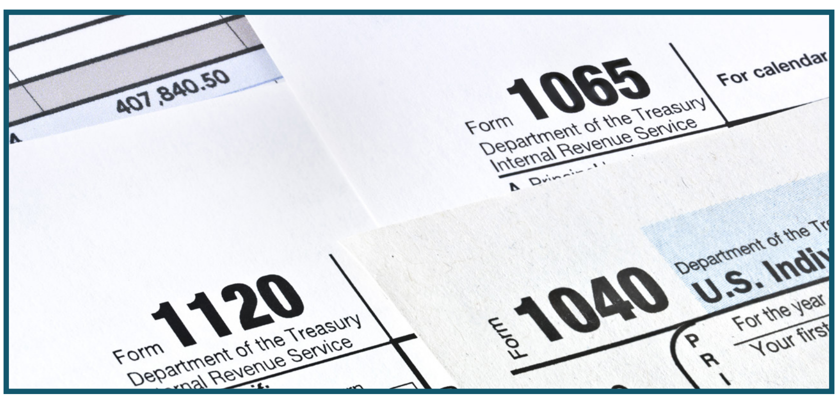
CONGRESS OF THE UNITED STATES
CONGRESSIONAL BUDGET OFFICE

CBO

Options for Reducing the Deficit: 2019 to 2028



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DECEMBER 2018

Notes

The estimates for the various options shown in this report were completed in November 2018. They may differ from any previous or subsequent cost estimates for legislative proposals that resemble the options presented here.

Unless this report indicates otherwise, all years referred to regarding budgetary outlays and revenues are federal fiscal years, which run from October 1 to September 30 and are designated by the calendar year in which they end.

The numbers in the text and tables are in nominal (current-year) dollars. Those numbers may not add up to totals because of rounding. In the tables, for changes in outlays, revenues, and the deficit, negative numbers indicate decreases, and positive numbers indicate increases. Thus, negative numbers for spending and positive numbers for revenues reduce the deficit, and positive numbers for spending and negative numbers for revenues increase it.

Some of the tables in this report give values for two related concepts: *budget authority* and *outlays*. Budget authority is the authority provided by federal law to incur financial obligations that will result in immediate or future outlays of federal government funds.

The budget projections used in this report come from various sources. The 10-year spending projections, in relation to which the budgetary effects of spending options are generally calculated, are those in Congressional Budget Office, *An Analysis of the President's 2019 Budget* (May 2018, revised August 2018), www.cbo.gov/publication/53884. The 10-year revenue projections, in relation to which the budgetary effects of revenue options are generally calculated, are those in Congressional Budget Office, *The Budget and Economic Outlook: 2018 to 2028* (April 2018), www.cbo.gov/publication/53651; the exceptions are the revenue projections shown in Chapter 1, which are those in *An Analysis of the President's 2019 Budget* (May 2018, revised August 2018). The longer-term budget projections are those in Congressional Budget Office, *The 2018 Long-Term Budget Outlook* (June 2018), www.cbo.gov/publication/53919. Budgetary results before 2019 reflect data from the Bureau of Economic Analysis and from Department of the Treasury, Bureau of the Fiscal Service, *Final Monthly Treasury Statement of Receipts and Outlays of the United States Government for Fiscal Year 2018 Through September 30, 2018, and Other Periods* (October 2018), https://go.usa.gov/xPhhG (PDF, 592 KB).

As referred to in this report, the Affordable Care Act comprises the Patient Protection and Affordable Care Act, the health care provisions of the Health Care and Education Reconciliation Act of 2010, and the effects of subsequent judicial decisions, statutory changes, and administrative actions.

CBO's website includes a search tool that allows users to filter options by major budget category, budget function, topic, and date (www.cbo.gov/budget-options). The website also includes previous editions of this report (https://go.usa.gov/xPdC9).

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CHAPTER

1

Introduction

Since 2007, federal debt held by the public has more than doubled in relation to the size of the economy, and it will keep growing significantly if the large annual budget deficits projected under current law come to pass (see Figure 1-1). The Congress faces an array of policy choices as it confronts the challenges posed by such large and growing debt. To help inform lawmakers, the Congressional Budget Office periodically issues a compendium of policy options that would help reduce the deficit, reporting the estimated budgetary effects of those options and highlighting some arguments for and against them.

This report, the latest in the series, presents 121 options that would decrease federal spending or increase federal revenues over the next 10 years (see Table 1-1 on page 6).[1] Of those options, 112 are presented in the main body of the report, and most of those 112 would save $10 billion or more over that period. The remaining 9 options are presented in an appendix and would generally have smaller budgetary effects.

The options in this report come from various sources. Some are based on proposed legislation or on the budget proposals of various Administrations; others come from Congressional offices or from entities in the federal government or in the private sector. The options cover many areas—defense, health, Social Security, provisions of the tax code, and more. The budgetary effects identified for most of the options span the 10 years from 2019 to 2028 (the period covered by CBO's baseline budget projections), although many of the options would have longer-term effects as well.[2]

Chapters 2 through 4 present options in the following categories:

- Chapter 2: Mandatory spending,
- Chapter 3: Discretionary spending, and
- Chapter 4: Revenues.[3]

Each chapter begins with a description of budgetary trends for the topic area, a general discussion of the method underlying the estimates of budgetary effects, and an overview of the options in the chapter. Then the chapter offers individual entries for each option that provide background information; describe the option; discuss the estimated budgetary effects, the basis of those estimates, and the largest sources of uncertainty; and summarize arguments for and against the change.

As a collection, the options are intended to reflect a range of possibilities, not a ranking of priorities or an exhaustive list. The inclusion or exclusion of any particular option does not imply that CBO endorses it or opposes it, and the report makes no recommendations. The report also does not contain comprehensive budget plans; it would be possible to devise such plans by combining certain options in various ways (although some would overlap and would interact with others).

CBO's website includes a search tool that allows users to filter options by major budget category, budget function, topic, and date. That tool is regularly updated to include only the most recent version of budget options from various CBO reports. Therefore, the tool currently includes all of the options that appear in this report. It also

1. For the previous edition, see Congressional Budget Office, *Options for Reducing the Deficit: 2017 to 2026* (December 2016), www.cbo.gov/publication/52142.

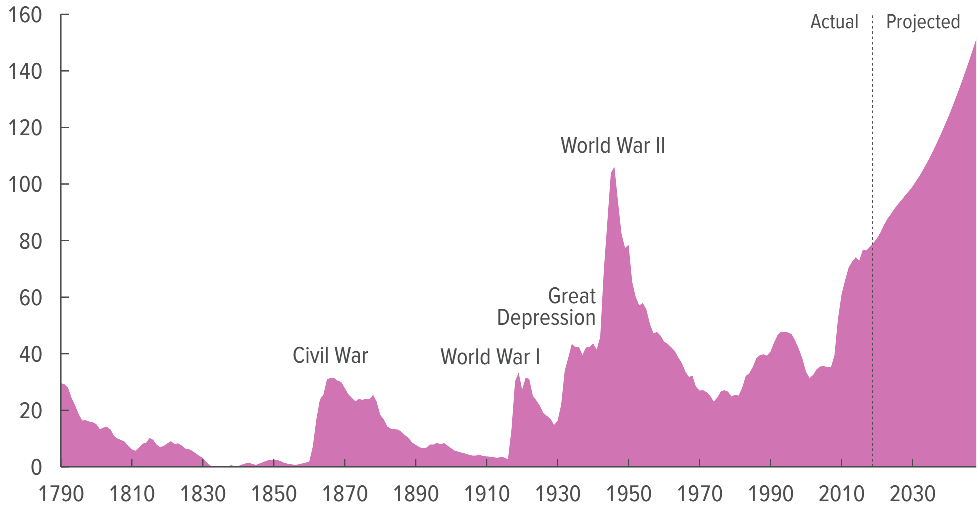
2. CBO's most recent baseline budget projections underlie the analysis in Congressional Budget Office, *An Analysis of the President's 2019 Budget* (May 2018, revised August 2018), www.cbo.gov/publication/53884. For additional discussion, see Congressional Budget Office, *The Budget and Economic Outlook: 2018 to 2028* (April 2018), www.cbo.gov/publication/53651.

3. Options that would change health-related spending or revenues are divided among those three chapters. In several previous editions, such options were in a separate chapter.

Figure 1-1.

Federal Debt Held by the Public

Percentage of Gross Domestic Product



High and rising federal debt would reduce national saving and income in the long term; increase the government's interest payments, thereby putting more pressure on the rest of the budget; limit lawmakers' ability to respond to unforeseen events; and increase the likelihood of a fiscal crisis.

Source: Congressional Budget Office.

CBO's most recent long-term projection of federal debt was completed in June 2018. See Congressional Budget Office, *The 2018 Long-Term Budget Outlook* (June 2018), www.cbo.gov/publication/53919. For details about the sources of data used for past debt held by the public, see Congressional Budget Office, *Historical Data on Federal Debt Held by the Public* (July 2010), www.cbo.gov/publication/21728.

CBO's projection generally reflects current law, following the agency's 10-year baseline budget projections through 2028 and then extending most of the concepts underlying those baseline projections for the rest of the long-term projection period.

includes options that were analyzed in the past, were not updated for this report, but remain informative. Those options were either in previous editions of this report or in different CBO reports analyzing specific federal programs or aspects of the tax code.[4]

The Current Context for Decisions About the Budget

The federal budget deficit in fiscal year 2018 totaled $779 billion—3.8 percent of gross domestic product, or GDP (see Table 1-2 on page 10).[5] That deficit represented an increase from the 2017 deficit, which equaled 3.5 percent of GDP.[6] As a result, debt held by the public increased to 78 percent of GDP at the end of 2018—about 2 percentage points higher than the amount in 2017 and the highest percentage since 1950.

In accordance with law, CBO constructs its baseline projections of federal revenues and spending under the assumption that current laws will generally remain unchanged. In those projections, budget deficits rise to an average of 5.1 percent of GDP between 2022 and 2025. That percentage has been exceeded in only five years since 1946; four of those years followed the deep 2007–2009 recession. After 2025, deficits dip—primarily because some tax provisions are scheduled to expire under current law, boosting revenues. Nevertheless, between 2026 and 2028, the projected deficit averages $1.4 trillion, or 4.8 percent of

4. However, CBO has removed from the tool most options not included in this report that would modify provisions of the tax code, because the significant changes to provisions of the tax code in Public Law 115-97—originally called the Tax Cuts and Jobs Act and referred to as the 2017 tax act in this report—have rendered estimates for those options or the options themselves obsolete.

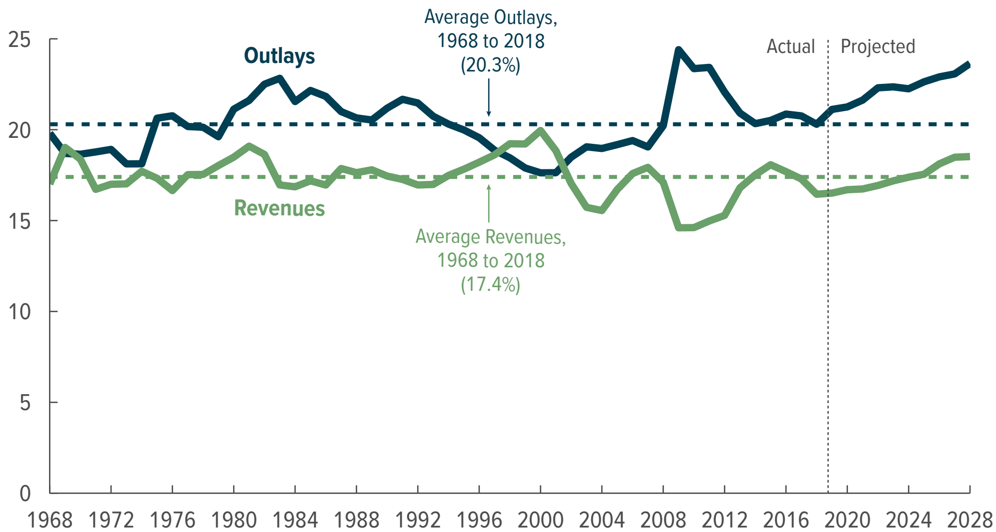
5. Actual amounts for *total* revenues and outlays are available for 2018. So are details regarding revenues. In contrast, details regarding outlays are available only through 2017.

6. The increase was smaller than it would otherwise have been because October 1, 2017 (the first day of fiscal year 2018), fell on a weekend; as a result, certain payments that were to be made on that day were instead made in September, in fiscal year 2017.

Figure 1-2.

Revenues and Outlays

Percentage of Gross Domestic Product



Revenues and outlays, measured as a percentage of gross domestic product, grow over the next decade in CBO's projections. Both are above their 50-year averages by 2028.

Source: Congressional Budget Office.

The projected values shown are from Congressional Budget Office, *An Analysis of the President's 2019 Budget* (May 2018, revised August 2018), www.cbo.gov/publication/53884.

GDP—which is still well above its 50-year average of 2.9 percent. In those years, revenues and outlays too are projected to be above their 50-year averages as measured in relation to GDP (see Figure 1-2). Significant growth in spending on retirement and health care programs—caused by the aging of the population and rising health care costs per person—and growing interest payments on federal debt drive much of the projected growth in spending over the coming decade.

As deficits accumulate in CBO's baseline projections, debt held by the public grows to 96 percent of GDP (or $29 trillion) by 2028. At that level, debt held by the public, measured as a percentage of GDP, would be more than twice its 50-year average. Beyond the 10-year period, if current laws remained in place, the pressures that contributed to rising deficits during the baseline period would accelerate and push up debt even more sharply. Three decades from now, for instance, debt held by the public is projected to be about twice as high in relation to GDP as it is this year—which would be a higher ratio than the United States has ever recorded.[7]

Such high and rising debt would have serious consequences, both for the economy and for the federal budget. Federal spending on interest payments would rise substantially as a result of increases in interest rates, such as those projected to occur over the next few years. Moreover, because federal borrowing reduces national saving over time, the nation's capital stock ultimately would be smaller, and productivity and income would be lower, than would be the case if the debt was smaller. In addition, lawmakers would have less flexibility than otherwise to respond to unexpected challenges, such as significant economic downturns or financial crises. Finally, the likelihood of a fiscal crisis in the United States would increase. Specifically, the risk would rise of investors' becoming unwilling to finance the government's borrowing unless they were compensated with very high interest rates. If that occurred, interest rates on

7. See Congressional Budget Office, *The 2018 Long-Term Budget Outlook* (June 2018), www.cbo.gov/publication/53919. The long-term projections, which focus on the 30-year period ending in 2048, extend most of the concepts underlying the 10-year projections for an additional 20 years, and they reflect the economic effects of projected fiscal policy over the 30-year period. For a discussion of how the federal budget and the nation's economy would evolve under three alternative scenarios, see Congressional Budget Office, *The Long-Term Budget Outlook Under Alternative Scenarios for Fiscal Policy* (August 2018), www.cbo.gov/publication/54325.

federal debt would rise suddenly and sharply in relation to rates of return on other assets.

Not only are deficits and debt projected to be greater in coming years; the United States is also on track to have a federal budget that will look very different from past budgets. In 2028, if current laws generally did not change, spending for all federal activities other than the major health care programs and Social Security would account for its smallest share of GDP in the past 50 years.[8] And those major health care programs (particularly Medicare) and Social Security would equal a much larger percentage of GDP than they have in the past. Furthermore, revenues would represent a larger share of GDP in 2028 than they generally have in the past few decades.

Choices for the Future

To put the federal budget on a sustainable long-term path, lawmakers would need to make significant policy changes—allowing revenues to rise more than they would under current law, reducing spending for large benefit programs to amounts below those currently projected, or adopting some combination of those approaches.

Lawmakers and the public may weigh several factors in considering new policies that would reduce budget deficits. What is an acceptable amount of federal debt, and how much deficit reduction is consequently necessary? How rapidly should such reductions occur? What is the proper size of the federal government, and what would be the best way to allocate federal resources? What types of policy changes would most enhance prospects for near-term and long-term economic growth? What would be the distributional implications of proposed changes—that is, who would bear the burden of particular cuts in spending or increases in taxes, and who would realize the economic benefits?

The scale of changes in noninterest spending or revenues would depend on the target level of federal debt. If lawmakers set out to ensure that debt in 2048 matched its current level of 78 percent of GDP, cutting noninterest spending or raising revenues (or both) in each year beginning in 2019 by amounts totaling 1.9 percent of GDP (about $400 billion in 2019, or $1,200 per person) would achieve that result. Increases in revenues or reductions in noninterest spending would need to be larger to reduce debt to the percentages of GDP that are more typical of those in recent decades. For instance, if lawmakers wanted to lower the debt to 41 percent of GDP (its average over the past 50 years) by 2048, they could achieve that outcome by increasing revenues, cutting noninterest spending, or both by amounts totaling 3.0 percent of GDP each year, beginning in 2019. (In 2019, 3.0 percent of GDP would be about $630 billion, or $1,900 per person.)[9]

Regardless of the chosen goal for federal debt, lawmakers would face trade-offs in deciding how quickly to implement policies designed to put federal debt on a sustainable path. The benefits of reducing the deficit sooner would include a smaller accumulated debt, smaller policy changes required to achieve long-term outcomes, and less uncertainty about the policies that lawmakers would adopt. However, if lawmakers implemented spending cuts or tax increases too quickly, people might have insufficient time to plan for or adjust to the new system. By contrast, if policymakers waited several years to reduce federal spending or increase taxes, more debt would accumulate over the long term, which would slow long-term growth in output and income and ultimately require larger policy changes to reach any chosen target for debt.[10]

Caveats About This Report

The ways in which specific federal programs, the budget as a whole, and the U.S. economy will evolve under current law are uncertain, as are the possible effects of proposed changes to federal spending and revenue policies. CBO's projections, especially its projections of how the economy will evolve, are even more uncertain than usual this year, because they incorporate estimates of the economic effects of major recent changes in fiscal policy—and those estimates are themselves particularly

8. The major health care programs consist of Medicare, Medicaid, and the Children's Health Insurance Program, along with federal subsidies for health insurance purchased through the marketplaces established under the Affordable Care Act and related spending.

9. Those changes to spending or revenues do not include economic feedback—that is, the effect on the budget from increases in economic growth and decreases in interest rates that result from reductions in deficits. The projected effects on debt, however, include both the direct effects of the policy changes and the resulting economic feedback.

10. See Congressional Budget Office, *The Deficit Reductions Necessary to Meet Various Targets for Federal Debt* (August 2018), www.cbo.gov/publication/54181.

uncertain. CBO aims to formulate projections that fall in the middle of the distribution of possible outcomes.

The estimates presented in this report could differ from cost estimates for similar proposals that CBO might produce later or from revenue estimates developed later by the staff of the Joint Committee on Taxation (JCT). One reason is that the proposals on which those estimates were based might not precisely match the options presented here. A second is that the baseline budget projections against which such proposals would be measured might have changed and thus would differ from the projections used for this report. A third is that CBO has not yet developed specific estimates of secondary effects for some options.

A fourth reason is that some proposals similar to options presented here would be defined as "major" legislation and thus would require CBO and JCT, to the extent practicable, to incorporate the budgetary impact of macroeconomic effects into cost estimates. (The Congress defines major legislation as either having a gross budgetary effect, before macroeconomic effects are incorporated, of 0.25 percent of GDP in any year over the next 10 years, or having been designated as such by the Chair of either Budget Committee. CBO projects that 0.25 percent of GDP in 2028 would be $75 billion.) Those macroeconomic effects might include, for example, changes in the labor supply or private investment. Incorporating such macroeconomic feedback into cost estimates is often called dynamic scoring. The estimates presented in this report do not incorporate such effects.

Many of the options in this report could be used as building blocks for broader changes. In some cases, however, combining various spending or revenue options would produce budgetary effects that would differ from the sums of those estimates as presented here because some options would overlap or interact in ways that would change their budgetary impact. Furthermore, some options are mutually exclusive.

Some options discussed in this report are flexible enough to be scaled up or down, leading to larger or smaller effects on households, businesses, and the budget. This report presents estimates for some of those alternatives. However, some options, such as those that eliminate programs, could not be scaled up or down.

Discretionary spending is controlled by annual appropriation acts in which policymakers specify how much money will be provided for certain government programs in specific years. CBO's baseline projections incorporate the assumption that discretionary funding will not exceed caps imposed by the Budget Control Act of 2011 (Public Law 112-25) and modified by subsequent legislation. To reduce projected deficits through changes in discretionary spending, lawmakers would therefore need to decrease the caps below their current levels or enact appropriations below those caps. The discretionary options in this report could be used either to reduce appropriations below the existing caps or to help comply with those caps. (Using the options merely to comply with existing caps would not reduce projected deficits.)

The estimated budgetary effects of options do not reflect the extent to which the options would reduce interest payments on federal debt. Those savings may be included as part of a comprehensive budget plan (such as the Congressional budget resolution), but CBO does not generally make such calculations for individual pieces of legislation or for individual options of the type discussed here.

Some of the estimates in this report depend on projections of states' responses to federal policy changes, which can be difficult to predict and can vary over time because of states' changing fiscal conditions and other factors. CBO's analyses do not attempt to quantify the impact of options on states' spending or revenues.

Some options might impose federal mandates on other levels of government or on private entities. The Unfunded Mandates Reform Act of 1995 requires CBO to estimate the costs of any mandates that would be imposed by new legislation that the Congress considers. (The law defines mandates as enforceable duties imposed on state, local, or tribal governments or the private sector, as well as certain types of provisions affecting large mandatory programs that provide funds to states.) In this report, CBO does not address the costs of any mandates that might be associated with the various options.

Table 1-1.

Options for Reducing the Deficit

Option Number	Title	Savings, 2019–2028[a] (Billions of dollars)
	Mandatory Spending	
Option 1	Limit Enrollment in the Department of Agriculture's Conservation Programs	3 to 10
Option 2	Eliminate Title I Agriculture Programs	20
Option 3	Reduce Subsidies in the Crop Insurance Program	4 to 21
Option 4	Limit ARC and PLC Payment Acres to 30 Percent of Base Acres	10
Option 5	Raise Fannie Mae's and Freddie Mac's Guarantee Fees and Decrease Their Eligible Loan Limits	3 to 12
Option 6	Eliminate or Reduce the Add-On to Pell Grants, Which Is Funded With Mandatory Spending	31 to 62
Option 7	Limit Forgiveness of Graduate Student Loans	12 to 32
Option 8	Reduce or Eliminate Subsidized Loans for Undergraduate Students	7 to 22
Option 9	Reduce or Eliminate Public Service Loan Forgiveness	9 to 22
Option 10	Remove the Cap on Interest Rates for Student Loans	11 to 16
Option 11	Adopt a Voucher Plan and Slow the Growth of Federal Contributions for the Federal Employees Health Benefits Program	35 to 37[b]
Option 12	Establish Caps on Federal Spending for Medicaid	162 to 703
Option 13	Limit States' Taxes on Health Care Providers	15 to 344
Option 14	Reduce Federal Medicaid Matching Rates	55 to 394
Option 15	Introduce Enrollment Fees Under TRICARE for Life	12
Option 16	Introduce Minimum Out-of-Pocket Requirements Under TRICARE for Life	27
Option 17	Change the Cost-Sharing Rules for Medicare and Restrict Medigap Insurance	44 to 116
Option 18	Increase Premiums for Parts B and D of Medicare	40 to 418
Option 19	Raise the Age of Eligibility for Medicare to 67	15 to 22
Option 20	Reduce Medicare's Coverage of Bad Debt	12 to 39
Option 21	Require Manufacturers to Pay a Minimum Rebate on Drugs Covered Under Part D of Medicare for Low-Income Beneficiaries	154
Option 22	Modify Payments to Medicare Advantage Plans for Health Risk	47 to 67
Option 23	Reduce Quality Bonus Payments to Medicare Advantage Plans	18 to 94
Option 24	Consolidate and Reduce Federal Payments for Graduate Medical Education at Teaching Hospitals	34 to 40
Option 25	Convert Multiple Assistance Programs for Lower-Income People Into Smaller Block Grants to States	88 to 247
Option 26	Eliminate Subsidies for Certain Meals in the National School Lunch, School Breakfast, and Child and Adult Care Food Programs	11
Option 27	Reduce TANF's State Family Assistance Grant by 10 Percent	13
Option 28	Eliminate Supplemental Security Income Benefits for Disabled Children	100[b]
Option 29	Link Initial Social Security Benefits to Average Prices Instead of Average Earnings	77 to 121
Option 30	Make Social Security's Benefit Structure More Progressive	7 to 36
Option 31	Raise the Full Retirement Age for Social Security	28
Option 32	Require Social Security Disability Insurance Applicants to Have Worked More in Recent Years	50
Option 33	Eliminate Eligibility for Starting Social Security Disability Benefits at Age 62 or Later	20
Option 34	Narrow Eligibility for Veterans' Disability Compensation by Excluding Certain Disabilities Unrelated to Military Duties	4 to 33
Option 35	End VA's Individual Unemployability Payments to Disabled Veterans at the Full Retirement Age for Social Security	7 to 48
Option 36	Reduce VA's Disability Benefits to Veterans Who Are Older Than the Full Retirement Age for Social Security	11
Option 37	Narrow Eligibility for VA's Disability Compensation by Excluding Veterans With Low Disability Ratings	6 to 38
Option 38	Use an Alternative Measure of Inflation to Index Social Security and Other Mandatory Programs	202

Continued

Table 1-1. Continued

Options for Reducing the Deficit

Option Number	Title	Savings, 2019–2028[a] (Billions of dollars)
	Discretionary Spending	
Option 1	Reduce the Department of Defense's Budget	248 to 517
Option 2	Reduce DoD's Operation and Maintenance Appropriation (Excluding Funding for the Defense Health Program)	70 to 195
Option 3	Cap Increases in Basic Pay for Military Service Members	18
Option 4	Replace Some Military Personnel With Civilian Employees	14
Option 5	Cancel Plans to Purchase Additional F-35 Joint Strike Fighters and Instead Purchase F-16s and F/A-18s	13
Option 6	Stop Building Ford Class Aircraft Carriers	10
Option 7	Reduce Funding for Naval Ship Construction to Historical Levels	50
Option 8	Reduce the Size of the Nuclear Triad	8 to 9
Option 9	Cancel the Long-Range Standoff Weapon	11
Option 10	Defer Development of the B-21 Bomber	32
Option 11	Modify TRICARE Enrollment Fees and Cost Sharing for Working-Age Military Retirees	11[b]
Option 12	Reduce the Size of the Bomber Force by Retiring the B-1B	17
Option 13	Reduce the Size of the Fighter Force by Retiring the F-22	27
Option 14	Cancel the Ground-Based Midcourse Defense System	18
Option 15	Reduce the Basic Allowance for Housing to 80 Percent of Average Housing Costs	15[b]
Option 16	Cancel Development and Production of the New Missile in the Ground-Based Strategic Deterrent Program	24
Option 17	Reduce Funding for International Affairs Programs	116
Option 18	Reduce Appropriations for Global Health to Their Level in 2000	57
Option 19	Eliminate Human Space Exploration Programs	89
Option 20	Reduce Department of Energy Funding for Energy Technology Development	3 to 16
Option 21	Eliminate Funding for Amtrak and the Essential Air Service Program	2 to 20[b]
Option 22	Limit Highway and Transit Funding to Expected Revenues	116
Option 23	Eliminate the Federal Transit Administration	87
Option 24	Increase the Passenger Fee for Aviation Security	21
Option 25	Eliminate Federal Funding for National Community Service	9
Option 26	Eliminate Head Start	92
Option 27	Tighten Eligibility for Pell Grants	3 to 86[b]
Option 28	Increase Payments by Tenants in Federally Assisted Housing	21
Option 29	Reduce Funding for the Housing Choice Voucher Program or Eliminate the Program	9 to 125
Option 30	End Enrollment in VA Medical Care for Veterans in Priority Groups 7 and 8	57[b]
Option 31	Reduce the Annual Across-the-Board Adjustment for Federal Civilian Employees' Pay	58
Option 32	Reduce the Size of the Federal Workforce Through Attrition	35
Option 33	Reduce Funding for Certain Grants to State and Local Governments	1 to 42
Option 34	Repeal the Davis-Bacon Act	12[b]

Continued

Table 1-1. Continued

Options for Reducing the Deficit

Option Number	Title	Savings, 2019–2028[a] (Billions of dollars)
	Revenues	
Option 1	Increase Individual Income Tax Rates	123 to 905
Option 2	Raise the Tax Rates on Long-Term Capital Gains and Qualified Dividends by 2 Percentage Points and Adjust Tax Brackets	70 to 81
Option 3	Eliminate or Modify Head-of-Household Filing Status	66 to 165
Option 4	Curtail the Deduction for Charitable Giving	146 to 176
Option 5	Eliminate Itemized Deductions	1,312
Option 6	Change the Tax Treatment of Capital Gains From Sales of Inherited Assets	105
Option 7	Eliminate the Tax Exemption for New Qualified Private Activity Bonds	32
Option 8	Expand the Base of the Net Investment Income Tax to Include the Income of Active Participants in S Corporations and Limited Partnerships	199
Option 9	Tax Carried Interest as Ordinary Income	14
Option 10	Include Disability Payments From the Department of Veterans Affairs in Taxable Income	4 to 93
Option 11	Include Employer-Paid Premiums for Income Replacement Insurance in Employees' Taxable Income	342
Option 12	Reduce Tax Subsidies for Employment-Based Health Insurance	256 to 638
Option 13	Further Limit Annual Contributions to Retirement Plans	103
Option 14	Tax Social Security and Railroad Retirement Benefits in the Same Way That Distributions From Defined Benefit Pensions Are Taxed	411
Option 15	Eliminate Certain Tax Preferences for Education Expenses	188
Option 16	Lower the Investment Income Limit for the Earned Income Tax Credit and Extend That Limit to the Refundable Portion of the Child Tax Credit	8
Option 17	Require Earned Income Tax Credit and Child Tax Credit Claimants to Have a Social Security Number That Is Valid for Employment	24
Option 18	Increase the Payroll Tax Rate for Medicare Hospital Insurance	898 to 1,787
Option 19	Increase the Payroll Tax Rate for Social Security	716 to 1,422
Option 20	Increase the Maximum Taxable Earnings for the Social Security Payroll Tax	785 to 1,223
Option 21	Expand Social Security Coverage to Include Newly Hired State and Local Government Employees	80
Option 22	Tax All Pass-Through Business Owners Under SECA and Impose a Material Participation Standard	163
Option 23	Increase Taxes That Finance the Federal Share of the Unemployment Insurance System	18
Option 24	Increase the Corporate Income Tax Rate by 1 Percentage Point	96
Option 25	Repeal Certain Tax Preferences for Energy and Natural Resource–Based Industries	2 to 8
Option 26	Repeal the "LIFO" and "Lower of Cost or Market" Inventory Accounting Methods	58
Option 27	Require Half of Advertising Expenses to Be Amortized Over 5 or 10 Years	63 to 132
Option 28	Repeal the Low-Income Housing Tax Credit	49
Option 29	Increase All Taxes on Alcoholic Beverages to $16 per Proof Gallon and Index for Inflation	68 to 83
Option 30	Increase the Excise Tax on Tobacco Products by 50 Percent	42
Option 31	Increase Excise Taxes on Motor Fuels and Index for Inflation	237 to 515
Option 32	Impose an Excise Tax on Overland Freight Transport	358
Option 33	Impose Fees to Cover the Costs of Government Regulations and Charge for Services Provided to the Private Sector	* to 14
Option 34	Impose a 5 Percent Value-Added Tax	1,920 to 2,970
Option 35	Impose a Tax on Emissions of Greenhouse Gases	1,099
Option 36	Impose a Fee on Large Financial Institutions	90 to 103
Option 37	Impose a Tax on Financial Transactions	777
Option 38	Tax Gains from Derivatives as Ordinary Income on a Mark-to-Market Basis	19
Option 39	Increase Federal Civilian Employees' Contributions to the Federal Employees Retirement System	45
Option 40	Increase Appropriations for the Internal Revenue Service's Enforcement Initiatives	35

Continued

Table 1-1. Continued

Options for Reducing the Deficit

Option Number	Title	Savings, 2019–2028[a] (Billions of dollars)
	Spending Options With Smaller Budgetary Effects (Appendix)	
Option A-1	Divest Two Agencies of Their Electric Transmission Assets	2[b]
Option A-2	Change the National Flood Insurance Program	1
Option A-3	Tighten Eligibility for the Supplemental Nutrition Assistance Program	8
Option A-4	Reduce Pension Benefits for New Federal Retirees	3
Option A-5	Eliminate the Special Retirement Supplement for New Federal Retirees	5
Option A-6	Eliminate Certain Forest Service Programs	6
Option A-7	Limit the Number of Cities Receiving Urban Areas Security Initiative Grants	1
Option A-8	Eliminate the International Trade Administration's Trade-Promotion Activities	3
Option A-9	Convert the Home Equity Conversion Mortgage Program Into a Direct Loan Program	3

Sources: Congressional Budget Office; staff of the Joint Committee on Taxation.

* = between zero and $500 million.

ARC = Agriculture Risk Coverage; DoD = Department of Defense; LIFO = last in, first out; PLC = Price Loss Coverage; SECA = Self-Employment Contributions Act; TANF = Temporary Assistance for Needy Families; VA = Department of Veterans Affairs.

a. For options affecting primarily mandatory spending or revenues, savings sometimes would derive from changes in both. When that is the case, the savings shown include effects on both mandatory spending and revenues. For options affecting primarily discretionary spending, the savings shown are the decrease in discretionary outlays.

b. Savings do not encompass all budgetary effects.

Table 1-2.

CBO's Baseline Budget Projections

	Actual												Total	
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2019–2023	2019–2028
							In Billions of Dollars							
Revenues	3,316	3,329	3,490	3,680	3,829	4,016	4,232	4,448	4,667	5,003	5,301	5,520	19,246	44,186
Outlays	3,982	4,108	4,463	4,683	4,947	5,290	5,505	5,693	6,020	6,324	6,616	7,047	24,888	56,587
Deficit	-665	-779	-973	-1,003	-1,118	-1,275	-1,273	-1,245	-1,352	-1,321	-1,314	-1,527	-5,642	-12,401
Debt Held by the Public at the End of the Year	14,665	15,751	16,743	17,804	18,970	20,290	21,609	22,904	24,310	25,687	27,058	28,642	n.a.	n.a.
							As a Percentage of Gross Domestic Product							
Revenues	17.2	16.4	16.5	16.7	16.7	16.9	17.2	17.4	17.5	18.1	18.5	18.5	16.8	17.5
Outlays	20.7	20.3	21.1	21.3	21.6	22.3	22.4	22.3	22.6	22.9	23.1	23.6	21.8	22.4
Deficit	-3.5	-3.8	-4.6	-4.6	-4.9	-5.4	-5.2	-4.9	-5.1	-4.8	-4.6	-5.1	-4.9	-4.9
Debt Held by the Public at the End of the Year	76.1	77.8	79.2	80.8	82.9	85.6	87.8	89.5	91.4	93.0	94.4	96.1	n.a.	n.a.

Source: Congressional Budget Office.

The projected values shown are from Congressional Budget Office, *An Analysis of the President's 2019 Budget* (May 2018, revised August 2018), www.cbo.gov/publication/53884.

n.a. = not applicable.

CHAPTER

2

Mandatory Spending Options

Mandatory spending—which totaled about $2.8 trillion in 2017, or 70 percent of federal outlays—consists of spending that is generally governed by statutory criteria and is not normally constrained by the annual appropriation process. Mandatory spending also includes certain types of payments that federal agencies receive from the public and from other government agencies. Those payments are classified as offsetting collections or offsetting receipts and reduce gross mandatory spending.[1] Lawmakers generally determine spending for mandatory programs by setting the programs' parameters, such as eligibility rules and benefit formulas, rather than by appropriating specific amounts each year.

The largest mandatory programs are Social Security and Medicare. Together, those programs accounted for 60 percent of mandatory outlays in 2017. Medicaid and other health care programs, including the Children's Health Insurance Program and subsidies for insurance under the Affordable Care Act, accounted for 16 percent of mandatory spending in that year (see Figure 2-1). The rest of mandatory spending is for income security programs (such as unemployment compensation, nutrition assistance programs, and Supplemental Security Income, or SSI), retirement benefits for civilian and military employees of the federal government, veterans' benefits, student loans, and agriculture programs.[2]

1. Unlike revenues, which the government collects through exercising its sovereign powers (for example, in levying income taxes), offsetting collections and receipts are generally collected from other government accounts or from members of the public through businesslike transactions (for example, in assessing Medicare premiums or rental payments and royalties for extracting oil or gas from public lands).

2. Tax credits reduce a taxpayer's overall tax liability (the amount owed), and when a refundable credit exceeds the liability apart from the credit, the excess may be refunded to the taxpayer; that refund is recorded in the budget as an outlay.

Trends in Mandatory Spending

As a share of the economy, mandatory spending increased significantly between 1968 and 1975, from 5.5 percent to 9.4 percent of gross domestic product (GDP). That increase was attributable mainly to growth in spending for Social Security and other income security programs, and to a lesser extent for Medicare and Medicaid. From 1975 through 2007, mandatory spending varied between roughly 9 percent and 10 percent of GDP. Such spending peaked in 2009 at 14.5 percent of GDP, boosted by the effects of the 2007–2009 recession and policies enacted in response to it. Mandatory spending as a share of GDP fell through 2014—as the effects of a gradually improving economy, the expiration of temporary legislation enacted in response to the recession, and payments from Fannie Mae and Freddie Mac partially offset the increase associated with the recession—and then started to rise again (see Figure 2-2). If no new laws were enacted affecting mandatory programs, the Congressional Budget Office estimates that mandatory outlays would continue to increase as a share of the economy, rising from 13.1 percent of GDP in 2017 to 15.2 percent in 2028.[3] By comparison, such spending averaged 9.8 percent of GDP over the past five decades.

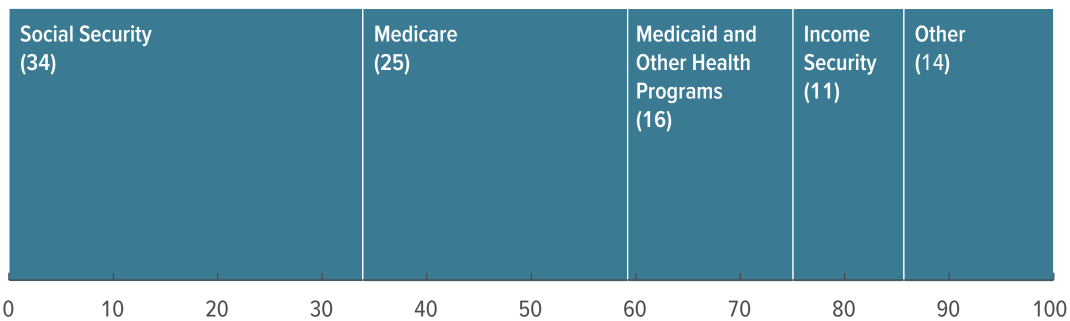
Spending for Social Security and the major health care programs—particularly Medicare—will drive much of the growth in mandatory spending over the coming decade, CBO expects. CBO projects that, under current law, spending for those programs will increase from 10.2 percent of GDP in 2019 to 12.5 percent in 2028, accounting for almost two-thirds of the total increase in outlays for mandatory spending over that period. (Those percentages reflect adjustments to eliminate the effects of shifts in the timing of certain payments.)

3. CBO's projections of mandatory spending underlie the projections in Congressional Budget Office, *An Analysis of the President's 2019 Budget* (May 2018, revised August 2018), www.cbo.gov/publication/53884.

Figure 2-1.

Composition of Mandatory Spending, 2017

Percent



Social Security and Medicare were the largest components of mandatory spending in 2017, accounting for more than half of the total.

Source: Congressional Budget Office, using data from the Office of Management and Budget.

Other health programs include the Children's Health Insurance Program as well as outlays to subsidize health insurance purchased through the marketplaces established under the Affordable Care Act and related spending.

Other mandatory spending includes outlays for federal civilian and military retirement, certain veterans' benefits, and a variety of other programs.

Much of the projected growth in mandatory spending over the coming decade is attributable to the aging population and rising health care costs per person, both of which spur spending on retirement programs and health care. The number of people age 65 or older has grown significantly—more than doubling over the past 50 years—and is expected to rise by more than one-third by 2028. Moreover, CBO projects that spending per enrollee in federal health care programs will grow more rapidly over the coming decade than it has in recent years. As a result, in CBO's projections, spending on people age 65 or older for Social Security, Medicare, and Medicaid would increase from 6.7 percent of GDP in 2018 to 8.8 percent in 2028.

In contrast, mandatory spending for people under age 65 is projected to remain roughly unchanged at just above 6 percent of GDP over the next 10 years, after adjustments to eliminate the effects of shifts in the timing of certain payments.

Method Underlying Mandatory Spending Estimates

The budgetary effects of the various options examined in this chapter are measured in relation to the spending that CBO projected in its adjusted April 2018 baseline.[4]

In creating its mandatory baseline budget projections, CBO generally assumes that federal fiscal policy follows current law and that programs now scheduled to expire or to begin in future years will do so. That assumption applies to most, but not all, mandatory programs. Following procedures established in the Deficit Control Act of 1985, CBO's projections incorporate the assumption that some mandatory programs scheduled to expire in the coming decade under current law will instead be extended. In particular, in CBO's baseline, all such programs that predate the Balanced Budget Act of 1997 and that have outlays in the current year above $50 million are presumed to continue. For programs established after 1997, continuation is assessed on a program-by-program basis in consultation with the House and Senate Committees on the Budget. The Supplemental Nutrition Assistance Program (SNAP) is the largest expiring program assumed to be extended in the baseline.

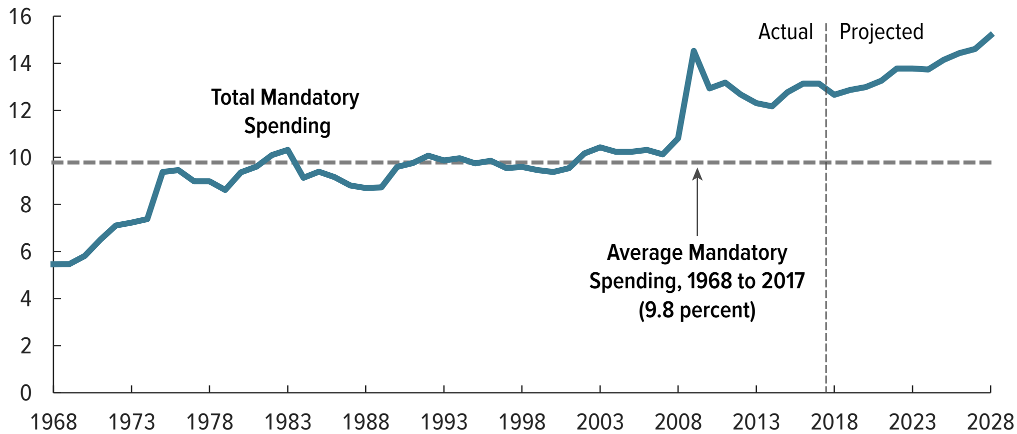
In addition, under Section 257 of the Deficit Control Act, CBO is required to assume that entitlement programs, including Social Security and Medicare, will be able to make all scheduled payments. For example, CBO must assume that scheduled Social Security benefits would be paid even after the program's trust funds were exhausted and annual payroll tax revenues were inadequate to fund those payments.

4. For information on that baseline, see Congressional Budget Office, *An Analysis of the President's 2019 Budget* (May 2018), www.cbo.gov/publication/53884.

Figure 2-2.

Mandatory Spending

Percentage of Gross Domestic Product



Under current law, spending for Social Security and the major health care programs—particularly Medicare—will drive much of the growth in mandatory spending over the coming decade, CBO projects.

Source: Congressional Budget Office.

The projected values shown underlie the projections in Congressional Budget Office, *An Analysis of the President's 2019 Budget* (May 2018, revised August 2018), www.cbo.gov/publication/53884.

Total mandatory spending includes offsetting receipts (funds collected by government agencies from other government accounts or from the public in businesslike or market-oriented transactions that are recorded as offsets to outlays).

The estimates in this chapter are uncertain for a number of reasons. For instance, the estimates depend in part on CBO's baseline projections, but those projections are uncertain. For example, CBO's projections of participation in certain income support programs depends in part on the overall strength of the economy. If an unanticipated economic downturn occurred, participation in those programs would probably be higher than CBO currently estimates, which would affect estimates for relevant options in this chapter.

In addition, CBO's estimates depend on numerous estimates regarding behavior and choices made by individuals, state governments, and other entities. For example, if Medicare's eligibility age rose, as is described in Option 19, some people would probably choose to work longer to maintain employer-sponsored health insurance. In analyzing that option, CBO's estimate of the number who would make that choice may differ from what would actually happen if that policy was enacted. Furthermore, legislation would be required to implement the options in this chapter, and the details of such legislation could differ from the policy assumptions CBO made in developing its estimates. The estimates for each option in this chapter only include its effects in isolation. If one option was combined with other proposals, as would happen if the option was part of a broader legislative proposal, then there would be potential interactions between the option and those other changes, and the cost estimate for a broader package would account for those interactions. As a result, the estimated budgetary effects of an option if it were combined with other policy changes could be quite different than the estimate for the option in isolation. Also, at the time of this volume's publication, the Congress was deliberating changes to agriculture and nutrition programs, including crop insurance, commodity support, and SNAP. If legislation was enacted to modify those programs, estimates for related options would probably differ from those published in this volume.

Options in This Chapter

The 38 options in this chapter encompass a broad array of mandatory spending programs. The options are grouped by program, but some are conceptually similar even though they concern different programs. For instance, several options would shift spending from the government to a program's participants or from the federal government to the states. Other options would redefine the population eligible for benefits or would reduce the payments that beneficiaries receive.

Fourteen options in this chapter focus on health care. One health option—which would impose caps on federal spending for Medicaid—takes a broader approach to changing federal health care policy than the other options examined in this report. Six options concern Social Security. Another five involve means-tested benefit programs (including nutrition assistance programs and SSI). The remaining options in this chapter focus on programs that deal with education, veterans' benefits, federal pensions, agriculture, Fannie Mae and Freddie Mac, and natural resources. Some options would affect revenues as well as outlays and so include an estimate of that revenue effect.

Some options to reduce federal spending on health care in which lawmakers have recently expressed interest and that appeared in prior volumes of this report are not in this volume. One such option would convert Medicare to a premium support system in which beneficiaries would purchase health insurance from a list of competing plans and the federal government would pay part of the cost of the coverage. CBO published an analysis of the effects of such a system on federal spending and beneficiaries' choices and payments in 2017, and the agency has not updated that analysis.[5] Another option would impose federal limits on medical malpractice torts. It is not part of the current volume because the agency is revising its analytical approach and expects to publish an updated model and estimates in the spring of 2019.

5. See Congressional Budget Office, *A Premium Support System for Medicare: Updated Analysis of Illustrative Options* (October 2017), www.cbo.gov/publication/53077.

Also excluded are options that would make major changes to the Affordable Care Act—such as repealing its coverage provisions or replacing those provisions with a flat tax credit or block grants to the states. CBO is currently devoting the resources needed to analyze such options to the development and testing of a new version of its health insurance simulation model.[6] The new model incorporates new data into early stages of the modeling process, better accounts for consumers' selection of types of insurance plans, and allows easier simulation of new insurance products.

Apart from health, there are other policy options that are not in this volume despite interest from lawmakers. In particular, there are no options related to immigration. Estimating the effects of legislation that would change immigration law is often complicated, involving analysis of both budgetary and macroeconomic effects, and such analysis is beyond the scope of this volume.[7]

Some options that were included in previous volumes, including changing the eligibility for SNAP, have not been included in this chapter, but instead are contained in this edition's appendix in an abbreviated format.

6. See Congressional Budget Office, *CBO's Health Insurance Simulation Model: Overview of Planned Updates* (October 2018), www.cbo.gov/publication/54623.

7. For CBO's most recent estimates of comprehensive immigration legislation, see Congressional Budget Office, cost estimate for H.R. 3440, Dream Act of 2017 (December 15, 2017), www.cbo.gov/publication/53409; and cost estimate for S. 1615, Dream Act of 2017 (December 15, 2017), www.cbo.gov/publication/53410.

Mandatory Spending—Option 1 **Function 300**

Limit Enrollment in the Department of Agriculture's Conservation Programs

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Outlays												
Phase out the Conservation Stewardship Program	0	*	-0.2	-0.4	-0.6	-0.7	-0.9	-1.1	-1.3	-1.5	-1.2	-6.7
Scale back the Conservation Reserve Program	0	*	*	*	-0.3	-0.4	-0.6	-0.6	-0.6	-0.6	-0.3	-3.1
Both alternatives above	0	*	-0.2	-0.4	-0.8	-1.1	-1.6	-1.7	-1.9	-2.0	-1.5	-9.8

This option would take effect in October 2019.

* = between -$50 million and zero.

Background

Under the Conservation Stewardship Program, landowners enter into contracts with the Department of Agriculture (USDA) to undertake various conservation measures—including measures to conserve energy and improve air quality—in exchange for annual payments and technical help. Those contracts last five years and can be extended for another five years. For every acre enrolled in the CSP, a producer receives compensation for carrying out new conservation activities and for improving, maintaining, and managing existing conservation practices. Current law limits new enrollment in the CSP to 10 million acres per year. In 2018, approximately 110 million acres were enrolled, and USDA spent $1.3 billion on the program.

Under the Conservation Reserve Program, landowners enter into contracts to stop farming on specified tracts of land, usually for 10 to 15 years, in exchange for annual payments and cost-sharing grants from USDA to establish conservation practices on that land. One type of tract used in the program is a "conservation buffer"—a narrow strip of land maintained with vegetation to intercept pollutants, reduce erosion, and provide other environmental benefits. Acreage may be added to the reserve program through general enrollment, which is competitive and conducted periodically for larger tracts of land, or through continuous enrollment, which is available during annual sign-up periods announced by USDA, for smaller tracts of land. Current law caps total enrollment in the reserve program at 24 million acres by 2018; in 2018, USDA spent $2 billion on the roughly 23 million acres enrolled.

The Agriculture Act of 2014 (the 2014 farm bill) was the most recent comprehensive legislation addressing farm programs. It authorized the Conservation Stewardship Program and the Conservation Reserve Program through 2018.

Option

Beginning in 2020, the first part of this option would prohibit new enrollment in the stewardship program. Land enrolled now—and therefore hosting new or existing conservation activities—would be eligible to continue in the program until the contract for that land expired (after as long as 10 years if the contract is extended). As a result, starting in 2029—after all of the current contracts expired—there would be no land enrolled in the program.

Beginning in 2020, the second part of this option would prohibit both new enrollment and reenrollment in the general enrollment portion of the reserve program; continuous enrollment would remain in effect.

Effects on the Budget

The budgetary effects of this option are estimated relative to the Congressional Budget Office's baseline projections for the affected programs, which—as required by law—incorporate the assumption that the programs will continue to operate beyond their scheduled expiration date. The options would generate savings with respect to those baseline projections because the programs that are assumed to continue would be eliminated.

By the Congressional Budget Office's estimates, prohibiting new enrollment in the stewardship program would reduce federal spending by about $7 billion through 2028. That prohibition would eliminate the possibility of adding up to 10 million acres per year, at an average annual federal cost of $18 per acre, to the stewardship program.

Ending general enrollment in the reserve program would reduce spending by $3 billion through 2028, CBO estimates. That change would reduce the amount of land enrolled in the reserve program (at an average federal cost of $52 per acre) by almost half—by about 11 million acres in 2028.

Under this option, reductions in federal spending would grow over time because both the stewardship program and the reserve program operate through multi-year contracts. Existing contracts would remain in place until they expired, and as they did the federal government would realize savings. (The option's prohibitions on further enrollment mean that the government would make no payments to new enrollees under the stewardship program or to new enrollees or reenrollees under the general enrollment portion of the reserve program.)

Uncertainty about the budgetary effects of this option stems from uncertainty regarding the average federal costs per acre. Those costs depend on the types of land enrolled in the programs; contracts for different types of land involve different payment rates. Because the projection of the types of land that would be enrolled or reenrolled in the programs under current law is uncertain, those average costs are uncertain.

Other Effects

One argument for prohibiting new enrollment in the stewardship program and thus phasing out the program is that some of the program's provisions limit its effectiveness. For example, paying farmers for conservation practices they have already adopted may not enhance the nation's conservation efforts. Moreover, USDA's criteria for determining payments for conservation practices are not clear, and payments may be higher than necessary to encourage farmers to adopt new conservation measures.

An argument against prohibiting new enrollment in the stewardship program is that, unlike traditional crop-based subsidies, the stewardship program may offer a way to support farmers while also providing environmental benefits. Furthermore, conservation practices often impose significant up-front costs, which can reduce the net economic output of agricultural land, and stewardship program payments help offset those costs.

One argument for scaling back the reserve program is that the land could become available for other uses, some of which might provide greater environmental benefits. For example, reducing enrollment could free more land to produce crops and biomass for renewable energy products.

An argument against scaling back the reserve program is that studies have indicated that the program yields high returns—in the form of enhanced wildlife habitat, improved water quality, and reduced soil erosion—for the money it spends. Furthermore, USDA is enrolling more acres targeting specific environmental and resource concerns, perhaps thereby improving the cost-effectiveness of protecting fragile tracts.

RELATED OPTIONS: Mandatory Spending, "Eliminate Title I Agriculture Programs" (page 17), "Reduce Subsidies in the Crop Insurance Program" (page 19), "Limit ARC and PLC Payment Acres to 30 Percent of Base Acres" (page 21)

Mandatory Spending—Option 2 Function 350

Eliminate Title I Agriculture Programs

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Outlays	0	0	0	0	0	-0.6	-0.7	-6.3	-6.0	-6.1	0	-19.7

This option would take effect in October 2023.

Background

Since 1933, lawmakers have enacted and often modified a variety of programs to support commodity prices and supplies, farm income, and producers' liquidity. The Agriculture Act of 2014 (the 2014 farm bill) was the most recent comprehensive legislation addressing farm income and price support programs. Title I of that bill authorized programs through 2018 for producers of major commodities (such as corn, soybeans, wheat, and cotton), as well as specialized programs for dairy and sugar.

Option

Beginning with the 2024 marketing year, this option would eliminate all Title I commodity support programs. (For example, commodity support for wheat would end on June 1, 2024, and commodity support for corn would end on September 1, 2024.)

Under this option, the permanent agriculture legislation enacted in 1938 and 1949 would be repealed. (That permanent legislation would offer producers price and income support at a relatively high level after the 2014 farm bill or any new farm legislation expired.)

Effects on the Budget

The budgetary effects of this option are estimated relative to the Congressional Budget Office's baseline projections for the affected programs, which—as required by law—incorporate the assumption that the programs will continue to operate beyond their scheduled expiration date. The effective date for this option is set for 2024 under the assumption that the option could not be implemented before legislation is passed that authorizes the programs to continue to operate through 2023. The option would generate savings with respect to CBO's baseline projections, starting in 2024, which incorporate the assumption that the programs continue through 2028. Reductions in government spending with respect to CBO's baseline would begin in fiscal year 2024 and savings would rise sharply in fiscal year 2026, when most outlays for the 2024 marketing year would occur. CBO estimates that this option would reduce spending by $20 billion, with respect to that baseline, over the 2019–2028 period.

This estimate is derived by eliminating projected spending for the Title I commodity support programs, which is uncertain because it can vary greatly from year to year as a result of changes in weather, trade, and market demand. Such changes have a direct effect on commodity production and prices, which affect the cost of the programs.

Other Effects

During the Great Depression of the 1930s, the 25 percent of the population that lived on farms had less than half the average household income of urban households; federal commodity programs came about to alleviate that income disparity. One argument for eliminating Title I commodity support programs is that the structure of U.S. farms has changed dramatically since then: The significant income disparity between farm and urban populations no longer exists. In 2014, about 97 percent of all farm households (which now constitute about 2 percent of the U.S. population) were wealthier than the median U.S. household. Farm income, excluding federal program payments, was 52 percent higher than median U.S. household income. Moreover, payments made through programs that support commodity prices and incomes are concentrated among a relatively small portion of farms. Three-quarters of all farms received no farm-related government payments in 2014; most program payments, in total, went to mid- to large-scale farms (those with annual sales above $350,000).

Moreover, agricultural producers have access to a variety of other federal assistance programs, such as subsidized crop insurance and farm credit assistance programs. In addition, eliminating Title I programs would limit spending that may distort trade between U.S. producers and other countries, thereby reducing the risk that the World Trade Organization might again challenge agricultural support by the federal government (as it did with the U.S. cotton program).

An argument against eliminating commodity support programs is that despite relatively high average income among farmers, the farm sector still faces significant challenges. Farm income fluctuates markedly and depends on the vagaries of the weather and international markets. Commodity programs try to stabilize crop revenues over time. Also, a significant portion of U.S. agricultural production is exported to markets where foreign governments subsidize their producers. Without support from the government's commodity programs, U.S. producers might not be able to compete as effectively in those export markets. Finally, many years of continual government payments from commodity programs have been capitalized into the fixed assets of farm operations (primarily land); abruptly removing that income stream would cause farmers' wealth to drop significantly.

RELATED OPTIONS: Mandatory Spending, "Limit Enrollment in the Department of Agriculture's Conservation Programs" (page 15), "Reduce Subsidies in the Crop Insurance Program" (page 19), "Limit ARC and PLC Payment Acres to 30 Percent of Base Acres" (page 21)

Mandatory Spending—Option 3 Function 350

Reduce Subsidies in the Crop Insurance Program

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Outlays												
Reduce premium subsidies	0	-0.2	-1.8	-2.1	-2.1	-2.1	-2.1	-2.2	-2.2	-2.2	-6.2	-16.9
Limit administrative expenses and the rate of return	0	-0.1	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-1.6	-4.1
Both alternatives above	0	-0.2	-2.3	-2.6	-2.6	-2.6	-2.7	-2.7	-2.7	-2.7	-7.7	-21.0

This option would take effect in June 2019.

Background

The federal crop insurance program, a permanent program that is frequently updated by the Congress, protects farmers from losses caused by drought, floods, pest infestation, other natural disasters, and low market prices. Farmers can choose various amounts and types of insurance protection—for example, they can insure against losses caused by poor crop yields, low crop prices, or both. The Department of Agriculture (USDA) sets premium rates for federal crop insurance so that the premiums equal the expected payments to farmers for crop losses. The federal government pays about 60 percent of total premiums, on average, and farmers pay about 40 percent.

Private insurance companies—which the federal government reimburses for their administrative costs—sell and service insurance policies purchased through the program. The current Standard Reinsurance Agreement (SRA) establishes a limit for administrative expenses (currently $1.4 billion per year). The SRA establishes the terms and conditions under which the federal government provides subsidies and reinsurance on eligible crop insurance contracts sold or reinsured by private insurance companies. In addition, the federal government reinsures those private insurance companies by agreeing to cover some of the losses when total payouts exceed total premiums. Overall, the Congressional Budget Office projects that under current law the average rate of return to crop insurance companies will be 14 percent through 2020. Under current law, CBO projects that federal spending for crop insurance would total $78 billion from 2020 through 2028.

Option

Beginning in June 2019, this option would reduce the federal government's subsidy to 40 percent of the crop insurance premiums, on average. It also would limit the federal reimbursement to crop insurance companies for administrative expenses to 9.25 percent of estimated premiums (or to an average of $1 billion each year from 2020 through 2028) and limit the rate of return on investment for those companies to 12 percent each year.

Effects on the Budget

This option would save $21 billion from 2020 through 2028, CBO estimates.

A change in premium subsidies would alter the cost of crop insurance to producers. As a result, a producer might make no change, change the type of insurance purchased (for example, switching from revenue coverage to yield coverage, which is less expensive), reduce coverage on particular acres, reduce the number of acres covered by insurance (for example, not insuring every field on the farm), drop insurance coverage altogether, or take some combination of those actions. CBO accounted for each of those possible outcomes, making determinations of likely behavior after consulting with producers, academic experts, people working in the crop insurance industry, and others.

The reduction in premium subsidies in this option would save $17 billion from 2019 through 2028, CBO estimates. Those savings are uncertain largely because the response by producers is difficult to predict. Generally, the more producers drop insurance or switch to lower coverage levels, the more this option would save.

Limiting administrative expenses and the rate of return of crop insurance companies under the option would save $4 billion through 2028, CBO estimates. The savings from an annual restriction on the administrative reimbursement, such as that in this option, would be the difference between the SRA limit and what the option would allow. In addition, CBO estimates that limiting the average rate of return to crop insurance companies to 12 percent would reduce the rate of return by 2 percentage points. As a result, the government would cover less of the companies' losses. Generally, the amount of savings from limiting administrative expenses and the rate of return of crop insurance companies is proportional. For example, each additional 1 percentage point reduction in the limit on reimbursements for administrative expenses as a percent of premiums would save an additional $1 billion over the 10-year period. Similarly, an additional 1 percentage point reduction in the rate of return would save around $0.8 billion.

Other Effects

An argument in favor of this option is that cutting the federal subsidies for premiums would probably not substantially affect participation in the program. Private lenders to farmers increasingly view crop insurance as an important way to ensure that farmers can repay their loans, which encourages participation. Moreover, the farmers who dropped out of the program would generally continue to receive significant support from other federal farm programs.

Another argument in favor of this option is that it would reduce reimbursement rates for administrative expenses to a level more in line with current premiums. Current reimbursements to crop insurance companies for administrative expenses (around $1.3 billion per year) were established in 2010, when premiums were relatively high. Recent reductions in the value of the crops insured (partly the result of lower average commodity prices) have resulted in lower average premiums for crop insurance. However, administrative expenses have not shown a commensurate reduction. A cap of 9.25 percent, or about $1 billion, would be close to average reimbursements during the years before the run-up in commodity prices in 2010. Furthermore, according to a recent USDA study, the current rate of return on investment for crop insurance companies, 14 percent, is higher than that of other private companies, on average.

An argument against this option is that cutting the federal subsidies for premiums would probably cause farmers to buy less insurance and leave them more vulnerable to risk. All else being equal, the option would increase the cost of insurance by 50 percent and could lead to a reduction in insured acres. If the amount of insurance declined significantly, lawmakers might be more likely to enact special relief programs when farmers encountered significant difficulties, which would offset some of the savings from cutting the premium subsidy. (Such ad hoc disaster assistance programs for farmers cost an average of about $700 million annually in the early 2000s.) In addition, limiting reimbursements to companies for administrative expenses and reducing the targeted rate of return to companies could add to the financial stress of companies in years with sizable payouts for covered losses. Moreover, if significantly fewer farmers participate, then some smaller crop insurance companies would probably go out of business.

RELATED OPTIONS: Mandatory Spending, "Limit Enrollment in the Department of Agriculture's Conservation Programs" (page 15), "Eliminate Title I Agriculture Programs" (page 17), "Limit ARC and PLC Payment Acres to 30 Percent of Base Acres" (page 21)

Mandatory Spending—Option 4 Function 350

Limit ARC and PLC Payment Acres to 30 Percent of Base Acres

											Total	
Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2019–2023	2019–2028
Change in Outlays	0	0	0	0	0	0	0	-3.3	-3.3	-3.4	0	-10.0

This option would take effect in crop year 2024.

Background

The Agricultural Act of 2014 (Public Law 113-79) provides support to producers of covered commodities (wheat, oats, barley, corn, grain sorghum, long-grain rice, medium-grain rice, soybeans and other oilseeds, peanuts, chickpeas, dried peas, and lentils) through the Agriculture Risk Coverage (ARC) and Price Loss Coverage (PLC) programs.

Eligibility under the ARC and PLC programs is determined from a producer's planting history. Only producers who have established base acres (that is, who have shown a history of planting covered commodities on their farms) with the Department of Agriculture under statutory authority granted by previous farm bills may participate. Growers with base acres for covered commodities need not plant a crop to receive payments.

