Estimated impacts of Pillar Two and potential policy responses on US domestic economic activity

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Executive summary

In 2021, over 135 jurisdictions participating in the Inclusive Framework (IF) on Base Erosion and Profit Shifting (BEPS) agreed to take steps to change the international tax system. The IF's approach includes two components, Pillar One and Pillar Two. Pillar One prescribes new nexus and profit allocation rules with the objective of assigning a greater share of taxing rights over global business income to market jurisdictions. Pillar Two, the focus of this report, is a 15% global minimum tax.

Although there is significant uncertainty regarding the potential implementation and impact of Pillar Two,[1] this report finds that if Pillar Two is widely adopted outside of the United States, it is likely to significantly reduce the domestic jobs and investment of multinational enterprises (MNEs).[2] Specifically:

▶ This report estimates that widespread adoption of Pillar Two outside of the United States could reduce domestic MNE jobs by roughly 370,000 and annual domestic MNE investment by roughly $22 billion.

▶ Moreover, this report finds that adapting US tax law to account for rising global tax costs, such as changes to the US international tax system for MNEs, would mitigate this negative economic impact to the US economy whereas retaliatory tariffs would exacerbate the negative economic impact of Pillar Two adoption outside of the United States.

Background: Pillar Two

Pillar Two is designed such that large MNEs would pay a minimum 15% tax on income earned within each jurisdiction in which they operate. Pillar Two applies to MNEs with revenue of at least €750 million (approximately $800 million). To calculate the tax, MNEs must:

1. Calculate their Global Anti-Base Erosion Rules (GloBE) effective tax rate (GETR) in each jurisdiction;

2. Calculate a top-up amount for each jurisdiction such that the total tax is equal to 15% of their excess profit, which is defined as GloBE income less a substance-based income exclusion (SBIE) that reduces income by a percentage of tangible assets and payroll; and

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[1] These uncertainties arise because the exact details of Pillar Two are uncertain; many details that are available can be too complex to model with publicly available data; it is uncertain which countries will ultimately adopt Pillar Two, when this will occur, and in what form; there are likely to be interactions between Pillar One and Pillar Two that are not considered as part of this analysis; and the behavioral responses of companies in response to Pillar Two are uncertain, among others. Some countries have taken legislative action on Pillar Two while others have announced an intention to do so this year. See the caveats and limitations section of this report for additional discussion.

[2] Widespread adoption of Pillar Two outside of the United States is defined in this analysis as the adoption of Pillar Two charging provisions throughout the world such that all foreign income of US MNEs is potentially subject to QDMTTs and all domestic income of MNEs is potentially subject to UTPRs for MNEs with revenue of at least €750 million. The UTPR is designed and intended to apply to any CE that is not subject to QDMTT or IIR, but, in this particular scenario, the UTPR only applies to the domestic income of MNEs (as other income is subject to QDMTTs in this scenario). The United States is assumed not to impose a QDMTT, IIR, or UTPR. Foreign taxes on the foreign income of US MNEs arising from QDMTTs are assumed to generate FTCs for GILTI. However, these FTCs cannot always be used (e.g., US MNEs in an excess credit position cannot make use of these additional FTCs). The SBIE is assumed to be 5% of tangible assets plus 5% of payroll costs. This analysis makes no judgement regarding what widespread adoption of Pillar Two outside of the United States is likely to be and it could significantly differ from the stylized assumptions made in this analysis. It is possible that other scenarios could occur beyond those that are defined in this report, such as MNEs being subject to IIRs and UTPRs outside the US. The body of the report discusses other key assumptions.

3. Pay the tax to the appropriate jurisdiction via one of the three charging provisions. These charging provisions have a hierarchy for jurisdictions in which more than one applies. The qualified domestic minimum top-up tax (QDMTT) takes priority, followed by the income inclusion rule (IIR) and the undertaxed profits rule (UTPR).[3]

These Pillar Two charging provisions are:[4]

▶ **Qualified domestic minimum top-up tax (QDMTT):** A QDMTT ensures that the jurisdiction in which a constituent entity (CE) (i.e., a business entity that is a part of the MNE) operates retains the taxing rights to profits that are earned in that jurisdiction.

▶ **Income inclusion rule (IIR):** If the jurisdiction in which the CE operates does not impose a QDMTT, an IIR can instead apply. In this case a top-up tax would be applied by the jurisdiction of the CE's direct or indirect parent company.

▶ **Undertaxed profits rule (UTPR):** The UTPR imposes top-up tax through a denial of deductions or other adjustments if the low-taxed income of a MNE group in a particular jurisdiction is not subject to a QDMTT or IIR. The total potential top-up tax that is not subject to QDMTT or IIR is allocated to the jurisdictions that have implemented a UTPR. The UTPR acts as a backstop to ensure the minimum tax is levied with respect to income not subject to a QDMTT or an IIR.

In short, the charging provisions of Pillar Two are designed such that an MNE group will be subject to Pillar Two with respect to all jurisdictions in which it has operations, even if some jurisdictions do not adopt the Pillar Two charging provisions. For example, foreign countries can use the UTPR to effectively tax the US operations of US MNEs even in the situation where the United States does not adopt Pillar Two policies.

Estimated impact of Pillar Two

Even if the United States does not adopt Pillar Two policies, Pillar Two can effectively increase the tax liability of (1) US MNE operations outside of the United States (through QDMTTs, IIRs, or UTPRs), as well as (2) US MNE operations in the United States through UTPRs and (3) inbound MNE operations in the United States through IIRs adopted by other jurisdictions and UTPRs.

These tax increases would likely result in reduced domestic MNE economic activity. For the foreign operations of US MNEs, this is because, as suggested by academic research, the overseas businesses of US MNEs are likely complementary to the US domestic businesses (e.g., when the foreign investment and employment of US MNEs increases, so does the US MNE's domestic investment and employment). Additionally, effectively increasing the corporate income tax liability of domestic MNE operations through UTPRs and foreign IIRs would reduce this US economic activity.

Key findings:

▶ Widespread adoption of Pillar Two outside of the United States could increase the cash tax effective tax rate (ETR) on US MNEs overall by 2.6 percentage points, with their ETR

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[3] Pillar Two also includes a subject to tax rule (STTR), which is a treaty-based rule that allows jurisdictions in which CEs operate to impose withholding tax on certain related party payments that are subject to tax below a minimum rate.
[4] Pillar Two policies are defined here and throughout the report as QDMTTs, IIRs, and UTPRs.

on foreign income rising by 4.5 percentage points and their ETR on domestic income rising by 1.4 percentage points.

▶ The estimated corporate income tax increase for US MNEs in this report of 18% is greater than the International Monetary Fund's estimated average increase for all in-scope MNEs globally of 6%. All in-scope MNEs globally includes both US and non-US MNEs. This suggests the increase in corporate income tax would be, on average, larger for US MNEs than all in-scope MNEs.

▶ Widespread adoption of Pillar Two outside of the United States is estimated to reduce the domestic employment of MNEs by roughly 370,000 workers, as well as annual domestic MNE investment by roughly $22 billion. Job losses represent permanent reductions.

Adapting US tax law to rising global tax costs

Adapting US tax law to account for rising global tax costs could mitigate this reduction in US economic activity. To illustrate the potential impact, this report considers two commonly discussed changes to the US tax on Global Intangible Low-Taxed Income (GILTI) that could partially offset the increase in taxation for the US MNE sector from Pillar Two.[5] GILTI operates as a tax on the foreign earnings of US MNEs.

▶ **Eliminating the GILTI haircut:** Under current law, GILTI generally allows US MNEs to take a credit against US tax for taxes paid to foreign jurisdictions to prevent double taxation. However, the tax credit that the United States allows for foreign taxes paid on GILTI is limited to 80% (i.e., the "GILTI haircut"). Thus, GILTI effectively taxes at a rate of up to 13.125% even though the (after-deduction) statutory GILTI rate is 10.5%. That is, the credit can eliminate GILTI-related tax liability if the foreign tax rate is at least equal to 13.125% (13.125% x 80% = 10.5%).

▶ **Eliminating expense allocation:** Certain GILTI rules require the allocation of a portion of US expenses, like interest expense, to foreign source earnings, limiting the use of foreign tax credits. Eliminating expense allocation would allow the further use of foreign tax credits to offset US tax and mitigate double taxation.

Overall, it is estimated that these two changes to the US tax on GILTI would increase the domestic jobs at MNEs by roughly 140,000 workers and the annual domestic investment of MNEs by roughly $8 billion. Put differently, these changes could offset approximately 40% of the estimated economic impact of widespread adoption of Pillar Two outside of the United States. On net, Pillar Two (negative economic impact) combined with this illustrative tax relief for MNEs (positive economic impact) results in 230,000 (=370,000 - 140,000) fewer domestic jobs at MNEs.

Including additional policy changes could further offset the estimated losses due to widespread implementation of Pillar Two. These changes could include:

▶ Provide treaty-based foreign tax credits
▶ Providing sourcing rules that address the UTPR
▶ Providing for even greater utilization of GILTI foreign tax credits

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[5] The MNEs with a reduction in tax liability from these two GILTI changes will not necessarily be the same MNEs with an increase in tax liability from Pillar Two.

