



# Budget Model

## H.R. 5376, Build Back Better Act: Budget and Macroeconomic Effects

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**Summary:** PWBM estimates that H.R. 5376, the Build Back Better Act, would increase spending by \$2.1 trillion over the 10-year budget window while increasing revenue by \$1.8 trillion, for a 10-year deficit of \$274 billion. By 2050, the proposal would decrease GDP by 0.2 percent, relative to current law.

### Key Points

- PWBM estimates that H.R. 5376, the Build Back Better Act, as written would increase spending by \$2.1 trillion over the 10-year budget window and revenue by \$1.8 trillion, for a 10-year deficit of \$274 billion.
- We project that H.R. 5376 would decrease GDP by 0.2 percent in 2050, relative to the current law baseline, even after accounting for positive growth effects of various spending programs.
- In an alternative, illustrative scenario in which all temporary provisions in H.R. 5376 are made permanent, spending would instead total \$4.6 trillion over the 10-year budget window. In this scenario, by 2050 federal debt increase by 24.4 percent and GDP would fall by 2.9 percent relative to current law.

### Introduction

On November 3, 2021, the House Rules Committee released legislative language for the Build Back Better Act. In this analysis, PWBM analyzes the macroeconomic effects of the legislation, building on our conventional estimate of the [budgetary effects of the bill](#).

PWBM estimates that the legislation provides for \$2.1 trillion in new spending and tax expenditures over the budget window. Provisions range from investments in physical capital to new and expanded social spending programs focused on health, poverty, education, childcare, and more. The bill also would reduce tax liabilities for several years by increasing the allowable deduction for households' state and local taxes. The bill also specifies several budgetary offsets, estimated to reduce noninterest deficits by \$1.8 trillion. These provisions raise revenue by increasing taxes on multinational corporations, public stock buybacks, certain owners of closely-held businesses, high-income households, and nicotine products. The bill also proposes strengthening tax law enforcement and lowering prescription drug prices.

We evaluate the Act under two scenarios. In the first scenario, PWBM presents the spending and revenue provisions 'as written' in the legislative text where certain provisions sunset within the 10-year budget window. Under this scenario, we project that the long-run trajectory of public debt would be 1.5 percent larger and that GDP would be 0.2 percent lower in 2050 relative to baseline projections.

Under the second scenario, we assume that temporary provisions of the proposal are extended permanently. We find that, against baseline projections, government debt would be more than 24 percent larger in 2050 and GDP would be about 3 percent lower in the same year.

## Spending and Tax Expenditures

The House bill proposes spending on a number of policies. The main provisions include:

- **Preschool and child care.** Implements universal preschool for three- and four-year-olds and subsidizes child care for low-income families.
- **Paid family and medical leave.** Implements four weeks of paid family and medical leave.
- **Medicaid home and community-based care.** Supports home and community-based care, including care from family caregivers.
- **Child Tax Credit.** Extends the expanded Child Tax Credit (CTC) parameters under the American Rescue Plan Act (ARPA) through 2022, and makes the credit fully refundable permanently thereafter.
- **Earned Income Tax Credit.** Extends the expanded Earned Income Tax Credit (EITC) parameters under ARPA through 2022.
- **Clean energy tax credits.** Creates and expands tax credits for electric vehicles, solar power investment, home repairs that improve energy efficiency, and more.
- **Climate resiliency investments.** Funds investments in forest management, coastal restoration, and similar efforts aimed at insuring against extreme weather.
- **Clean energy procurement.** Incentivizes public sector purchasing of renewable energy technologies.
- **ACA subsidies.** Extends the expanded ACA Premium Tax Credit (PTC) under ARPA through 2025 and fills Medicaid coverage gap.
- **Medicare hearing benefits.** Adds new benefit for hearing care including hearing aids and preventive services.
- **Housing affordability.** Invests in public housing, implements housing choice vouchers, provides rental assistance, expands Fair Housing Initiatives, and provides homeownership assistance.
- **Higher education and workforce development.** Increases the maximum Federal Pell Grant award, expands eligibility for federal student financial aid, increases aid awarded to colleges, and invests in worker training programs.
- **Medical and healthcare workforce development.** Provides funding for medical education and training as well as pandemic preparedness.

