertainty about the true nature of the policies being implemented. With over a hundred tax jurisdictions involved, it is not possible to track potential policy changes in each country and make assumptions about the nature and timing of each country's new tax provisions. Instead, modeling is based on broad adoption of a generic plan compliant with the Model Rules. These rules may evolve further between now and implementation, materially changing the estimate. Second, modeling should consider a potential profit-shifting response, as the purpose of Pillar Two is to induce profit-shifting out of low-tax jurisdictions, whether that shifting lands the income in the U.S. or elsewhere. Doing this requires assumptions about the potential behavior of MNEs in response to a new tax system. Third, international income tax data is comparatively scant, complex, and poorly harmonized relative to domestic tax data. And finally, the effect of Pillar Two on U.S. revenues is likely to be a net figure, composed of both positive and negative elements that partially offset. Net figures are generally more volatile than gross figures.

Despite these limitations, the examples and results below can be instructive on the general direction and magnitude of the effects of the Pillar Two agreement.

Stylized Example: Foreign Tax Credit Effects of Foreign QDMTTs

The most direct effect of increased taxes in the rest of the world—for example, through Pillar Two's QDMTTs—is to reduce U.S. corporate tax revenue. Put simply, as the share of profits taxed away by foreign revenue departments increases, the portion available to other parties, like shareholders and U.S. tax collectors, must necessarily decrease.

The U.S. includes part of the foreign income of U.S. multinationals in their U.S. taxable income through Subpart F and GILTI, with a credit for foreign taxes paid. The foreign tax credit (FTC) is limited to the

product of the U.S. corporate tax rate and the income associated with those foreign taxes. When foreign countries raise their effective tax rates on the foreign income of U.S. multinationals, this raises the foreign tax credits claimed by those multinationals against their U.S. tax liability, provided that the foreign tax credit limitation does not constrain the amount of the credit.

The sensitivity of the foreign tax credit to effective foreign tax rates depends on the design of the U.S.'s residual taxes on foreign income. For example, a higher corporate tax rate relaxes the limitation on the foreign tax credit, increasing the exposure of federal corporate tax revenue to foreign tax hikes. The current GILTI approach pools calculations across all countries in which the multinational has foreign income, whereas a version compliant with Pillar Two would have separate foreign tax credit calculations for each country in which the multinational operates.

To illustrate this, consider the left half of the following table. In this example, a U.S. multinational has subsidiaries in Ireland and Germany. The Irish affiliate faces a 5 percent effective tax rate, while the German affiliate faces a 25 percent effective tax rate. These affiliates generate some U.S. taxable income under GILTI (deemed intangible income) of \$50 in each country. With a 62.5 percent GILTI inclusion rate and a 21 percent corporate tax rate, this yields \$6.56 in initial U.S. tax liability from each country, for a total of \$13.13. After applying the 20 percent haircut on foreign taxes, the multinational has \$12 in potentially creditable taxes, split with \$2 attributable to Ireland and \$10 to Germany.

Table 1. Example Foreign Tax Credit Effects of Foreign QDMTTs and Country-by-Country Calculations

	No Foreign QDMTTs				With Foreign QDMTTs			
	Pooled GILTI		CbC GILTI		Pooled GILTI		CbC GILTI	
	Ireland	Germany	Ireland	Germany	Ireland	Germany	Ireland	Germany
DII + Gross-up	50	50	50	50	50	50	50	50
Foreign ETR	5%	25%	5%	25%	15%	25%	15%	25%
Foreign Taxes Paid	2.5	12.5	2.5	12.5	7.5	12.5	7.5	12.5
Foreign Taxes after Haircut	2	10	2	10	6	10	6	10
U.S. Tax before Credits	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56
Taxes Available for Credit	12.00	2.00	10.00		16.00	6.00	10.00	
FTC Limitation	13.13		6.56	6.56	13.13		6.56	6.56
FTC	12.00			8.56	13.13			12.56
Residual U.S. Tax	1.13			4.56	0.00			0.56
Foreign Tax		15		15		20		20
Total Tax		16.13		19.56		20.00		20.56

When pooling GILTI calculations, the taxes available for credit are smaller than the limitation, leading to a \$12 foreign tax credit and a net \$1.13 federal tax liability. The German subsidiary takes more than half of the FTC limitation, but the Irish subsidiary takes less than half, and as a result, the corporation is able to make full use of the FTC.

However, with country-by-country calculations, the limitation binds on taxes in Germany but not Ireland, leading to a smaller \$8.56 tax credit and a higher federal tax liability of \$4.56. In general, country-by-country systems will raise more revenue than pooled systems when rates differ substantially from country to country.