This report does not offer judgements on what is the likely or proper US response.
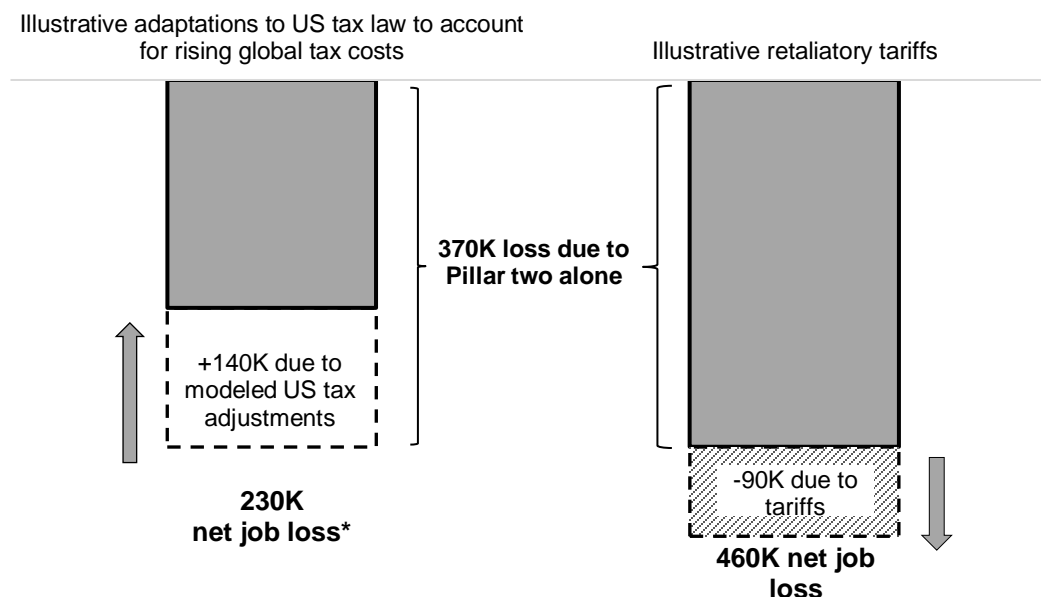
Enacting retaliatory tariffs

Alternatively, the United States could respond by implementing retaliatory tariffs. Tariffs are, in effect, excise taxes on goods and services imported into the United States from other jurisdictions. The tax increase from tariffs is typically thought to be passed forward to US consumers through higher prices, which would further reduce US economic activity.

Recently enacted tariffs include the 2018 tariffs on solar panels, washing machines, steel, aluminum and a broad range of products from China. Some members of Congress have recently expressed support for maintaining the tariffs on solar panels and steel. Recent discussions of new tariffs include, for example, carbon border tariffs being suggested by some Republican members of the Senate (e.g., the "foreign pollution fee") as well as broadly similar proposals from some Democratic members (e.g., the Clean Competition Act).

This report estimates the economic impact of an across-the-board one percentage-point increase in tariffs. This is, in aggregate, the same order of magnitude as the change in tariff revenue as a share of imports between 2017 and 2020. There are, of course, other potential retaliatory measures that could reduce economic activity. This report does not offer any judgements on what the likely or proper US response is. This across-the-board increase in tariffs would exacerbate the negative economic impact of widespread adoption of Pillar Two UTPRs outside of the United States and further reduce US jobs by roughly 90,000 and US investment by roughly $7 billion. On net, Pillar Two (negative economic impact) combined with retaliatory tariffs (negative economic impact) results in 460,000 (=370,000 + 90,000) fewer domestic jobs.

Figure ES-1. Net domestic employment impact of widespread adoption of Pillar Two outside of the United States and illustrative US policy responses

Illustrative adaptations to US tax law to account for rising global tax costs

Illustrative retaliatory tariffs

370K loss due to Pillar two alone

+140K due to modeled US tax adjustments

230K net job loss*

-90K due to tariffs

460K net job loss

* Job losses can be further offset by the implementation of additional policies, including -- but not limited to -- those described in the body of this report.

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I. Introduction

In 2021, over 135 jurisdictions participating in the Inclusive Framework (IF) on Base Erosion and Profit Shifting (BEPS) agreed to take steps to change the international tax system.[1] Joining the IF means that jurisdictions can participate in the ongoing negotiations for the structure of the new regime, and if they choose to implement the rules in their jurisdiction, they will do so in a manner that aligns with the international agreement. The IF's approach includes two components, Pillar One and Pillar Two. Pillar One prescribes new nexus and profit allocation rules with the objective of assigning a greater share of taxing rights over global business income to market jurisdictions.[2] Pillar Two, the focus of this report, is a 15% global minimum tax.

Background: Pillar Two

Pillar Two is designed such that large multinational enterprises (MNEs) would pay a minimum 15% tax on income earned within each jurisdiction in which they operate. Pillar Two applies to MNEs with revenue of at least €750 million (approximately $800 million).[3] To calculate the tax, MNEs must:

1. Calculate their Global Anti-Base Erosion Rules (GloBE) effective tax rate (GETR) in each jurisdiction;

2. Calculate a top-up amount for each jurisdiction such that the total tax is equal to 15% of their excess profit, which is defined as GloBE income less a substance-based income exclusion (SBIE) that reduces income by a percentage of tangible assets and payroll; and

3. Pay the tax to the appropriate jurisdiction via one of the three charging provisions. These charging provisions have a hierarchy for jurisdictions in which more than one applies. The qualified domestic minimum top-up tax (QDMTT) takes priority, followed by the income inclusion rule (IIR) and the undertaxed profits rule (UTPR).[4]

Each step is explained in more detail below.[5] Note that, although the OECD released administrative guidance in February 2023, the exact details of implementation are subject to significant uncertainty. Additionally, it is uncertain which countries will ultimately adopt Pillar Two, when this will occur, and in what form.

1. Calculate GETR

To determine the GETR, constituent entities (CEs) (i.e., a business entity that is a part of the MNE) must first calculate GloBE income. Subject to deviations that may be meaningful, generally the starting point is the CE's income or loss as reported in the parent's consolidated financial statements. Income is then adjusted to remove certain differences between book and tax income. Generally, refundable tax credits can be treated as income and not as a reduction in tax, while non-refundable credits are treated as a reduction in tax. It is still not completely certain how certain US tax credits will be treated under the Pillar Two regime. Current reports suggest that low-income housing and certain renewable energy tax credits may be protected to some degree under Pillar

Two when appropriate tax equity structures and accounting policy elections are in place, while credits such as the R&D tax credit may not be protected.[6] Taxes attributable to GloBE income generally include all income taxes. The GETR, calculated as covered taxes divided by net GloBE income, is calculated on a jurisdictional basis.

Special temporary rules also exist for "blended controlled foreign corporations (CFC) tax regimes." The United States has a blended CFC tax regime because of the netting of income and losses and cross-crediting in its tax on Global Intangible Low-Taxed Income (GILTI).[7] GILTI refers to a category of certain earnings of foreign affiliates of US-based MNEs. The GILTI rules operate as a form of minimum tax on the profits of US-based MNEs and is currently calculated on a global basis, rather than the jurisdiction-by-jurisdiction basis as proposed in the GloBE rules. A temporary formula is used to allocate tax levied in blended CFC tax regimes such that the tax is only allocated to jurisdictions with an GETR less than the GILTI effective rate. Jurisdictions with lower GETRs under the GloBE rules and larger amounts of GILTI income will be allocated larger shares of GILTI tax.

2. Calculate top-up tax

The top-up tax is equal to the difference between the 15% minimum rate and the GETR in each jurisdiction. The top-up tax is applied to excess profit, which is defined as GloBE income less an SBIE of 8% of the carrying value of tangible assets plus 10% of payroll costs (declining to 5% of each by 2033).[8] The final tax amount is equal to that resulting value less any QDMTT imposed.[9]

3. Pay the tax

Pillar Two charging provisions have a hierarchy for jurisdictions in which more than one applies. The QDMTT takes priority, followed by the IIR and the UTPR.

These Pillar Two charging provisions are:[10]

- ▶ **Qualified domestic minimum top-up tax (QDMTT):** A QDMTT ensures that the jurisdiction in which a CE operates retains the taxing rights to profits that are earned in that jurisdiction.

- ▶ **Income inclusion rule (IIR):** If the jurisdiction in which the CE operates does not impose a QDMTT, an IIR can instead apply. In this case a top-up tax would be applied by the jurisdiction of the CE's direct or indirect parent company.

- ▶ **Undertaxed profits rule (UTPR):** The UTPR imposes top-up tax through a denial of deductions or other adjustments if the low-taxed income of an MNE group in a particular jurisdiction is not subject to a QDMTT or IIR. The total potential top-up tax that is not subject to QDMTT or IIR is allocated to the jurisdictions that have implemented a UTPR. The UTPR acts as a backstop to ensure the minimum tax is levied with respect to income not subject to a QDMTT or an IIR.

In short, the charging provisions of Pillar Two are designed such that an MNE group will be subject to Pillar Two with respect to all jurisdictions in which it has operations, even if some jurisdictions do not adopt the Pillar Two charging provisions. For example, foreign countries can use the UTPR

to effectively tax the US operations of US MNEs even in the situation where the United States does not adopt Pillar Two charging provisions.

High-level examples

The high-level examples below illustrate how the tax is applied in different situations depending on which jurisdictions implement a Pillar Two charging provision. For each example, assume Parent Company is located in Country A, CE1 is located in Country B, and CE2 is located in Country C. Each CE's GETR is 10%. Parent Company's GETR is 20%.

