October 31, 2019

Dear Senator Warren:

We understand that health care experts have projected that your Medicare for All plan would require $20.5 trillion in additional federal funding between 2020 and 2029. We estimate that the revenue and spending options presented below would provide a combined $20.5 trillion in additional funding between 2020 and 2029 for Medicare for All without imposing any new taxes on middle-class families.

Our analysis is not an endorsement of Medicare for All or of these proposed revenue and spending options to fund it.

Your potential funding sources fall into six categories:

- **Employer Medicare Contribution:** The Employer Medicare Contribution would generate an estimated $8.8 trillion in federal revenue while reducing the net costs of health care for American businesses by approximately $200 billion over the next ten years. Private sector employers are projected to spend approximately $9 trillion between 2020 and 2029 on employer contributions for employee health insurance, health-related expenses for employees under workers’ compensation and long-term disability, and health plan administration. Under your Medicare for All plan, employers would no longer have to pay these costs. Your proposal would replace what individual employers are projected to pay for health insurance costs per-employee with a contribution to Medicare that is less than that projected amount, generating significant federal revenue while saving every employer money.

- **Additional Take-Home Pay Subject to Existing Taxes:** Medicare for All automatically produces additional take-home pay for families because they no longer need to pay their share of premiums for the cost of their company’s health insurance or for additional health insurance expenses through Health Savings Accounts and similar tax-advantaged accounts. This additional gross take-home pay is subject to taxation under existing tax laws, generating an estimated $1.4 trillion in federal revenue.

- **Taxes on the Financial Sector, Large Corporations, and the Top 1% of Individuals:** We estimate that new targeted taxes on financial firms will generate $900 billion in revenue, new taxes on large corporations will generate $2.9 trillion in revenue, and new taxes on the top 1% of individuals will generate $3 trillion in revenue, for a total of $6.8 trillion in additional federal revenue.

- **Better Enforcement of Existing Tax Laws:** You propose significant investments in more robust enforcement of our tax laws and adoption of best practices on tax compliance to reduce tax evasion and bring America’s tax gap closer to the tax gap of countries like the United Kingdom. We estimate these measures would generate $2.3 trillion in additional federal revenue without requiring the imposition of any new taxes.
• **Immigration Reform**: You support immigration reform, including a pathway to citizenship. We estimate that such reform generates an estimated $400 billion in net additional federal revenue in the form of increased tax payments, not incorporating macrodynamic effects on economic growth from greater immigration.

• **Elimination of the Overseas Contingency Operations Fund**: You propose eliminating the Overseas Contingency Operations fund, which frees up an estimated $800 billion in funding over the next ten years.

The following table summarizes our revenue estimates:

<table>
<thead>
<tr>
<th>Source</th>
<th>Estimated Funding, 2020-29 (in trillions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employer Medicare Contribution</td>
<td>8.8</td>
</tr>
<tr>
<td>Additional take-home pay subject to existing taxes</td>
<td>1.4</td>
</tr>
<tr>
<td>Targeted taxes on financial firms</td>
<td>0.9</td>
</tr>
<tr>
<td>Taxes on large corporations</td>
<td>2.9</td>
</tr>
<tr>
<td>Taxes on the top 1% of individuals</td>
<td>3.0</td>
</tr>
<tr>
<td>Investments and improvements in tax enforcement to narrow the tax gap</td>
<td>2.3</td>
</tr>
<tr>
<td>Immigration reform</td>
<td>0.4</td>
</tr>
<tr>
<td>Elimination of the Overseas Contingency Operations fund</td>
<td>0.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20.5</strong></td>
</tr>
</tbody>
</table>

The remainder of this letter provides relevant background and detailed revenue estimates.