The ARC program pays farmers when the revenues in a crop year fall short of guaranteed amounts at either the county level (ARC-County, or ARC-CO—accounting for most coverage) or the individual farm level (ARC-Individual Coverage, or ARC-IC). (A crop year begins in the month that the crop is first harvested and ends 12 months later. For example, the corn crop year begins September 1 and ends the following August 31.) The PLC program pays farmers when the national average market price for a covered commodity in a given crop year falls below a reference price specified in the law.

When a payment for a crop is triggered, total payments are calculated by multiplying the payment per acre by a producer's payment acres for that crop. For ARC-CO and PLC, the number of payment acres equals 85 percent of base acres; for ARC-IC, it is 65 percent of base acres. Fiscal year 2017 payments for ARC-CO and PLC were $2.4 billion and $2.9 billion, respectively. The Congressional Budget Office estimates that ARC-IC payments in the same year were $36 million, but data from USDA do not distinguish ARC-CO payments from ARC-IC payments.

Option

Beginning with the 2024 crop year, this option would limit payment acres for ARC-CO and for PLC to 30 percent of base acres and would make a comparable cut to ARC-IC (to 23 percent of base acres). This option reflects the baseline assumption that the programs (which are scheduled to expire with the beginning of the 2019 crop year) are extended as they exist in the 2014 farm bill, and that the first contracts under that extension would run through crop year 2023. Producers are assumed to enter into contracts under the current system covering the period through the 2023 crop year, so CBO assumes that the option's new limits on payment acres would take effect in crop year 2024.

Effects on the Budget

Savings would begin in fiscal year 2026, when ARC and PLC payments for crop year 2024 would be made. Any payments come well after crop harvest for two reasons: First, the crop year for each commodity must be complete before the season-average price is known. Second, the 2014 farm bill requires payments to be made beginning October 1 after the end of the applicable crop year, which pushes them into the next fiscal year. Total savings over the 2026–2028 period would be $10.0 billion, CBO estimates. Savings would be proportional—reducing payment acres by an additional 10 percent would increase the savings by 10 percent.

This estimate relies upon CBO's estimates for crop price and yield, which are forecast 8 to 10 years into the future. CBO takes uncertainty into account in various ways, such as projecting the chances that prices of covered crops would be below certain thresholds. Nonetheless, given that agricultural markets can vary because of weather, annual planting decisions, and changes in consumption and trade patterns, actual savings from implementing this option could be higher or lower than projected.

Other Effects

One argument in favor of this option is that it would limit the competitive advantage that farmers with base acres have over farmers without base acres. Those advantages include the payments themselves, as well as decreased risk and the expectation of a more stable income.

The option might also affect the production and prices of some crops. Factors other than federal payments—such as consumers' demand, climate, infrastructure, and producers' investment in specialized equipment—generally have the greatest impact on producers' planting choices. However, because only covered commodities are eligible for ARC and PLC support, the availability of those payments tends to encourage farmers to plant crops they might not otherwise plant. Prices for fruits and vegetables (which are not covered by the ARC or PLC programs) may be higher than they would be without those programs. Program rules require a reduction in payments if a farmer plants fruits, vegetables, or wild rice, which tends to reduce the supply of such crops. Those effects might be reduced if the programs were cut back.

An argument against this option is that farming is an inherently risky enterprise. Many growers favor the income stability fostered by federal programs.

RELATED OPTIONS: Mandatory Spending, "Limit Enrollment in the Department of Agriculture's Conservation Programs" (page 15), "Eliminate Title I Agriculture Programs" (page 17), "Reduce Subsidies in the Crop Insurance Program" (page 19)

Mandatory Spending—Option 5 **Function 370**

Raise Fannie Mae's and Freddie Mac's Guarantee Fees and Decrease Their Eligible Loan Limits

											Total	
Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2019–2023	2019–2028
Change in Outlays[a]												
Increase guarantee fees	0	-0.7	-0.1	-1.4	-1.0	-1.3	-1.3	-1.4	-1.5	-1.5	-5.1	-12.0
Decrease loan limits	0	-0.1	0.1	-0.1	-0.3	-0.5	-0.5	-0.6	-0.7	-0.8	-0.3	-3.3
Both alternatives above[b]	0	-0.7	-0.1	-1.4	-1.4	-1.5	-1.7	-1.7	-1.8	-1.8	-3.5	-11.8

This option would take effect in October 2019.

a. Excludes the potential effects on federal spending for the Federal Housing Administration and the Government National Mortgage Association. Spending for those agencies is set through annual appropriation acts and thus is classified as discretionary, whereas spending for Fannie Mae and Freddie Mac is not determined by appropriation acts and thus is classified as mandatory.

b. If both alternatives were enacted together, the total effects would be less than the sum of the effects for each alternative because of interactions between the approaches.

Background

Fannie Mae and Freddie Mac are government-sponsored enterprises (GSEs) that were federally chartered to help ensure a stable supply of financing for residential mortgages, including those for low- and moderate-income borrowers. The GSEs carry out that mission in the secondary mortgage market (the market for buying and selling mortgages after they have been issued): They buy mortgages from lenders and pool those mortgages to create mortgage-backed securities (MBSs), which they sell to investors and guarantee against losses from defaults. Under current law, in 2018 Fannie Mae and Freddie Mac generally can purchase mortgages of up to $679,650 in areas with high housing costs and up to $453,100 in other areas; regulators can alter those limits if house prices change. The two GSEs provided credit guarantees for about half of all mortgages for single-family homes that originated in 2017.

In September 2008—after falling house prices and rising mortgage delinquencies threatened the GSEs' solvency and impaired their ability to ensure a steady supply of financing to the mortgage market—the federal government took control of Fannie Mae and Freddie Mac in a conservatorship process. As a result, the Congressional Budget Office concluded that the institutions had effectively become government entities whose operations should be reflected in the federal budget. By contrast, the Administration considers the GSEs to be nongovernmental entities.

Under current law, CBO projects, the mortgage guarantees that the GSEs issue from 2019 through 2028 would cost the federal government $19 billion. That estimate reflects the subsidy rate that CBO attributes to the guarantees—the difference between the cost of the guarantees and any fees received by the GSEs as a percentage of the original unpaid principal balance. CBO's estimates are constructed on a present-value basis. (Present value is a single number that expresses a flow of current and future income or payments in terms of an equivalent lump sum received or paid today.)

The Administration's projections focus on the annual cash transactions between the enterprises and the Treasury. Those transactions include potential outlays for purchases of stock from the GSEs that would be needed to maintain the GSEs' solvency. Those transactions also include dividends on the Treasury's stock holdings, which are paid to the Treasury. Essentially, those dividend payments reflect the GSEs' quarterly income. Those cash flows stem from both existing and new business. Under current law, both CBO and the Administration expect that the Treasury would receive substantial net cash inflows from Fannie Mae and Freddie Mac over the 10-year period; CBO views those transactions as intragovernmental, whereas the Administration considers them to be payments from private firms to the government.

Option

This option includes two alternatives to reduce the budgetary costs of Fannie Mae and Freddie Mac. In the first alternative, the average guarantee fee that Fannie Mae and Freddie Mac assess on loans they include in their MBSs would increase by 5 basis points (100 basis points equal 1 percentage point), to more than 60 basis points, on average, beginning in October 2019. In addition, to keep guarantee fees constant after 2021—when an increase of 10 basis points that was put in place in 2011 is scheduled to expire—the average guarantee fee would be increased by 15 basis points, relative to the fee that would be in effect under current law, after 2021.

In the second alternative, the size of the mortgages that Fannie Mae and Freddie Mac included in their MBSs would be reduced, beginning by setting the maximum mortgage in all areas at $453,100 in 2020 (eliminating the higher limit in high-cost areas) and then reducing that maximum by 5 percent a year until it reaches about $300,000 by 2028. (Guarantee fees would remain as they are under current law.)

Effects on the Budget

The first alternative, increasing guarantee fees, would reduce net federal spending by $10 billion from 2019 through 2028 and would cause the volume of new guarantees by Fannie Mae and Freddie Mac to fall by around 16 percent, CBO estimates. (The projected reduction in spending each year is the decrease in subsidy costs for mortgages guaranteed in that year.)

The second alternative, reducing loan limits, would save $3 billion from 2019 through 2028 because the volume of new guarantees would fall by about 29 percent, CBO estimates. That is because fewer loans would be eligible for the entities to purchase and pool as MBSs.

Taking both alternatives together would lower net federal spending by $12 billion from 2019 through 2028 and would result in a drop in new guarantees of about 38 percent, according to CBO's estimates. Because raising guarantee fees by 5 basis points initially and by 15 basis points after 2021 would eliminate most of the federal subsidy costs for the GSEs' guarantees, lowering the loan limits would have a smaller budgetary effect.

However, because the GSEs' profits would drop, CBO estimates that the alternatives would result in net reductions in cash receipts over 10 years under the Administration's cash accounting approach: The reduction in the amount the two GSEs paid the government would be greater than the amount that the government saved on potential stock purchases. Under the first alternative, increasing the fees would raise the net amount of cash flowing to the Treasury per loan, but the drop in the volume of guarantees would reduce that net cash flow by a larger amount. The effect would be a relatively small drop in net cash receipts from the GSEs to the Treasury. Under the second alternative, the decline in the volume of the guarantees would lead to substantial drops in cash receipts to the Treasury. Taking both alternatives together would also lead to significant decreases in net cash receipts.

To estimate changes in costs from increasing guarantee fees or decreasing loan limits, CBO estimates the effect on total loan guarantees and their subsidy rate. Raising guarantee fees would lower the cost of each guarantee and would reduce the number of guarantees because some borrowers would turn to privately backed mortgages. CBO's estimates of subsidy rates take into account how reducing loan limits and increasing fees would change the mix of borrowers and thus the credit risks borne by the GSEs.

Because the GSEs' guarantee fees are already close to those that CBO estimates private firms would charge, increases in those fees that were larger than those encompassed by this option would result in more borrowers taking out privately backed mortgages and would only marginally increase budgetary savings. Savings from changing the loan limits would be roughly proportional to the change in loan volume. (Whether savings would be proportional for bigger changes in loan limits is uncertain because the composition of the borrowers would change more.) Reducing loan limits more rapidly—say, over 5 years instead of 10 years—would save more money but would risk disrupting the supply of housing credit.

Many factors affect CBO's estimates of federal subsidies for Fannie Mae and Freddie Mac. CBO's model for the GSEs captures how changes in the mortgage market and in macroeconomic conditions affect mortgage performance and originations. Its inputs include projections of home prices, interest rates, unemployment rates, total mortgage originations, the GSEs' market share, and mortgage characteristics. CBO's estimates of subsidy rates are based on a large number of repeated (stochastic) simulations of mortgage defaults, losses given default, and the rate at which borrowers prepay their mortgages based on the GSEs' reported data on mortgage performance from 2000 to 2015.

The estimates for those alternatives are uncertain because both the total number of new guarantees and the cost per guarantee are uncertain. Those estimates rely in part on CBO's projections of the economy over the next decade. If a downturn in either the economy or in housing markets occurred, more borrowers would probably default on their mortgage loans and recoveries would be lower than in normal times, and as a result, budgetary costs would be higher than estimated. Conversely, if the GSEs purchased and guaranteed fewer mortgages than expected or if defaults were lower than expected, costs would be lower than estimated.

Other Effects

Because some of the benefits of Fannie Mae's and Freddie Mac's guarantees flow to mortgage borrowers in the form of lower rates, both alternatives in this option would slightly raise borrowing costs. The higher guarantee fees would probably pass directly through to borrowers in the form of higher mortgage rates. The lower loan limits would push some borrowers into the so-called jumbo mortgage market, where loans exceed the eligible size for guarantees by Fannie Mae and Freddie Mac and where rates might be slightly higher, on average.

One argument for the alternatives is that they could support a larger role for the private sector in the secondary mortgage market, which would reduce taxpayers' exposure to the risk of defaults. Lessening subsidies also would help address the GSEs' current underpricing of mortgage credit risk, which encourages borrowers to take out bigger mortgages and buy more expensive homes. Consequently, the option could reduce overinvestment in housing and shift the allocation of some capital toward more productive activities.

An argument for lowering loan limits instead of raising fees is that many moderate- and low-income borrowers would continue to benefit from the subsidies provided by the GSEs. More-affluent borrowers generally would lose that benefit, but they typically can more easily find other sources of financing. The $300,000 limit in 2028 would allow for the purchase of a home costing about $375,000 (with a 20 percent down payment). By comparison, the median price of an existing single-family residence in August 2018 was about $267,000; thus, lowering loan limits as specified here would probably not affect most moderate- and low-income borrowers.

One argument against taking steps that would increase the cost of mortgage borrowing is that doing so could slightly reduce home prices, hurting existing homeowners. Posing another drawback, the slightly higher mortgage rates resulting from lower subsidies would limit some opportunities for refinancing—perhaps constraining spending by some consumers and thereby dampening the growth of private spending. Phasing in the specified changes more slowly could mitigate those concerns, although that approach would reduce the budgetary savings as well.

Finally, both alternatives would make loans guaranteed by the Federal Housing Administration (FHA) more attractive to the riskiest borrowers (unless there are corresponding changes to the rules governing such loans), which could increase risks for taxpayers because FHA guarantees loans with smaller down payments than do the GSEs.

RELATED OPTION: Appendix, Discretionary, "Convert the Home Equity Conversion Mortgage Program Into a Direct Loan Program" (page 311)

RELATED CBO PUBLICATIONS: *Accounting for Fannie Mae and Freddie Mac in the Federal Budget* (September 2018), www.cbo.gov/publication/54475; *Transitioning to Alternative Structures for Housing Finance: An Update* (August 2018), www.cbo.gov/publication/54218; *Modeling the Subsidy Rate for Federal Single-Family Mortgage Insurance Programs* (January 2018), www.cbo.gov/publication/53402; *Transferring Credit Risk on Mortgages Guaranteed by Fannie Mae or Freddie Mac* (December 2017), www.cbo.gov/publication/53380; *The Effects of Increasing Fannie Mae's and Freddie Mac's Capital* (October 2016), www.cbo.gov/publication/52089; *The Federal Role in the Financing of Multifamily Rental Properties* (December 2015), www.cbo.gov/publication/51006; *Transitioning to Alternative Structures for Housing Finance* (December 2014), www.cbo.gov/publication/49765; *Modifying Mortgages Involving Fannie Mae and Freddie Mac: Options for Principal Forgiveness* (May 2013), www.cbo.gov/publication/44115; *The Budgetary Cost of Fannie Mae and Freddie Mac and Options for the Future Federal Role in the Secondary Mortgage Market* (June 2011), www.cbo.gov/publication/41487; *Fannie Mae, Freddie Mac, and the Federal Role in the Secondary Mortgage Market* (December 2010), www.cbo.gov/publication/21992; *CBO's Budgetary Treatment of Fannie Mae and Freddie Mac* (January 2010), www.cbo.gov/publication/41887; *An Overview of Federal Support for Housing* (November 2009), www.cbo.gov/publication/41219

Mandatory Spending—Option 6 Function 500

Eliminate or Reduce the Add-On to Pell Grants, Which Is Funded With Mandatory Spending

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Outlays												
Eliminate Mandatory Add-On Funding	-1.7	-6.2	-6.4	-6.5	-6.6	-6.7	-6.8	-6.9	-7.1	-7.2	-27.4	-62.2
Reduce Mandatory Add-On Funding	-0.8	-3.1	-3.2	-3.3	-3.3	-3.4	-3.4	-3.5	-3.6	-3.7	-13.8	-31.3

This option would take effect in July 2019.

The estimates are relative to the Congressional Budget Office's adjusted April 2018 baseline, updated to account for the increase to the maximum discretionary award in the appropriation for fiscal year 2019.

Background

The Federal Pell Grant Program is the largest source of federal grant aid to low-income students for undergraduate education. For the 2016–2017 academic year, the program provided $27 billion in aid to 7.2 million students. A student's Pell grant eligibility is chiefly determined on the basis of his or her expected family contribution (EFC)—the amount, calculated using a formula established under federal law, that the federal government expects a family to pay toward the student's postsecondary education expenses. The EFC is based on factors such as the student's income and assets. For dependent students (in general, unmarried undergraduate students under the age of 24 who have no dependents of their own), the parents' income and assets, as well as the number of other dependent children in the family who are attending postsecondary schools, are also taken into account. To be eligible for the maximum grant, which is $6,195 for the 2019–2020 academic year, a student must have an EFC of zero and be enrolled in school full time. For each dollar of EFC above zero, a student's eligible grant amount is reduced by a dollar. Students with an EFC exceeding 90 percent of the maximum grant (that is, an EFC of more than $5,575 for the 2019–2020 academic year) are ineligible for a grant. Part-time students are eligible for smaller grants than those received by full-time students with the same EFC.

Funding for the Pell grant program has both discretionary and mandatory components. The maximum award funded by the discretionary component is set in each fiscal year's appropriation act. For the 2019–2020 academic year, that amount is $5,135 per student. One mandatory component is the funding stemming from the Higher Education Act that is dedicated to supporting the discretionary program. The other mandatory component is so-called add-on funding, which under current law increases the maximum award by $1,060 to $6,195.

Option

This option would reduce the maximum award in the Pell grant program. There are two alternatives under the option. One alternative would eliminate the mandatory add-on component of Pell grant funding, thereby reducing the maximum grant awarded to students to $5,135 for the 2019–2020 academic year. The second alternative would reduce the mandatory component by half, causing the maximum grant to decline to $5,665 in that year.

Effects on the Budget

Under the first alternative, the grant amount would be reduced by an average of $710 during the period. (That amount is smaller than the reduction in the maximum award because some students do not receive the maximum award.) The number of Pell recipients would be lower by about 3 percent, or about 275,000 people per year, during the 2019–2028 period. (Under current law, a student cannot receive less than 10 percent of the maximum Pell grant award. Because a student's award is the maximum award minus the student's EFC, students with an EFC exceeding 90 percent of the maximum Pell grant award—$5,575 for the 2019–2020 academic year—do not qualify for a grant. As the maximum size of the grant shrinks, fewer students will meet that threshold.) CBO estimates that this alternative would reduce mandatory spending by $62 billion over the 10-year period.

Under the second alternative, the grant amount would be reduced by an average of $355 during the period. The number of recipients would be about 2 percent lower during the 2019–2028 period, or about 130,000 people per year. CBO estimates that this alternative would result in a reduction of $31 billion in mandatory spending over the 10-year period.

Under current law, program costs and the number of Pell grant recipients would grow by about 2 percent per year, CBO estimates. Under the option, those amounts would still rise over 10 years, but not by as much. CBO estimates that the distribution of EFC among applications would remain relatively stable over the next decade. CBO also estimates that most of the affected students would add to their federal student loans to the extent allowed under current law.

Uncertainty about the number of Pell grant recipients is the primary source of uncertainty in CBO's estimates. The number of recipients is affected by economic factors including job opportunities, the cost of attending school, and expectations of future opportunities for graduates. The number of Pell grant recipients is also affected by the maximum discretionary award amount, which is set each year in an appropriation act.

Other Effects

A few studies suggest that some postsecondary institutions have responded to past increases in the size of Pell grants by raising tuition or shifting more of their own aid to students who did not qualify for Pell grants. An argument for reducing the maximum Pell grant, therefore, is that institutions might become less likely to raise tuition and more likely to aid students who had lost eligibility for a Pell grant or who were receiving a smaller Pell grant.

An argument against this option is that even with the grant at its current amount, the cost of attending a public four-year college is greater for most recipients than their EFC plus all financial aid—and for many recipients attending private colleges, the gap is even larger. Reducing Pell grant amounts (and eliminating Pell grants for some students) would further increase that financial burden and might cause some students to choose a less suitable institution or to forgo some or all postsecondary education. Moreover, among students who remained eligible for Pell grants under this option, grant amounts would be reduced uniformly, regardless of the students' financial need. By contrast, targeted reductions in grants might be more effective in protecting one of the program's goals: boosting the educational attainment of students from the lowest-income families.

RELATED OPTIONS: Mandatory Spending, "Reduce or Eliminate Subsidized Loans for Undergraduate Students" (page 31); Discretionary Spending, "Tighten Eligibility for Pell Grants" (page 179); Revenues, "Eliminate Certain Tax Preferences for Education Expenses" (page 244)

RELATED CBO PUBLICATIONS: *Federal Aid for Postsecondary Students* (June 2018), www.cbo.gov/publication/53736; *Distribution of Federal Support for Students Pursuing Higher Education in 2016* (June 2018), www.cbo.gov/publication/53732; *The Pell Grant Program: Recent Growth and Policy Options* (September 2013), www.cbo.gov/publication/44448; *Options to Change Interest Rates and Other Terms on Student Loans* (June 2013), www.cbo.gov/publication/44318

Mandatory Spending—Option 7 Function 500

Limit Forgiveness of Graduate Student Loans

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Savings Estimated Using the Method Established in the Federal Credit Reform Act												
Change in Outlays												
Increase payments under IDR plans	-0.3	-0.7	-1.0	-1.2	-1.6	-1.9	-2.3	-2.7	-3.1	-3.3	-4.7	-17.9
Extend repayment period for IDR plans	-0.2	-0.4	-0.6	-0.8	-1.0	-1.3	-1.5	-1.8	-2.0	-2.2	-3.1	-11.9
Increase payments and extend repayment period[a]	-0.5	-1.2	-1.7	-2.2	-2.8	-3.4	-4.0	-4.7	-5.4	-5.9	-8.3	-31.7
Savings Estimated Using the Fair-Value Method												
Change in Outlays												
Increase payments under IDR plans	-0.2	-0.6	-0.9	-1.1	-1.4	-1.7	-2.1	-2.5	-2.8	-3.1	-4.3	-16.4
Extend repayment period for IDR plans	-0.1	-0.3	-0.5	-0.6	-0.8	-1.0	-1.2	-1.4	-1.6	-1.7	-2.4	-9.2
Increase payments and extend repayment period[a]	-0.4	-1.0	-1.5	-1.9	-2.4	-3.0	-3.5	-4.2	-4.8	-5.2	-7.3	-27.9

This option would take effect in July 2019.

By law, the costs of federal student loan programs are measured in the budget according to the method established in the Federal Credit Reform Act. The fair-value method is an alternative and is included in this table for informational purposes.

IDR = income-driven repayment.

a. If both alternatives were adopted, the total savings would be greater than the sum of the savings if the alternatives were individually adopted because of interactions between the two alternatives.

Background

Federal student loans can be forgiven under certain circumstances. The federal government offers several income-driven repayment (IDR) plans in which borrowers make monthly payments for a certain period of time based on their income, after which the outstanding balance of their loans is forgiven. IDR plans do not impose a limit on the amount that can be forgiven. The Congressional Budget Office expects that the biggest benefits of those plans currently go to people who borrow to attend graduate or professional school, because those people tend to borrow larger amounts than do people who borrow for undergraduate studies.

Option

This option includes two alternatives that would reduce loan forgiveness for borrowers who took out federal student loans to pay for graduate school, starting with loans made to new borrowers in July 2019.

The first alternative would increase the percentage of income above 150 percent of the poverty guidelines that graduate borrowers in IDR plans pay on loans to 15 percent, up from the current 10 percent in most plans. (The amount those borrowers pay is capped by the amount that would be required under the Standard Repayment Plan with a 10-year repayment period, so borrowers with sufficiently high income would pay less than 15 percent of their income.)

The second alternative would extend the repayment period from 20 years to 25 years for several IDR plans used by borrowers who take out loans to finance graduate school. (The percentage of income required for monthly payments and the length of the repayment period for borrowers with only undergraduate loans would continue to be 10 percent and 20 years, respectively.)

Effects on the Budget

When estimating the budgetary effects of proposals to change federal loan programs, CBO is required by law to use the method established in the Federal Credit Reform Act (FCRA). That approach uses accrual accounting—which, unlike cash accounting, records the estimated present value of credit programs' expenses and related receipts when the legal obligation is first made rather than when subsequent cash transactions occur. (Present value is a single number that expresses a flow of current and future payments in terms of an equivalent lump sum paid today and that depends on the rate of interest, or discount rate, that is used to translate future cash flows into current dollars.) FCRA accounting, however, does not consider all the risks borne by the government. In particular, it does not consider market risk—which arises from shifts in macroeconomic conditions, such as productivity and employment, and from changes in expectations about future macroeconomic conditions. The government is exposed to market risk because, when the economy is weak, borrowers default on their debt obligations more frequently, and recoveries from borrowers are lower. Under an alternative method, the fair-value approach, estimates are based on market values—market prices when they are available, or approximations of market prices when they are not—which better account for the risk that the government takes on. As a result, the discount rates used to calculate the present value of higher loan repayments under this option are higher for fair-value estimates than for FCRA estimates, and the savings from those higher repayments are correspondingly lower.

Because loan repayments under IDR plans would be expected to increase under this option, the government would face less risk on loans in those plans; however, in estimating the budgetary effects of this option, CBO did not decrease the fair-value discount rates to account for the anticipated decline in risk.

Under current law, the student loan program will generate $18 billion for the government from 2019 to 2028, according to the FCRA method, CBO estimates. Under the first alternative, the government would save an additional $18 billion over the same period, according to FCRA accounting. According to the fair-value method, over the same period, federal costs would be reduced from $212 billion to $196 billion, for a savings of $16 billion. Under either method, the annual savings grow over time, because each year the number of borrowers and volume of loans are projected to increase as more borrowers enter the repayment plans. (The numbers for savings and costs account only for mandatory costs—both subsidy and administrative costs—for direct student loans.)

Under the second alternative, CBO estimates, federal spending from 2019 to 2028 would be reduced by $12 billion, according to the FCRA method. According to the fair-value method, spending would be reduced by $9 billion.

If both alternatives were implemented, the total savings would be slightly greater than the sum of the savings if the alternatives were individually adopted because of interactions between the two alternatives.

Both alternatives would encourage prospective borrowers who use an IDR plan to limit their borrowing because the cost of repaying the loan would increase. Under the first alternative, the cost of repaying the loan could be as much as 50 percent higher than under current law. The second alternative would increase by 25 percent the number of payments made by affected borrowers—and because income tends to increase with work experience, adding more years of payments would probably increase the sums that borrowers would have to repay by an even larger percentage.

Accordingly, under both alternatives CBO expects the volume of loans in IDR plans would be reduced. Under current law, CBO estimates that 45 percent of the volume of the loans made to all student borrowers and about 55 percent of those made to graduate student borrowers will enter an IDR plan. Under this option, CBO estimates that by 2028, the volume of loans originated to graduate student borrowers who entered an IDR would be reduced by about 20 percent (to about 44 percent of the loans originated to graduate student borrowers) in the first alternative and by 15 percent in the second alternative.

There are several sources of uncertainty in the estimates associated with this option. CBO must project future enrollment, the number of students who will take out a government loan, and the future earnings of those borrowers under current law and under each of the two alternatives. To estimate the effects of the option, CBO must then predict how those borrowers would respond to increases in the effective cost of borrowing that would occur under either or both alternatives.

It is difficult to determine how savings would be affected by variations in the option. For example, increasing the share of income borrowers pay on their loans from 10 percent to 20 percent (rather than from 10 percent to 15 percent, as specified in the first alternative) would not double the savings under the first alternative. That is because, if loan repayments had to be a higher portion of their income, more borrowers would completely pay off their loans or switch to other types of repayment plans. Similarly, if the repayment period was increased by 10 years (rather than by 5 years as specified in the second alternative), the savings would not double.

Other Effects

An argument in favor of this option is that reducing the amount of student debt that is forgiven—either by increasing the amount of the monthly payment or by extending the repayment period—would reduce students' incentive to borrow and would encourage them to enroll in graduate programs whose benefits, in terms of improved opportunities for employment, justified the costs of the additional schooling.

A second argument in favor of this options is that it focuses on people who have borrowed for graduate studies, who often have relatively high income and are therefore more likely to be able to eventually pay back their loans. Under both alternatives, affected borrowers would pay back more of their loans than they otherwise would, and more of those borrowers would completely pay off their debt before the end of the repayment period. (Under either alternative, IDR plans would continue to forgive any amount that was not repaid, so debt relief would be provided to borrowers who, despite making regular payments for 20 years or 25 years, could not pay off their debt.)

An argument against this option is that it would increase the risk that students would not be able to repay their loans. The increased risk might lead some students to choose less graduate education or to forgo it altogether. Both alternatives would disproportionately affect prospective graduate students with fewer financial resources, such as those who come from low-income families. Such students would be less likely to attend graduate school and consequently would have lower future earnings; and if they chose to take out loans to attend graduate school, they would be likelier to have heavy student debt later in life.

RELATED OPTION: Mandatory Spending, "Reduce or Eliminate Subsidized Loans for Undergraduate Students" (page 31)

RELATED CBO PUBLICATION: *Options to Change Interest Rates and Other Terms on Student Loans* (June 2013), www.cbo.gov/publication/44318

Mandatory Spending—Option 8 **Function 500**

Reduce or Eliminate Subsidized Loans for Undergraduate Students

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Savings Estimated Using the Method Established in the Federal Credit Reform Act												
Change in Outlays												
Restrict access to subsidized loans to students eligible for Pell grants	- 0.1	-0.4	-0.5	-0.6	-0.7	-0.8	-0.9	-1.0	-1.0	-1.0	-2.3	-7.0
Eliminate subsidized loans altogether	-0.4	-1.1	-1.6	-1.9	-2.2	-2.5	-2.8	-3.0	-3.1	-3.2	-7.1	-21.6
Savings Estimated Using the Fair-Value Method												
Change in Outlays												
Restrict access to subsidized loans to students eligible for Pell grants	-0.1	-0.3	-0.4	-0.5	-0.5	-0.6	-0.7	-0.7	-0.8	-0.8	-1.8	-5.4
Eliminate subsidized loans altogether	-0.3	-0.9	-1.3	-1.5	-1.7	-2.0	-2.2	-2.4	-2.5	-2.6	-5.7	-17.3

This option would take effect in July 2019.

By law, the costs of federal student loan programs are measured in the budget according to the method established in the Federal Credit Reform Act. The fair-value method is an alternative and is included in this table for informational purposes.

Background

The William D. Ford Federal Direct Loan Program lends money directly to students and their parents to help finance postsecondary education. Two types of loans are offered to undergraduate students: subsidized loans, which are available only to undergraduates who demonstrate financial need, and unsubsidized loans, which are available to undergraduates regardless of need (and to graduate students as well).

For undergraduates, the interest rates on the two types of loans are the same, but the periods during which interest accrues are different. Subsidized loans do not accrue interest while students are enrolled at least half time, for six months after they leave school or drop below half-time status, and during certain other periods when they may defer making repayments. Unsubsidized loans accrue interest from the date of disbursement. The program's rules cap the amount—per year, and also for a lifetime—that students may borrow in subsidized and unsubsidized loans. By the Congressional Budget Office's estimates, subsidized and unsubsidized loans will each constitute roughly half of the dollar volume of federal loans to undergraduate students for the 2018–2019 academic year.

Option

This option includes two possible changes to subsidized loans. In the first alternative, only students who were eligible for Pell grants would have access to subsidized loans. (In the 2015–2016 academic year, about two-thirds of subsidized loan recipients received Pell grants, CBO estimates.) In the second alternative, subsidized loans would be eliminated altogether. In both alternatives, students would be able to borrow additional amounts in the unsubsidized loan program equal to what they were eligible to borrow in the subsidized loan program.

The Federal Pell Grant Program provides grants to help finance postsecondary undergraduate education; to be eligible for those grants, students and their families must demonstrate financial need. Under current law, only students with an expected family contribution (EFC)—the sum that the federal government expects a family to pay for a student's postsecondary education—of less than about $5,575 are eligible for a Pell grant. However, students with a larger EFC are eligible for subsidized loans as long as the EFC is less than their estimated tuition, room, board, and other costs of attendance, adjusted for other aid received. Under the first alternative, those students with a larger EFC would no longer qualify for subsidized loans.

Effects on the Budget

When estimating the budgetary effects of proposals to change federal loan programs, the Congressional Budget Office is required by law to use the method established in the Federal Credit Reform Act (FCRA). Under FCRA accounting, projected cash flows—including projected flows after 2028—are discounted to the present value in the year the loan is taken out using interest rates on Treasury securities. (Present value is a single number that expresses a flow of current and future payments in terms of an equivalent lump sum paid today and that depends on the rate of interest, or discount rate, that is used to translate future cash flows into current dollars.)

FCRA accounting, however, does not consider all the risks borne by the government. In particular, it does not consider market risk—which arises from shifts in macroeconomic conditions, such as productivity and employment, and from changes in expectations about future macroeconomic conditions. The government is exposed to market risk because, when the economy is weak, borrowers default on their debt obligations more frequently, and recoveries from borrowers are lower. Under another method, the fair-value approach, estimates are based on market values—market prices when they are available, or approximations of market prices when they are not—which better account for the risk that the government takes on. As a result, the discount rates used to calculate the present value of higher loan repayments under this option are higher for fair-value estimates than for FCRA estimates, and the savings from those higher repayments are correspondingly smaller.

According to the FCRA method, under current law the direct loan program would produce $18 billion in budgetary savings from 2019 to 2028, CBO estimates, and the option would produce additional savings of $7 billion under the first alternative and $22 billion under the second alternative. According to the fair-value method, under current law the direct loan program would cost $212 billion over the same period, and under the option those outlays would be reduced by $5 billion under the first alternative and by $17 billion under the second. This option would only affect new borrowers after July 1, 2019, so savings would rise over time because each new cohort of loans would include a larger share of new borrowers.

Under both alternatives, CBO expects that most of the affected students would continue to borrow through the unsubsidized loan program. However, not all of them would borrow as much in unsubsidized loans as they would have in subsidized loans because interest on unsubsidized loans starts to accrue earlier, from the date the loan is disbursed.

Under current law, CBO estimates that annual borrowing under the subsidized loan program would rise from $22 billion in 2019 to $30 billion in 2028. The option would gradually reduce the number of students who could take out subsidized loans. Under the first alternative, the volume of new subsidized loans would fall gradually over the 2019–2028 period and be $10 billion lower in 2028 than it would be under current law, CBO estimates. The volume of unsubsidized student loans would be about $10 billion higher in 2028 than it would be under current law. Under the second alternative, almost no subsidized loans would be originated in 2028 and the volume of unsubsidized loans would be almost $30 billion higher in that year than it would be under current law.

Using the FCRA method, CBO projects that the federal government incurs a cost of about $0.13 for every dollar of subsidized loans and a smaller cost—about $0.02—for every dollar of unsubsidized loans, because interest on an unsubsidized loan accrues from the date a loan is disbursed. To determine the government's savings, CBO calculates the amount that students would borrow in unsubsidized loans because they did not have access to subsidized loans, multiplied by the difference in cost ($0.11). Next, it calculates the amount the government would save from subsidized loans that would not be replaced (because some students would find unsubsidized loans too expensive). That figure is reached by multiplying the volume of such loans times $0.13. CBO adds the two figures together to estimate savings under FCRA. (Under the fair-value method, the same calculations are made except for the estimates of the loans' costs: $0.31 per dollar for subsidized loans and $0.23 per dollar for unsubsidized loans.)

The growth of enrollment, the path of future interest rates, the repayment plans borrowers will choose, the speed with which they will repay the loans, and the sensitivity of borrowers to the higher cost of unsubsidized loans are all sources of uncertainty in CBO's estimates. The sensitivity to cost is particularly important. Even for unsubsidized loans, the federal government provides a subsidy. So the fewer students who substitute unsubsidized loans for the subsidized loans that would no longer be available, the greater the reduction in federal costs.

Other Effects

If a student who would have borrowed $23,000 (the lifetime limit) in subsidized loans, beginning in the 2019–2020 academic year, instead borrowed the same amount in unsubsidized loans, that student would leave school with additional debt of about $3,700. Over a typical 10-year repayment period, the student's monthly repayment would be $41 higher than if he or she had borrowed the same amount in subsidized loans.

An argument in favor of this option is that the current program does not focus resources on people with the greatest needs as effectively as Pell grants. Also, providing subsidies by not charging interest on loans for a period of time may induce students to take loans without fully recognizing the difficulty they will face in repaying them once that period ends. Another argument in favor of the option is that some postsecondary institutions may increase tuition in order to benefit from some of the subsidies that the government gives students; reducing subsidies might therefore slow the growth of tuition. If institutions responded in that way, they would at least partially offset the effect of higher borrowing costs on students' pocketbooks. Also, the prospect of higher loan repayments upon graduation might encourage students to pay closer attention to the economic value to be obtained from a degree and to complete postsecondary programs more quickly. And for most college students, $41 a month in additional costs is small compared with the benefits that they obtain from a college degree.

An argument against this option is that students who face a higher cost of borrowing might decide against attending college, might leave college before completing a degree, or might apply to schools where tuition is lower but educational opportunities are not as well aligned with their interests and skills. Those decisions could eventually lead to lower earnings. Moreover, for any given amount borrowed, higher interest costs would require borrowers to devote more of their future income to interest repayment. That, in turn, could constrain their career choices or limit their ability to make other financial commitments, such as buying a home.

RELATED OPTIONS: Mandatory Spending, "Eliminate or Reduce the Add-On to Pell Grants, Which Is Funded With Mandatory Spending" (page 26); Discretionary Spending, "Tighten Eligibility for Pell Grants" (page 179); Revenues, "Eliminate Certain Tax Preferences for Education Expenses" (page 244)

RELATED CBO PUBLICATIONS: *Federal Aid for Postsecondary Students* (June 2018), www.cbo.gov/publication/53736; *The Pell Grant Program: Recent Growth and Policy Options* (September 2013), www.cbo.gov/publication/44448; *Options to Change Interest Rates and Other Terms on Student Loans* (June 2013), www.cbo.gov/publication/44318

Mandatory Spending—Option 9 **Function 500**

Reduce or Eliminate Public Service Loan Forgiveness

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Savings Estimated Using the Method Established in the Federal Credit Reform Act												
Change in Outlays												
Cap PSLF at $57,500	-0.2	-0.3	-0.5	-0.6	-0.8	-1.0	-1.2	-1.4	-1.6	-1.7	-2.4	-9.3
Eliminate PSLF	-0.4	-0.8	-1.2	-1.5	-1.9	-2.4	-2.9	-3.4	-3.8	-4.1	-5.8	-22.4
Savings Estimated Using the Fair-Value Method												
Change in Outlays												
Cap PSLF at $57,500	-0.1	-0.2	-0.3	-0.4	-0.6	-0.7	-0.8	-1.0	-1.1	-1.2	-1.6	-6.4
Eliminate PSLF	-0.3	-0.7	-0.9	-1.2	-1.6	-1.9	-2.3	-2.7	-3.1	-3.3	-4.7	-18.0

This option would take effect in July 2019.

By law, the costs of federal student loan programs are measured in the budget according to the method established in the Federal Credit Reform Act. The fair-value method is an alternative approach and is included in this table for informational purposes.

PSLF = Public Service Loan Forgiveness.

Background

A variety of programs forgive federal student loans. In one kind of program, known as an income-driven repayment (IDR) plan, monthly payments are calculated each year as a share of a borrower's family income, typically 10 percent to 15 percent of an estimate of discretionary income. The amount of the monthly payment is recalculated each year in response to changes in the borrower's family income and family size. After the borrower has made payments for a certain period, usually 20 years, the outstanding balance of his or her loan is forgiven, although the borrower is liable for income taxes on that forgiven debt. In addition, borrowers in an IDR plan are eligible for the Public Service Loan Forgiveness (PSLF) program if they are employed full time in public service. The program provides debt forgiveness after 10 years of monthly payments. In addition, PSLF borrowers are not liable for income taxes on the forgiven debt. Neither IDR plans nor the PSLF program impose a limit on the amount of debt that can be forgiven.

Option

This option includes two alternatives, which would apply to federal student loans taken out by new borrowers as of July 1, 2019. The first would cap the amount of debt that could be forgiven under PSLF at $57,500—the current aggregate limit on loans to independent undergraduate students. Borrowers with a balance remaining after receiving the maximum forgiveness under PSLF would continue making payments under a repayment plan of their choice, including IDR plans, and, as a result, could receive additional forgiveness after making payments for the required additional time. Because the cap is equal to the limit for federal student loans for undergraduate studies, and because there is no such maximum for graduate studies, the first alternative would mostly affect students who borrow for graduate school, especially those borrowers who have high debt compared with their post-school income.

The second alternative would eliminate the PSLF program. Borrowers would still have the option of choosing an IDR plan and, as a result, could ultimately receive loan forgiveness (albeit at the end of a longer period of making payments). The alternative would affect all borrowers who enter public service with outstanding student loans, but again would have the greatest impact on those who have high debt compared with their income.

Neither alternative would eliminate debt forgiveness under IDR plans.

Effects on the Budget

When estimating the budgetary effects of proposals to change federal loan programs, the Congressional Budget Office is required by law to use the method established in the Federal Credit Reform Act (FCRA). Under FCRA accounting, projected cash flows—including projected flows after 2028—are discounted to the present value in the year the loan was taken out using interest rates on Treasury securities. (Present value is a single number that expresses a flow of current and future payments in terms of an equivalent lump sum paid today and that depends on the rate of interest, or discount rate, that is used to translate future cash flows into current dollars.) FCRA accounting, however, does not consider all the risks borne by the government. In particular, it does not consider market risk—which arises from shifts in macroeconomic conditions, such as productivity and employment, and from changes in expectations about future macroeconomic conditions. The government is exposed to market risk because, when the economy is weak, borrowers default on their debt obligations more frequently, and recoveries from borrowers are lower. Under an alternative method, the fair-value approach, estimates are based on market values—market prices when they are available, or approximations of market prices when they are not—which better account for the risk that the government takes on. As a result, the discount rates used to calculate the present value of higher loan repayments under this option are higher for fair-value estimates than for FCRA estimates, and the savings from those higher repayments are correspondingly lower.

Estimated according to the FCRA method, annual federal costs under the first alternative would fall by $9 billion from 2019 to 2028. According to the fair-value method, over the same period, annual federal costs would fall by $6 billion. Under the second alternative, CBO estimates, federal costs from 2019 to 2028 would be reduced by $22 billion according to the FCRA method and by $18 billion according to the fair-value method.

The option would only affect new borrowers as of July 1, 2019, so savings would rise over time because each new cohort of loans would include a larger share of borrowers who have not previously taken out student loans. Based on data for recent years showing IDR usage and eligibility for forgiveness of loans under PSLF, CBO projects that roughly 10 percent of federal loans to students originated each year between 2019 and 2028 ultimately will receive forgiveness of outstanding balances (calculated as the origination amount minus the principal repaid, plus accumulated interest) under PSLF.

Considerable uncertainty surrounds CBO's estimates of savings under this option. It arises from uncertainty about the number of borrowers who will enter public service occupations and remain in those occupations for 10 years, the earnings of those borrowers over their public service careers, and the amount of student loan debt those borrowers would still owe at the end of 10 years of service.

Other Effects

An argument for eliminating PSLF is that doing so would remove the difference in compensation (including loan forgiveness) between public service employees with student loans and those without them. Student loan borrowers who receive loan forgiveness effectively receive more compensation for their public service work than other public service employees who did not receive loan forgiveness. If the goal of PSLF is to increase pay for public service jobs, it would be more efficient to subsidize everyone who chose to enter public service work.

An argument against eliminating PSLF is that it would reduce some incentives from accepting public service jobs over other jobs. PSLF reduces the risk of borrowing to pay for education for those who are likely to have public service employment options, such as law school graduates who could work as public defenders, because they can always enter public service and discharge their debt after making payments for a specified number of years. The elimination of public service loan forgiveness might also prevent some people from working in the public sector, possibly reducing the supply of workers for those types of jobs compared with the supply under current law.

RELATED OPTION: Mandatory Spending, "Limit Forgiveness of Graduate Student Loans" (page 28)

RELATED CBO PUBLICATION: *Federal Aid for Postsecondary Students* (June 2018), www.cbo.gov/publication/53736

Mandatory Spending—Option 10 Function 500

Remove the Cap on Interest Rates for Student Loans

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
	Savings Estimated Using the Method Established in the Federal Credit Reform Act											
Change in Outlays												
Remove the cap for PLUS and graduate loans	-0.1	-0.6	-1.4	-1.7	-1.5	-1.2	-1.1	-1.1	-1.1	-1.2	-5.3	-10.9
Remove the cap for all loans	-0.1	-0.9	-1.9	-2.4	-2.2	-1.7	-1.5	-1.5	-1.6	-1.7	-7.5	-15.5
	Savings Estimated Using the Fair-Value Method											
Change in Outlays												
Remove the cap for PLUS and graduate loans	-0.1	-0.5	-1.0	-1.3	-1.2	-0.9	-0.8	-0.8	-0.9	-0.9	-4.0	-8.3
Remove the cap for all loans	-0.1	-0.7	-1.5	-1.8	-1.7	-1.3	-1.1	-1.2	-1.2	-1.3	-5.7	-11.7

This option would take effect in July 2019.

Background

Through the William D. Ford Federal Direct Loan Program, the federal government lends money directly to students and their parents to help finance postsecondary education. The interest rates on new student loans are indexed annually to the 10-year Treasury note rate. For undergraduate subsidized and unsubsidized loans, the interest rate is the 10-year Treasury note rate plus 2.05 percentage points, with a cap of 8.25 percent. For unsubsidized loans to graduate students, the interest rate is the 10-year Treasury note rate plus 3.6 percentage points, with a cap of 9.5 percent. Finally, for PLUS loans, which are additional unsubsidized loans to parents or graduate students, the rate is the 10-year Treasury note rate plus 4.6 percentage points, with a cap of 10.5 percent.

Option

This option includes two alternatives. The first would remove the interest rate cap on all graduate loans and PLUS parent loans. The second would remove the interest rate cap on all federal student loans. Both policies would take effect in the 2019–2020 academic year. Without the caps, student loan interest rates would be higher than under current law for undergraduate borrowers if the 10-year Treasury note rate was higher than 6.2 percent or for graduate and parent borrowers if it was higher than 5.9 percent.

Effects on the Budget

When estimating the budgetary effects of proposals to change federal loan programs, the Congressional Budget Office is required by law to use the method established in the Federal Credit Reform Act (FCRA). Under FCRA accounting, projected cash flows—including projected flows after 2028—are discounted to the present value in the year the loan was taken out using interest rates on Treasury securities. (Present value is a single number that expresses a flow of current and future payments in terms of an equivalent lump sum paid today and that depends on the rate of interest, or discount rate, that is used to translate future cash flows into current dollars.) FCRA accounting, however, does not consider all the risks borne by the government. In particular, it does not consider market risk—which arises from shifts in macroeconomic conditions, such as productivity and employment, and from changes in expectations about future macroeconomic conditions. The government is exposed to market risk because, when the economy is weak, borrowers default on their debt obligations more frequently, and recoveries from borrowers are lower. Under an alternative method, the fair-value approach, estimates are based on market values—market prices when they are available, or approximations of market prices when they are not—which better account for the risk that the government takes on. As a result, the discount rates used to calculate the present value of higher loan repayments under the option are higher for fair-value estimates than for FCRA estimates, and the savings from those higher repayments are correspondingly lower.

According to the FCRA method, eliminating the cap only on loans to graduate students and parents would reduce projected spending by $11 billion from 2019 to 2028, CBO estimates. According to the fair-value method, projected spending would decline by $8 billion.

According to the FCRA method, eliminating the cap on all federal student loans would reduce projected spending by $16 billion from 2019 to 2028. According to the fair-value method, projected spending would decline by $12 billion.

Both alternatives are projected to lower spending because there is some possibility that the interest rate caps could bind under current law, even though that outcome does not occur in CBO's 10-year economic projections. In other words, the estimates take into account the possibility that interest rates will be higher than expected. CBO estimates a range of possible outcomes for borrower interest rates using statistical techniques designed to capture the effects of volatility in interest rates. Specifically, such estimates are based on Monte Carlo simulations, a technique based on statistical inference regarding the uncertainty in estimates and projections of economic variables. That technique allows CBO to account for the probability in each year that the 10-year Treasury note rate will be high enough for the caps to be in effect.

Uncertainty around the possible outcomes for future interest rates is one key factor that makes the estimates of the two alternatives uncertain. Underlying the estimates is the probability that the Treasury rate will be high enough for student loan rates to be capped, which is based on CBO's April 2018 forecast of the Treasury rate. A greater probability of higher Treasury rates would increase the probability that the caps would bind. As a result, the estimated savings from this option would also increase. Likewise, a smaller probability of higher Treasury rates would decrease the probability that the caps would bind and, thus, the estimated savings would decrease.

Other Effects

An argument for this option is that the program's subsidy would depend less on the level of interest rates. In other words, the cost to borrowers would always increase when the government's cost of funding increases and any underlying subsidy would remain unchanged. Removing the caps would also prevent student loan borrowing from becoming cheaper relative to other borrowing, such as taking out a home mortgage, when Treasury rates are high.

An argument against this option is that borrowers would face higher costs to repay their loans if their loan interest rates were higher than the current caps. The Congress originally included the caps so that there would be a limit to borrowers' interest costs if Treasury rates increased to very high levels. If the caps were removed, the potential for such high interest rates could cause people who would need to take out student loans to choose not to attend college. In addition, such high interest rates could increase borrowers' default rates.

RELATED OPTIONS: Mandatory Spending, "Limit Forgiveness of Graduate Student Loans" (page 28), "Reduce or Eliminate Subsidized Loans for Undergraduate Students" (page 31), "Reduce or Eliminate Public Service Loan Forgiveness" (page 34); Revenues, "Eliminate Certain Tax Preferences for Education Expenses" (page 244)

RELATED CBO PUBLICATION: *Options to Change Interest Rates and Other Terms on Student Loans* (June 2013), www.cbo.gov/publication/44318

Mandatory Spending—Option 11 Function 550

Adopt a Voucher Plan and Slow the Growth of Federal Contributions for the Federal Employees Health Benefits Program

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
					Adopt a Voucher Plan, With Growth Based on the CPI-U							
Change in Mandatory Outlays[a]	0	0	-0.7	-1.6	-2.7	-3.9	-5.0	-6.1	-7.1	-8.2	-5.0	-35.2
Change in Revenues[b]	0	0	*	*	*	*	*	-0.1	-0.2	-0.2	-0.1	-0.6
Decrease (-) in the Deficit From Changes in Mandatory Outlays and Revenues[c]	0	0	-0.6	-1.6	-2.7	-3.8	-4.9	-6.0	-7.0	-8.0	-4.9	-34.6
Change in Discretionary Spending												
Budget authority	0	0	-0.6	-1.4	-2.3	-3.2	-4.1	-5.0	-5.9	-6.8	-4.3	-29.2
Outlays	0	0	-0.6	-1.4	-2.3	-3.2	-4.1	-5.0	-5.9	-6.8	-4.3	-29.2
					Adopt a Voucher Plan, With Growth Based on the Chained CPI-U							
Change in Mandatory Outlays[a]	0	0	-0.7	-1.8	-2.9	-4.1	-5.3	-6.5	-7.6	-8.7	-5.4	-37.5
Change in Revenues[b]	0	0	*	*	-0.1	-0.1	-0.1	-0.1	-0.2	-0.3	-0.1	-0.8
Decrease (-) in the Deficit From Changes in Mandatory Outlays and Revenues[c]	0	0	-0.7	-1.7	-2.9	-4.1	-5.2	-6.3	-7.4	-8.5	-5.3	-36.8
Change in Discretionary Spending												
Budget authority	0	0	-0.7	-1.5	-2.5	-3.4	-4.3	-5.4	-6.3	-7.3	-4.7	-31.4
Outlays	0	0	-0.7	-1.5	-2.5	-3.4	-4.3	-5.4	-6.3	-7.3	-4.7	-31.4

This option would take effect in January 2021.

CPI-U = consumer price index for all urban consumers; * = between -$50 million and zero.

a. Includes estimated savings by the Postal Service, whose spending is classified as off-budget.

b. Estimates include the effects on Social Security payroll tax receipts, which are classified as off-budget.

c. Changes in discretionary spending are not included in this total because they would be realized only if future appropriations were adjusted accordingly and because the Congress uses different procedures to enforce its budgetary goals related to discretionary spending.

Background

The Federal Employees Health Benefits (FEHB) program provides health insurance coverage to 4 million federal workers and annuitants, as well as to approximately 4 million of their dependents and survivors. In 2018, those benefits are expected to cost the government (including the Postal Service) about $38 billion. Policyholders, whether they are active employees or annuitants, generally pay 25 percent of the premium for lower-cost plans and a larger share for higher-cost plans; the federal government pays the rest of the premium. That premium-sharing structure provides some incentive for federal employees to choose plans with lower premiums, although the incentive is smaller than it would be if they realized the full savings from choosing such plans. The premium-sharing structure also imposes some competitive pressure on insurers to hold down premiums—but again, less pressure than would exist if employees paid the full cost of choosing more expensive plans.

Option

This option consists of two alternatives. Each alternative would replace the current premium-sharing structure with a voucher, which would be excluded from income and payroll taxes, starting in January 2021. Under the first alternative, the voucher would be updated each year by the projected rate of inflation as measured by the consumer price index for all urban consumers (CPI-U). The second alternative would index the voucher to the chained CPI-U, rather than the CPI-U.

According to the Congressional Budget Office's estimates, the voucher under the first alternative would cover roughly the first $6,500 of a self-only premium, the first $14,000 of a self-plus-one premium, or the first $15,000 of a family premium in 2021. CBO calculated those amounts by taking its estimates of the government's average expected contributions to FEHB premiums in 2018 and then increasing them by the CPI-U from 2018 through 2021. Each year, the voucher would continue to grow at that rate of inflation, rather than at the average rate of growth for FEHB premiums.

Because the chained CPI-U grows more slowly than the CPI-U, the value of the voucher under the second alternative would cover less of the premium than the first alternative. Relative to current law, CBO estimates that average contributions to FEHB premiums would be 3 percent lower in 2021 and 22 percent lower in 2028 under the CPI-U alternative and 3 percent lower in 2021 and 23 percent lower in 2028 under the chained CPI-U alternative.

Effects on the Budget

Under current law, FEHB premiums grow significantly faster than either measure of inflation in CBO's projections. (The expected rate of growth for FEHB premiums is similar to that for private insurance premiums, which the agency estimates on the basis of its projections of increases in disposable income and other factors that have historically been associated with growth in premiums.) Indexing the voucher to either measure of inflation would produce budgetary savings. However, in general, linking the voucher amount to an index that grows faster (as under the first alternative) would result in lower savings, and linking the voucher amount to an index that grows more slowly (as under the second alternative) would produce greater savings.

Mandatory Spending and Revenues. Both alternatives would affect mandatory spending and revenues. They would reduce mandatory spending for the FEHB program because the Treasury and the Postal Service would make lower payments for FEHB premiums for annuitants and postal workers. (That reduced spending includes estimated savings by the Postal Service, whose spending is classified as off-budget.)

In addition, both alternatives would have other effects on mandatory spending because some FEHB participants would leave the program. On the one hand, mandatory spending would increase if FEHB participants disenrolled from FEHB and enrolled in federally subsidized insurance provided by Medicare or the health insurance marketplaces established under the Affordable Care Act. (People whose contributions to employment-based health insurance exceed a specified percentage of income are eligible for subsidies through the marketplaces if they meet other eligibility criteria; by increasing enrollees' premium contributions, this option would boost the number who qualify on that basis.) On the other hand, mandatory spending would be further reduced if annuitants who are FEHB participants disenrolled from the program and either became uninsured or bought unsubsidized coverage in the marketplaces or from insurers outside the marketplaces. The net effect of those disenrolled FEHB participants on changes in mandatory spending would be small relative to the savings from the voucher, but the direction of the change is uncertain.

Revenues also would be affected because of changes in the number of people with employment-based insurance (obtained through a spouse, for example). Those changes would affect the share of total compensation that takes the form of taxable wages and salaries and the share that takes the form of nontaxable health benefits. Taxable compensation would increase for some people and decrease for others. Those effects on revenues, however, would be minimal.

Overall, estimated changes in mandatory spending and revenues would reduce the deficit between 2021 and 2028 by $35 billion under the first alternative and by $37 billion under the second alternative.

Discretionary Spending. By reducing federal agencies' payments for FEHB premiums for current employees and their dependents, the first alternative would reduce discretionary spending by an estimated $29 billion from 2021 through 2028, provided that appropriations were reduced to reflect those lower costs. The second alternative would reduce discretionary spending by an estimated $31 billion from 2021 through 2028.

Uncertainty. The largest source of uncertainty in the estimate of savings over the next 10 years is CBO's estimate of how the growth of FEHB premiums under current law would compare with general inflation, as measured by either the CPI-U or the chained CPI-U. The difference between the FEHB premium and the voucher amount is a major contributor to the budgetary effects under both alternatives.

Other Effects

An advantage of both alternatives is that they would increase enrollees' incentive to choose lower-premium plans: If they selected plans that cost more than the voucher amount, they would pay the full additional cost. For the same reason, both alternatives would strengthen price competition among health care plans participating in the FEHB program. Because enrollees would pay no premium for plans that cost no more than the value of the voucher, insurers would have a particular incentive to offer such plans.

Both alternatives also could have several drawbacks. First, because the value of the voucher would grow more slowly over time than premiums would, participants would eventually pay more for their health insurance coverage. Some employees and annuitants who would be covered under current law might therefore decide to forgo coverage altogether. Second, many large private-sector companies currently provide health care benefits for their employees that are comparable to what the government provides. Under this option, the government benefits could become less attractive than private-sector benefits, making it harder for the government to attract highly qualified workers. Finally, the option would cut benefits that many federal employees and annuitants may believe they have already earned.

RELATED CBO PUBLICATION: *Comparing the Compensation of Federal and Private-Sector Employees, 2011 to 2015* (April 2017), www.cbo.gov/publication/52637

Mandatory Spending—Option 12 Function 550

Establish Caps on Federal Spending for Medicaid

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Caps on Overall Spending[a]												
Apply Caps to All Eligibility Categories, With Growth of Caps Based on the CPI-U												
Change in Outlays	0	-1	-14	-32	-45	-60	-75	-91	-109	-125	-92	-553
Change in Revenues[b]	0	*	-2	-4	-5	-7	-8	-9	-10	-12	-12	-57
Decrease (-) in the Deficit	0	-1	-12	-28	-40	-53	-68	-82	-99	-113	-81	-496
Apply Caps to All Eligibility Categories, With Growth of Caps Based on the CPI-U Plus 1 Percentage Point												
Change in Outlays	0	-1	-4	-17	-26	-37	-48	-59	-71	-83	-48	-346
Change in Revenues[b]	0	*	-1	-3	-4	-5	-6	-7	-8	-9	-8	-41
Decrease (-) in the Deficit	0	-1	-3	-14	-22	-32	-42	-52	-64	-74	-41	-305
Apply Caps to Adult and Children Eligibility Categories Only, With Growth of Caps Based on the CPI-U												
Change in Outlays	0	-1	-7	-17	-25	-33	-42	-51	-60	-68	-51	-304
Change in Revenues[b]	0	*	-2	-3	-5	-6	-7	-8	-9	-10	-10	-50
Decrease (-) in the Deficit	0	-1	-5	-14	-20	-27	-35	-42	-51	-58	-40	-255
Apply Caps to Adult and Children Eligibility Categories Only, With Growth of Caps Based on the CPI-U Plus 1 Percentage Point												
Change in Outlays	0	-1	-2	-10	-15	-22	-28	-34	-41	-47	-28	-199
Change in Revenues[b]	0	*	-1	-2	-3	-4	-5	-6	-7	-8	-7	-38
Decrease (-) in the Deficit	0	-1	-1	-7	-12	-17	-23	-28	-34	-39	-21	-162

Continued

Background

Medicaid is a joint federal-state program that covers acute and long-term health care for groups of low-income people, chiefly families with dependent children, elderly people (people over the age of 65), nonelderly people with disabilities, and—at the discretion of individual states—other nonelderly adults whose family income is up to 138 percent of the federal poverty guidelines. Under current law, the federal and state governments share in the financing and administration of Medicaid. The federal government provides the majority of Medicaid's funding; establishes the statutory, regulatory, and administrative structure of the program; and monitors state compliance with the program's rules. As part of its responsibilities, the federal government determines which groups of people and medical services states must cover if they participate in the program and which can be covered at states' discretion. For their part, the states administer the program's daily operations, reimburse health care providers and health plans, and determine which optional eligibility and service categories to adopt. The result is wide variation among states in

Mandatory Spending—Option 12 Continued

Establish Caps on Federal Spending for Medicaid

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
					Caps on Spending per Enrollee[c]							
Apply Caps to All Eligibility Categories, With Growth of Caps Based on the CPI-U												
Change in Outlays	0	-1	-3	-40	-64	-82	-102	-123	-146	-169	-109	-731
Change in Revenues[b]	0	*	-1	-1	-2	-2	-3	-5	-6	-8	-4	-28
Decrease (-) in the Deficit	0	-1	-3	-39	-62	-80	-98	-118	-140	-162	-105	-703
Apply Caps to All Eligibility Categories, With Growth of Caps Based on the CPI-U Plus 1 Percentage Point												
Change in Outlays	0	-1	-3	-21	-39	-51	-64	-78	-93	-109	-64	-460
Change in Revenues[b]	0	*	-1	-1	-1	-2	-3	-4	-5	-6	-3	-22
Decrease (-) in the Deficit	0	-1	-3	-20	-37	-49	-61	-75	-89	-103	-61	-438
Apply Caps to Adult and Children Eligibility Categories Only, With Growth of Caps Based on the CPI-U												
Change in Outlays	0	-1	-3	-29	-44	-55	-68	-81	-96	-110	-77	-488
Change in Revenues[b]	0	*	-1	-1	-2	-2	-3	-4	-5	-6	-4	-24
Decrease (-) in the Deficit	0	-1	-3	-28	-42	-53	-65	-77	-90	-104	-74	-464
Apply Caps to Adult and Children Eligibility Categories Only, With Growth of Caps Based on the CPI-U Plus 1 Percentage Point												
Change in Outlays	0	-1	-3	-18	-30	-39	-48	-58	-68	-79	-53	-345
Change in Revenues[b]	0	*	-1	-1	-1	-2	-2	-3	-4	-5	-3	-21
Decrease (-) in the Deficit	0	-1	-3	-17	-29	-37	-45	-54	-64	-74	-50	-324

Sources: Congressional Budget Office; staff of the Joint Committee on Taxation.

CPI-U = consumer price index for all urban consumers; * = between -$500 million and zero.

a. This alternative would take effect in October 2021, although some changes to outlays and revenues would occur earlier.

b. Estimates include the effects on Social Security payroll tax receipts, which are classified as off-budget.

c. This alternative would take effect in October 2022, although some changes to outlays and revenues would occur earlier.

levels of enrollment, the scope of services covered, payment rates for providers and health plans, and spending per capita, among other aspects of how the program is implemented.

In 2017, the states received $375 billion in federal funding for Medicaid and spent $230 billion of their own funds for the program. Under current law, almost all federal funding is open-ended: If a state spends more because enrollment increases or costs per enrollee rise, larger federal payments are generated automatically. On average, the federal government pays about 62 percent of program costs, with a range among the states of 50 percent to the current high of 85 percent, reflecting the variation in state per capita income and in the share of enrollees (if any) in each state that became eligible for

Medicaid as a result of the optional expansion of that program under the Affordable Care Act (ACA). Through 2016, the federal government paid all costs for enrollees who became eligible as a result of the ACA. The federal government is scheduled to cover a slightly declining share of costs for that group from 2017 through 2019, and 90 percent of costs in 2020 and beyond.

Medicaid spending has consumed a rising share of the federal budget over the past several decades, representing a growing percentage of gross domestic product (GDP)—a trend that the Congressional Budget Office projects will continue into the future. Over the past 20 years, federal Medicaid spending has risen at an average rate of slightly more than 7 percent annually as a result of general growth in health care costs, mandatory and optional expansions of program eligibility and covered services, and the increasing amount of state spending that qualifies for federal matching payments.