In Example 1, Country A, where Parent Company is located, has an IIR. Country B, where CE1 is located, has no Pillar Two charging provisions. The Parent Company would be subject to a 5% top-up rate (15% minimum less CE1's 10% GETR) and the tax would be payable to Country A.

Example 1. Income Inclusion Rule
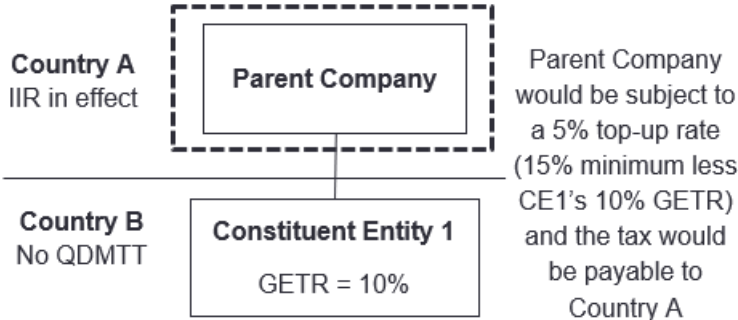
In Example 2, the same conditions apply, but Country B adopts a QDMTT, preempting Country A's IIR. In this case, CE1 would pay Country B a 5% QDMTT (15% minimum tax less 10% GETR).
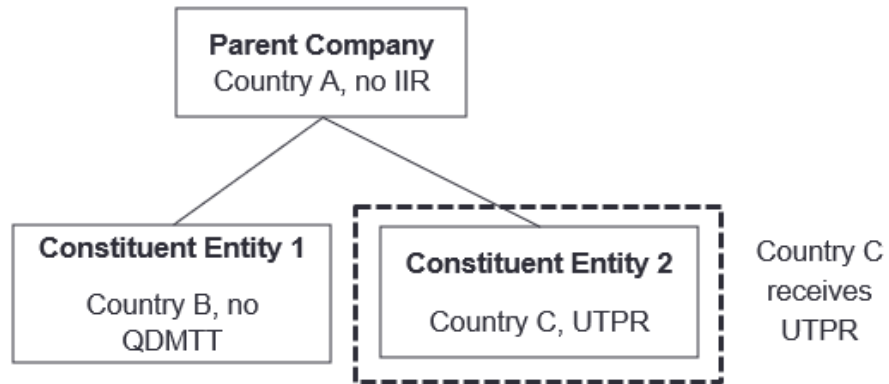
Example 2. Qualified domestic minimum top-up tax
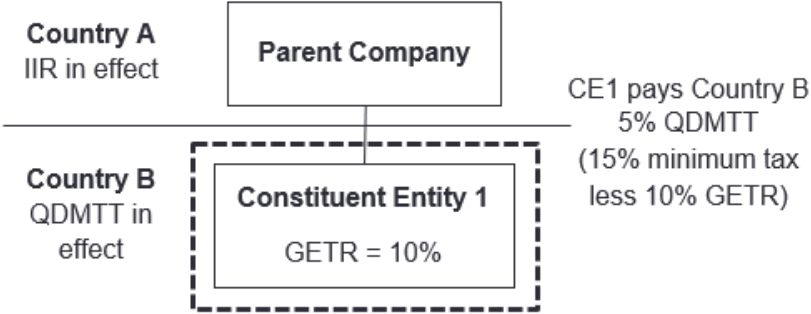
In Example 3, assume that Country A does not adopt Pillar Two charging provisions (i.e., does not adopt a QDMTT, IIR, or UTPR), Country B does not have a QDMTT, and Country C has a UTPR. Since Country C has a UTPR and neither Country A nor Country B have a QDMTT or IIR, Country C can collect the entire top-up amount. Country C collects the UTPR through a denial of deductions or other adjustments to CE2 to effectively tax CE1's income. If Country C is not the only jurisdiction with a UTPR the top-up tax amount is split with other jurisdictions with a UTPR

using a formula that incorporates the number of employees and the net book value of tangible assets.

Example 3. Undertaxed profits rule

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                    ┌─────────────────────┐
                    │   Parent Company    │
                    │   Country A, no IIR  │
                    └─────────────────────┘
                      ╱                 ╲
                     ╱                   ╲
  ┌─────────────────────┐   ┌─────────────────────┐
  │ Constituent Entity 1 │   │ Constituent Entity 2 │   Country C
  │                      │   │                      │   receives
  │     Country B, no    │   │   Country C, UTPR    │    UTPR
  │       QDMTT          │   │                      │
  └─────────────────────┘   └─────────────────────┘
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Implications for the United States

The charging provisions of Pillar Two are designed such that an MNE group is generally subject to Pillar Two in all jurisdictions even if some jurisdictions do not adopt Pillar Two charging provisions. Therefore, even if the United States does not adopt Pillar Two charging provisions, Pillar Two can effectively increase the tax liability of (1) US MNE operations outside of the United States, as well as (2) US MNE operations in the United States and (3) inbound MNE operations in the United States through a combination of QDMTTs, IIRs, and UTPRs.

These tax increases would likely result in reduced domestic MNE economic activity. For the foreign operations of US MNEs, this is because, as suggested by academic research, the overseas businesses of US MNEs are likely complementary to the US domestic businesses (e.g., when the foreign investment and employment of US MNEs increases, so does the US MNE's domestic investment and employment). Additionally, effectively increasing the corporate income tax liability of domestic MNE operations through UTPRs and foreign IIRs would likely reduce this US economic activity.

II. Estimated effective tax rate impacts

This analysis estimates the change in the cash tax effective tax rate (ETR) of the widespread adoption of Pillar Two outside of the United States.

<u>Widespread adoption of Pillar Two outside of the United States</u>

Widespread adoption of Pillar Two outside of the United States is defined in this analysis as the adoption of Pillar Two charging provisions throughout the world such that all foreign income of US MNEs is potentially subject to QDMTTs and all domestic income of MNEs is potentially subject to UTPRs for MNEs with revenue of at least €750 million. The UTPR is designed and intended to apply to any CE that is not subject to QDMTT or IIR, but, in this particular scenario, the UTPR only applies to the domestic income of MNEs (as other income is subject to QDMTTs in this scenario). The United States is assumed not to impose a QDMTT, IIR, or UTPR.

Foreign taxes on the foreign income of US MNEs arising from QDMTTs are assumed to generate foreign tax credits (FTCs) for GILTI. However, these FTCs cannot always be used (e.g., US MNEs in an excess credit position cannot make use of these additional FTCs). The SBIE is assumed to be 5% of tangible assets plus 5% of payroll costs. This analysis makes no judgement regarding what widespread adoption of Pillar Two outside of the United States is likely to be and, if it occurs, it could significantly differ from the stylized assumptions made in this analysis.

<u>Methodology and results</u>

Even if the United States does not adopt Pillar Two charging provisions, Pillar Two can effectively increase the tax liability of (1) US MNE operations outside of the United States, as well as (2) US MNE operations in the United States and (3) inbound MNE operations in the United States through a combination of QDMTTs, IIRs, and UTPRs. UTPRs increase the ETR on the foreign income of US MNEs because it is assumed to be implemented at the foreign subsidiaries of US MNEs in a way that effectively raises the ETR on US MNE domestic income.

This analysis primarily relies on country-by-country reporting data supplemented with other publicly available industry-level and country-level data.[11] The methodology generally follows that of the February 2023 International Monetary Fund's (IMF) analysis of the global effects of Pillars One and Two, but, due to this analysis' focus on the United States, this analysis adds additional detail on the US tax system and for US MNEs.[12]

ETRs for US MNEs were estimated in a scenario without any Pillar Two charging provisions and a scenario in which there is widespread adoption of Pillar Two outside of the United States.[13] The Pillar Two impact is estimated under the assumption that, for the MNEs subject to Pillar Two, foreign income is subject to QDMTTs and domestic income is subject to UTPRs.[14]

As displayed in Table 1, widespread adoption of Pillar Two outside of the United States could increase the ETR on US MNEs overall by 2.6 percentage points, with their ETR on foreign income rising by 4.5 percentage points and their ETR on domestic income rising by 1.4 percentage points.[15]

Table 1. Estimated impact of Pillar Two on ETR of US MNEs

	Current Law	After Pillar Two implementation	Change in ETR on US MNE income
Overall ETR	14.0%	16.5%	2.6%
ETR on foreign income	14.8%	19.2%	4.5%
ETR on domestic income	13.5%	14.8%	1.4%

Note: The US operations of inbound MNEs are assumed to have the same ETR profile as the US operations of US MNEs by industry. There is significant uncertainty regarding the potential implementation and impact of Pillar Two. These uncertainties arise because the exact details of Pillar Two are uncertain; many details that are available can be too complex to model with publicly available data; it is uncertain which countries will ultimately adopt Pillar Two, when this will occur, and in what form; there are likely to be interactions between Pillar One and Pillar Two that are not considered as part of this analysis; and the behavioral responses of companies in response to Pillar Two are uncertain, among others. See the caveats and limitations section of this report for additional discussion. Figures are rounded. Source: EY analysis.

III. Economic impact of Pillar Two

This analysis estimates the economic impact of widespread adoption of Pillar Two outside of the United States. The tax increases estimated in the previous section are likely to result in reduced economic activity in the United States because:

► taxing foreign operations of US MNEs is likely to reduce US domestic activity; and

► taxing US operations of MNEs is likely to reduce US domestic activity.