**Background**

Americans spend about twice the average of our peer countries on health care per person, and 28% more per person than the next-highest spending country.\(^1\) Total national health expenditures in the United States were nearly $3.5 trillion in 2017 — approximately 17.9% of Gross Domestic

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\(^1\) Per-capita healthcare spending in the U.S. was $10,224 in 2017, which was 28% higher than Switzerland, the next highest spender per capita, and roughly double the comparable country average of $5,280. “How Does Health Spending in the U.S. Compare to Other Countries?,” Peterson-Kaiser Health System Tracker, December 7, 2018, [https://www.healthsystemtracker.org/chart-collection/health-spending-u-s-compare-countries/](https://www.healthsystemtracker.org/chart-collection/health-spending-u-s-compare-countries/).
Product. Total national health expenditures are projected to rise sharply in coming years, reaching nearly $6 trillion by 2027 – or 21% of projected GDP.

A large part of this cost is borne by employers and individuals. The average annual premium for employer-sponsored insurance for a family is now more than $20,000, with employers paying about 70% of this cost. According to recent estimates from the Kaiser Family Foundation, this current average annual premium rose 22% over the last five years, and 54% over the last ten years — faster than both wages and inflation. Average out-of-pocket costs for individuals with insurance also continues to increase, reaching nearly $779 in 2017, up 58% since 2007.

Despite this level of spending, America does not achieve universal coverage, and does not have the best health outcomes. More than 27 million Americans remain uninsured. Forty percent of Americans — including those with insurance — report forgoing a recommended medical test or treatment in the last year because of cost. The United States has the lowest life expectancy at birth among our peer countries, and life expectancy overall has declined each of the last three years for which we have data available. Our maternal mortality rate is higher than most of our peer countries, as is our infant mortality rate.

Revenue Estimates

Employer Medicare Contribution

By law, employers with at least fifty full-time employees must offer health care coverage to their employees or pay a per-employee penalty. That means American companies with fifty or more full-time employees are paying for health care one way or another. Many companies with fewer than fifty employees offer health insurance for their employees too.

According to current forecasts, private sector employers collectively are projected to spend just under $9 trillion between 2020 and 2029 to provide and administer health care for employees, primarily in the form of premium contributions for employee-sponsored insurance.

The Employer Medicare Contribution would require every employer who is paying for health care today to pay less for health care per-employee than they are projected to pay, with a target of generating $8.8 trillion in federal revenue between 2020 and 2029. Like current premium payments for health insurance, the Employer Medicare Contribution payments would be tax-deductible.

To calculate the contribution, employers will determine what they spent on premium contributions for employer-sponsored insurance, other health-related expenses for employees, and health plan administration in each of the last three years, and divide that by the number of employees of the company in each of those years to arrive at their average annual health care cost per employee. (Part-time employees would count in proportion to the number of hours they worked.) A similar calculation would apply to pass-through entities, such as law firms or private equity funds, and health-related expenses now paid by them or their owners or partners, even though such individuals technically are not employees. Self-employed individuals would be required to provide Employer Medicare Contributions if they exceed an income threshold.

Under the first year of Medicare for All, employers would be obligated to take that per-employee cost, adjust it upwards to account for the overall increase in national health care spending,

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multiply it by their total number of employees, and contribute 98% of that amount as their Employer Medicare Contribution. Over time, an employer’s health care cost-per-employee would gradually be shifted downwards (or upwards) towards the average health care cost-per-employee nationally among firms paying the Employer Medicare Contribution. If needed to meet the $8.8 trillion revenue target, there would be a Supplemental Employer Medicare Contribution requirement for large firms with extremely high executive compensation and stock buyback rates.

Small businesses — those with fewer than fifty employees — would be exempt from the Employer Medicare Contribution unless they are already paying for employee health care today. For new firms that exceed the small business threshold, the government would phase in a requirement to make Employer Medicare Contributions equal to the national average cost of health care-per-employee across all employers paying the Employer Medicare Contribution. Merging firms would pay the weighted average cost of health care-per-employee of the two firms that are merging. Additional rules, including anti-evasion rules, would be developed.