- **Equity and other investments.** Miscellaneous investments and spending.
- **Modification to the state and local tax (SALT) deduction.**<sup>1</sup> Sets the SALT cap at \$80,000 through 2030, \$10,000 for 2031, then removes the limitation permanently beginning in 2032. Against a current law baseline, under which the deduction is limited to \$10,000 through 2025, this change represents a tax cut through 2025 and a tax increase through 2031.
- **Immigration reform.** Increases immigrant protections and work permits, modifies eligibility requirements for adjustment of legal status, and expands immigration processing capacity to prevent backlogs.

In addition to estimating the budgetary impacts of these provisions in a [recent analysis](#), PWBM has previously analyzed the economic effects of related policies including [preschool and childcare programs](#), [Child Tax Credit expansion](#), and [legalization of unauthorized immigrants](#). PWBM captures growth effects of spending programs using our documented [integrated microsimulation and overlapping-generations model](#) that starts with hundreds of thousands of different types of households that differ by over 60 attributes, including, income, race, parent and children education, number of children, and many more. In order to model the combined economic effects of initiatives in H.R. 5376, we categorize provisions according to economic impact: direct transfers and tax expenditures, labor productivity-boosting spending, productivity-increasing public infrastructure investments, and other federal spending.

Labor productivity-boosting spending, in particular, distinguishes economic decisions at the household level and, for example, includes future increases in productivity for children who would otherwise not have access to preschool and childcare programs under current policy. It also includes the ability of secondary workers (often females) to enter the workforce who would not be able to afford childcare under current law. Numerous other productivity effects are also included, which work to offset some of the economics distortions caused by larger taxes and higher deficits. While many of the tax distortions fall within the usual 10-year budget window, many of the spending-induced productivity gains fall outside. PWBM, therefore, presents its analysis to 2050 in order to capture these gains.

Table 1 shows the distribution of spending by model input.

## Table 1. Spending by Model Input Classification

Billions of dollars

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Spending Category	Total 10-Year Spending	
	HR 5376	Illustrative Permanent Spending Scenario
Public Infrastructure Investment	\$165	\$165
Labor Productivity Boosting	\$400	\$794
Transfers & Tax Expenditures	\$741	\$2,814
Other Spending	\$778	\$778
<b>Total</b>	<b>\$2,084</b>	<b>\$4,551</b>

Other federal spending makes up the largest share (37 percent) of the new proposed spending under HR 5376. This category includes four weeks of paid family and medical leave, Medicaid home and community-based care, Medicare hearing benefits, immigration reform, investments in clean energy technology, supply chains, manufacturing, and procurement, and equity and other investments. Transfers and tax expenditures account for 36 percent of new spending. This category includes the extension and expansion of the CTC, EITC, and PTC. It also includes clean energy tax credits and housing affordability policies. Labor productivity boosting spending, including universal preschool and means-tested childcare programs, makes up 19 percent of new proposed spending. Eight percent of new spending is invested in public infrastructure, which includes investments in higher education and workforce development, medical and healthcare workforce development, and climate resilience.

We analyze two scenarios. The first scenario models the package proposed in H.R. 5376 'as written,' wherein certain policies expire after a set number of years as specified in the proposed legislation. The second scenario permanently extends all temporary provisions other than the "Clean Energy Tax Credits" policy, which still end after 10 years. Note that the SALT provision, which is a revenue *raiser* after 2025 relative to current law, is also assumed to be permanent.

### Budgetary Offsets and Tax Reforms

The legislation proposes several budgetary offsets including tax increases on businesses and high-income households, increased tax collections from stricter tax law enforcement, and reduced federal spending from prescription drug price reforms. The main provisions include:

- **Minimum tax on corporations' book income.** Creates a new 15 percent corporate alternative minimum tax based on the financial statement income of corporations with at least \$1 billion in such income.