CBO expects that, under current law, federal spending for Medicaid will grow more slowly in the next decade as the pressure grows on some states to constrain the program's increasing share of their budgets; however, it will continue to increase faster than GDP growth and general inflation, in part because of continued growth in health care costs and in part because more states are expected to expand Medicaid coverage under the ACA. (To date, 32 states and the District of Columbia have done so.) Medicaid spending is projected to rise at an average rate of 6 percent a year, whereas GDP is projected to increase by about 4 percent a year on a nominal basis, and general inflation is expected to average about 2 percent a year. CBO estimates that Medicaid's share of federal noninterest spending will rise from 10 percent in 2017 to 11 percent in 2028.

Lawmakers could make structural changes to Medicaid to decrease federal spending on the program. Among the possibilities are reducing the scope of covered services, eliminating eligibility categories, repealing the expansion of the ACA, reducing the federal government's share of total Medicaid spending, or capping the amount that states receive from the federal government to operate the program. This option focuses on the last approach, although the others could have similar implications for federal and state spending or for individual enrollees, depending on the way states were permitted to, or decided to, respond to such policy changes.

Key Design Choices That Would Affect Savings

As outlined in this option, there are a variety of designs for caps that policymakers could consider that would significantly affect federal Medicaid savings. However, a number of major policy choices, with important implications, would have to be made. Those key design choices include the following:

- Whether to set overall or per-enrollee caps;
- What categories of Medicaid spending and what eligibility categories to include in the spending limits;
- Which year's spending to use to set the base year and what growth factor, or percentage rate, to use to increase the caps over time; and
- Whether optional expansion of coverage under the ACA also would be subject to the caps (thus creating special complexities for states that have not yet expanded coverage but that might do so in the future).

Overall or Per-Enrollee Spending Caps. The first consideration is whether to pursue a cap on federal Medicaid spending across the board or to provide each state with a fixed amount of funding for each enrollee.

Overall Caps. In general, overall caps would consist of a maximum amount of funding that the federal government would give a state to operate Medicaid. Once established, and depending on the way they were scheduled to increase, the federal caps generally would not fluctuate in response to rising or falling enrollment or as a result of changes in the cost of providing services.

Overall caps could be structured in one of two main ways. First, the federal government could provide block grants at amounts that would not change, regardless of fluctuations in costs or enrollment. Alternatively, the federal government could maintain the current financing structure—paying for a specific share of a state's Medicaid spending—but capping the total amount provided to states. In that case, each state would bear all additional costs above the federal caps, but the state and the federal government would share the savings if spending fell below the caps. In CBO's view, however, if caps were set below current projections of federal Medicaid spending, such additional federal savings would be unlikely. Given the incentive to maximize federal funding, CBO expects that states would generally structure their programs to qualify for all available federal funds up to the amount of the caps.

Per-Enrollee Caps. Caps on per-enrollee spending would set an upper limit on the amount a state could spend on care for Medicaid enrollees, on average. Under such a plan, the federal government would provide funds for each person enrolled in the program, but only up to a specified amount per enrollee. As a result, each state's total federal funding would be calculated as the product of the number of enrollees and the capped per-enrollee spending amount. (Individual enrollees whose care proved to be more expensive than the average could still generate additional federal payments, as long as the total per capita average did not exceed the cap.) Unlike an overall spending cap, such an approach would allow for additional funding if enrollment rose (when a state chose to expand eligibility under the ACA, for example, or as a result of an increase in enrollment during an economic downturn). Funding would decline if Medicaid enrollment fell (for example, when a state chose to restrict enrollment or when enrollment fell as a result of an improving economy).

Several structures are possible for per-enrollee caps. Caps could be set on the basis of average federal spending per enrollee for all Medicaid beneficiaries or for people by eligibility category. In those circumstances, the federal government would count the enrollees overall or the number in each category and multiply that sum by the spending limit per enrollee. For caps based on eligibility category, the overall limit on Medicaid spending for each state would be the sum of the groups' limits. A similar but more flexible approach would be to set a total limit consisting of the sum of the limits for the chosen groups, but to allow states to cross-subsidize groups (that is, to spend more than the cap for some groups and less for others) as long as the state's total spending limit was maintained.

Spending Categories. Policy options to cap federal Medicaid spending could target all Medicaid spending or spending for specific categories of services. Most federal Medicaid spending covers acute care ($260 billion in 2017) or long-term care ($88 billion in 2017). Both types of spending could be divided among various subcategories. For example, caps could exclude payments to certain enrollees who are also enrolled in Medicare for their Medicare cost sharing because such payments, which are typically included in acute care spending, are more related to Medicare than Medicaid. Other spending categories include disproportionate share hospital (DSH) payments to inpatient facilities that serve a higher percentage of Medicaid enrollees and uninsured patients; spending under the Vaccines for Children (VFC) program; and administrative spending. (The total in 2017 for those three categories was $27 billion.) In general, the more spending categories that were capped, the greater the potential for federal budgetary savings.

Eligibility Categories. In addition to placing limits on spending for different categories of services, caps could limit spending for different eligibility categories. The main eligibility categories for Medicaid consist of the elderly; people with disabilities; children; nondisabled, nonelderly adults who would have been eligible before enactment of the ACA; and adults made eligible by the ACA. As with service categories, the more eligibility categories that are covered by the caps, the greater the potential for federal savings. For example, caps could limit federal spending (either overall or per enrollee) only for children and certain adults but leave spending unchanged for elderly and disabled enrollees. Because the latter two groups of enrollees currently account for about 47 percent of Medicaid spending—and are projected to account for about 46 percent in 2028—caps that did not apply to them would produce far smaller savings than caps that applied to all groups (assuming that the other characteristics of the two sets of caps were the same).

Per-enrollee caps could establish one average per-person cost limit for all enrollees or establish separate limits for different types of enrollees. If there was more than one per-enrollee cap, separate caps could be established for as many specific categories as could be identified in Medicaid administrative data (see the section on "Other Considerations"). For example, past proposals have considered separate caps for the elderly, people with disabilities, children, and nondisabled, nonelderly adults. Separate caps also could be established for pregnant women, for adults added as a result of the expansion of Medicaid under the ACA, or for other particular groups.

The choice of creating only one or more than one per-enrollee cap—and if so, which groups to select for each cap—could affect whether and to what extent the states would have an incentive to maximize enrollment of some groups over others. A single cap for all enrollees would average the costs of groups without regard to substantial differences in the groups' health status, thus creating financial incentives for states to enroll people whose costs were expected to be below the cap. For example, per-enrollee spending for children and non-elderly, nondisabled adults, on average, is below that for elderly patients and people with disabilities. Therefore, the enrollment of every additional child and nonelderly, nondisabled adult would generate payments from the federal government in excess of their average costs, helping a state to remain below its total spending limit, and the enrollment of every additional elderly or disabled enrollee would make that goal more difficult to achieve because federal payments would be below their average cost. However, the degree to which states could effectively maximize enrollment of people in one category compared with another would depend on the degree of flexibility states were given to keep their costs below the caps.

Base-Year Spending. Establishing caps on federal spending for Medicaid requires selecting a particular year of Medicaid outlays as a "base year" and calculating that year's total spending for the service categories and eligibility groups that are included. The base year is usually not the first year in which the caps take effect, which could be any year in the budget window, but the year from which the future cap amounts are projected (as described in the next section). Thus, for overall and per-enrollee spending caps alike, the selection of the base year is important: A higher base-year amount would lead to higher caps (and lower federal savings) than a lower base-year amount would.

An important consideration in selecting a base year is whether to use a past or future year. Most proposals use a past year because Medicaid expenditures are known and because states cannot increase spending in a past base year to boost their future spending limits. By contrast, a future base year would allow states to increase spending in that year by raising payment rates for providers and health plans, making additional onetime supplemental payments, or moving payments for claims from different periods into the base year, thereby increasing the caps and lowering federal savings.

Choosing a past year as a base also would essentially lock in the spending that resulted from previous choices about the design of a state's Medicaid program, including the choice of whether to expand Medicaid. Once caps were set on the basis of a past year, states would be responsible for the full cost of any expansionary program changes whose costs exceeded the caps, such as raising payment rates or voluntarily adding covered services (which some might consider a desirable outcome if a principal goal of the cap was to constrain state spending). In addition, states that have made efforts to operate their programs efficiently to keep costs low would receive caps that reflected that efficiency and were, all else being equal, lower than the caps of states with inefficient programs. Therefore, those states that maintained efficiency would have less flexibility to reduce spending to comply with the caps, and states that operated inefficiently would have more flexibility. Ways to address that issue would include supplementing base-year spending amounts or assigning higher growth rates to states that spent less to give them more room to change their programs over time. However, that approach would reduce the federal savings generated by the caps.

Growth Factors. The choice of which growth factor to use determines the annual rate of increase in spending subject to the caps from the base year and inflates the spending limits in future years. The growth factor is one of the most important drivers of savings derived from the option to cap Medicaid spending, as the caps are essentially limits on the degree to which the federal government would allow its payments to grow over time. However, the growth factor could be set to meet specific savings targets or to achieve other specific policy purposes. For example, if a growth factor was set roughly equal to the rate of increase projected for Medicaid spending under current law, little or no budgetary savings might be anticipated, but some other policy objective could be met, such as protecting the federal government from unanticipated cost increases in the future. Alternatively, the growth factor could be set to make the increase in federal Medicaid spending—overall or per enrollee—match changing prices in the economy as measured, for example, by the consumer price index for all urban consumers (CPI-U). The growth factor could be set to reflect the growth in health care costs per person, perhaps as measured by the per capita increase in national health expenditures, or at a rate that was consistent with economic growth as measured by the increase in per capita GDP. Growth factors that were tied to price indexes or to overall economic growth, however, would not generally account for increases in the average quantity or intensity of medical services of the sort that have occurred in the past.

For overall spending caps, which would not provide additional funds automatically if Medicaid enrollment rose, the growth factor could include some measure of population growth (such as the Census Bureau's state population estimates) or changes in the unemployment rate to account for increases in enrollment. A growth factor also could be any legislated rate designed to produce a desired amount of savings.

In general, the lower the growth factor relative to CBO's projected growth rate for federal Medicaid spending under current law, the greater the projected federal budgetary savings would be. But the lower the growth factor, the greater the possibility that federal funding would not keep pace with increases in states' costs per Medicaid enrollee or, in the case of overall caps, with increases in Medicaid enrollment, thus raising the likelihood that states would not be able to maintain current services or coverage.

The Optional Expansion of Medicaid. Since January 2014, states have been permitted to extend eligibility for Medicaid to most people whose income is below 138 percent of the federal poverty guidelines. Under the terms of the ACA, the federal government currently covers a much larger share of the cost of providing Medicaid coverage to people made eligible by the expansion than it does for other Medicaid enrollees. That higher federal share was set at 100 percent through 2016 and is scheduled to decline gradually to 90 percent by 2020 and remain at that rate thereafter. The expansion of Medicaid would add complexity to the design of federal spending caps, particularly for states that chose to adopt the expansion after the base year.

For states that have not yet adopted the ACA expansion, data from an earlier base year would reflect spending only for groups of people who were eligible before expansion. Should any of those states subsequently adopt the expansion, the annual limits established by an overall spending cap would fail to account for the spending of expansion enrollees. For per-enrollee caps, the additional enrollment from the coverage expansion would generate additional federal spending, but average per capita spending for adults in the base year would not account for the higher federal payment for newly eligible people. In addition, the average would not reflect any differences in expected costs related to the health status of those new enrollees compared with costs for people who would have been eligible before the expansion.

In designing Medicaid caps, those issues could be addressed in one of several ways. Specifically, policymakers could:

- Select a base year far enough in the future to allow time for states that chose to do so to adopt the expansion and for enrollment to become fairly stable.
- Leave spending uncapped for people who enrolled as a result of the expansion, but cap spending only for nonexpansion enrollees.
- Allow the Secretary of Health and Human Services to add an estimate of future spending attributable to the expansion for states that chose to adopt the expansion after the base year.
- Base the caps on total combined federal and state spending to avoid the complexity of differing matching rates for expansion and pre-expansion adults.
- Make no adjustment to the caps to account for the costs of the expansion.

Another question related to the optional expansion concerns whether capping federal Medicaid spending might cause some states that would otherwise expand coverage to reject the expansion instead. Limits on federal Medicaid payments represent a potential shifting of costs to states, which in turn would affect states' budget processes and program decisions. States could reduce Medicaid costs and lessen financial risk by dropping the optional expansion or deciding to adopt it later. CBO anticipates that the more that caps reduced federal funding below the amounts projected under current law, the greater the likelihood that states would discontinue or reject the optional expansion—unless the cap's structure was designed so that participating in the expansion did not make complying with the cap more difficult.

Option

CBO analyzed two alternatives to limit federal Medicaid spending: establishing overall spending caps and establishing per-enrollee caps. For both alternatives, CBO also analyzed limits on spending for all eligibility groups and limits on adults and children only (excluding the elderly and disabled). Further, to illustrate a range of savings, CBO used a pair of alternative growth factors for each type of cap: either the annual change in the

CPI-U or the change in the CPI-U plus 1 percentage point (referred to here as the CPI-U plus 1). Under each alternative—and its variants—states would retain their current-law authority concerning optional benefits, optional enrollees, and payment rates for providers and health plans.

CBO chose 2017 as the base year for all alternatives. Overall caps would take effect in October 2021; per-enrollee caps would take effect one year later. That additional year would be the minimum necessary to allow for the complex gathering of data needed to arrive at state-specific caps for each enrollee group (as discussed below in the section "Availability of Data"). For overall and per-enrollee caps alike, federal matching rates would continue as they are under current law. Medicaid's DSH, VFC, and administrative spending would be excluded, as would Medicaid assistance with Medicare cost sharing and premiums for those dually eligible for both programs.

For the per-enrollee spending caps, CBO assumed that separate spending limits would be set for five Medicaid eligibility groups in each state: the elderly; people with disabilities; children; nondisabled, nonelderly adults who would have been eligible before enactment of the ACA; and adults made eligible by the ACA (in states that have expanded coverage). States would be permitted to cross-subsidize groups. CBO also assumed that the Secretary of Health and Human Services would create a new data source to capture the necessary spending and enrollment information for the five groups. Those same specifications would apply to alternatives that capped spending only for adults and children.

For simplicity, CBO assumed that the Secretary would not adjust the caps to reflect estimated additional spending in any state that adopted the expansion after the base year. Per-enrollee caps would be established on combined federal and state spending (overall caps would not). By that method, if combined federal and state spending exceeded the caps, the percentage of the excess spending above the cap would be cut from the federal payment to states: If a state overspent its per-enrollee cap by 5 percent, for example, the federal payment to the state would be reduced by the same amount.

Effects on the Budget From Caps on Overall Spending

Under the specifications listed here, CBO estimates that the overall caps affecting spending for all eligibility groups would generate gross savings to Medicaid of $700 billion between 2020 and 2028 using the CPI-U growth factor and $454 billion using the CPI-U plus 1 growth factor. That translates into savings of about 15 percent and 10 percent, respectively, from the current-law projection of total federal Medicaid spending for the period. In 2028, gross savings from establishing overall caps on all eligibility groups would represent about 23 percent of projected federal Medicaid spending using the CPI-U growth factor and 16 percent using the CPI-U plus 1 growth factor.

CBO estimates that establishing caps on overall spending for only the adult and children eligibility groups would generate gross savings to Medicaid of $433 billion between 2020 and 2028 using the CPI-U growth factor and $299 billion using the CPI-U plus 1 growth factor. That translates into savings of about 9 percent and 6 percent, respectively, from the current-law projection of total federal Medicaid spending for the period. In 2028, gross savings from establishing caps on overall spending for only the adult and children eligibility groups would represent about 14 percent of projected federal Medicaid spending using the CPI-U growth factor and 10 percent using the CPI-U plus 1 growth factor.

The gross savings from establishing caps on overall spending—regardless of whether those caps applied to spending for all eligibility categories or only to those that consist of adults and children—would be partially offset. Reductions in federal Medicaid spending resulting from the overall caps would represent large reductions in state revenues. Therefore, in CBO's assessment, the states would take a variety of actions to reduce a portion of the additional costs that they would face, including restricting enrollment. CBO anticipates that, in response to the caps on spending, some states would discontinue coverage for enrollees made eligible by the ACA, and all states that would have adopted such coverage in the future would no longer choose to do so. (A reduction in the deficit would occur in 2020 because the caps would become law in 2019, and CBO expects that some of the states that would have opted to expand coverage would have done so in 2020.) For people who lost Medicaid coverage, some would gain access to subsidized health insurance coverage through the marketplaces established by the ACA. Specifically, some people who lost Medicaid eligibility would qualify for subsidies to buy coverage through the marketplaces if other eligibility criteria were met. The rest would enroll in other coverage, principally through an employer, or become uninsured. Overall, CBO and the staff of the Joint Committee on Taxation (JCT) estimate that roughly 60 percent of people who lost Medicaid coverage would become uninsured; that increase in the uninsured would in turn increase Medicare's DSH payments to inpatient facilities that serve a higher percentage of low-income patients.

For the caps on overall spending that affect all eligibility groups, the agencies estimate—using the CPI-U growth factor—that the additional marketplace and employment-based coverage, along with increased Medicare spending related to DSH payments, would increase outlays by $147 billion and decrease revenues by $57 billion from 2020 through 2028. Using the CPI-U plus 1 growth factor, the agencies estimate that the additional coverage and Medicare spending would increase outlays by $108 billion and decrease revenues by $41 billion over the same period. As a result, the net effect on the deficit would be savings of $496 billion between 2020 and 2028 using the CPI-U growth factor and $305 billion using the CPI-U plus 1 growth factor.

For caps affecting overall spending for only the adult and children eligibility groups, the agencies estimate—using the CPI-U growth factor—that the additional marketplace and employment-based coverage along with increased Medicare spending related to DSH payments would increase outlays by $129 billion and decrease revenues by $50 billion from 2020 through 2028. Using the CPI-U plus 1 growth factor, the agencies estimate that the additional coverage and Medicare spending would increase outlays by $100 billion and decrease revenues by $38 billion over the same period. As a result, the net effect on the deficit would be savings of $255 billion between 2020 and 2028 using the CPI-U growth factor and $162 billion using the CPI-U plus 1 growth factor.

Effects on the Budget From Caps on Spending per Enrollee

CBO estimates that per-enrollee caps affecting spending for all eligibility groups would generate gross savings to Medicaid of $805 billion between 2020 and 2028 using the CPI-U growth factor and $522 billion using the CPI-U plus 1 growth factor, yielding savings of about 17 percent and 11 percent, respectively, relative to the current-law projection of total federal Medicaid spending for the period. The gross savings would represent about 29 percent and 19 percent, respectively, of projected federal Medicaid spending in 2028.

CBO estimates that per-enrollee caps affecting spending only for the adult and children eligibility groups would generate gross savings to Medicaid of $554 billion between 2020 and 2028 using the CPI-U growth factor and $403 billion using the CPI-U plus 1 growth factor. That translates into savings of about 12 percent and 8 percent, respectively, from the current-law projection of total federal Medicaid spending for the period. The gross savings would represent about 19 percent and 14 percent, respectively, of projected federal spending for Medicaid in 2028.

Some of the difference in gross savings to Medicaid is attributable to the caps' different implementation dates—specifically, the later implementation of per-enrollee caps. If the caps on overall spending also took effect in 2022, the gross savings from establishing those caps on all eligibility groups would be $678 billion using the CPI-U growth factor and $445 billion using the CPI-U plus 1 growth factor. The gross savings from implementing caps on overall spending for only the adult and children eligibility groups would be $422 billion using the CPI-U growth factor and $295 billion using the CPI-U plus 1 growth factor.

As with the caps on overall spending, the gross savings from per-enrollee caps would be partially offset. Although per-enrollee caps would provide additional federal payments for each enrollee, caps below projections of federal per-enrollee spending would create a loss of revenues to states for each enrollee relative to current law. Therefore, CBO anticipates that some states also would take action to restrict enrollment under per-enrollee caps. In addition, CBO and JCT estimate that roughly 60 percent of enrollees who lost Medicaid coverage would become uninsured, thereby increasing Medicare's DSH payments to inpatient facilities that serve a higher percentage of low-income patients. The remainder would instead either obtain subsidized health insurance through the marketplaces or enroll in an employment-based plan. For per-enrollee caps affecting all eligibility groups, the agencies estimate that the additional coverage and Medicare spending using the CPI-U growth factor would increase outlays by $74 billion and decrease revenues by $28 billion from 2020 through 2028. Using the CPI-U plus 1 growth factor, the agencies estimate that the additional coverage and Medicare spending would increase outlays by $62 billion and decrease revenues by $22 billion over the same period. As a result, the net effect on the deficit would be savings of $703 billion between 2020 and 2028 using the CPI-U growth factor and $438 billion using the CPI-U plus 1 growth factor.

For per-enrollee caps affecting only the adult and children eligibility groups, the agencies estimate—using the CPI-U growth factor—that increases in marketplace and employment-based coverage along with increased Medicare spending related to DSH payments would increase outlays by $66 billion and decrease revenues by $24 billion from 2020 through 2028. Using the CPI-U plus 1 growth factor, the agencies estimate that those coverage changes would increase outlays by $58 billion and decrease revenues by $21 billion over the same period. As a result, the net effect on the deficit would be savings of $464 billion between 2020 and 2028 using the CPI-U growth factor and $324 billion using the CPI-U plus 1 growth factor.

Per-enrollee caps—whether they applied to spending for all eligibility groups or to spending for adults and children only—would save more than the caps on overall spending, using the same growth factor. For example, using the CPI-U growth factor, the net effect on the deficit of the per-enrollee caps would be $703 billion in savings, and the net effect on the deficit of the caps on overall spending would be $496 billion in savings. The per-enrollee caps would have a larger effect on the deficit because of the way federal spending would change in response to state eligibility restrictions. As explained above, CBO expects that states would respond both to the per-enrollee caps and to overall caps on spending by seeking to offset a portion of the additional costs they would face relative to current law, including by taking steps to restrict eligibility. However, the effects on federal spending would be greater under per-enrollee caps. If per-enrollee caps were established, states would respond by restricting eligibility, and enrollment would fall. As a result, states would receive less federal funding (because they would receive the per capita amount for each enrollee on the basis of those enrollees' eligibility category). By contrast, if the overall caps were established, lower enrollment would not change the amount of federal funding that would be available to states because the funding is not tied to enrollment. Were it not for the additional savings created by the way in which enrollment changes affected federal funding under the per-enrollee caps, those caps would have a smaller net effect on the deficit than the caps on overall spending, using the same growth factor.

Uncertainty

There are two principal sources of uncertainty in the estimates of savings arising from this option. First, differences in the actual rate of growth in Medicaid spending under current law between 2019 and 2028, as compared with CBO's baseline projections of that growth, would affect the amount of savings achieved by the caps. If spending growth in the absence of the caps was substantially lower than CBO's projections, the savings realized by the caps on Medicaid spending would be significantly lower. In an extreme case, if spending growth under current law was less than the CPI-U in each year, then capping Medicaid growth by implementing either the overall caps or the per-enrollee caps would produce no savings. By contrast, if spending growth under current law was substantially higher than CBO's projections, then the savings would be significantly higher, as would the pressure on states to make adjustments to their programs. Moreover, small differences in the actual growth under current law as compared with CBO's projections earlier in the 2019–2028 period could significantly affect the savings from the establishment of caps. The significant difference in savings would occur because small differences between growth under current law and CBO's projections early in the period would compound over many years.

The second source of uncertainty pertains to how states would respond to the caps. Although the states' responses would generally have a smaller effect on savings than differences between the actual and estimated growth rate for Medicaid under current law, whether and how states chose to alter their Medicaid program in response to the caps is uncertain. If a state chose to leave its Medicaid programs unchanged and instead found other ways to offset the loss of federal funds, there would be little or no change in Medicaid enrollment or to the offsetting costs and revenue reductions associated with former Medicaid enrollees obtaining subsidized health insurance through the marketplaces or enrolling in an employment-based plan. By contrast, if states made more significant cuts to Medicaid enrollment than expected, more former Medicaid enrollees would obtain subsidized health insurance through the marketplaces, enroll in an employment-based plan, or become uninsured, which would increase the associated offsetting costs.

Other Effects

From the federal government's perspective, capping Medicaid funding to states could confer several advantages relative to current law. For example, setting spending limits by establishing caps would make federal costs for Medicaid more predictable. Federal spending caps also would curtail states' current ability to increase federal Medicaid funds—an ability created by the open-ended nature of federal financing for the program—and could reduce the relatively high proportion of program costs now covered by the federal government. Because the federal government matches states' Medicaid spending, an additional state dollar spent on Medicaid is worth more to a state than an additional state dollar spent outside the program. Therefore, states have considerable incentive to devote more of their budgets to Medicaid than they would otherwise and to shift other unmatched program expenditures into Medicaid. For example, states have sometimes chosen to reconfigure health programs—previously financed entirely with state funds—in order to qualify for federal Medicaid reimbursement. And most states finance a portion of their Medicaid spending through taxes collected from health care providers with the intention of returning the collected taxes to those providers in the form of higher Medicaid payments, thereby boosting federal Medicaid spending without a corresponding increase in state spending. Those incentives would be reduced under a capped program.

Caps on federal Medicaid spending also could present several disadvantages relative to current law. Capped federal spending would create uncertainty for states as they plan future budgets because it could be difficult to predict whether Medicaid spending would exceed the caps and thus require additional state spending. Moreover, depending on the structure of the caps, Medicaid might no longer serve as a countercyclical source of federal funds for states during economic downturns (under overall caps, the states might not automatically receive more federal funds if a downturn caused an increase in Medicaid enrollment). If the limits on federal payments were set low enough, additional costs—perhaps substantial costs—would be shifted to states. States then would need to decide whether to commit more of their own revenues to Medicaid or reduce spending by cutting payments to health care providers and health plans, eliminating optional services, restricting eligibility for enrollment, or (to the extent feasible) arriving at more efficient methods for delivering services. Under proposals that led to significant reductions in federal funding, many states would find it difficult to offset the reduced federal payments solely through improvements in program efficiency. If reductions in federal revenues were large enough, states would probably resort to a combination of all approaches. All of those effects would be magnified in the long run beyond 2028 as the difference between the permissible level of federal spending under the caps and the spending that would have occurred under current law grew wider over time.

Enrollees would be affected in various ways if states reduced providers' payment rates or payments to managed care plans, cut covered services, or curtailed eligibility. If states reduced payment rates, fewer providers might be willing to accept Medicaid patients, especially given that, in many cases, Medicaid's rates are already significantly below those of Medicare or private insurance for some of the same services. If states reduced payments to Medicaid managed care plans, some plans might shrink their provider networks, curtail quality assurance, or drop out of the program altogether. If states reduced covered services, some enrollees might decide either to pay out of pocket or to forgo those services entirely. And if states narrowed their categories of eligibility (including the optional expansion under the ACA), some of those enrollees would lose access to Medicaid coverage, although some would become eligible for subsidies for private coverage or could choose to enroll in employment-based coverage, if available.

Other Considerations

Because caps on federal Medicaid spending would represent a fundamental restructuring of Medicaid financing, several other considerations would need to be addressed. In addition to their consequences for the federal budget, the limits on federal spending would require new administrative mechanisms for full implementation. The Centers for Medicare & Medicaid Services (CMS, the federal agency within the Department of Health and Human Services that administers Medicaid) would need to establish a mechanism for enforcing the caps to account for the delayed availability of the necessary data to calculate the final limits. Administrative data on Medicaid spending and enrollment do not currently provide enough information to establish per-enrollee caps such as those modeled for this option. Such data would need to be developed.

Enforcement. Before overall or per-enrollee caps could take effect, CMS would need to establish mechanisms to ensure state compliance. The nature of that enforcement would depend on legislative direction given to the Secretary for establishing the caps. If the growth factors for either type of cap were based on the value of some specific measure of economic activity, such as the CPI-U (as opposed to a fixed growth factor that consisted of an annual increase of a certain percentage), CMS would not know the final spending limits until after the end of the fiscal year, when the measure would be finalized, unless growth from some earlier period was used instead. Per-enrollee caps would require additional delays because final enrollment data for any year would not be available for at least several months after the fiscal year's end. In addition, states usually make accounting adjustments to a prior year's spending long after the end of the fiscal year. Such delays would prevent CMS from determining the final limits on a current year's spending until well into the next fiscal year. Although states could attempt to forecast the limits and could update those forecasts over the course of a year, it would be difficult to precisely target spending to remain below the caps; states therefore could face reductions in funding triggered by spending above the caps.

Availability of Data. States currently report enough data for CMS to determine per-enrollee spending for only two groups of enrollees: those made eligible by the ACA and all other enrollees combined. To set per-enrollee caps on the basis of currently available data, lawmakers could establish either a single overall per-enrollee cap that represented average spending in all Medicaid eligibility categories or two caps—one for each of the groups of enrollees for which data were available. As stated above, broad categories for per-enrollee caps create incentives to favor the enrollment of people in eligibility categories with lower rather than higher costs. Therefore, to establish caps like those modeled in this option, the Secretary could rely on internal state data regarding enrollment among and spending for the groups considered under these alternatives. However, that might create an incentive for states to submit enrollment and spending data that would maximize the caps. Alternatively, the Secretary could make available a new uniform, state-reported data source for the relevant information, but such a data set would require additional time to design, develop, and implement.

RELATED OPTION: Mandatory Spending, "Convert Multiple Assistance Programs for Lower-Income People Into Smaller Block Grants to States" (page 89)

RELATED CBO PUBLICATIONS: *Preliminary Analysis of Legislation That Would Replace Subsidies for Health Care With Block Grants* (September 2017), www.cbo.gov/publication/53126; *Federal Grants to State and Local Governments* (March 2013), www.cbo.gov/publication/43967

Mandatory Spending—Option 13 Function 550

Limit States' Taxes on Health Care Providers

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Outlays												
Lower the safe-harbor threshold to 5 percent	0	0	-2	-2	-2	-2	-2	-2	-2	-2	-5	-15
Lower the safe-harbor threshold to 2.5 percent	0	0	-11	-12	-12	-13	-14	-15	-15	-16	-35	-108
Eliminate the safe-harbor threshold	0	0	-34	-37	-39	-42	-44	-47	-49	-52	-110	-344

This option would take effect in October 2020.

Background

Medicaid is a joint federal-state program that pays for health care services for low-income people in various demographic groups. State governments operate the program under federal statutory and regulatory oversight, and the federal government reimburses a portion of each state's costs at matching rates that generally range from 50 percent to 85 percent, depending on the per capita income of the state and on the share of enrollees (if any) in each state that became eligible for Medicaid as a result of the optional expansion of that program under the Affordable Care Act. The rest of the funding must come from state revenues, either from general funds or from another source. Most states finance at least a portion of their Medicaid spending through taxes collected from health care providers. In the early 1990s, the Congress required states that taxed health care providers to collect those taxes at uniform rates from all providers of the same type (hospitals, for example). Those rules were created because some states were taxing Medicaid providers either exclusively or at higher rates than other providers of the same type with the intention of returning the collected taxes to those providers in the form of higher Medicaid payments. Such "hold harmless" provisions were leading to large increases in federal Medicaid outlays but not to corresponding increases in states' Medicaid spending, despite what would have been expected under Medicaid's matching-rate formula. However, federal law grants a "safe harbor" exception to hold-harmless provisions when a state collects taxes that do not exceed 6 percent of a provider's net patient revenues. Any tax amounts collected from providers that exceed 6 percent of their revenues are deducted from a state's total Medicaid expenditures before determining the amount of federal matching funds.

Option

This option consists of three alternatives, all of which would take effect in October 2020 to allow states time to adjust their tax laws. Under the first alternative, the safe-harbor threshold would be lowered to 5 percent. Under the second alternative, the threshold would be lowered to 2.5 percent. And, under the third alternative, the threshold would be eliminated. Lowering or eliminating the safe-harbor threshold would reduce the amount of taxes that states could collect from providers to finance their share of Medicaid spending.

Effects on the Budget

The Congressional Budget Office estimates that capping the threshold at 5 percent (the first alternative) would reduce mandatory spending by $15 billion between 2021 and 2028 and that capping it at 2.5 percent (the second alternative) would reduce mandatory spending by $108 billion over that period. Eliminating the safe-harbor threshold (the third alternative) would reduce mandatory spending by $344 billion between 2021 and 2028. The growth in savings over that period is a result of CBO's expectation that collections of tax revenues would increase at the rate of growth of overall health care spending for the types of providers that are typically taxed.

The large difference in savings generated by the three alternatives is a result of the distribution of taxes that are imposed on providers by states. Those tax rates vary widely, from under 1 percent to 6 percent. Therefore, the lower the threshold, the more that tax revenues collected from providers would be affected. Lowering the threshold to 5 percent would affect only the taxes collected above that rate, whereas lowering the threshold to 2.5 percent would affect the additional tax revenues collected above that rate. Eliminating the threshold would affect all tax revenues collected from providers.

The amount of savings generated by the option would depend entirely on the extent to which states chose to adjust their Medicaid programs in response to the lower thresholds. Under the new limits, states would need to decide whether to continue spending the same amount—and make up the difference out of other revenues—or to cut spending by the difference in revenues collected under the old and new thresholds. In the first case, states might replace lost revenues by raising additional general revenues or by reducing spending elsewhere in their budgets and transferring those amounts to Medicaid spending. In that case, the federal government would continue to match the same amount of state spending and there would be no change in federal spending. Alternatively, states could decide not to replace the lost revenues and instead cut their Medicaid spending. That choice would reduce federal spending because the matched amounts would be smaller.

CBO expects that different states would respond to a lower safe-harbor threshold in different ways. Most states would probably not replace all of the revenues lost as a result of the lower threshold for the taxation of providers. The health care providers being taxed typically benefit directly from higher Medicaid payment rates, making the imposition of such taxes an easier choice for states than alternative choices for replacing such revenues. However, most states would probably not cut Medicaid spending by the full amount of the lost revenues because they deem other choices to be preferable. CBO anticipates that, on average, states would replace half of the lost revenues, but that estimate is highly uncertain. To the extent that the average state response would be to make larger cuts to Medicaid, the savings would be greater, and to the extent that the average state response would be to make smaller cuts to Medicaid, the savings would be smaller.

Other Effects

One argument for implementing this option is that it would limit or eliminate a state financing mechanism that has inflated federal payments to states for Medicaid beyond the amount the federal government would have paid in the absence of such taxes. An argument against this option is that, to the extent that states cut back spending on Medicaid in response to the lost revenues, health care providers could face lower payment rates that might make some of them less willing to treat Medicaid patients. Moreover, some Medicaid enrollees could face a reduction in services or possibly lose their eligibility for the program if states restricted enrollment to curtail costs.

Mandatory Spending—Option 14 Function 550

Reduce Federal Medicaid Matching Rates

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Use the Same FMAP for All Categories of Administrative Services												
Change in Outlays	0	0	-5	-6	-6	-7	-7	-8	-8	-8	-18	-55
Remove the FMAP Floor												
Change in Outlays	0	0	-40	-43	-45	-48	-50	-53	-56	-59	-128	-394
Reduce the Matching Rate for Enrollees Made Eligible by the ACA												
Change in Outlays	0	-1	-28	-40	-43	-47	-50	-54	-57	-60	-113	-381
Change in Revenues[a]	0	*	-2	-3	-4	-4	-5	-5	-6	-6	-9	-36
Decrease (-) in the Deficit	0	-1	-26	-36	-39	-43	-46	-48	-51	-54	-103	-345

Sources: Congressional Budget Office; staff of the Joint Committee on Taxation.

This option would take effect in October 2020, although in some cases changes to outlays and revenues would occur earlier.

ACA = Affordable Care Act; FMAP = federal medical assistance percentage; * = between -$500 million and zero.

a. Estimates include the effects on Social Security payroll tax receipts, which are classified as off-budget.

Background

Medicaid is a joint federal-state program that pays for health care services for low-income people in various demographic groups. State governments operate the program under federal statutory and regulatory oversight, and both the federal and state governments share in the cost of the program, with the federal government's share varying by state, by the type of cost (that is, costs for administrative or medical services), and by eligibility category. For medical services used by most Medicaid enrollees—those who were not made eligible by the Affordable Care Act (ACA)—the share of Medicaid costs paid for by the federal government is determined according to the federal medical assistance percentage (FMAP). The FMAP is based on a formula that provides higher federal reimbursement to states with lower per capita incomes (and vice versa) relative to the national average. By law, states can receive an FMAP rate of no less than 50 percent and no more than 83 percent. The national average matching rate is 57 percent, with states contributing the remaining 43 percent.

The federal government's share of costs for medical services is considerably higher for enrollees who became eligible for Medicaid as a result of the optional expansion of that program under the ACA. For that eligibility category, the federal government's share of Medicaid costs was initially set at 100 percent—a rate that was in effect from 2014 through 2016. As required by statute, that federal share began declining in 2017 and will reach 90 percent in 2020, where it will remain thereafter. The federal government's share for enrollees made eligible by the ACA does not vary by state.

The federal government's share of administrative expenses is also specified by statute and varies by the category of such costs, but not by state. The general administrative expenses of operating Medicaid are evenly divided between the federal and state governments, but 25 specified categories of administrative costs have rates that vary from about 70 percent to 100 percent. For example, the federal government pays 75 percent of the cost of employing skilled medical professionals for Medicaid administration, 75 percent of the cost of utilization review (the process of determining the appropriateness and medical necessity of various health care services), 90 percent of the cost of developing systems to manage claims and information, and 75 percent of the cost of operating such systems. The overall average federal share for administrative expenses was 64 percent in 2017.

Option

This option consists of three alternatives, each of which would go into effect in October 2020.

- Under the first alternative, the federal government's share for all categories of administrative spending would be 50 percent.
- Under the second alternative, the 50 percent floor on the FMAP for medical services for enrollees not made eligible by the ACA would be removed, causing FMAP rates to fall below 50 percent for states with the highest per capita incomes.
- Under the third alternative, the federal share of medical expenditures for enrollees made eligible by the ACA would be based on the same FMAP formula that applies to all other enrollees.

Effects on the Budget

The amount of savings resulting from each alternative would vary significantly. The Congressional Budget Office estimates that under the first alternative, setting all categories of administrative spending to 50 percent, would reduce mandatory spending by $55 billion from 2021 through 2028. Under the second alternative, eliminating the 50 percent floor on the FMAP rate, mandatory spending would be reduced by $394 billion between 2021 and 2028. For both of those alternatives, CBO estimates that the reductions in spending would increase over the period in line with the projected growth in Medicaid spending.

The third alternative, setting the federal share of medical expenditures for enrollees made eligible by the ACA so that it equals the rate used for other enrollees, would reduce Medicaid spending by $492 billion between 2020 and 2028, CBO estimates. The savings arising from this alternative would be partially offset: Specifically, CBO anticipates that, in response to the reduced federal share for enrollees made eligible by the ACA, some states would discontinue coverage for that category of enrollees and all states that would have adopted such coverage in the future would no longer choose to do so. (A reduction in the deficit would occur in 2020 because this alternative would become law in 2019, and CBO expects that some of the states that would have opted to expand coverage would have done so in 2020.) As a result, CBO and the staff of the Joint Committee on Taxation estimate that outlays other than those for Medicaid would increase by $98 billion and revenues would decrease by $36 billion because some people who did not receive Medicaid coverage would instead receive subsidies through the health insurance marketplaces established by the ACA or obtain employment-based coverage. In addition, CBO estimates that there would be an increase in outlays of $13 billion for Medicare "disproportionate share hospital" payments to inpatient facilities that serve a higher percentage of low-income patients because such payments are determined on the basis of the uninsured rate, which would increase. On net, this alternative would reduce the deficit by $345 billion from 2020 through 2028. The net reduction in the deficit would increase over time in line with projected increases in health care spending and with projected increases in the rate of additional state coverage expansions under current law.

For all three alternatives, reducing the share of total spending by the federal government would shift additional financial responsibility to states for the cost of Medicaid. Lower federal spending would require additional spending by states in order for them to maintain the same eligibility levels, covered services, and provider payment rates in their Medicaid programs. However, the amount of savings from these alternatives would also depend on the extent to which states chose to adjust their Medicaid programs in response to reduced federal spending. Under each alternative, states would need to decide whether to continue spending the same amount—and make up the difference out of other revenues—or to cut spending by the difference in the amount of lost federal spending. If states chose to spend the same amount, they might replace reduced federal spending by raising taxes or by reducing spending elsewhere in their budgets and transferring those amounts to Medicaid spending. In either of those cases, the federal government would save the amount that resulted from the change to the federal share. Alternatively, if states decided not to replace the lost federal spending, they could instead shrink their Medicaid programs sufficiently to keep their spending more consistent with prior levels. States could do so by limiting optional eligibility and services and by lowering provider payment rates, as long as minimum federal standards were met.

CBO expects that different states would respond to lower federal spending in different ways. Most states would probably not replace all of the lost federal spending with state spending because full replacement could place substantial pressure on state budgets. However, most states would probably not cut Medicaid spending by the full amount of the lost federal spending because they would deem other choices to be preferable. CBO anticipates that, on average, states would replace half of the lost federal share, which would reduce federal spending even further because the federal government would be contributing its share, as lowered under the alternatives, on the basis of smaller programs.

For the first two alternatives, CBO anticipates that states would not limit eligibility. Under the first alternative, the loss in federal revenues would be modest when compared with total Medicaid spending and would be insufficient to induce states to restrict eligibility. Under the second alternative, most of the affected states would be unlikely to seek savings by reducing eligibility because they have a history of expanding Medicaid coverage. By contrast, under the third alternative, CBO anticipates reductions in the optional ACA expansion because states adopted the expansion expecting the higher matching rate, and a number of them expanded coverage on the basis of the enhanced FMAP. However, the expectations for all three alternatives are highly uncertain, and actual savings would vary on the basis of states' actions.

Other Effects

There are different arguments for implementing the alternatives. One argument for the first alternative, setting the federal share for all administrative categories to 50 percent, is that the higher rates under current law were designed to encourage states to develop and support particular administrative activities that the federal government considered important for the Medicaid program. Once those administrative systems were operational, however, there might be less reason to continue the higher subsidy. However, a reduced federal share might cause states to cut back on some activities that the federal government would still want to encourage.

An argument for the second alternative, removing the 50 percent floor on the FMAP, is that it would reduce payments to states with the greatest financial resources available to fund their programs. The floor of 50 percent raises a number of states' FMAP rates well above the rates they would receive in the absence of the floor, and removing the floor would require states with higher per capita income to pay a greater share of Medicaid costs. However, an argument against this alternative is that it would concentrate significant spending reductions among only 14 states.

An argument for the third alternative, applying the FMAP formula to the ACA eligibility category, is that the income of enrollees in that eligibility group does not differ substantially from that of adults in other nondisabled, nonelderly eligibility categories—both within states that have adopted the ACA and those that have not. Therefore, it could seem inequitable to pay more for the ACA eligibility group than other groups. However, lowering the federal share for that group would lead to significant reductions in federal spending for most of the 32 states that adopted the expansion as of 2018 and did so partly because they expected to receive the higher federal share.

Mandatory Spending—Option 15 Function 550

Introduce Enrollment Fees Under TRICARE for Life

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Outlays												
MERHCF	0	0	-1.0	-1.7	-2.1	-2.3	-2.4	-2.6	-2.7	-2.8	-4.8	-17.6
Medicare	0	0	0.2	0.4	0.7	0.7	0.7	0.8	0.8	0.9	1.3	5.2
Total	0	0	-0.8	-1.3	-1.4	-1.6	-1.7	-1.8	-1.9	-1.9	-3.5	-12.4

This option would take effect in January 2021.

MERHCF = Department of Defense Medicare-Eligible Retiree Health Care Fund.

Background

TRICARE for Life (TFL) was introduced in 2002 as a supplement to Medicare for military retirees and their Medicare-eligible family members. It pays nearly all medical costs not covered by Medicare, and also provides a pharmacy benefit. Beneficiaries who are eligible for TRICARE are automatically enrolled in TFL and there are no enrollment fees (although beneficiaries must pay their premium for Medicare Part B, which covers physicians' and other outpatient services). In contrast, most public and private programs that cover health care costs require enrollees to pay a premium or an enrollment fee. In 2017, the Department of Defense spent $10 billion for the care delivered to Medicare-eligible beneficiaries both by military treatment facilities and by civilian providers (in addition to the amount spent for those patients through Medicare).

Option

Starting in calendar year 2021, this option would require most Medicare-eligible beneficiaries who choose to enroll in TFL to pay an annual fee of $485 for individual coverage and $970 for family coverage. Those amounts would equal the enrollment fees for the preferred-provider plan in TRICARE paid by retirees who are not yet eligible for Medicare and who entered service after 2017, the Congressional Budget Office estimates. (Members who received a disability retirement and survivors of members who died on active duty could enroll for free.) The new enrollment fees would be in addition to the Medicare Part B premium and would be indexed to growth in average Medicare costs in later years.

Effects on the Budget

This option would reduce spending for TRICARE for Life in two ways: Specifically, it would reduce spending directly by the amount of the fees collected and indirectly by encouraging some beneficiaries to forgo TFL in favor of other Medicare supplemental benefits (or to go without supplemental coverage altogether). CBO estimates that the option would reduce mandatory outlays devoted to TFL-eligible beneficiaries by about $12 billion between 2021 and 2028. This estimate includes the effects of beneficiaries switching to other Medicare supplemental plans, which would cause some costs currently paid by TFL, such as prescription drugs, to shift to Medicare. CBO estimates the costs that would shift from TFL to Medicare would be about $5 billion between 2021 and 2028. Despite that shift, over time, the savings to the federal government from this option would increase by about 5 percent each year. About 75 percent of that annual increase would be related to the indexing of the fees to Medicare cost growth, and the rest would result from changes in the number of people eligible for the TFL benefit, which is expected to increase in future years.

The greatest source of uncertainty in the estimate is the extent to which beneficiaries would enroll in TFL (or not). The new fees would be significantly less than the costs associated with most Medicare supplemental plans that are available through civilian markets. Nevertheless, the requirement to enroll to receive the benefit could cause unanticipated shifts in the number of covered beneficiaries. About 80 percent of the reduction in mandatory spending would come directly from the collection of the enrollment fees, so if the enrollment fees were double the amounts examined here, the reductions in spending stemming from the fees would approximately double. The rest of the reductions in spending would result from beneficiaries switching to other sources to close Medicare coverage gaps. Doubling the enrollment fees suggested by this option would increase the number of beneficiaries who would forgo TFL in favor of other coverage, but the decrease in enrollment—and the decrease in federal spending resulting from changes in enrollment—would be less than double. Although the introduction of an enrollment fee would cause the most price-sensitive beneficiaries to stop using TFL, the out-of-pocket cost of TFL would still be less than many other options for supplementing Medicare. Thus, CBO estimates that most beneficiaries would choose to keep using TFL unless the proposed fee was significantly higher.

Other Effects

An advantage of this option is that the requirement to enroll to receive the benefit could increase TFL beneficiaries' awareness of the benefit, which could encourage those who enroll to use more services, which might improve their health.

A disadvantage of this option is that retirees (including those with lower income) would see their out-of-pocket costs for health care rise. In addition, the change could cause some patients to inadvertently lose coverage if they neglected to pay the fee, which might negatively affect their health.

RELATED OPTIONS: Mandatory Spending, "Introduce Minimum Out-of-Pocket Requirements Under TRICARE for Life" (page 59); Discretionary Spending, "Modify TRICARE Enrollment Fees and Cost Sharing for Working-Age Military Retirees" (page 145)

RELATED CBO PUBLICATIONS: *Approaches to Changing Military Health Care* (October 2017), www.cbo.gov/publication/53137; *Approaches to Reducing Federal Spending on Military Health Care* (January 2014), www.cbo.gov/publication/44993

Mandatory Spending—Option 16 Function 550

Introduce Minimum Out-of-Pocket Requirements Under TRICARE for Life

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Outlays												
MERHCF	0	0.1	0.1	-1.4	-2.3	-2.6	-2.7	-2.9	-3.1	-3.3	-3.5	-18.0
Medicare	0	0	0	-0.5	-1.1	-1.4	-1.4	-1.5	-1.6	-1.7	-1.6	-9.3
Total	0	0.1	0.1	-1.9	-3.5	-3.9	-4.2	-4.4	-4.7	-5.0	-5.1	-27.3

This option would take effect in January 2022, although some changes to outlays would occur earlier.

MERHCF = Department of Defense Medicare-Eligible Retiree Health Care Fund.

Background

TRICARE for Life (TFL) was introduced in 2002 as a supplement to Medicare for military retirees and their Medicare-eligible family members. The program pays nearly all medical costs not covered by Medicare and requires few out-of-pocket fees. Because the Department of Defense (DoD) is a passive payer in the program—it neither manages care nor provides incentives for the cost-conscious use of services—it has virtually no means of controlling the program's costs. In contrast, most supplemental Medicare policies control spending by requiring enrollees to pay deductibles or copayments up to a specified threshold. In 2017, DoD spent $10 billion for the care delivered to Medicare-eligible beneficiaries by military treatment facilities and by civilian providers (in addition to the amount spent for those patients through Medicare).

Option

This option would introduce minimum out-of-pocket requirements for TFL beneficiaries. For calendar year 2022, TFL would not cover any of the first $750 of an enrollee's cost-sharing payments under Medicare and would cover only 50 percent of the next $6,750 in such payments. Because all further costs would be covered by TFL, enrollees would not be obligated to pay more than $4,125 in 2022. Those dollar limits would be indexed to growth in average Medicare costs (excluding Part D drug benefits) for later years. Currently, military treatment facilities charge no copayments for hospital services provided to TFL beneficiaries. To reduce beneficiaries' incentives to avoid out-of-pocket costs by switching to military facilities, this option would require TFL beneficiaries seeking care from those facilities to make payments that would be roughly comparable to the charges they would face at civilian facilities. DoD would need to establish procedures for collecting payments from TFL beneficiaries who received care from military treatment facilities.

Effects on the Budget

This option would reduce spending for Medicare as well as for TFL because higher out-of-pocket costs would lead beneficiaries to use somewhat fewer medical services. Altogether, including some implementation costs in 2020 and 2021, the option would reduce federal spending devoted to TFL beneficiaries by $27 billion between 2020 and 2028, the Congressional Budget Office estimates. About two-fifths of those savings would come from reduced spending for medical services—both by Medicare and from the fund that pays for TFL expenditures—because of reduced demand for those services. The rest would represent a shift in spending: The federal government would spend less, and military retirees and their families would spend more. The estimated savings could be altered by changing the amount of health care costs that people would need to pay out of pocket, but the relationship would not be proportional—that is, doubling out-of-pocket costs would not necessarily double the savings. One reason for that relationship is that the number of people using TFL under different cost-sharing scenarios would not change proportionally: Relatively healthy people, who do not spend the deductible under the current system, for example, would not change their demand for health care services if that deductible increased.

The greatest source of uncertainty in the estimate is the extent to which beneficiaries would reduce their spending on health care. CBO relies on studies that have shown that an increase in out-of-pocket costs leads to a decrease in the use of health care. The RAND Health Insurance Experiment conducted from 1974 to 1982, for example, examined a nonelderly population and showed that health care spending was about 45 percent higher for participants without any cost sharing than for those who effectively faced a high deductible; average spending for people with intermediate amounts of cost sharing fell between spending for those two groups (Newhouse and the Insurance Experiment Group 1993). More recent studies also concluded that higher cost sharing led to lower health care spending (for example, Swartz 2010). Nevertheless, the behavior of military retirees might be different from that of the studied populations, and changes in the cost and availability of other Medicare supplemental insurance would affect the estimated amount of savings.

Other Effects

An advantage of this option is that greater cost sharing would increase TFL beneficiaries' awareness of the cost of health care and promote a corresponding restraint in their use of medical services. Research has generally shown that introducing modest cost sharing can reduce medical expenditures without causing measurable increases in adverse health outcomes for most people.

A disadvantage is that the change could discourage some patients (particularly low-income patients) from seeking preventive medical care or from managing their chronic conditions under close medical supervision, which might negatively affect their health.

RELATED OPTIONS: Mandatory Spending, "Introduce Enrollment Fees Under TRICARE for Life" (page 57), "Change the Cost-Sharing Rules for Medicare and Restrict Medigap Insurance" (page 61); Discretionary Spending, "Modify TRICARE Enrollment Fees and Cost Sharing for Working-Age Military Retirees" (page 145)

RELATED CBO PUBLICATIONS: *Approaches to Changing Military Health Care* (October 2017), www.cbo.gov/publication/53137; *Approaches to Reducing Federal Spending on Military Health Care* (January 2014), www.cbo.gov/publication/44993

WORK CITED: Joseph P. Newhouse and the Insurance Experiment Group, *Free for All?: Lessons From the RAND Health Insurance Experiment* (RAND Corporation, 1993); Katherine Swartz, *Cost-Sharing: Effects on Spending and Outcomes*, Research Synthesis Report 20 (Robert Wood Johnson Foundation, December 2010), http://tinyurl.com/oyle4s8 (PDF, 369 KB)

Mandatory Spending—Option 17 Function 570

Change the Cost-Sharing Rules for Medicare and Restrict Medigap Insurance

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Outlays												
Establish uniform cost sharing for Medicare	0	0	0	-4	-5	-6	-6	-6	-7	-10	-9	-44
Restrict medigap plans	0	0	0	-7	-9	-10	-10	-11	-12	-13	-16	-72
Both alternatives above	0	0	0	-11	-15	-15	-16	-17	-19	-22	-25	-116

This option would take effect in January 2022.

Background

In the traditional fee-for-service (FFS) portion of the Medicare program, cost sharing—the payments for which enrollees are responsible when they receive health care—varies significantly depending on the type of service provided. Cost sharing in FFS Medicare can take the following forms: deductibles, coinsurance, or copayments. Deductibles are the amount of spending an enrollee incurs before coverage begins, and coinsurance (a specified percentage) and copayments (a specified amount) represent the portion of spending an enrollee pays at the time of service.

Under Part A, which primarily covers services provided by hospitals and other facilities, enrollees are liable for an initial copayment (sometimes called the Part A deductible) for each "spell of illness" that requires hospitalization. In 2019, that copayment will be $1,364. In addition, enrollees are subject to substantial daily copayments for extended stays in hospitals and skilled nursing facilities. Under Part B, which mainly covers outpatient services (such as visits to a doctor), enrollees face an annual deductible that will be $185 in 2019. Once their spending on Part B services has reached that deductible, enrollees generally pay 20 percent of allowable costs for most Part B services. Some services that Medicare covers under Parts A and B—such as preventive care, certain hospice services, home health visits, and laboratory tests—require no cost sharing. However, Medicare beneficiaries who incur extremely high medical costs may be obligated to pay significant amounts because the program does not have a catastrophic cap on cost sharing.

In 2013, about 80 percent of people who enrolled in fee-for-service Medicare had some form of supplemental insurance that reduced or eliminated their cost-sharing obligations and protected them from high medical costs. Approximately 25 percent of FFS enrollees had supplemental coverage that was subsidized by the federal government. That coverage was available through Medicaid, TRICARE (the civilian component of the Military Health System), or a retiree policy from the Federal Employees Health Benefits (FEHB) program. In addition, about 35 percent of FFS enrollees had supplemental coverage through nonfederal retiree policies, and about 20 percent purchased individual medigap policies. In recent years, roughly two-thirds of medigap enrollees chose a plan that offered "first dollar" coverage, which paid all Part A and Part B Medicare cost sharing and the Part B deductible. The plans chosen by the other medigap enrollees did not cover the Part B deductible but covered all or most other FFS cost sharing. Starting in 2020, new Medicare beneficiaries will be prohibited from purchasing medigap plans that cover the Part B deductible.

Option

The option consists of three alternatives, each of which would take effect in January 2022:

- The first alternative would replace Medicare's current cost sharing with a single annual deductible of $750 for all Part A and Part B services; a uniform coinsurance rate of 20 percent for all spending above that deductible; and an annual out-of-pocket cap of $7,500.

- The second alternative would leave Medicare's cost-sharing rules unchanged but would restrict existing and new medigap policies. Specifically, it would bar those policies from paying any of the first $750 of an enrollee's cost-sharing obligations for Part A and Part B services in calendar year 2022 and would limit coverage to 50 percent of the next $6,750 of an enrollee's cost sharing. Medigap policies would cover all further cost sharing, so policyholders would not pay more than $4,125 in cost sharing in 2022.

- The third alternative would combine the changes from the first and second alternatives. All medigap plans would be prohibited from covering any of the new $750 combined deductible for Part A and Part B services, and, in 2022, the annual cap on an enrollee's out-of-pocket obligations (including payments by supplemental plans on an enrollee's behalf) would be $7,500. For spending that occurred after the deductible was met but before the cap was reached, beneficiaries would be responsible for a uniform coinsurance rate of 20 percent for all services. Because medigap policies would cover 50 percent of that coinsurance, medigap policyholders would effectively face a 10 percent coinsurance rate. In 2022, those provisions would limit medigap enrollees' out-of-pocket spending (excluding medigap premiums) to $4,125; Medicare enrollees without supplemental coverage would pay no more than $7,500 out of pocket.

After 2022, dollar amounts in all three alternatives, such as the combined deductible and cap (the first and third alternatives), along with the medigap thresholds (the second and third alternatives), would be indexed by the rate of growth of average FFS Medicare spending per enrollee.

Effects on the Budget

All three alternatives would decrease mandatory outlays between 2022 and 2028. Those effects would largely be driven by lower FFS Medicare spending but also would reflect interactions between FFS Medicare and other parts of Medicare as well as other federal programs. All three alternatives would shift spending from Medicare to beneficiaries in part by reducing the amount of services used by enrollees in response to higher out-of-pocket costs. The Congressional Budget Office obtained its estimates using a microsimulation model the agency developed to analyze proposals that would change cost-sharing rules for Medicare and restrict medigap insurance. Estimates of changes in utilization are based on research that concludes that people reduce their use of health care in response to higher out-of-pocket costs and, conversely, increase their use of health care in response to lower out-of-pocket costs.

Under the first alternative, establishing uniform cost sharing, mandatory outlays would decrease by $44 billion, on net, from 2022 through 2028. Outlays for FFS Medicare would decrease by $22 billion. Although spending on Part B would increase under this alternative, that effect would be more than offset by a decrease in spending on Part A services. Decreased outlays for FFS Medicare would reduce other mandatory spending over the same period because of the net effect of four factors, three of which would reduce spending and one of which would increase spending:

- First, the reduction in FFS Medicare spending would reduce the benchmarks used to set payments to Medicare Advantage plans, reducing federal payments to those plans. (Medicare Advantage plans are offered by private health insurers, which assume the responsibility for, and the financial risk of, providing Medicare benefits.)

- Second, receipts from Part B premiums would increase, partially offsetting the increase in spending on Part B services. (Part B premiums increase when Part B spending increases because standard premiums are set to cover about 25 percent of Part B costs annually.)

- Third, federal spending on Medicaid would decrease for people, known as dual-eligible beneficiaries, who are enrolled in both Medicare and Medicaid. Medicaid pays cost sharing and Part B premiums for most of those beneficiaries. Under this alternative, the reduction in Medicaid payments for cost sharing above the catastrophic cap would more than offset the increase in spending from higher Part B premiums.

- Fourth, those reductions in spending would be partially offset by increases in federal spending on the FEHB program and TRICARE stemming from increases in cost sharing for Medicare beneficiaries covered by those programs. Changes in cost sharing would affect federal spending on Medicaid differently than spending on FEHB and TRICARE because dual-eligible beneficiaries have more spending that exceeds the catastrophic cap.

On net, the interactions between changes in outlays for FFS Medicare and lower federal payments to Medicare Advantage plans, higher Part B premiums, lower federal spending on Medicaid, and higher spending through the FEHB and TRICARE programs would decrease other mandatory outlays by $22 billion.

The budgetary effects of changing Medicare's cost-sharing rules would depend to a large extent on the dollar amounts at which the deductible and catastrophic cap were set. To illustrate that variability, CBO estimated the effects on federal spending of making several types of changes to the deductible and the catastrophic cap. Raising the deductible by an additional $100 in 2022 (from $750 to $850) while keeping the catastrophic cap at $7,500 would increase CBO's estimate of federal savings from about $44 billion to $65 billion between 2022 and 2028. If the deductible was instead lowered by $100 to $650, CBO's estimate of the savings during those years would be reduced by about $21 billion to $22 billion. If, instead, the deductible remained unchanged at $750 but the catastrophic cap was raised by an additional $500 in 2022 (from $7,500 to $8,000), the estimated savings would increase by about $25 billion to $69 billion. Reducing the catastrophic cap by $500 to $7,000 would reduce the estimated savings by about $27 billion to $17 billion over the period.

Under the second alternative, restricting medigap plans, mandatory outlays would decrease by $72 billion. Outlays for FFS Medicare (Parts A and B) would decrease by $60 billion because medigap enrollees would face a larger fraction of their Medicare cost sharing out of pocket and would therefore use fewer services, resulting in less Medicare spending. As a result of lower FFS Medicare spending, payments to Medicare Advantage plans and Part B premium receipts would both decrease. In addition, Medicaid spending would decrease as a result of the decrease in the Part B premium. Altogether, the interactions would further decrease spending by about $12 billion. Federal spending on the FEHB program and TRICARE would not change under the second alternative.

Under the third alternative, which entails simultaneously changing Medicare's cost sharing and restricting medigap plans, mandatory outlays would decrease by $116 billion. Outlays for FFS Medicare (Parts A and B) would decrease by $81 billion. The remaining $35 billion in savings would result from the effects of interactions between FFS Medicare and other parts of Medicare as well as other federal programs. Although the total savings from this alternative would approximate the sum of the savings from the first two alternatives, that relationship might not apply using different dollar amounts for the deductible and catastrophic cap.

For all three alternatives, the estimates reflect impacts on the entire FFS Medicare population; however, the effects on individual beneficiaries would differ depending on their spending for particular health care services. For example, under the third alternative, out-of-pocket costs would rise in 2026 for more than 55 percent of enrollees (by about $900, on average) and would stay the same for another 43 percent. For the remaining 2 percent of enrollees, out-of-pocket costs would fall by an average of about $5,800.

CBO's analysis of the effects of the three alternatives is subject to uncertainty. One source of uncertainty is the extent to which future changes in enrollment in FFS Medicare and supplemental insurance and spending by category align with CBO's baseline projections. A second source stems from the use in this analysis of a 5 percent sample of Medicare beneficiaries from 2013, with the sample adjusted to reflect differences in Medicare FFS enrollment and spending in CBO's baseline by category of medical service between 2013 and each year between 2022 and 2028. Patterns of medical spending and utilization among Medicare FFS beneficiaries could differ between 2013 and the 2022–2028 period in important ways in addition to those related to the baseline projections.

Another important source of uncertainty is how beneficiaries would change their use of Medicare services in response to changes in cost sharing or restrictions to medigap insurance. CBO relied on published research to estimate that response, but those research findings can only approximate how Medicare FFS beneficiaries would respond in the future. To what extent the alternatives would affect enrollment in medigap or Medicare Advantage plans is another source of uncertainty because such a response is likely, but there is little evidence to inform CBO's analysis. CBO did not incorporate the effects of any change in medigap or Medicare Advantage enrollment into its estimates.

Other Effects

An argument in favor of this option is that it would increase incentives for enrollees to use medical services prudently. The third alternative would provide the strongest incentives because it would expose beneficiaries to the highest out-of-pocket costs. Higher deductibles and coinsurance rates expose enrollees to some of the financial consequences of their decisions about health care utilization and are aimed at ensuring that services are used only when an enrollee's benefits exceed those costs.