Employers currently offering health benefits under a collective bargaining agreement would receive a discount on their Employer Medicare Contribution if they pass along an equivalent amount of the savings to workers in the form of increased wages, pensions, or other collectively bargained benefits. New firms, or existing firms which enter into a collective bargaining agreement with their employees after the enactment of Medicare for All, will be able to reduce their Employer Medicare Contributions in the same way.\(^\text{13}\) Employers taking advantage of this option would not be able to reduce their effective health care-per-employee cost below the national average across all employers paying the Employer Medicare Contribution.

The Employer Medicare Contribution will generate **$8.8 trillion** between 2020-29.

*Additional Take-Home Pay Subject to Existing Taxes*

Between 2020 and 2029, American workers are projected to spend $3.7 trillion on their share of premiums for employer-sponsored insurance.\(^\text{14}\) The large majority of these expenses are exempt

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\(^{13}\) Because you have set forth a plan to dramatically increase the number of firms who enter into collective bargaining agreements by removing barriers to unionization, we anticipate that many firms may exercise this option. *See* Elizabeth Warren, “Empowering American Workers and Raising Wages,” Medium, October 3, 2019, [https://medium.com/@teamwarren/empowering-american-workers-and-raising-wages-a60f27847bcb](https://medium.com/@teamwarren/empowering-american-workers-and-raising-wages-a60f27847bcb). This is a matter that will involve the jurisdiction of multiple agencies with relevant authority and expertise, including the Department of Labor, the Department of Health & Human Services, the Internal Revenue Service, and agencies that oversee collective bargaining.

\(^{14}\) Public and private employers combined are projected to spend $10.8 trillion on health insurance premium contributions from 2020-29, according to Table 16 in the National Health Expenditure Accounts, adjusted for the 0.5 percentage-point slower annual growth in national health expenditures that the Urban Institute projects. Data from the 2018 Medical Expenditure Panel Survey suggests that employees pay, on average, 25.5% of the total ESI plan premium. Therefore, total employee ESI premiums can be calculated as ($10.8 trillion)\(^*(25.5/74.5)\) = $3.7 trillion from 2020 to 2029. See National Health Expenditure Accounts, Table 16, [https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsProjected.html](https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsProjected.html) and Medical Expenditure Panel Survey, 2018.
from taxation. Under Medicare for All, millions of Americans who receive employer-sponsored insurance will get most of that $3.7 trillion back in the form of higher taxable take-home pay. Applying existing taxes to the share of this additional take-home pay that is currently untaxed will generate an estimated $1.15 trillion in federal revenue.

In addition, Medicare for All allows for the elimination of health savings accounts and medical savings accounts, and obviates the need for a tax deduction for individual medical expenses in excess of 10% of Adjusted Gross Income, which collectively would generate another $250 billion in revenue.

In total, these sources generate approximately $1.4 trillion in revenue.

**Targeted Taxes on Financial Firms**

You have identified two new taxes on financial firms that we estimate will generate $900 billion combined between 2020 and 2029.

The first is a financial transactions tax. As described by the Congressional Budget Office (CBO), this proposal would impose a tax that is assessed on and collected from financial firms “on the

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15 Kaiser Family Foundation data imply that the lion’s share of employee health insurance premiums are paid for with pre-tax dollars. To be conservative, we assume that 10% of employee premiums are currently paid with post-tax dollars. See Kaiser Family Foundation and Health Research & Educational Trust, “Employer Health Benefits 2015 Annual Survey.”