For the foreign operations of US MNEs, this is because, as suggested by academic research, the overseas businesses of US MNEs are likely complementary to the US domestic businesses.[16] That is, when the foreign investment and employment of US MNEs increases, so does the US MNE's domestic investment, employment, exports, and R&D.[17] Another set of studies indicates that shifting profits from domestic investment abroad to low-tax jurisdictions reduces the tax cost of domestic investment and, therefore, results in more domestic investment. Additionally, effectively increasing the corporate income tax liability of domestic MNE operations through UTPRs and foreign IIRs would likely reduce this US economic activity.[18]

Methodology and results

Although this analysis relies on a significant body of academic literature suggesting (1) the overseas businesses of US MNEs are generally complementary to the US domestic businesses and (2) effectively increasing the corporate income tax liability of domestic MNE operations through UTPRs and foreign IIRs would reduce US economic activity, the behavioral responses of companies in response to Pillar Two are highly uncertain due to its unprecedented nature.

Accordingly, this analysis produces a range of estimates from the available academic literature and reports the median as its central tendency estimate.[19]
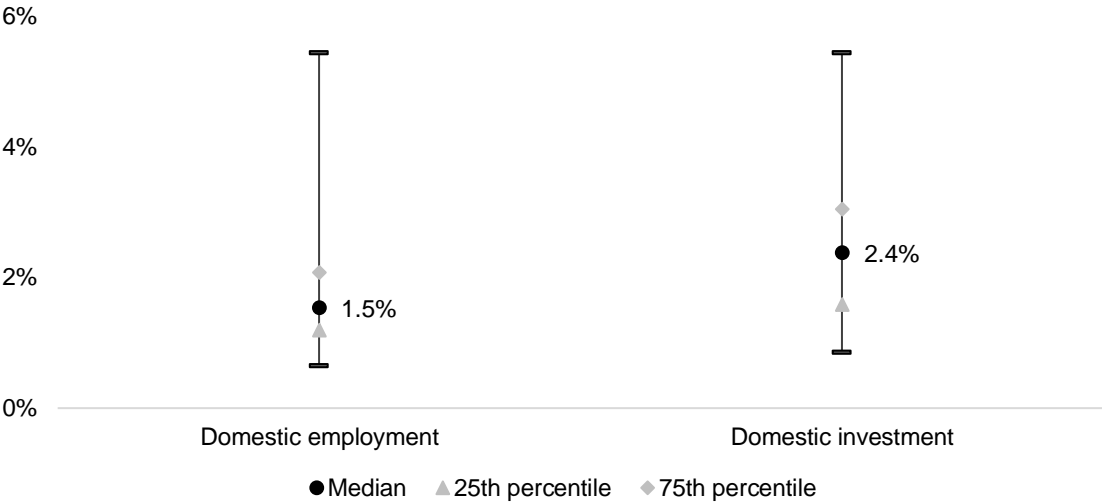
The results are summarized below:

► MNE domestic employment is estimated to decline by 1.5 percentage points

► MNE domestic investment is estimated to decline by 2.4 percentage points

When scaled to data on MNEs, this results in a 370,000-worker decline in jobs at impacted businesses and a $22 billion decline in investment.

The potential range of impacts suggested by the academic literature is summarized below in Figure 1. The 25th and 75th percentiles are also reported and they are not significantly different from the median value. The 25th percentile is the value at which 25% of the results are below that value and 75% of the results are above that value. The 75th percentile is the value at which 75% of the results are below that value and 25% of the results are above that value. The median is also known as the 50th percentile.

Figure 1. Estimated impact of Pillar Two changes on domestic activity of MNEs

●Median ▲25th percentile ◆75th percentile

Note: There is significant uncertainty regarding the potential implementation and impact of Pillar Two. These uncertainties arise because the exact details of Pillar Two are uncertain; many details that are available can be too complex to model with publicly available data; it is uncertain which countries will ultimately adopt Pillar Two, when this will occur, and in what form; there are likely to be interactions between Pillar One and Pillar Two that are not considered as part of this analysis; and the behavioral responses of companies in response to Pillar Two are uncertain, among others. See the caveats and limitations section of this report for additional discussion.
Source: EY analysis.

IV. Potential response: Adapting US tax law to rising global tax costs

Adapting US tax law to account for rising global tax costs for MNEs could mitigate this reduction in US economic activity. To illustrate the potential impact, this report considers two commonly discussed changes to the US tax on GILTI that could partially offset the increase in taxation for the US MNE sector. Other potential changes are discussed qualitatively. This report does not offer any judgements on what the likely or proper US response is.

<u>Background: GILTI</u>

GILTI is a definition of certain earnings of foreign affiliates of US-based MNEs – referred to as CFCs – that was adopted as part of the Tax Cuts and Jobs Act (TCJA) of 2017. The GILTI rules operate as a form of tax on the profits of US-based MNEs. The rationale for the provision when enacted under the TCJA was to subject a portion of the foreign earnings of US MNEs operating in low-tax jurisdictions to a minimum tax to reduce the incentive for shifting corporate profits to low-taxed jurisdictions.

The GILTI tax is imposed currently (without deferral) and implemented by allowing a deduction of 50% of the income through 2025 and 37.5% thereafter. The implied statutory GILTI tax rate is generally 10.5% (=21% x (1-50%)) through 2025 and 13.125% (=21% x (1-37.5%)) thereafter.[20]

Under current law, GILTI allows US MNEs to take a credit against US tax for taxes paid to foreign jurisdictions to prevent double taxation. GILTI is applied on a worldwide basis, so that taxes paid to higher tax jurisdictions may be used to offset US tax liability from income earned in low tax jurisdictions. However, the tax credit that the United States allows for foreign taxes paid on GILTI is limited to 80%. Because of this GILTI "haircut," GILTI effectively taxes at a rate of 13.125% even though the (after-deduction) statutory rate is 10.5%. That is, the credit can eliminate GILTI-related tax liability if the foreign tax rate is at least equal to 13.125% (13.125% x 80% = 10.5%).

Foreign tax credits are further limited by the application of pre-existing rules requiring the allocation of a portion of US expenses, like interest expense, to foreign source earnings, meaning that foreign earnings subject to even higher foreign tax rates are subject to the GILTI tax. In addition, currently unused foreign tax credits related to GILTI income cannot be carried back or forward – they expire unused.[21]

As an illustration of adapting US tax law to account for rising global tax costs, this report estimates the impact of a policy response of (1) eliminating the GILTI haircut and (2) eliminating expense allocation. The impact of these provisions are estimated in the same international tax model used to estimate the tax and economic impact of widespread adoption of Pillar Two outside of the United States described above.

Overall, it is estimated that these two changes to the US tax on GILTI would increase the domestic jobs at MNEs by roughly 160,000 workers and the annual domestic investment of MNEs by roughly $8 billion. Put differently, these changes could offset approximately 40% of the estimated economic impact of widespread adoption of Pillar Two outside of the United States. On net, Pillar Two (negative economic impact) combined with this illustrative tax relief for MNEs (positive economic impact) results in 230,000 (=370,000 - 140,000) fewer domestic jobs at MNEs. Including

additional policy changes could further offset the estimated losses due to widespread implementation of Pillar Two.

<u>Other potential policy responses</u>

Other potential changes to US tax law for MNEs that could partially offset the increase in taxation for the US MNE sector include, but are not limited to:[22]

Provide treaty-based foreign tax credit

Congress could amend section 901 (with a conforming amendment to section 960) to clarify that a "foreign income tax" includes any covered tax under an applicable US income tax treaty. In addition, the Senate could require, as a condition to treaty ratification, corresponding language be included Article 23 (the article on double tax relief) in all future tax treaties. These changes would allow the foreign tax credit rules to better respond to the risks of double taxation arising as US treaty partners attempt to update their tax rules in response to Pillar Two. These amendments could also alleviate the difficulties that the Department of Treasury has encountered following the enactment of the TCJA when attempting to craft regulations which align the goals of the tax code at section 901 and the goal of tax treaties (i.e., preventing double taxation).

Provide sourcing rules that address the UTPR

The sourcing rules which determine the treatment of expenses as related to US or foreign locations for purposes of calculating the foreign tax credit limitation of section 904 (i.e., sections 861-864) could be amended to provide that a deduction for a UTPR attributable to US income incurred by a foreign entity could be allocated to US income. This is on the principle that a deduction should be allocated to the underlying income to which it relates. By not allocating the UTPR expense to the UTPR-paying entity's own foreign income, the foreign tax credit limitation is unaffected, thereby mitigating the risk that additional double taxation will arise.

Furthermore, a US parent could be allowed a deduction for a UTPR attributable to its US income that is imposed on a foreign entity to the extent the US parent reimburses the foreign entity for the UTPR. Allowing a deduction could also make clear that the reimbursement is not treated as a capital contribution. This treatment is necessary where the Pillar Two rules provide for the possibility of extraterritorial taxation whereby an entity may be liable for a charge based upon income to which the entity does not have any corresponding right (e.g., when the charge is payable by a subsidiary entity in connection with parent entity low-taxed profits).

Provide for greater utilization of GILTI foreign tax credits

Section 904(c) could be amended by deleting the final sentence in that section. This change would eliminate the one year "use it or lose it" scenario currently applicable to GILTI basket FTCs. As foreign governments apply additional taxes under Pillar Two, there is increasing pressure on the foreign tax credits in the GILTI basket because there will be an increase to tax expenses without a corresponding increase to earnings / FTC limitation in that basket. The ability to carry those GILTI FTCs to different tax periods, similar to the treatment of credits in the so called "general limitation basket," could help mitigate the risk of double taxation on CFC income.