An advantage of introducing uniform cost sharing with a catastrophic cap and a combined deductible (the first and third alternatives) is that the catastrophic cap would reduce cost sharing for enrollees whose total spending exceeded the cap. Capping enrollees' out-of-pocket expenses would especially help people who developed serious illnesses, required extended care, or underwent repeated hospitalizations but lacked supplemental coverage for their cost sharing. Also, the combined deductible would be lower than the current initial copayment for inpatient hospital services, potentially decreasing Part A cost sharing for some beneficiaries. The uniform coinsurance rate across services could also encourage enrollees to compare the costs of different treatments in a more consistent way.

An argument in favor of restricting the level of cost sharing covered by medigap plans (the second alternative) is that the decline in Part B spending would in turn reduce Part B premiums. Lower Part B premiums would benefit all beneficiaries who pay them (including Medicare Advantage enrollees). State Medicaid spending would also decrease because Medicaid pays the Part B premiums for dual-eligible beneficiaries.

An argument against the option is that in any given year, some enrollees would see their combined payments for premiums and cost sharing rise, which could cause some people to forgo needed health care services and could adversely affect their health. Studies have shown that people who are subject to higher cost sharing reduce not only their use of less effective care but also their use of effective care (for example, Swartz 2010). In the RAND Health Insurance Experiment, researchers found that cost sharing had no substantial effect on health in general. However, among the poorest and sickest participants, those with no cost sharing were healthier by some measures than those who faced some cost sharing (Manning and others 1987).

Two other arguments against the introduction of uniform cost sharing (the first and third alternatives) are higher supplemental insurance premiums for some plans and increased administrative burdens. To begin with, premiums would increase for supplemental retiree policies. Next, the first and third alternatives would increase administrative burdens for both the federal government and some types of health care providers because some services would be newly subject to cost sharing and because the administrative structures supporting Part A and Part B services would need to be integrated.

An argument against the change to medigap cost sharing (the second and third alternatives) is that changing the terms of current medigap policies could be considered unfair or unduly burdensome. Under current law, Medicare enrollees who do not buy medigap insurance when they turn 65 may be charged much higher premiums for such insurance if they delay the purchase until they develop health problems. Thus, many Medicare enrollees might pay medigap premiums for years to ensure access to the financial protection of supplemental insurance if their health deteriorates. In addition, current and future policyholders would face more uncertainty about their out-of-pocket costs. For those reasons, some policyholders might object to being prevented from having coverage for all of their cost sharing above the deductible, even if they would be better off financially in most years under this option. (In recent years, most medigap policyholders have purchased coverage for the Part B deductible; high-deductible medigap policies have attracted only limited enrollment despite their lower premiums.)

RELATED OPTION: Mandatory Spending, "Introduce Minimum Out-of-Pocket Requirements Under TRICARE for Life" (page 59)

RELATED CBO PUBLICATION: Noelia Duchovny and others, *CBO's Medicare Beneficiary Cost-Sharing Model: A Technical Description*, Working Paper (forthcoming)

WORK CITED: Willard G. Manning and others, "Health Insurance and the Demand for Medical Care: Evidence From a Randomized Experiment," *American Economic Review*, vol. 77, no. 3 (June 1987), pp. 251–277, www.jstor.org/stable/1804094; Katherine Swartz, *Cost-Sharing: Effects on Spending and Outcomes*, Research Synthesis Report 20 (Robert Wood Johnson Foundation, December 2010), http://tinyurl.com/oyle4s8 (PDF, 369 KB)

Mandatory Spending—Option 18 **Function 570**

Increase Premiums for Parts B and D of Medicare

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Outlays												
Increase basic premiums	0	-7	-16	-27	-38	-52	-55	-60	-64	-69	-89	-389
Freeze income thresholds for income-related premiums	0	*	-1	-2	-3	-4	-5	-7	-8	-11	-5	-40
Both alternatives above[a]	0	-8	-17	-28	-40	-54	-59	-64	-70	-77	-93	-418

This option would take effect in January 2020.

* = between -$500 million and zero.

a. If both alternatives were enacted together, the total of their effects would be less than the sum of the effects for each alternative because of interactions between the approaches.

Background

All enrollees in Medicare Part B (which covers physicians' and other outpatient services) and Part D (the outpatient prescription drug benefit, which is delivered through private-sector companies) are charged basic premiums for that coverage. Under current law, the Part B premium in 2019 is scheduled to be $135.50 per month, or about 25 percent of the average cost per enrollee age 65 or older. (Premiums can be higher or lower for enrollees who receive Part B benefits through Medicare Advantage, the private insurance option for Medicare beneficiaries.) The monthly premium for someone choosing a standard Part D plan with average projected costs in 2019 is scheduled to be $33.19, which is expected to cover 25.5 percent of the average per capita cost of the basic benefit. Low-income enrollees and those with few assets receive subsidies through the low-income subsidy (LIS) program to cover some or all of their premiums.

Enrollees with relatively high income pay an income-related premium (IRP) that is determined on the basis of the beneficiary's modified adjusted gross income, or MAGI (adjusted gross income plus tax-exempt interest). For enrollees who pay an IRP for Part B, the combined premium for 2019 ranges from $190 per month to $461 per month under current law. For Part D, enrollees are scheduled to pay between $46 and $111 in monthly premiums for a standard plan that is projected to have average costs per enrollee in 2019. The amounts are set so that the basic premium and the IRP together are expected to cover between 35 percent and 85 percent of an enrollee's costs.

Under current law, the income thresholds for the higher premiums for Parts B and D are divided among five brackets. The highest (or fifth) income bracket is frozen until 2028 whereas the rest are frozen through 2019. The Bipartisan Budget Act of 2018 added a fifth income bracket for the IRPs so that individual filers with income greater than or equal to $500,000 or married couples who file joint returns and have combined incomes greater than or equal to $750,000 pay a higher premium percentage. The lowest bracket is set at $85,000 for single beneficiaries or $170,000 for married couples filing joint tax returns. The thresholds are scheduled to increase by about 2 percent in 2020 and after that to be indexed by the consumer price index for all urban consumers.

The share of Part B enrollees subject to income-related premiums is projected to increase from about 10 percent in 2019 to about 12 percent in 2028 as growth in income for affected enrollees slightly outpaces indexing of the thresholds. Everyone subject to the IRP for Part D is also subject to it for Part B.

Option

This option would raise the premiums for Parts B and D under one of three alternative approaches. Each alternative would take effect in January 2020:

- The first alternative would increase basic premiums from 25 percent of Part B costs per enrollee and 25.5 percent of Part D costs per enrollee to 35 percent of each program's costs. That increase would take effect over five years. For Part B, the share of costs per enrollee covered by the basic premium would rise by 2 percentage points each year through 2024 and then remain at 35 percent. For Part D, that share would increase by 1.5 percentage points in the first year and by 2 percentage points each year from 2021 through 2024 and then remain at 35 percent. By 2028, basic premiums would reach $281 per month for Part B and $77 per month for Part D. Those changes would not affect the total premiums of enrollees paying the IRP because the premiums are already expected to cover at least 35 percent of costs.

- The second alternative would extend the current freeze on income thresholds through 2028.

- The third alternative would combine the first two. It would increase basic premiums for Parts B and D to 35 percent of costs per enrollee and freeze the income thresholds for income-related premiums.

Effects on the Budget

The Congressional Budget Office estimates that the first alternative would decrease net Medicare spending (total Medicare spending minus beneficiaries' premiums and other offsetting receipts) by $389 billion between 2020 and 2028. This alternative would not affect the total premiums of enrollees paying the IRP. For the second alternative, CBO estimates that net Medicare spending would be reduced by $40 billion between 2020 and 2028 and that the share of enrollees paying an IRP would rise by 0.4 percentage points in 2020 and by 5.5 percentage points in 2028. The third alternative would reduce net Medicare spending by $418 billion between 2020 and 2028. (That amount is slightly less than the sum of the savings from the other two alternatives—if implemented separately—because of interactions between the two approaches.) All estimates are derived from the following: CBO's analysis of the distribution of income for all people age 65 or older (the agency estimates that Medicare enrollees under the age of 65 would not satisfy the criteria to be subject to an IRP); and CBO's expectation regarding those who would delay enrollment in Medicare Parts B and D or drop coverage altogether.

CBO's analysis of the first and third alternatives accounts for the fact that federal savings from the higher basic premiums for Parts B and D would be partially offset by higher federal payments to states for Part B premiums for dual-eligible beneficiaries (people who are enrolled in both Medicare and Medicaid) and by higher subsidies for LIS enrollees in Part D. CBO anticipates that, if implemented, all of the alternatives would result in an increase in the number of people who would delay enrollment in Medicare Parts B and D. The savings would be higher if the increase in the basic premiums was larger or if the income thresholds were frozen. The savings would be smaller if the proposed increase in the basic premiums was smaller, the income thresholds were not frozen (for the highest income bracket), or those thresholds were indexed to grow at a slower rate than that in effect under current law (for all other income brackets).

A large source of uncertainty in the estimate over the next 10 years is the unpredictability of basic premiums because, in part, they are directly linked to CBO's baseline projections of enrollment and total spending for Parts B and D. Those projections are used to establish costs per beneficiary, a key part of determining premium amounts. Another large source of uncertainty is the income distribution for Medicare enrollees. It is hard to project changes in the distribution of income—and therefore in how much of Medicare enrollees' income falls within each income bracket.

Additionally, there is uncertainty surrounding the percentage of people age 65 or older who would choose to delay enrollment in Medicare. When premiums (basic or income-related) increase, current enrollees might choose to stay in, disenroll from, or go on and off of ("churn through") the program, whereas potential new enrollees might choose to delay their enrollment in the program. CBO expects that Medicare basic premiums would be lower than most private insurance premiums under current law and the option. As a result, CBO anticipates that an increase in the basic premiums for Parts B and D would have minimal effects on the number of beneficiaries who would choose to disenroll from those programs. However, CBO expects that if income-related premiums increased, the small percentage of people between the ages of 64 and 70 who continued to work, maintain creditable coverage through their employer, and delay enrollment in the Medicare program to avoid paying the IRP would increase. Because both Parts B and D of the Medicare program assess a permanent penalty for delayed (late) enrollment in the absence of other creditable health care coverage, CBO does not expect an increase in the percentage of people who would disenroll from Parts B and D; also, those penalties make it unlikely that higher income-related premiums would increase the number of people who would churn through the Medicare program.

Other Effects

One argument in favor of this option is that it would reduce the pressure on the working-age population to pay for benefits being received by older groups. (Because of demographic changes, the number of Medicare beneficiaries per worker has been increasing substantially as members of the baby-boom generation retire, thus increasing that pressure.) Another argument is that by absorbing a larger share of enrollees' income, higher Part D premiums would increase competitive pressure in the market for prescription drug plans, thus giving enrollees a stronger incentive to choose less expensive plans. Such pressure could cause prescription drug plans to reduce their bids slightly, generally leading to lower premiums for those plans along with reducing the federal government's costs and lowering the total cost of drugs for Medicare beneficiaries. Similar effects on costs for hospital care or outpatient services could accrue if enrollees sought out lower-cost Medicare Advantage plans, although such effects are not included in the estimates shown here.

A disadvantage of this option is that it would reduce many enrollees' disposable income by increasing basic premiums and freezing all of the income thresholds. A growing share of enrollees would become subject to the IRP in later years because people's nominal income tends to rise over time (although their purchasing power might not increase). Another disadvantage of this option: Even though the disposable income of low-income enrollees whose Medicare premiums are paid by Medicaid might not decrease, state Medicaid programs would face higher costs for some enrollees, such as certain Part B enrollees who have low income and limited assets.

Mandatory Spending—Option 19 Function 570

Raise the Age of Eligibility for Medicare to 67

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Raise the Age of Eligibility for Medicare to 67 by Two Months Each Year												
Change in Outlays												
Medicare	0	0	0	0	-1.3	-3.3	-5.5	-7.7	-10.4	-13.7	-1.3	-42.0
Social Security[a]	0	0	0	0	-0.2	-0.4	-0.5	-0.7	-0.9	-1.1	-0.2	-3.8
Medicaid and subsidies through health insurance marketplaces	0	0	0	0	0.8	2.1	3.6	5.2	7.0	9.0	0.8	27.8
Total	0	0	0	0	-0.7	-1.6	-2.4	-3.2	-4.3	-5.7	-0.7	-18.0
Change in Revenues[b]	0	0	0	0	-0.1	-0.2	-0.3	-0.5	-0.7	-0.9	-0.1	-2.6
Decrease (-) in the Deficit	0	0	0	0	-0.7	-1.4	-2.1	-2.8	-3.6	-4.8	-0.7	-15.4
Raise the Age of Eligibility for Medicare to 67 by Three Months Each Year												
Change in Outlays												
Medicare	0	0	0	0	-1.9	-4.5	-7.5	-11.2	-15.0	-19.7	-1.9	-59.9
Social Security[a]	0	0	0	0	-0.2	-0.5	-0.7	-1.0	-1.3	-1.5	-0.2	-5.2
Medicaid and subsidies through health insurance marketplaces	0	0	0	0	1.1	2.9	5.0	7.5	10.2	12.9	1.1	39.6
Total	0	0	0	0	-0.9	-2.1	-3.3	-4.7	-6.1	-8.4	-0.9	-25.5
Change in Revenues[b]	0	0	0	0	-0.1	-0.3	-0.4	-0.7	-1.0	-1.3	-0.1	-3.7
Decrease (-) in the Deficit	0	0	0	0	-0.8	-1.8	-2.8	-4.0	-5.2	-7.1	-0.8	-21.8

Sources: Congressional Budget Office; staff of the Joint Committee on Taxation.

This option would take effect in January 2023.

a. Estimates include the effects on Social Security outlays, which are classified as off-budget.

b. Estimates include the effects on Social Security payroll tax receipts, which are classified as off-budget.

Background

Under current law, the usual age of eligibility to receive Medicare benefits is 65, although younger people generally may enroll after they have been eligible for Social Security disability benefits for two years. The average number of years that people are covered under Medicare has increased significantly since the program's creation because of a rise in life expectancy. In 1965, when Medicare was established, a 65-year-old man could expect to live another 12.9 years, on average, and a 65-year-old woman another 16.3 years. Since then, life expectancy for 65-year-olds has risen by more than four years—to 18.2 years for men and 20.7 years for women. That trend, which results in higher program costs, is projected to continue.

Option

This option, which consists of two alternatives, would raise Medicare's eligibility age (MEA) to 67.

- Under the first alternative, the MEA would rise by two months each year, beginning in 2023 (when people born in 1958 will turn 65). It would continue to increase until it reached 67 for people born in 1969. (That cohort will become eligible for Medicare benefits in 2036.) The MEA would remain at 67 thereafter.

- Under the second alternative, the MEA would increase by three months each year, beginning in 2023, until it reached 67 for people born in 1965. (That cohort will become eligible for Medicare benefits in 2032.) It would remain at 67 thereafter.

Under the two alternatives, the MEA would rise to match Social Security's full retirement age (FRA), the age at which workers become eligible for full retirement benefits. (People can claim reduced retirement benefits—but not Medicare benefits—starting at age 62, which is the most common age to do so.) The FRA has already been increased from 65 to 66 and is scheduled to rise further during the coming decade, reaching 67 for people born in 1960 (who will turn 67 in 2027). The MEA would remain below the FRA until 2036 under the first alternative and until 2032 under the second alternative.

In addition, under the Affordable Care Act (ACA), states are permitted to expand eligibility for Medicaid to adults under the age of 65 whose income is no more than 138 percent of the federal poverty guidelines. The estimates in this option reflect the assumption that the age limit for people made eligible for Medicaid by the ACA would increase in tandem with the MEA.

Effects on the Budget

Implementing either of the two alternatives would reduce federal budget deficits between 2023 and 2028, according to estimates by the Congressional Budget Office and the staff of the Joint Committee on Taxation (JCT). The net reduction in deficits would result from the combined effect of changes to outlays and revenues, both of which would decrease over that period. The reduction in outlays would stem from decreases in spending for Medicare and Social Security (although it would be partially offset by increases in federal subsidies for insurance purchased through the marketplaces established under the ACA and related spending for Medicaid). The reduction in revenues would largely stem from increases in federal subsidies for insurance purchased through the marketplaces, a portion of which is provided in the form of reductions in recipients' tax payments.

CBO and JCT estimate that under the first alternative, deficits would decrease by $15 billion between 2023 and 2028; that reduction comprises an $18 billion decrease in outlays and a $3 billion decrease in revenues. The agencies estimate that under the second alternative, deficits would decline by an additional $7 billion over the same period because the decrease in outlays and the partially offsetting decrease in revenues would be $8 billion and $1 billion greater, respectively. The estimated reduction in deficits between 2023 and 2028 would be greater under the second alternative because of a larger reduction in Medicare enrollment over that period.

Effects on Medicare. Raising the MEA would lower Medicare outlays by reducing the number of people enrolled in the program at any given time when compared with enrollment under current law. In calendar year 2023, when this option would take effect, about 3.6 million people will become eligible for Medicare coverage on the basis of their age under current law. That group would see its benefits delayed by two months under the first alternative and by three months under the second alternative. In calendar year 2028, under current law, about 3.7 million people will turn 65 and enroll in Medicare; their benefits would be delayed by a year under the first alternative and by 18 months under the second alternative. As a result, total spending on Medicare between 2023 and 2028 would be lower than under current law by $42 billion under the first alternative and by $60 billion under the second alternative.

Effects on Social Security. Raising the MEA also would reduce outlays for Social Security retirement benefits over the 2023–2028 period because, in CBO's estimation, some people would delay claiming retirement benefits. The reduction over that period would be $4 billion under the first alternative and $5 billion under the second alternative. Under both alternatives, expenditures would be higher in later years because delayed claiming would lead to higher monthly benefits.

CBO anticipates that the reduction in Social Security spending would be fairly small because raising the MEA would have little effect on people's decisions about when to claim retirement benefits. Historical evidence indicates that people are more likely to wait until reaching the FRA to claim retirement benefits than they are to claim when they reach the MEA (Manchester and Song 2011).

CBO also expects future decisions about claiming retirement benefits to be less linked to the MEA than has historically been the case because of greater access to health insurance through Medicaid and through the nongroup market (insurance purchased directly either in the health insurance marketplaces or from insurers outside the marketplaces). Increased access through Medicaid stems from a provision of the ACA that permits, but does not require, states to expand eligibility to include low-income adults under age 65. In the nongroup market, that increased access stems from subsidies for plans purchased through the marketplaces and from the provision that prevents insurers from denying coverage or varying premiums on the basis of an enrollee's health status. (Insurers are, however, permitted to vary premiums on the basis of enrollees' age, tobacco use, and geographic location.) As a result, it is now easier for some people who give up employment-based insurance upon retirement to qualify for Medicaid or to purchase health insurance in the nongroup market, in some cases with a federal subsidy.

Effects on Federal Subsidies for Health Insurance Outside of Medicare. Although raising the MEA would generate savings for Medicare and Social Security, those savings would be offset substantially by increases in federal spending and by decreases in revenues. That is because, in CBO's estimation, a sizable share of people who, under current law, would enroll in Medicare upon turning 65 would enroll instead in federally subsidized health insurance—such as Medicaid, insurance through the nongroup market, or employment-based insurance—between age 65 and the new MEA.

CBO estimates that in 2028, about 45 percent of the people affected by this option would obtain insurance from their own or a spouse's employer or former employer, about 20 percent would purchase insurance through the nongroup market, about 20 percent would receive coverage through Medicaid, and about 15 percent would become uninsured. (To develop those estimates, CBO examined data on the patterns of health insurance coverage among people a few years younger than the MEA. The figures were then adjusted to account for changes in sources of health insurance and in participation in the labor force as people age.)

Raising the MEA would increase federal outlays for Medicaid for two groups of people between the age of 65 and the new MEA: "full duals" (Medicare beneficiaries who are also enrolled in Medicaid with full benefits) and Medicaid enrollees who were made eligible for that program by the ACA but who, under current law, would lose that eligibility once they qualified for Medicare at age 65. Because CBO assumed that the age limit for Medicaid would increase in tandem with the MEA under this option, Medicaid would remain the primary source of coverage for members of both groups until they reached the new MEA. As a result, federal outlays for Medicaid between 2023 and 2028 would be higher by $15 billion under the first alternative and by $20 billion under the second alternative, CBO projects.

Raising the MEA also would increase outlays for subsidies for health insurance coverage purchased through the marketplaces because some people, instead of obtaining Medicare coverage at age 65, would continue to receive or would obtain subsidized health insurance through the marketplaces when they were between age 65 and the new MEA. (Those federal subsidies cover a portion of participants' health insurance premiums.) In addition, the resulting increase in the average age of people purchasing health insurance coverage through the nongroup market would slightly increase premiums for all people enrolled in that market, which would in turn increase spending on subsidies for people purchasing subsidized coverage through the marketplaces. CBO and JCT estimate that, between 2023 and 2028, raising the MEA would increase outlays for subsidies for coverage through the marketplaces by $13 billion under the first alternative and by $19 billion under the second alternative.

Raising the MEA would lower revenues because a portion of the increase in marketplace subsidies for health insurance premiums would be provided in the form of reductions in recipients' tax payments. (The subsidies for health insurance premiums are structured as refundable tax credits; the portions of such credits that exceed taxpayers' other income tax liabilities are classified as outlays, whereas the portions that reduce tax payments are classified as reductions in revenues.) Revenues also would decline because of a small net increase in employers' spending on nontaxable health insurance benefits, which in turn would reduce collections of income taxes and payroll taxes. Raising the MEA would reduce revenues between 2023 and 2028 by $3 billion under the first alternative and by $4 billion under the second alternative, CBO and JCT estimate.

Uncertainty. The largest source of uncertainty in the estimate of savings over the next 10 years is CBO's estimate of the number of people between age 65 and the new MEA who would be enrolled in Medicaid or subsidized coverage through the marketplaces. CBO estimates that the majority of individuals affected by this policy change would not change their decision to work. If more individuals chose to delay retirement, however, more people between the age of 65 and the MEA would remain in employment-based insurance. That would reduce the number of people projected to enroll in nongroup insurance or Medicaid under both alternatives, which would reduce federal outlays. The net budgetary effects of those decisions, however, would depend on the income of the people who decided to keep working and whether or not they would qualify for alternative forms of subsidized coverage. Additionally, over time, fewer employers have been offering early-retiree health insurance to their employees. CBO estimates that this trend would continue, but it could accelerate or decelerate. Projecting a number of offers of such coverage that is too low would cause CBO to overestimate the number of people who would be enrolled in subsidized coverage through the marketplaces or Medicaid and therefore underestimate the savings from the option. Alternatively, projecting a number of offers that is too high would cause CBO to overestimate the savings from the option.

Longer-Term Effects. Over the longer term, deficits would continue to be lower under this option than they would be under current law. CBO estimates that, by 2048, spending on Medicare (net of offsetting receipts) would be about 2.5 percent less under this option than it would be under current law, amounting to 5.7 percent of gross domestic product rather than 5.9 percent under current law. In 2048, that effect would be almost identical under the two alternatives because the MEA would be identical in 2036 and subsequent years. On the basis of its estimates for 2023 through 2028, CBO projects that, under either alternative, roughly three-fifths of the long-term savings from Medicare would be offset by changes in federal outlays for Social Security, Medicaid, and subsidies for coverage through the marketplaces as well as by reductions in revenues.

Other Effects

An argument in favor of raising the MEA is that, as life expectancy increases, the increase in the MEA would help Medicare return its focus to the population it originally served—people in their last years of life—and support the services most needed by that group. CBO projects that by 2048, life expectancy for 65-year-olds will be 20.4 years for men and 22.8 years for women, compared with 12.9 years and 16.3 years in 1965. There is some evidence that, for many people, the increase in life expectancy has been accompanied by better health in old age (Chernew and others 2016). Those findings suggest that raising the MEA would not diminish the program's ability to provide health benefits to people near the end of life. However, individuals of lower socioeconomic status could be disproportionally affected by the higher MEA because the gains in life expectancy have not been uniform: In recent decades, life expectancy has generally increased more quickly for individuals with higher lifetime earnings (Waldron 2008).

An argument against raising the MEA is that it would shift costs that are now paid by Medicare to individual people, to employers that offer health insurance to their retirees, and to other government health insurance programs. In 2028, more people would be uninsured under this option—about 450,000 under the first alternative and about 600,000 under the second alternative, CBO estimates—and they thus might receive lower-quality care or none at all. Others would end up with a different source of insurance and might pay more for care than they would have as Medicare beneficiaries. Employers' costs of providing group plans for their retirees would increase because those plans would remain the primary source of coverage until the retirees reached the new MEA. In addition, states' spending on Medicaid and the federal costs of subsidies for health insurance purchased through the marketplaces would increase.

The net effect of raising the MEA on national health care spending is unclear because of the potential difference in costs borne by different payers to provide coverage for people between age 65 and the new MEA. One study showed that spending on some procedures declined when people switched from private health insurance to Medicare at age 65; that decline was driven mostly by price differences between private health insurance and Medicare (Wallace and Song 2016).

RELATED OPTION: Mandatory Spending, "Raise the Full Retirement Age for Social Security" (page 101)

RELATED CBO PUBLICATION: *Raising the Ages of Eligibility for Medicare and Social Security* (January 2012), www.cbo.gov/publication/42683

WORK CITED: Michael Chernew and others, *Understanding the Improvement in Disability Free Life Expectancy in the U.S. Elderly Population*, Working Paper 22306 (National Bureau of Economic Research, June 2016), www.nber.org/papers/w22306; Joyce Manchester and Jae G. Song, "What Can We Learn From Analyzing Historical Data on Social Security Entitlements?" *Social Security Bulletin*, vol. 71, no. 4 (November 2011), pp. 1–13, www.ssa.gov/policy/docs/ssb/v71n4/index.html; Hilary Waldron, "Trends in Mortality Differentials and Life Expectancy for Male Social Security-Covered Workers, by Socioeconomic Status," *Social Security Bulletin*, vol. 67, no. 3 (April 2008), pp. 1–28, https://www.ssa.gov/policy/docs/ssb/v67n3/index.html; Jacob Wallace and Zirui Song, "Traditional Medicare Versus Private Insurance: How Spending, Volume, and Price Change at Age Sixty-Five," *Health Affairs*, vol. 35, no. 5 (May 2016), pp. 864–872, http://dx.doi.org/10.1377/hlthaff.2015.1195

Mandatory Spending—Option 20 Function 570

Reduce Medicare's Coverage of Bad Debt

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Outlays												
Reduce the percentage of allowable bad debt to 45 percent	0	-0.2	-0.6	-1.1	-1.4	-1.5	-1.6	-1.7	-1.8	-2.0	-3.4	-12.1
Reduce the percentage of allowable bad debt to 25 percent	0	-0.4	-1.3	-2.2	-2.8	-3.0	-3.2	-3.5	-3.7	-4.0	-6.8	-24.1
Eliminate the coverage of allowable bad debt	0	-0.7	-2.1	-3.6	-4.6	-4.9	-5.3	-5.6	-6.0	-6.4	-11.0	-39.2

This option would take effect in October 2019.

Background

When hospitals and other providers of health care are unable to collect out-of-pocket payments from their patients, those uncollected funds are called bad debt. Historically, Medicare has paid some of the bad debt owed by its beneficiaries on the grounds that doing so prevents those costs from being shifted to others (that is, private insurance plans and people who are not Medicare beneficiaries). The unpaid and uncollectible deductible and coinsurance amounts for covered services furnished to Medicare beneficiaries are referred to as allowable bad debt. In the case of dual-eligible beneficiaries—Medicare beneficiaries who also are enrolled in Medicaid—out-of-pocket obligations that remain unpaid by Medicaid are uncollectible and therefore are included in allowable bad debt. Under current law, Medicare reimburses eligible facilities—hospitals, skilled nursing facilities, various types of health care centers, and facilities treating end-stage renal disease—for 65 percent of allowable bad debt. The Congressional Budget Office estimates that Medicare's spending on allowable bad debt was $3.5 billion in 2017.

Option

This option consists of three alternatives that would decrease the share of allowable bad debt that the program reimburses to eligible facilities. Under the first and second alternatives, the percentage of allowable bad debt that Medicare reimburses to participating facilities would be reduced from 65 percent to 45 percent and 25 percent, respectively. Under the third alternative, Medicare's coverage of allowable bad debt would be eliminated. The reductions would start to take effect in 2020 and would be phased in evenly until becoming fully implemented in 2022.

Effects on the Budget

The first alternative—reducing the percentage of allowable bad debt that Medicare reimburses to participating facilities by 20 percentage points (that is, from 65 percent to 45 percent) by 2022—would reduce outlays by $12 billion from 2020 through 2028, CBO estimates. The second alternative, in which the reduction would be doubled from 20 to 40 percentage points (that is, from 65 percent to 25 percent), would reduce outlays over that period by twice as much—$24 billion. The third alternative, eliminating coverage of bad debt, would save $39 billion over that period. The estimated savings associated with other percentage-point reductions would be roughly proportional to the magnitude of the reduction. For each of these alternatives, CBO estimates that the reductions in spending would increase over the period in line with the projected growth in Medicare spending.

Because hospitals account for most of the reimbursement for spending on bad debt (about 70 percent), the largest source of uncertainty in this estimate is whether private prices for hospital services would change in response to hospitals' loss of revenue from Medicare's reduced reimbursements for bad debt—and if so, whether private prices would increase or decrease. Some observers expect that reducing federal payments for bad debt would lead hospitals to increase prices for private insurers to make up for lost Medicare revenues—a phenomenon often referred to as cost shifting. If private prices increased, on average, then federal subsidies for private insurance would also increase, which would raise federal costs. Some studies have found no evidence of cost shifting or have found limited evidence of cost shifting that depends on factors such as local market power and contracting arrangements with insurers (Frakt 2011). Further, another study has found that private prices have fallen in response to Medicare's price reductions, which, in turn, suggests that federal subsidies could fall in response to Medicare's payment reductions (White 2013). Although that result might seem counterintuitive, there is evidence that hospitals respond to Medicare's payment reductions by lowering long-run operating expenses, which would allow for lower profit-maximizing private prices (White and Wu 2014). Because the direction of the impact on private prices stemming from changes in Medicare's payments is unknown, CBO's estimate of this policy does not include any changes in the prices charged to private insurers. However, any changes in federal spending related to changes in those prices are likely to be negligible.

Another source of uncertainty is whether facilities (including hospitals) would respond to the lost revenue by increasing their efforts to collect allowable bad debt (that is, unpaid deductible and coinsurance amounts) from Medicare patients. However, facilities are required to demonstrate a reasonable collection effort before debt can be classified as allowable bad debt. For example, the Centers for Medicare & Medicaid Services requires facilities to use the same strategies for collecting medical debt from Medicare patients as they do for private-pay patients. Because of that requirement and because facilities are not reimbursed by Medicare for debt incurred by private-pay patients, it is likely that facilities are already exerting significant effort to collect this debt, and the ability of facilities to collect further on Medicare debt would probably be small. Therefore, changes to Medicare's reimbursements of bad debt are unlikely to substantially change overall strategies for collecting medical debt. In addition, CBO estimates that facilities cannot collect about two-thirds of allowable bad debt because it is attributable to dual-eligible beneficiaries. (Currently, Medicaid programs are frequently not required to pay all out-of-pocket expenses for dual-eligible enrollees.) To the extent that increased collection efforts by facilities led to a reduction in allowable bad debt, any reduction in the coverage of that debt—other than elimination—would be associated with an additional reduction in outlays.

Other Effects

One argument for implementing this option is that Medicare currently reimburses facilities for allowable bad debt but does not reimburse doctors or other noninstitutional providers, so this option would reduce that disparity. Also, the reimbursement of bad debt was originally intended to reduce the incentive for cost shifting—but, as previously noted, the evidence for cost shifting is mixed, possibly meaning that the need for such reimbursement is smaller than originally thought.

An argument against this option is that facilities might have difficulty collecting additional payments from enrollees or other sources—especially in the case of dual-eligible beneficiaries and enrollees without other supplemental coverage, such as private medigap plans or coverage from former employers. The option would therefore lead to an effective cut in Medicare's payments to institutional providers. Also, those providers might try to mitigate the impact of this option by limiting their treatment of dual-eligible Medicare beneficiaries and those without other supplemental coverage. Consequently, the option could place additional financial pressure on institutional providers that treat a disproportionate share of those enrollees, potentially reducing their access to care or quality of care.

WORK CITED: Austin B. Frakt, "How Much Do Hospitals Cost Shift? A Review of the Evidence," *The Milbank Quarterly*, vol. 89, no. 1 (March 2011), pp. 90–130, http://dx.doi.org/10.1111/j.1468-0009.2011.00621.x; Chapin White, "Contrary to Cost-Shift Theory, Lower Medicare Hospital Payment Rates for Inpatient Care Lead to Lower Private Payment Rates," *Health Affairs*, vol. 32, no. 5 (May 2013), pp. 935–943, http://dx.doi.org/10.1377/hlthaff.2012.0332; Chapin White and Vivian Yaling Wu, "How Do Hospitals Cope With Sustained Slow Growth in Medicare Prices?" *Health Services Research*, vol. 49, no. 1 (February 2014), pp. 11–31, http://dx.doi.org/10.1111/1475-6773.12101

Mandatory Spending—Option 21 Function 570

Require Manufacturers to Pay a Minimum Rebate on Drugs Covered Under Part D of Medicare for Low-Income Beneficiaries

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Outlays	0	0	-4	-21	-25	-26	-22	-22	-19	-15	-50	-154

This option would take effect in January 2021.

Background

Medicare Part D is a voluntary, federally subsidized prescription drug benefit delivered to beneficiaries by private-sector plans. Federal subsidies for Part D drug benefits, net of the premiums paid by enrollees, totaled about $77 billion in calendar year 2015. (That amount includes payments to stand-alone prescription drug plans and Medicare Advantage plans; it excludes subsidies to employers for providing prescription drug coverage to retirees outside of Part D.) Private drug plans can limit the costs they incur for providing benefits to Part D enrollees by negotiating to receive rebates from manufacturers of brand-name drugs in return for charging enrollees smaller copayments for those drugs. The negotiation of rebate amounts is a business strategy for a Part D plan that is most effective when a few manufacturers' drugs are competing for market share in the treatment of a particular medical condition. The Congressional Budget Office estimates that in 2015, manufacturers' rebates paid to Part D plans amounted to about 22 percent of gross spending on all brand-name drugs under Part D.

Before Part D took effect in 2006, most dual-eligible beneficiaries—Medicare beneficiaries who were also enrolled in Medicaid—received drug coverage through Medicaid. Under federal law, drug manufacturers that participate in Medicaid (which is a joint federal-state program) must pay a portion of their revenues to the federal and state governments through rebates. In 2010, those rebates increased from 15.1 percent to 23.1 percent of the average manufacturer price (AMP) for a drug. (The AMP is the amount, on average, that manufacturers receive for sales to retail pharmacies.) If some purchasers in the private sector obtain a price lower than 23.1 percent off of the AMP, then Medicaid's basic rebate is increased to match the lowest price paid by private-sector purchasers. If a drug's price rises faster than overall inflation, the drug manufacturer pays a larger rebate. And those inflation-based rebates can be significant: In 2015, for example, the average inflation rebate under Medicaid, weighted by the dollar amount of brand-name drug purchases, was 37 percent of the AMP.

When Medicare Part D was established, dual-eligible beneficiaries were automatically enrolled in its Low-Income Subsidy (LIS) program, which typically covers premiums and most cost sharing required under the basic Part D benefit. LIS enrollees—most of whom are dual-eligible beneficiaries—accounted for about 30 percent of Part D enrollment in 2015, and their drug costs represented about 50 percent of total spending for Part D enrollees' drugs in that year. Currently, the rebates on drug sales to LIS enrollees and to other Part D enrollees are set through negotiations between the Part D plans and the drug manufacturers.

Option

Starting in 2021, this option would require manufacturers to pay a rebate to the federal government for brand-name drugs sold to LIS enrollees. The rebate would be 23.1 percent of the drug's AMP plus an additional, inflation-based amount, if warranted. (This option does not include the provision in the Medicaid program that would increase the rebate to match the lowest price paid by private-sector purchasers.) In many cases, a manufacturer might already have negotiated discounts or rebates that applied to all Part D enrollees equally. In those instances, any difference between the negotiated amount across all beneficiaries and the amount of the total rebate owed by the manufacturer would be paid to the federal government. If, however, the average Part D rebate for the drug was already more than 23.1 percent of the AMP plus the inflation-based rebate, the federal government would receive no rebate. Participation in the program would be mandatory for manufacturers who wanted their drugs to be covered by Part B (Medical Insurance) and Part D of Medicare, by Medicaid, and by the Veterans Health Administration.

Effects on the Budget

CBO estimates that implementing this option would reduce federal spending by $154 billion between 2021 and 2028 because, on average, the rebates negotiated for brand-name drugs are smaller than the statutory discounts obtained by Medicaid. (CBO projects, on the basis of historical data, that the effect in 2021 would be smaller than in other years because it would take some time to collect the rebates after the assessment date.) However, drug manufacturers would be expected to set higher "launch" prices for new drugs as a way to limit the effect of the new rebate, particularly for new drugs that do not have close substitutes. Over time, that response would reduce the savings to Medicare from this option. However, the size of that response is uncertain for two reasons: First, the amount of spending on new drugs that would be subject to higher prices is unclear. Second, the amount of the rebate that would be offset is uncertain because it would depend on the extent to which purchases of drugs subject to the inflation rebate were replaced by drugs with higher launch prices as a result of competition in the market. The higher launch prices also would affect other drug purchasers. Employment-based health insurance plans would probably negotiate larger rebates to offset a portion of the higher prices, but state Medicaid programs would pay more for new drugs, which in turn would tend to increase federal spending. (Those effects on federal spending for the Medicaid program are included in this estimate.)

In addition, this option could change manufacturers' incentives to offer rebates to Part D plans for existing drugs. However, because the pressures on those rebates would push in both directions, CBO expects that the average rebates would not change appreciably. In general, manufacturers offer rebates in exchange for preferred coverage of their drugs in order to increase sales and market share. A key provision of the option is that the amount of a rebate that a manufacturer paid to a Part D plan would count toward the total rebate that manufacturer owed the federal government. On the one hand, that provision would make it less costly for manufacturers to increase their rebates as a way to boost sales to non-LIS enrollees. On the other hand, the higher required rebate for sales of drugs to LIS enrollees would reduce the benefit to manufacturers of increasing those sales. The net effects of the reductions—in terms of both the costs and benefits of offering rebates—are unclear and would vary by drug. But the overall effects on rebates for existing drugs would probably be negligible, in CBO's estimation. If this option was expanded to include most of the Part D population, there could be adverse effects on the incentive for plans to use other tools such as formula tiers, prior authorization, and step therapy to hold down costs. However, if the option included a subset of the LIS population, the savings would be smaller and the incentives would remain unchanged.

Other Effects

An argument in favor of this option is that the Part D benefit could provide the same amount of drugs to Medicare beneficiaries at lower total cost, particularly for brand-name drugs that have no close substitutes and whose prices are less subject to market competition. An argument against the option is that the lower revenues that manufacturers receive for drugs under Part D could cause them to reduce their investments in research and development.

The development of "breakthrough" drugs would be least affected by any decline in investment, CBO expects, because purchasers of those drugs tend to be willing to pay more for them. Manufacturers initially can set a higher price for a breakthrough drug, which can offset a portion of the new rebate without substantially affecting sales. Consequently, Medicare's savings under this option would be limited for new drugs because of their higher launch prices, and, eventually, the savings on existing brand-name drugs would dissipate as those drugs lost patent protection and were replaced by less expensive generic versions.

The effects of the option on rebates and investment incentives would be larger than when rebates were required in the past. Before 2006, manufacturers were already paying rebates to Medicaid for drugs purchased by the dual-eligible population (who were then enrolled under Medicaid's drug benefit). However, the new rules also would apply to drugs purchased by LIS enrollees who are not dual-eligible beneficiaries, and therefore (all else being equal) the total required rebate would be larger than it was when dual-eligible beneficiaries received drug coverage through Medicaid. In addition, because of the 2010 increase in the rebate required for the sale of drugs covered by Medicaid, the reduction in manufacturers' incentives to invest in research and development would probably be greater under this option than under the earlier system.

RELATED CBO PUBLICATIONS: *Competition and the Cost of Medicare's Prescription Drug Program* (July 2014), www.cbo.gov/publication/45552; *Spending Patterns for Prescription Drugs Under Medicare Part D* (December 2011), www.cbo.gov/publication/42692

Mandatory Spending—Option 22 Function 570

Modify Payments to Medicare Advantage Plans for Health Risk

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Outlays												
Increase the minimum risk reduction from 5.9 percent to 8 percent	0	0	-3.3	-5.2	-5.2	-5.2	-6.1	-6.6	-7.1	-8.4	-8.6	-47.0
Increase the minimum risk reduction from 5.9 percent to 8 percent scaled by insurer and region	0	0	-3.3	-5.2	-5.2	-5.2	-6.1	-6.6	-7.1	-8.4	-8.6	-47.0
Modify how risk scores are constructed	0	0	-4.8	-7.4	-7.5	-7.4	-8.7	-9.4	-10.1	-11.9	-12.2	-67.2

This option would take effect in January 2021.

Background

Roughly a third of Medicare beneficiaries are enrolled in the Medicare Advantage program. Through that program, private health insurers receive a payment for each beneficiary they enroll and then take financial responsibility for covering that beneficiary's care. Almost all other Medicare beneficiaries receive care in the Medicare fee-for-service (FFS) program, which pays providers directly for each service or set of services covered by Part A (Hospital Insurance) or Part B (Medical Insurance). Payments to Medicare Advantage plans depend on three components: bids that plans submit to the Centers for Medicare & Medicaid Services (CMS), predetermined benchmarks that CMS sets on a county-level basis, and risk scores that reflect variation in beneficiaries' expected spending because of health conditions and other characteristics.

Plans' bids and Medicare's benchmarks together determine a base payment—or a per capita payment from CMS to the plan for an enrollee with average expected health costs. CMS determines base payments by comparing area-specific benchmarks to a plan's standardized bid—or a bid that reflects the plan's estimated cost for providing Medicare benefits in a given area to an enrollee in average health. If a plan's bid is above the benchmark, then CMS pays plans the benchmark. Plans must then charge enrollees a premium (which the enrollee pays in addition to the Part B premium) equal to the difference between the bid and the benchmark. If the plan's bid is less than the benchmark, then the base payment from CMS is the bid plus a rebate. That rebate is a percentage of the difference between the bid and the benchmark, which plans are required to devote primarily to reducing premiums for Part B or Part D (the prescription drug benefit), reducing cost sharing, or covering additional benefits that Medicare does not cover, such as vision or dental care. Both the benchmark and the rebate percentage are also modified to reflect a plan's average quality score. (Quality scores are discussed in detail in the option "Reduce Quality Bonus Payments to Medicare Advantage Plans" on page 82.)

CMS further adjusts payments to plans to reduce insurers' incentives to selectively enroll beneficiaries on the basis of their expected spending. Specifically, CMS scales total payments to plans upward or downward by the risk scores of a plan's enrollees. Risk scores are constructed to reflect variation in enrollees' expected health care costs and are calculated for all Medicare beneficiaries on the basis of their diagnoses and other characteristics. Those scores are standardized so that a score of 1.0 reflects the health care spending of the average beneficiary in Medicare FFS—a type of calculation that is generally referred to as normalization. Higher risk scores indicate higher expected health care spending, and a plan is paid more for an enrollee with a higher risk score. Conversely, a plan is paid less for enrollees with lower expected health care spending.

More thorough documentation of beneficiaries' diagnoses increases their risk scores, and thus, plans have a financial incentive to record all diagnoses for their enrollees. In contrast, providers serving Medicare FFS patients have more limited financial incentives to code a beneficiary's diagnoses because their payments are not tied to risk scores. Recent research has, in fact, shown that Medicare Advantage enrollees have higher average risk scores than otherwise similar FFS beneficiaries and that the difference has increased over time. Therefore, that divergence in risk scores appears to reflect more thorough diagnostic coding by Medicare Advantage plans, rather than differences in enrollees' health (Hayford and Burns 2018; Medicare Payment Advisory Commission 2018).

To adjust for differences in coding, federal law currently requires CMS to apply an across-the-board reduction to Medicare Advantage plan payments that is intended to reflect the difference in coding intensity across the two populations. However, some research has found that the increase in payments that is attributable to coding intensity exceeds the current reduction being applied in the program (Medicare Payment Advisory Commission 2018; Kronick and Welch 2014). Additionally, evidence suggests that some plans code more intensively than others. For instance, health maintenance organizations (HMOs) are thought to be able to code diagnoses more completely than preferred provider organizations (PPOs) or private fee-for-service (PFFS) plans, which have broader provider networks and exercise less control over providers' practice patterns (Geruso and Layton 2018; Hayford and Burns 2018). Thus, an across-the-board reduction in payments to offset coding intensity penalizes plans that do not code as intensively and maintains incentives for plans to increase coding intensity.

Option

This option—which would affect risk-adjustment policy—consists of three alternatives, all of which would take effect in 2021. Under current law, CMS must reduce payments to all plans by a minimum of 5.9 percent to reflect differences in coding across populations. The first alternative would require CMS to reduce payments to all plans by at least 8 percent instead. Eight percent is the Medicare Payment Advisory Commission's most recent estimate of the average difference between Medicare Advantage and FFS risk scores for otherwise similar beneficiaries.

The second alternative would also require CMS to reduce average plan payments by a minimum of 8 percent, rather than 5.9 percent. However, it would further require CMS to scale that 8 percent reduction—that is, increase or decrease the reduction—on the basis of differences in coding intensity for each insurer in a given region. CMS would calculate that adjustment using the change in risk scores for beneficiaries who switched from Medicare FFS to an insurer's plan in a given region and then place plans into quartiles according to growth in those enrollees' average annual coding intensity since switching to Medicare Advantage. To simplify implementation, plans within the same quartile would have their risk scores adjusted by the same percentage so that the average reduction across all plans, weighted by enrollment, would be a minimum of 8 percent.

Changes in risk scores for beneficiaries who switch from FFS to Medicare Advantage capture differences in coding intensity because those beneficiaries' initial risk scores are based on coding patterns in Medicare FFS, whereas the change in risk scores reflects the increase in coding attributable to joining Medicare Advantage. Examining changes in risk scores for beneficiaries on an insurer-level basis allows CMS to determine how coding intensity varies across insurers, and applying adjustments that are specific to each insurer ensures that plans that code more intensively face larger payment reductions. Likewise, allowing those adjustments to vary across regions addresses the fact that plans in different parts of the country may have different relationships with providers or different coding practices. Under this second alternative, insurers that have operated in the market for fewer than three years would have the standard 8 percent reduction applied to their payments.

The third alternative would make two changes to risk-adjustment policy. First, CMS would be required to use two years of diagnostic data to calculate risk scores rather than one. Under the current system, risk scores are generated on the basis of a beneficiary's diagnoses from the previous calendar year. Empirically, using two years of diagnoses to generate risk scores rather than one would result in more diagnoses being captured among FFS beneficiaries—and would have minimal effects on the number of diagnoses captured among Medicare Advantage beneficiaries. Accounting for additional diagnoses among FFS beneficiaries therefore would reduce the gap between average Medicare Advantage risk scores and average FFS risk scores. (The 21st Century Cures Act gave CMS the authority to use two years of diagnostic data beginning in 2019; the agency did not use that authority in 2019 but may in future years.)

Second, risk scores would no longer reflect diagnoses captured from health risk assessments. Health risk assessments are visits by providers that can help determine a beneficiary's health needs and set a course for treatment. However, health risk assessments in Medicare Advantage are more likely than those in FFS to record a diagnosis for which a beneficiary receives no subsequent care. Excluding diagnoses recorded only during health risk assessments—rather than during other visits to providers—would therefore further reduce the disparity between FFS and Medicare Advantage risk scores.

Effects on the Budget

All three alternatives would reduce mandatory spending between 2021 and 2028, according to estimates by the Congressional Budget Office.

CBO estimates that changing the reduction in risk scores from the current 5.9 percent to 8 percent to better reflect coding differences—the first alternative—would lower mandatory spending by $47 billion between 2021 and 2028. Those savings would be the result of direct cuts to plan payments, but they include an offset that stems from the expectation that plans would adjust their bidding behavior in response to the payment reduction. (Because of shifts in the timing of payments between fiscal years, savings under all three alternatives would change minimally between 2022 and 2024 and increase in 2028.)

Under the second alternative—which would also change the reduction in risk scores from 5.9 percent to 8 percent but scale that reduction by insurer and region—CBO estimates that mandatory spending would be reduced by $47 billion, the same amount of savings resulting from the first alternative. Compared with the first alternative, plans could face larger or smaller reductions under the second alternative; however net savings would be equivalent to those resulting from the first alternative because reductions in risk scores would, on average, be the same. As in the first alternative, CBO anticipates that plans would adjust their bidding behavior to partially offset the effect of payment cuts. CBO also expects that changes in bids would, on average, be the same as in the first alternative because adjustments by plans facing larger cuts would be offset by adjustments from plans facing smaller cuts.

Under the third alternative—modifying how risk scores are constructed—mandatory spending would be reduced by $67 billion (including the timing shifts noted above), CBO estimates. That reduction would be driven by lower payments to plans resulting from a 3 percent reduction in average normalized risk scores. Those reductions would arise in two ways: First, excluding diagnoses that are solely recorded in health risk assessments generally would result in a greater reduction in risk scores for Medicare Advantage enrollees than for FFS beneficiaries. Second, basing risk scores on two years of diagnoses would result in a greater average increase in risk scores for FFS beneficiaries than in risk scores for Medicare Advantage enrollees. Risk scores are normalized around the average health of beneficiaries in FFS. Thus, if FFS risk scores increased without a corresponding increase in Medicare Advantage risk scores, average normalized risk scores for Medicare Advantage enrollees would be reduced. That reduction, in turn, would reduce payments. As with the first two alternatives, CBO anticipates that plans would adjust bids in response to those payment reductions. Those adjustments would be slightly larger than in the first and second alternatives because the average reduction in plan payments would be larger. However, on net, this alternative would result in larger reductions in mandatory spending than the previous two alternatives.

CBO anticipates that the amount of savings in the first two alternatives would increase or decrease proportionately with the reduction applied to risk scores. That is, if the reduction to risk scores was smaller than 8 percent, savings would be proportionately reduced, and if that reduction was greater, savings would increase—although there is likely a limit on how much risk scores could be reduced before plans would exit the program. In contrast, the third alternative represents a onetime change in the calculation of risk scores and therefore could not be increased or decreased without additional modifications to the risk-adjustment model.

The largest source of uncertainty in the estimate of savings over the next 10 years under all three alternatives is CBO's estimate of how much plans would adjust their bids in response to reduced payments. CBO projects that plans would adjust their bids to partially offset that payment reduction. However, those adjustments could be larger or smaller than CBO anticipates. Additionally, enrollment in Medicare Advantage could be more responsive to changes in payments than the agency expects. CBO anticipates that plans would adapt to payment changes in ways that would preserve the benefits that enrollees value most; thus, in the agency's estimation, enrollment in Medicare Advantage would continue to grow as estimated under current law. Recent evidence suggests that, even when benchmarks have decreased, new and existing Medicare beneficiaries have continued to enroll in Medicare Advantage plans. However, if plans increased premiums or reduced the generosity of benefits in response to lower plan payments by more than CBO anticipates, then enrollment growth in Medicare Advantage could decrease over time. Whether changes in enrollment would increase or decrease savings depends on which beneficiaries disenrolled from or chose not to enroll in Medicare Advantage. If those beneficiaries, on average, cost more in Medicare FFS than they would in Medicare Advantage, then savings would be reduced. Conversely, if those beneficiaries cost more in Medicare Advantage than in Medicare FFS, then savings would increase.

There is an additional source of uncertainty associated with all three alternatives because spending reductions would be affected by the way in which risk scores changed under current law. If, under current law, plans increased the intensity with which they code diagnoses by more than anticipated, savings might grow over time. Conversely, other improvements in risk adjustment, such as changes in the data sources that CMS uses to calculate Medicare Advantage risk scores or improvements in coding accuracy for FFS beneficiaries, could decrease those savings over time by narrowing the gap between the risk scores of Medicare Advantage enrollees and otherwise similar FFS beneficiaries under current law. Estimates for the third alternative would be particularly affected by this source of uncertainty.

Other Effects

The main advantage of all three alternatives is that, in addition to reducing direct federal spending on plan payments, they would bring per capita payments for similar Medicare Advantage and FFS beneficiaries closer to parity. That is, reducing payments to Medicare Advantage plans would increase the likelihood that Medicare would make the same per capita payment for a beneficiary, regardless of whether that person was enrolled in Medicare FFS or Medicare Advantage. A disadvantage of all three alternatives is that insurers might reduce the generosity of the additional benefits that are funded by those additional payments, and some plans might either begin charging a premium or increase their premiums.

An advantage of the first alternative is that it would be easy to implement because it would reduce payments to all plans by the same amount. However, research has shown that coding intensity differs across plans: For instance, plans that have a more direct relationship with providers, such as HMOs, or plans that employ providers directly—that is, vertically integrated insurers—may exert more influence on diagnostic coding patterns. Other types of plans, such as PPOs and PFFS plans, have less influence over providers and therefore may have less influence on diagnostic coding patterns (Geruso and Layton 2018; Hayford and Burns 2018). Additionally, plans that conduct more health risk assessments, have better integrated electronic health records, or offer incentives to providers to code more diagnoses may all have higher risk scores than those that do not. Therefore, a uniform reduction to payments that reflects the average difference between Medicare Advantage and FFS beneficiaries' risk scores might exacerbate inequities in plan payments.

An advantage of the second alternative is that, unlike the first alternative, payment reductions would be scaled to reflect the degree to which plans in a given region coded more aggressively. Scaled reductions would have the benefit of applying lower payment reductions to plans that did not or could not code diagnoses as completely.

A disadvantage of the second alternative is that it would be more complicated for CMS to administer. Further, many of the activities that lead to more comprehensive coding of diagnoses could be desirable in other ways. For instance, diagnoses might be coded more comprehensively in plans that have better electronic health records and more integration with providers. Better integration with providers and more complete use of electronic health records might also improve patients' experiences and streamline the delivery of care. Thus, applying insurer-specific adjustments to risk scores might penalize plans that are engaged in behavior that otherwise would improve patient satisfaction or quality of care. Additionally, the alternative might give insurers incentives to change coding practices for beneficiaries who had recently switched from FFS to Medicare Advantage—that is, insurers might be inclined to delay documenting additional diagnoses until after the first three years of a beneficiary's enrollment.

An advantage of the third alternative is that it would work in part by improving the construction of risk scores rather than simply cutting payments. Using two years of diagnoses would result in conditions being coded more consistently for all Medicare beneficiaries, and thus should more accurately measure health risk among Medicare Advantage enrollees relative to FFS. Further, unlike the first two alternatives, this alternative would specifically discourage the use of health risk assessments primarily to uncover new diagnoses, rather than to define a plan of care for a beneficiary.

A disadvantage of the third alternative is that it would reduce plans' incentives to provide health risk assessments. If plans provided fewer health risk assessments, then they might also fail to detect conditions that might require additional care.

RELATED OPTION: Mandatory Spending, "Reduce Quality Bonus Payments to Medicare Advantage Plans" (page 82)

RELATED CBO PUBLICATIONS: Alice Burns and Tamara Hayford, *Effects of Medicare Advantage Enrollment on Beneficiary Risk Scores*, Working Paper 2017-08 (November 2017), www.cbo.gov/publication/53270; *A Premium Support System for Medicare: Updated Analysis of Illustrative Options* (October 2017), www.cbo.gov/publication/53077

WORK CITED: Michael Geruso and Timothy Layton, *Upcoding: Evidence From Medicare on Squishy Risk Adjustment*, Working Paper 21222 (National Bureau of Economic Research, revised April 2018), www.nber.org/papers/w21222; Tamara Beth Hayford and Alice Levy Burns, "Medicare Advantage Enrollment and Beneficiary Risk Scores: Difference-in-Differences Analyses Show Increases for All Enrollees on Account of Market-Wide Changes," *Inquiry*, vol. 55 (July 2018), http://journals.sagepub.com/doi/full/10.1177/0046958018788640; Richard Kronick and W. Pete Welch, "Measuring Coding Intensity in the Medicare Advantage Program," *Medicare and Medicaid Research Review*, vol. 4, no. 2 (2014), pp. E1–E19, http://dx.doi.org/10.5600/mmrr.004.02.a06; Medicare Payment Advisory Commission, *The Medicare Advantage Program: Status Report* (March 2018), Chapter 13, https://go.usa.gov/xPVPD

Mandatory Spending—Option 23 Function 570

Reduce Quality Bonus Payments to Medicare Advantage Plans

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Outlays												
Eliminate Medicare Advantage benchmark increases that are tied to quality scores	0	0	-6.7	-10.4	-10.5	-10.3	-12.2	-13.1	-14.2	-16.7	-27.6	-94.2
Eliminate double bonuses from Medicare Advantage benchmarks	0	0	-1.3	-2.0	-2.0	-2.0	-2.4	-2.5	-2.7	-3.2	-5.3	-18.2

This option would take effect in January 2021.

Background

Roughly one-third of all Medicare beneficiaries are enrolled in the Medicare Advantage program under which private health insurers assume the responsibility for, and the financial risk of, providing Medicare benefits. Almost all other Medicare beneficiaries receive care in the traditional fee-for-service (FFS) program, which pays providers a separate amount for each service or related set of services covered by Part A (Hospital Insurance) or Part B (Medical Insurance). Payments to Medicare Advantage plans depend in part on bids that the plans submit—indicating the per capita payment they will accept for providing the benefits covered by Parts A and B—and in part on how those bids compare with predetermined benchmarks. Plans that bid below the benchmark receive a portion of the difference between the benchmark and their bid in the form of a rebate, which must be primarily devoted to the following: decreasing premiums for Medicare Part B or Part D (prescription drug coverage); reducing beneficiary cost sharing; or providing additional covered benefits, such as vision or dental coverage. Those additional benefits and reduced cost sharing can make Medicare Advantage plans more attractive to beneficiaries than FFS Medicare. Plans that bid above the benchmark must collect an additional premium from enrollees that reflects the difference between the bid and the benchmark. Payments are further adjusted to reflect differences in expected health care spending that are associated with beneficiaries' health conditions and other characteristics.

Plans also receive additional payments—referred to as quality bonuses—that are tied to their average quality score. Those quality scores are determined on the basis of a weighted average of ratings that reflect consumer satisfaction and the performance of plans' providers on a range of measures related to clinical processes and health outcomes. The Centers for Medicare & Medicaid Services (CMS) pays higher-rated plans more in two ways. First, plans that have composite quality scores with at least 4 out of 5 stars are paid on the basis of a benchmark that is 5 percent higher than the standard benchmark. (New plans or plans with low enrollment lack sufficient data for quality scores to be accurately calculated, so they are paid on the basis of a benchmark that is 3.5 percent higher.) Certain urban counties with both low FFS spending and historically high Medicare Advantage enrollment are designated as "double-bonus counties." The quality bonuses applied to benchmarks in those counties are twice as high as in other counties.

The second way that quality scores impact plan payments is through the size of the rebate that a plan receives when it bids below the benchmark. Plans with 4.5 stars or more retain 70 percent of the difference between the bid and the quality-adjusted benchmark, plans with 3.5 to 4.0 stars retain 65 percent of that difference, and plans with 3 stars or less retain 50 percent of that difference. Recent evidence suggests that quality bonuses have increased Medicare's payments to plans by 3 percent (Medicare Payment Advisory Commission 2018).

In addition to encouraging plans to improve their quality directly through increased payments, the quality program also encourages consumers to enroll in plans with higher ratings. That is accomplished in two ways: First, CMS publishes plans' quality scores to assist consumers in identifying higher-quality plans. Second, because higher-rated plans receive higher rebates, those plans can offer enhanced benefits, which further increase the attractiveness of those plans relative to plans with lower quality ratings. Therefore, the quality-bonus program encourages plans to improve their quality scores both to garner higher payments and to increase their market share.

Quality bonuses in Medicare Advantage have been criticized for several reasons. The bonus structure may exacerbate geographic inequities across plans, both because quality bonuses are tied to benchmarks—which vary by county—and because of double-bonus designations. Differences in benchmarks and double-bonus designations may not reflect variations in the costs that plans incur for providing better quality. Additionally, because Medicare Part B premiums fund about 25 percent of all spending for Medicare Part B services, quality bonuses increase Part B premiums for all Medicare enrollees (including beneficiaries in Medicare FFS) despite enhancing benefits only for enrollees in higher-quality plans.

Quality scores may also be an imperfect indicator of a plan's overall quality. For example, some plans may be better able to record their processes and patient outcomes because they have more comprehensive electronic health records or closer relationships with providers. In addition, quality scores may be correlated with beneficiaries' characteristics, such as geographic location and income, leading to worse quality scores for plans that operate in poorer or more rural areas. Quality scores may also emphasize investment in areas of quality that are measured at the expense of components of quality that are not captured by the composite scores. Finally, there is evidence that plans have engaged in activities that increase quality scores without increasing underlying quality. Before the Bipartisan Budget Act of 2018 (Public Law 115-123) was enacted, some insurers consolidated plans in different counties into the same contract so that average quality scores increased. Because quality scores are calculated at the contract level, lower-quality plans in those consolidated contracts received higher payments, and enrollees in those lower-quality plans were shown quality scores that were inflated relative to local plans' performance. As a result of the new legislation, quality scores will reflect an enrollment-weighted average of quality in consolidated plans, which should reduce insurers' incentives to consolidate plans to increase quality scores. However, insurers will still have an incentive to engage in other activities that increase quality scores without necessarily increasing quality.

Option

This option consists of two different alternatives. The first alternative would eliminate benchmark increases that are tied to quality scores starting in 2021. The second alternative would eliminate double bonuses from Medicare Advantage benchmarks. Higher-quality plans in those counties would still be paid bonuses under the second alternative, but the maximum increase to the benchmark would be 5 percent rather than 10 percent. (Five percent is the increase to benchmarks under current law for plans with 4 or more stars that are not operating in double-bonus counties.) Under both alternatives, the effect of a plan's quality score on rebates would continue as under current law, and CMS would continue to publish quality information for the benefit of consumers.

Effects on the Budget

Implementing either of the two alternatives would reduce mandatory spending between 2021 and 2028, according to estimates by the Congressional Budget Office. CBO projects that the first alternative—eliminating benchmark increases on the basis of quality bonuses—would reduce mandatory spending by $94 billion between 2021 and 2028. That reduction would come primarily from direct reductions in benchmarks. In addition, on the basis of prior research, CBO anticipates that, for every additional dollar in reduced benchmarks, plans would reduce their bids by 50 cents to partially shield beneficiaries from cuts to benefits (Song, Landrum, and Chernew 2012).

Reductions to the quality bonuses of different magnitudes would not result in proportional savings. For instance, if increases to benchmarks that are based on quality bonuses were cut in half rather than being eliminated, CBO projects that those savings would be slightly less than half of the savings from eliminating those bonuses. The percentage reduction in savings would not be equal to the percentage reduction in bonuses because, under the Affordable Care Act, benchmarks are not allowed to exceed their local FFS per capita spending or their 2010 benchmark levels, after adjusting for growth. As a result of those caps on benchmarks, some plans that would otherwise receive a bonus of 5 percent or 3.5 percent receive a smaller bonus under current law. Thus, for those plans, a proposal that reduced the statutory bonus percentage by half would reduce the bonuses they receive by less than half.

Under the second alternative—eliminating double bonuses—CBO estimates that mandatory spending would be reduced by $18 billion over the same time frame. CBO anticipates that, if the second alternative was implemented, individual plans in affected counties would reduce bids in response to those reductions in bonuses.

Under both alternatives, CBO estimates that changes in enrollment in Medicare Advantage would have minimal budgetary effects. Recent evidence suggests that plans have largely shielded beneficiaries from reductions in benefits by reducing their bids in response to cuts in benchmarks. Additionally, enrollment in Medicare Advantage has grown across all counties at similar rates, suggesting that factors external to Medicare Advantage may drive increases in the program's share of Medicare enrollment.