16 Health Insurance Coverage of the Total Population, [https://www.kff.org/other/state-indicator/total-population/?dataView=1&currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%222asc%22%7D](https://www.kff.org/other/state-indicator/total-population/?dataView=1&currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%222asc%22%7D). This estimate assumes that 90% of existing employee ESI plan premiums are paid with pre-tax dollars. Estimates of the effective marginal tax rate on wages and salaries are then multiplied by the currently untaxed portion of employee ESI premiums in each year. Estimates for effective marginal tax rate on wages and salaries are drawn from the Tax Policy Center. For years 2020-25, these rates are adjusted upward by 2.3 percentage-points assuming the repeal of the Tax Cuts and Jobs Act, which you support. See Tax Policy Center, “Baseline Effective Marginal Tax Rates,” Aug. 23, 2018, [https://www.taxpolicycenter.org/simulations/baseline-effective-marginal-tax-rates-august-2018](https://www.taxpolicycenter.org/simulations/baseline-effective-marginal-tax-rates-august-2018). A similar estimate can alternatively be derived from the Joint Committee on Taxation estimate of the tax expenditure cost of Cafeteria Plans from foregone income tax revenue, extrapolated to the 2020-29 window and including the associated foregone payroll tax revenue (assuming that the ratio of foregone payroll tax revenue to income tax revenue is the same as Treasury projects by year for the tax exclusion of employer contributions for medical insurance premiums). This approach leads to a 10-year estimate of $1.15 trillion for the full tax expenditure cost of cafeteria plans. A small portion of this amount is dedicated to flexible spending accounts both for health care and dependent care, but these estimates also assume the lower effective marginal tax rates on wages and salaries that are currently in effect under the TCJA — these factors should roughly cancel each other out. Barro, Robert J. and Jason Furman. “Macroeconomic Effects of the 2017 Tax Reform,” Brookings Papers on Economic Activity, Spring 2018, [https://www.brookings.edu/wp-content/uploads/2018/03/BarroFurman_Text.pdf](https://www.brookings.edu/wp-content/uploads/2018/03/BarroFurman_Text.pdf).


purchase of most securities and on transactions involving derivatives. For purchases of stocks, bonds, and other debt obligations, the tax generally would be 0.1 percent of the value of the security. For purchases of derivatives, the tax would be 0.1 percent of all payments actually made under the terms of the derivative contract, including the price paid when the contract was written, any periodic payments, and any amount to be paid when the contract expires.”

The CBO estimates this measure will generate nearly $777 billion between 2019 and 2028. Adjusting that estimate for the 2020-29 period reflecting expected nominal GDP growth, we estimate this measure will generate approximately $800 billion in revenue.

The second measure is a systemic risk fee for financial institutions with more than $50 billion in total assets (roughly the forty biggest banks in the country). As described by the CBO, “an annual fee would be imposed on bank holding companies (including foreign banks operating in the United States) and nonbank financial companies . . . [of] 0.15 percent of firms’ covered liabilities, defined primarily as total liabilities less deposits insured by the FDIC.” Adjusting the existing CBO revenue estimate for the 2020-29 period, we estimate this measure would raise approximately $100 billion in revenue.

**Taxes on Large Corporations**

You have identified two changes to corporate taxation that we estimate would generate $2.9 trillion in revenue between 2020 and 2029. These estimates assume the repeal of the Tax Cuts and Jobs Act of 2017 (TCJA), which you have previously proposed, and the existence of your Real Corporate Profits Tax on very large and profitable American corporations.

First, you identified eliminating the current system of accelerated cost recovery — the ability of businesses to deduct the cost of their investments more quickly than the assets actually deteriorate — for large businesses, as outlined in former Senate Finance Committee Chairman Baucus’ 2013 cost recovery discussion draft. As described by NYU Law professor Lily Batchelder, the proposal reforms depreciation schedules for tangible assets, requires the amortization of research and development and advertising costs, and makes other adjustments to cost recovery schedules for other assets.

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According to the Joint Committee on Taxation, this change would have raised $988 billion over the ten years beginning in 2014 — a useful estimate for our purposes because it assumes the relevant tax rates and provisions that were in effect before the TCJA. Assuming that revenues from these provisions grow at the same rate as GDP, the proposal would raise $1.25 trillion over ten years beginning in 2020.

Second, you identified instituting a country-by-country minimum tax on foreign earnings of 35% — equal to the top corporate tax rate for US firms after the repeal of the TCJA — without permitting deferral. Under this proposal, for example, an American corporation that books $1 billion in profits in the Cayman Islands, taxed at 0% in the Cayman Islands, would immediately have to pay the federal government the difference between the new 35% minimum rate and the foreign rate (35% - 0%) on the $1 billion in profits. In addition, you asked us to review a proposal that the US collect certain taxes from foreign firms based on the fraction of their sales made in the United States.