V. Potential response: Enacting retaliatory tariffs

Alternatively, the United States could respond by implementing retaliatory tariffs. Tariffs are, in effect, excise taxes on goods and services imported into the United States from other jurisdictions. The tax increase from tariffs is typically thought to be passed forward to US consumers through higher prices, which would further reduce US economic activity.[23]

Recently enacted tariffs include the 2018 tariffs on solar panels, washing machines, steel, aluminum and a broad range of products from China. Some members of Congress have recently expressed support for maintaining the tariffs on solar panels and steel.[24] Recent discussions of new tariffs include, for example, carbon border tariffs being suggested by some Republican members of the Senate (e.g., the "foreign pollution fee") as well as broadly similar proposals from some Democratic members (e.g., the Clean Competition Act).

This report estimates the economic impact of an across-the-board one percentage-point increase in tariffs. This is, in aggregate, the same order of magnitude as the change in tariff revenue as a share of imports between 2017 and 2020. There are, of course, other potential retaliatory measures that could reduce economic activity. This report does not offer any judgements on what the likely or proper US response is.

The economic impact of retaliatory tariffs is estimated using the EY Macroeconomic Model, which is a general equilibrium model. Other estimates in this report are produced in a partial equilibrium framework. All results here and throughout the report are after the economy has fully adjusted to a policy change.

EY Macroeconomic Model

The economic impacts are estimated using the EY Macroeconomic Model, an overlapping generations model similar to models used by the Congressional Budget Office (CBO), Joint Committee on Taxation (JCT), and US Department of the Treasury to analyze changes in tax policy.[25]

The EY Macroeconomic Model includes a detailed modeling of industries and inter-industry linkages. Businesses choose the optimal mix of capital and labor based on relative prices and industry-specific characteristics. Each industry has a different relative size of capital, labor, and intermediate inputs associated with its output. This model is designed to include key economic decisions of businesses and households affected by tax policy, as well as major features of the US economy. The post-tax returns from work and savings are incorporated into business and households' decisions on how much to produce, save, and work.

A description of the EY Macroeconomic Model can be found in the appendix.

Use of revenues

An important element of these policy simulations is that they generate revenue, which creates opportunities inherent with the use of these revenues. The revenue could be used, for example, to reduce preexisting taxes, fund additional government spending or transfers, or reduce the federal deficit. This analysis assumes that the revenue is used to fund government transfers.
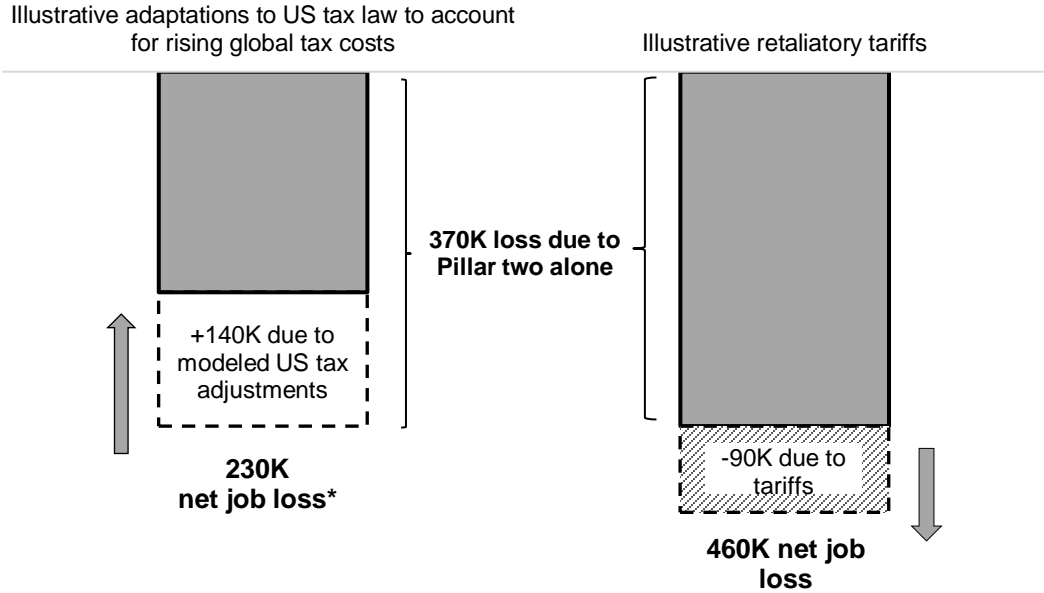
Government transfer programs are assumed not to boost private sector productivity or private sector output but could achieve other policy objectives.[26]

Macroeconomic estimates

This report estimates that an across-the-board 1 percentage-point increase in tariffs would exacerbate the negative economic impact of widespread adoption of Pillar Two outside of the United States and further reduce US jobs by roughly 90,000 and US investment by roughly $7 billion. On net, Pillar Two (negative economic impact) combined with retaliatory tariffs (negative economic impact) results in 470,000 (=380,000 + 90,000) fewer domestic jobs.

The net economic impact of Pillar Two and the illustrative policy responses are summarized in Figure 2.

Figure 2. Net domestic employment impact of widespread adoption of Pillar Two outside of the United States and illustrative US policy responses

Illustrative adaptations to US tax law to account for rising global tax costs

Illustrative retaliatory tariffs

370K loss due to Pillar two alone

+140K due to modeled US tax adjustments

230K net job loss*

-90K due to tariffs

460K net job loss

* Job losses can be further offset by the implementation of additional policies, including -- but not limited to -- those described in the body of this report.

Note: There is significant uncertainty regarding the potential implementation and impact of Pillar Two. These uncertainties arise because the exact details of Pillar Two are uncertain; many details that are available can be too complex to model with publicly available data; it is uncertain which countries will ultimately adopt Pillar Two, when this will occur, and in what form; there are likely to be interactions between Pillar One and Pillar Two that are not considered as part of this analysis; and the behavioral responses of companies in response to Pillar Two are uncertain, among others. See the caveats and limitations section of this report for additional discussion.
Source: EY analysis.

VI. Caveats and limitations

Any modeling effort is only an approximate depiction of the economic forces it seeks to represent, and the economic model developed for this analysis is no exception. Although various limitations and caveats might be listed, several are particularly noteworthy:

▶ **The exact details of how Pillar Two will be implemented are highly uncertain.** Although the OECD released administrative guidance in February 2023, the exact details of Pillar Two are subject to significant uncertainty. Moreover, it is uncertain which countries will ultimately adopt Pillar Two, when this will occur, and in what form. Some countries have taken legislative action on Pillar Two while others have announced an intention to do so this year. This report defines widespread adoption of Pillar Two outside the United States as the foreign income of US MNEs being subject to QDMTTs and the domestic income of MNEs being subject to UTPRs for MNEs with revenue of at least €750 million. This is a stylized assumption. This analysis makes no judgement regarding what widespread adoption of Pillar Two outside of the United States is likely to be and, if it occurs, it could significantly differ from the stylized assumptions made in this analysis.

▶ **Pillar Two calculations are high-level approximations.** The estimates in the report are limited by public information and use country-level and industry-level data. Specifically, the analysis primarily relies on information reported by federal government agencies (primarily from the Internal Revenue Service and US Bureau of Economic Analysis). Many details that are available for Pillar Two can be too complex to be modeled with publicly available data. Additionally, a key limitation to this analysis is the limited publicly available company-level data ideal for doing an analysis of changes to the international tax regime. Ideally this analysis would rely on company-level data as aggregating such data – as is necessary when using publicly available data – will generally reduce the accuracy of the results.

▶ **There are likely to be interactions between Pillar One and Pillar Two that are not considered as part of this analysis.** The IF's approach includes two components, Pillar One and Pillar Two. Pillar One prescribes new nexus and profit allocation rules with the objective of assigning a greater share of taxing rights over global business income to market jurisdictions. Pillar Two, the focus of this report, is a 15% global minimum tax. Pillar One is not modeled as part of this analysis.

▶ **The analysis assumes that the share of tangible assets used for the SBIE is 5% and the share of payroll is 5%.** In the initial years of Pillar Two, these percentages are 8% and 10%, respectively. Jurisdictions, per the administrative guidance, can also choose to implement an SBIE that is lower than the stated percentages.

▶ **Foreign taxes on the foreign income of US MNEs arising from QDMTTs are assumed to generate FTCs for GILTI.** However, the US Treasury has not yet confirmed whether QDMTT will be creditable for FTC purposes nor suggested whether limitations might be placed on creditability.

▶ **Behavioral responses of companies in response to Pillar Two are uncertain.** Given the unprecedented nature of Pillar Two it is unclear what the behavioral responses of

businesses would be. This analysis relies on an extrapolation of the existing academic literature, but this is out-of-sample extrapolation and may not be representative of how businesses will respond to Pillar Two.

▶ **The responsiveness of domestic MNE activity to changes in their foreign operations is uncertain.** There is significant uncertainty surrounding the responsiveness of domestic activity to changes in foreign activity. In addition to the range of estimates provided, some papers find that domestic and foreign activities are substitutes, rather than complements.[27]

▶ **Estimates are a comparative static.** This analysis compares fully phased in versions of current law and of widespread adoption of Pillar Two outside of the United States. It is likely to take time for any such adjustments to work themselves out, so that the full effects would be realized over time, not immediately.