Moving to the right half, consider the same two U.S. systems after foreign QDMTTs are implemented. This raises the Irish effective tax rate to 15 percent and doesn't affect the German tax rate. The firm's total taxes available for credit rise to \$16, with \$6 now attributable to Ireland. Using pooled calculations, the FTC limitation now binds, resulting in a \$13.13 FTC and zero net U.S. tax liability. Using country-by-country calculations, the FTC limitation does not bind in Ireland, so that FTC rises dollar-for-dollar with the foreign taxes available for credit.

Even this stylized example is relatively complex, but one can derive the following takeaways:

First, the implementation of foreign QDMTTs reduces both the after-tax income to shareholders and the revenues to the U.S. Treasury. Second, pooled GILTI benefits MNEs that face different rates in different jurisdictions. A move to a country-by-country GILTI system would increase U.S. tax revenues from such MNEs. Third, the importance of pooling or country-by-country calculations decreases if foreign tax rates become more equal, for example, through the implementation of QDMTTs.

While Table 1 is merely an example calculation, it illustrates the foreign tax credit effects found in the aggregate simulation below.

Aggregate Effects of Policy Scenarios on Corporate Effective Tax Rates

With some of these effects in mind, we move to modeling of the U.S. corporate tax base as a whole, first calculating the change in corporate tax rates for firms, and then moving to the revenue implications considering the foreign tax credit effects only, and finally the revenue implications with a profit-shifting response.

Policies and Assumptions

Our modeling of the exposure of the U.S. corporate tax base to foreign QDMTTs uses Tax Foundation's multinational component of the Taxes and Growth model.⁴

We consider the interactions between two sets of foreign policies and three sets of U.S. policies. For the foreign policies, we consider a baseline without Pillar Two, and an alternative with all countries implementing QDMTTs. Due to ambiguity in the OECD's recommendations regarding whether the substance carveout should adjust for interest expense, we assume these QDMTTs do not subtract interest expense when computing the substance carveouts. Our analysis omits Pillar One, as well as the effects of foreign IIRs and UTPRs. However, with broad implementation of QDMTTs, the IIRs and UTPRs become less relevant because 15 percent rates are already achieved at the QDMTT level.

⁴ For a prior explanation of the methodology, see Cody Kallen, *Options for Reforming the Taxation of U.S. Multinationals*, Aug. 12, 2021, <https://taxfoundation.org/research/all/federal/us-multinational-tax-reform-options-gilti/>.

Our three U.S. policies consist of the current-law baseline and two modified versions of GILTI that would qualify it as an IIR. One version considers the minimum requirements to make GILTI compliant with Pillar Two: a 15 percent tax rate, with no foreign tax credit haircut, and country-by-country calculations. We also consider a larger set of modifications that would make GILTI more closely resemble Pillar Two. In addition to the minimum compliance changes, the version with substantial compliance uses the OECD's substance carveouts, allows carryforwards of excess foreign tax credits, includes foreign oil- and gas-related income, and exempts GILTI from indirect expense allocation. Our calculation does not perfectly replicate the known Model Rules; it omits net operating loss carryforwards, which we lack information to model, and it still relies on taxable income calculations instead of financial statement income.

Effective Tax Rates on Foreign Income

We first explore how these policy combinations affect the effective tax rates on the foreign income of U.S. multinationals in 2024, presented in Table 2. Under current law, both in the U.S. and other countries, foreign governments impose 16.6 percent effective tax rates on the foreign income of U.S. multinationals, and the U.S. government imposes a residual 3 percent tax rate; these combine for a total tax rate of 19.7 percent on that foreign income.

When foreign governments impose QDMTTs, the foreign effective tax rate (ETR) on this income rises to 24.4 percent. If the U.S. makes no policy change, the foreign tax credits claimed by U.S. multinationals would rise modestly, and the U.S. residual ETR would fall to 2.5 percent.

Table 2. Effective Tax Rates on Foreign Income of U.S. Multinationals, 2024

U.S. Policy	No Foreign QDMTTs			With Foreign QDMTTs		
	Foreign	U.S.	Total	Foreign	U.S.	Total
Baseline	16.6%	3.0%	19.7%	24.4%	2.5%	27.0%
Minimal Compliance	16.6%	5.2%	21.9%	24.4%	3.8%	28.3%
Substantial Compliance	16.6%	4.4%	21.0%	24.4%	3.0%	27.4%

Notes: The numbers presented are the effective tax rates (ETR) on CFC income of U.S. multinationals, calculated as the taxes on that income divided by profits (excluding related party dividends). The foreign ETR measure uses only corporate income taxes assessed by foreign governments, and the U.S. measure uses the residual federal corporate income taxes attributable to GILTI and Subpart F (income inclusions from these sources, multiplied by the corporate tax rate, net of the foreign tax credits attributable to those sources).