CBO also anticipates that the budgetary effects of plans' exiting the market would be minimal. Medicare Advantage insurers have canceled plans in some markets in response to past policy changes. However, the majority of enrollees in canceled plans have been able to enroll in another Medicare Advantage plan.

The largest sources of uncertainty in the estimates are whether plans would change the amount of effort they invest in maintaining or improving quality and whether plans would further change the generosity of supplemental benefits in response to changes in quality-related payments. If plans reduced investment in quality or benefits by more than CBO anticipates, those effects could result in lower enrollment in the Medicare Advantage program than the agency projects. In general, enrolling a beneficiary in Medicare Advantage costs the Medicare program slightly more than enrolling the same beneficiary in Medicare FFS; thus, if reductions in enrollment were larger than anticipated, budgetary savings could be larger than projected.

Another source of uncertainty in the estimates is whether the savings would change over the budget window. CBO projects that the savings under both alternatives would grow at the same rate that spending on the Medicare Advantage program would grow under current law. (Projected savings would change minimally from 2022 through 2024 and would increase in 2028 because of shifts in the timing of payments between fiscal years.) That projection depends on how quality bonuses would grow under current law. If quality scores were to grow more quickly than expected under current law, then the spending reductions associated with the two alternatives would also grow over time. Likewise, if quality scores were to grow more slowly than expected, then the spending reductions would fall. Quality scores under current law could grow more quickly than expected if insurers became more adept at improving their quality scores or at encouraging providers to meet certain quality targets. On the other hand, quality scores could grow more slowly under current law because many quality measures are defined relative to other plans, and as plans invested more in quality improvements, the threshold for a plan's being designated as "high quality" might become harder to attain.

Other Effects

An advantage of the first alternative is that it would address some of the criticisms of quality bonuses that are highlighted above. Specifically, reducing Medicare's spending on payments to plans would reduce the degree to which Part B premiums paid by Medicare FFS beneficiaries financed supplemental benefits for Medicare Advantage enrollees. A second advantage of the alternative is that it would substantially reduce the financial incentives for insurers to invest in activities that improve quality scores without improving quality. For instance, insurers would have less incentive to increase lower-quality plans' scores by consolidating lower- and higher-quality plans, which would improve the transparency of quality scores for consumers and reduce unnecessary payments to plans. A third advantage of the alternative is that it would reduce disparities in payments that might stem from differences in beneficiaries' characteristics, geographic characteristics, or plan characteristics—such as the ability of insurers to document improvements in patient outcomes or the percentage of beneficiaries who live in a rural area. Finally, eliminating the benchmark bonuses for specific quality measures would reduce the incentive for insurers to devote more resources to improving those dimensions of quality, relative to other aspects of quality that are not included in quality scores.

A disadvantage of the first alternative is that it would reduce the financial incentives for insurers to devote resources to improving quality. Insurers might also devote less energy to documenting quality if financial incentives to do so were reduced—which might reduce the accuracy of information provided to consumers when choosing a plan.

The primary argument for the second alternative is that it would reduce geographic differences in plan payments that might be unrelated to the costs of improving the quality of plans. A disadvantage of the second alternative is that, as in the first alternative, it would not entirely address some of the criticisms of quality scores that are highlighted above. For example, plans might still have an incentive to focus on improving dimensions of quality that are included in quality-bonus scores at the expense of dimensions of quality that are not included in those scores. This alternative also would maintain the incentive for plans to engage in activities that increase quality scores without necessarily improving the underlying quality of care.

RELATED OPTION: Mandatory Spending, "Modify Payments to Medicare Advantage Plans for Health Risk" (page 77)

RELATED CBO PUBLICATION: Tamara Hayford and Jared Maeda, *Issues and Challenges in Measuring and Improving the Quality of Health Care*, Working Paper 2017-10 (December 2017), www.cbo.gov/publication/53387

WORK CITED: Medicare Payment Advisory Commission, *The Medicare Advantage Program: Status Report* (March 2018), Chapter 13, p. 355, https://go.usa.gov/xPVPD. Zirui Song, Mary Beth Landrum, and Michael E. Chernew, "Competitive Bidding in Medicare: Who Benefits From Competition?" *American Journal of Managed Care*, vol. 18, no. 9 (September 2012), pp. 546–552

Mandatory Spending—Option 24 Functions 550, 570

Consolidate and Reduce Federal Payments for Graduate Medical Education at Teaching Hospitals

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Outlays												
Establish a grant program, with growth of grant based on the CPI-U	0	-1.4	-1.9	-2.5	-3.1	-3.7	-4.3	-4.9	-5.6	-6.6	-8.9	-34.0
Establish a grant program, with growth of grant based on the CPI-U minus 1 percentage point	0	-1.4	-2.0	-2.8	-3.5	-4.3	-5.1	-5.9	-6.7	-7.9	-9.7	-39.5

This option would take effect in October 2019.

CPI-U = consumer price index for all urban consumers.

Background

Under certain circumstances, hospitals with teaching programs can receive funds from Medicare and Medicaid for costs related to graduate medical education (GME). Medicare's payments cover two types of costs: those for direct graduate medical education (DGME) and those for indirect medical education (IME). DGME costs are for the compensation of medical residents and institutional overhead. IME costs are other teaching-related costs—for instance, those associated with the added demands placed on staff as a result of teaching activities and the greater number of tests and procedures ordered by residents as part of the educational process. As for funding provided by Medicaid, the federal government matches a portion of what state Medicaid programs pay for GME. The Congressional Budget Office estimates that total mandatory federal spending for hospital-based GME in 2018 was more than $15 billion, of which roughly 80 percent was financed by Medicare and the remainder by Medicaid. That spending is projected to grow at an average annual rate of 5.5 percent from 2020 through 2028 (about 3 percentage points faster than the average annual growth rate of the consumer price index for all urban consumers, or CPI-U). Teaching hospitals also receive funding from other federal agencies—which is discretionary rather than mandatory spending—as well as funding from private sources.

Medicare's payments for DGME are based on three factors: a hospital's costs per resident in a base year, indexed for subsequent inflation; the hospital's number of residents, which is subject to a cap that was first enacted in the Balanced Budget Act of 1997; and the share of total inpatient days at the hospital that is accounted for by Medicare beneficiaries. Payments for IME are made under Medicare's hospital inpatient prospective payment system as a percentage add-on to the base payment and reflect a hospital's teaching intensity (such as its ratio of full-time equivalent residents to the number of beds). In the Medicaid program, GME payments are considered to be a part of supplemental payments and states are allowed, but not required, to make Medicaid payments for GME. Each state determines its own level of Medicaid payments for GME and how those payments will be made. For example, some states base their GME payments on Medicare's methodology or on a modified form of that methodology, whereas other states provide lump-sum payments for GME. Those payments are subject to the same federal matching rates as other Medicaid spending and are subject to upper payment limits for Medicaid spending.

Option

Beginning in October 2019, this option would consolidate all mandatory federal spending for GME into a grant program for teaching hospitals. Payments would be apportioned among hospitals according to the number of residents at a hospital (up to its existing cap) and the share of the hospital's inpatient days accounted for by Medicare and Medicaid patients. Total funds available for distribution in 2020 would be fixed at an amount equaling the sum of Medicare's 2018 payments for DGME and IME and the federal share of Medicaid's 2018 payments for GME. Total funding for the grant program would then grow at the rate of inflation. CBO examined two alternative measures of inflation. Under the first alternative, funding for the grant program would grow with the CPI-U; and under the second alternative, funding for the grant program would grow with the CPI-U minus 1 percentage point per year.

Effects on the Budget

In CBO's estimation, the first alternative would reduce mandatory spending by $34 billion between 2020 and 2028. Using the amount of federal funding for GME in 2018 to establish the total funding available in 2020 would cause a downward shift in the funding stream—relative to CBO's projection of federal spending on GME under current law—that would reduce federal spending by $17.5 billion between 2020 and 2028. Increasing GME funding at the rate of the CPI-U, rather than at the rate of growth CBO projects under current law, would yield an additional $21.4 billion reduction in federal spending over that period. However, CBO expects that those savings would be partially offset by a $4.8 billion increase in federal Medicaid spending. Many states make supplemental payments to hospitals that serve as safety-net hospitals (medical facilities that provide care regardless of a person's ability to pay) and to those that provide charity care or other types of community benefits. Those supplemental payments are eligible for the same federal matching payments as other types of Medicaid-covered services. CBO anticipates that some states would make separate supplemental payments to replace a portion of lost hospital revenue for some or all of their teaching hospitals, which would partially offset the reduction in federal spending for Medicaid.

CBO estimates that the second alternative would reduce spending by $40 billion between 2020 and 2028. Under that alternative, the reduction in spending associated with the downward shift in the funding stream would be the same as under the first alternative, $17.5 billion. Increasing federal GME funding at the rate of the CPI-U minus 1 percentage point per year would yield a greater reduction in spending than would the first alternative, or $27.6 billion between 2020 and 2028. The offsetting increase in federal Medicaid spending over that period would also be larger than under the first alternative and is estimated to be $5.4 billion.

By 2028, the savings associated with the first alternative would represent about 16 percent of projected federal spending for GME under current law, whereas savings associated with the second alternative would represent about 19 percent. By consolidating federal funding for medical education, this option could reduce the federal government's costs of administering the program. Any such administrative efficiencies would accrue to discretionary spending and therefore are not included in the estimate of changes to mandatory spending described above.

The option would not change the existing caps on the number of subsidized slots for residents. Altering those caps would not change the budgetary effects because total federal payments for GME under this option would not depend on the number of residents. Removing those caps might allow the existing slots to be allocated more efficiently among hospitals, but it also would create an incentive for hospitals to expand their residency programs in an attempt to receive a larger share of the total. The net effects on hospitals' residency programs would be difficult to predict.

Two sources of uncertainty in the estimates relate to the projected payment amounts for GME and the projected growth in the CPI-U from 2019 through 2028. In the event that the actual growth rates for either DGME or IME were higher or lower than the projected rates, the estimated savings would be greater or lesser than those using CBO's current baseline projections. Also, to the extent that the difference between actual growth in the CPI-U and the growth in projected payments for GME occurring under current law turned out to be greater than CBO has estimated, the savings under the option would be larger, and vice versa. A third source of uncertainty is anticipating and projecting the extent to which states would offset the reductions to GME payments, for example, by making separate supplemental payments to teaching hospitals that experience reductions in GME funding.

Other Effects

An argument for reducing the overall subsidy for GME is that federal payments under current law exceed hospitals' actual teaching costs. The Medicare Payment Advisory Commission (MedPAC) has consistently found that the IME adjustment is greater than hospitals' estimated indirect costs of providing medical education. In a 2016 analysis, MedPAC estimated that an IME adjustment about one-third the size of the current one would reflect the indirect costs that teaching hospitals actually incur (MedPAC 2016). That analysis suggested that a smaller subsidy would not unduly affect hospitals' teaching activities. A smaller subsidy also would reduce the incentive for hospitals to hire a greater number of residents than necessary. Another argument in favor of consolidating GME funding to hospitals is that unifying the funding for GME could allow for a broader policy discussion about the ways in which medical education is funded.

An argument against the option is that reducing the federal subsidy for GME could lead teaching hospitals to shift the composition of their residency programs toward specialists and away from primary care residents. Hospitals made such a shift after the caps on Medicare-funded residency slots were enacted because employing specialists tends to be more profitable. If hospitals responded to further reductions in federal GME subsidies in the same way, they could exacerbate concerns about a shortage of primary care physicians in the future. Alternatively, hospitals might respond to the reduced subsidy by lowering residents' compensation and making them responsible for more of the cost of their medical training.

Another argument against the option is that some teaching hospitals might use part of their GME payments to fund care for uninsured people. The option could therefore disproportionately affect teaching hospitals that treat a larger number of uninsured patients. Furthermore, states could lose some discretion to direct Medicaid GME payments to hospitals because the federal government would be administering the grant program. Under those circumstances, states would no longer receive federal matching for those funds and might choose to reduce their GME payments to hospitals. However, that reduction would be mitigated if states instead shifted their GME payments to other types of supplemental payments (which are subject to federal matching). Finally, if hospitals' costs grew faster than GME payments, hospitals and residents might bear an increasing share of the costs of operating a residency program over time.

WORK CITED: Medicare Payment Advisory Commission, *Report to Congress: Medicare Payment Policy* (March 2016), p. 75, https://go.usa.gov/xPvSn (PDF, 5.61 MB)

Mandatory Spending—Option 25 **Function 600**

Convert Multiple Assistance Programs for Lower-Income People Into Smaller Block Grants to States

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Mandatory Outlays												
Convert SNAP to block grant	0	-21	-20	-18	-17	-17	-16	-16	-17	-17	-76	-160
Convert child nutrition programs to block grants	0	-6	-8	-8	-9	-10	-10	-11	-12	-13	-31	-88
Total	0	-27	-27	-27	-26	-27	-27	-28	-29	-30	-107	-247

This option would take effect in October 2019.

SNAP = Supplemental Nutrition Assistance Program.

Background

There are sizable federal programs to assist people who have relatively low income. Those programs include the Supplemental Nutrition Assistance Program (SNAP) and a collection of child nutrition programs. Federal spending for SNAP and child nutrition programs in 2018 was $91 billion.

SNAP provides benefits to help low-income households buy food. Federal outlays for the program were $68 billion in 2018. Child nutrition programs subsidize meals provided to children at school, at child care centers, in after-school programs, and in other settings. In 2018, spending for those programs was $23 billion, most of it for the National School Lunch Program and the School Breakfast Program.

Option

This option would convert SNAP and the child nutrition programs to separate, smaller block grants to the states beginning in October 2019. The block grants would provide a set amount of funding to states each year, and states would be allowed to make significant changes to the structure of the programs.

The option would provide annual funding equal to federal outlays for each program in 2007 (the last full year before the most recent recession), increased to account for inflation in the cost of food since then. (The starting amounts would include outlays for both benefits and administrative costs and, for child nutrition programs, would represent total mandatory spending for that set of programs. Outlays for SNAP would be increased to account for inflation in the cost of food at home, and outlays for child nutrition would be increased to account for inflation in the cost of food away from home.)

Another alternative would convert SNAP and the child nutrition programs to block grants through which the federal government would provide funding to match state spending on those programs. The Congressional Budget Office has not analyzed that alternative here because its effects would depend on the amounts and conditions of the grants and on decisions by state governments, which are very difficult to predict.

Effects on the Budget

CBO's estimates of the budgetary effects of legislative proposals are measured relative to its baseline budget projections. As the rules governing those projections specify, CBO's baseline projections for SNAP reflect the assumption that the program will continue to be extended beyond its expiration at the end of 2018. Though most of the child nutrition programs are permanently authorized, authorization for some spending expired at the end of 2015 (including the authorizations for the Summer Food Service Program and state administrative expenses); that spending has been extended through annual appropriations. As with SNAP, CBO's baseline projections for the child nutrition programs reflect the assumption that the programs will continue to be extended.

In CBO's baseline projections, outlays for SNAP are projected to decline through 2022. Spending is projected to then increase between 2023 and 2028, reaching

$70 billion in 2028, slightly higher than spending was in 2018. CBO projects that spending on SNAP would decline over the 2019–2022 period because the number of people receiving benefits would decrease as the economy improves. Despite a continued decline in the number of people receiving benefits between 2023 and 2028, CBO projects that spending would increase over that period because the increase in per-person benefits would more than offset the decline in the number of participants. In contrast, outlays for child nutrition programs are projected to increase through 2028, reaching $36 billion in that year, over 50 percent more than spending in 2018.

By CBO's estimates, setting annual funding amounts to equal the federal outlays for each program in 2007 (adjusted for inflation) would reduce spending on SNAP by $160 billion from 2020 through 2028—or by about a quarter of the spending projected in the baseline. For child nutrition programs, the reduction would be $88 billion, or about a third.

The budgetary effects of switching SNAP and child nutrition programs to block grants would depend heavily on the formulas used to set the amounts of the grants. If, instead of setting the inflation-adjusted value of the grants at the 2007 amounts, the grants were fixed in nominal dollars (as is, for example, the block grant for Temporary Assistance for Needy Families), savings would grow each year. By contrast, if the grants were indexed for both inflation and population growth—that is, if they were allowed to grow faster than specified in this option—savings would decline each year. Total savings would be less than those projected for this option if the change was phased in gradually instead of having spending immediately revert to the 2007 amounts (adjusted for inflation).

Although the formula used to set the amount of each separate block grant in this option is the same, the effects on spending would differ for each program. For SNAP, the estimated reduction in federal spending from converting to a block grant would decline through 2026, both in dollar terms and as a share of projected spending. In 2027 and 2028, the estimated savings would increase.

Those results occur because, under the option, spending on SNAP would increase throughout the 10-year period, whereas spending in the baseline declines through 2022; hence, the difference between the two would narrow during those first few years. From 2023 to 2026, when both spending in the baseline and projected spending under the option increase, the latter grows more rapidly than the former. That is because, in the baseline, participation is projected to continue to decline during those years, causing overall spending to increase more slowly than the rate of inflation (for the price of food at home) used to increase the grant funding under the option. As a result, savings under the option would continue to decline through 2026. After 2026, the projected savings would rise as the year-over-year decrease in participation in the baseline slowed.

For child nutrition programs, the reduction in federal spending from converting to the specified block grant would increase over time, both in dollar terms and as a share of projected spending under assumptions governing the baseline. The savings would be greater in later years because CBO expects participation in the programs toincrease. As a result, spending in the baseline grows faster than would spending under the option, in CBO's estimation.

Among the largest sources of uncertainty in the estimate of savings over the next 10 years are CBO's estimates of changes in the price of food at home (which is relevant for SNAP) and changes in the price of food away from home (which is relevant for the child nutrition programs). CBO's baseline projections of participation in SNAP and of the number of meals served through child nutrition programs are additional sources of uncertainty. Under the option, federal spending would not depend on participation in the programs. But because of the uncertainty regarding participation and the numbers of meals in CBO's baseline and the uncertainty regarding inflation in CBO's baseline and under the option, the savings from the option could be larger or smaller than those shown here.

The budgetary effects of a second alternative—which would convert SNAP and the child nutrition programs to block grants in which the federal government matched the amount states spent on those programs—would depend on how the block grants were specified. States would probably have substantial flexibility under such an alternative, and the budgetary effects would depend in large part on how states responded to that flexibility.

Other Effects

An argument for converting SNAP and the child nutrition programs to block grants is that state programs might better suit local needs and might be more innovative. States could define eligibility and administer benefits in ways that might better serve their populations. Moreover, allowing states to design their own programs would result in more experimentation, and some states could adopt approaches that had worked elsewhere.

Another argument for the option is that it would make spending by the federal government more predictable. The programs that this option affects must, under current law, make payments to eligible people. Therefore, spending automatically increases or decreases without any legislative action. For example, outlays for SNAP benefits more than doubled between 2007 and 2011, primarily because participation in the program increased (mainly because of deteriorating labor market conditions). And even if the number of participants in a program does not change, the benefits paid per person can change if the income of participants changes.

An argument against this option is that it would reduce federal support for lower-income people. Whom the cut in spending affected—and how it affected them—would depend on how states structured their programs and how state spending changed. But such a cut—amounting to about 30 percent of the projected mandatory spending on SNAP and child nutrition programs during those years—would almost certainly eliminate benefits for some people who would otherwise have received them, as well as significantly reduce the benefits of some people who remained in the programs.

Another argument against this option is that block grants would be less responsive to economic conditions than the current federal programs. The automatic changes in spending on benefits under current law help stabilize the economy, reducing the depth of recessions during economic downturns. Those stabilizing effects would no longer exist under the option. Furthermore, if federal spending did not increase during a future economic downturn and more people became eligible for benefits, states that could not increase their spending (at a time when their own revenues were probably declining) would have to reduce per-person benefits or tighten eligibility, perhaps adding to the hardship for families just when their need was greatest.

RELATED OPTIONS: Mandatory Spending, "Eliminate Subsidies for Certain Meals in the National School Lunch, School Breakfast, and Child and Adult Care Food Programs" (page 92); Appendix, Mandatory Spending, "Tighten Eligibility for the Supplemental Nutrition Assistance Program" (page 309)

RELATED CBO PUBLICATIONS: *Child Nutrition Programs: Spending and Policy Options* (September 2015), www.cbo.gov/publication/50737; *The Effects of Potential Cuts in SNAP Spending on Households With Different Amounts of Income* (March 2015), www.cbo.gov/publication/49978; *The Supplemental Nutrition Assistance Program* (April 2012), www.cbo.gov/publication/43173

Mandatory Spending—Option 26 Function 600

Eliminate Subsidies for Certain Meals in the National School Lunch, School Breakfast, and Child and Adult Care Food Programs

											Total	
Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2019–2023	2019–2028
Change in Outlays	-0.1	-0.8	-1.0	-1.1	-1.2	-1.2	-1.2	-1.3	-1.3	-1.4	-4.2	-10.7

This option would take effect in July 2019.

Background

The National School Lunch Program, the School Breakfast Program, and the Child and Adult Care Food Program provide funds that enable public schools, nonprofit private schools, child and adult care centers, and residential child care institutions to offer subsidized meals and snacks to participants. In the 2018–2019 school year, federal subsidies are generally 61 cents for each lunch, 31 cents for each breakfast, and 8 cents for each snack for participants in households with income above 185 percent of the federal poverty guidelines (commonly known as the federal poverty level, or FPL). The programs provide larger subsidies for meals served to participants from households with income at or below 185 percent of the FPL and above 130 percent of the FPL, and still larger subsidies to participants from households with income at or below 130 percent of the FPL. As a result of the subsidies, participants from households with income at or below 130 percent of the FPL pay nothing for their meals.

Under current law, federal subsidies for meals served to participants from households with income greater than 185 percent of the FPL can include base cash subsidies; certain commodities; and, for those schools participating in the school lunch program that comply with federal nutrition guidelines, an additional cash subsidy. In the 2018–2019 school year, the base cash subsidies for meals served to participants from households with income greater than 185 percent of the FPL are 31 cents per lunch and 31 cents per breakfast; for after-school snacks provided to such participants, the amount is 8 cents. All participating schools and centers also receive commodities—food from the Department of Agriculture, such as fruit and meat—with a value of 23.5 cents per lunch. Schools that offer meals that are certified by state authorities as complying with federal nutrition guidelines receive an additional cash subsidy of 6 cents per lunch in the 2018–2019 school year. (Additional subsidies are available for schools and centers in Alaska and Hawaii, schools in Puerto Rico, and participating schools that serve a certain number of meals to students from households with income at or below 185 percent of the FPL.)

Option

Beginning in July 2019, this option would eliminate the subsidies for meals and snacks served through the National School Lunch Program, the School Breakfast Program, and a portion of the Child and Adult Care Food Program to participants from households with income greater than 185 percent of the FPL. The Child and Adult Care Food Program provides funds for meals and snacks served in child and adult care centers as well as in day care homes. Reimbursement rates for meals served through participating child and adult care centers are equal to the reimbursement rates for meals served through the National School Lunch Program and the School Breakfast Program. Because reimbursement rates for meals served in day care homes are set differently, this option does not affect day care homes.

Effects on the Budget

The Congressional Budget Office estimates that the option would reduce federal spending by $10.7 billion through 2028. Reductions in the number of meals served under the option account for most of savings. In 2028, CBO's projection of $1.4 billion in savings that year reflects:

- About 1.4 billion fewer lunches and snacks through the school lunch program, at an average subsidy of about 63 cents;
- About 450 million fewer breakfasts served through the School Breakfast Program, at an average subsidy of about 43 cents;

- About 425 million fewer meals and snacks served in the child and adult food program, at an average subsidy of about 30 cents; and

- Additional savings of about $200 million from reduced spending on commodities and program administration.

Those estimates are based on historical trends, projected school enrollment, and other factors.

Most of the outlay savings are from the elimination of the subsidy for paid meals in the lunch and breakfast programs, but CBO also estimates that some schools and centers where a small share of meals are served to participants for free or at reduced price levels would drop out of the programs. About 15 percent of the total savings are from the loss of free and reduced price meals and snacks at schools that would exit the programs without the subsidy for meals served to participants from higher-income households.

There are several sources of uncertainty in this estimate, including, for example, CBO's projections under current law of the number of meals and snacks served and the reimbursement rates for those meals and snacks, which partly depend on inflation. Additionally, there is uncertainty about how many schools and centers with low levels of free and reduced price meal reimbursements would drop out of the programs under the option.

Other Effects

The primary argument for this option is that it would target federal subsidies to those most in need. Because the subsidies for meals served to participants from households with income greater than 185 percent of the FPL are small, the effect of the option on those participants and the members of their households would probably be minimal.

An argument against this option is that schools and centers would probably offset part or all of the loss of the subsidies by charging participants from higher-income households higher prices for meals, and some of those participants might stop buying meals. In addition, schools and centers might leave the programs if they incur meal program costs that exceed the subsidies they receive for meals served to participants from households with income at or below 185 percent of the FPL; about one-third of school food authorities surveyed claimed that expenses exceeded revenues in the previous year (Food and Nutrition Service 2016). Individuals at such institutions who would be eligible for free or reduced-price meals would no longer receive subsidized meals, and the meals served at those institutions would no longer have to meet any other requirements of the programs (including the nutrition guidelines).

RELATED OPTIONS: Mandatory Spending, "Convert Multiple Assistance Programs for Lower-Income People Into Smaller Block Grants to States" (page 89), Appendix, Mandatory Spending, "Tighten Eligibility for the Supplemental Nutrition Assistance Program" (page 309)

RELATED CBO PUBLICATION: *Child Nutrition Programs: Spending and Policy Options* (September 2015), www.cbo.gov/publication/50737

WORK CITED: Food and Nutrition Service, *Special Nutrition Program Operations Study*, Nutrition Assistance Program Report (prepared by 2M Research Services LLC, October 2016), p. 165, https://go.usa.gov/xkSeh

Mandatory Spending—Option 27 Function 600

Reduce TANF's State Family Assistance Grant by 10 Percent

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Outlays	0	-0.9	-1.4	-1.5	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-5.4	-13.4

This option would take effect in October 2019.

Background

Temporary Assistance for Needy Families (TANF) provides cash assistance, work support (such as subsidized child care), and other services to some low-income families with children. Almost all of the federal government's TANF funding is provided through a block grant called the State Family Assistance Grant (SFAG), which totals $16 billion annually. The states administer TANF and have considerable latitude in determining the mix of cash assistance, work support, and other services that the program provides. The states also determine the requirements for participation in work-related activities that some recipients must meet to avoid a reduction in the amount of cash assistance they receive through the program.

Option

Beginning in October 2019, this option would reduce the SFAG by 10 percent.

Effects on the Budget

Reducing the amount of the SFAG would decrease federal spending by about $13 billion through 2028, the Congressional Budget Office estimates. Initially, the option would save less than $1.6 billion per year because some states do not spend all of their funding in the year that they receive it. Thus, some of the funding that would be eliminated by this option would not have been spent until later years under current law. CBO estimates that states spend the vast majority of funding within two years of receipt, but some states take eight years to exhaust it. Thus, the reduction in spending will not equal the reduction in funding until 2028. However, the average difference between spending and funding from 2020 through 2028 is only about 10 percent. The speed with which states spend their funding is the main source of uncertainty for this option.

Gauging the savings for alternatives that would reduce the SFAG by other percentages is fairly straightforward. For example, cutting the SFAG by half as much (that is, 5 percent) would reduce spending by about half the amount. If cuts were much larger than 10 percent, states might spend the remaining funding more quickly, which could slightly reduce the savings over the next decade.

Other Effects

One argument for this option is that it might prevent some families from becoming dependent on federal aid, if states responded to the reduction in SFAG funding by making their work requirements more stringent to reduce their spending on cash assistance. The more stringent work requirements would probably result in shorter periods of cash assistance for some families. And, in some cases, family members might find work more quickly, either to compensate for the loss of cash assistance or to comply with the work requirements. However, some states might respond to the reduction in funding by decreasing their spending on work support, which could make finding and keeping jobs harder.

An argument against this option is that it would reduce the amount of assistance available to low-income families with children. Because federal spending on TANF has stayed about the same since 1998, the program's first full year, the purchasing power of that funding has fallen by 28 percent. As real (inflation-adjusted) spending on TANF has decreased, so has the number of families who get cash assistance from the program—from 3.2 million families in 1998 to 1.1 million in 2017. In comparison, roughly 5.5 million families had income below the poverty threshold in 2017. Reducing real spending on the program by an additional 10 percent would further reduce the number of families that TANF served or the amount of assistance that it provided.

RELATED CBO PUBLICATION: *Temporary Assistance for Needy Families: Spending and Policy Options* (January 2015), www.cbo.gov/publication/49887

Mandatory Spending—Option 28 Function 600

Eliminate Supplemental Security Income Benefits for Disabled Children

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Mandatory Outlays	0	-10	-10	-11	-11	-10	-11	-12	-12	-14	-41	-100
Change in Discretionary Outlays	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	-4	-9

This option would take effect in October 2019.

Background

The Supplemental Security Income (SSI) program provides cash assistance to people who are disabled, aged, or both and who have low income and few assets. In 2018, 15 percent of SSI recipients, or 1.2 million people, are projected to be disabled children under age 18, receiving an average monthly benefit of $686. To receive benefits, those children must have marked, severe functional limitations and usually must live in a household with low income and few assets.

Option

This option would eliminate SSI benefits for disabled children.

Effects on the Budget

The Congressional Budget Office estimates that eliminating disabled children's benefits would reduce mandatory spending by $100 billion through 2028. That estimate is based on CBO's projection of the total number of SSI recipients who are disabled children and on their average projected benefits in the 10-year period. Because the number of disabled children and their average benefits are projected to increase over time, the annual savings from this option would also generally increase. However, both the projected number of disabled children and their average projected benefits are inherently uncertain.

Because annual discretionary appropriations cover SSI's administrative costs, this option would generate an extra $9 billion in discretionary savings over the same period. CBO arrived at that estimate using the projected total cost of administering SSI and the percentage reduction in the program's mandatory outlays due to this option, both of which are uncertain.

Other Effects

Eliminating SSI benefits for children may encourage their parents to increase work and thereby increase earnings. (Research has not shown that parents reduce work in anticipation of receiving SSI benefits for their child; however, in one study, parents who stopped receiving their child's SSI benefit significantly increased their work hours and fully offset the loss of the benefit [Deshpande 2016].) Currently, the program's traits create a disincentive for parents to increase work. Unlike another program that aims to help families achieve self-sufficiency, Temporary Assistance for Needy Families, SSI imposes no work requirements on parents and does not explicitly limit how long their child may receive benefits as long as the child remains medically and financially eligible. Furthermore, SSI benefits decrease by 50 cents with each additional dollar of parental earnings above a certain threshold, depending on household size and other factors. (For example, in calendar year 2018, for a single parent with one child who is disabled and with no other income, the SSI benefit is generally reduced after the parent earns more than $1,625 per month.) Although increased work by those parents would support financial self-sufficiency, such a change might have negative effects on the outcomes of disabled children.

Another argument for this option is that, rather than provide a cash benefit to the children's parents without ensuring that they spend the money on disabled children, policymakers could choose to support those children in other ways. For example, states could receive grants to make an integrated suite of educational, medical, and social services available to disabled children and their families. To the extent that funds that would have been used to provide SSI benefits for children were instead used for a new program or to increase the resources of other existing programs, federal savings from this option would be correspondingly reduced.

An argument against the option is that this program serves a disadvantaged group. SSI is the only federal income support program geared toward families with disabled children, and SSI benefits reduce child poverty rates. Families with disabled children are typically more susceptible to economic hardship than other families because of both direct and indirect costs associated with children's disabilities. (Direct costs can include additional out-of-pocket health care expenses, spending on adaptive equipment, and behavioral and educational services. Indirect costs for the parents of disabled children can include lost productivity and negative health effects.)

RELATED CBO PUBLICATION: *Supplemental Security Income: An Overview* (December 2012), www.cbo.gov/publication/43759

WORK CITED: Manasi Deshpande, "The Effect of Disability Payments on Household Earnings and Income: Evidence From the SSI Children's Program," *Review of Economics and Statistics*, vol. 98, no. 4 (October 2016), pp. 638–654, https://dx.doi.org/10.1162/REST_a_00609

Mandatory Spending—Option 29 Function 650

Link Initial Social Security Benefits to Average Prices Instead of Average Earnings

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Outlays												
Apply pure price indexing	0	*	-1	-3	-5	-9	-15	-21	-30	-37	-9	-121
Apply progressive price indexing	0	*	-1	-2	-3	-6	-9	-14	-19	-24	-6	-77

This option would take effect in January 2020.

* = between -$500 million and zero.

Background

Social Security benefits for retired and disabled workers are based on their average lifetime earnings. The Social Security Administration uses a statutory formula to compute a worker's initial benefits, and through a process known as wage indexing, the benefit calculation in each year accounts for economywide growth of wages. Average initial benefits for Social Security recipients therefore tend to grow at the same rate as do average wages. (After people become eligible to receive benefits, their monthly benefits are adjusted annually to account for increases in the cost of living but not for further increases in average wages.)

Option

This option consists of two alternatives to constrain the growth of Social Security benefits. The first alternative would change the computation of initial benefits so that the real (inflation-adjusted) value of average initial benefits did not rise. That alternative, often called "pure" price indexing, would allow increases in average real wages to result in higher real Social Security payroll taxes but not in higher real benefits. Beginning with participants who became eligible for benefits in 2020, pure price indexing would link the growth of initial benefits to the growth of prices (as measured by changes in the consumer price index) rather than to the growth of average wages. (Benefit growth would be cut by reducing three factors that determine the primary insurance amount. The factors would be reduced by the real wage growth in each year. Those three factors are now 90 percent, 32 percent, and 15 percent; the earnings levels at which the factors change are called bend points. For example, with real wage growth of 1 percent, the three factors would be reduced by 1 percent, so in 2020 they would be 89.1 percent, 31.68 percent, and 14.85 percent, respectively.)

Under pure price indexing, benefits for each successive cohort of beneficiaries would be smaller than the benefits scheduled under current law, with the extent of the reduction being determined by the growth of average real wages. For example, if real wages grew by 1 percent annually, workers newly eligible for benefits in the first year the pure price indexing was in effect would receive 1 percent less than they would have received under the current rules; those becoming eligible in the second year would receive about 2 percent less; and so on. The actual incremental reduction would vary from year to year, depending on the growth of real wages.

The second alternative for constraining the growth of initial Social Security benefits, called progressive price indexing, would keep the current benefit formula for workers who had lower earnings and would reduce the growth of initial benefits for workers who had higher earnings.

Under this alternative, initial benefits for the 30 percent of workers with the lowest lifetime earnings would increase with average wages, as they are scheduled to do, but initial benefits for other workers would increase more slowly, at a rate that depended on their position in the distribution of earnings. For example, for workers whose earnings put them at the 31st percentile of the distribution, benefits would rise only slightly more slowly than average wages, whereas for the highest earners—workers with 35 years of earnings at or above the taxable maximum—benefits would rise with prices, as they would under pure price indexing. Thus, under progressive price indexing, the initial benefits for most workers would increase more quickly than prices but more slowly than average wages. As a result, the benefit structure would gradually become flatter, and ultimately, all newly eligible workers in the top 70 percent of earners would receive the same monthly benefit.

Effects on the Budget

Pure price indexing would reduce federal outlays by $121 billion through 2028, the Congressional Budget Office estimates. By 2048, pure price indexing would reduce scheduled Social Security outlays by 16 percent from what would occur under current law; when measured as a percentage of total economic output, the reduction would be 1.1 percentage point because outlays would decline from 6.3 percent to 5.2 percent of gross domestic product. People newly eligible for benefits in 2048, CBO estimates, would experience a reduction in benefits of about one-third from the benefits scheduled under current law.

Progressive price indexing would reduce federal outlays by $77 billion through 2028, CBO estimates. By 2048, progressive price indexing would reduce the outlays for Social Security by 9 percent; when measured as a percentage of total economic output, the reduction would be 0.6 percentage points because outlays would fall from 6.3 percent to 5.7 percent of gross domestic product.

CBO's estimates are based on its projections of the growth in average real wages, which determine the extent of the aggregate benefit reduction that results from each alternative. CBO applies those aggregate benefit reduction rates to the Social Security benefit payments scheduled under current law to arrive at the estimated budgetary savings. For progressive price indexing, the projected distribution of earnings for the top 70 percent of earners also affects the estimated savings.

Because the benefit reductions would increase for each successive cohort of beneficiaries, the projected budgetary savings would increase over time. The realized savings could be higher or lower than shown due to uncertainty in projections of real wage growth.

Other Effects

Under both approaches, the people most affected by the option are those who would become eligible for benefits in the distant future. Those beneficiaries, however, would have had higher real earnings during their working years and thus a greater ability to save for retirement on their own to offset those reductions.

Progressive price indexing would reduce scheduled Social Security benefits less than would pure price indexing, and beneficiaries with lower earnings would not be affected. Real annual average benefits would still increase for all but the highest-earning beneficiaries. Benefits would replace less of affected workers' earnings than under current law but would replace more earnings than they would under pure price indexing.

An argument for both alternatives in this option is that average inflation-adjusted benefits in the program would not decline over time. If lawmakers adopted pure price indexing, future beneficiaries would generally receive the same real monthly benefit paid to current beneficiaries, and as average longevity increased, they would receive benefits for more years.

But because benefits would not be as closely linked to average wages, an argument against both alternatives is that affected beneficiaries would not share in overall economic growth to the same extent as they do under current law. As a result, benefits would replace less of the affected beneficiaries' earnings than they do today.

RELATED OPTIONS: Mandatory Spending, "Make Social Security's Benefit Structure More Progressive" (page 99), "Raise the Full Retirement Age for Social Security" (page 101)

RELATED CBO PUBLICATIONS: *Social Security Policy Options, 2015* (December 2015), www.cbo.gov/publication/51011; letter to the Honorable Paul Ryan providing CBO's analysis of the Roadmap for America's Future Act of 2010 (January 27, 2010), www.cbo.gov/publication/41860; *Long-Term Analysis of S. 2427, the Sustainable Solvency First for Social Security Act of 2006* (attachment to a letter to the Honorable Robert F. Bennett, April 5, 2006), www.cbo.gov/publication/17701

Mandatory Spending—Option 30 Function 650

Make Social Security's Benefit Structure More Progressive

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Outlays												
Use 90/32/5 PIA factors	0	0	*	-0.2	-0.3	-0.5	-0.9	-1.4	-1.8	-2.3	-0.5	-7.4
Use 100/25/5 PIA factors	0	0	-0.3	-0.7	-1.5	-2.5	-4.2	-6.3	-8.8	-11.2	-2.5	-35.5

This option would take effect in January 2020.

PIA = primary insurance amount; * = between -$50 million and zero.

Background

The amount of the Social Security benefit paid to a disabled worker or to a retired worker who claims benefits at the full retirement age is called the primary insurance amount (PIA). The Social Security Administration (SSA) calculates that amount using a formula applied to a worker's average indexed monthly earnings (AIME), a measure of average taxable earnings over that worker's lifetime. The benefit formula is progressive, meaning that the benefit is larger as a share of lifetime earnings for someone with a lower AIME than it is for a person with a higher AIME. To compute the PIA, the SSA separates AIME into three brackets by using two bend points (or dollar threshold amounts). In calendar year 2018, the first bend point is $895, and the second bend point is $5,397. Average indexed earnings in each of the three brackets are multiplied by three corresponding factors to determine the PIA: 90 percent, 32 percent, and 15 percent. (Bend points rise each year with average wages, whereas the factors remain constant.)

For example, a worker with an AIME of $1,000 would have a PIA of $839 because the 90 percent PIA factor would apply to the first $895, and the 32 percent factor would apply to the remaining $105. A worker with an AIME of $6,000 would have a PIA of $2,337 because the 90 percent factor would apply to the first $895, the 32 percent factor would apply to the next $4,502 ($5,397 minus $895), and the 15 percent factor would apply to the remaining $603 ($6,000 minus $5,397). Because the formula is progressive, for an AIME of $1,000, the PIA amounts to 84 percent of the AIME; for $6,000, the PIA amounts to 39 percent of the AIME.

Option

This option would make the Social Security benefit structure more progressive by cutting benefits for people with higher average earnings while either preserving or expanding benefits for people with lower earnings. Starting with people newly eligible in 2020, the first alternative in this option would affect only beneficiaries with an AIME above the second bend point. That approach would reduce the 15 percent PIA factor by 1 percentage point per year until it reached 5 percent in 2029.

The more progressive second alternative in this option would reduce benefits for a larger fraction of beneficiaries with higher lifetime earnings while increasing benefits for people with lower lifetime earnings. The second approach would lower both the 15 percent and 32 percent factors and would increase the 90 percent factor. The factors would change gradually over 10 years until they reached 5 percent, 25 percent, and 100 percent, respectively. (The 15 percent and 90 percent factors would change by 1 percentage point per year, whereas the 32 percent factor would change by 0.7 percentage points per year.)

Effects on the Budget

The first alternative would reduce total federal outlays for Social Security over the 10-year period by about $7 billion, the Congressional Budget Office estimates. That estimate is based on CBO's projections of the share of newly eligible beneficiaries who would be affected by that approach and the average reduction in their benefits. By 2028, based on data provided by the Social Security Administration, CBO estimates that about 2.5 million people, or 13 percent of all newly eligible beneficiaries, would be affected. For people who become eligible in 2028, the average decline in monthly benefits for those affected would amount to 4 percent, or about $150 dollars, relative to amounts under current law.

The second alternative would achieve total federal savings of $36 billion over the 10-year period. CBO estimates that about 45 percent of new beneficiaries would receive benefits that are higher than under current law, while 55 percent of new beneficiaries would receive benefits that are lower. People who become eligible in 2028 and would get increased benefits would, on average, receive 6 percent, or about $70 dollars per month, more than under current law; the average decrease for people whose benefits would be reduced would amount to about 8 percent, or $220 dollars per month.

Annual savings from both alternatives would grow over time as the new benefit structure applied to more beneficiaries. In 2048, the first and second alternatives would reduce Social Security outlays from what would occur under current law by 2 percent and 6 percent, respectively. When measured as a percentage of total economic output, the reduction in Social Security outlays under the two alternatives would be 0.2 percentage points and 0.4 percentage points, as the outlays fell from 6.3 percent of gross domestic product to 6.1 percent and to 5.9 percent, respectively.

To achieve greater budgetary savings, larger reductions in the 15 percent and the 32 percent PIA factors could be implemented. (Conversely, smaller reductions would result in less savings.) In addition, to target benefit reductions more narrowly, one or more additional bend points could be added to the formula.

The overall savings from the alternatives in this option could be higher or lower than shown because the projected distribution of earnings and the resulting benefits are uncertain. For example, if earnings were more equally distributed than CBO has projected, resulting in more people with an AIME above the second bend point, the savings from both approaches would be slightly higher than shown because the reduction in benefits would apply to more people.

Other Effects

An argument in favor of this option is that it would better target Social Security benefits toward people who need them more—protecting or expanding benefits for people with low average earnings while reducing payments to people with higher average earnings. This option would help make the Social Security system more progressive at a time when growing disparities in life expectancy by income level are making the system less progressive. (Beneficiaries with higher income typically live longer and experience larger improvements in their life expectancy than lower-income beneficiaries. As a result, higher-income groups receive benefits for more years, on average, than lower-income beneficiaries.) The second approach in this option would increase progressivity more than the first approach by boosting benefits to lower-income people.

An argument against this option is that it would weaken the Social Security system's link between earnings and benefits. In addition, the second approach would reduce benefits for beneficiaries with an AIME above the 45th percentile, some of whom do not have high lifetime earnings. In particular, CBO projects that in 2028 the second approach would reduce benefits for people with an AIME higher than about $3,100, or approximately $37,000 in annual indexed earnings.

RELATED OPTIONS: Mandatory Spending, "Raise the Full Retirement Age for Social Security" (page 101), "Link Initial Social Security Benefits to Average Prices Instead of Average Earnings" (page 97)

RELATED CBO PUBLICATIONS: *CBO's 2016 Long-Term Projections for Social Security: Additional Information* (December 2016), www.cbo.gov/publication/52298; *Social Security Policy Options, 2015* (December 2015), www.cbo.gov/publication/51011

Mandatory Spending—Option 31 **Function 650**

Raise the Full Retirement Age for Social Security

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Outlays	0	0	0	0	-0.2	-0.9	-2.2	-4.5	-7.6	-12.8	-0.2	-28.2

This option would take effect in January 2023.

Background

The age at which workers become eligible for full retirement benefits from Social Security—the full retirement age (FRA), also called the normal retirement age—depends on their year of birth. For workers born in 1937 or earlier, the FRA was 65. It increased in two-month increments for each successive birth year until it reached 66 for workers born in 1943. For workers born between 1944 and 1954, the FRA holds at 66, but it then increases again in two-month increments and reaches age 67 for workers born in 1960 or later. As a result, the FRA is 67 for workers who turn 62 in 2022 or later. The earliest age at which workers may start to receive reduced retirement benefits will remain 62; however, benefit reductions at that age will be larger for workers whose FRA is higher. For example, workers born in 1954 (whose FRA is 66) will receive a permanent 25 percent reduction in their monthly benefit amount if they claim benefits at age 62 rather than at their FRA, whereas workers born in 1960 (whose FRA is 67) will receive a 30 percent reduction if they claim benefits at 62.

Option

Under this option, the FRA would continue to increase from age 67 by two months per birth year beginning with workers turning 62 in 2023, until it reached age 70 for workers born in 1978 or later (who will turn 62 beginning in 2040). As under current law, workers could still choose to begin receiving reduced benefits at age 62, but the reduction in their initial monthly benefit would be larger, reaching 45 percent when the FRA is 70. This option would not reduce the benefits for workers who qualify for Social Security Disability Insurance (DI).

An increase in the FRA would reduce lifetime benefits for every affected Social Security recipient, regardless of the age at which a person claims benefits. Workers could maintain the same monthly benefit by claiming benefits at a later age, but then they would receive benefits for fewer years.

Effects on the Budget

This option would shrink federal outlays by $28 billion through 2028, the Congressional Budget Office estimates. By 2048, the option would reduce Social Security outlays from what would occur under current law by 8 percent; when measured as a percentage of total economic output, the reduction would be about 0.5 percentage points because outlays would fall from 6.3 percent to 5.8 percent of gross domestic product.

CBO's estimates reflect the projected age distribution of future beneficiaries and the benefit reductions that would occur at each claim age under this option. Savings would increase each year both because more beneficiaries would be subject to the higher FRA and because the reduction would be greater for each additional birth cohort of beneficiaries up to the 1978 cohort. However, overall savings could differ from the estimates shown here because of unexpected changes in the timing of benefit claiming.

Because many workers retire at the FRA, CBO estimates that increasing that age would result in some beneficiaries' working longer and claiming Social Security benefits later than they would under current law. The magnitude of that estimated effect is consistent with the change in claiming behavior that occurred after the FRA had increased from age 65 to age 66. (However, the estimates shown here do not include the budgetary effects of an increase in the overall supply of labor.) As the FRA increased to age 70 under this option, it is uncertain whether workers would continue to respond by working as many additional months as they did when the FRA increased to age 66.

Because the reduced benefits would create an incentive for workers to apply for DI benefits, which would not be affected by this option, the estimates shown here reflect the higher resulting applications and awards for the DI program. For example, under current law, workers who retire at age 62 in 2048 will receive 70 percent of their primary insurance amount (what they would have received had they claimed benefits at their FRA); if they qualify for DI benefits, however, they will receive the full amount. Under this option, workers who retired at 62 in 2048 would receive only 55 percent of their primary insurance amount, but they would still receive 100 percent if they qualified for DI benefits. As a result, CBO estimates, the total benefits for the DI program in 2048 would be slightly higher under this option relative to the total benefits under current law.

To achieve additional savings, the FRA could be increased more quickly or could continue beyond age 70. A one-year increase in the FRA would be equivalent to a reduction in the monthly benefit of about 6 percent to 8 percent, depending on the age at which a recipient chose to claim benefits and the recipient's FRA. For claims before the FRA, benefits would be reduced 5/9 of a percent for each of the first 36 months before the FRA. For example, if workers claimed benefits three years before the FRA, their benefits would be reduced by 20 percent. For claims more than three years before the FRA, benefits would be further reduced by 5/12 of a percent for each additional month, or 5 percent per year. For example, if workers claimed benefits five years before the FRA, their benefits would be reduced by 30 percent. (Conversely, for workers who claimed benefits after their FRA, the benefits ould be increased by 8/12 of a percent per month because of delayed retirement credits.)

Some proposals to increase the FRA also would increase the earliest eligibility age (EEA)—when participants may first claim retirement benefits—from 62. Increasing the EEA together with the FRA would cause federal spending to be lower in the first few decades fter implementation and higher in later decades than if only the FRA was increased. A higher EEA would prevent some people from claiming any Social Security benefits in the year in which they would first become eligible under current law; however, those people's monthly benefits would be higher when they ultimately became eligible for benefits under the higher EEA.

Other Effects

An argument for this option is that people who turn 65 today will, on average, live significantly longer and collect Social Security benefits for more years than retirees did in the past, increasing their average lifetime Social Security benefits. In 1940, life expectancy at 65—the number of additional years a person was expected to live after reaching that age—was 11.9 years for men and 13.4 years for women. Since that time, life expectancy at 65 has risen by more than six years, to 18.2 years for men and 20.7 years for women. Therefore, a commitment to provide retired workers with a certain monthly benefit beginning at age 65 today is significantly more costly than that same commitment made to recipients in 1940. However, the gains in life expectancy have not been uniform: In recent decades, life expectancy has generally increased more quickly for beneficiaries with higher lifetime earnings, who receive higher Social Security benefits.

An argument against this option is that it would increase the incentive for workers nearing retirement to stop working and apply for DI benefits. To eliminate that added incentive to apply for disability benefits, policymakers could narrow the difference in benefit amounts by also reducing scheduled disability payments.

In addition, increasing only the FRA would increase the risk of poverty at older ages for people who did not respond to the increase in the FRA by delaying the age at which they claimed benefits or by applying for DI benefits. If the option was accompanied by an increase in the EEA, poverty at older ages would be reduced. However, for people who depended on retirement benefits at age 62, increasing the EEA would cause financial hardship, even if the total lifetime value of their benefits would be generally unchanged.

RELATED OPTIONS: Mandatory Spending, "Raise the Age of Eligibility for Medicare to 67" (page 68), "Link Initial Social Security Benefits to Average Prices Instead of Average Earnings" (page 97), "Make Social Security's Benefit Structure More Progressive" (page 99), "Eliminate Eligibility for Starting Social Security Disability Benefits at Age 62 or Later" (page 105)

RELATED CBO PUBLICATIONS: *Social Security Policy Options, 2015 (*December 2015), www.cbo.gov/publication/51011; *Policy Options for the Social Security Disability Insurance Program* (July 2012), www.cbo.gov/publication/43421; *Raising the Ages of Eligibility for Medicare and Social Security* (January 2012), www.cbo.gov/publication/42683; "Raise the Earliest Eligibility Age for Social Security," in *Reducing the Deficit: Spending and Revenue Options* (March 2011), www.cbo.gov/publication/22043; Jae Song and Joyce Manchester, *Have People Delayed Claiming Retirement Benefits? Responses to Changes in Social Security Rules,* Working Paper 2008-04 (May 2008), www.cbo.gov/publication/19575

Mandatory Spending—Option 32 Function 650

Require Social Security Disability Insurance Applicants to Have Worked More in Recent Years

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Outlays	0	-0.7	-1.8	-3.0	-4.3	-5.5	-6.8	-8.1	-9.3	-10.5	-9.7	-50.0

This option would take effect in January 2020.

Background

To be eligible for benefits under Social Security Disability Insurance (DI), disabled workers must generally have worked 5 of the past 10 years. Specifically, workers over age 30 must have earned at least 20 quarters of coverage in the past 10 years. (In this option, the 10-year time frame is referred to as the look-back period.) In calendar year 2018, a worker receives one quarter of coverage, the basic unit for determining coverage under Social Security, for each $1,320 earned during the year, up to four quarters; the amount of earnings required for a quarter of coverage generally increases annually with average wages in the economy.

Option

This option would raise the share of recent years that disabled workers must have worked while shortening the look-back period. It would require disabled workers older than 30 to have earned 16 quarters of coverage in the past 6 years—usually equivalent to working 4 of the past 6 years. That change in policy would apply to people seeking benefits in 2020 and later and would not affect blind applicants, who are exempt from the recency-of-work requirement.

Effects on the Budget

The Congressional Budget Office estimates that the option would lower federal outlays for Social Security by $50 billion from 2020 through 2028. Based on administrative data from the Social Security Administration, CBO estimates that about 13 percent of those who would receive new disability awards each year under current law would not meet the work requirement under this option. CBO estimates that a quarter of those affected by the option would be able to earn enough additional quarters of coverage to later qualify for DI benefits under the new standard. Incorporating that effect, this option would reduce the number of workers who received DI benefits by 6 percent, or about 600,000 people, in 2028, CBO estimates.

Most of the people affected by the option would eventually claim retirement benefits at age 62, but at a reduced rate, because they would be claiming benefits earlier than their full retirement age. (Benefits for retired workers who claim benefits before their full retirement age are reduced by up to 30 percent depending on their birth cohort and the age at which they claim benefits.) CBO's estimates of budgetary savings from the option over a 10-year period reflect the net result of a $57 billion reduction in DI outlays and a $7 billion increase in Social Security retirement benefits relative to amounts under current law.

Budgetary savings from this option would increase as a share of total Social Security benefits for several decades as fewer workers received DI benefits each year. However, the overall savings would remain small, and, in 2048, outlays for Social Security would be about 1 percent lower than under current law.

Several sources of uncertainty could affect the overall savings from this option. The share of affected workers who would be able to work longer and still qualify for DI benefits under the option could be higher or lower than anticipated, as could the difference between those workers' benefits and the average DI benefit. For example, if those affected workers had benefits that were higher than the average, the budgetary savings from this option would be lower.

In addition, it is uncertain how the option would affect spending for other federal programs—such as Medicare, Medicaid, and Supplemental Security Income (SSI)—or spending on subsidies for health insurance purchased through marketplaces. Through 2028, those effects would reduce the savings slightly. On one hand, disabled workers who would no longer qualify for DI under this option would lose their eligibility for Medicare until age 65, thus reducing spending for Medicare. On the other hand, some disabled workers who lose DI and Medicare benefits under this option would become eligible for SSI, Medicaid, or health insurance subsidies, increasing spending for those programs. Uncertainty about those effects grows over time, in part because of growing uncertainty about health care costs under different federal programs. The estimates presented here do not account for changes in spending for those other federal programs.

An alternative approach could raise the number of recent years that disabled workers must have worked while lengthening the look-back period by requiring workers to have worked 8 of the past 12 years. That approach would result in similar budgetary effects. Such an adjustment would help people who had worked consistently in the past but who had been unable to find work in the years immediately before they became disabled.

Other Effects

An argument in favor of this option is that it would better target benefits toward people who do not work because of a recent disability; however, whether that is actually the case is difficult to determine. Under current law, people who have not been in the labor force for five years can qualify for disability benefits. By comparison, this option would only allow people who were out of the labor force for two years or less to qualify for benefits.

A reason to keep the existing work provision is that the option could penalize some people who would have been working were they not disabled. For example, some people might leave the workforce for more than two years to care for children or pursue additional education and then become disabled while out of the workforce or shortly after returning to work. Those people could qualify for disability benefits under current law but would not qualify under this option. Similarly, some people who were in the labor force but unable to find work for over two years before becoming disabled would become ineligible for benefits under the option.

RELATED OPTION: Mandatory Spending, "Eliminate Eligibility for Starting Social Security Disability Benefits at Age 62 or Later" (page 105)

RELATED CBO PUBLICATIONS: *Social Security Disability Insurance: Participation and Spending* (June 2016), www.cbo.gov/publication/51443; *Social Security Policy Options, 2015* (December 2015), www.cbo.gov/publication/51011; *Policy Options for the Social Security Disability Insurance Program* (July 2012), www.cbo.gov/publication/43421

Mandatory Spending—Option 33 Function 650

Eliminate Eligibility for Starting Social Security Disability Benefits at Age 62 or Later

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Outlays	0	-0.2	-0.5	-1.0	-1.5	-2.1	-2.7	-3.3	-4.0	-4.7	-3.1	-19.9

This option would take effect in January 2020.

Background

Under current law, people are eligible for Social Security Disability Insurance (DI) until they reach full retirement age—currently 66 years and 4 months for workers who turn 62 in 2018. The full retirement age is scheduled to rise gradually, starting at 66 years and 6 months for workers born in 1957 (who will turn 62 in 2019) and eventually reaching 67 for people born in 1960 or later (the oldest of whom will turn 62 in 2022). Workers who claim retirement benefits after turning 62 and before their full retirement age receive lower benefits for as long as they live. By contrast, workers who claim DI benefits before their full retirement age are not subject to a reduction in DI benefits. When those workers reach their full retirement age, their DI benefits are automatically converted to full retirement benefits, and the benefit amount remains the same.

That difference in benefits encourages some people between age 62 and their full retirement age to apply for DI when they apply for Social Security retirement benefits. If their DI application is approved, they receive higher benefits for the rest of their life than if they had applied only for retirement benefits. (Some people claim retirement benefits during the five-month waiting period that the DI program imposes on applicants. If they receive retirement benefits during the waiting period and then are approved for the DI program, their monthly DI benefits and future retirement benefits are reduced a little. For example, if they receive retirement benefits for the full five months, their future DI and retirement benefits are generally reduced by 2 percent.)

Option

Under this option, workers would not be allowed to apply for DI benefits after their 62nd birthday nor to receive DI benefits for a qualifying disability that begins after that date. Under such a policy, individuals who would have become eligible for DI benefits at age 62 or later under current law would instead have to claim retirement benefits if they wanted to receive Social Security benefits based on their own earnings. Benefits for those people over their lifetime would be as much as 30 percent lower than the DI and retirement benefits they are scheduled to receive under current law. (The actual reduction in lifetime benefits would depend on their year of birth and the age at which they claimed retirement benefits.) Workers who would have become eligible for DI benefits based on a disability that began before age 62 would not be affected by this option.

Effects on the Budget

The option would reduce federal outlays for Social Security by $20 billion between 2020 and 2028, the Congressional Budget Office estimates. Based on data from the Social Security Administration, CBO estimates that, under current law, about 11 percent of new disability awards each year would be made to people who, after their 62nd birthday, applied for DI or experienced the onset of a qualifying disability. CBO estimates that in 2028 this option would affect about 730,000 people who would have received disability benefits under current law. Under the option, those people are projected to instead collect retirement benefits, which would be up to 30 percent lower than the disability benefits because they would be claiming benefits earlier than their full retirement age. CBO's estimates of the budgetary savings from the option reflect the net result of an $85 billion reduction in DI outlays and a $65 billion increase in Social Security retirement benefits as people shifted from the DI program to the retirement program. The estimate accounts for factors such as the distribution of average benefits by age, which depends on projected earnings, as well as the delay between disability onset and benefit receipt.

Budgetary savings from this option increase over time as more workers become affected by the new eligibility rules; however, the overall savings remain relatively small. By 2048, Social Security outlays (including both DI and retirement benefits) would be reduced by less than 1 percent from what they would be under current law.

Uncertainty about the effects of the option on other federal spending and on people's behavior could cause the savings from the option to be higher or lower than estimated. First, it is uncertain how the option would affect spending for other federal programs—such as Medicare, Medicaid, and Supplemental Security Income (SSI)—as well as spending on subsidies for health insurance purchased through marketplaces. Through 2028, those effects would reduce the savings slightly. On the one hand, disabled workers older than 62 would lose their eligibility for Medicare until age 65, thus reducing spending for Medicare. On the other hand, some disabled workers who lose DI and Medicare benefits under this option would become eligible for SSI, Medicaid, or health insurance subsidies, increasing spending for those programs. Uncertainty about those effects grows over time, in particular because of growing uncertainty about health care costs under different federal programs. The estimates presented here do not account for changes in spending for those other federal programs.

The second important source of uncertainty is how older people's participation in the labor force and the timing of benefit claiming would change in response to this option. On the one hand, the option would induce some people to work longer than they would under current law: Although DI benefits are available only to people judged unable to perform substantial work, some people could find employment that would accommodate their disabilities. If DI benefits were not available, those people would work longer and claim benefits later than they would under current law. On the other hand, the option would induce some people planning to work until age 62 or later to leave the labor force at age 61 so that they could apply for DI benefits. The estimates presented here do not include the effects of those factors, whose magnitudes are uncertain.

Other Effects

An argument for this option is that it eliminates the incentive for people applying for retirement benefits to apply for disability benefits at the same time in hopes of securing a financial advantage. Moreover, workers who became disabled between age 62 and the full retirement age would still have access to Social Security retirement benefits, although those benefits would be smaller than the disability benefits available under current law.

An argument against this option is that it would substantially reduce the support available to older people who, under current law, would be judged too disabled to perform substantial work. Those people would have received significantly lower benefits from Social Security if they had been ineligible for DI and had applied for retirement benefits before reaching the full retirement age. In addition, some people would have lost coverage through Medicare because that program's benefits are generally not available to people under age 65, whereas most recipients of DI become entitled to Medicare benefits 24 months after their DI benefits begin. In addition, DI beneficiaries typically have lower life expectancy than non-DI beneficiaries, resulting in their receiving benefits for fewer years. This option would further reduce the amount of benefits they receive over a lifetime.

RELATED OPTIONS: Mandatory Spending, "Raise the Full Retirement Age for Social Security" (page 101), "Require Social Security Disability Insurance Applicants to Have Worked More in Recent Years" (page 103)

RELATED CBO PUBLICATIONS: *Social Security Disability Insurance: Participation and Spending* (June 2016), www.cbo.gov/publication/51443; *Policy Options for the Social Security Disability Insurance Program* (July 2012), www.cbo.gov/publication/43421; *Supplemental Security Income: An Overview* (December 2012), www.cbo.gov/publication/43759

Mandatory Spending—Option 34 Function 700

Narrow Eligibility for Veterans' Disability Compensation by Excluding Certain Disabilities Unrelated to Military Duties

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Outlays												
Exclude certain disabilities from veterans' disability compensation	0	-2.4	-3.3	-3.5	-3.6	-3.7	-3.9	-4.0	-4.2	-4.4	-12.7	-33.0
Exclude certain disabilities from veterans' disability compensation for new applicants	0	*	-0.1	-0.2	-0.3	-0.4	-0.5	-0.6	-0.7	-0.8	-0.7	-3. 6

This option would take effect in January 2020.

* = between -$50 million and zero

Background

Veterans may receive disability compensation from the Department of Veterans Affairs (VA) for medical conditions or injuries that occurred or worsened during active-duty military service. Such service-connected disabilities range widely in severity and type, from migraines and treatable hypertension to the loss of limbs. VA also provides dependency and indemnity compensation (DIC)—payments to surviving spouses or children of a veteran who died from a service-related injury or disease. The Department of Defense (DoD) has a separate compensation system for service members who can no longer fulfill their military duties because of a disability.

Not all service-connected medical conditions and injuries are incurred or exacerbated in the performance of military duties. For example, a qualifying injury could occur when a service member was at home or on leave, and a qualifying medical condition, such as Parkinson's disease, could develop independently of a service member's military duties. In 2017, VA paid a total of $2.7 billion, the Congressional Budget Office (CBO) estimates, to compensate for seven medical conditions that, according to the Government Accountability Office (GAO), military service is unlikely to cause or aggravate. Those conditions are arteriosclerotic heart disease, chronic obstructive pulmonary disease, Crohn's disease, hemorrhoids, multiple sclerosis, osteoarthritis, and uterine fibroids. There were 758,085 instances of those conditions in 2017.