▶ **Information reported in financial statements may change in response to Pillar Two.** Neither the behavioral response of companies potentially changing the information reported on their financial statements for tax reasons nor the potential economic impact of a change in the quality of financial statements on financial markets is taken into account.

▶ **The range of estimates for the economic impact of widespread adoption of Pillar Two outside of the United States is not statistical in nature.** This report provides a range of point estimates from the empirical literature on how widespread adoption of Pillar Two outside of the United States could impact domestic activity. The range should not be viewed as a confidence interval or statistical in nature.

▶ **Modeling captures the partial equilibrium effects of the international tax policy changes, except for the modeling of the economic impacts of tariffs, which uses a general equilibrium framework.** The empirical work on which this analysis is based largely does not include "general equilibrium effects" that might accompany the Pillar Two tax changes that affect a wide range of businesses. For example, employment might go up in other businesses not in-scope for Pillar Two. Nonetheless, there may remain losses for the economy as a whole. MNEs tend to be highly productive and innovative businesses and damaging them may hurt the economy even if workers eventually find jobs elsewhere. Some researchers have argued that "general equilibrium effects" are likely to reduce the response but not to change the direction. These economy-wide effects, however, might be realized as lower labor income, caused by a shift of labor to less productive activities and a reduced US capital stock, rather than as reduced employment. Labor earnings would be harmed in any event. Tariffs, however, are estimated in a general equilibrium framework.

Appendix

The EY Macroeconomic Model used for the tariff analysis is similar to those used by the CBO, JCT, and US Treasury Department.[28] In this model, changes in tax policy affect the incentives to work, save and invest, and to allocate capital and labor among competing uses. Representative individuals and firms incorporate the after-tax return from work, savings, and investment, into their decisions on how much to produce, save, and work.

The general equilibrium methodology accounts for changes in equilibrium prices in factor (i.e., capital and labor) and goods markets and simultaneously accounts for the behavioral responses of individuals and businesses to changes in taxation (or other policies). Behavioral changes are estimated in an overlapping generations (OLG) framework, whereby representative individuals with perfect foresight incorporate changes in current and future prices when deciding how much to consume and save in each period of their lives.

High-level description of model's structure

Production

Firm production is modeled with the constant elasticity of substitution (CES) functional form, in which firms choose the optimal level of capital and labor subject to the gross-of-tax cost of capital and gross-of-tax wage. The model includes industry-specific detail through use of differing costs of capital, factor intensities, and production function scale parameters. Such a specification accounts for differential use of capital and labor between industries as well as distortions in factor prices introduced by the tax system. The cost of capital measure models the extent to which the tax code discriminates by asset type, organizational form, and source of finance.

The industry detail included in this model corresponds approximately with three-digit North American Industry Classification System (NAICS) codes and is calibrated to a stylized version of the US economy. Each of 36 industries has a corporate and pass-through sector except for owner-occupied housing and government production. Because industry outputs are typically a combination of value added (i.e., the capital and labor of an industry) and the finished production of other industries (i.e., intermediate inputs), each industry's output is modeled as a fixed proportion of an industry's value added and intermediate inputs to capture inter-industry linkages. These industry outputs are then bundled together into consumption goods that consumers purchase.

Consumption

Consumer behavior is modeled through use of an OLG framework that includes 55 generational cohorts (representing adults aged 21 to 75). Thus, in any one year, the model includes a representative individual optimizing lifetime consumption and savings decisions for each cohort aged 21 through 75 (i.e., 55 representative individuals) with perfect foresight. The model also distinguishes between two types of representative individuals: those that have access to capital markets (savers) and those that do not (non-savers or rule-of-thumb agents).

Non-savers and savers face different optimization problems over different time horizons. Each period non-savers must choose the amount of labor they supply and the amount of goods they

consume. Savers face the same tradeoffs in a given period, but they must also balance consumption today with the choice of investing in capital or bonds. The model assumes 50% of US households are permanently non-savers and 50% are permanently savers across all age cohorts.

The utility of representative individuals is modeled as a CES function, allocating a composite commodity consisting of consumption goods and leisure over their lifetimes. Representative individuals optimize their lifetime utility through their decisions of how much to consume, save, and work in each period subject to their preferences, access to capital markets, and the after-tax returns from work and savings in each period. Representative individuals respond to the after-tax return to labor, as well as their overall income levels, in determining how much to work and thereby earn income that is used to purchase consumption goods or to consume leisure by not working. In this model the endowment of human capital changes with age — growing early in life and declining later in life — following the estimate of Altig et al. (2001).[29]

Government

The model includes a simple characterization of both federal and state and local governments. Government spending is assumed to be used for either: (1) transfer payments to representative individuals, or (2) the provision of public goods. Transfer payments are assumed to be either Social Security payments or other transfer payments. Social Security payments are calculated in the model based on the 35 years in which a representative individual earns the most labor income. Other transfer payments are distributed on a per capita basis. Public goods are assumed to be provided by the government in fixed quantities through the purchase of industry outputs as specified in a Leontief function.

Government spending in the model can be financed by collecting taxes or borrowing. Borrowing, however, cannot continue indefinitely in this model. Eventually, the debt-to-GDP ratio must stabilize so that the government's fiscal policy is sustainable. The model allows government transfers, government provision of public goods, or government tax policy to be used to achieve a selected debt-to-GDP ratio after a selected number of years. This selected debt-to-GDP ratio could be, for example, the initial debt-to-GDP ratio or the debt-to-GDP ratio a selected number of years after policy enactment.

Modeling the United States as a large open economy

The model is an open economy model that includes both capital and trade flows between the United States and the rest of the world. International capital flows are modeled through the constant portfolio elasticity approach of Gravelle and Smetters (2006).[30] This approach assumes that international capital flows are responsive to the difference in after-tax rates of return in the United States and the rest of the world through a constant portfolio elasticity expression. Trade is modeled through use of the Armington assumption, wherein products made in the United States versus the rest of the world are imperfect substitutes.

Table A-1. Key model parameters

Intertemporal substitution elasticity	0.4
Intratemporal substitution elasticity	0.6
Leisure share of time endowment	0.4
International capital flow elasticity	3.0
Capital-labor substitution elasticity	0.8
Adjustment costs	2.0

Source: Key model parameters are generally from Joint Committee on Taxation, *Macroeconomic Analysis of the Conference Agreement for H.R. 1, The 'Tax Cuts and Jobs Act,'* December 22, 2017 (JCX-69-17) and Jane Gravelle and Kent Smetters, "Does the Open Economy Assumption Really Mean that Labor Bears the Burden of a Capital Income Tax?" *Advances in Economic Analysis and Policy,* 6(1) (2006): Article 3.

Endnotes

[1] See *Tax Challenges Arising from Digitalisation of the Economy – Global Anti-Base Erosion Model Rules (Pillar Two)*, OECD, 2021 https://www.oecd-ilibrary.org/taxation/tax-challenges-arising-from-digitalisation-of-the-economy-global-anti-base-erosion-model-rules-pillar-two_782bac33-en; *Statement on a Two-Pillar Solution to Address the Tax Challenges Arising from the Digitalisation of the Economy*, OECD, 2021. https://www.oecd.org/tax/beps/statement-on-a-two-pillar-solution-to-address-the-tax-challenges-arising-from-the-digitalisation-of-the-economy-october-2021.pdf; and *Tax Challenges Arising from the Digitalisation of the Economy – Administrative Guidance on the Global AntiBase Erosion Model Rules (Pillar Two)*, OECD, February 2023. https://www.oecd.org/tax/beps/agreed-administrative-guidance-for-the-pillar-two-globe-rules.pdf. For a full list of IF member jurisdictions see: https://www.oecd.org/tax/beps/inclusive-framework-on-beps-composition.pdf

[2] For more information on Pillar One, see *OECD releases Pillar One public consultation document on draft nexus and revenue sourcing rules*, EY Global Tax Alert, 2022 https://www.ey.com/en_gl/tax-alerts/oecd-releases-pillar-one-public-consultation-document-on-draft-nexus-and-revenue-sourcing-rules.

[3] While the Pillar Two is denominated in Euros, the administrative guidance to Pillar Two provides the guidance for annual adjustment for jurisdictions that enact legislation with thresholds in a different currency. The administrative guidance states that annual threshold adjustments should be based on the average exchange rate for the month of December as quoted by the European Central Bank. In December 2022, one Euro was equivalent to approximately 1.059 USD.

[4] Pillar Two also includes a subject to tax rule (STTR), which is a treaty-based rule that allows jurisdictions in which CEs operate to impose withholding tax on certain related party payments that are subject to tax below a minimum rate.

[5] For more detail on Pillar Two, see *OECD/G20 Inclusive Framework releases Administrative Guidance under Pillar Two GloBE Rules: Detailed Review,* EY Tax News Update Global Edition, 2023 https://globaltaxnews.ey.com/news/2023-5172-oecd-g20-inclusive-framework-releases-administrative-guidance-under-pillar-two-globe-rules-detailed-review.

[6] For discussions of the application of US credits, see *New OECD Guidance Answers Pressing Global Minimum Tax Questions*, taxnotes, 2023 https://www.taxnotes.com/tax-notes-today-international/base-erosion-and-profit-shifting-beps/new-oecd-guidance-answers-pressing-global-minimum-tax-questions/2023/02/03/7fxhk; and *U.S. Research Credit, FDII Break Relief Under GLOBE Unlikely*, taxnotes, 2023 https://www.taxnotes.com/tax-notes-today-international/credits/us-research-credit-fdii-break-relief-under-globe-unlikely/2023/03/10/7g4c8.