Source: Authors' calculations using Tax Foundation's CorpTax model.

The U.S. could also choose to respond by imposing a more Pillar Two-compliant version of GILTI. Either the minimally compliant or substantially compliant scenario would raise the residual ETRs on the foreign income of U.S. multinationals. Though these alternate policies would raise considerable revenue in the absence of foreign QDMTTs, the foreign QDMTTs crowd out much of that revenue through higher foreign tax credits. In either Pillar Two-compliant scenario, the foreign QDMTTs result in new foreign tax credits amounting to 1.4 percent of profits. This loss of tax revenue from foreign QDMTTs can offset revenue gained from U.S. policy change. For example, with both foreign QDMTTs and substantial U.S. compliance, these effects roughly cancel for the U.S. Treasury. In all cases, the higher foreign tax rates lead to higher total tax rates on corporate income—that is, less money for shareholders.

Revenue Effects of Pillar Two

For the purposes of Table 3, we assume that foreign countries will adopt QDMTTs, and present the effects of the three possible U.S. policy responses on federal corporate income tax revenue, measured in billions of dollars.

Table 3 includes both the foreign tax credit effects, which reduce U.S. tax revenues, and a profit-shifting effect, which likely increases U.S. tax revenues. As foreign taxes become higher, it becomes more favorable for companies to locate more income in the U.S. because it improves by comparison. One limitation of the analysis is that the profit-shifting response occurs relatively immediately; in reality, it is not likely that MNEs would make such decisions so quickly. Uncertainty about the future path of U.S. tax policy will also influence the extent of profit shifting into the U.S. once foreign QDMTTs are adopted.

Note that change in corporate income tax is not equal to change in total U.S. tax revenue, as part of the higher corporate taxes would be offset by lower revenue from the stock buyback tax as well as taxes on capital gains and dividend income. Given the large quantity of international tax increases modeled here, we expect this effect would be significant.

The first line presents only the effects of foreign QDMTT implementation, with no changes to domestic tax rules. On net, the profit-shifting response is more important than the increase in foreign tax credits, raising U.S. tax revenue. The second scenario contemplates the minimal changes to GILTI to make it compliant with the Pillar Two rules for an IIR: using a 15 percent tax rate, with no FTC haircut, and country-by-country calculations. These changes raise tax revenue further. Note that they raise revenue the most in 2024 and 2025. In those two years, under current U.S. law, the GILTI rate is below 15 percent. An increase to 15 percent in those two years is responsible for an outsized share of the revenue increase over the baseline.

The third scenario contemplates making GILTI substantially resemble a Pillar Two IIR. This raises revenue initially when the current GILTI rate is low and loses revenue compared to the higher GILTI rate beginning in 2025. However, this revenue loss shrinks over time as the Pillar Two substance carveouts become less generous each year.

Table 3. Main Policy Scenarios, Changes in Federal Corporate Income Tax Revenue (Billions of Dollars)

U.S. Policy	Foreign QDMTTs	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
Baseline	Yes	3.8	4.3	2.7	3.2	3.3	3.4	3.4	3.5	3.4	3.9	34.9
Minimal Compliance	Yes	14.7	16.0	6.0	6.6	6.8	7.2	7.3	7.5	7.6	8.2	88.0
Substantial Compliance	Yes	7.0	7.9	-2.5	-2.1	-2.1	-2.1	-1.9	-1.2	-1.1	0.0	1.9

Notes: The numbers presented are the annual changes in federal corporate income tax revenue, relative to the current law baseline. We consider combinations of foreign QDMTTs and modifications to GILTI to make it compliant with the OECD's requirements for an IIR.

Source: Authors' calculations using Tax Foundation's CorpTax model.

Table 4 decomposes the three scenarios modeled into two parts. It presents the scenarios from Table 3 with no profit-shifting response (FTC effects and policy changes, where applicable), and then presents the effects on U.S. corporate tax revenue of the profit-shifting responses. With the static or pre-profit-shifting calculations only, the imposition of foreign QDMTTs reduces U.S. corporate tax revenue. Tax hikes from minimal GILTI compliance can reduce the revenue loss, but substantial compliance increases the static revenue loss. In all cases, the profit-shifting responses to the QDMTTs and the GILTI changes increase U.S. corporate tax revenue by approximately \$100 billion over 10 years.