Appendix A to this letter provides revenue estimates from economists Emmanuel Saez and Gabriel Zucman of the University of California-Berkeley of both the country-by-country minimum proposal and the taxation of foreign firms proposal, assuming the kinds of anti-inversion and international tax coordination efforts you support. We adopt an estimate that is just below the midpoint of their range of estimates, resulting in $1.65 trillion in additional revenue.

**Taxes on Wealthy Individuals**

You have identified two options for taxing the top 1% of individuals. We estimate they would collectively raise a total of $3 trillion between 2020 and 2029.

First, you have previously proposed an annual 2% tax on net worth above $50 million, with a 1% surtax on net worth above $1 billion. Raising the billionaire surtax an additional three percentage points would generate an estimated additional $1 trillion in revenue, based on a 15% avoidance estimate.

Second, drawing on an analysis by NYU Law professors Lily Batchelder and David Kamin, you have proposed reforming the treatment of income from capital to match the treatment of income from labor for the top 1%. Your proposal would eliminate the preferential tax rates on capital gains and dividends and institute a “mark to market” or “accrual” system for those households in the top 1%. This proposed system, whereby capital gains income (excluding retirement accounts) is taxed on an annual basis rather than only at the time of sale or transfer of the asset, would generate approximately $2 trillion between 2020 and 2029.

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25 Ibid. at 51, tbl. 7.
27 This calculation assumes a tax rate on these households of 39.6% and 15 percent avoidance with no other behavioral response. Lily L. Batchelder and David Kamin, “Taxing the Rich: Issues and Options,” SSRN Scholarly
**Improved Tax Enforcement**

IRS estimates indicate that the current federal “tax gap”—the gap between taxes owed and taxes collected—is roughly 15% based on the rounded average of its past two analyses. If the 15% gap remains, it will represent more than $7.7 trillion in federal taxes over the next ten years that would be owed but never collected.

Much of this tax gap is attributable to individual income tax avoidance by high-income taxpayers, who have more opportunities for avoidance. The data show that the net misreporting rate as a percentage of income is above average for the wealthiest 5% of taxpayers and below average for the bottom 90%. America’s tax laws have been underenforced, the IRS budget has been cut, and the agency today “has only about the same number of revenue agents (auditors who tend to audit the most complex returns) as it had in the 1950s when the economy was one-seventh its current size.” IRS enforcement resources have also been mistargeted at low-income taxpayers rather than wealthy taxpayers.

You asked us to review a proposal to substantially increase funding for tax enforcement and adopt “best practices” that the Treasury Department’s Inspector General and other tax experts have suggested. Specifically:

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32 The IRS audit rate dropped 42% in 2017 from what it was in 2010, and investigations of individuals who do not file returns have dropped from 2.3 million to 360,000 over the same time period. Jesse Eisinger and Paul Kiel, “How the IRS Was Gutted,” ProPublica, December 11, 2018, https://www.propublica.org/article/how-the-irs-was-gutted.


• Substantially increasing funding for the IRS, including the Criminal Investigation Division. The Treasury Department estimated that for every $1 invested in IRS enforcement in FY 2017, there would be a nearly $6 direct return in terms of additional revenue collected — not including an indirect deterrence effect three times the direct return.36

• Expanding third-party reporting and withholding requirements. Research shows a 5% tax misreporting rate for income with information reporting (and just a 1% tax misreporting rate for income with information reporting and withholding), compared to as high as a 55% misreporting rate for some income without these measures.37

• Strengthening enforcement of the Foreign Account Tax Compliance Act (FATCA). Under FATCA, foreign financial institutions must automatically report the holdings and income of US taxpayers. But the IRS is not currently using these reports for systematic tax enforcement (i.e., these reports are not matched to tax returns, except in the specific context of some operational audits), which reduces the usefulness of FATCA and reduces tax collection.38 You propose developing the infrastructure to automatically match FATCA reports to tax returns and instituting sanctions for non-compliant foreign financial institutions to encourage more reporting.