[7] The administrative guidance confirms that the US GILTI regime, in its current form, is a CFC tax regime under the GloBE rules. The administrative guidance provides a limited time, allocation approach for CFC taxes levied under GILTI and other blended CFC tax regimes. This approach is applicable for fiscal years beginning on or before 31 December 2025 (but not including a fiscal year that ends after 30 June 2027). Tax on GILTI is included when calculating the GETR under IIRs and UTPRs but not under QDMTTs. The US Treasury has not yet clarified whether tax arising from QDMTTs is creditable for US FTC purposes.

[8] Jurisdictions can also choose to implement an SBIE that is lower than 5% of tangible assets and 5% of payroll.

[9] According to the administrative guidance, "A QDMTT is not required to have a substance carve-out. However, if it has a substance carve-out, such carve-out must not be broader than the substance factors as set out in the Substance-based Income Exclusion, i.e. tangible assets and payroll. The scope and measure of tangible assets and payroll must not be broader than the GloBE Rules to ensure functionally equivalent outcomes. However, the QDMTT carve-out could provide for an applicable percentage lower than the GloBE Rules." See *Tax Challenges Arising from the Digitalisation of the Economy – Administrative Guidance on the Global AntiBase Erosion Model Rules (Pillar Two)*, OECD, 2023 https://www.oecd.org/tax/beps/agreed-administrative-guidance-for-the-pillar-two-globe-rules.pdf.

[10] Pillar Two charging provisions are defined here and throughout the report as QDMTTs, IIRs, and UTPRs.

[11] The ETR analysis primarily relies on 2019 IRS country-by-country reporting data. Additional calculation parameters were derived from other IRS data and BEA data for 2019. A caution in using these 2019 IRS country-by-country reporting data is that intra-company dividends could be included in pre-tax income, which could lead to artificially low ETRs. Specifically, the OECD notes: "MNEs may have included intra-company dividends in profit figures, meaning that profit figures could be subject to double counting. Uncertainty about the inclusion or exclusion of intra-company dividends in profit before tax hampers the interpretation of CbCR statistics and the comparability of the aggregate data across reporting jurisdictions. While the inclusion of dividends in the profit figure is normal in separate financial accounting, in the context of corporate income tax analysis it can lead to biased results. As a distribution of post-tax profits, dividends are often lightly taxed or tax-exempt. Therefore, the inclusion of intra-company dividends in "profit (loss) before income tax" can result in artificially low effective tax rates (ETRs)." To adjust for this, this analysis reduces pre-tax profits by 17%, in accordance with the IMF methodology. For more detail, see *Important disclaimer regarding the limitations of the Country-by-Country report statistics*, OECD, 2022 https://www.oecd.org/tax/tax-policy/anonymised-and-aggregated-cbcr-statistics-disclaimer.pdf. For more discussion see *"Economic Analysis: Are Country by Country Reports Worthless?"*, Martin Sullivan (2020), Tax Notes, January 21 https://www.taxnotes.com/tax-

notes-today-international/information-reporting/economic-analysis-are-country-country-reports-worthless/2020/01/13/2brx4; "*Profit Shifting Before and After the Tax Cut and Jobs Act",* Kimberly Clausing (2020b), December, *National Tax Journal*, https://www.journals.uchicago.edu/doi/10.17310/ntj.2020.4.14; and "*Double Counting: How much profit of multinational enterprises is really in tax havens?"* Jennifer Blouin and Leslie A. Robinson (2020) https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3491451.

[12] See *International Corporate Tax Reform*, *Policy Paper No. 2023/001*, International Monetary Fund, 2023 https://www.imf.org/en/Publications/Policy-Papers/Issues/2023/02/06/International-Corporate-Tax-Reform-529240.

[13] This IRS data used in this report implies the following distribution of profit across groupings of ETRs on foreign income: 45% in <5% ETR jurisdictions, 9% in 5-10% ETR jurisdictions, 11% in 10-15% ETR jurisdictions, 12% in 15-20% ETR jurisdictions, 8% in 20-25% ETR jurisdictions, and 15% in 25%+ jurisdictions. Notably, this finding is broadly similar to Clausing (2020a). In contrast, IMF (2023) estimates that 18.5% of the global profit of MNEs (i.e., not just the foreign income of US MNEs) is taxed below 15%. See Kimberly A. Clausing, "5 Lessons on Profit Shifting From U.S. Country-by-Country Data," Tax Notes Federal, November 9, 2020, p. 925-940.

[14] See *New OECD Guidance Answers Pressing Global Minimum Tax Questions*, taxnotes, 2023 https://www.taxnotes.com/tax-notes-today-international/base-erosion-and-profit-shifting-beps/new-oecd-guidance-answers-pressing-global-minimum-tax-questions/2023/02/03/7fxhk In this analysis, the estimation of the change in ETR for US parent companies under UTPR was adjusted to account for these protected credits by revising upwards the taxes paid by the value of LIHTC and renewable energy tax credits.

[15] The change in ETR due to Pillar Two is largely consistent with other analyses. For example, the Penn Wharton Budget Model finds that Pillar Two would increase the ETR (inclusive of US and foreign tax) on foreign income by 4 percentage points. See *Effective Tax Rates on U.S. Multinationals' foreign income under proposed changes by House ways and means and the OECD*, UPenn, Wharton 2021 https://budgetmodel.wharton.upenn.edu/issues/2021/9/28/effective-tax-rates-multinationals-ways-and-means-and-oecd. Additionally, the Penn Wharton Budget Model results imply a corporate income tax increase for US MNEs of approximately 13%.

[16] For example, Kovak et al. (2017) finds that a 10% increase in affiliate employment results in a 1.8% increase in US parent employment. Desai et al. (2009) finds that a 10% increase in foreign investment is associated with a 2.6% increase in domestic investment, a 10% increase in foreign employee compensation is associated with a 3.7% increase in domestic employee compensation, and a 10% increase in foreign employment is associated with a 6.6% increase in domestic employment. Becker and Reidel (2011) finds that a 10 percentage-point increase in the corporate income tax rate in the parent company's country is associated with a 5.6% decrease in the capital stock of affiliates; this suggests a complementarity between a US MNE's domestic and foreign activity. Hufbauer, Moran, and Oldenski (2013) finds that a 10% increase in employment at foreign affiliates leads to a 5.4% increase in R&D spending in the United States, a 4.3% increase in capital spending in the United States, a 4.2% increase in exports from the United States, a 4.1% increase in US sales, and a 3.9% increase in US employment. Hufbauer, Moran, and Oldenski (2013) also finds similar domestic effects for increases in sales, R&D, and capital expenditures by foreign affiliates.

These results span a wide range and seem sufficient to suggest the potential responses estimated in the literature. Note that some of the papers (e.g., Desai, Foley, and Hines (2009) and Hufbauer, Moran, and Oldenski (2013)) that are used to inform the estimates of the domestic effects widespread Pillar Two adoption of Pillar Two outside of the United States do not examine the effects of taxation per se. Rather, those authors examine the relationship between foreign expansion and domestic expansion for a panel of firms over time. To the extent that the relationships between foreign and domestic activity would be different for tax policy changes, the domestic effects of widespread adoption of Pillar Two outside of the United States would differ from those estimated in this paper.

See: *"The Labor Market Effects of Offshoring by US Multinational Firms: Evidence from Changes in Global Tax Policies*," Kovak, Brian, Lindsay Oldenski, and Nicholas Sly, Working Paper, National Bureau of Economic Research, 2017;; *"Cross-border Tax Effects on Affiliate Investment – Evidence from European Multinationals*", Becker, Johannes, and Nadine Riedel, European Economic Review, 2012;; "*Estimated impacts of proposed changes to GILTI provision on US domestic economic activity*," EY, 2021, prepared for the National Association of Manufacturers.

[17] While on average the US benefits from expansion of the foreign businesses of US MNEs, some segments will likely be harmed. There is evidence suggesting, for example, that low-wage, low-skilled US workers may be among those harmed. Foreign expansion allows the United States to specialize more effectively in what it does best, which may leave these workers behind. Using tax policy to hinder the ability of US businesses to compete in world markets, however, is likely not the solution to this. Other solutions, such as providing upskilling and relocation assistance would allow these workers to gain new-economy skills. See, for example, the discussion and citations in Andre Barbe and David Riker, "*The Effects of Offshoring on US Workers: A Review of the Literature*," Journal of International Commerce and Economics, United States International Trade Commission, 2018 and in Hufbauer et al. (2013), locations 248-249, 726 in Kindle version.

[18] See, for example, "*Tax policy and business investment*", Kevin Hassett and Glenn Hubbard, (2002), in M. Feldstein and A. Auerbach (eds.), Handbook of Public Economics, Vol. 3, Elsevier North Holland, pp. 1293-1343.

[19] Economic impacts were determined by pooling the results of the academic literature on the topic. The results for this paper were calculated on an industry-by-industry basis for in-scope US MNEs. The results also include the domestic economic effects from potential changes in the US operations of foreign MNEs operating in the US. Economy-wide averages are reported for simplicity.