Table 4. Changes in Federal Corporate Income Tax Revenue Decomposition (Billions of Dollars)

U.S. Policy	Foreign QDMTTs	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
Foreign Tax Credit Channel												
Baseline	Yes	-4.1	-4.2	-6.1	-6.2	-6.5	-6.7	-7.1	-7.5	-8.0	-7.9	-64.3
Minimal Compliance	Yes	5.9	6.5	-3.2	-3.1	-3.3	-3.2	-3.6	-3.8	-4.2	-4.1	-16.0
Substantial Compliance	Yes	-1.0	-0.8	-10.8	-10.9	-11.2	-11.6	-11.8	-11.7	-12.0	-11.4	-93.2
Profit Shifting Channel												
Baseline	Yes	7.9	8.5	8.9	9.4	9.7	10.1	10.5	11.0	11.4	11.9	99.3
Minimal Compliance	Yes	8.8	9.5	9.2	9.7	10.1	10.5	10.9	11.3	11.8	12.3	104.0
Substantial Compliance	Yes	8.0	8.7	8.3	8.8	9.1	9.5	10.0	10.4	10.9	11.4	95.1

Notes: The numbers presented are the annual changes in federal corporate income tax revenue, relative to the current-law baseline. We consider combinations of foreign QDMTTs and modifications to GILTI to make it compliant with the OECD's requirements for an IIR. The first three lines present the revenue effects with no profit shifting, and the last three lines present the marginal revenue effects of the profit-shifting responses.

Source: Authors' calculations using Tax Foundation's CorpTax model.

Note that the results in Table 4 add up to their corresponding results in Table 3. For example, the first and fourth rows of Table 4 sum to the first row of Table 3, except for rounding.

On net, these two effects alone are likely to sum to an increase in corporate income taxes paid. However, on net, a successful implementation of Pillar Two abroad would constitute a large tax increase by foreign governments on U.S. shareholders. We expect this could result in as much as \$69 billion in lost personal income taxes, as U.S. shareholders would have lower post-corporate-tax incomes.

It may surprise the reader to find that the revenue effects of minimal and substantial compliance are modest and negative, respectively, given that Pillar Two is intended to help countries raise revenue and TCJA was a tax cut. But the substance carveouts of the IIR are relatively generous in the early years of Pillar Two implementation. It is true that IIRs are more stringent than GILTI in terms of their country-by-country calculations. However, as mentioned earlier, country-by-country calculations matter more in a world where low-tax countries still exist. If one assumes, as we did above, that other countries adopt QDMTTs, the IIR's country-by-country calculations matter much less.

For the sake of understanding how U.S. policy options interact with foreign QDMTTs, Table 5 presents the separate effects of these U.S. policy changes with and without foreign QDMTTs. The first two lines present the incremental effects of making GILTI comply with Pillar Two (minimal or substantial) when other countries do not impose QDMTTs. The last two lines present these revenue effects if other countries are already imposing QDMTTs. If other countries do not impose QDMTTs, then making GILTI comply with Pillar Two raises tax revenue, with the minimal compliance scenario raising the most revenue. However, if other countries already impose QDMTTs, the benefits to the U.S. treasury of country-by-country application are considerably lower, and the Treasury actually loses revenue by adopting the IIR's generous substance carveouts in the substantial compliance scenario.

Table 5. Effects of Making GILTI Comply with Pillar Two, Changes in Federal Corporate Income Tax Revenue (Billions of Dollars)

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	Total
If Only the U.S. Complies											
Minimal Compliance	18.7	20.3	10.4	11.1	11.5	12.1	12.4	12.9	13.3	13.9	136.7
Substantial Compliance	11.0	12.2	1.9	2.4	2.8	3.0	3.5	4.5	5.2	6.4	53.0
If Other Countries Have QDMTTs											
Minimal Compliance	10.9	11.7	3.3	3.5	3.6	3.8	3.9	4.0	4.2	4.3	53.1
Substantial Compliance	3.2	3.6	-5.3	-5.3	-5.3	-5.5	-5.3	-4.7	-4.4	-4.0	-33.1

Notes: The numbers presented are the annual changes in federal corporate income tax revenue, relative to the current-law baseline. We consider combinations of foreign QDMTTs and modifications to GILTI to make it compliant with the OECD's requirements for an IIR.

Source: Authors' calculations using Tax Foundation's CorpTax model.

If one considers the role of the IIR in Pillar Two, it is perhaps unsurprising that an IIR-like regime for international taxes raises relatively little revenue at the margin when other countries adopt QDMTTs. The IIR is intended to be a backstop to the QDMTT, and it is intended to incentivize countries to adopt QDMTTs. The IIR is not necessarily intended to generate revenue except as a backstop.