Option

Beginning in January 2020, this option would cease veterans' disability compensation for the seven medical conditions GAO identified. Under the option's first alternative, veterans now receiving compensation for those conditions would have their compensation reduced or eliminated, and veterans who applied for compensation for those conditions in the future would not be eligible for it. The second alternative would affect only new applicants for disability compensation. The option would not alter DoD's disability compensation system.

Effects on the Budget

By CBO's estimates, the savings from the first alternative, in which VA would no longer make payments to all veterans for the seven medical conditions, would be $33 billion between 2020 and 2028. Most of the savings would result from curtailing payments to current recipients of disability compensation. In 2020, VA would no longer provide compensation for about 846,000 cases of those seven conditions, CBO estimates. That number would rise to 976,000 cases in 2028. (The number of veterans affected by the option would be fewer than the number of cases because some veterans would have more than one of the seven conditions.) In addition, CBO estimates that veterans' loss of eligibility for the seven conditions would result in fewer cases of DIC. The option would result in about 1,200 fewer of those cases in 2028, CBO estimates.

Savings from the second alternative, in which only new applicants for disability compensation would be ineligible to receive payments for the seven conditions, would be about $4 billion over the 2020–2028 period, CBO estimates. The number of cases for which VA would not provide compensation would increase from 15,000 in 2020 to approximately 225,000 by 2028.

The largest source of uncertainty in estimating the savings from this option is the estimate of the population receiving benefit payments for each of the seven conditions. CBO projects the number of veterans receiving payments for those conditions on the basis of historical information on the number of veterans receiving a disability rating for such conditions, the growth of the overall disability compensation program, the mortality rate of the disability compensation population, and other factors. Savings per veteran are estimated by calculating the average rating and payment for each of the seven conditions and reducing the veteran's payment by a corresponding amount.

Other Effects

An argument in support of this option is that it would make the disability compensation system for military veterans more comparable to civilian systems. Few civilian employers offer long-term disability benefits, and among those that do, benefits do not typically compensate individuals for all medical problems that developed during employment.

An argument against this option is that veterans' compensation could be viewed as a lifetime indemnification the federal government owes to people who become disabled to any degree during service in the armed forces.

RELATED OPTION: Mandatory Spending, "End VA's Individual Unemployability Payments to Disabled Veterans at the Full Retirement Age for Social Security" (page 109)

RELATED CBO PUBLICATION: *Veterans' Disability Compensation: Trends and Policy Options* (August 2014), www.cbo.gov/publication/45615

Mandatory Spending—Option 35 Function 700

End VA's Individual Unemployability Payments to Disabled Veterans at the Full Retirement Age for Social Security

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Outlays												
End IU payments to all veterans age 67 or older	0	-2.8	-4.0	-4.4	-4.9	-5.4	-5.8	-6.3	-6.8	-7.2	-16.1	-47.6
End IU payments to all veterans age 67 or older who would begin receiving IU after December 2019	0	-0.1	-0.2	-0.4	-0.5	-0.7	-0.9	-1.1	-1.3	-1.5	-1.2	-6.7

This option would take effect in January 2020.

IU = Individual Unemployability.

Background

In 2017, 4.5 million veterans with medical conditions or injuries that were incurred or that worsened during active-duty service received disability compensation from the Department of Veterans Affairs (VA). The amount of compensation such veterans receive depends on the severity of their disabilities (which are rated between zero and 100 percent in increments of 10), the number of their dependents, and other factors—but not on their income or civilian employment history.

In addition, VA may increase certain veterans' disability compensation to the 100 percent level, even though VA has not rated their service-connected disabilities at that level. To receive the supplement, termed an Individual Unemployability (IU) payment, disabled veterans must apply for the benefit and meet two criteria. First, veterans generally must be rated between 60 percent and 90 percent disabled. Second, VA must determine that veterans' disabilities prevent them from maintaining substantially gainful employment—for instance, if their employment earnings would keep them below the poverty threshold for one person. In 2017, for veterans who received the supplement, it boosted their monthly VA disability payment by an average of about $1,200. In September 2017, about 380,000 veterans received IU payments. Of those veterans, the Congressional Budget Office estimates, about 180,000 were age 67 or older. That age group has been the largest driver of growth in the program.

VA's regulations require that IU benefits be based on a veteran's inability to maintain substantially gainful employment because of the severity of a service-connected disability and not because of age, voluntary withdrawal from work, or other factors. About 48 percent of veterans receiving the IU supplement were 67 or older in September 2017, up from about 40 percent in September 2010. That rise is attributed largely to the aging of Vietnam War veterans.

Option

This option consists of two alternatives, both beginning in January 2020. Under the first alternative, VA would stop making IU payments to veterans age 67 or older (the full retirement age for Social Security benefits for those born after 1959). That restriction would apply to both current and prospective recipients. Therefore, at age 67, VA disability payments would revert to the amount associated with the rated disability level.

Under the second alternative, veterans who begin receiving the IU supplement after January 2020 would no longer receive those payments once they reach age 67. In addition, no new applicants who are age 67 or older would be eligible for IU benefits after that date. Unlike under the first alternative, veterans who are already receiving IU payments and are age 67 or older after the effective date of the option would continue to collect the IU supplement.

Effects on the Budget

By CBO's estimates, the savings from the first alternative, in which veterans age 67 or older may no longer collect the IU supplement, would be $48 billion between 2020 and 2028. That reduction in spending is the result of a decrease in the number of veterans who would qualify for the supplement. CBO estimates that the number of veterans who would no longer receive or qualify for the IU supplement would total nearly 235,000 in 2020. That number would increase to 382,000 veterans in 2028, with savings totaling $7 billion in that year. Disability payments for those who lost eligibility would be reduced by an average of $1,300 per month in 2020, increasing to $1,600 by 2028.

The savings from the second alternative, which would end IU payments to new recipients and bar applications from veterans who are age 67 or older after the effective date of the option, would total $7 billion between 2020 and 2028. The number of veterans who would not collect IU payments under this alternative grows from 8,300 in 2020 to 83,000 in 2028. The savings from this alternative equal $2 billion in that final year of the projection period.

CBO projects the number of veterans receiving the IU supplement on the basis of past growth in the number of new recipients (by age) and adjusts that number to account for the morbidity of beneficiaries and other factors, such as the backlog of disability cases to be decided. For IU recipients who would no longer receive the supplement under this option, CBO determines per-veteran savings by reducing the payment amount to a level that corresponds to the veteran's overall disability rating. CBO estimates that rating on the basis of historical data on IU recipients and anticipated changes in the distribution of their ratings. The largest sources of uncertainty in the estimate of savings over the next 10 years are CBO's estimates of the number of participants who would be affected by the option and of the disability ratings of those affected. Changes in policy, such as increased efforts by VA and private organizations to inform veterans about this benefit or the level of assistance given by those entities in developing a claim, may affect the number of applicants with fully developed claims, and consequently contribute to uncertainty regarding the savings from this option.

Other Effects

One argument for this option is that most veterans older than Social Security's full retirement age would not be in the labor force because of their age, so their lack of earnings would probably not be attributable to service-connected disabilities. In 2017, about 35 percent of men ages 65 to 69 were in the labor force; for men age 75 or older, that number dropped to about 10 percent. In addition, most recipients of IU payments who are older than 65 would have other sources of income: They would continue to receive regular VA disability payments and might also collect Social Security benefits. (Recipients of the IU supplement typically begin collecting it in their 60s and probably have worked enough in prior years to earn Social Security benefits.)

An argument for retaining the current policy is that IU payments should be determined solely on the basis of a veteran's ability to work due to his or her disabilities and that age should not be a factor in deciding a claim. In addition, replacing the income from the IU supplement would be hard or impossible for some disabled veterans. If they had been out of the workforce for a long time, their Social Security benefits might be small, and they might not have accumulated much in personal savings.

RELATED OPTIONS: Mandatory Spending, "Narrow Eligibility for Veterans' Disability Compensation by Excluding Certain Disabilities Unrelated to Military Duties" (page 107), "Narrow Eligibility for VA's Disability Compensation by Excluding Veterans With Low Disability Ratings" (page 113)

RELATED CBO PUBLICATION: *Veterans' Disability Compensation: Trends and Policy Options* (August 2014), www.cbo.gov/publication/45615

Mandatory Spending—Option 36 Function 700

Reduce VA's Disability Benefits to Veterans Who Are Older Than the Full Retirement Age for Social Security

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Outlays	0	-0.2	-0.4	-0.7	-0.9	-1.1	-1.4	-1.7	-1.9	-2.2	-2.2	-10.5

This option would take effect in January 2020.

Background

In 2017, 4.5 million veterans with medical conditions or injuries that occurred or worsened during active-duty service received disability compensation from the Department of Veterans Affairs (VA). Service-connected disabilities vary widely in severity and type: Some examples are the loss of a limb, migraines, and hypertension. The amount of base compensation veterans receive depends on the severity of their disabilities (which are rated between zero and 100 percent in increments of 10). In calendar year 2018, base compensation rates generally ranged from $135 to $2,975 per month. Additional compensation may be awarded to veterans based on the number of their dependents and other factors. By law, VA's disability payments are intended to offset the average earnings that veterans would be expected to lose given the severity of their service-connected medical conditions or injuries, whether or not a particular veteran's condition actually reduced his or her earnings. Disability compensation is not means-tested: Veterans who work are eligible for benefits, and, in fact, most working-age veterans who receive such compensation are employed. (In contrast, Social Security Disability Insurance pays cash benefits to adults who are judged to be unable to perform "substantial" work because of a disability, and they eventually lose the benefits if they return to work and earn more than the program's limit on earnings—for most beneficiaries, $1,180 a month in calendar year 2018. Those Social Security disability benefits are based on previous earnings and usually replace wages and salaries on less than a one-to-one basis.)

Even after veterans reach full retirement age, VA's disability payments continue at the same level. By contrast, the income that people receive after they retire (from Social Security or private pensions) usually is less than their earnings from wages and salary before retirement. For instance, the ratio of benefits from Social Security to average lifetime earnings is usually much less than 1 to 1. For workers who have earned relatively low wages over their career, the ratio is around one-half; for higher-income workers, it is around one-quarter or less. As a consequence, once veterans reach retirement age, the combination of their VA disability payments and Social Security benefits may be more than the income of comparable veterans without a service-connected disability. In 2016, about 87 percent of veterans who received VA's disability compensation and who were age 67 or older were out of the labor market.

Option

Under this option, VA would reduce disability compensation payments to veterans by 30 percent at age 67 for all veterans who begin receiving those benefits after January 2020. (Social Security's full retirement age varies depending on beneficiaries' birth year; this option uses age 67, which is the full retirement age for people born after 1959.) Social Security and pension benefits would be unaffected by this option. Veterans who are already collecting disability compensation as of January 2020 would see no reduction in their VA disability benefits when they reach age 67.

Effects on the Budget

By the Congressional Budget Office's estimates, the savings from this option would be about $11 billion between 2020 and 2028. CBO estimates that the number of veterans age 67 and older who would no longer receive their full preretirement disability compensation from VA would increase from 60,000 in 2020 to about 470,000 in 2028. On average, veterans' benefit would be reduced by about $320 per month in 2020, increasing to a reduction of $385 per month in 2028.

The largest source of uncertainty in the estimate of savings over the next 10 years involves determining the number of new disability beneficiaries who will be 67 after January 2020. The number of veterans age

67 and older who receive disability compensation has increased in the past decade as Vietnam veterans have aged. CBO projects that the number of new recipients age 67 and older will decline in the coming years as the share of the veterans' population in that age group falls. However, the health of the veteran population also affects the number of older veterans on the rolls, as do outreach efforts by VA and others to inform veterans about the benefit and other factors.

Other Effects

Because earnings from wages and salaries typically decline when people retire, this option would better align veterans' benefits with the loss in income after retirement that is typical of the general population.

An argument against this option is that it would reduce the support available to disabled veterans. If they had been out of the workforce for a long time, their Social Security benefits might be small, and they might not have accumulated much personal savings. In addition, VA's disability payments may be considered compensation owed to veterans—particularly combat veterans—because they faced special risks and became disabled in the course of their military service.

The reduction in VA's disability benefit could affect older veterans' participation in the labor force and the age at which they would begin claiming Social Security benefits. This option might induce some older veterans with disabilities to remain in the labor force longer or work more hours than they would have under the current system in order to preserve their income; some veterans, however, would not be able to maintain employment that would accommodate their disabilities as they age.

RELATED OPTION: Mandatory Spending, "End VA's Individual Unemployability Payments to Disabled Veterans at the Full Retirement Age for Social Security" (page 109)

RELATED CBO PUBLICATION: *Veterans' Disability Compensation: Trends and Policy Options* (August 2014), www.cbo.gov/publication/45615

Mandatory Spending—Option 37 Function 700

Narrow Eligibility for VA's Disability Compensation by Excluding Veterans With Low Disability Ratings

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Outlays												
Provide disability compensation only for veterans with disability ratings of 30 percent or higher	0	-2.5	-3.6	-3.9	-4.1	-4.3	-4.5	-4.5	-5.0	-5.2	-14.1	-37.9
Provide disability compensation only for new applicants with disability ratings of 30 percent or higher	0	-0.6	-0.2	-0.4	-0.5	-0.7	-0.8	-1.0	-1.1	-1.3	-1.2	-6.2

This option would take effect in January 2020.

Background

In 2017, 4.5 million veterans with medical conditions or injuries that were incurred or that worsened during active-duty service received disability compensation from the Department of Veterans Affairs (VA). Such service-connected disabilities range widely in severity and type, from migraines and treatable hypertension to the loss of limbs. The base amount of compensation veterans receive depends on the severity of their disabilities, which are rated between zero and 100 percent in increments of 10; a 100 percent rating means that veterans are considered totally disabled and probably unable to support themselves financially. The most common rating is 10 percent. In 2018, base compensation rates generally ranged from about $140 to $3,000 per month. Additional compensation may be awarded based on the presence of dependents and other factors. The amount of compensation is intended to offset the average amount of income veterans lose as a result of the severity of their service-connected medical conditions or injuries.

Option

Under this option's first alternative, VA would narrow eligibility for compensation to veterans with disability ratings of 30 percent or higher. The second alternative would impose the same limits on eligibility, but it would only affect new applicants for disability compensation.

Effects on the Budget

By the Congressional Budget Office's estimates, the savings from the first alternative, in which current and future recipients would be ineligible for payments for disability ratings of less than 30 percent, would be $38 billion over the 2020–2028 period. In 2017, about 1.3 million veterans received compensation for a rating of less than 30 percent. Under current law, that number is projected to rise to 1.5 million in 2020 and then to 1.9 million by 2028. Under the first alternative, VA would discontinue compensation for those veterans.

Savings from the second alternative, in which VA would no longer make payments for future cases in which veterans' disability rating was less than 30 percent, would be $6 billion between 2020 and 2028. The number of veterans who would no longer qualify for compensation under this alternative would be small at first but would rise to 500,000 by 2028.

Additional savings would be possible if eligibility was further limited to veterans with disability ratings higher than 30 percent. However, the amount saved would not be proportional to the level of the disability rating, because neither payment amounts nor the beneficiary population increase at the same rate as their associated disability ratings.

The largest source of uncertainty in estimating the savings from this option is the future size of the population with disability ratings of less than 30 percent. CBO projects that number based on the number of veterans who received such disability ratings in the past, the growth of the overall disability compensation program, the mortality rate of veterans receiving disability compensation, and other factors.

Other Effects

One argument for this change is that it would permit VA to concentrate spending on veterans with the greatest impairments. Furthermore, there may be less need than in the past to compensate veterans with milder impairments. Many civilian jobs now depend less on physical labor than was the case in 1917, when the disability-rating system was first devised; the rating system that is the basis for current payments has not undergone major revisions since 1945. In addition, medical care and rehabilitation technologies have made great progress. Thus, a physical limitation rated below 30 percent might not substantively reduce a veteran's earning capability, because it would not preclude work in many modern occupations.

An argument against this option is that veterans' compensation could be viewed as a lifetime indemnification the federal government owes to people who become disabled to any degree during service in the armed forces.

RELATED OPTION: Mandatory Spending, "Narrow Eligibility for Veterans' Disability Compensation by Excluding Certain Disabilities Unrelated to Military Duties" (page 107)

Mandatory Spending—Option 38 Multiple Functions

Use an Alternative Measure of Inflation to Index Social Security and Other Mandatory Programs

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Outlays												
Social Security	0	-2.0	-4.8	-7.9	-11.2	-14.6	-18.1	-21.6	-25.1	-28.8	-25.9	-134.1
Other benefit programs with COLAs[a]	0	-0.5	-1.3	-2.2	-2.9	-3.4	-4.4	-5.2	-6.1	-7.2	-6.9	-33.3
Effects on SNAP from interactions with COLA programs[b]	0	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.4	0.5	0.5	2.2
Health programs	0	-0.3	-1.2	-2.0	-2.7	-3.6	-4.6	-5.5	-6.6	-7.8	-6.3	-34.3
Other federal spending[c]	0	*	-0.1	-0.2	-0.2	-0.3	-0.4	-0.5	-0.6	-0.8	-0.5	-3.2
Total	0	-2.9	-7.3	-12.1	-16.8	-21.7	-27.2	-32.6	-38.0	-44.1	-39.1	-202.7
Change in Revenues[d]	0	*	*	*	*	*	*	*	*	*	-0.1	-0.2
Decrease (-) in the Deficit	0	-2.9	-7.2	-12.1	-16.8	-21.6	-27.2	-32.6	-38.0	-44.0	-39.1	-202.4

Sources: Congressional Budget Office; staff of the Joint Committee on Taxation.

This option would take effect in January 2020.

COLA = cost-of-living adjustment; SNAP = Supplemental Nutrition Assistance Program; * = between -$50 million and $50 million.

a. Other benefit programs with COLAs include civil service retirement, military retirement, Supplemental Security Income, veterans' pensions and compensation, and other retirement programs whose COLAs are linked directly to those for Social Security or civil service retirement.

b. The policy change would reduce payments from other federal programs to people who also receive benefits from SNAP. Because SNAP benefits are based on a formula that considers such income, a decrease in those other payments would lead to an increase in SNAP benefits.

c. Other federal spending includes changes to benefits and various aspects (eligibility thresholds, funding levels, and payment rates, for instance) of other federal programs, such as those providing Pell grants and student loans, SNAP, child nutrition programs, and programs (other than health programs) linked to the federal poverty guidelines. (The changes in spending on SNAP included here are those besides the changes in benefits that result from interactions with COLA programs.)

d. The effects on revenues reflect the reduction in marketplace subsidies for health insurance premiums and slightly higher enrollment in employment-based coverage under the option.

Background

Cost-of-living adjustments for Social Security (COLAs) and many other parameters of federal programs are indexed to increases in traditional measures of the consumer price index (CPI). The CPI measures overall inflation and is calculated by the Bureau of Labor Statistics (BLS). In addition to the traditional measures of the CPI, that agency computes another measure of inflation—the chained CPI—designed to account for changes in spending patterns and to eliminate several types of statistical biases that exist in the traditional CPI measures. (Nonetheless, the chained CPI does not resolve all statistical issues with traditional CPI measures.) Under current law, beginning in 2018, the chained CPI would be used for indexing most parameters of the tax system, including the individual income tax brackets.

Option

Beginning in 2020, this option would use the chained CPI for indexing COLAs for Social Security and for indexing parameters of other programs. The chained CPI has grown an average of about 0.25 percentage points more slowly per year since 2001 than the traditional CPI measures have, and the Congressional Budget Office expects that gap to persist. Therefore, the option would reduce federal spending, and savings would grow each year as the effects of the change compounded.

Effects on the Budget

Outlays would be reduced by $203 billion through 2028, CBO estimates, and the net effect on the deficit would be about the same. The budgetary effects of this option would stem from a reduction in the average benefits that eligible people receive through a number of federal programs, and, to a lesser extent, from a reduction in eligibility for certain programs. (The small revenue effects estimated here are the net result of two largely offsetting factors. First, the option would reduce marketplace subsidies for health insurance premiums. Because those subsidies are structured as refundable tax credits, a portion of the reduction in subsidies translates into higher tax liabilities for recipients, meaning higher revenues. Second, slightly higher enrollment in employment-based coverage under the option would mean that a larger share of compensation would be made in the form of nontaxable health benefits, which would result in less taxable compensation for employees, and, therefore, less revenues.)

The CPI affects COLAs for Social Security and the pensions that the government pays to retired federal civilian employees and military personnel, as well as veterans' pensions and veterans' disability compensation. In most of those programs, the policy change would not alter benefits when people are first eligible to receive them, either now or in the future, but it would reduce their benefits in later years because the annual COLAs would be smaller, on average. The effect would be greater the longer people received benefits (that is, the more years of reduced COLAs they experienced). Therefore, the effect would ultimately be especially large for the oldest beneficiaries as well as for some disabled beneficiaries and military retirees, who generally become eligible for annuities before age 62 and thus can receive COLAs for a longer period.

To obtain the estimates for the effects of the option on COLAs, CBO reduced payments for beneficiaries after the first year of receipt by the difference between the traditional CPI and the chained CPI in each year. For example, in the case of COLAs for Social Security, CBO estimates that about 63 million people would be affected by the benefit reductions in 2020, experiencing an average benefit reduction of about 0.25 percent relative to current law. By 2028, the average reduction in monthly benefits for those people is projected to be 2.2 percent relative to current law.

By affecting program parameters, growth in the CPI also affects spending for Supplemental Security Income, Medicare, Medicaid, the health insurance marketplaces established under the Affordable Care Act, Pell grants, student loans, the Supplemental Nutrition Assistance Program (SNAP), child nutrition programs, and other programs. The index is used to calculate various eligibility thresholds, payment rates, and other factors that could affect the number of people eligible for those programs and the benefits people receive. For some programs, such as Medicaid, budgetary savings stem from the reduction in the number of people eligible for those programs and from the reduction in the average federal spending on each eligible person. For other programs, such as Medicare, savings from this option stem largely from reductions in the updates to prices that the federal government would pay.

For SNAP, the option would lead to higher spending as a result of two opposing effects. On the one hand, the policy change would lead to a reduction in SNAP benefits. The amount of those benefits is based on beneficiaries' total income minus allowable deductions, such as costs associated with housing and child care, and the value of some of those deductions in each year is linked to the CPI. Lower deductions would lead to lower SNAP benefits. On the other hand, a reduction in payments from other federal programs as a result of the option would reduce beneficiaries' income, leading to higher SNAP benefits. Because that second effect is larger, the option would increase SNAP benefits, on net.

The uncertainty in the estimate of budgetary savings from this option stems from differences between the projected traditional CPI and chained CPI. Historically, that gap has varied widely. For example, in calendar year 2005, the chained CPI growth was 0.51 percentage points slower than the CPI for all urban consumers, and in calendar year 2008, growth was 0.12 percentage points faster.

Other Effects

One argument for switching to the chained CPI in Social Security and other federal programs is that the chained CPI is generally viewed as a more accurate measure of overall inflation than the traditional CPI measures, for two main reasons. First, the chained CPI more fully accounts for how people tend to respond to price changes. Consumers often lessen the effect of inflation on their standard of living by buying fewer goods or services that have risen in price and by buying more goods or services that have not risen in price or have risen less. Measures of inflation that do not account for such substitution overstate growth in the cost of living—a problem known as substitution bias. BLS's procedures for calculating the traditional CPI measures account for some types of substitution, but the chained CPI more fully incorporates the effects of changing buying patterns.

A second reason to believe that the chained CPI is a better measure of inflation is that it is largely free of a problem known as small-sample bias. That bias, which is significant in the traditional CPI measures, occurs when certain statistical methods are applied to price data for only a limited number of items in the economy.

One argument against using the chained CPI, and thereby reducing COLAs in Social Security and other federal retirement programs, is that the chained CPI might not accurately measure the growth in prices that Social Security beneficiaries and other retirees face. The elderly tend to spend a larger percentage of their income on items whose prices can rise especially quickly, such as health care. (However, determining how rising health care prices affect the cost of living is problematic because accurately accounting for changes in the quality of health care is challenging.) The possibility that the cost of living may grow faster for the elderly than for the rest of the population is of particular concern because Social Security and pension benefits are the main source of income for many retirees.

Another argument against this option is that a reduction in COLAs would ultimately have larger effects on the oldest beneficiaries and on the disabled beneficiaries who received benefits for a longer period. For example, if benefits were adjusted every year by 0.25 percentage points less than the increase in the traditional CPI measures, Social Security beneficiaries who claimed benefits at age 62 would face a reduction in retirement benefits at age 75 of about 3 percent compared with what they would receive under current law, and a reduction at age 95 of about 8 percent. To protect vulnerable people, lawmakers might choose to reduce COLAs only for beneficiaries whose income or benefits were greater than specified amounts. Doing so, however, would reduce the budgetary savings from the option.

Finally, policymakers might prefer to maintain current law because they want benefits to grow faster than the cost of living so that beneficiaries would share in overall economic growth. An alternative approach would be to link benefits to wages or gross domestic product. Because those measures generally grow faster than inflation, such a change would increase outlays.

RELATED CBO PUBLICATIONS: Testimony of Jeffrey Kling, Associate Director for Economic Analysis, before the Subcommittee on Social Security, Committee on Ways and Means, U.S. House of Representatives, *Using the Chained CPI to Index Social Security, Other Federal Programs, and the Tax Code for Inflation* (April 18, 2013), www.cbo.gov/publication/44083; *Using a Different Measure of Inflation for Indexing Federal Programs and the Tax Code* (February 2010), www.cbo.gov/publication/21228

CHAPTER

3

Discretionary Spending Options

Discretionary spending—the part of federal spending that lawmakers control through annual appropriation acts—amounted to about $1.2 trillion, or 30 percent of total federal outlays, in 2017. Just under half of that spending paid for defense programs. Spending on the Department of Defense's (DoD's) operation and maintenance accounted for more than 40 percent of discretionary spending on defense programs, and spending on military personnel accounted for nearly a quarter of that spending (see Figure 3-1). Discretionary spending on nondefense activities was less concentrated. For instance, the largest categories of that spending were transportation; education, training, employment, and social services; and veterans' benefits and services. Each category accounted for 10 percent to 15 percent of that spending.

The discretionary budget authority (that is, the authority to incur financial obligations) provided in appropriation acts results in outlays when the money is spent. Some appropriations (such as those for federal employees' salaries) are spent quickly, but others (such as those for major construction projects) are disbursed over several years. Thus, in any given year, discretionary outlays include spending from new budget authority as well as spending from budget authority provided in earlier appropriations.[1] Some fees and other charges that are triggered by appropriation action are categorized in the budget as offsetting collections or offsetting receipts and credited against discretionary spending.

1. For some major transportation programs, budget authority is considered mandatory, but the outlays resulting from that authority are discretionary. Budget authority for those programs is provided in authorizing legislation rather than appropriation acts, but the amount of that budget authority that the Department of Transportation can obligate each year is limited by appropriation acts. Those obligation limitations are treated as a measure of discretionary budgetary resources. For more information, see Congressional Budget Office, *The Highway Trust Fund and the Treatment of Surface Transportation Programs in the Federal Budget* (June 2014), www.cbo.gov/publication/45416.

Trends in Discretionary Spending

Measured as a percentage of gross domestic product (GDP), discretionary outlays declined from 13.1 percent in 1968 to 6.0 percent in 1999 before rising and then falling again, to 6.2 percent in 2017 (see Figure 3-2). From 2012 through 2017, discretionary outlays measured as a percentage of GDP dropped largely because of constraints imposed by the Budget Control Act of 2011 (Public Law 112-25) and lower spending for military operations in Afghanistan and Iraq.

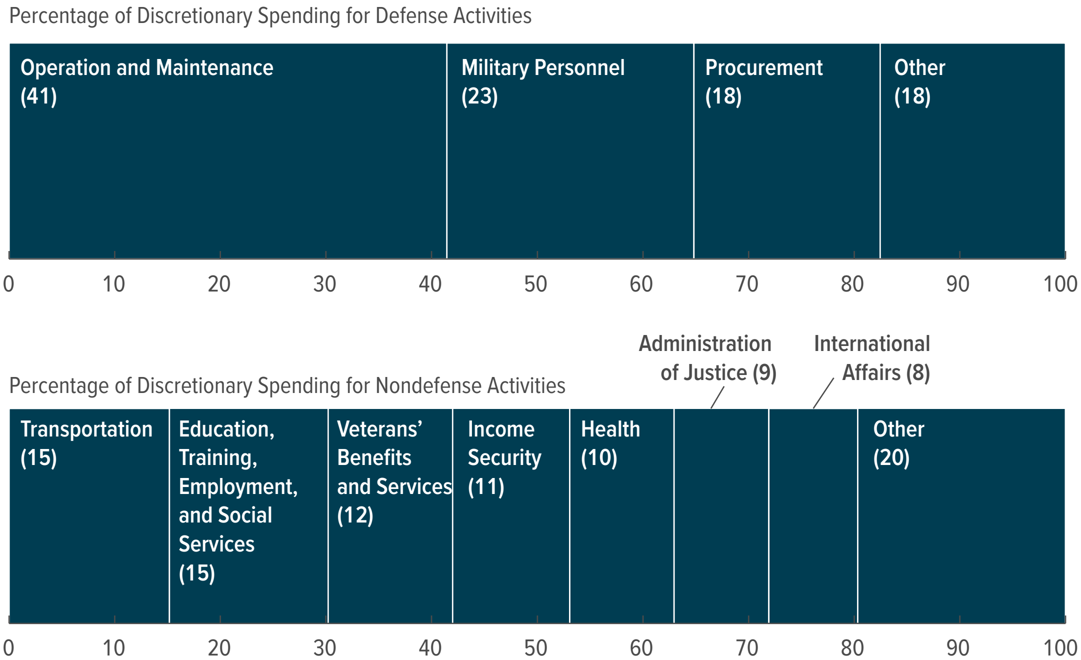
In the Congressional Budget Office's baseline projections, discretionary outlays decline further relative to the size of the economy, falling from 6.3 percent of GDP in 2018—already below their 50-year average of 8.5 percent—to 5.4 percent in 2028. The recently enacted Bipartisan Budget Act of 2018 (P.L. 115-123) raised the limits on discretionary funding that otherwise would have been in place for 2018 and 2019. In 2020 and 2021, funding is scheduled to revert to the lower levels set by the Budget Control Act. In CBO's baseline, discretionary appropriations for 2022 through 2028 grow from the 2021 amount at the rate of inflation, which is slower than projected growth in GDP, leading to an estimated decline in that spending relative to GDP. By 2028, discretionary spending for nondefense activities would equal 2.8 percent of GDP; for defense, it would equal 2.6 percent of GDP.[2] Those would be the smallest shares of the economy that those categories have accounted for since the early 1960s.

Most of the long-term decline in total discretionary outlays relative to GDP stems from a decrease in spending for national defense measured as a share of GDP. Starting from 9.2 percent of GDP in 1968, discretionary outlays for defense fell over the next several decades, reaching 2.9 percent at the turn of the century. Such spending began climbing again shortly thereafter and averaged 4.6 percent of GDP from 2009 through 2011. (The growth in defense spending over the 2001–2011 period

2. Most defense spending is funded through discretionary appropriations.

Figure 3-1.

Composition of Discretionary Spending, 2017



Defense and nondefense spending each constituted approximately half of all discretionary spending in 2017.

Source: Congressional Budget Office, using data from the Office of Management and Budget.

Other discretionary spending for defense includes outlays for research, development, test, and evaluation; military construction; family housing; and some defense-related activities of government entities other than the Department of Defense, such as the atomic energy activities of the Department of Energy.

Discretionary spending for health in the nondefense category excludes care provided by the Veterans Health Administration. Outlays for that care are included under veterans' benefits and services.

Other nondefense discretionary spending includes outlays for general science, space, and technology; energy; natural resources and the environment; agriculture; commerce and housing credit; community and regional development; Medicare and Social Security (for administrative activities); and general government.

was driven by military operations in Iraq and Afghanistan, which cost about 1 percent of GDP in 2011, for example.) Since then, discretionary outlays for defense have declined relative to the size of the economy, falling to 3.1 percent of GDP in 2017.

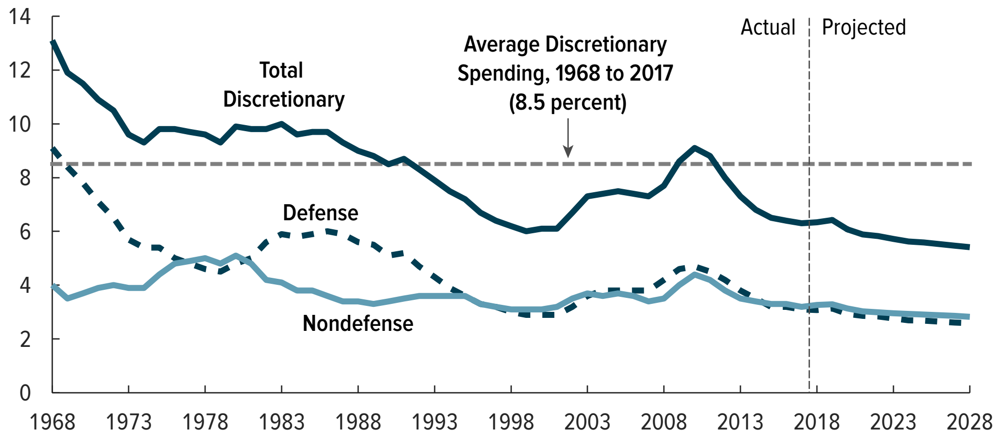
Discretionary spending for nondefense activities includes spending in areas such as education, transportation, veterans' benefits and services, community and regional development, and administration of justice (which includes most of the spending of the Department of Homeland Security). That category also includes spending on many health programs, such as public health activities, health and health care research initiatives, and certain other health-related activities. Spending on those health programs and activities totaled about $66 billion in 2017, or about 11 percent of total discretionary spending on nondefense activities. (The federal government also helps pay for health insurance premiums for its civilian workers, but that funding is part of agencies' budgets so most of it is excluded from that calculation.)

Over the past five decades, discretionary spending for nondefense activities has generally hovered between 3 percent and 4 percent of GDP. One exception was the period from 1976 to 1981, when such spending rose to almost 5 percent of GDP, on average. Another exception occurred from 2009 through 2011, when funding from the American Recovery and Reinvestment Act of 2009 (P.L. 111-5) boosted discretionary outlays for nondefense activities to between 4 percent and 4.4 percent of GDP. Those outlays have generally declined relative to the size

Figure 3-2.

Discretionary Spending

Percentage of Gross Domestic Product



If current statutory limits on discretionary spending remained in place through 2021 and funding grew with inflation thereafter, discretionary spending would decline as a share of GDP over the next decade.

Source: Congressional Budget Office.

The projected values shown underlie the projections in Congressional Budget Office, *An Analysis of the President's 2019 Budget* (May 2018, revised August 2018), www.cbo.gov/publication/53884.

of the economy since then, dropping to 3.2 percent of GDP in 2017.

Method Underlying Discretionary Spending Estimates

Except for some exceptions noted below, the budgetary effects described in this chapter were calculated relative to CBO's adjusted April 2018 baseline projections of discretionary spending over the next 10 years and do not include changes as a result of 2019 appropriations.[3] (CBO expects that the effects of those changes would be relatively small in most instances.) In accordance with section 257 of the Balanced Budget and Emergency Deficit Control Act of 1985 (P.L. 99-177), CBO's projections reflect the assumption that current appropriations will continue in future years, with adjustments to keep pace with inflation. (Although CBO follows that law in constructing its baseline projections for individual components of discretionary spending, its baseline projections of overall discretionary spending incorporate the caps and automatic spending reductions put in place by the Budget Control Act of 2011, as amended.)[4] As specified in law, CBO uses the following measures of inflation when constructing its baseline: the employment cost index for wages and salaries (applied to spending for federal personnel) and the GDP price index (applied to other spending). For each option in this section, CBO assumes that federal appropriations would be reduced accordingly to achieve the estimated budgetary savings.

Some options involving DoD's operation and maintenance budget (Options 1, 2, 12, and 13) or acquisition budget (Options 5 through 10) were calculated on a different basis. Because CBO's baseline projections do not reflect programmatic details for force structure, acquisition, and maintenance of specific weapon systems, the effects of those options were calculated relative to DoD's planned spending as laid out in its 2019 Future Years Defense Program (FYDP). The FYDP provides details about DoD's intended funding requests for the 2019–2023 period—including the Administration's plans for the number of military and civilian personnel, the procurement and maintenance of weapon systems, and the amount that equipment is operated. Comparing estimates of DoD's spending under a given option against that planned defense spending better captures the effects the option would have than comparing estimated spending under the option against CBO's baseline projections. Through 2023, the budgetary effects estimated for those 10 options are based on DoD's estimates of the

3. Those projections underlie the analysis in Congressional Budget Office, *An Analysis of the President's 2019 Budget* (May 2018, revised August 2018), www.cbo.gov/publication/53884.

4. Those adjustments to discretionary funding are applied in the aggregate, rather than in each account, because CBO cannot predict how lawmakers will comply with the caps.

costs of its plans. From 2024 through 2028, the effects are based on DoD's estimates when available (such as those in the Navy's annual 30-year shipbuilding plan or those for the costs of selected individual aircraft) and on CBO's projections of price and compensation trends for the overall economy when they are not. For an option that would cancel the planned acquisition of a weapon system, for example, the savings reported in this volume reflect DoD's estimates of the costs of that system; CBO often adjusts those savings downward to account for the costs of purchasing and operating existing systems in place of the system that would be canceled. In addition to showing the budgetary costs, each acquisition option includes a discussion of the effects of the option on DoD's ability to perform its missions.

Because the costs of implementing the FYDP would exceed CBO's baseline projections for defense spending—in some cases, by significant amounts—the options involving military force structure, operation and maintenance, and acquisition would not necessarily reduce deficits below those projected in CBO's baseline. Rather, they are, at least in part, options for bringing DoD's planned funding closer to the amounts projected in the baseline, which accord with the limits on such spending.

In many instances, CBO would have estimated higher costs for DoD's planned programs than the amounts budgeted either in DoD's FYDP or in CBO's extension of the FYDP, which relies primarily on DoD's cost estimates.[5] However, the savings from implementing an option relative to DoD's budget request are better represented by the program's costs in the FYDP and the extended FYDP than by CBO's independent cost estimates. If lawmakers enacted legislation to cancel a planned weapon system or retire an existing system, for instance, DoD could eliminate the amounts budgeted for that system from its FYDP and increase the amounts for operating other systems to come closer to the funding limits currently in place.

The estimates included in the chapter are uncertain for at least several reasons. For instance, CBO's baseline projections and DoD's planned spending are uncertain, because actual appropriations could differ considerably from projected amounts. Furthermore, legislation would be required to implement the options in this chapter, and the details of such legislation could differ from the assumptions that CBO made in developing its estimates.

Options in This Chapter

The 34 options in this chapter cover a broad array of discretionary programs, including some health care programs. Fifteen options in this chapter would affect defense programs, two options would affect health care spending, and the rest would affect nondefense programs. Some options include broad cuts—such as Option 1, which would reduce overall funding for DoD, or Option 32, which would decrease federal civilian employment. Others focus on specific programs: For instance, Option 20 concerns the Department of Energy's programs for research and development in energy technologies. Some options would change the rules of eligibility for certain federal programs; Option 27, for example, would tighten eligibility criteria for Pell grants, and Option 30 would end the ability of certain veterans to obtain medical care from the Department of Veterans Affairs.

Some options that have been included in previous volumes have not been included in this edition. However, several of those options, such as changing the Home Equity Conversion Mortgage Program from a guarantee program to a direct loan program and eliminating certain forest service programs, are included in an abbreviated format in this edition's appendix.

To reduce deficits through changes in discretionary spending, lawmakers would need to lower the statutory funding caps below the levels already established under current law or enact appropriations that were below those caps. The options in this chapter could be used to help accomplish either of those objectives. Alternatively, some of the options could be implemented to help comply with the existing caps on discretionary funding.

Under the constraints imposed by the Budget Control Act and the Bipartisan Budget Act of 2018, total discretionary spending over the 2019–2028 period is projected to be lower by $1.7 trillion (or about 12 percent) than it would be if the funding provided for 2018 was continued in future years with increases for inflation.

5. For CBO's estimates of the costs of DoD's plans, see Congressional Budget Office, *Long-Term Implications of the 2019 Future Years Defense Program* (forthcoming).

Discretionary Spending—Option 1 Function 050

Reduce the Department of Defense's Budget

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Reduce DoD's Budget by 10 Percent Relative to the Amount Planned for 2022												
Change in Planned Defense Spending												
Budget authority	0	-23	-46	-71	-65	-68	-73	-75	-84	-87	-204	-591
Outlays	0	-13	-32	-53	-58	-63	-68	-71	-77	-82	-156	-517
Reduce DoD's Budget by 5 Percent Relative to the Amount Planned for 2022												
Change in Planned Defense Spending												
Budget authority	0	-11	-23	-35	-28	-31	-35	-35	-43	-44	-98	-284
Outlays	0	-6	-16	-26	-27	-28	-32	-33	-38	-41	-76	-248

This option would take effect in October 2019.

Estimates of savings displayed in the table are based on the 2019 Future Years Defense Program and the Congressional Budget Office's extension of that plan.

DoD = Department of Defense.

Background

The Department of Defense (DoD) received $616 billion in appropriations for its base budget in 2019, the highest amount since 2010 (after adjusting for inflation). The Department's Future Years Defense Plan (FYDP) for 2019 anticipates that base-budget levels will average about $650 billion per year (in 2019 dollars) through 2023. (DoD's base budget is intended to fund enduring activities, such as day-to-day military and civilian operations and development and procurement of weapon systems. It does not include additional funding appropriated for nonpermanent activities, such as overseas contingency operations or other emergencies.) Before 2019, the amount appropriated in 2010 had been the highest for DoD's base budget, which had grown by 50 percent since 2000, and surpassed even the 1985 budget, DoD's largest peacetime budget during the Cold War. After 2012, DoD's base budgets decreased under the constraints of the Budget Control Act of 2011 (BCA), averaging about $550 billion for 2013 through 2018.

Option

This option encompasses two alternative decreases in DoD's budget. The first would reduce DoD's budget over three years so that funding in 2022 would be 10 percent less than the funding planned for that year in the Administration's 2019 FYDP. The second would reduce DoD's budget by 5 percent over that same period. Both alternatives would allow for real (inflation-adjusted) growth of 1 percent annually after 2022.

Effects on the Budget

Under the first alternative, funding for DoD in 2022 would be $637 billion, excluding funding for overseas contingency operations. That amount would still be large by historical standards; adjusted for inflation, it would be roughly in line with DoD's base budget in 2012, the last budget prepared before the BCA's caps were applied, and more than Cold War spending at its height. Through 2028, cumulative funding for DoD would be reduced by $591 billion under the first alternative. That estimate of savings is based on the costs of plans outlined in the 2019 FYDP (which defines plans and costs through 2023) and the Congressional Budget Office's projections of costs over the following five years. Under the second alternative, savings would total $284 billion through 2028.

Savings would be smaller if DoD needed more than three years to implement the reductions under this option or if the costs of current plans were overstated. Conversely, savings could be larger if costs to implement current plans were underestimated. For example, DoD has frequently underestimated its costs to develop and purchase weapon systems.

Other Effects

Accommodating the smaller amount of funding under this option would require DoD to decrease the size of its forces, slow the rate at which it modernizes weapon systems, or do both. Force cuts could be made proportionally across the services or could be tailored to the specific needs of parts of the military. Similarly, to achieve a desired pace of modernization, DoD would need to balance the goal of maintaining a particular force size against the goal of procuring new weapons. (CBO's estimate of savings in outlays is based on proportional reductions to each part of DoD's budget.)

With a somewhat smaller force, DoD's ability to execute all the elements in the current national security strategy would be lessened. The current strategy envisions prevailing at both the low end of the spectrum of conflict (for example, counterinsurgency operations) and at the high end (conflicts with Russia or China). Simultaneously pursuing those goals is expensive. For example, at the same time that the Army has soldiers in more than 140 countries, all four military services are buying highly sophisticated military weaponry to fight against Russia or China, and DoD is modernizing all elements of its nuclear forces. Under this option, DoD would need to focus its efforts on the most important elements of national security, cut back in some other areas, and rely more on both conventional and nuclear deterrence to dissuade Russia and China from attacks on the United States, its interests, or its allies. For instance, DoD might need to scale back or eliminate the Army's presence in some countries and replace that military effort with other instruments of national power. Such a shift from military to nonmilitary engagement would not be inconsistent with the *Summary of the 2018 National Defense Strategy of the United States of America*, which calls for "the seamless integration of multiple elements of national power—diplomacy, information, economics, finance, intelligence, law enforcement, and military." The reduced size of the military and concurrent shift to a more integrated approach would require greater patience in addressing crises around the world, however: Diplomacy rarely offers the dramatic action (or speed) of military intervention.

One argument against this option is that the size and number of military operations that could be conducted simultaneously and the duration for which they could be sustained would be diminished. Under Army policy, for example, three active brigade combat teams (BCTs) are required to support the rotation of a single BCT in and out of a combat zone. Consequently, the number of BCTs that the Army could continuously deploy would decrease by one for every three active BCTs that were cut from the force structure. Similar considerations would apply to the deployment of naval and air forces. If the need for a large, sustained military presence overseas arose, DoD could increase the size of its forces at that time (as it has done often in the past), but it could take a few years.

Despite the reduced military capacity under this option, the United States would remain the world's preeminent military power. Even in 2022, when funding would be lowest under this option in both nominal and inflation-adjusted terms, it would be nearly double the combined military spending of China and Russia in 2017.

RELATED OPTIONS: Discretionary Spending, "Reduce DoD's Operation and Maintenance Appropriation (Excluding Funding for the Defense Health Program)" (page 125), "Reduce the Size of the Federal Workforce Through Attrition" (page 190)

RELATED CBO PUBLICATIONS: *Long-Term Implications of the 2019 Future Years Defense Program* (forthcoming); *The U.S. Military's Force Structure: A Primer* (July 2016), www.cbo.gov/publication/51535; *Approaches for Scaling Back the Defense Department's Budget Plans* (March 2013), www.cbo.gov/publication/43997

Discretionary Spending—Option 2 Function 050

Reduce DoD's Operation and Maintenance Appropriation (Excluding Funding for the Defense Health Program)

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Freeze O&M Budget Authority for Five Years and Then Limit Its Growth to the Rate of Inflation												
Change in Planned Defense Spending												
Budget authority	0	-6	-13	-19	-22	-25	-28	-32	-36	-39	-60	-220
Outlays	0	-3	-9	-16	-20	-23	-26	-29	-33	-36	-48	-195
Limit the Growth of O&M Budget Authority to the Rate of Inflation												
Change in Planned Defense Spending												
Budget authority	0	-1	-4	-6	-4	-7	-10	-13	-16	-19	-16	-81
Outlays	0	-1	-3	-5	-4	-6	-8	-11	-14	-17	-13	-70

This option would take effect in October 2019.

Estimates of savings displayed in the table are based on the 2019 Future Years Defense Program and the Congressional Budget Office's extension of that plan.

DoD = Department of Defense; O&M = operation and maintenance.

Background

The Department of Defense (DoD) uses funds from its operation and maintenance (O&M) account to pay the salaries and benefits of most of its civilian employees, to train its military personnel, and to purchase goods (such as paper clips and jet fuel) and services (including, for example, health care, equipment maintenance and repair, and information technology support). O&M accounted for nearly 40 percent of DoD's request for base-budget funding in 2019, making it the largest single appropriation title in DoD's budget. (That funding does not include the additional amount that DoD requested for overseas contingency operations.) In real terms (that is, after the amounts have been adjusted to remove the effects of inflation as measured by growth in the price index for gross domestic product), DoD's base-budget costs for O&M grew by about 45 percent from 2000 to 2018, despite a 4 percent decrease in the size of the military. (A previous Congressional Budget Office study found that spending for departmental management functions, which are largely funded through the O&M account, grew at a faster pace than spending for other support functions.)

Under DoD's plans, as laid out in its Future Years Defense Program (FYDP), O&M funding—measured in real dollars—would grow by 2 percent from 2019 through 2023, the last year in the most recent FYDP, (That amount does not include the additional increase from the planned transition of contingency funding into the base budget.) CBO projects O&M funding beyond 2023 by applying the employment cost index for growth in civilian pay and the historical average rate for O&M per service member for growth in other costs. (Military health care costs are projected separately and not included in this option.) Under that projection, O&M continues to grow faster than inflation through 2028.

Option

This option has two alternatives. Both would reduce the growth in DoD's O&M appropriation without affecting the portion of O&M funding slated for the Defense Health Program (DHP). CBO excluded funding for the DHP from this option because the causes of growth in that program are well-known and distinct from the factors that underlie growth in the rest of the O&M account; DHP funding is addressed by another option in this volume, which is listed below.

Under the first alternative, DoD's O&M appropriation in the base budget (excluding funding for the DHP) for 2020 through 2023 would equal the amount that the department requested in its budget for 2019. That portion of the budget would grow with inflation from 2024 through 2028. Under the second alternative, DoD's O&M appropriation in the base budget (excluding funding for the DHP) would grow with inflation from the 2019 amount throughout the entire 10-year period.

Effects on the Budget

The first alternative would reduce the discretionary budget authority provided for O&M by $220 billion over 10 years relative to the amount that would be needed under CBO's estimates of the costs of DoD's plans over the next decade. As a result, outlays would decrease by $195 billion over that period. The first alternative would lessen the amount appropriated for O&M (excluding funding for the DHP) in 2024 by 11 percent. The second alternative would reduce discretionary budget authority over 10 years by $81 billion and outlays by $70 billion. DoD's total appropriations for O&M under the second alternative would be 3 percent less than they would be under the department's current plan.

This option does not specify how the changes to DoD's plans for O&M funding would be allocated among the four military services and the defensewide agencies or how they would be implemented within each service or agency. Rather than stipulating slower growth across the board, for example, the option would allow DoD to redistribute O&M funding in its future budget requests among the services and agencies as it sees fit and would permit the services and agencies to reallocate their funding in a manner that minimized any loss of capability or readiness.

DoD could use many methods to achieve the lower O&M targets. Although those methods could be implemented individually, they might be more effective if they were applied as part of a DoD-wide effort to streamline functions and business processes. One approach would be to gradually but significantly reduce the number of civilian personnel and, thus, decrease amounts paid from the O&M account. If DoD used that approach alone to meet the funding targets under this option, by 2024 the department would employ roughly 240,000 (or 37 percent) fewer civilian personnel under the first alternative than it would under its current plan; under the second alternative, DoD would employ 60,000 (or 9 percent) fewer civilians.

However, such changes would decrease costs only if the functions performed by the civilian personnel who were cut were not fulfilled by contractors (who would also be paid through the O&M account). The military services and DoD could continue to provide those functions if they found ways to operate more efficiently, or they could forgo the functions altogether. Using military personnel to replace civilians, contractors, or contracted services would not be an effective solution: That approach would simply transfer costs from the O&M account to the military personnel account. Furthermore, CBO has found that in many cases, substituting military personnel for civilians would increase total costs, on net.

Another approach that could be used to achieve the lower O&M targets would be to reduce the use of contractors and contracted services. DoD relies on contractors to perform a wide range of functions—from mowing lawns to maintaining complex weapon systems—that in the past were performed almost exclusively by military personnel and civilian employees. As with reducing the civilian workforce, cutting down on the use of contractors could save billions of dollars each year, but only if DoD forgoes the functions that contractors fulfill or finds less costly ways of performing them.

One source of uncertainty about savings under this option is changes in the prices of the goods and services that the department purchases. If the price of fuel falls—as a result of decreases in the price of oil, for example—then the costs of DoD's plans would be less than they were estimated to be in the 2019 FYDP and CBO's extension of that plan. Thus, the savings under this option compared with those estimates would be correspondingly smaller. Increases in other costs, such as for civilian pay (which is determined by the Congress) and maintenance (perhaps from aging equipment) would have the opposite effect.

Other Effects

An advantage of this option is that some parts of DoD would have incentives to become more efficient. DoD's business functions, such as financial management and logistics, may be less efficient than analogous functions in the private sector. The operations of many of DoD's support programs have been placed on the Government Accountability Office's (GAO's) High Risk List, which identifies federal programs that GAO believes are at risk for waste, inefficiency, or ineffective spending. DoD's business-reform initiatives suggest that spending on those support programs could be reduced without significantly decreasing the quality of services provided.

A disadvantage of this option is that it could negatively affect the capability of the military to fight and win wars if care is not taken to ensure that personnel remain as well trained and equipment stays as well maintained as under DoD's current plan. If DoD was unable to afford that level of readiness under this option, it would have to reduce force structure to preserve readiness. Another disadvantage of the option is that it could discourage DoD from making changes that would allow it to provide essential functions more efficiently. For example, in 2012 DoD identified about 14,000 military positions in commercial activities that could be converted to positions filled by federal civilian employees or contractors (see Discretionary Spending, Option 4, "Replace Some Military Personnel With Civilian Employees"). By reducing spending on military personnel, such conversions would probably reduce DoD's overall costs, but they would nevertheless increase the department's O&M spending. Policymakers and DoD would need to take precautions to prevent this option from forestalling such conversions.

RELATED OPTIONS: Discretionary Spending, "Reduce the Department of Defense's Budget" (page 123), "Replace Some Military Personnel With Civilian Employees" (page 130), "Modify TRICARE Enrollment Fees and Cost Sharing for Working-Age Military Retirees" (page 145)

RELATED CBO PUBLICATIONS: *Analysis of the Long-Term Costs of the Administration's Goals for the Military* (December 2017), www.cbo.gov/publication/53350; *Trends in the Department of Defense's Support Costs* (October 2017), www.cbo.gov/publication/53168; *Trends in Spending by the Department of Defense for Operation and Maintenance* (January 2017), www.cbo.gov/publication/52156; *Replacing Military Personnel in Support Positions With Civilian Employees* (December 2015), www.cbo.gov/publication/51012; *Growth in DoD's Budget From 2000 to 2014* (November 2014), www.cbo.gov/publication/49764

Discretionary Spending—Option 3 Function 050

Cap Increases in Basic Pay for Military Service Members

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Spending												
Budget authority	0	-0.3	-0.8	-1.3	-1.8	-2.4	-2.6	-2.7	-2.8	-2.9	-4.2	-17.6
Outlays	0	-0.3	-0.8	-1.3	-1.8	-2.4	-2.6	-2.7	-2.8	-2.9	-4.2	-17.6

This option would take effect in January 2020.

About 25 percent of the savings displayed in the table reflect intragovernmental transfers and thus would not reduce the deficit.

Background

Basic pay is the largest component of military service members' cash compensation, accounting for about 60 percent of the total. (Allowances for housing and food, along with the tax advantage that arises because those allowances are not subject to federal taxes, make up most of the remainder of that compensation.) Between 2008 and 2017, inflation-adjusted spending per person on basic pay rose by 10 percent. To set annual increases in basic pay, lawmakers typically use the percentage increase in the employment cost index (ECI) for private-sector workers' wages and salaries (for all occupations and industries) as a benchmark. Under current law, the pay raise for service members is, by default, set to equal the percentage change in the ECI. (In contrast, the default pay raise for federal civilian employees is the rate of increase in the ECI minus 0.5 percentage points, and lawmakers authorize a separate annual adjustment to account for regional differences in the cost of living.) Lawmakers have often overridden the formula for service members by temporarily changing the law to specify a different pay raise for a single year through the annual defense authorization and appropriations acts while reverting to current law for future years. Although lawmakers enacted pay raises equal to or higher than the increase in the ECI for each year from 2000 to 2013 and for 2017 and 2018, they granted pay raises that were smaller than the increase in the ECI in 2014, 2015, and 2016.

Option

This option would cap basic pay raises for military service members at 0.5 percentage points below the increase in the ECI for five years starting in 2020 and then return them to the ECI benchmark in 2025.

Effects on the Budget

The Congressional Budget Office estimates that this option would reduce discretionary budget authority by nearly $18 billion from 2020 through 2028 compared with personnel costs if raises equaled the annual percentage increase in the ECI. About 1.3 million active-duty service members would be affected by that change annually. Over the next 10 years, on average, they would receive an increase of about $1,400 in basic pay each year, which is roughly $200 less per year than the amount they would receive if basic pay rose with the ECI over the first five years.

A source of uncertainty in the estimated savings over the next decade is CBO's expectation that the smaller pay raise would have little effect on recruiting and retention. CBO anticipates that the military services would not need to offer additional incentives to encourage people to join or stay in the military. Although the Department of Defense (DoD) has begun increasing the number of service members, those increases are small relative to the increases earlier in the 2000s and will be phased in over several years. DoD plans to boost the total number of military personnel by 51,500 (or 4 percent) by 2023.

A smaller reduction in basic pay than the amount specified in this option would probably result in proportionally smaller savings. Conversely, larger reductions in basic pay could result in larger savings, but if the reductions were large enough, they could adversely affect recruiting and retention and prompt DoD to offer additional bonuses or other incentives to maintain the number of people serving in the military. The point at which the military would incur additional costs to recruit or retain personnel depends on many factors, including labor market conditions in the broader economy at the time.

Other Effects

One argument for this option is that DoD has consistently exceeded its goal of ensuring that the average cash compensation for military personnel exceeds the wages and salaries received by 70 percent of civilians with comparable education and work experience. According to one recent study, the average cash compensation for enlisted personnel in 2016 exceeded the wages and salaries of 84 percent of their civilian counterparts; the corresponding value for officers was 77 percent. Furthermore, the annual increase in the ECI might not be the most appropriate benchmark for setting military pay raises over the long run. The comparison group for the ECI includes a broad sample of civilian workers who are, on average, older than military personnel and more likely to have a postsecondary degree. Historically, pay raises for those workers have been larger than for younger or less educated workers, who more closely match the demographic profile of military personnel.

An argument against this option is that, over the next decade, military recruiting and retention could be compromised if basic pay raises did not keep pace with increases in the ECI. Capping raises also would constrain the amount service members receive in other benefits, such as the retirement annuities that are tied to a member's 36 highest months of basic pay over the course of a military career.

RELATED OPTION: Discretionary Spending, "Reduce the Annual Across-the-Board Adjustment for Federal Civilian Employees' Pay" (page 188)

RELATED CBO PUBLICATIONS: *Long-Term Implications of the 2019 Future Years Defense Program* (forthcoming); *Analysis of the Long-Term Costs of the Administration's Goals for the Military* (December 2017), www.cbo.gov/publication/53350; *Costs of Military Pay and Benefits in the Defense Budget* (November 2012), www.cbo.gov/publication/43574; testimony of Carla Tighe Murray, Senior Analyst for Military Compensation and Health Care, before the Subcommittee on Personnel, Senate Committee on Armed Services, *Evaluating Military Compensation* (April 28, 2010), www.cbo.gov/publication/21430

Discretionary Spending—Option 4 Function 050

Replace Some Military Personnel With Civilian Employees

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Spending												
Budget authority	0	-0.2	-0.7	-1.3	-1.8	-2.3	-2.4	-2.5	-2.7	-2.8	-4.0	-16.7
Outlays	0	-0.1	-0.5	-1.0	-1.5	-1.9	-2.1	-2.2	-2.4	-2.5	-3.1	-14.2

This option would take effect in October 2019.

About 40 percent of the savings displayed in the table reflect intragovernmental transfers and thus would not reduce the deficit.

Background

The workforce of the Department of Defense (DoD) consists of members of the active-duty and reserve military, federal civilian employees, and private contractors. According to data from DoD, thousands of members of the military work in support, or "commercial," jobs that could be performed by civilian employees or contractors at a lower overall cost. Many of those jobs do not involve functions that could raise concerns about personal safety or national security and are performed in military units that do not deploy overseas for combat.

Option

Under this option, DoD would replace over four years 80,000 of the roughly 340,000 active-duty military personnel in commercial jobs with 64,000 civilian employees. As a result, active-duty end strength (the number of military personnel on the rolls on the final day of the fiscal year) would decrease by 80,000.

Although DoD has replaced military personnel with civilian employees before (converting about 48,000 military positions to 32,000 civilian jobs between 2004 and 2010), only a small percentage of all military positions have been reviewed for that purpose. Moreover, the mix of military and civilian employees used to perform various commercial functions differs across the services. The Army fills 27 percent of its finance and accounting jobs with military personnel, for example, whereas the Marine Corps staffs 64 percent of those jobs with military personnel. The Navy employs military personnel for 8 percent of its jobs in motor vehicle transportation services; the Air Force, 67 percent. If each service adopted the personnel mix with the lowest percentage of military personnel in commercial occupations, up to 100,000 jobs currently held by military personnel could be opened to civilians, the Congressional Budget Office estimates.

Effects on the Budget

By CBO's estimate, replacing 80,000 military personnel with 64,000 civilian employees would reduce discretionary outlays by about $14 billion between 2019 and 2028 if appropriations were reduced accordingly. Most of the savings would come from replacing military personnel with fewer civilians. (CBO estimates that the cost of each civilian employee in the occupations examined in this option is only a few percentage points lower than the cost of a military service member, on average.) The long-term savings from this option would exceed the amounts shown here because some of the budgetary effects would not be fully realized for a few decades, when new employees began to retire and collect benefits. For example, most of the costs of deferred benefits, such as health care that DoD provides to military retirees under age 65 and that the Department of Veterans Affairs offers to veterans of all ages, occur beyond the 10-year budget period. In addition, the higher tax revenues that would flow to the federal government because a smaller proportion of civilian pay than military pay is exempt from federal taxation are not shown here.

The savings under this option would reach about $2 billion a year, but not until around 2024, when the replacement of the military personnel with the smaller number of civilians was complete. Fewer civilians could perform the work done by the military personnel they replace because those civilians receive less on-the-job training, do not have to devote part of the work year to general military training, and typically do not rotate among positions as rapidly as military personnel do. Savings would be proportionally smaller if fewer military personnel were replaced with civilians, but at the same ratio of 1:1.25. If, instead, a given number of military personnel were replaced with even fewer civilians, the savings would be larger, although using replacement ratios above 1:1.25 would boost the risk that capabilities would be lessened. (It would probably be increasingly difficult for fewer and fewer civilians to perform the same quantity of services—at the same quality—that a given number of military personnel could perform.)

The savings in this option are somewhat uncertain, for at least two reasons. First, the number of military positions in support jobs could be smaller in the future. For instance, DoD could respond to changes in the national security environment or new missions by restructuring its military forces and converting military positions in support jobs to combat positions. Such actions would result in fewer military positions being available for transfer to civilians. Second, the average cost of civilian employees in comparison with the cost of military personnel could change. Compensation for the occupations examined in this option, many of which are professional, could grow at a slower rate than military pay in the future. In that event, the average pay of the added civilians relative to the average pay of the eliminated military positions would fall, increasing the potential savings.

Other Effects

One argument for converting military to civilian positions is that civilians require, on average, less job-specific training over their careers. Unlike military personnel, civilian employees are not subject to frequent transfers, so the military services can employ, on average, fewer civilians to provide the same quantity and quality of services.

An argument against this option is that even though many service members might spend part of their career in jobs that could be performed by civilians, most are trained fighters who could be deployed if needed. Replacing such military personnel with civilians could reduce DoD’s ability to surge quickly if called upon to do so. Moreover, despite the potential cost savings, the military services try to avoid converting certain types of positions because doing so could lead to reductions in effectiveness or morale and hinder their workforce management objectives. For example, the Navy provides shore positions for sailors so that they do not spend their entire career at sea—even though some of those positions could be filled at a lower cost by civilians.

RELATED CBO PUBLICATION: *Replacing Military Personnel in Support Positions With Civilian Employees* (December 2015), www.cbo.gov/publication/51012

Discretionary Spending—Option 5 Function 050

Cancel Plans to Purchase Additional F-35 Joint Strike Fighters and Instead Purchase F-16s and F/A-18s

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Planned Defense Spending												
Budget authority	0	-2.4	-2.3	-2.0	-2.2	-2.6	-1.0	-0.5	-1.1	-2.1	-8.9	-16.2
Outlays	0	-0.3	-0.8	-1.5	-1.8	-2.0	-2.1	-1.8	-1.3	-1.2	-4.4	-12.8

This option would take effect in October 2019.