Several measures of the domestic impacts rely on estimated changes in foreign employment and investment. These impacts were calculated first and then applied to the domestic employment and investment literature. For foreign investment, a literature review by de Mooij and Ederveen (2008) finds a central tendency estimate that a 1 percentage-point increase in the marginal effective tax rate (METR) would be associated with a 0.8% decrease in foreign investment. The authors also find that the response may be much larger for foreign investment: the mean effect of the studies they reviewed is that a 1 percentage-point increase in the effective average tax rate (EATR) would result in a 3.3% decrease in foreign investment. Feld and Heckemeyer (2011), finds a similarly large central tendency effect of 2.5% reduction in foreign investment due to each percentage-point increase in the EATR. To estimate the change in foreign labor, one potential approach is to assume that the percentage change in employment is the same as the percentage change in investment. Alternatively, Clausing (2009) estimates that a 1 percentage-point decrease in the difference between the foreign effective tax rate on capital income and the US effective tax rate would lead to a 1.6% increase in employment abroad by US MNEs. She reports that results based on statutory tax rates are about 30% smaller (i.e., an elasticity of 1.1). Clausing (2012) estimates that going to a territorial system under TCJA expanded employment by the foreign subsidiaries of US MNEs by about 800,000 in 2012, corresponding to a drop of about 3.2%. Including both the explicit and the implicit tax changes from TCJA (see Altshuler and Grubert (2013)) suggests that going to territorial would have lowered the US tax by roughly 10 percentage points.

The change in domestic employment is sourced from Serrato (2019), Hufbauer, Moran, and Oldenski (2013), and Kovak et al (2017). Serrato finds that a 1 percentage-point increase in a firm's effective tax rate was associated with a 1.2% to 1.44% decrease in employment over a 10-year period. Hufbauer, Moran, and Oldenski (2013) find that a 10% increase in employment at foreign affiliates leads to a 3.9% increase in US employment for US MNEs. The authors also find that a 10% reduction in investment in the foreign affiliate leads to a 0.9% decrease in employment in the United States. Kovak et. al find that a 10% increase in affiliate employment results in a 1.8% increase in US parent employment.

The change in domestic investment is sourced from Serrato (2019), Desai, Foley and Hines (2009), and Hufbauer, Moran, and Oldenski (2013). Serrato estimates a semi-elasticity of 1.8 for the change in domestic investment due to a change in overall ETR. Desai, Foley and Hines (2009) and Hufbauer (2013) estimate the change in domestic investment as a function of a change in foreign investment, with elasticities ranging from a 1.6% to 2.6% increase in domestic investment due to each 10% increase in foreign investment.

See "*Corporate tax elasticities: a reader's guide to empirical findings*," Ruud de Mooij and Sjef Ederveen, Oxford Review of Economic Policy 24(4), pp. 680-697, (2008); "*FDI and Taxation: A Meta-Study*," Lars Feld and Jost Heckemeyer, Journal of Economic Surveys 25(2): 233-272, (2011); "*Domestic Effects of the Foreign Activities of US Multinationals*", Desai, Mihir, C. Fritz Foley and James Hines, American Economic Journal: Economic Policy, (2009); "*Outward Direct Investment and US Exports, Jobs, and R&D: Implications for US Policy*", Gary Clyde Hufbauer, Theodore H. Moran, and Lindsay Oldenski ,The Peterson Institute for International Economics, (2013) (see original research and chapter 3); "*Unintended Consequences of Eliminating Tax Havens,*"Serrato, Juan Carlos Suarez, Working Paper, National Bureau of Economic Research, (December 2019); "*Multinational Firm Tax Avoidance and Tax Policy*," Clausing, Kimberly, (2009), National Tax Journal 62(4), pp: 703-725; "*A Challenging Time for International Tax Policy*," Clausing, Kimberly, (2012), Tax Notes pp. 281-283; "*Fixing the System: An Analysis of Alternative Proposals for the Reform of International Tax*," Grubert, Harry and Rosanne Altshuler, "National Tax Journal 66(3): pp. 671-712, (2013).

[20] GILTI also includes a high-tax exclusion that can generally be elected when foreign income is taxed at an effective rate greater than 18.9% (i.e., 90% of the 21% US corporate income tax rate).

[21] Formally, at a high level, GILTI requires the inclusion of the active income of a US parent's controlled foreign corporations (CFCs) that exceeds 10% of the CFCs' basis in their depreciable tangible property (so-called Qualified Business Asset Investment (QBAI)). GILTI also puts GILTI-related foreign taxes in a separate basket, gives a 20% haircut to the credit allowed for foreign taxes, and does not allow unused credits to be carried back or forward. GILTI does not apply to Subpart F income, foreign oil and gas income, or income effectively connected to a US business. GILTI also does not apply to the dividends from related foreign affiliates. But this is to prevent double counting in the measurement of GILTI income, not to subject such income to an alternative tax regime. GILTI also allows a deduction against taxable income for a 10% rate of return on tangible assets used in a US MNE's foreign operations as a high-level measure of the normal return on tangible assets. It is through this deduction that GILTI attempts to measure and tax only the intangible foreign income (rather than all income) of US MNEs.

[22] Other potential changes were proposed in the House-passed Build Back Better Act. For example, the bill would have eliminated the overlap of the GILTI rules and the NOL rules, which under current law and dramatically reduce a company's 250 deduction. For more detail, see https://taxnews.ey.com/news/2021-9027-house-approves-build-back-better-act-reconciliation-bill.

[23] This analysis assumes that this there is full pass-through of US tariffs to US consumers. This is consistent with empirical research for recent tariffs implemented in the United States. However, the exact amount of pass-through and how this could change over time is uncertain. See "*The Return to Protectionism*", Pablo D Fajgelbaum, Pinelopi K. Goldberg, Patrick J. Kennedy, and Amit K. Khandelwal, National Bureau of Economic Research, March 2019; "*The Impact of the 2018 Tariffs on Prices and Welfare*", Amiti, Mary, Stephen J. Redding, and David E. Weinstein, The Journal of Economic Perspectives, 33(4): 187-210, Fall 2019.

[24] For more detail on the 2018-2020 tariffs, see "*Trump Administration Tariff Actions: Frequently Asked Questions,*" Congressional Research Service, December 2020. For letters supporting the maintenance of certain tariffs, see https://www.brown.senate.gov/imo/media/doc/solar_tariffs_letter_to_potus.pdf and https://d12t4t5x3vyizu.cloudfront.net/crawford.house.gov/uploads/2023/02/FINAL-Steel-Letter-2.22.23.pdf. For examples of carbon border tariffs, see *"Border Carbon Adjustments: Background and Developments in the European Union"*, Congressional Research Service, February 2023 and https://www.whitehouse.senate.gov/news/release/whitehouse-and-colleagues-introduce-clean-competition-act-to-boost-domestic-manufacturers-and-tackle-climate-change.

[25] See, for example, "*Fiscal Policy Effects in a Heterogeneous-Agent Overlapping-Generations Economy With an Aging Population,*" Shinichi Nishiyama, Congressional Budget Office, Working Paper 2013-07, December 2013; "*Macroeconomic Analysis of the 'Tax Reform Act of 2014",* Joint Committee on Taxation (JCT), February 2014 (JCX-22-14); "*Macroeconomic Analysis of Various Proposals to Provide $500 Billion in Tax Relief*", JCT , March 2005 (JCX-4-05); and "*The President's Advisory Panel on Federal Tax Reform, Simple, Fair, & Pro-Growth: Proposals to Fix America's Tax System"*, US Department of the Treasury, November 2005.

[26] This analysis includes a stylized modeling of government transfer programs via a rebate to households. Any particular policy proposals should be explicitly modeled to estimate its effects.

[27] Some research is less supportive of the view that increases in the taxes paid on the income of foreign affiliates of US MNEs will adversely impact their US operations. See, for example, "*Outsourcing is Good for America,*" Hubbard, R. Glenn, 2004; "*How Multinational Companies Strengthen the US Economy,*" Slaughter, Matthew, United States Council Foundation, 2009; and "*Investing Abroad Means More Jobs Abroad and More Employment at Home,*" Griswold, Daniel, 2016; *"The Effects of Offshoring on U.S. Workers: A Review of the Literature,*" Barbe, Andre and Riker, David, United States International Trade Commission Journal of International Commerce and Economics, 2018.

[28] See, for example, "*Fiscal Policy Effects in a Heterogeneous-Agent Overlapping-Generations Economy With an Aging Population,*" Shinichi Nishiyama, Congressional Budget Office, Working Paper 2013-07, December 2013; "*Macroeconomic Analysis of the 'Tax Reform Act of 2014",* Joint Committee on Taxation (JCT), February 2014 (JCX-22-14); "*Macroeconomic Analysis of Various Proposals to Provide $500 Billion in Tax Relief,*" JCT, March 2005 (JCX-4-05); and, "*The President's Advisory Panel on Federal Tax Reform, Simple, Fair, & Pro-Growth: Proposals to Fix America's Tax System",* US Department of the Treasury, , November 2005.

[29] See "*Simulating Fundamental Tax Reform in the United States,*" David Altig, Alan Auerbach, Laurence Koltikoff, Kent Smetters, and Jan Walliser, *American Economic Review,* 91(3) (2001): 574-595.

[30] See *"Does the Open Economy Assumption Really Mean That Labor Bears the Burden of a Capital Income Tax?"*, Jane Gravelle and Kent Smetters, *Advances in Economic Analysis and Policy,* 6(1) (2006): 1-42.