Comparison with Other Estimates

In a recent analysis, the Joint Committee on Taxation (JCT) considered the effects of Pillar Two adoption, with a wide range of potential effects on U.S. tax revenue depending on assumptions and policy adoption.⁵ For example, they estimate that take-up of Pillar Two by the countries already moving to adopt it could reduce federal corporate tax revenue by \$174.5 billion, raise it by \$224.2 billion, or anything in between, over the next decade. The wide margin of error in the analysis is explained by uncertainty over the profit-shifting response. If profits shift from low-tax jurisdictions to the U.S. that increases U.S. tax revenue, while profit-shifting to QDMTT jurisdictions could actually reduce U.S. tax revenue through higher foreign tax credits.

JCT then moves to five scenarios involving the remainder of the world—that is, the countries that have not yet committed to Pillar Two compliance—and the U.S., finding that adoption of Pillar Two by the remainder of the world tends to reduce U.S. revenues, while U.S. moves toward Pillar Two compliance can gain reve-

⁵ Joint Committee on Taxation, *Possible Effects of Adopting The OECD's Pillar Two, Both Worldwide and in the United States*, June 2023, https://www.finance.senate.gov/imo/media/doc/118-0228b_june_2023.pdf

nue at the margin. The results tend towards the negative side, with a point estimate of a \$56.5 billion loss if the whole world adopts Pillar Two, but substantial uncertainty over the profit-shifting response makes it impossible to clearly determine whether the agreement raises or lowers revenue on net.

Our results differ from JCTs for several reasons. First, we model adoption in 2024, whereas JCT assumes adoption in 2025; as the current GILTI rate is low, adoption in 2024 raises more revenue for the U.S. Second, JCT's analysis also includes implementation of the UTPR and foreign IIRs, while our analysis focuses on foreign QDMTTs only. These foreign IIRs would apply to profits reported in the U.S. by local affiliates of foreign multinationals, and the UTPRs would apply to the U.S. profits of U.S. multinationals. Both of these policies may raise the tax cost of reporting profits in the U.S., creating incentives to shift profits out of the U.S. and reducing U.S. corporate tax revenue. Finally, due to the unprecedented nature of the Pillar Two proposals, there is immense uncertainty about how firms will respond to the incentives produced by overlapping minimum taxes. JCT uses novel assumptions about how firms may shift profits when subject to Pillar Two, whereas we rely on our standard semi-elasticity of 0.8 with respect to the difference in effective tax rates between parent and subsidiary jurisdictions.

Previous analyses from Tax Foundation and the Penn Wharton Budget Model also considered the potential effects of foreign Pillar Two implementation on GILTI revenue.⁶⁷ All these analyses of Pillar Two share a common theme: it should reduce incentives to report profits in low-tax countries, but the higher foreign taxes reduce revenue raised by GILTI.

Effects of Foreign Pillar Two Adoption

The immediate effects of Pillar Two adoption are negative for shareholders, as they would pay considerably higher foreign taxes under any plausible scenario. The effects of Pillar Two adoption on the U.S. Treasury's revenues are far from certain. While we lean towards a positive point estimate on corporate tax receipts alone, it is a volatile net figure, and the positive sign rests entirely on behavioral assumptions about profit shifting. Furthermore, it could be offset by reduced taxes on corporate distributions, such as the stock buyback tax, capital gains and dividends taxes, or ordinary income taxes on retirement plan distributions.

In the case where Pillar Two has slightly positive effects on U.S. revenues, it remains a relatively inefficient tax hike from the U.S. perspective: for every dollar a U.S. shareholder forgoes to higher taxes, much of it will end up in foreign treasuries, leaving the U.S. Treasury with just a fraction of those taxes.

However, it is important to note that the U.S. cannot unilaterally choose a world without Pillar Two. Other countries are interested in adopting the agreement. The higher foreign taxes we model here are the prerogative of those other countries. And the foreign tax credits that cause the revenue loss in our simulations are a longstanding component of U.S. international taxes. The U.S. policy response must therefore be realistic about what it can accomplish in light of changing circumstances.

6 Cody Kallen, Tax Foundation, *Options for Reforming the Taxation of U.S. Multinationals*, Aug. 12, 2021, <https://taxfoundation.org/research/all/federal/us-multinational-tax-reform-options-gilti/>.

7 Penn Wharton Budget Model, *Profit Shifting and the Global Minimum Tax*, Jul. 21, 2021, <https://budgetmodel.wharton.upenn.edu/issues/2021/7/21/profit-shifting-and-the-global-minimum-tax>.