Estimates of savings displayed in the table are based on the 2019 Future Years Defense Program and the Congressional Budget Office's extension of that plan.

Background

The F-35 Joint Strike Fighter program is the military's largest aircraft development program. As a stealthy aircraft, the F-35 is difficult for adversaries to detect by radar and other air defense sensors. The program is producing three versions of that aircraft: the conventional takeoff F-35A for the Air Force, the short takeoff and vertical landing (STOVL) F-35B for the Marine Corps, and the carrier-based F-35C for the Navy. The Department of Defense (DoD) has received appropriations for 542 F-35s through 2019: 338 F-35As, 135 F-35Bs, and 69 F-35Cs. Current plans call for purchasing 1,914 more F-35s through 2044. According to DoD, the remaining costs to complete the program will amount to $253 billion (in nominal dollars). The Marine Corps' and the Air Force's versions of the F-35 entered operational service in 2015 and 2016, respectively. The Navy expects to declare its version operational in 2019.

Option

Under this option, DoD would halt further production of the F-35 and instead purchase the most advanced versions of older, nonstealthy fighter aircraft that are still in production. Through 2028, the Air Force would purchase 510 F-16 Fighting Falcons, and the Navy and Marine Corps would purchase 394 F/A-18 Super Hornets. Those purchases would occur on the same schedule as that currently in place for the F-35s. The services would continue to operate the 429 F-35s that have already been purchased.

Effects on the Budget

By the Congressional Budget Office's estimates, this option would reduce budget authority by about $16 billion from 2020 through 2028, provided that appropriations were reduced accordingly. The savings are based on procurement cost estimates DoD published in its December 2017 Selected Acquisition Report for the F-35 program and CBO's estimate of current prices for F-16s and F/A-18s. In terms of outlays, savings would be about $13 billion from 2020 through 2028. The remaining $3 billion reduction in outlays corresponding to the reduction in budget authority through 2028 would occur in later years. Reductions in outlays lag reductions in budget authority because DoD pays for aircraft as expenses are incurred. For example, CBO projects that most of the outlays to procure new military aircraft would occur over four years to account for the time required to negotiate contracts, manufacture and deliver the aircraft, and process the final payments.

CBO did not include possible changes in operation and maintenance costs under this option because the cost to operate an established fleet of F-35s remains uncertain. On the one hand, F-35s are now expected to be more expensive to operate than new F-16s or F/A-18s on a per-aircraft basis. On the other hand, any decrease in operation costs that might accrue from reducing the types of fighters in service would be delayed under this option. For example, F-16s would remain in the Air Force's inventory longer than currently planned, and the Marine Corps would need to operate new F/A-18s along with its F-35Bs. The savings under this option could be higher or lower depending on the relative magnitude of such factors.

Additional procurement savings would accrue from 2029 through 2044 if DoD purchased F-16s and F/A-18s instead of the F-35s that are scheduled to be purchased in those later years. However, the Navy and Air Force are both considering the development of entirely new aircraft with fighter-like capabilities to be fielded in the 2030s, making it unlikely that F-16 and F/A-18 purchases would continue much beyond 2028. It is unclear how the costs to develop and purchase entirely new aircraft would compare with the costs of current plans for the F-35 or continued purchases of F-16s and F/A-18s under this option. It might also be possible to scale back this option by purchasing a mix of F-35s, F-16s, and F/A-18s over the next 10 years instead of replacing all F-35 purchases with F-16s and F/A-18s. That middle course of action would probably yield little or no savings, however; the unit costs of all three types of aircraft would be higher because each of their production rates would be lower.

Other Effects

An advantage of this option is that it would reduce the cost of replacing DoD's older fighter aircraft while still providing new F-16s and F/A-18s with improved capabilities—including modern radar, precision weapons, and digital communications—that would be able to defeat most of the threats that the United States is likely to face in the coming years. The F-35s that have already been purchased would augment the stealthy B-2 bombers and F-22 fighters that are currently in the force, improving the services' ability to operate against adversaries equipped with advanced air defense systems. The military has successfully operated a mix of stealthy and nonstealthy aircraft since the advent of the F-117 stealth fighter in the 1980s.

A disadvantage of this option is that a force composed of a mix of stealthy and nonstealthy aircraft would be less flexible against advanced enemy air defense systems. If the United States was unable to neutralize such defenses early in a conflict, then the use of F-16s and F/A-18s might be limited, effectively reducing the number of fighters that the United States would have at its disposal. Although the Marine Corps would end up with fewer STOVL fighters capable of operating from amphibious assault ships under this option, enough F-35Bs have already been purchased to fully replace the STOVL AV-8B Harriers that perform that function today.

RELATED OPTION: Discretionary Spending, "Reduce the Size of the Fighter Force by Retiring the F-22" (page 150)

RELATED CBO PUBLICATIONS: *Long-Term Implications of the 2019 Future Years Defense Program* (forthcoming); *The Cost of Replacing Today's Air Force Fleet* (December 2018), www.cbo.gov/publication/54657; *The Depot-Level Maintenance of DoD's Combat Aircraft: Insights for the F-35* (February 2018), www.cbo.gov/publication/53543; *Strategies for Maintaining the Navy's and Marine Corps' Inventories of Fighter Aircraft* (May 2010), www.cbo.gov/publication/21251; *Alternatives for Modernizing U.S. Fighter Forces* (May 2009), www.cbo.gov/publication/41181

Discretionary Spending—Option 6 Function 050

Stop Building Ford Class Aircraft Carriers

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Planned Defense Spending												
Budget authority	0	0	-1.0	-1.6	-2.0	-1.9	-1.9	-2.7	-3.5	-3.7	-4.5	-18.2
Outlays	0	0	-0.1	-0.3	-0.7	-1.1	-1.4	-1.7	-2.1	-2.5	-1.1	-9.9

This option would take effect in October 2019.

Estimates of savings displayed in the table are based on the 2019 Future Years Defense Program and the Congressional Budget Office's extension of that plan.

Background

The Administration's 2019 budget calls for maintaining a fleet of 11 aircraft carriers and 9 active-duty naval air wings. (The number of active air wings is two less than the number of carriers because normally two of the Navy's carriers are having their nuclear reactors refueled or undergoing other major maintenance at any particular time.) Aircraft carriers are accompanied by a mix of surface combatants (typically cruisers and destroyers) to defend against enemy aircraft, ships, and submarines. The Navy calls such a force a carrier strike group.

Option

Under this option, the Navy would stop building new aircraft carriers after completion of the third of its modern Ford class carriers, the *Enterprise*, which lawmakers authorized in 2018 and which is expected to be completed in 2027. Thus, plans to start building the fourth Ford class carrier in 2023 would be canceled, as would the Navy's plans to purchase additional carriers in subsequent years. (Under its current 30-year shipbuilding plan, the Navy would purchase a new carrier every four or five years. Because those ships are expensive and take a long time to build, the Congress appropriates funds for construction over eight years, beginning two years before a ship is authorized for purchase by the Congress. Funding for the *Enterprise* began in 2016.)

Effects on the Budget

Savings under this option would result exclusively from not buying new carriers; those savings would be offset partially by higher costs for building nuclear-powered submarines and for refueling the Navy's existing carriers, because the fixed overhead costs of the commercial shipyard performing that work would be allocated to fewer programs. (The same shipyard that builds and overhauls aircraft carriers also builds parts of submarines. Some of that shipyard's overhead costs that are currently associated with building new carriers would instead be charged to submarine programs and to refueling carriers, increasing the total costs of those programs.)

This option would reduce discretionary budget authority by about $18 billion from 2021 through 2028 compared with costs under the Department of Defense's plans, the Congressional Budget Office estimates. Outlays would decrease by nearly $10 billion over that period. (For carrier construction, outlay savings are substantially less than budget authority savings; because carriers are built over nine-year periods, the outlay savings are not fully captured within the 10-year period of this option.) The savings were determined by eliminating the Administration's funding request from 2021 through 2023 for the fourth carrier and by estimating (using CBO's figures) the costs of construction for that ship as well as the fifth ship from 2024 through 2028.

The estimate of savings is reasonably certain under this option because the cost of the fourth and fifth carriers will be very similar, after adjusting for inflation, to the cost of the third carrier. Some uncertainty remains (about inflation in the costs of material and labor, for example), but it is small—implying a change in costs that is within a few percentage points of the total cost of an aircraft carrier.

Additional savings would be realized after 2028 because the Navy would no longer be purchasing new aircraft carriers and because it would need to buy fewer aircraft to put on its carrier fleet, which would slowly shrink as old ships were retired from the fleet. The savings under this option would accrue only if the Navy did not buy other weapon systems to replace the capability and capacity that it lost by not purchasing additional carriers.

Other Effects

One argument in favor of this option is that the existing fleet and the carriers under construction would maintain the current size of the carrier force for a long time because the ships are designed to operate for 50 years. Three Ford class carriers, including the *Enterprise*, have been delivered or are under construction. They will replace the first three Nimitz class carriers when they are retired in the 2020s and early 2030s; so as late as 2036, the Navy would still field 11 carriers under this option. The size of the carrier force would decline thereafter, however, falling to 6 ships by 2048. If national security interests made additional carriers necessary in the future, the Navy could restart production. But doing so would be more expensive and complex than building new carriers is today, and it takes years to construct such large ships. Building new designs of small warships is a challenge; relearning how to build the largest warship ever produced would pose much greater challenges for the shipyard tasked with the job.

Another argument in favor of this option is that, as new technologies designed to threaten and destroy surface ships are developed and are acquired by more countries, the large aircraft carrier may cease to be an effective weapon system for defending the United States' interests overseas. Among the technologies that might threaten the carrier in the future are long-range supersonic antiship cruise missiles, antiship ballistic missiles, very quiet submarines, and satellite and other tracking systems. If the United States' defensive capabilities failed to keep pace with advances in antiship technologies, the Navy's large surface warships may face much greater risks in the future. If over the next 20 years the technologies to detect, track, and attack the Navy's aircraft carriers advanced to such an extent that it could not effectively defend against those new weapons, then any large investment in new carriers that the Navy made today would ultimately not be cost-effective.

An argument against this option is that ceasing production of aircraft carriers could hamper the Navy's fighting ability. Since World War II, the aircraft carrier has been the centerpiece of the U.S. Navy. According to the Navy, each of its 10 older Nimitz class carriers can sustain 95 strike sorties per day and, with each aircraft carrying four 2,000-pound bombs, deliver three-quarters of a million pounds of bombs each day. That firepower far exceeds what any other surface ship can deliver. The new Ford class aircraft carriers will be able to sustain even more sorties each day.

Another argument against this option is that carriers may prove adaptable to a future environment that includes more sophisticated threats to surface ships—perhaps through the development of new weapon systems on the carriers. Since World War II, carriers have transported many different types and generations of aircraft. The Navy is now developing long-range unmanned aircraft that would be capable of striking an enemy's shores while allowing the carrier to operate outside the range of most air and missile threats. Equipping long-range unmanned aircraft with long-range, precision, stealthy munitions could extend the life of the aircraft carrier as an effective weapon system for decades to come. Furthermore, the Navy is developing new technologies that may make the defense of large surface ships economically and tactically effective. Energy-based weapons designed to shoot down incoming missiles could be more cost-effective than today's ship defenses, which rely primarily on missiles. In short, if either of those technological developments occurred, then the large aircraft carrier could remain a potent weapon system into the distant future.

RELATED OPTION: Discretionary Spending, "Reduce Funding for Naval Ship Construction to Historical Levels" (page 136)

RELATED CBO PUBLICATIONS: *Long-Term Implications of the 2019 Future Years Defense Program* (forthcoming); *An Analysis of the Navy's Fiscal Year 2019 Shipbuilding Plan* (October 2018), www.cbo.gov/publication/54564; *How CBO Estimates the Costs of New Ships* (April 2018), www.cbo.gov/publication/53785; *Comparing a 355-Ship Fleet With Smaller Naval Forces* (March 2018), www.cbo.gov/publication/53637; *Costs of Building a 355-Ship Navy* (April 2017), www.cbo.gov/publication/52632

Discretionary Spending—Option 7 Function 050

Reduce Funding for Naval Ship Construction to Historical Levels

											Total	
Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2019–2023	2019–2028
Change in Planned Defense Spending												
Budget authority	0	-4.6	-7.6	-9.3	-8.5	-8.6	-8.8	-9.0	-9.2	-9.4	-29.8	-74.7
Outlays	0	-0.3	-1.6	-3.4	-5.2	-6.5	-7.5	-8.0	-8.4	-8.7	-10.5	-49.7

This option would take effect in October 2019.

Estimates of savings displayed in the table are based on the 2019 Future Years Defense Program and the Congressional Budget Office's extension of that plan.

Background

The Navy's fiscal year 2019 shipbuilding plan proposes buying 301 new ships over the next 30 years at an average cost of about $27 billion per year (in 2018 dollars), the Congressional Budget Office estimates. Including the costs of all activities funded by the Navy's shipbuilding account, such as refueling nuclear-powered aircraft carriers and outfitting new ships, the average annual cost of implementing the plan is about $29 billion. That amount is 80 percent more than the average of $16 billion per year (in 2018 dollars) that the Navy has spent on shipbuilding over the past 30 years.

Option

This option would decrease budget authority for naval ship construction to the 30-year average in real (inflation-adjusted) terms.

Effects on the Budget

If funding for ship construction was reduced to its 30-year average, discretionary budget authority would decline by about $75 billion through 2028 compared with amounts under the Department of Defense's (DoD's) plans. Outlays would fall by a total of about $50 billion over that period, CBO estimates. (For naval ship construction, outlay savings are usually substantially less than budget authority savings. Because most ships are built over many years, outlay savings are not fully captured within the 10-year period.)

The savings were determined by calculating the difference between historical average funding and amounts in DoD's 2019 Future Years Defense Program (FYDP) and CBO's extension of that plan. To determine the historical average for shipbuilding, CBO adjusted the amount of appropriated dollars over the past 30 years using an index for naval shipbuilding provided by the Navy. Because CBO's estimates are in nominal dollars, the future savings in nominal dollars are calculated against the historical average, which then grows at the rate of the shipbuilding index. For the extension of DoD's FYDP, CBO's method relies on historical experience, with adjustments for four factors: rate (the production efficiencies that are made possible when several ships of the same type are built simultaneously or in close succession at a given shipyard), learning (the gains in efficiency that accrue over the duration of a ship's production as shipyard workers gain familiarity with a particular ship model), acquisition strategy (such as whether ship contracts are granted directly to a company or awarded as the result of a competitive process), and economic factors.

Specifically, this option would reduce the number of ships that the Navy plans to purchase over the next 30 years from 301 to 177, decreasing the number to be purchased over the 2019–2028 period from 110 to 71. The cuts would affect several types of ships in the Navy's fleet: surface combatants, attack submarines, amphibious ships, and combat logistics and support ships. The number of aircraft carriers, would remain unchanged, however, to comply with a statutory requirement that the Navy maintain a force of at least 11 such ships. The number of ballistic missile submarines also would not be affected by the cuts, because Navy officials consider those ships their highest acquisition priority.

The savings in this option are somewhat uncertain because the final costs of some types of ships the Navy plans to buy over the next 10 years are uncertain. For example, the Navy plans to buy 16 new frigates by 2028, but the design, size, capabilities, and cost of those ships have not yet been determined. (Five companies with designs for ships that vary between 3,000 tons and 6,500 tons are competing for the program.) In the case of other ships, such as the new Columbia class ballistic missile submarine, CBO's estimates of their costs are higher than the Navy's, and even those higher estimates could be too low based on historical cost growth of new ship construction programs.

Savings under this option could be adjusted by buying more or fewer ships. A higher level of funding, albeit less than that under the Navy's 2019 plan, could maintain today's fleet at or around its current 284 ships, for example. Conversely, a level of funding lower than the 30-year historical average, such as the level of funding in the 1990s, would result in an even smaller Navy by 2048 than the one envisioned under this option.

Other Effects

An argument in favor of reducing funding for ship construction is that the Navy would still have a powerful fleet in 2028 and beyond. Because ships take a long time to build and then serve in the fleet for 25 to 50 years, even with the cuts the size of the fleet would grow by nearly the same amount through 2028 under this option as it would under the 2019 plan. Under the Navy's 30-year plan, the fleet would grow to 313 ships by 2028 and to 335 ships by 2048. Under this option, the fleet would grow to 308 ships by 2028, at which point it would steadily decline to 228 ships by 2048. As the fleet grew to 308 ships over the next 10 years, it would require more sailors to crew the additional ships and more personnel, both military and civilian, to support those ships and sailors. More money also would be needed to operate and maintain those ships. As the fleet declined in size thereafter, fewer personnel would be required. Operating and support costs would continue to rise, though, because of real growth in those costs above general inflation in the economy. As a result, even the smaller fleet in 2048 would cost more to operate and maintain than today's fleet.

An argument against this option is that it would further decrease the size of the fleet over the next 30 years. The fleet has already shrunk over the past 30 years: Since 1987, the number of ships has fallen by more than 50 percent—from 568 to 285. With a smaller fleet, the Navy may not have the forces that it needs to implement its war plans if a conflict was to erupt. The Navy's shipbuilding plan is based on the 2016 force structure assessment, which concluded that the Navy needs a minimum of 355 ships in its fleet to deploy an adequate number overseas in the event of a major conflict. At any given time, some ships are undergoing long-term maintenance or are in the early stages of training and thus are unavailable to be immediately deployed, so the Navy must maintain more ships in the fleet than it would need to fight. Some observers, pointing to the increasing assertiveness with which Russia and China conduct foreign relations, have noted that the world appears to be entering an era of renewed competition between major powers. Decreasing funding for shipbuilding and substantially reducing the size of the fleet would, over the long run, result in the Navy having fewer ships than it says it needs to protect the United States' interests overseas in the event of a conflict with another major power.

Another argument against this option is that it could lead the Navy to reduce its overseas presence. Today the Navy operates more than a third of its fleet—or about 100 ships—overseas. If the fleet was smaller, it is likely that fewer ships would be based overseas in peacetime. The Navy could, however, maintain the same level of presence with a smaller fleet by stationing more ships overseas, increasing the practice of rotating crews to forward-deployed ships to keep them on station longer, or extending the length of deployments. But those measures would cost money and, in the case of longer deployments, place greater stress on the crews that operate the ships.

RELATED OPTION: Discretionary Spending, "Stop Building Ford Class Aircraft Carriers" (page 134)

RELATED CBO PUBLICATIONS: *Long-Term Implications of the 2019 Future Years Defense Program* (forthcoming); *An Analysis of the Navy's Fiscal Year 2019 Shipbuilding Plan* (October 2018), www.cbo.gov/publication/54564; *How CBO Estimates the Costs of New Ships* (April 2018), www.cbo.gov/publication/53785; *Comparing a 355-Ship Fleet With Smaller Naval Forces* (March 2018), www.cbo.gov/publication/53637; *Costs of Building a 355-Ship Navy* (April 2017), www.cbo.gov/publication/52632; *Preserving the Navy's Forward Presence With a Smaller Fleet* (March 2015), www.cbo.gov/publication/49989

Discretionary Spending—Option 8 Function 050

Reduce the Size of the Nuclear Triad

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Retain a Nuclear Triad With 10 Submarines, 300 ICBMs, and 1,550 Warheads												
Change in Planned Defense Spending												
Budget authority	0	0.1	-1.0	-0.3	-0.9	-1.7	-1.9	-1.2	-4.0	-0.4	-2.1	-11.2
Outlays	0	*	*	-0.3	-0.5	-0.8	-1.1	-1.3	-1.5	-2.0	-0.8	-7.5
Retain a Nuclear Triad With 8 Submarines, 150 ICBMs, and 1,000 Warheads												
Change in Planned Defense Spending												
Budget authority	0	-0.1	-1.1	-0.4	-0.9	-1.6	-2.0	-1.7	-4.5	-0.8	-2.5	-13.1
Outlays	0	*	-0.1	-0.4	-0.5	-0.8	-1.2	-1.5	-1.9	-2.4	-1.0	-8.9

This option would take effect in October 2019.

Estimates of savings displayed in the table are based on the 2019 Future Years Defense Program and the Congressional Budget Office's extension of that plan.

ICBM = intercontinental ballistic missile; * = between −$50 million and $50 million.

Background

The United States' nuclear deterrence strategy, developed during the Cold War, is built around the strategic nuclear triad, which comprises long-range bombers, intercontinental ballistic missiles (ICBMs), and submarines that launch ballistic missiles (SSBNs). Each component of the triad plays a particular role that complements the other two. Bombers provide flexibility, and by changing the pace or location of their operations, the United States can signal intent to an adversary. ICBMs provide the most rapid response, and their dispersed underground silos present several hundred targets that an adversary would need to destroy to disable the United States' nuclear forces. The ability of SSBNs to remain on alert while submerged and undetectable for long periods makes them the most difficult of the three components to destroy and ensures that the United States can retaliate against a nuclear attack. That ability to retaliate and assure the destruction of an adversary who launched a nuclear attack helps provide stability during a crisis by deterring adversaries from using nuclear weapons.

The most recent arms control treaty between the United States and Russia, New START, limits strategic forces to 700 deployed delivery systems and 1,550 deployed warheads. (The treaty also limits forces to 800 total deployed and nondeployed delivery systems.) To comply with those limits, which took effect in 2018, the United States maintains a nuclear force consisting of the following components: 12 deployed (14 total) Ohio class SSBNs that together carry up to 1,090 warheads on 240 missiles; 400 deployed (454 total) Minuteman III ICBMs, each carrying a single warhead; and 60 deployed (66 total) B-52H and B-2A bombers, each of which counts as a single warhead under the treaty's rules.

Almost all components of the United States' nuclear forces are scheduled to be modernized (refurbished or replaced by new systems) over the next 20 years. Current plans call for developing and purchasing 12 new SSBNs, 642 new ICBMs (of which up to 450 would be fielded in existing silos after the silos were refurbished, and the remainder would be spares and test stock), and 80 to 100 B-21 bombers, the next-generation long-range strategic bombers now under development. Through the mid-2030s, modernization is expected to nearly double the amount spent annually on nuclear forces (currently about $30 billion).

Option

This option would reduce the costs of modernization by retiring some existing delivery systems early and by purchasing fewer of the new systems. It would still allow the United States to retain the strategic benefits provided by the complementary roles of the triad's three components. The Congressional Budget Office examined two alternative approaches to reducing the size of the triad: The first would keep U.S. forces at the New START limit of 1,550 warheads, and the second would make deeper cuts and reduce the number of deployed warheads to 1,000. Neither alternative would change the size or composition of the planned bomber fleet because the number of bombers is determined largely by their conventional (that is, nonnuclear) mission.

The first alternative would reduce forces to 10 SSBNs and 300 ICBMs and would load more warheads on SSBNs or ICBMs. Under that alternative, the Navy would retire 4 Ohio class SSBNs at a rate of one per year starting in 2020; delay by one year the purchase of new SSBNs included in its current shipbuilding plan, starting with the second submarine, which is slated to be procured in 2024; and cancel orders for the last 2 SSBNs scheduled to be purchased under the current plan. In addition, the Department of Defense (DoD) would retire 150 ICBMs—50 each year for three years starting in 2020—and procure 482 new ICBMs instead of the 642 that are in the current plan.

The second alternative under this option would make deeper cuts to forces but still retain a triad structure. Under that alternative, the Navy would field 8 SSBNs, and the Air Force would deploy 150 ICBMs. That force level would be reached by retiring existing systems early, starting in 2020, and by purchasing fewer replacement systems.

Effects on the Budget

Over the next decade, the first alternative would reduce discretionary budget authority by about $11 billion compared with amounts under DoD's plan, CBO estimates. Outlays would decrease by a smaller amount—nearly $8 billion over that period—because the budget authority provided would not be spent right away since developing new systems requires extensive research and planning. The majority of savings from this alternative would occur after 2028, when DoD would purchase fewer new systems and operate fewer systems overall than it would under its current plan.

The second alternative would reduce discretionary budget authority through 2028 by about $13 billion compared with amounts under DoD's plan. Outlays would decrease by about $9 billion. As with the first alternative, the majority of savings would occur after 10 years, when DoD would purchase and operate fewer modernized systems.

Even though the second alternative would cut roughly twice as many systems as the first alternative, the savings under the second alternative would be considerably less than twice as much as under the first alternative. (For the new systems, 4 fewer submarines and 320 fewer ICBMs would be purchased in the second alternative, compared with 2 fewer submarines and 160 fewer ICBMs in the first alternative; for the existing generation of systems, 6 submarines and 300 ICBMs would be retired early in the second alternative, compared with 4 submarines and 150 ICBMs in the first alternative.) That nonlinear scaling results from two primary causes. In both alternatives, even though fewer new systems would eventually be purchased, CBO assumed those canceled purchases would come at the end of the production run, which would occur after 2028. Also, the early retirement of existing systems would occur gradually under this option. Thus, the retirements of the additional systems in the second alternative would occur later in the 10-year period, so DoD would have fewer years in which to accrue savings from forgoing operations.

CBO's estimate of the costs of this option involves some uncertainty. Historically, programs that develop new systems have often experienced costs that exceed initial estimates. Development of the new submarines and ICBMs may cost more than estimated—particularly for the ICBM, which is in the very early design stages for its new missile. Another source of uncertainty concerns the savings that would accrue from the early retirement of existing systems. CBO's estimate is based on a model in which half of the operating costs for a system are fixed, and half vary linearly with the number of systems deployed (for example, retiring 50 percent of the ICBMs would result in a savings of 25 percent in operating costs). However, actual savings from early retirements may not follow that model.

Other Effects

An argument in favor of the first alternative is that it would reduce the cost of nuclear modernization without sacrificing the complementary roles of the triad or reducing the size of nuclear forces significantly below those permitted under New START. In addition, scaling back plans now might lessen the chances of troubled programs being canceled later and thus might prevent development funding for such programs from being wasted.

An argument against the first alternative is that it would decrease the capabilities of nuclear forces. In particular, with fewer submarines the Navy might not be able to meet its current goals for the number of SSBNs on patrol, even though the number of warheads deployed with the submarine fleet could remain the same as under the current plan. In addition, cutting the number of ICBMs that were deployed by one-third would present fewer targets to an adversary, thereby increasing the likelihood that the adversary could disable that component of the United States' nuclear triad.

The arguments for and against the first alternative also apply to the second alternative. Another argument in favor of the second alternative is that a force with 1,000 warheads would continue the trend started by earlier arms control treaties, which have made the United States' current nuclear arsenal about 85 percent smaller than it was at its peak during the Cold War. Some analysts argue that further reduction would strengthen efforts at preventing nuclear proliferation by continuing the United States' compliance with the Nuclear Non-Proliferation Treaty, in which countries with nuclear weapons agreed to work toward reducing and eventually eliminating such weapons and, in exchange, countries without nuclear weapons agreed to not develop or acquire them. Moreover, proponents would argue, a smaller force would still be sufficient for deterrence: The official *Nuclear Weapons Employment Strategy of the United States*, released in 2013, states that the United States could maintain a "strong and credible" strategic nuclear deterrent with about one-third fewer weapons deployed than the number allowed under New START.

An argument against the second alternative is that reducing U.S. nuclear forces in the current geopolitical environment could spark new arms races and might increase the chances that an adversary would launch a nuclear attack on the United States. For example, the most recent *Nuclear Posture Review*, released in 2018, concludes that the geopolitical environment has deteriorated markedly since the last *Nuclear Posture Review* in 2010 and that the world has returned to a state of "Great Power" competition. In that international atmosphere, a new arms control agreement would have little chance of being reached, so a decision by the United States to reduce its stockpile to 1,000 warheads would be unilateral, which some analysts argue could reduce strategic stability. Internationally, allies that do not have their own nuclear weapons and thus rely on U.S. nuclear forces to deter attacks would probably oppose such cuts. If they determined that a reduction to 1,000 warheads signaled that the United States was less committed to protecting them than it has been in the past, they might choose to pursue their own nuclear weapons programs, which could provoke regional arms races. Furthermore, this alternative would diminish the capabilities of U.S. nuclear forces even more than the first alternative. The possibility of the Navy's encountering difficulties in meeting its goals for the number of SSBN patrols under this alternative would therefore be greater than under the first alternative, and the smaller ICBM force would present even fewer targets to an adversary.

RELATED OPTIONS: Discretionary Spending, "Cancel the Long-Range Standoff Weapon" (page 141), "Cancel Development and Production of the New Missile in the Ground-Based Strategic Deterrent Program" (page 157)

RELATED CBO PUBLICATIONS: *Approaches for Managing the Costs of U.S. Nuclear Forces, 2017 to 2046* (October 2017), www.cbo.gov/publication/53211; *Projected Costs of U.S. Nuclear Forces, 2015 to 2024* (January 2015), www.cbo.gov/publication/49870

Discretionary Spending—Option 9 Function 050

Cancel the Long-Range Standoff Weapon

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Planned Defense Spending												
Budget authority	0	-1.4	-1.2	-1.2	-1.2	-1.2	-1.2	-1.6	-2.1	-2.0	-5.0	-13.3
Outlays	0	-0.8	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.4	-1.6	-4.4	-11.0

This option would take effect in October 2019.

Estimates of savings displayed in the table are based on the 2019 Future Years Defense Program and the Congressional Budget Office's extension of that plan.

Background

Long-range bombers are one of the three components of the strategic nuclear triad, which also includes intercontinental ballistic missiles and submarine-launched ballistic missiles. Nearly all of the systems that make up the nuclear triad are scheduled to be refurbished or replaced with new systems over the coming decades. Over the next 20 years, modernization efforts are expected to nearly double the total amount that the United States spends annually on nuclear forces (currently about $30 billion).

Since 1945, the United States has used nuclear-capable bombers to deter adversaries and assure allies during crises—by increasing the pace of their operations (for example, by raising their alert level or by maintaining alert bombers in the air at all times) or by deploying the aircraft to areas of potential conflict. Bomber weapons are effective only if they are able to penetrate air defenses to reach their targets. To ensure that capability, the Air Force relies on hard-to-detect platforms, including cruise missiles that can deliver a warhead when launched from a bomber operating safely away from air defenses, and stealthy manned bombers that can fly into defended airspace and drop short-range gravity bombs from directly above targets. Currently, the Air Force fields two types of long-range bombers that can carry nuclear weapons, both of which can also perform conventional missions: the B-52H, which carries the Air-Launched Cruise Missile (ALCM), and the stealthy B-2A, which carries several varieties of nuclear gravity bombs. In addition, some shorter-range tactical aircraft—specifically the F-15E and, in the future, the F-35A—are capable of carrying nuclear gravity bombs.

Nearly all components of the nuclear bomber force are slated for modernization over the coming decades through the combined efforts of the Department of Defense (DoD) and the Department of Energy (DOE). The centerpiece of the nuclear bomber modernization effort is the development of a new stealthy bomber, the B-21. Two other programs focus on the development of new weapons for that bomber. In one program, the B61-12 life extension program (LEP), DOE is working to refurbish and combine several varieties of the B61 bomb into a single hybrid design. In the other program, DoD is developing the Long-Range Standoff Weapon (LRSO), a new nuclear air-launched cruise missile that will carry a warhead that DOE will produce. Plans call for the B-21 to be capable of carrying both the B61-12 bomb and the LRSO.

Option

This option would cancel the LRSO but retain the B61-12 LEP. Thus, the Air Force would stop equipping bombers with cruise missiles armed with nuclear warheads after the current ALCMs reached the end of their service life (around 2030). Specifically, DoD would cancel development and production of the LRSO, and DOE would cancel development and production of the associated warhead. Aircraft that are capable of carrying nuclear bombs would still be able to do so. This option would not change the planned size of the strategic bomber fleet or its ability to conduct nonnuclear missions.

Effects on the Budget

This option would reduce discretionary budget authority by about $13 billion over the next decade, the Congressional Budget Office estimates, if appropriations were reduced accordingly. Outlays would decrease by $11 billion. Savings would continue to accrue after 2028 as both the cost of the additional LRSO missiles and warheads that would be purchased and the expense of operating the new systems would be eliminated.

CBO's estimate of the costs of the LRSO is based on the actual development costs of the Advanced Cruise Missile, the most recent air-launched nuclear cruise missile built by the United States. Those costs were increased by 40 percent to account for cost growth between generations of missiles. CBO's cost estimates for both the LRSO and the associated warhead are very uncertain. Programs that develop new weapon systems historically have experienced cost growth relative to early estimates, and the LRSO and the warhead programs are both in the early planning stages.

CBO's estimate of savings is based on the full cancellation of the LRSO and its warhead, forgoing both development and subsequent production. If DoD chose instead to continue those programs but to reduce the quantity purchased, savings would be substantially lower. The development efforts, which constitute roughly half of the costs within the 10-year period, would still continue. Reduced production is also likely to result in 10-year savings that are less than proportional to the reduction in the number of missiles purchased, for several reasons. The current generation ALCMs are well past their original service life, so any reductions in LRSO quantities are likely to be taken at the end of the production run. Most savings would thus occur after 2028. In addition, reducing the quantity purchased would probably boost the average unit cost of both missiles and warheads.

Other Effects

By equipping bombers with a single type of nuclear weapon, the United States could reduce costs while still retaining the ability to deploy nuclear weapons on bombers. That is one argument for this option. Another argument for canceling the LRSO program is that the need for nuclear cruise missiles has been lessened significantly by the development of modern conventional cruise missiles, which can perform many of the same missions. Modern cruise missiles, both conventional and nuclear, are substantially more accurate than the ALCM, according to unclassified estimates. Because damage from a missile warhead can depend more strongly on accuracy than explosive yield, a modern conventional cruise missile could potentially perform some (but not all) of the missions that were assigned to the less-accurate, nuclear-tipped ALCM. In addition, to maintain the ability to conduct missions requiring nuclear weapons, some analysts argue, the LRSO program could be postponed until adversaries' air defenses advanced to the point at which the B-21 could no longer penetrate them.

An argument against canceling development of new air-launched cruise missiles is that doing so would somewhat diminish the capabilities of U.S. nuclear forces, particularly the forces' capacity to carry out limited nuclear strikes. Cruise missiles offer operational planners flexibility because they can travel for extended distances (the unclassified range for the current ALCM is more than 1,500 miles) along complicated flight paths, potentially allowing bombers to avoid dangerous or sensitive areas. Thus, removing air-launched cruise missiles would be more detrimental to the Air Force's strategic nuclear capabilities than eliminating nuclear bombs, which must be dropped close to a target.

RELATED OPTION: Discretionary Spending, "Reduce the Size of the Nuclear Triad" (page 138)

RELATED CBO PUBLICATIONS: *Approaches for Managing the Costs of U.S. Nuclear Forces, 2017 to 2046* (October 2017), www.cbo.gov/publication/53211; *Projected Costs of U.S. Nuclear Forces, 2015 to 2024* (January 2015), www.cbo.gov/publication/49870

Discretionary Spending—Option 10 Function 050

Defer Development of the B-21 Bomber

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Planned Defense Spending												
Budget authority	0	-3.0	-3.1	-3.3	-4.1	-5.7	-7.7	-6.7	-5.9	-5.5	-13.5	-44.9
Outlays	0	-1.5	-2.6	-2.7	-2.8	-3.4	-3.8	-4.5	-5.2	-5.4	-9.6	-31.8

This option would take effect in October 2019.

Estimates of savings displayed in the table are based on the 2019 Future Years Defense Program and the Congressional Budget Office's extension of that plan.

Background

The Air Force operates a fleet of 157 long-range bombers: 76 B-52Hs, 61 B-1Bs, and 20 B-2A stealth bombers that entered service in the 1960s, 1980s, and 1990s, respectively. Although those aircraft should be able to continue flying through at least 2040, the Air Force is developing a new bomber—designated the B-21—which it plans to field in the mid- to late 2020s. The goal of that program is to produce at least 100 aircraft that could augment and eventually replace the B-1B and B-2A bombers. (The Air Force is developing plans for new engines and subsystems to extend the service life of the B-52H.) The Air Force has estimated that developing and procuring the first 100 aircraft will cost $80 billion (in 2016 dollars). The Congressional Budget Office has not assessed the validity of that estimate because many details about the program—including the B-21's speed, payload, and stealthy characteristics, as well as its production schedule—are classified.

Option

This option would defer development of the B-21 bomber until after 2028.

Effects on the Budget

If implemented, this option would reduce budget authority by about $45 billion (in nominal dollars) through 2028, provided that appropriations were reduced accordingly. Those savings include $12 billion in research and development funding that the Air Force has budgeted for 2020 through 2023 (in its 2019 budget request), plus $33 billion through 2028 to complete development and begin procurement. To calculate those savings, CBO spread the Air Force's estimate of total costs for the program over a notional development and procurement schedule that would support initial fielding of B-21s by the mid- to late 2020s. Savings would differ if the Air Force's cost estimates proved to be inaccurate or if the fielding schedule changed, as often happens with programs that are developing new aircraft.

In terms of outlays, savings would be about $32 billion from 2020 through 2028. The remaining $13 billion reduction in outlays corresponding to the reduction in budget authority through 2028 would occur in later years. Reductions in outlays lag reductions in budget authority because the Department of Defense (DoD) pays for aircraft as expenses are incurred. For example, CBO projects that most of the outlays to procure new military aircraft would occur over four years to account for the time required to negotiate contracts, manufacture and deliver the aircraft, and process the final payments.

Shortening or lengthening the time over which the B-21 program was deferred would alter the projected savings. Additional savings might accrue after 2028 if DoD decided that it could accommodate a longer delay. Alternatively, a shorter deferment in developing and fielding the B-21 would yield lower savings.

Other Effects

An advantage of this option is that it would reduce acquisition costs at a time when the Air Force plans to modernize other parts of its fleet. Funding would not have to be provided for bomber production while the Air Force carried out its plan to purchase KC-46A tankers and F-35A fighters and to develop other aircraft, including helicopters, an aircraft for training new pilots, and a replacement for Air Force One. Another advantage of this option is that a bomber program that begins later might be able to take advantage of any general advances in aerospace technology that are made in the coming years. Such advances might make possible an even more capable bomber or might lead to other types of weapons that would make a new bomber unnecessary or reduce the number of bombers needed. Taking advantage of future technological developments could be particularly valuable for weapon systems that are expected to be in use for several decades. Even with a 10-year delay, a new bomber would still be available before today's bombers reached the end of their service life.

A disadvantage of this option is that if some current bombers need to be retired sooner than expected, a replacement would not be available. By 2035, the Air Force's B-52s will be about 75 years old, its B-1Bs will be about 50 years old, and its B-2As about 40 years old. Expecting those aircraft to perform reliably after that much time may prove to be overly optimistic. Similarly, a gap in capability could arise if the new bomber was deferred and ended up taking significantly more time to field than expected (as has been the case for the F-35 fighter program). Another disadvantage is that the Air Force's inventory of stealthy bombers that are able to fly in defended airspace would remain limited to the B-2A, which makes up only 13 percent of today's bomber force. Larger numbers of stealthy bombers might be useful in operations against adversaries that employed advanced air defenses. A third disadvantage is that fewer bombers would be available for operations in places like the western Pacific Ocean, where long distances and limited basing options would make long-range aircraft such as the B-21 particularly useful during a conflict.

RELATED OPTIONS: Discretionary Spending, "Cancel Plans to Purchase Additional F-35 Joint Strike Fighters and Instead Purchase F-16s and F/A-18s" (page 132), "Reduce the Size of the Bomber Force by Retiring the B-1B" (page 148)

RELATED CBO PUBLICATIONS: *Long-Term Implications of the 2019 Future Years Defense Program* (forthcoming); *Approaches for Managing the Costs of U.S. Nuclear Forces, 2017 to 2046* (October 2017), www.cbo.gov/publication/53211

Discretionary Spending—Option 11 Function 050

Modify TRICARE Enrollment Fees and Cost Sharing for Working-Age Military Retirees

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Discretionary Spending												
Budget authority	0	0.1	-0.9	-1.2	-1.3	-1.4	-1.6	-1.7	-1.8	-2.0	-3.4	-11.8
Outlays	0	*	-0.7	-1.1	-1.3	-1.4	-1.5	-1.7	-1.8	-1.9	-3.1	-11.4
Change in Mandatory Outlays	0	0	*	*	*	*	*	*	*	*	*	-0.1
Change in Revenues[a]	0	0	-0.1	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.5	-1.9
Increase in the Deficit From Changes in Mandatory Outlays and Revenues[b]	0	0	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.5	1.8

Sources: Congressional Budget Office; staff of the Joint Committee on Taxation.

This option would take effect in January 2021, although some changes to outlays would occur earlier.

* = between -$50 million and $50 million.

a. Estimates include the effects on Social Security payroll tax receipts, which are classified as off-budget.

b. Changes in discretionary spending are not included in this total because they would be realized only if future appropriations were adjusted accordingly and because the Congress uses different procedures to enforce its budgetary goals related to discretionary spending.

Background

More than 9 million people are eligible to receive health care through TRICARE, a program run by the Department of Defense's (DoD's) Military Health System. Among its beneficiaries are 1.5 million members of the active military and the other uniformed services (such as the Coast Guard), certain reservists, retired military personnel, and their qualified family members. The costs of that health care have been among the fastest-growing portions of the defense budget over the past 17 years, more than doubling in real (inflation-adjusted) terms since 2001. In 2017, DoD spent about $50 billion for health care. Much of the cost increases are attributable to new and expanded health care benefits and to financial incentives to use those benefits.

In 2017, about 20 percent of military health care spending was for working-age retirees (generally, beneficiaries who, although retired from military service, are under age 65 and thus not yet eligible for Medicare) and their family members—3.1 million beneficiaries in all. Some 1.6 million people (or about 50 percent of that group) were enrolled in TRICARE Prime, which operates like a health maintenance organization. Subscribers in 2018 pay an annual enrollment fee of $289 (for individual coverage) or $578 (for family coverage). Working-age retirees who do not enroll in TRICARE Prime may participate in TRICARE Select (a preferred provider network). Under the Select plan, a beneficiary who chooses an in-network provider for a given medical service pays lower out-of-pocket costs than one who chooses an out-of-network provider.

The National Defense Authorization Act for Fiscal Year 2017 (Public Law 114-328) made several changes to the TRICARE program, including creating the Select plan by merging two other plans and increasing cost sharing for the households of military retirees. However, those higher out-of-pocket costs will apply only to those retirees whose initial enlistment or appointment to the armed forces occurred on or after January 1, 2018. With few exceptions, the higher cost-sharing amounts will not take effect until 2038 or later, when that cohort begins to retire.

Option

Under this option, TRICARE's enrollment fees, deductibles, and copayments for working-age military retirees would increase as described below starting in

January 2021. Thereafter, such costs would be indexed to nationwide growth in health care spending per person. Specifically:

- Beneficiaries with individual coverage would pay $650 annually to enroll in TRICARE Prime. The annual cost of family enrollment would be $1,300. (That family enrollment fee is about equivalent to what would result if the $460 annual fee first instituted in 1995 had grown each year by the nationwide growth in health care spending per person.)

- All beneficiaries who enroll in TRICARE Select would pay an annual enrollment fee of $485 for individual coverage and $970 for a family, which is the Congressional Budget Office's estimate of what the enrollment fees will be under current law for those retirees who joined the armed forces after January 1, 2018.

- The annual deductible for individual retirees (or surviving spouses) for TRICARE Select would rise to $300, and the annual family deductible would be $600.

- The schedule of copayments for medical treatments under TRICARE Prime and Select in 2021 would be the same for all retirees (regardless of when they joined the armed forces). In subsequent years, copayments would grow in line with nationwide growth in health care spending per person.

Those higher out-of-pocket costs would apply to most new and current retirees beginning in 2021. The only exception would be for those who retired because of disability and certain survivors (whose cost sharing would remain unchanged). DoD would incur some added costs for implementation expenses.

Effects on the Budget

CBO estimates that, combined, those changes would reduce discretionary outlays for DoD by $12.6 billion between 2020 and 2028, under the assumption that appropriations would be reduced accordingly. The increased out-of-pocket expenses for beneficiaries would reduce DoD's discretionary costs for the TRICARE program, as enrollees used fewer services and as Prime members switched to civilian care provided by their current employers or some other source of health care. Under this option, CBO estimates, about 120,000 retirees and their family members would leave TRICARE because of the higher out-of-pocket costs they would face.

Discretionary spending outside of DoD would increase slightly under the option. Some eligible retirees would obtain health care from other discretionary federal programs—such as the Veterans Health Administration or the Federal Employees Health Benefits (FEHB) program, if the person or his or her spouse was employed as a civilian by the federal government—increasing the costs of those programs. About $1.2 billion in additional spending would be needed for those programs by 2028, CBO projects, so the overall reduction in discretionary costs would be $11.4 billion between 2020 and 2028.

This option would have partially offsetting effects on mandatory spending. On the one hand, mandatory spending would increase when some retirees enrolled in other federal health care programs, such as Medicaid (for low-income retirees) or the FEHB program (for those who complete a career in the federal civil service after military retirement). On the other hand, mandatory spending would decrease as a result of the new cost sharing for retirees of the Coast Guard, the uniformed corps of the National Oceanic and Atmospheric Administration, and the Public Health Service. (TRICARE's costs for retirees from those three uniformed services are paid from mandatory appropriations; DoD's costs are paid from annual discretionary appropriations.) Overall, in CBO's estimation, mandatory spending under this option would decline by $100 million between 2021 and 2028 because spending for people in those three uniformed services would fall by a larger amount than spending for Medicaid and FEHB annuitants would rise.

CBO and the staff of the Joint Committee on Taxation estimate that, under this option, federal tax revenues would decline by $1.9 billion between 2021 and 2028 because some retirees would enroll in employment-based plans in the private sector and therefore experience a shift in compensation from taxable wages to nontaxable fringe benefits.

In general, relative to this option, increasing the share of health care costs paid by beneficiaries would further reduce federal spending, but the results would not be proportional; consequently, doubling fees or copayments would not necessarily double the savings. One reason for that relationship is that changes in some fees (such as the Prime enrollment fee) would alter beneficiaries' behavior differently than changes in other fees (such as the copayment for primary care). In addition, the number of households that used TRICARE under different cost-sharing scenarios would not change proportionally: Relatively healthy people, who do not spend the entire deductible under the current system, for example, would be unaffected by having that deductible increase.

The largest source of uncertainty in the estimate of savings over the next 10 years relates to CBO's estimate of the number of people who would shift from TRICARE to other health care plans. Many military members retire while they are still young enough to start second careers. Studies show that over 75 percent of those working-age retirees have access to other health insurance through either an employer or a professional association (for example, Mariano and others 2007). Therefore, any significant increase in out-of-pocket costs for the military health benefit would cause some people to stop using those benefits and instead rely on other health care coverage. Nevertheless, the behavior of military retirees might differ from that of the studied populations, and changes in the cost and availability of civilian health insurance would affect the estimated amount of savings.

Other Effects

One argument in favor of this option is that the federal government established TRICARE coverage to supplement other health care for military retirees and their dependents. That was done to serve as a safety net rather than as a replacement for benefits offered by postservice civilian employers. Yet the cost sharing under the option would still be comparatively low. The Prime enrollment fee under this option, for example, would be about one-fifth that of the average premium paid by employees for employment-based health insurance in 2017. The migration of retirees from civilian coverage into TRICARE is one factor in the rapid increase in TRICARE spending since 2000.

An argument against this option is that current retirees joined and remained in the military with the understanding that they would receive free or very low-cost medical care in retirement. Imposing new cost sharing might cause some to drop their TRICARE coverage and become uninsured; it also could adversely affect military retention. Another potential disadvantage is that the health of users who remained in TRICARE might suffer if higher copayments led them to forgo some care. However, their health might not be affected significantly if the higher copayments fostered more disciplined use of medical resources and discouraged the use of health care that did little to improve health.

RELATED OPTIONS: Mandatory Spending, "Introduce Enrollment Fees Under TRICARE for Life" (page 57), "Introduce Minimum Out-of-Pocket Requirements Under TRICARE for Life" (page 59)

RELATED CBO PUBLICATIONS: *Approaches to Changing Military Health Care* (October 2017), www.cbo.gov/publication/53137; *Approaches to Reducing Federal Spending on Military Health Care* (January 2014), www.cbo.gov/publication/44993

WORK CITED: Louis T. Mariano and others, *Civilian Health Insurance Options of Military Retirees: Findings From a Pilot Survey* (RAND Corporation, 2007), www.rand.org/pubs/monographs/MG583.html

Discretionary Spending—Option 12 Function 050

Reduce the Size of the Bomber Force by Retiring the B-1B

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Planned Defense Spending												
Budget authority	0	-1.8	-1.9	-1.9	-1.9	-2.0	-2.0	-2.1	-2.1	-2.2	-7.5	-17.9
Outlays	0	-1.1	-1.6	-1.8	-1.9	-1.9	-2.0	-2.0	-2.1	-2.1	-6.4	-16.5

This option would take effect in October 2019.

Estimates of savings displayed in the table are based on cost estimates from the Air Force.

Background

In the mid-1980s, the U.S. Air Force purchased 100 B-1B long-range bombers to serve as part of the nation's Cold War nuclear deterrent. Although the aircraft's ability to deliver nuclear weapons has been removed to comply with the terms of the original START arms control treaty, the bomber continues to be used for conventional missions. The B-1B fleet currently comprises 61 aircraft that can carry most of the types of conventional weapons in the Air Force's inventory. Although the Air Force plans to replace the B-1Bs with B-21 bombers that are under development, B-1Bs are expected to remain part of the bomber force into the 2030s.

Option

This option would retire the entire the B-1B bomber fleet in 2020.

Effects on the Budget

This option would reduce costs by about $18 billion through 2028. Most of the savings would result from eliminating the costs for operation and maintenance of the B-1B fleet and the costs for the military personnel in the squadrons that would be inactivated under this option. (Personnel from the inactivated squadrons would be moved to other jobs in the Air Force, reducing the service's need to recruit and train new personnel.) The Congressional Budget Office estimated those savings on the basis of historical costs for the B-1B. The remaining savings would result from eliminating planned upgrades to the aircraft. Measured in terms of outlays, savings would total about $17 billion through 2028, CBO estimates. If the Air Force did not reduce the number of personnel and instead reassigned the military positions to other duties, the savings would be $4 billion lower.

A key reason that savings under this option are uncertain is that the aircraft's operating costs could rise more quickly or more slowly than CBO projects. Over its service life, the B-1B has been less reliable and costlier to operate than expected, and that trend may persist as the B-1B fleet ages. (The aircraft are at least 30 years old.) If lawmakers chose to retire only a portion of the B-1B fleet, savings would be smaller than indicated in this option. However, that reduction would not be proportionate because the Air Force would not be able to divest itself of the fixed costs associated with operating and sustaining the B-1B aircraft as long as any of them are in service.

Other Effects

One argument for this option is that other aircraft may be able to handle the missions now covered by the B-1B force. The 76 B-52H and 20 B-2A aircraft that would remain in the Air Force's inventory under this option could be used for those missions. In addition, depending on the specific circumstances of a particular mission, other systems (such as cruise missiles, attack aircraft flown from aircraft carriers, and unmanned aircraft like the MQ-9 Reaper) could substitute for B-1Bs.

One argument against this option is that it would reduce the Air Force's ability to attack targets from great distances or to have aircraft with large payloads orbiting over conflict areas awaiting orders to attack. Compared with other ground attack aircraft (such as strike fighters), bombers like the B-1B can carry substantially more weapons and can fly longer and farther without refueling. Retiring the B-1B fleet would reduce the size of the long-range bomber force by about 40 percent until the latter half of the 2020s (when B-21 bombers are expected to begin entering the force). At that time, the Air Force could decide that the smaller bomber force is adequate, or it could begin increasing the size of the bomber force with new B-21s.

RELATED OPTION: Discretionary Spending, “Defer Development of the B-21 Bomber” (page 143)

RELATED CBO PUBLICATION: *Long-Term Implications of the 2019 Future Years Defense Program* (forthcoming)

Discretionary Spending—Option 13 Function 050

Reduce the Size of the Fighter Force by Retiring the F-22

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Planned Defense Spending												
Budget authority	0	-2.9	-3.2	-3.1	-3.2	-3.3	-3.4	-3.5	-3.6	-3.7	-12.3	-29.9
Outlays	0	-1.7	-2.5	-2.8	-3.0	-3.1	-3.3	-3.4	-3.5	-3.6	-10.0	-26.7

This option would take effect in October 2019.

Estimates of savings displayed in the table are based on cost estimates from the Air Force.

Background

The U.S. Air Force's F-22 fighter aircraft are designed to engage in combat with enemy aircraft. Built to be a stealthy fighter, the F-22 is difficult for enemy radar to detect. The Air Force initially planned to replace its F-15 A-D fighters (many of which were built in the 1970s and 1980s) with F-22s.

In 1990, the Air Force had approximately 360 F-15A/Bs and 450 F-15C/Ds. Earlier plans called for replacing those F-15 A-Ds with 648 F-22s. However, because of schedule delays, cost increases, and changes to threats and missions, the Department of Defense (DoD) reduced the number of F-22s acquired to 195, of which approximately 180 remain in regular operation. As a result of the reduction in the number of F-22s, the Air Force continues to operate approximately 240 F-15C/Ds. (All of the F-15A/Bs have been retired.) The Air Force's oldest active F-22s entered service in November 2002, and its newest entered service in April 2012.

Option

This option would retire the entire F-22 fleet in October 2019. The aircraft would be flown to Davis-Monthan Air Force Base in Arizona, where they would be put into long-term preservation and storage.

Effects on the Budget

Retiring the F-22 fleet would reduce costs by about $30 billion through 2028. That amount comprises three categories of savings: operation and maintenance (about $16 billion); upgrades and modifications (about $9 billion); and military personnel (about $5 billion). By retiring the F-22 fleet, the Air Force would no longer have to pay the annual costs to operate and maintain those aircraft or to train pilots to fly them. A large portion of the work to maintain the aircraft is handled by its manufacturer, Lockheed Martin, through a contractual arrangement with the Air Force. (The Air Force also has a support contract with Pratt & Whitney, the company that built the aircraft's engines.) The Congressional Budget Office's estimate of savings incorporates the assumption that once those contracts ended and fewer workers were needed to operate and maintain the F-22s, the Air Force would reduce its civilian and contractor workforces accordingly. Second, retiring the F-22 fleet would make upgrades or modifications to improve the aircraft's capabilities unnecessary. (Those improvements would have been funded through two of the Air Force's budgets: procurement, and research, development, test, and evaluation.)

The estimate of savings includes reductions in military personnel associated with the fighter squadrons that would be removed from the force. Personnel from the inactivated squadrons would be moved to other jobs in the Air Force, reducing the service's need to recruit and train new personnel. If the department did not reduce the number of personnel in the force and instead reassigned the military positions to other duties, the savings would be $5 billion lower.

Measured in terms of outlays, savings would total about $27 billion from 2019 through 2028, CBO estimates. The effects on outlays are smaller in 2020 than in other years because some of the funding appropriated in that year would be spent in later years. Reductions in outlays lag behind reductions in budget authority because DoD pays its contractors after work is performed. Retiring only a portion of the fleet would not generate commensurate savings because of the fixed costs associated with operating any F-22s. The fleet is already smaller than DoD intended, so the costs per aircraft are elevated; retiring only part of the fleet would increase costs per aircraft even further. A significant uncertainty surrounding the estimated savings stems from averting future upgrades or modifications—the costs of which are hard to predict.

Other Effects

One argument for this option is that retiring the F-22 would not eliminate the military's stealthy aviation capability. DoD's growing fleet of F-35 fighter aircraft has that capability. Although F-35s are not optimized for air-to-air combat in the way F-22s are, they could partially replace the capabilities lost through retirement of the F-22s. In addition, the Air Force would retain its ability to attack ground targets with stealthy aircraft by using the B-2 bomber and the B-21 bomber (which is currently in development).

One argument against this option is that it would reduce the Air Force's fighter force by about 10 percent (assuming that all else was unchanged). That decrease would have an adverse effect on the Air Force's ability to fight adversaries such as Russia or China, which have advanced air-defense systems and which also fly sophisticated fighter aircraft. DoD expects that the F-22 would be particularly valuable in countering enemy aircraft in the initial days of a conflict, when an adversary's aerial detection capabilities have not yet been degraded.

RELATED OPTION: Discretionary Spending, "Cancel Plans to Purchase Additional F-35 Joint Strike Fighters and Instead Purchase F-16s and F/A-18s" (page 132)

RELATED CBO PUBLICATIONS: *The Cost of Replacing Today's Air Force Fleet* (December 2018), www.cbo.gov/publication/54657; *Alternatives for Modernizing U.S. Fighter Forces* (May 2009), www.cbo.gov/publication/41181

Discretionary Spending—Option 14 Function 050

Cancel the Ground-Based Midcourse Defense System

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Spending												
Budget authority	0	-2.5	-2.2	-1.8	-1.8	-1.9	-2.3	-2.5	-2.5	-2.6	-8.4	-20.3
Outlays	0	-1.0	-1.9	-2.0	-1.9	-1.9	-2.0	-2.2	-2.4	-2.5	-6.8	-17.7

This option would take effect in October 2019.

Background

The Ground-Based Midcourse Defense (GMD) system is designed to defend against intermediate and long-range missiles during the middle portion of their trajectory. It uses interceptor missiles to launch a kill vehicle, which uses onboard sensors to locate the threat and then maneuvers to hit and kill it. The system is part of a layered defense that combines sensors, control systems, and several types of interceptors or other methods to destroy attacking missiles of various ranges and during different portions of their trajectories.

GMD comprises 44 interceptor missiles in silos at Fort Greely, Alaska, and Vandenberg Air Force Base, California; battle management command-and-control software; and a communications system to relay information to and from the interceptors in flight. The Department of Defense (DoD) is planning to add 20 interceptors to the system and has several programs under way to support GMD testing and improve the GMD system.

Option

This option would cancel the GMD system and its support efforts, including the Improved Homeland Defense Interceptors, Common Kill Vehicle, and Multi-Object Kill Vehicle programs. The option would not affect the overarching command-and-control or sensor programs that support other missile defense systems.

Effects on the Budget

This option would reduce budget authority by about $20 billion over the next decade, the Congressional Budget Office estimates. Outlays would decrease by a smaller amount—about $18 billion over that period—because the budget authority provided would not be spent right away as development of new systems requires extensive research and planning. Those savings would result from ending efforts to improve the interceptors and kill vehicles, canceling procurement of additional interceptors, and avoiding the costs of operation and maintenance of the GMD system. The estimate of savings does not include reductions in the number of military personnel because the GMD site at Fort Greely is operated by Army National Guard units, which CBO assumes would be assigned to other activities.

CBO's estimate of savings is based on plans as described in DoD's budget documentation. Those estimates, which CBO has projected to 2028, are somewhat uncertain because technology development programs historically have experienced cost growth relative to DoD's estimates. Some of the programs that this option would cancel are intended to fix problems with the existing interceptors or kill vehicles, and those problems could prove more difficult (and expensive) to overcome than DoD or CBO has anticipated.

CBO's estimate of savings is based on the full cancellation of GMD and of the supporting programs designed to improve performance. If DoD chose instead to continue fielding the GMD system but to reduce the number of interceptors, savings would be substantially less and would not be proportional to the reduction in the number of interceptors fielded. That is because the development programs that are intended to improve performance, which constitute about half of the estimated costs over the next decade, would still continue. In addition, fixed costs associated with maintaining each base and continuing to operate at least one interceptor there would result in savings in operations costs for GMD that would be less than proportional to the reduction in the number of interceptors.

Other Effects

One argument for this option is the GMD program's mixed track record. Critics argue that initial development of the system was rushed, resulting in quality control and design flaws. They contend that GMD has failed in six of 10 intercept tests since its deployment in 2004 (although interpretation of whether several of those tests succeeded or failed is controversial). Furthermore, critics argue that even if the system performed as designed, it could be defeated by decoys or other countermeasures. U.S. nuclear forces are sufficient to deter any attacks on the United States, in their view. A second argument is that the system has been a source of geopolitical tension. The United States withdrew from the Anti-Ballistic Missile Treaty, a bilateral agreement with Russia, before deployment of GMD. Since that withdrawal, the Russians have repeatedly protested against U.S. missile defenses. Some analysts attribute recent Russian improvements to their nuclear forces to concerns about U.S. missile defenses. A final argument is that DoD could use other programs to perform some of the missions designated for GMD. For example, the Aegis missile defense system now deployed on Navy ships and at one location ashore also intercepts missiles in the midcourse phase of their flight and is slated to be tested against long-range threats. In addition, DoD is devising defenses that would destroy missiles during their boost phase (while their rocket boosters are still firing), which could defend against some of the threats that GMD is intended to address. However, if DoD chose to increase funding for those programs to compensate for the loss of GMD, the net savings for this option would decline accordingly.

An argument against this option is the current threat posed by ballistic missile launches from hostile nations. Despite the deterrence against attack provided by the large U.S. nuclear arsenal, the threat has increased recently, in particular with the successful testing of long-range missiles by North Korea. Advocates of the GMD system contend that the continued operation, expansion, and improvement of GMD would provide urgently needed protection for the United States and its allies.

RELATED CBO PUBLICATIONS: *Historical and Planned Future Budgets for the Missile Defense Agency's Ground-Based Midcourse Defense Program* (July 2014), www.cbo.gov/publication/45546; *Options for Deploying Missile Defenses in Europe* (February 2009), www.cbo.gov/publication/41165; *Alternatives for Boost-Phase Missile Defense* (July 2004), www.cbo.gov/publication/15852

Discretionary Spending—Option 15 Function 050

Reduce the Basic Allowance for Housing to 80 Percent of Average Housing Costs

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Discretionary Spending												
Budget authority	0	*	-0.2	-0.6	-1.0	-1.5	-2.0	-2.5	-3.1	-3.7	-1.9	-14.7
Outlays	0	*	-0.2	-0.6	-1.0	-1.5	-2.0	-2.5	-3.1	-3.6	-1.9	-14.6
Change in Mandatory Outlays	0	*	-0.1	-0.2	-0.4	-0.5	-0.7	-0.8	-1.0	-1.2	-0.7	-4.9

This option would take effect in January 2020.

* = between −$50 million and zero.

Background

Housing allowances are one component of military compensation. The amount provided varies by a service member's rank, location, and whether he or she has dependents. The Department of Defense (DoD) provides those allowances to ensure that eligible personnel and their families have access to affordable quality housing.

Three types of housing are available to service members: government-owned housing (quarters or family housing), housing on military bases operated through long-term contracts with DoD (privatized housing), and housing in the local civilian market. Unmarried service members with fewer than four years of service are typically required to live in barracks, but more senior personnel and service members with dependents can choose among the three types of housing. About 60 percent of service members live in privatized or local housing.

If government-owned military housing is not available (which is typically the case, because it is very limited), service members are provided a Basic Allowance for Housing (BAH) to offset most of their costs for rent and utilities. Because those costs vary by location, the BAH rate varies by locality; the amount provided is based on rents in the local housing market. The housing allowance is not subject to federal (and, in many cases, state) income tax.

In the mid-1990s, to improve the quality of military housing, management of those facilities was transferred from DoD to private-sector developers through the Military Housing Privatization Initiative (MHPI). BAH is the primary source of income for that program. As of 2018, nearly all family housing on military bases in the United States was managed by private-sector developers.

In the early years of the MHPI program, BAH compensation was set to cover about 80 percent of service members' rental and utility costs, on average. That share was consistent with DoD's long-standing policy of compensating service members who live off-base. In 2001, BAH was increased so that it would cover, on average, 100 percent of a service member's expenses for housing and utilities by 2005. (That change was part of the Secretary of Defense's efforts to improve service members' quality of life.) The Congress partially reversed that policy in the National Defense Authorization Act for 2016, authorizing DoD to lessen BAH to 95 percent of average housing costs.