• Simplifying tax filing obligations in line with other developed countries with lower tax gaps,39 including by adopting the Tax Filing Simplification Act40 and using “smart returns” to improve honest reporting.41

• Redirecting resources away from tax enforcement for low-income taxpayers towards high-income taxpayers.

• Increasing resources for the nonfiler compliance program.42

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● Strengthening reporting requirements for international income.\textsuperscript{43}

● Using existing currency transaction reports to enforce cash income compliance.\textsuperscript{44}

● Increasing reporting requirements for virtual- or crypto-currencies.\textsuperscript{45}

● Allowing the False Claims Act and whistleblower protections to be used by employees who disclose tax evasion and abuse.\textsuperscript{46}

We estimate that adopting these measures would close the overall tax gap by one-third to 10%—still significantly above the tax gap in countries like the United Kingdom (5.6%).\textsuperscript{47} Doing so will generate an additional $\textbf{2.3 trillion} in revenue after accounting for the increased cost of IRS and other agency enforcement.\textsuperscript{48}

\textit{Immigration Reform}

You support immigration reform, including a pathway to citizenship for undocumented immigrants and expanded legal immigration consistent with certain principles. Based on the CBO’s analysis of the 2013 comprehensive immigration reform bill, we estimate an additional $\textbf{400 billion} in direct federal revenue from immigration reform.\textsuperscript{49}


\textsuperscript{44} Ibid. at 8.

\textsuperscript{45} Ibid. at 9.


\textsuperscript{48} This estimate conservatively assumes an overall enforcement cost borne by the federal government of $1 per $10 of revenue. The most significant reforms to close the tax gap used by other countries with significantly smaller tax gaps, such as increased third-party information requirements and withholding, are largely costless to the federal government, further driving down the ratio of revenue to enforcement costs, and the Treasury Department estimated that each $1 in enforcement in the FY 2017 budget would yield $6 in revenue based on recovery and penalties, and up to three times that effect due to deterrence and other indirect effects. “Budget for Fiscal Year 2017,” Department of the Treasury. \url{https://obamawhitehouse.archives.gov/sites/default/files/omb/budget/fy2017/assets/tre.pdf}.

\textsuperscript{49} The CBO score of the 2013 comprehensive immigration reform bill accounted for additional federal health care spending on immigrants, both legal and undocumented. Because the Urban Institute includes the cost of covering the health care of undocumented immigrants in its cost estimate of Medicare for All (and that Urban Institute estimate is the baseline for your cost estimate for Medicare for All), we have excluded the costs of covering those immigrants from the 2013 CBO score. We conservatively estimate that as 75% of the CBO-projected health care costs for newly legal residents. We then calculate the annual new revenue increase after accounting for new taxes paid by newly legal residents based on the 2013 CBO score, and then convert those figures to the 2020–29 budget window by interpreting new revenue as a percentage of GDP. See Congressional Budget Office, “S. 744 Border Security, Economic Opportunity, and Immigration Modernization Act,” June 18, 2013, \url{http://www.cbo.gov/sites/default/files/cbofiles/attachments/s744.pdf}. 
Reduction in Defense Spending

Finally, eliminating and defunding the Overseas Contingency Operations Fund is projected to save approximately $800 billion between 2020 and 2029.\(^50\)

Methodology

We have used static estimates to score the revenue measures used to fund your Medicare for All plan. These estimates thus do not account for the impact of these revenue measures on economic activity. This is consistent with the static cost estimate experts have provided for your Medicare for All plan. Our estimates account for previous revenue measures you have proposed.

Conclusion

We estimate that the revenue options you identified would provide a total of $20.5 trillion in federal funding for Medicare for All between 2020 and 2029 without imposing any new taxes on middle-class families.