Second Risk To U.s. Tax Base: Intrusions Into U.S. Domestic Tax Policy

Whether the U.S. federal government gains or loses revenue on its international corporate income tax provisions as a result of the higher foreign taxes from Pillar Two, it will still face a second threat to its tax base in the form of the UTPR.

This risk to the tax base is different in character and scope from the foreign tax credit mechanisms outlined above. Unlike the QDMTTs and foreign taxes above, the UTPR threatens to extract taxes for foreign governments from U.S. companies on their U.S. earnings. The tax is nominally a tax on the foreign subsidiary of a U.S. company, levied through the denial of deductions and other measures. However, in practice, the amount taxed is determined by the income and tax profile of the parent company. Effectively, the UTPR lets foreign countries reach into the U.S. tax base. This arrangement is relatively unprecedented in international law.⁸

Furthermore, the imposition (or potential imposition) of top-up taxes on the U.S. domestic tax base functionally limits the ability of Congress to write its own tax code, and the ability of the Internal Revenue Service (IRS) to write its own guidance for taxpayers.

Consider an example of this phenomenon in action. A U.S. MNE calculates its corporate income tax liability to the IRS. It makes use of tax credits or other provisions explicitly and intentionally written into the U.S. tax code by Congress, which reduces its tax burden somewhat, resulting in a rate in the mid-teens.

A foreign country where the U.S. MNE has a small subsidiary then recalculates the tax rate using the Pillar Two Model Rules—in other words, different accounting assumptions and guidance than the U.S. laws with which the corporation complied. It finds that under the Pillar Two calculation, the U.S. MNE's tax rate dipped below 15 percent. The small country where the subsidiary is then levies a UTPR, not on the income of the foreign subsidiary it houses, but effectively on the income of the entire MNE group, in order to top up the MNE's rate to 15 percent under Pillar Two. Notably, this can happen even if the U.S. tax rate, as calculated under the terms of the U.S. corporate income tax code or the corporate alternative minimum tax (CAMT) added by the Biden administration, exceeds 15 percent.

This is a problem from the corporation's perspective in that it faces a new tax, likely for relatively small amounts of money, but with the compliance costs of an additional calculation. This is also a problem from the Treasury's perspective because a foreign country receives the money, and the IRS does not. And it is a more subtle problem for Congress as well: the corporation's tax liability at the margin is determined by the UTPR, not by the Internal Revenue Code. Effectively, this means that corporations intended to benefit from congressionally designed incentives could find those incentives canceled by the UTPR. The entire incentive structure for the corporation would then be determined by the rules of Pillar Two, not Congress.

Much of this is an integral part of Pillar Two's design: the drawbacks are necessary to make the entire agreement work. The UTPR is the enforcement mechanism, and Pillar Two is intended to proscribe the

⁸ Sjoerd Douma, Alexia Kardachaki, Georg Kofler, Peter Bräumann, and Michael Tumpel, *The UTPR and International Law: Analysis From Three Angles*, May 23, 2023, <https://www.taxnotes.com/tax-notes-today-international/digital-economy/utpr-and-international-law-analysis-three-angles/2023/05/23/7gns6>.

actions of governments. The question is whether the benefits of Pillar Two—limiting the ability of low-tax jurisdictions to attract more than their economic share of tax revenue through profit-shifting—are worth Pillar Two’s drawbacks to participating countries.

The United States, due to a safe harbor provision for countries with a corporate income tax rate of at least 20 percent, will not be subject to the UTPR until the end of 2026 (for companies that have fiscal years that do not align with the calendar year). It could avert UTPR by adopting both a QDMTT and an IIR, functionally accepting Pillar Two’s tax base as its own, or at least, as an alternative minimum tax.

The U.S. has several risks from the UTPR, despite its 21 percent headline tax rate. Under most circumstances, U.S. firms are unlikely to be subject to UTPR, but a number of provisions may clash with the Model Rules and result in effective rates below 15 percent for Pillar Two purposes, potentially triggering UTPR.

The Fate of FDII

The first of these is FDII. U.S. companies receive a special 13.125 percent effective rate on a particular kind of income thought to be unusually mobile or subject to profit-shifting. This effective rate will rise to 16.4 percent after 2025, so there is little danger that FDII will trigger UTPR liability by itself. However, it may work in tandem with other provisions to create low effective rates.

FDII is income from the use of intellectual property located in the U.S. but derived from export. For example, a U.S. technology hardware company that holds its patents in the U.S. but ultimately sells its products abroad could make use of the FDII rate on its income from the patents. This style of income is thought to be unusually mobile—and therefore, subject to tax competition—because of the intangible nature of the income and the fact that the end user is abroad. It would be comparatively easy to claim that much of the value chain is generated outside of the U.S., so FDII is effectively a reward or an incentive to help the U.S. hold onto that mobile income.