- **Tax on share repurchases.** Imposes a 1 percent excise tax on share repurchases.
- **Modifications to international taxes.** Increases the minimum tax rate on certain foreign income to 15 percent and determines the tax on a country-by-country basis; increases taxes on base erosion payments; reduces the tax benefit for foreign income from domestic intangibles; and makes changes to foreign tax credits.
- **Delay of R&E expenditure amortization.** Delays the scheduled change to the tax treatment of research and experimental expenditures from 2023 to 2026, at which point such costs will be amortized rather than expensed.
- **AGI surcharge on high-income households.** Assesses a 5 percent surcharge on AGI above \$10 million and an additional 3 percent on AGI above \$25 million.
- **NIIT tax base harmonization.** Subjects all income above \$400,000 to the Net Investment Income Tax (NIIT), which, together with Medicare taxes under current law, generally applies to income above \$250,000 with the exception of certain pass-through income.
- **Extension of excess noncorporate losses limitation.** Extends the maximum allowable deduction for most pass-through losses (\$524,000 for joint returns in 2021), which is scheduled to expire in 2026 under current law.
- **Modifications to retirement plan taxes.** Limits balances in certain retirement accounts of high-net-worth individuals and eliminates “backdoor Roth” rollovers.
- **Expansion of nicotine taxes.** Imposes federal excise taxes on nicotine products not already taxable under current law.
- **IRS funding.** Appropriates an additional \$80 billion over the next decade for IRS enforcement activities, including the hiring and training of new auditors and IT systems modernization.
- **Rebate rule repeal.** Repeals the implementation of a “rebate rule” scheduled to increase prescription drug-related Medicare outlays beginning in 2023.

PWBM estimates these provisions would reduce noninterest deficits by about \$1.8 trillion over the budget window. Table 2 shows estimated provision-level, annual budget effects.

Table 2. Estimated Budgetary Effects of Offset Provisions

*Billions of dollars*

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Provision	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Budget window
Minimum tax on corporations’ book income	\$7	\$20	\$23	\$25	\$27	\$28	\$30	\$32	\$35	\$38	\$264

<b>Provision</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>	<b>2031</b>	<b>Budget window</b>
Tax on share repurchases	\$4	\$5	\$5	\$5	\$5	\$5	\$5	\$6	\$6	\$6	\$51
Modifications to international taxes	\$0	\$31	\$35	\$39	\$27	\$27	\$29	\$31	\$31	\$32	\$282
Delay of R&E expenditure amortization	\$0	-\$11	-\$16	-\$17	-\$14	\$9	\$16	\$13	\$8	\$3	-\$11
Other business tax provisions	\$5	\$11	\$11	\$10	\$9	\$9	\$10	\$10	\$10	\$11	\$96
Extension of excess noncorporate losses limitation	\$0	\$0	\$0	\$0	\$0	\$27	\$35	\$36	\$38	\$40	\$175
AGI surcharge on high-income households	\$18	\$25	\$26	\$28	\$27	\$26	\$26	\$28	\$30	\$32	\$267
NIIT base harmonization	\$16	\$22	\$24	\$26	\$21	\$21	\$23	\$23	\$24	\$26	\$226
Modifications to retirement plan taxes	\$0	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$9
Other tax provisions	\$0	-\$1	-\$1	-\$1	\$0	\$1	\$1	\$1	\$1	\$1	\$2
Expansion of nicotine taxes	\$0	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$10
IRS funding	-\$1	-\$1	\$3	\$10	\$17	\$26	\$32	\$34	\$35	\$35	\$190
Prescription drug price reforms	\$1	\$2	\$2	\$10	\$29	\$35	\$39	\$41	\$43	\$46	\$250
<b>Total</b>	<b>\$50</b>	<b>\$104</b>	<b>\$115</b>	<b>\$137</b>	<b>\$151</b>	<b>\$215</b>	<b>\$247</b>	<b>\$257</b>	<b>\$262</b>	<b>\$270</b>	<b>\$1,810</b>

## The Macroeconomic Effects of the House Build Back Better Act

Each component of the proposed legislation contributes differently to the proposal's overall effect on the U.S. economy.