Out of this $20.5 trillion in additional federal funding, $8.8 trillion is shifting most projected employer premium payments and other health care costs for employees into an Employer Medicare Contribution to the federal government, and another $800 billion is in the form of federal spending cuts. The remaining $10.9 trillion is from: applying existing taxes to increased take-home pay; immigration reform; targeted taxes on financial firms, large corporations, and the top 1% of families; and stronger enforcement of tax laws to make sure people pay what they owe.

This additional $10.9 trillion in revenue over the next ten years — approximately $1.1 trillion annually — would still leave overall US tax revenue below the average rate for OECD countries. In the latest OECD data from 2017, the United States ranked 32nd out of 36 countries in tax revenue-to-GDP ratio, more than seven percentage points below the average ratio.\(^51\) The 2017 Tax Cuts and Jobs Act has likely made the United States an even greater outlier.\(^52\) An additional $1.1 trillion a year in revenue — representing roughly 5.4% of GDP — would still likely leave the US below the average tax revenue-to-GDP ratio among OECD countries.

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Sincerely,

**Simon Johnson**  
Former Chief Economist, International Monetary Fund  
*and*  
Ronald A. Kurtz (1954) Professor of Entrepreneurship  
Sloan School of Management, MIT

**Betsey Stevenson**  
Professor of Economics and Public Policy, Gerald R. Ford School of Public Policy, University of Michigan  
*and*  
Former Member, Council of Economic Advisers  
Former Chief Economist, Department of Labor

**Mark Zandi**  
Chief Economist, Moody’s Analytics
Appendix A: Estimates on improvements to international taxation
Emmanuel Saez
Gabriel Zucman
October 30, 2019

1. Corporate tax

1.1. Improved taxation of US multinationals

Proposal: apply country-by-country minimum tax rates to the foreign profits of US multinationals. In what follows we consider a 35% minimum country-by-country tax rate. This means that if a US corporation books $1 billion in profits in the Cayman Islands, taxed at 0% in the Cayman Islands, it would immediately have to pay (35% - 0%) x $1 billion = $350 million in the US (no deferral). If a US company books $1 billion in profits in Ireland taxed at 5% in Ireland, it would immediately have to pay (35% - 5%) x $1 billion = $300 million in the US.

Revenue projection: $115 billion (0.6% of national income) in 2019.
Details of the estimation. We use data from IRS form 8975 (country-by-country reports) for year 2016 (the latest year available) to simulate the static revenue from a 35% country-by-country minimum tax. In 2016 this would have yielded $102 billion in tax revenue ($82 billion coming from profits booked in tax havens, and $20 billion coming from profits booked in countries generally not considered tax havens but with corporate tax rates below 35%). Assuming a 4% nominal annual growth rate between 2016 and 2019 gives $115 billion in static revenue in 2019. This figure under-estimates the true revenue because this computation is based on aggregate data (not firm-level data) and there is heterogeneity in the effective tax rates paid by US firms within each foreign country.¹

This reform would be equivalent to increasing the effective rate of taxation of the foreign profits of US multinationals by close to 20 points. By contrast, the TCJA, which also introduced a minimum tax on foreign earnings (GILTI), increases the effective rate of taxation of the foreign profits of US multinationals by 1.2 points only, or $7.7 billion (according to JCT projections for 2018), because the tax rate applied to foreign profits (10.5%) is low and the tax is not applied country-by-country but to all foreign earnings combined.

1.2. Improved taxation of foreign multinationals

Proposal: Collect part of the “global tax deficit” of foreign companies. The global tax deficit of a firm is the extra tax that a firm would pay if it was subject to a minimum effective tax rate (of say 35%) in each of the countries where it operates.

Example: assume a non-US company’s global profits are $10 billion, of which $4 billion are booked and taxed in Germany at a rate of 35%, $2 billion are booked and taxed in the UK at a rate of 20%, and the remaining $4 billion are booked and taxed in the Cayman Islands at a rate of 1%

¹ Complete estimation details in Saez and Zucman (2019), The Triumph of Injustice, WW Norton, Chapter 6 and Online Appendix Tables D.2 and D.3.
0%. If the minimum effective tax rate is 35%, then the company’s global tax deficit is: $4 \text{ billion} \times (35\% - 35\%) + $2 \text{ billion} \times (35\% - 20\%) + $4 \text{ billion} \times (35\% - 0\%) = $1.7 \text{ billion}.