Nonrefundable Tax Credits, Inflation Reduction Act, and R&D

A second risk for the U.S. concerns non-refundable tax credits. The U.S. frequently makes use of non-refundable tax credits to incentivize specific behaviors. Though this practice can be overused in some cases, and a neutral tax code can be preferable, there are legitimate cases to use credits under specific circumstances: for example, for behaviors with positive externalities, a tax credit can be used to internalize those externalities and align incentives.

Importantly, and perhaps, incoherently, Pillar Two generally considers non-refundable tax credits to be reductions in tax liability, while it considers refundable credits to be equivalent to increases in income. This distinction has an extraordinary impact on Pillar Two’s tax calculations.

Consider the following: a business earns \$1 billion, which is taxed at a 21 percent rate for \$210 million in tax liability before credits. However, it earns a nonrefundable tax credit worth 8 percent of its income, or \$80 million. Under the UTPR, it is thought to have paid just \$130 million in tax on a \$1 billion income, or a 13 percent rate. It is therefore charged \$20 million, bringing its tax rate back up to 15 percent, and leaving

shareholders with \$850 million.

Now, imagine the credit is made refundable, and is counted as income. The calculation adds the tax credit to income, making for an income of \$1.08 billion, on which it paid \$210 million in ordinary taxes. The business now has a 19.44 percent tax rate and faces no liability under the UTPR. Shareholders earn \$870 million.

These two calculations result in extremely different U.S. tax rates, and therefore, different UTPR liability. And yet, the cash flows for the business in question are the same before the UTPR is applied. A tax rate is a fraction, and the difference comes entirely from whether the credit is counted in the numerator (tax) or the denominator (income). As the UTPR is concerned with tax rates around 15 percent, changes to the small numerator have many times more leverage in determining the fraction than equal-sized changes to the large denominator.

In a sense, the treatment of refundable credits is backward for Pillar Two's purposes. Pillar Two's goal is ostensibly to prevent tax codes from being too generous to businesses, in order to stem the competition among jurisdictions for profit shifting. And yet, for any given size of a tax credit, a refundable version is strictly more generous than a nonrefundable version, not less. The model rules are an inversion of reality. In any case, the result is that countries will be incentivized to ensure that their credits or other business subsidies are counted as income rather than reductions in tax.

In March 2023, a broad survey of U.S. tax credits and Pillar Two by five PwC experts showed many credits could reduce tax liability under the Model Rules, potentially triggering UTPR liability. One solution, converting them all into qualified refundable credits so they could be counted as income under the Model Rules, would cost the U.S. \$193.1 billion in revenues over 10 years.⁹ However, additional OECD guidance has been released since that estimate was released, providing more latitude to certain transferable tax credits. Therefore, it is now possible that more and cheaper options are available to protect Congress's tax credit policies.

This is of special interest to the Inflation Reduction Act, a 2022 law containing many tax credits designed to promote clean energy. A July report from the Congressional Research Service shows that while few of these tax credits are refundable, they are virtually all transferable.¹⁰ Under the new guidance from the OECD, this will shield much of their value from potential UTPR, potentially allowing Congress to continue making subsidies through the tax code.

A more serious concern for the U.S. is research and development (R&D). Most countries choose to subsidize R&D in some form. However, as a report from Ernst & Young (EY) comparing policies around the world shows, the U.S. is relatively unique in leaning almost entirely on a nonrefundable tax credit to subsidize R&D.¹¹ Many of the other subsidies documented by EY, such as grants or loans at favorable rates, would have much less of an impact on the Pillar Two calculations, effectively changing only income, not

⁹ Peter Merrill, Karl Russo, Aaron Junge, Damien Boudreau, and Florian Holle, "Where Credit Is Due: Treatment of Tax Credits Under Pillar 2," PwC, Mar. 20, 2023, <https://www.taxnotes.com/special-reports/credits/where-credit-due-treatment-tax-credits-under-pillar-2/2023/03/17/7g743>.

¹⁰ Congressional Research Service, "Energy Tax Credits and the Global Minimum Tax," Jul. 21, 2023, <https://sgp.fas.org/crs/misc/IF12439.pdf>.