Programs such as new investments in public housing and increased Medicare benefits are transfers or payments to households. Considered alone, these transfers direct real resources away from capital formation and toward consumption. A smaller private capital stock—computers, equipment, factories, buildings, and other productive assets that are used to produce goods and services—leads to a decline in GDP. In addition, some of the transfer programs may affect work incentives. For example, the proposed removal of the Child Tax Credit's phase-in structure increases [effective marginal tax rates](#) for low-income households, which may reduce labor supply via the substitution effect.

On the other hand, some programs increase labor productivity. [Universal preschool programs and childcare](#) provide education at an earlier age and assist with childcare for lower income parents. These childcare and educational programs lead to a small increase in labor productivity as caregivers gain flexibility to work more hours in a greater variety of jobs. Furthermore, additional preschool education leads to increases in productivity when affected children eventually enter the workforce.

Like other kinds of government spending, public infrastructure investment draws real resources away from the private sector. However, as explained in PWBM's previous [analysis](#) of the effects of public infrastructure investment, infrastructure increases productivity. Additional public infrastructure makes both workers and private capital more productive, which leads to higher wages and higher GDP.

The remaining spending proposals lead to higher government spending and higher government debt. As before, higher government debt crowds out investment in productive private capital. Less private capital leads to lower wages as workers become less well-equipped to do their jobs effectively.

The reconciliation proposal's revenue-raising provisions decrease government debt, which offsets some of the negative effects on wages and GDP. However, a higher tax burden on investment, both at the business level and the shareholder level, reduces the incentive to accumulate private capital. Immigration reform provides a path to authorized status for a large majority of unauthorized immigrants currently residing in the United States. This policy provides additional work opportunities for these immigrants who would have otherwise been unauthorized to work; therefore, these immigrants' productivity increases. With higher pay and more opportunities, these immigrants work more, earn additional income, and begin paying additional taxes. This leads to lower government debt, which crowds in private capital. More hours worked and more productive capital leads to higher GDP.

Expanding Medicare to include dental, vision, and hearing benefits increases consumption for current retirees and decreases the need for the currently young to save for those expenses. Lowering the Medicare age to 60 and making the ACA subsidies more generous lower households' financial risk, so they save and work less. Reducing Medicare drug prices lowers retiree out-of-pocket spending and leads to lower savings and hours worked. All these policies increase federal deficits by varying amounts, except for the provision reducing Medicare drug prices. The savings on prescription drugs covers a portion of the spending in the other programs but ultimately debt increases and private capital decreases. Together, the healthcare provisions decrease hours worked, private capital, and GDP.

Table 3 shows the combined effects from these different components when the non-health spending expires at the end of the 10-year budget window to satisfy the budget requirements for reconciliation. Overall, the proposal leads to higher government debt and a drop in private capital. Government debt increases by 2.1 and 1.5 percent in 2040 and 2050, respectively. Private capital declines by 0.6 percent in both years.

Table 3. Macroeconomic Effects of the Build Back Better Act

*Percent Change from Baseline*[DOWNLOAD DATA](#)

<b>Year</b>	<b>GDP</b>	<b>Capital Stock</b>	<b>Hourly Wage</b>	<b>Hours Worked</b>	<b>Government Debt</b>
2031	-0.2	-0.2	0.2	-0.4	2.9
2040	-0.3	-0.6	0.0	-0.3	2.1
2050	-0.2	-0.6	0.1	-0.3	1.5

Although lower private capital makes workers less productive—which results in lower wages—some of the provisions in the reconciliation proposal decrease labor supply (by 0.3 percent in both 2040 and 2050), which makes labor more valuable. More scarce labor leads to higher wages. The net effect is that wages increase in the short run. Wages increase by 0.2 percent in 2031. However, as the decline in private capital grows over time, labor productivity continues to decline, which lowers wages. By 2050, the hourly wage declines by 0.1 percent relative to baseline. The drop in the labor supply and private capital leads to a fall in GDP of 0.3 and 0.2 percent in 2040, and 2050, respectively.