The proposal made in section 1.1. is equivalent to saying that the United States would collect 100% of the global tax deficit of US firms (i.e., firms headquartered in the US). The proposal made here involves the US collecting a fraction of the global tax deficit of foreign firms. More precisely, the US would collect the fraction of the global tax deficit of foreign firms corresponding to the fraction of their sales made in the United State. The general idea is for the United States to act as tax collector of last resort.

In the above example: if the foreign company makes 25% of its sales in the US, then the US would collect 25% x $1.7 \text{ billion} = $425 \text{ million} (on top of any tax otherwise due in the US).

**Revenue projection:** We conservatively project that this would generate the equivalent of half of the revenue of the 35% country-by-country minimum tax on US multinationals ($115 \text{ billion}), i.e. $57 \text{ billion} in 2019.² The total static extra revenues of improved taxation of US and foreign multinationals add up to $172 \text{ billion} in 2019 ($115 \text{ billion} + $57 \text{ billion}).

### 1.3. Ten-year revenue projections for improved taxation of multinationals

Medium/long run revenue depends on how US multinationals would change the location of their profits, the location of their headquarters (i.e., inversions), and the evolution of the tax rates applied by other countries.

If multinationals don’t change the location of their profits and headquarters, and foreign countries do not change their tax rates, the 10 year revenue is $12 \times $172 \text{ billion} = $2.06 \text{ trillion}.

**Addressing inversions**

A minimum country-by-country tax applied by the US could be avoided if firms changed their nationality and re-incorporated abroad. In the short run this is not a major risk given that tax inversions have come to a halt since the implementation of anti-inversion regulations in 2016. Anti-inversion regulations can be further strengthened to prevent any company initially incorporated in the United States from changing nationality.

**International cooperation on minimum taxation**

In the longer run, new companies might choose to incorporate abroad from the get-go, reducing tax revenue in the US compared to the $2.06 trillion estimate. This issue can be addressed by

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² The profits currently booked by foreign multinationals in the US are about half the profits currently booked by US multinationals abroad, so a rough order of magnitude is that the base of the tax on foreign multinationals is about half the base of the tax on US multinationals. But the profits currently booked by foreign multinationals in the US are artificially low due to profit shifting out of the United States (while the profits currently booked by US multinationals abroad are artificially high, also due to profit shifting out of the United States), so the $57 billion revenue estimate is a lower bound.
forging an international agreement on a country-by-country minimum tax. Most large economies have an interest in joining such an agreement, because they currently lose revenue from tax competition. Low-tax countries may be unwilling to join an international agreement on a minimum tax because they derive sizable benefits from current international tax competition. The threat of economic sanctions could be used to convince them to join an agreement, similar to the US approach with the Foreign Account Tax Compliance Act in 2010, which has proved effective in securing cooperation from all the world’s tax havens. Making tax coordination a component of new free-trade agreements would also allow to make progress in forging an international agreement.

Sensitivity of estimates to foreign countries’ tax rates

If the United States started collecting the tax deficit of US and foreign firms, this could encourage other high-tax countries to do the same. Collecting the tax deficit of multinational companies is in the interest of all high-tax countries (not doing so means leaving money on the table). And once most high-tax countries do this, tax havens do not have incentives anymore to offer low tax rates.

In our lower-bound scenario we therefore assume that the revenue from the tax on foreign firms (~$57 billion / year) entirely dries up (i.e., their global tax deficit becomes zero). We assume that only the improved taxation of the foreign profits of US multinationals ($115 billion / year) generates revenue (e.g., that if tax havens increased their tax rate, these profits would be shifted back to the US, increasing tax revenue in the US).

Thus, the lower-bound revenue over the 10-year budget period 2020-29 is $115 billion \times 12 = $1.38 trillion and the upper-bound is $172 billion \times 12 = $2.06 trillion.