¹¹ Ernst & Young, "Worldwide R&D Incentives Reference Guide," 2022, https://assets.ey.com/content/dam/ey-sites/ey-com/en_gl/topics/tax/tax-guides/2022/ey-worldwide-r-and-d-incentives-guide-2022.pdf.

tax paid. The likely result is that current-law U.S. R&D tax policy is more likely to be targeted by UTPRs, even though it is not necessarily more generous than many of the U.S.'s peers. If Pillar Two goes forward as currently understood, the U.S. would benefit from changing Sec. 174 to an alternative more favorably treated under the Model Rules.

The Endgame of UTPR Avoidance

The U.S. has several options for handling the potential UTPR. Each has potential drawbacks.

One option is to fight the UTPR directly, noting its unprecedented nature in international tax law. Effectively, the U.S. could treat the UTPR as a discriminatory tax or tariff, and retaliate. Some members of Congress have introduced bills taking this approach.¹² This could potentially dissuade countries from levying UTPR on the U.S. tax base, but it could also start a damaging trade war.

Another option is to adopt a QDMTT and an IIR, effectively including Pillar Two's tax base as an alternative minimum tax. In this case, some congressional tax policies may be thwarted by the QDMTT, but the tax provisions invalidated by the QDMTT would simply result in money returned to the Treasury. This would stifle Congress's ability to write the tax policy it chooses and result in some business behaviors being governed by Pillar Two rules at the margin. A final option is to not adopt a QDMTT and simply hope that UTPR situations are relatively rare, or that corporations themselves find a way to avoid them.

In any case where the Pillar Two rules bind U.S. policy, compliance costs for U.S. businesses rise. However, it is likely that over the long run lawmakers and businesses could work together to get provisions labeled as income increases, rather than tax reductions, for Pillar Two purposes, keeping nominal rates above 15 percent while still offering businesses favorable terms in economic reality.

Of course, other countries—especially those very same countries that offered low tax rates and spurred the BEPS project in the first place—may be looking to game the same rules and find new ways to attract business and profit shifting. This could ultimately undermine the spirit of Pillar Two.

The most strictly unfavorable long-run result of Pillar Two, in other words, is for countries and businesses to simply learn to work around it, spending the resources and the intelligence of tax professionals on undermining the system. This would return the world to the status quo ante, but with the extra administrative costs of designing low corporate taxes that aren't labeled as such by the OECD.

The OECD could, in turn, continue to issue administrative guidance and new rules to stop such behaviors, but this would either require continuous ongoing negotiations or an unelected governing body making policy changes unchecked. National legislatures could become weary of ever-changing guidance from the OECD regarding the rules they have already put into law.

¹² Alan Cole, "Why Does the UTPR Matter?," Tax Foundation, Jun. 1, 2023, <https://taxfoundation.org/blog/utpr-pillar-two-us-tax-base/>.

Conclusion

The Pillar Two component of the OECD's BEPS project is likely to increase taxes on U.S. corporations and shareholders. This is a loss to a large number of U.S. taxpayers, including individuals with brokerage accounts, defined contribution pensions such as 401(k) plans, or defined benefit plans that invest in stocks.

The higher foreign taxes will mechanically reduce U.S. tax revenues on foreign earnings of U.S. corporations because of foreign tax credits. We estimate this reduction at about \$64.3 billion over 10 years. Higher taxes abroad may induce profit shifting to the U.S., which we estimate could generate \$99.3 billion in corporate tax revenue over 10 years, more than offsetting the corporate income tax revenue lost from higher FTCs and resulting in an increase of \$34.9 billion in corporate revenue over 10 years. However, reduced taxes on distributions to shareholders, whether through the buyback tax, or through income taxes on capital gains, dividends, and retirement plan distributions, would reduce or even wipe out the total gains to the U.S. Treasury.

Given the high uncertainty surrounding policy and corporate behaviors, we are unable to definitively state whether foreign adoption of Pillar Two will raise or reduce U.S. tax revenues.

Corporate tax revenues could be modified through changes to GILTI. A country-by-country system, as specified in the Model Rules for an IIR, would gain revenue. But these effects are limited if Pillar Two is adopted widely and rates among countries become more equal. Additionally, in some respects, a Pillar Two IIR would actually be less restrictive than the current GILTI system, thanks to its generous substance carveouts in early years.

Under any system, Pillar Two is likely to increase compliance costs for U.S. taxpayers.

These distributional effects are paired with a significant loss of U.S. fiscal sovereignty. The UTPR creates the possibility of foreign countries taxing U.S. income extraterritorially. And averting UTPR liability would require the U.S. to outsource Congress's policymaking ability to an international body. It is plausible that losses to fiscal sovereignty can be averted by exploiting inconsistencies or mathematical problems with the Model Rules. However, this outcome would lead to a less efficient policymaking process that expends resources on circumventing rules rather than creating sound tax policy.