Table 4 shows the macroeconomic effects for the illustrative scenario in which all spending is projected to continue at similar rates of growth beyond the 10-year budget window. Government debt increases by 19.6 and 24.4 percent in 2040 and 2050, respectively. Relative to baseline, GDP declines by 1.9 and 2.9 percent in the same years.

Table 4. Macroeconomic Effects Under Continued Spending Scenario

*Percent Change from Baseline*[DOWNLOAD DATA](#)

<b>Year</b>	<b>GDP</b>	<b>Capital Stock</b>	<b>Hourly Wage</b>	<b>Hours Worked</b>	<b>Government Debt</b>
2031	-1.1	-2.2	0.7	-1.8	11.6
2040	-1.9	-4.7	-0.5	-1.4	19.6
2050	-2.9	-7.9	-1.7	-1.3	24.4

## Appendix: Estimation Methodology and Comparisons to Congressional Scorekeepers

*Added on November 22, 2021*



In this appendix, we describe PWBM's revenue estimation methodology for major tax offset provisions. Appendix Table 1 compares these estimates to those of Congress's official scorekeepers, the Joint Committee on Taxation (JCT) and the Congressional Budget Office (CBO).

- **Minimum tax on corporations' book income** (PWBM: \$264B, JCT: \$319B) - Estimate is from PWBM's corporate tax model. It is based primarily on publicly available data from corporate tax returns of public and private corporations, data on public corporations from Compustat, and more detailed information on selected corporations from financial statements filed with the Securities and Exchange Commission. Projections for pretax income generally follow CBO's projections for growth in corporate profits, adjusted for changes in the composition of corporate profits. Differences between financial statement income and taxable income reflect changes in tax policy over time and recent trends in financial statement income.
- **Tax on share repurchases** (PWBM: \$51B, JCT: \$124B) - Estimate is based on a projection of share repurchases. Historical data on gross share repurchase data of publicly-traded nonfinancial corporations comes from the [Federal Reserve's Enhanced Financial Accounts](#). We assume that the level of repurchases (measured relative to GDP) remains at the historical average measured over 2010 to 2020. We then adjust the tax base by incorporating financial firms (based on calculations from [S&P Dow Jones Indices](#)), removing net issuance from the base, and modeling a small behavioral effect wherein some firms retain more of their earnings in response to the tax.
- **Modifications to international taxes** (PWBM: \$282B, JCT: \$279B) - Estimate is from PWBM's corporate tax model. It is based primarily on publicly available data from corporate tax returns of multinational enterprises, data on public multinationals from Compustat, and a mandatory survey of multinationals conducted by the Bureau of Economic Analysis. Projections for the foreign activities of multinationals are based on [estimates of profit shifting elasticities from JCT staff](#), PWBM's [analysis of recent trends in profit shifting](#), and PWBM's estimates of how the proposed changes would change [effective tax rates on foreign income](#).
- **Delay of R&E expenditure amortization** (PWBM: -\$11B, JCT: -\$4B) - Estimate is from PWBM's corporate tax model. It is based primarily on publicly available data from corporate tax returns, detailed data on investment in intellectual property products from the Bureau and Economic Analysis, and additional information from the [INTAN-invest database](#).
- **Extension of excess noncorporate losses limitation** (PWBM: \$175B, JCT: \$160B) - Estimate is from PWBM's individual tax module, which combines IRS tax-filer-level microdata with proprietary demographic projections.
- **AGI surcharge on high-income households** (PWBM: \$267B, JCT: \$228B) - Estimate is from PWBM's individual tax module, which combines IRS tax-filer-level microdata with proprietary demographic projections. Consistent with our [previous work](#), we project that affected taxpayers would respond by reducing capital gains realizations (elasticity of 0.66).
- **NIIT base harmonization** (PWBM: \$226B, JCT: \$252B) - Estimate is from PWBM's individual tax module, which combines IRS tax-filer-level microdata with proprietary demographic projections.
- **Expansion of nicotine taxes** (PWBM: \$10B, JCT: \$9B) - PWBM uses U.S. e-cigarette sales and price data from the Center for Disease Control ([1](#), [2](#)) to project usage over time. Behavioral responses are modeled using the price elasticity presented in a [meta-analysis](#) of the relevant literature.

- **IRS funding** (PWBM: \$190B, CBO: \$127B) - To project the revenue effects of additional IRS funding, PWBM considers three basic factors that might increase tax revenue: direct collections, deterrence effects, and auditor productivity. For direct collections, we estimate the direct return on investment (ROI) associated with additional tax enforcement efforts. Studies from the [Congressional Budget Office](#) and [Holtzblatt and McGuire \(2020\)](#) use confidential IRS data to measure the direct ROI for different types of enforcement activities. Following this work, we project that ROIs peak after several years, reflecting the fixed costs associated with hiring and training new employees. ROI are assumed to fall with additional funding, both relative to baseline (as the IRS focuses on high-ROI projects first) and over time after peaking (as affected taxpayers adjust tax planning techniques to evade new enforcement efforts). For deterrence effects, we make revenue adjustments based on an analysis of a body of empirical research that offers mixed results on the direction, degree, and permanence of deterrence responses. Measured effects in the literature display heterogeneity across income level, income composition, and business entity type. Studies using tax data consider corporate and individual taxpayer reactions to enforcement.<sup>2</sup> For corporate filings, some studies find positive and statistically significant effects ([Hoopes et al. 2012](#); [Boning et al 2020](#)) with one study indicating a reversion over time “consistent with strategic responses on the part of firms and with Bayesian updating of audit risk” ([DeBacker et. al. 2015](#)). For individual taxpayers, one study finds positive and statistically significant short-run effects but little change for high-income sophisticated taxpayers ([DeBacker et. al. 2018](#)). The short-run positive effects in this study are associated with additional third-party reporting (e.g., bank reporting) and other details that differ from the current legislation. Another study shows positive revenue effects for low and middle-income taxpayers but with a fall in revenue for high-income taxpayers ([Slemrod et. al. 2001](#)).<sup>3</sup> On net, our reading across the broader literature indicates support for a small positive effect for deterrence. Finally, our revenue estimate allows for improvements to information technology systems to modestly improve auditor productivity. This adjustment reflects the IRS’s [detailed qualitative assessment](#) of project-level ROIs associated with improvements to information technology systems.

## Appendix Table 1. Estimation Methodology and Comparisons to Congressional Scorekeepers

*Billions of dollars*

[DOWNLOAD DATA](#)

<b>Provision</b>	<b>PWBM</b>	<b>Congressional scorekeepers</b>
Minimum tax on corporations' book income	\$264	\$319
Tax on share repurchases	\$51	\$124
Modifications to international taxes	\$282	\$279
Delay of R&E expenditure amortization	-\$11	-\$4
Extension of excess noncorporate losses limitation	\$175	\$160
AGI surcharge on high-income households	\$267	\$228
NIIT base harmonization	\$226	\$252
Expansion of nicotine taxes	\$10	\$9
IRS funding	\$190	\$127

*This analysis was produced by PWBM staff. Report was written by [Jon Huntley](#), [Maddison Erbabian](#), and [John Ricco](#). Prepared for the website by [Mariko Paulson](#).*

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1. A [recent PWBM analysis](#) highlights the budgetary and distributional effects of the SALT provision in isolation. ↩
  2. One paper uses a hypothetical laboratory setting to study behavior of participants who are presented with different information as an analogy to tax enforcement but does not directly analyze IRS data across a range of incomes ([Alm et al 2009](#)). ↩
  3. We also reviewed additional studies that are not discussed herein due to space considerations; the limited discussion herein is only intended to demonstrate the variation in results found in previous studies. ↩