Option

This option would reduce BAH by 1.7 percentage points in January of each year starting in 2020. BAH would not change for service members until they moved. As a result, by 2028, BAH would once again cover 80 percent of rental and utility costs. This option would affect discretionary spending by DoD and would also affect mandatory spending by the Department of Veterans Affairs (VA), because the housing benefit that VA provides as part of the Post-9/11 GI Bill is tied to BAH rates.

Effects on the Budget

In 2017, about 14 percent (or $20 billion) of DoD's $139 billion military personnel appropriation was for BAH. If implemented, this option would save about $15 billion in discretionary spending and nearly

$5 billion in mandatory spending from 2019 through 2028, the Congressional Budget Office estimates.

CBO's estimate reflects the size and composition of DoD's forces for fiscal year 2019 (as indicated in the President's 2019 budget). CBO projects that service members would move every three years, on average, and that their moves would occur uniformly throughout the year. Because of those factors, in combination with the specifications of the option, the savings in both budget authority and outlays would lag behind reductions in the BAH rate. Because of that lag, savings would continue to increase until 2031—peaking at nearly $5 billion—and would grow with inflation thereafter.

Housing costs used to calculate the BAH rate are composed of the median rent plus average utility costs and are determined from market data for approximately 300 military housing areas in the United States, including Alaska and Hawaii. If housing costs deviated significantly from expectations, savings under this option would differ as well.

If the BAH was changed by more or less than 1.7 percentage points per year, the savings under this option would grow or shrink proportionately. For example, increasing the annual rate of reduction to 3.0 percentage points per year would result in proportionately higher savings by 2028.

Other Effects

One advantage of this option is that it would slow the growth of military pay, which would move cash compensation for military personnel closer to the 70th percentile of compensation for civilians with comparable education and years of experience (DoD's goal). Currently, cash compensation for a majority of military personnel is at about the 90th percentile—that is, regular military compensation (RMC) is higher than the compensation of 90 percent of all comparable civilians. (DoD uses RMC as the measure of cash compensation for military personnel; that calculation adjusts for the fact that BAH and the basic allowance for subsistence are not taxed.) Gradually reducing BAH below local market costs would not reduce total compensation below current levels, however, because military pay raises and the costs of rental housing are expected to continue to rise.

A second advantage of this option is that reducing BAH might have only a small effect on the nominal (not adjusted for inflation) value of a service member's compensation. Because BAH is not taxed at the federal level, under this option it would cover more than 80 percent of housing costs—and perhaps as much as 90 percent to more than 100 percent for many service members, depending on their marginal rate for federal income taxes. The value could be somewhat higher for military personnel who live in states that also do not tax the allowance.

One disadvantage of this option is that slowing the growth of military compensation by reducing the BAH rate might affect DoD's ability to retain military personnel. The extent of that effect would depend on the strength of the U.S. economy and other factors in future years.

A second disadvantage is that reducing BAH below local market costs would limit the housing choices available to service members. Those living in the local community would have to pay more out of pocket or find less expensive housing. But those living in privatized government housing would be shielded from the decreases in BAH because current policies allow developers to charge no more than the local BAH for rent and utilities. That disparity would probably boost demand for government housing, although it is already near capacity.

Under current policies, reducing the BAH rate would also decrease the income of the private-sector developers who provide housing on military installations. Lowering the BAH rate further, to 80 percent of market prices in the area, would reduce their income from current levels unless policies changed and those service members were required to pay a portion of their rent out of pocket (as is the case with service members who live off-base and are reimbursed at 95 percent of their estimated average housing costs).

Although this option would reduce income, providing housing on military installations may continue to be profitable for private-sector developers, who entered into contracts to build and manage their facilities when BAH rates were much closer to those that would be in effect under this option. In addition, private-sector developers receive several other benefits—help in financing their investment, very high demand, and few marketing costs—all of which providers of off-base housing do not.

The experience of private-sector developers under the reduction of the current BAH rate from 100 percent in 2015 to 95 percent by 2019 has yet to be fully studied. A 2018 analysis from the Government Accountability Office found that DoD needs to improve the consistency of the information it provides to better assess that experience.

Developers of private-sector housing have already asked the Congress to help preserve their income as BAH rates decline to 95 percent. The latest defense authorization bill (for 2019) requires DoD to provide 5 percent above the prescribed BAH rate for that purpose. This option incorporates the assumption that developers would not receive supplemental funding to offset further reductions in BAH rates.

Discretionary Spending—Option 16 Function 050

Cancel Development and Production of the New Missile in the Ground-Based Strategic Deterrent Program

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Spending												
Budget authority	0	-0.4	-1.4	-2.4	-3.3	-4.1	-4.0	-4.8	-5.2	-4.8	-7.5	-30.4
Outlays	0	-0.4	-1.1	-1.9	-2.6	-3.3	-3.7	-3.9	-3.7	-3.6	-6.1	-24.3

This option would take effect in October 2019.

Estimates of savings displayed in the table are based on the 2019 Future Years Defense Program and the Congressional Budget Office's extension of that plan.

Background

The United States' long-range nuclear forces consist of intercontinental ballistic missiles (ICBMs) carrying nuclear warheads, ballistic missile submarines carrying submarine-launched ballistic missiles (SLBMs), and long-range bombers carrying nuclear bombs and cruise missiles. That configuration is often referred to as the strategic nuclear triad. Each segment of the triad contributes to nuclear deterrence in different ways that complement the others. ICBMs provide the ability to respond promptly to an attack. Furthermore, because the silos that house ICBMs are hardened against nuclear attack and are well separated from other silos, each missile would have to be destroyed individually, which sets a high threshold for an adversary to deliver a debilitating attack on U.S. nuclear forces. Ballistic missile submarines operating at sea are very hard to detect and thus would be likely to survive any attack on U.S. nuclear forces and ensure that the United States could retaliate. Bombers provide flexibility and the ability to signal intent during a crisis (by increasing their pace of operations or being visibly deployed to crisis regions).

The United States currently fields 400 ICBMs distributed among 450 active silos at three bases. That force includes Minuteman III missiles, the last of which entered service in the 1970s and which have been refurbished several times. The Air Force plans to replace those missiles with new missiles when the current inventory reaches the end of its useful life, around 2030. As part of the Ground-Based Strategic Deterrent (GBSD) program, the Department of Defense (DoD) will design a new ICBM, build about 640 of those missiles, and refurbish the existing silos, ICBM support equipment, and command-and-control systems. Minuteman III missiles currently carry W78 and W87 warheads, which are sustained by the Department of Energy (DOE). Over the coming years, DOE plans to design and build interoperable warheads (IWs), which would replace the existing warheads for SLBMs and ICBMs.

Option

Under this option, the new missile portion of the GBSD program would be canceled, and the IW program would be replaced with less complex life-extension programs (LEPs) on the SLBM warheads (the W76 and the W88). The current Minuteman III missiles, along with their W78 and W87 warheads, would continue to operate until they reached the end of their operational lifetime. Refurbishment of the silos, command-and-control systems, and other support equipment would continue as planned under the GBSD program.

Effects on the Budget

This option would reduce budget authority by about $30 billion over the next 10 years relative to the costs of DoD's 2019 plan, the Congressional Budget Office estimates. Outlays would decrease by about $24 billion over that period. Savings in outlays would be delayed relative to budget authority because developing new systems requires extensive research and planning and because DoD distributes funding as expenses are incurred. Most of the savings would come from forgoing development and initial production of the new ICBM as part of the GBSD program. Additional savings would result from cancellation of the IW programs, although some of those savings would be offset by the costs of replacing the IWs with LEPs on the current SLBM warheads.

Most of the savings from this option would occur after the 10-year period. DoD plans to produce the new ICBM and its interoperable warheads into the 2030s. In addition, operation and support costs for ICBM forces and warheads would end after the Minuteman III missiles were retired.

CBO's estimate of the costs to develop the new ICBM is based on the actual costs to develop the Minuteman III, inflated to current dollars and then increased by 50 percent to account for cost growth between generations of missiles. CBO estimated the cost of the first production unit of the ICBM by applying a parametric model based on engine thrust and other technical parameters (assuming the new missile would have parameters similar to those of the Minuteman III). CBO's estimate of the costs of the IW programs is based on DOE's plans. All of those estimates are very uncertain. Programs that have developed new weapon systems historically have experienced cost growth relative to early estimates, and both the missile and warhead programs are in the early planning stages.

CBO's estimate of savings is based on full cancellation of the new ICBM and its warheads, forgoing both development and subsequent production. If DoD and DOE chose instead to continue those programs but to reduce the quantity purchased, savings would be substantially smaller. That is because the development efforts, which constitute most of the 10-year savings, would persist.

Other Effects

One argument for this option is that the likelihood of a large-scale disabling nuclear strike—the threat most subject to deterrence by ICBMs—is much lower now than during the Cold War, according to some analysts. If a large-scale strike did occur, the United States would still have several hundred warheads available for a retaliatory strike as long as U.S. nuclear submarines at sea remain undetectable, so deterrence would still be effective. Furthermore, some analysts argue that ICBMs provide little value in the modern multipolar nuclear environment in which regional conflicts could escalate to war and limited nuclear strikes present the most pressing risks. Advocates of this option would also argue that ballistic missile submarines are capable of carrying more nuclear warheads than they do currently, so the reduction of 400 warheads coming from no longer fielding ICBMs in the 2030s could be offset by increasing the number of warheads carried on SLBMs. Thus, this option would not necessarily represent a reduction in the number of warheads fielded by the United States.

One argument against this option is that it would decrease strategic stability. Some analysts argue that reducing the ICBM force would increase the risk of an attack because the number of sites an adversary would have to destroy in a disabling strike on U.S. land-based nuclear forces would decline from almost 500 to around 20. Another argument against this option is that it could lead to nuclear proliferation if the retirement of the ICBM force in the 2030s was viewed by allies as being significant enough that they questioned U.S. security assurances (backed by U.S. nuclear weapons) and decided to pursue their own nuclear arsenals.

RELATED OPTIONS: Discretionary Spending, "Reduce the Size of the Nuclear Triad" (page 138), "Cancel the Long-Range Standoff Weapon" (page 141)

RELATED CBO PUBLICATIONS: *Approaches for Managing the Costs of U.S. Nuclear Forces, 2017 to 2046* (October 2017), www.cbo.gov/publication/53211; *Projected Costs of U.S. Nuclear Forces, 2014 to 2023* (December 2013), www.cbo.gov/publication/44968, and subsequent updates to that report

Discretionary Spending—Option 17 Function 150

Reduce Funding for International Affairs Programs

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019-2028
Change in Spending												
Budget authority	0	-15	-15	-15	-16	-16	-16	-17	-17	-18	-61	-145
Outlays	0	-5	-8	-11	-13	-14	-15	-16	-16	-17	-37	-116

This option would take effect in October 2019.

Background

The budget for international affairs funds diplomatic and consular programs, global health initiatives, security assistance, and other programs. In 2017, those programs cost an estimated $51 billion, including $12 billion for international security assistance, $8 billion for diplomatic and consular programs, $8 billion for global health programs, and $3 billion for international disaster assistance. (Other activities that receive funding include migration and refugee assistance, development assistance, peacekeeping efforts, and narcotics control and law enforcement.) Most funding for international affairs is administered by the Department of State or the Agency for International Development. Several other agencies, such as the Departments of Defense, Agriculture, and the Treasury, also receive funding for overseas assistance programs. The costs of most programs are relatively small, but significant budgetary savings could be achieved with broad cuts to the entire international affairs budget.

Option

This option would reduce the total international affairs budget by 25 percent beginning in 2020.

Effects on the Budget

In total, the reduction in funding for international affairs programs would save $116 billion through 2028, the Congressional Budget Office estimates, provided that federal appropriations were reduced accordingly. The eliminated appropriations would not immediately decrease outlays by the same amount because it typically takes about six years for most of the funds appropriated in one year to be spent. If funding was reduced by 25 percent in 2020, CBO expects that about one-third of the resulting savings would accrue in the same year, roughly one-fourth in the following year, and the remainder over the next four years. If funding was reduced by more than 25 percent, savings would be proportionally larger. Uncertainty about the budgetary effects of reducing spending on international affairs programs stems primarily from uncertainty about whether actual appropriations made by the Congress would match CBO's baseline projections in any given year.

Other Effects

An argument for this option is that reducing federal spending on international affairs could encourage the private sector to take a larger role in providing foreign assistance. Private organizations already provide significant resources for various international initiatives (such as HIV/AIDS research and financial development assistance), and further diversifying funding sources for international initiatives could increase their overall success. In addition, some of the U.S. government's foreign assistance may be ineffective at promoting growth and reducing poverty. Although some projects and programs are generally considered successful, the Congressional Research Service has concluded that "in most cases, clear evidence of the success or failure of U.S. assistance programs is lacking, both at the program level and in the aggregate."

The primary argument against this option is that reducing funding for international affairs programs could have far-reaching effects that might ultimately impede both the international and domestic policy agendas of the United States. Such programs, which encompass many activities in addition to foreign aid, are central to establishing and maintaining positive relations with other countries. Those relationships contribute to increased economic opportunities in the United States, better international cooperation, and enhanced national security. Significant reductions in federal funding for international affairs programs would hinder humanitarian, environmental, public health, economic, and national security efforts.

Discretionary Spending—Option 18 **Function 150**

Reduce Appropriations for Global Health to Their Level in 2000

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Spending												
Budget authority	0	-7.6	-7.8	-8.0	-8.1	-8.3	-8.5	-8.7	-8.9	-9.0	-31.5	-74.8
Outlays	0	-0.5	-3.3	-5.8	-6.9	-7.4	-7.8	-8.2	-8.4	-8.6	-16.5	-57.0

This option would take effect in October 2019.

The estimate of savings stems from the difference between the proposed funding and amounts in the Congressional Budget Office's baseline, which are determined by 2018 appropriations and adjusted for inflation.

Background

Between 2000 and 2010, annual appropriations for Global Health increased (in 2018 dollars) from roughly $1 billion to $9 billion. (Some Global Health funding is appropriated to accounts managed by the Department of State, whereas other funding is appropriated to accounts managed by the United States Agency for International Development. The Congressional Budget Office has aggregated the accounts here.) Global Health appropriations are used to combat HIV/AIDS, prevent child and maternal deaths, and reduce the threat of infectious diseases. Most of the funding in recent years has been spent for efforts in African nations.

Option

This option would reduce Global Health appropriations to about $1 billion annually, which was their inflation-adjusted level in 2000.

Effects on the Budget

Implementing this option would save $57 billion over 10 years. CBO expects that 7 percent of the savings resulting from the reduction in funding in 2020 would accrue in that year, 36 percent would accrue the next year, and the remainder would accrue over the following years. That rate of spending is consistent with historical patterns in the Global Health account. Choosing among prospective recipients is a lengthy process, so outlays often do not occur until several years after Global Health funds have been appropriated.

The estimate of savings stems from the difference between the proposed funding and amounts in CBO's baseline, which are determined by 2018 appropriations and adjusted for inflation. Savings under this option would be proportional: Decreasing Global Health appropriations to $3 billion instead (roughly their level in 2003), for instance, would save about $36 billion over 10 years. The option's savings are somewhat uncertain because of the potential for actual appropriations to differ from CBO's baseline projections.

Other Effects

One argument for this option is that the goals for the program may have nearly been met. The U.S. government's strategy has been to control the HIV/AIDS epidemic by 2020 in a selected group of countries with high rates of infection. If the program has been able to largely achieve that goal, further spending in that category might not be as valuable. A second argument is that a reduction in Global Health appropriations could spur other organizations or governments to increase their investments in such initiatives. Those investments could be at least as effective—or even more effective—than those of the State Department and the Agency for International Development.

The main argument against this option is that combating certain diseases could be more difficult if other funding sources did not emerge. That outcome could adversely affect health worldwide.

Discretionary Spending—Option 19 Function 250

Eliminate Human Space Exploration Programs

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Spending												
Budget authority	0	-9.4	-9.6	-9.9	-10.1	-10.3	-10.6	-10.8	-11.0	-11.3	-38.9	-92.9
Outlays	0	-7.1	-9.0	-9.7	-10.0	-10.2	-10.5	-10.7	-11.0	-11.2	-35.7	-89.3

This option would take effect in October 2019.

Background

The National Aeronautics and Space Administration's (NASA's) Human Exploration and Operations Mission Directorate oversees both the development of the systems and capabilities required to explore deep space and the agency's operations in low-Earth orbit. The directorate's human exploration programs fund the research and development of the next generation of systems for deep space exploration and provide technical and financial support to the commercial space industry. Complementing those efforts, the space operations programs carry out missions in low-Earth orbit, most notably using the International Space Station, and provide facilities and services to communicate with satellites in space. In 2017, the directorate's funding included all of the funding provided for deep space exploration, 85 percent of the funding for low-Earth orbit and spaceflight, and 20 percent of the funding for exploration research and technology.

Option

This option would eliminate all funding for NASA's directorate for human exploration and operations in space starting in 2020. The agency's science and aeronautics programs and robotic space missions would continue unchanged.

Effects on the Budget

Provided that federal appropriations were reduced accordingly, eliminating human space programs would save $89 billion between 2020 and 2028, the Congressional Budget Office estimates. By eliminating NASA's Human Exploration and Operations Mission Directorate, this option would decrease appropriations in three areas that support human space exploration. The eliminated appropriations would not immediately decrease outlays by the same amount, however, because funds appropriated in one year are typically spent over four years. If funding was eliminated in 2020, CBO expects that 75 percent of the resulting savings would accrue in that same year, 18 percent in the next year, and the remainder over the following two years. If funding was decreased rather than eliminated, the savings would be proportional to the change in spending, in CBO's estimation. There is some uncertainty about the option's savings as a result of restructuring in NASA's budget accounts in recent years and the potential for actual appropriations to differ from CBO's baseline projections.

Other Effects

The main argument for this option is that increased capabilities in electronics and information technology have generally reduced the need for humans to fly space missions. The scientific instruments used to gather knowledge in space today rely much less (or not at all) on nearby humans to operate them. Also, to avoid putting humans in harm's way, NASA and other federal agencies have increasingly used robots to perform potentially dangerous missions. To explore and study Mars, for example, NASA uses robotic rovers and orbiters. The Curiosity rover launched in November 2011, landed on Mars more than eight months later, and has been exploring the planet and conducting scientific studies since then, following commands delivered remotely.

Eliminating humans from spaceflights would avoid risk to human life and would decrease the cost of space exploration by reducing the weight and complexity of the vehicles needed for the missions. (Unlike instruments, humans need water, air, food, space to move around in, and rest.) In addition, by replacing people with instruments, one-way missions would be possible, thus eliminating the cost and complexity of return and reentry into the Earth's atmosphere. Return trips would be necessary only when a particular mission required it, such as to collect samples for further analysis.

A major argument against this option is that eliminating human spaceflight from the orbits near Earth would end the technical progress necessary to prepare for human missions to Mars (though such missions are—at a minimum—decades away). Moreover, if robotic missions proved too limiting, then human space efforts might have to be restarted. Another argument against this option is that there might be some scientific advantage to having humans at the International Space Station to conduct experiments in microgravity that could not be carried out in other, less costly, ways. (However, the International Space Station is currently scheduled to be retired in 2024; its decommissioning was twice postponed, first from 2015 and then from 2020.)

Discretionary Spending—Option 20 Function 270

Reduce Department of Energy Funding for Energy Technology Development

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Reduce Funding for Fossil Energy Research, Development, and Demonstration												
Change in Spending												
Budget authority	0	-0.2	-0.3	-0.5	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6	-1.5	-4.2
Outlays	0	*	-0.1	-0.2	-0.3	-0.4	-0.5	-0.5	-0.5	-0.5	-0.6	-3.0
Reduce Funding for Nuclear Energy Research, Development, and Demonstration												
Change in Spending												
Budget authority	0	-0.2	-0.4	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-1.8	-5.1
Outlays	0	-0.1	-0.3	-0.5	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-1.4	-4.7
Reduce Funding for Energy Efficiency and Renewable Energy Research, Development, and Demonstration												
Change in Spending												
Budget authority	0	-0.4	-0.8	-1.3	-1.3	-1.3	-1.3	-1.4	-1.4	-1.4	-3.8	-10.7
Outlays	0	-0.1	-0.3	-0.6	-0.9	-1.1	-1.2	-1.3	-1.4	-1.4	-1.9	-8.3
Total												
Change in Spending												
Budget authority	0	-0.7	-1.5	-2.4	-2.4	-2.5	-2.5	-2.6	-2.6	-2.7	-7.1	-19.9
Outlays	0	-0.2	-0.7	-1.3	-1.8	-2.1	-2.3	-2.5	-2.5	-2.6	-3.9	-16.0

This option would take effect in October 2019.

* = between -$50 million and zero.

Background

The Department of Energy (DOE) supports new technologies throughout the various stages of the development process, from basic energy research through commercial demonstration projects. Roughly one-third of the department's funding for research and development in 2017 went to funding basic research on energy sciences, and the remaining two-thirds went to technology development and demonstration. Excluding defense-related funding, nearly all of DOE's spending for technology development and demonstration supported new technologies in the areas of fossil and nuclear energy, energy efficiency, and renewable energy. Measured in 2017 dollars, funding for developing and demonstrating technologies in those three areas has averaged $2.3 billion per year since 2010.

Option

This option would reduce funding for technology development and demonstration in fossil energy, nuclear energy, energy efficiency, and renewable energy programs to roughly 25 percent of their 2018 amounts. The reduction would be phased in over three years: Funding would be reduced by 25 percent in 2020, 50 percent in 2021, and the full amount of the cuts (75 percent) in 2022 and thereafter. This option would reduce DOE's efforts to support the later stages of technology development and the demonstration of commercial feasibility but would not alter DOE's support of basic and early applied research, which is carried out primarily through the department's Office of Science. (This option would not affect funding for technical assistance or financial assistance, such as that provided for weatherization services for low-income families; for an option that would affect such funding, see Discretionary Spending, Option 33, “Reduce Funding for Certain Grants to State and Local Governments.”)

Effects on the Budget

Provided that federal appropriations were reduced accordingly, reductions in funding for energy technology development would lower discretionary outlays by a total of $16 billion from 2020 through 2028, the Congressional Budget Office estimates. The reduction in outlays is smaller than the reduction in projected funding because of lags between when the funds are appropriated and when they are expended. Historically, DOE has spent its funding for research and development within four to six years of its appropriation. That lag reflects the time it takes to plan and solicit research proposals, consider bids, and award contracts, and it is a key source of uncertainty surrounding the estimated effects of the cut in funding on outlays. A shorter lag time than CBO has estimated would result in greater deficit reduction over the next 10 years, and vice versa.

If funding for technology development was reduced by a smaller amount than it would be under this option, a smaller reduction in outlays would probably result. However, decreasing funding by a greater amount than this option envisions would not necessarily decrease outlays proportionally. For example, depending on the extent of the reductions, DOE might face unavoidable costs related to shutting down programs, which could limit savings in the near term.

Other Effects

An argument for this option is that federal funding is generally more cost-effective when it supports basic science and research aimed at the very early stages of developing new technologies than when it supports research that is focused on technologies that are closer to reaching the marketplace. That is because basic research done early in the technology development process is more likely to lead to knowledge that, although it may be valuable to society, results in benefits that cannot be fully captured by firms in the form of higher profits. In contrast, research done in the later stages of the technology development process is more likely to be profitable for private firms to undertake without federal funding.

Another argument for this option is that the private sector has an advantage in developing, demonstrating, and deploying new energy technologies. Generally, the direct feedback that markets provide to private investors has proven more effective than the judgment of government managers in selecting which technologies will be commercially successful. The limits on the government’s ability to promote the development of new energy technologies are illustrated by federal efforts to commercialize technology to capture and store carbon dioxide. Although DOE has offered financial incentives to firms to build that technology into new commercial power plants, it has found few firms willing to do so. Overall, DOE has long sought to introduce new energy technologies for coal through expensive technology demonstration plants that have often failed to deliver commercially useful knowledge or attract much private interest.

An argument against this option is that reducing federal support may result in too little spending on the development and use of products that reduce energy consumption or produce energy with minimal greenhouse gas emissions. Reducing emissions of greenhouse gases would diminish the potentially large long-run costs associated with climate change, but producers and consumers have little incentive to manufacture or purchase technologies that reduce those emissions. That lack of incentive results from the fact that the costs imposed by climate change are not reflected in current energy prices. Federal support could help compensate for the resulting underinvestment in greenhouse gas–reducing technologies.

RELATED CBO PUBLICATIONS: Testimony of Terry Dinan, Senior Adviser, Microeconomic Studies Division, before the Subcommittee on Energy of the House Committee on Energy and Commerce, *Federal Support for Developing, Producing, and Using Fuels and Energy Technologies* (March 29, 2017), www.cbo.gov/publication/52521; *Federal Efforts to Reduce the Cost of Capturing and Storing Carbon Dioxide* (June 2012), www.cbo.gov/publication/43357; *Federal Climate Change Programs: Funding History and Policy Issues* (March 2010), www.cbo.gov/publication/21196

Discretionary Spending—Option 21 Function 400

Eliminate Funding for Amtrak and the Essential Air Service Program

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Eliminate Funding for Amtrak												
Change in Discretionary Spending												
Budget authority	0	-2.0	-2.1	-2.1	-2.2	-2.2	-2.3	-2.3	-2.3	-2.4	-8.4	-19.9
Outlays	0	-2.0	-2.1	-2.1	-2.2	-2.2	-2.3	-2.3	-2.3	-2.4	-8.3	-19.8
Discontinue Payments to Air Carriers Under the Essential Air Service Program												
Change in Discretionary Spending												
Budget authority	0	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.7	-1.6
Outlays	0	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.6	-1.5
Eliminate the Essential Air Service Program												
Change in Mandatory Outlays	0	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.5	-1.4

This option would take effect in October 2019.

Background

The federal government subsidizes intercity travel in various ways. For example, the National Railroad Passenger Corporation—or Amtrak—received appropriations of about $1.5 billion in 2017 and $1.9 billion in 2018 to subsidize intercity passenger rail services. The 2018 figure includes $650 million in grants for the Northeast Corridor and debt service and about $1.3 billion in grants for the national network that Amtrak operates. For comparison, Amtrak's capital spending in 2017 was $1.6 billion and its operating expenses totaled $4.2 billion (including $0.8 billion in depreciation and amortization costs).

Another form of federal subsidy for intercity travel is the Essential Air Service (EAS) program, which received $150 million in discretionary budget authority and $122 million in mandatory budget authority in 2017; the latter came from overflight fees that are charged to aircraft that fly through U.S. airspace but take off and land in other countries. As of September 2018, the EAS program—created by the Airline Deregulation Act of 1978 to maintain airline service in communities that had been covered by federally mandated service—subsidized air service in 63 communities in Alaska, 2 in Hawaii, 1 in Puerto Rico, and 108 in the continental United States (CONUS). Based on EAS data available for those CONUS communities, the federal subsidy per airline passenger in 2017 ranged from $14 in Joplin, Missouri, and Cody, Wyoming, to $536 in Alliance, Nebraska.

Option

This option would eliminate funding for Amtrak and discontinue the EAS program.

Effects on the Budget

Provided that federal appropriations were reduced accordingly, this option would yield savings of about $21 billion in discretionary spending from 2020 through 2028, the Congressional Budget Office estimates. That amount consists of about $20 billion in savings from eliminating funding for Amtrak and roughly $2 billion in savings from eliminating the discretionary component of the EAS program (identified separately in the budget as Payments to Air Carriers). Discontinuing the EAS program would also yield savings totaling about $1 billion in mandatory spending over that same period, CBO estimates.

CBO's baseline projections of budget authority for Amtrak and the discretionary component of EAS are based on the appropriations contained in the Consolidated Appropriations Act, 2018, adjusted for projected inflation through 2028. Estimated budget authority for the mandatory component of EAS reflects anticipated revenues from the overflight fees, which are charged per nautical mile and may be adjusted periodically so as to remain "reasonably related" to the government's cost of providing air traffic services. CBO's projections of revenues from the fees primarily reflect its projections of economic output (gross domestic product, or GDP) and inflation in consumer prices.

In all three cases, most savings in outlays are projected to occur in the same year as the reductions in budget authority. For instance, the Federal Railroad Administration is required to make quarterly payments to Amtrak, and CBO expects virtually all of a reduction in budget authority in a given year to result in outlay savings in the same year. For the EAS program, CBO projects the reductions in outlays from a given year's cut in budget authority to be distributed over three years, with about two-thirds occurring in the same year and the remainder over the next two years, for both mandatory and discretionary spending. Those rates reflect the time required for the Department of Transportation (DOT) to select and contract with airlines to provide the subsidized air services, obligate funds, receive invoices for services provided, and review and approve the invoices as outlined in the contract.

Relatively little uncertainty surrounds the option's savings relative to CBO's baselines for Amtrak and the EAS program—although those baseline projections could differ substantially from the amounts that the Congress might appropriate for the programs even if lawmakers did not change the programs otherwise. The effects on outlays of changes in budget authority have not varied much from year to year in the past, making the projections of those effects fairly certain. The main source of uncertainty in this option is the projected revenues from the overflight fees; actual revenues, and hence the savings from not using those revenues for the EAS program, could differ from CBO's baseline either because GDP or inflation diverged from the agency's current baseline projections or because those factors are imperfect proxies for miles of overflight travel and changes in the costs of air traffic control.

Short of eliminating support for Amtrak and the EAS program, the Congress could reduce spending on either program in more limited ways. For example, the minimum distance for federal support of Amtrak's rail lines could be raised from 750 miles to some higher threshold, with corresponding reductions in appropriations. Setting the minimum at 1,000, 1,500, or 2,000 miles would reduce the number of eligible lines from 15 to 11, 6, or 4, respectively. Alternatively, eligibility for continued federal support of Amtrak could be based on the number of states served: Five of the 15 lines serve 10 or more states, and an additional 8 lines serve between 5 and 8 states. Eligibility for subsidized air travel service in the EAS program could be tightened by increasing the minimum distance of a community from the nearest medium or large hub airport, lowering the maximum subsidy per passenger, or reducing or eliminating DOT's authority to grant waivers of the existing requirements (discussed below).

Other Effects

One argument in favor of this option is that when the Amtrak and EAS subsidies were first authorized in the 1970s, both were viewed as temporary measures. They were intended to help Amtrak become self-supporting and to aid communities and airlines as they adjusted to deregulation.

A second argument for the option is that both subsidies support transportation services that are of some value to particular groups of users but that are not commercially viable and provide little if any benefit to the general public. According to that argument, states or localities that highly value the subsidized rail or air services should provide the subsidies. States are already required to provide support for Amtrak service on rail lines less than 750 miles long in amounts determined by a cost-allocation method that Amtrak developed in consultation with the states to ensure that those lines cover their operating costs. Some analysts have called for the federal government to extend that requirement to Amtrak lines longer than 750 miles. The EAS program also has cost-sharing requirements, although they affect only the three communities in the program that are less than 40 miles from the nearest small hub airport: Those communities must now negotiate a local share of the costs before their participation in the program will be renewed. Communities not in the EAS program have used various methods to develop or maintain air service, including guaranteeing airlines a minimum level of revenues (in some cases, using federal grants to back the guarantees), waiving fees, and taking over ground-handling operations.

An argument against eliminating funding for either Amtrak or EAS is that rail or air service to some smaller communities would be curtailed without the federal subsidies. Amtrak's long rail lines could be particularly vulnerable because reaching agreement among all of the affected states on how to replace the federal subsidies could be difficult. Eliminating service on existing rail lines could cause hardship for passengers who rely on them and might undermine the economies of affected communities.

Another argument against eliminating support for Amtrak is that the amount of such support needs to be analyzed relative to federal subsidies for other modes of travel. Rail travel has certain advantages for society, including a much lower fatality rate than travel by highways and lower emissions of air pollutants and greenhouse gases than travel by highways or air. Those advantages could be lost under the option: The loss of federal support could lead to sharp reductions in Amtrak's operations and capital investment and consequently could undermine the future viability of passenger rail service in the United States.

An additional argument against discontinuing EAS is that efforts to control the program's costs are under way. Four communities with high average subsidy costs per passenger in 2015 or 2016 have lost their eligibility for EAS: In one case, the subsidy exceeded a cap of $200 for CONUS communities within 210 driving miles of a medium or large hub airport; the other subsidies exceeded a cap of $1,000 that applies to all CONUS communities. Also, a fifth community has taken a buyout to leave the program voluntarily. DOT used its authority to grant temporary waivers to 28 other communities that were out of compliance with the $200 cap in 2015 or 2016 or with a requirement that CONUS communities within 175 miles of a medium or large hub airport board an average of at least 10 passengers per day; seven of the 28 came into compliance by 2016 or 2017. Looking at the average 2017 subsidies of the remaining 21 communities, 9 fell between $201 and $250, and another 6 were $100 to $500 below their 2015 levels. (Four more communities fell out of compliance in 2016 or 2017; their 2017 subsidy rates ranged from $203 to $265.) Continued efforts by communities to comply with the requirements and by DOT to terminate the eligibility of communities unable to comply could help to control the EAS program's costs.

RELATED CBO PUBLICATION: *The Past and Future of U.S. Passenger Rail Service* (September 2003), www.cbo.gov/publication/14769

Discretionary Spending—Option 22 Function 400

Limit Highway and Transit Funding to Expected Revenues

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Discretionary Spending												
Budget authority (Obligation limitations)	0	0	-16	-17	-19	-21	-22	-24	-25	-27	-52	-170
Outlays	0	0	-2	-9	-12	-14	-17	-19	-21	-22	-23	-116

This option would take effect in October 2020.

Most of the outlays for the highway program are controlled by limitations on obligations set in annual appropriation acts rather than by contract authority (a mandatory form of budget authority) set in authorizing law. By the Congressional Budget Office's estimate, $739 million in contract authority is exempt from the limitations each year; spending stemming from that authority would not be affected by this option.

Background

The federal government provides grants to states for highway and mass transit projects. The last reauthorization for such grants—the Fixing America's Surface Transportation Act, or FAST Act—provided funding for 2016 through 2020. (Most funding is in the form of contract authority, a type of mandatory budget authority, but most spending is controlled by annual limitations on obligations set in appropriation acts.)

Historically, most of the funding for highway and transit programs has come from the Highway Trust Fund, an accounting mechanism in the federal budget that has separate accounts for highways and transit. Both accounts are credited with revenues generated by the federal taxes on gasoline and diesel fuels; the highway account is also credited with other federal taxes related to highway transportation. Since 2001, the revenues credited to the trust fund each year have consistently fallen short of outlays from that account; in 2017, for example, $54 billion was spent from the trust fund, and $41 billion in revenues and interest was credited to it. Since 2008, lawmakers have addressed the funding shortfall by supplementing revenues dedicated to the trust fund with several transfers, primarily from the Treasury's general fund. The FAST Act authorized the latest such transfer: $52 billion to the highway account and $18 billion to the transit account. The Congressional Budget Office estimates that those transfers, along with the revenues and interest credited to the fund, will permit the highway and transit accounts to pay all their obligations through the end of 2020. For later years, in accordance with provisions of the Balanced Budget and Emergency Deficit Control Act of 1985, CBO's baseline for highway and transit spending incorporates the assumption that obligations incurred by the Highway Trust Fund will be paid in full.

Option

This option would reduce federal funding for highways and mass transit, starting in fiscal year 2021, by lowering the obligation limitations for highway and transit programs supported by the Highway Trust Fund to the amount of revenues projected to be credited to the fund. The federal taxes that directly fund the Highway Trust Fund would not change. (The option would not affect highway spending that is exempt from the limitations on obligations; CBO projects $739 million per year in such spending.)

Effects on the Budget

This option would reduce resources provided to state and local governments for highways and mass transit by $170 billion, relative to the obligation limitations in CBO's baseline projections, from 2021 through 2028. Provided that federal appropriations were reduced accordingly, outlays would decrease by $116 billion over that period, CBO estimates. Smaller savings could result if the obligation limitations were reduced below those projected in CBO's baseline (which reflects the levels authorized in the FAST Act, adjusted for projected inflation through 2028) but above the levels of revenues projected to be credited to the Highway Trust Fund; in that case, the highway and transit accounts would continue to require support from general revenues. Conversely, larger savings could result if the obligation limitations were set below the levels of projected revenues.

The estimated reductions in budget authority reflect the difference between the Highway Trust Fund's projected revenues and its projected obligation limitations. Revenues depend largely on fuel use, which CBO projects will continue to decline through 2028 because of increases in fuel efficiency that exceed increases in miles traveled.

Outlay estimates are based on the estimated limitations on obligations, taking into account the fact that outlays may continue for more than five years from the year of obligation. The federal government reimburses states only after they incur eligible expenses, and a small portion of obligations never result in outlays. About one-quarter of the savings in outlays associated with a reduction in obligations in a given year are projected to occur in the same year, and less than half occur the following year.

Fuel use and spending rates are the main sources of uncertainty in this option. More fuel consumption implies higher revenues credited to the trust fund and hence smaller savings resulting from limiting spending to revenues; conversely, less fuel consumption implies greater savings. Motorists could use more fuel than CBO projects if, for example, oil prices were lower than expected or federal fuel economy standards were loosened. Alternatively, fuel use could fall short of CBO's projections if, for example, a recession reduced freight transportation and passenger travel. A recession could also affect the speed with which outlays occurred, as could the reduction in federal spending and other factors.

Other Effects

A key argument for this option is that funding highways and transit systems from charges on highway and transit users, including federal and state fuel taxes and transit fares, is fairer than funding those systems from general taxes paid by all taxpayers, because those who benefit pay the costs. In addition, it tends to promote a more efficient allocation of resources, because the charges give users some incentive to limit their travel and because as use increases, more revenues become available. Those arguments suggest that if current revenues are too low to fund a desired level of federal support for highways and mass transit, an increase in the current taxes on users or creation of new such taxes is appropriate.

A related argument is that it is fairer and more efficient to have local or state tax revenues pay for transportation projects that primarily benefit people in a particular area and to reserve federal revenues for projects that have regional or national significance. Another argument for this option is that it would reduce the extent to which federal support for certain investments in highways and mass transit distorts choices states make between such investments and spending on operations and maintenance, or on other priorities. Also, some of the reduction in federal spending under this option could be offset by greater spending by state and local governments. (Some studies on the effects of federal highway grants have found that the availability of such grants has encouraged state and local governments to reduce their own spending on highways and to use those funds for other purposes.)

A general argument against reducing federal spending on highways and mass transit is that doing so could increase the economic and social costs associated with aging roads, bridges, buses, and rail systems. In addition, the transportation network as a whole supports interstate commerce and thus strengthens the national economy.

An argument against the specific alternative of reducing spending to the available tax revenues from highway users is that portions of that spending go to transit projects (which more directly benefit transit users than highway users) and to projects and purposes that benefit the general public—such as sidewalks, bike paths, recreational trails, scenic beautification, and preservation of historic transportation structures. In addition, current federal taxes on highway users have limited effects on the efficiency of road use because they give motorists only weak incentives to avoid contributing to its two main social costs—traffic congestion and pavement damage by heavy trucks.

RELATED OPTIONS: Discretionary Spending, “Eliminate the Federal Transit Administration” (page 171); Revenues, “Raise the Tax Rates on Long-Term Capital Gains and Qualified Dividends by 2 Percentage Points and Adjust Tax Brackets” (page 207)

RELATED CBO PUBLICATIONS: *Federal Support for Financing State and Local Transportation and Water Infrastructure* (October 2018), www.cbo.gov/publication/54549; Sheila Campbell, *Fiscal Substitution of Investment for Highway Infrastructure,* Working Paper 2018-08 (August 2018), www.cbo.gov/publication/54371; “Baseline Projections for Selected Programs: Highway Trust Fund Accounts” (April 2018), www.cbo.gov/publication/51300; *The Macroeconomic and Budgetary Effects of Federal Investment* (June 2016), www.cbo.gov/publication/51628; *Approaches to Making Federal Highway Spending More Productive* (February 2016), www.cbo.gov/publication/50150; cost estimate for the conference agreement on H.R. 22, the FAST Act, as posted on the website of the House Committee on Rules on December 1, 2015 (December 2, 2015), www.cbo.gov/publication/51051; testimony of Joseph Kile, Assistant Director for Microeconomic Studies, before the Senate Committee on Finance, *The Status of the Highway Trust Fund and Options for Paying for Highway Spending* (June 18, 2015), www.cbo.gov/publication/50297; *Alternative Approaches to Funding Highways* (March 2011), www.cbo.gov/publication/22059

Discretionary Spending—Option 23 Function 400

Eliminate the Federal Transit Administration

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Spending												
Budget authority (Including obligation limitations)	0	0	-15	-15	-15	-16	-16	-16	-17	-17	-45	-127
Outlays	0	0	-2	-6	-9	-11	-13	-15	-16	-16	-16	-87

This option would take effect in October 2020.

The option would eliminate programs currently funded from two sources: the mass transit account of the Highway Trust Fund and the general fund of the Treasury. Programs funded from the Highway Trust Fund receive mandatory budget authority in the form of contract authority. The Congressional Budget Office expects that the contract authority will continue to be controlled by limitations on obligations contained in appropriation acts. The budgetary resources reflect the estimated obligation limitations contained in CBO's adjusted April 2018 baseline and the estimated budget authority for those programs funded from the general fund.

Background

The Department of Transportation's Federal Transit Administration (FTA) provides financial and technical support to roughly 6,800 local public transit systems across the country, through about two dozen formula grant and competitive grant programs. Its funds support capital investments, and in some cases operating expenses, for subways, buses, light-rail and commuter rail systems, trolleys, and ferries. The FTA was created in 1964, when it was known as the Urban Mass Transit Administration. Spending for programs administered by the FTA and administrative costs for the agency are projected to total about $127 billion from 2021 through 2028, or about $15 billion per year, the Congressional Budget Office estimates.

Option

This option would phase out the FTA, terminating new spending on its programs after the Fixing America's Surface Transportation Act expires in 2020 and eliminating the agency entirely upon completion of its outstanding grants. The option would not affect the federal taxes on motor fuels that provide some of the funding for the FTA: The 2.86 cents per gallon now credited to the transit account of the Highway Trust Fund would continue to be collected, whether the revenues were credited to the (sole remaining) highway account of the trust fund or to the general fund of the Treasury.

Effects on the Budget

Implementing this option would reduce spending by $87 billion over 10 years, CBO estimates, reflecting CBO's current baseline projection for programs administered by the FTA. (That figure does not take into account mandatory spending associated with various costs of closing the agency, such as payments to former employees for accrued annual leave, unemployment benefits, and early retirement.) CBO projects FTA's budget authority by adjusting the amount appropriated in fiscal year 2019 by a measure of projected inflation. Savings would be smaller if lawmakers chose to phase out the FTA more gradually or to retain any of its programs by assigning them to a different agency, such as the Federal Highway Administration.

As with similar infrastructure programs, savings in outlays would initially be small relative to the reduction in budget authority because that reduction would cancel projects involving spending in multiple years. The bulk of the savings in outlays would occur within six years of the reductions in budget authority.

There is relatively little uncertainty about the option's savings relative to CBO's baseline—although whether actual appropriations made by the Congress would match CBO's baseline projections in any given year is itself uncertain. The transition costs of closing the FTA are somewhat uncertain but also relatively small in comparison with the agency's total budget.

Other Effects

The main argument for eliminating the FTA is that the benefits of public transit systems are primarily local or regional and should be financed at the local or state level. If the people who benefit from a transit system bear its costs, it is less likely that too many projects or overly costly projects will be undertaken or that services of low value relative to their ongoing costs will continue to be supported. Relatedly, decisions made on the basis of state or local funding would not be influenced by the greater availability of federal support for capital investments than for operating expenses. Less capital-intensive options (for example, dedicated bus lanes instead of light-rail lines) are often more cost-effective overall.

An argument against eliminating the FTA is that public transit has benefits that extend beyond the area directly served. Without continued federal funding, transit services would be cut back and systems would deteriorate, leading to increased road use, with its attendant problems of traffic congestion, accidents, and emissions of local air pollutants and greenhouse gases. In turn, greater congestion could increase demand for road construction and development in outlying areas. Dispersion of economic activity to such areas, where greater distances and lower population density make the provision of transit services more costly, could reduce access to jobs by people who do not own cars.

RELATED OPTION: Discretionary Spending, "Limit Highway and Transit Funding to Expected Revenues" (page 168)

Discretionary Spending—Option 24 Function 400

Increase the Passenger Fee for Aviation Security

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Spending												
Budget authority	0	-2.0	-2.0	-2.1	-2.2	-2.3	-2.4	-2.4	-2.5	-2.6	-8.3	-20.5
Outlays	0	-2.0	-2.0	-2.1	-2.2	-2.3	-2.4	-2.4	-2.5	-2.6	-8.3	-20.5

This option would take effect in October 2019.

Fees collected under this option could be recorded in the budget as revenues or as discretionary or mandatory offsets to spending, depending on the specific legislative language used to increase them.

Background

The Aviation and Transportation Security Act, enacted in response to the terrorist attacks of September 11, 2001, made the federal government, rather than airlines and airports, responsible for screening passengers, carry-on baggage, and checked baggage. Implementing new standards under the 2001 law required the hiring of screeners who were more highly qualified and trained, necessitating increased compensation and raising overall security costs. To help pay for those costs, the law directed airlines to charge passengers a fee, remitted to the government, on trips beginning from an airport in the United States. Initially set at $2.50 for a one-way trip with no stops and $5 for a trip with one or more stops, the fee was raised and restructured by the Congress in 2013 and 2014. It is now set at $5.60 per one-way trip, with a maximum charge of $11.20 per round trip, regardless of the number of stops. In 2017, the Transportation Security Administration (TSA) collected about $3.9 billion from the fee, of which $2.4 billion helped to offset its appropriation of $7.3 billion for operations and support, most of which relates to civil aviation security. Of the remaining fees collected, $1.3 billion was deposited in the Treasury's general fund and $250 million was allocated to TSA's Aviation Security Capital Fund.

Option

This option, which is similar to a proposal in the President's 2019 budget, would increase the passenger fee to $8.25 per one-way trip by 2020, with a maximum charge of $16.50 per round trip. Projected budget authority for TSA would not change.

Effects on the Budget

Implementing this option would boost collections (and thus reduce net budget authority and outlays) by $20 billion over 10 years, the Congressional Budget Office estimates. That increase in collections is based on CBO's projections of future air travel, which in turn are largely based on the agency's projections of gross domestic product (GDP), adjusted to account for a slight reduction in the amount of travel as a result of the higher fees. Once the option went into effect, the total amount of fees collected would be equivalent to 80 percent or more of the amount of projected total funding for TSA's operations and support and for the allocation to its capital fund. A higher percentage of TSA's costs could be recouped if the fee was set to some amount above $8.25 or vice versa; a given percentage increase or decrease in the fee relative to $8.25 would roughly change the effect on outlays by the same percentage.

Uncertainty surrounding CBO's projections of future air travel is the primary source of uncertainty in the estimates of the option's budgetary effects. The actual number of trips could be larger or smaller than CBO projects, either because actual GDP is higher or lower than anticipated in CBO's current baseline or because travel can be affected by factors other than changes in GDP—for instance, by changes in airfares resulting from changes in the cost of jet fuel.

Other Effects

The main arguments for and against this option rest on the principle that the beneficiaries of a service should pay for it; the differences lie in who is seen as benefiting from TSA's aviation security efforts. An argument for the option is that the primary beneficiaries are passengers and that security is a basic cost of airline transportation, just as fuel and labor are. The current situation, in which roughly 40 percent of those costs are covered partly by taxpayers in general, provides a subsidy to airlines and their passengers.

Conversely, an argument against the option is that the economy as a whole and the public in general benefit from the availability and security of air transportation. To the extent that greater security reduces the risk of terrorist attacks, the entire population is better off. By that reasoning, using less funding provided by taxpayers in general to pay for the costs of transportation security measures is a disadvantage of the option.

RELATED OPTION: Revenues, "Impose Fees to Cover the Costs of Government Regulations and Charge for Services Provided to the Private Sector" (page 286)

Discretionary Spending—Option 25 Function 500

Eliminate Federal Funding for National Community Service

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Spending												
Budget authority	0	-1.0	-1.1	-1.2	-1.2	-1.2	-1.2	-1.3	-1.3	-1.3	-4.5	-10.9
Outlays	0	-0.2	-0.7	-0.9	-1.0	-1.1	-1.1	-1.2	-1.2	-1.2	-2.8	-8.6

This option would take effect in October 2019.

Background

National community service programs provide financial and in-kind assistance to students, seniors, and others who volunteer in their communities in areas such as education, public safety, the environment, and health care. In 2018, federal funding for the Corporation for National and Community Service (CNCS), which operates the AmeriCorps and Senior Corps programs, totaled $1.1 billion. Participants in CNCS programs receive one or more of the following types of compensation: wages, stipends for living expenses, training, and subsidies for health insurance and child care. In addition, upon completing their service, participants in certain programs can earn education awards, paid from the National Service Trust (NST), in amounts tied to the maximum value of the Pell grant ($6,095 for the 2018–2019 academic year). In 2018, roughly 75,000 people participated in AmeriCorps, and 222,000 people participated in Senior Corps.

Option

This option would eliminate all federal funding for CNCS except for funding for the National Service Trust. Currently, programs such as AmeriCorps and Senior Corps are funded through a mix of public and private resources. Each year, private businesses and foundations contribute more than $1.2 billion to CNCS's programs. In the absence of federal funding, the volunteer programs could continue to operate, but only to the extent that state and local governments and private entities chose to fund them.

Effects on the Budget

This option would reduce budget authority by $11 billion from 2020 through 2028, the Congressional Budget Office estimates. That estimate includes not only the savings in operational costs associated with terminating the volunteer programs, but also the savings in CNCS's administrative costs. Under this option, CNCS would curtail its operations in 2019 and redirect its budget authority toward shutting down. Budget authority from 2020 through 2028 would be substantially smaller than in CBO's baseline projection, but it would not be eliminated entirely because of the ongoing claiming of education awards. Former volunteers generally have up to seven years (or longer if an extension is granted) to claim those awards after completing their service. Accordingly, CBO projects continued budget authority through 2028 to fund the administration of the NST.

Provided that federal appropriations were reduced accordingly, this option would decrease outlays by $9 billion from 2020 through 2028, CBO estimates. Savings would be lower in 2020 and 2021 than in subsequent years because of the onetime costs of shutting down the agency, such as paying accrued annual leave and incurring penalties for canceling leases for office space. Drawing on budget authority provided before 2020, CNCS's outlays would decrease gradually over the period but would not be eliminated in full because of continued disbursements from the NST. If the amount of education awards owed to former participants ever exceeded the legislated budget authority, the difference would be paid for by mandatory spending, not new budget authority.

Uncertainty in this estimate comes mainly from NST's future disbursements. The amounts that would be paid out through 2028 depend on the number of current volunteers who would ultimately qualify for an education award, the share of eligible individuals who would claim an award, and the timing of those claims.

From 2022 through 2028, a funding cut of less than 100 percent would have an effect on outlays that was roughly proportional to the size of the cut. For example, if funding was cut in half rather than in full, savings over that period would be approximately half the agency's baseline funding level. In 2020 and 2021, however, a funding cut of less than 100 percent would have a proportionately larger effect on outlays. That is because costs to shut down CNCS would only occur in those early years if the option eliminated all funding for the agency. If funding was cut in half rather than in full, savings in 2020 and 2021 would be greater than half of the agency's baseline funding level.

Other Effects

An argument in favor of this option is that funding community service programs at the local level might be more efficient than funding them at the federal level because the benefits of such programs accrue more to the local community than to the nation as a whole. According to that argument, the local government, community, or organization that received the benefits of a given service project would be better positioned than the federal government to decide whether that project was valuable enough to fund and to determine which service projects should receive the highest priority. Another argument for eliminating student-focused national service programs and the education benefits associated with them is that unlike most other federal programs that provide financial aid to students, CNCS's education benefits are not targeted at low-income students. Participants in AmeriCorps are selected without regard to their families' income or assets, so funds do not necessarily go to the students with the greatest financial need.

An argument against eliminating CNCS is that the programs provide opportunities for participants of all socioeconomic backgrounds to engage in public service and develop skills that are valuable in the labor market. In addition, if federal funding was not replaced by other sources, this option could have adverse effects on the communities in which CNCS operates.

Discretionary Spending—Option 26 Function 500

Eliminate Head Start

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Spending												
Budget authority	0	-10	-11	-11	-11	-11	-11	-12	-12	-12	-42	-101
Outlays	0	-4	-10	-10	-11	-11	-11	-11	-12	-12	-35	-92

This option would take effect in October 2019.

Background

The two Head Start programs provide comprehensive development services, including prekindergarten education, for children from low-income families. The Head Start program serves primarily 3- and 4-year-old preschoolers, and the Early Head Start program provides services to pregnant women and child care for children under age 3. (In this option, "Head Start" refers to both programs collectively.) Head Start is administered by the Department of Health and Human Services, but services are provided by state or local governments or by private nonprofit or for-profit institutions. Children in foster care, children who are homeless, and children from families that receive public assistance (from programs such as Temporary Assistance for Needy Families or Supplemental Security Income) qualify for Head Start regardless of their families' income.

Option

This option would eliminate Head Start.

Effects on the Budget

Provided that federal appropriations were reduced accordingly, this option would save $92 billion between 2020 and 2028, the Congressional Budget Office estimates. Head Start served roughly 900,000 children in 2017 at an average cost of about $10,000 per child, for a total budgetary cost of $9 billion. Outlays for the program are projected to rise to $12 billion by 2028, CBO estimates. That estimate is based on projections of budget authority and on historical trends in spending. Eliminating Head Start would therefore reduce budgetary costs by an average of about $10 billion per year over the coming decade.

CBO projects that about 40 percent of the budget authority provided for Head Start in a given year is spent in that year, in part because of the timing of contracts with grantee institutions, and the remainder is spent over the next few years. As a result, the reduction in outlays in 2020 would be smaller than the reduction in budget authority in that year because those outlays would include spending from the budget authority granted in the preceding few years.

For any given percentage cut to budget authority, outlays over the 10-year period would decline by less than budget authority. For example, outlays would decline by roughly 90 percent if Head Start was eliminated and by roughly 45 percent if budget authority was reduced by 50 percent. Because CBO's baseline projections of budget authority for discretionary programs reflect the assumption that current appropriations will continue with adjustments for inflation (as described in this chapter's introduction), uncertainty in the budget authority estimates primarily results from uncertainty in the amount of funding that the Congress will appropriate for Head Start in the coming years. A minor amount of additional uncertainty surrounds the rate at which outlays would occur.

Other Effects

The main argument for this option is that many of the children expected to be enrolled in Head Start in the future would be enrolled in alternative preschool or child care programs (both public and private) if Head Start was eliminated. For example, several states have instituted a universal prekindergarten program with the goal of enrolling all 4-year-olds. Most of the children currently enrolled in Head Start in such states would instead be enrolled in the state-sponsored programs, and their families would probably pay no or only partial tuition. Children in states where such a program was not available could be enrolled in private preschools, although the tuition costs for such programs would most likely exceed those for public programs.

The main argument against this option is that some children from low-income families would not be enrolled in any preschool program if Head Start was eliminated. Young children who did not attend any program would enter kindergarten less prepared than those who did attend such programs, and research suggests that they might do less well in school and earn less as adults as a result. Consequently, economic growth could be lower in the future if Head Start was eliminated. In addition, eliminating federal subsidies for child care would place an additional burden on some low-income families.

RELATED CBO PUBLICATIONS: "How CBO Analyzes the Economic Effects of Changes in Federal Subsidies for Education and Job Training," CBO Blog (May 3, 2017), www.cbo.gov/publication/52361; *The Macroeconomic and Budgetary Effects of Federal Investment* (June 2016), www.cbo.gov/publication/51628

Discretionary Spending—Option 27 Function 500

Tighten Eligibility for Pell Grants

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Restrict Pell Grants to Students With an EFC Less Than or Equal to 65 Percent of the Maximum Pell Grant Award												
Change in Discretionary Spending												
Budget authority	-0.3	-0.3	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-1.8	-3.7
Outlays	-0.1	-0.3	-0.3	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-1.5	-3.4
Change in Mandatory Outlays	*	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.5	-1.1
Restrict Pell Grants to Students With an EFC of Zero												
Change in Discretionary Spending												
Budget authority	-8.5	-8.6	-8.8	-8.9	-9.1	-9.3	-9.7	-9.9	-10.3	-10.7	-43.9	-93.9
Outlays	-2.3	-8.4	-8.6	-8.8	-9.0	-9.1	-9.4	-9.7	-10.0	-10.4	-37.2	-85.9
Change in Mandatory Outlays	-0.6	-2.1	-2.1	-2.2	-2.2	-2.2	-2.3	-2.3	-2.3	-2.3	-9.1	-20.6
Restrict Pell Grants to Students in Families With Income Below 250 Percent of the Federal Poverty Level												
Change in Discretionary Spending												
Budget authority	-0.9	-0.9	-1.0	-1.0	-1.0	-1.0	-1.0	-1.1	-1.1	-1.1	-4.8	-10.2
Outlays	-0.2	-0.9	-0.9	-1.0	-1.0	-1.0	-1.0	-1.1	-1.1	-1.1	-4.1	-9.3
Change in Mandatory Outlays	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-1.0	-2.3

This option would take effect in July 2019.

The estimates are relative to the Congressional Budget Office's adjusted April 2018 baseline, updated to account for the increase to the maximum discretionary award in the appropriation for fiscal year 2019.

EFC = expected family contribution; * = between -$50 million and zero.

Background

The Federal Pell Grant Program is the largest source of federal grant aid to low-income students for undergraduate education. Recipients may enroll at four-year colleges and universities, for-profit schools, two-year community colleges, institutions that specialize in occupational training, or other educational institutions. (Pell grants generally are not available to students pursuing graduate or professional degrees.) For the 2016–2017 academic year, the program provided $27 billion in aid to 7.2 million students.

Eligibility for Pell grants is chiefly determined on the basis of a student's expected family contribution (EFC)—the amount, calculated using a formula established under federal law, that the government expects a family to contribute toward the cost of the student's postsecondary education. The EFC is based on factors such as the student's income and assets. For dependent students (in general, unmarried undergraduate students under the age of 24 who have no dependents of their own), the parents' income and assets, as well as the number of other dependent children in the family attending postsecondary schools, are also taken into account. Under current law, a student cannot receive less than 10 percent of the maximum Pell grant award. Because a student's award is the maximum award minus the student's EFC, students with an EFC exceeding 90 percent of the maximum Pell grant award (that is, an EFC of $5,575 or greater for the 2019–2020 academic year) do not qualify for a grant.

Funding for the Pell grant program has both discretionary and mandatory components. The discretionary component is the maximum award set in each fiscal year's appropriation act. For the 2019–2020 academic year, that amount is $5,135 per student. One mandatory component is the funding stemming from the Higher Education Act that is dedicated to supporting the discretionary program. The other mandatory component is add-on funding that increases the maximum award. For the 2019–2020 award year, that increase is $1,060, resulting in a maximum award of $6,195. The Congressional Budget Office estimates that the average grant for the 2019–2020 academic year will be $4,200.

Option

This option would tighten eligibility for Pell grants. The option could be implemented in one of three ways, and the savings would depend on the approach taken.

The first two alternatives would lower the EFC threshold. Under the first alternative, students with an EFC exceeding 65 percent of the total maximum Pell grant award (that is, an EFC of $4,026 or more for the 2019–2020 academic year) would be ineligible for a Pell grant. Under the second alternative, eligibility would be limited to students whose EFC is zero.

The third alternative would take a different approach, adding a criterion for Pell grant eligibility. To qualify for a grant under this alternative, students would need to be from families whose adjusted gross income is below 250 percent of the federal poverty level (FPL). For a family of four in 2018, the FPL is $25,100. In that example, Pell grants for the 2019–2020 program year would be limited to students from families of four with income below $62,750.

Effects on the Budget

Under the first alternative, the number of Pell grant recipients would be about 5 percent lower during the 2019–2028 period, which represents a reduction of about 400,000 people per year, on average. Recipients who no longer qualified for grants under this alternative would have received smaller Pell grants, averaging $1,260 (or less than one-third of the estimated average grant amount under current law). If the maximum discretionary Pell grant award remained at $5,135, this alternative would yield discretionary savings of $3 billion and mandatory savings of $1 billion from 2019 through 2028, CBO estimates, provided that federal appropriations were reduced accordingly.

Under the second alternative, the number of Pell grant recipients would be 37 percent lower during the 2019–2028 period, which is a reduction of 3 million people per year, on average. Again, recipients who no longer qualified for grants under this alternative would have received slightly smaller Pell grants, averaging $3,800 (or about 90 percent of the estimated average grant amount under current law). This alternative would yield discretionary savings of $86 billion and mandatory savings of $21 billion through 2028, CBO estimates. Although this alternative would reduce the number of Pell grant recipients by about 8 times as much as under the first alternative, the savings would be more than 20 times larger because the average amount granted to affected people under the second alternative is larger.

Under the third alternative, the number of Pell grant recipients would be about 6 percent lower during the 2019–2028 period, which is a reduction of 465,000 people per year, on average. Recipients who no longer qualified for grants under this alternative would have received Pell grants averaging $2,700 (or about 65 percent of the estimated average grant amount under current law). The savings would be larger under this alternative than under the first alternative because the average grant amount among those students is larger. Through 2028, discretionary savings would total $9 billion, and mandatory savings would total $2 billion, CBO estimates.

Under current law, the Pell Grant program's costs and number of recipients are estimated to grow by about 2 percent per year. That growth is somewhat slower than the growth in the total number of students attending postsecondary schools because some students would lose eligibility for Pell grants as their family income grew. Under this option, the distribution of Pell grant applications by EFC, income, and family size would remain stable over the next decade, CBO estimates. To the extent allowed under current law, affected students would compensate by borrowing more through the federal student loan program, in CBO's judgment. (Funding for the Pell grant program is primarily discretionary and, thus, subject to appropriation each year. Therefore, CBO does not show direct spending effects, including student loan effects, for changes specific to the Pell grant program.) The effects on outlays are much smaller in 2019 than in other years because the option would take effect in July of that year and the fiscal year ends in September.

Uncertainty about the number of Pell grant recipients is the primary source of uncertainty in CBO's estimates. The number of recipients is generally affected by economic factors, including job opportunities, the cost of attending school, and expectations of future opportunities for college graduates. The number of Pell grant recipients is also affected by the discretionary maximum award amount, which is set each year.

Other Effects

An argument for this option, applicable to all three alternatives, is that it would focus federal aid on students who, on the basis of the federally calculated EFC (and the federally calculated FPL in the third alternative), tend to have lower income. Students who would be affected under the first alternative would probably still be able to pay to attend a public two-year college: Tuition and fees at those schools for the 2016–2017 academic year averaged about $3,500, which is below the EFC of students who would be affected under that alternative.

An additional argument, applicable to all three alternatives, is that many students affected by the tightening of eligibility criteria for Pell grants would qualify for other financial support. Most students whose EFC was in the affected range under either of the first two alternatives would be eligible for $3,500 or more in federal loans that are interest-free while students are in school. Furthermore, educational institutions might respond to the change by shifting some of their own aid to students who would not be eligible under the option. (A few studies suggest that institutions responded to past increases in the size of Pell grants by raising tuition and shifting more of their own aid to students who did not qualify for those grants.)

An argument against all three alternatives is that many Pell grant recipients have educational expenses that greatly exceed the sum of their family's EFC and other aid (in the form of grants, loans, or work-study programs) from federal, state, institutional, or other sources. In the 2015–2016 academic year, for example, 30 percent of students with an EFC above 65 percent of the maximum Pell grant at the time and 85 percent of students with an EFC between zero and 65 percent of the maximum grant incurred educational expenses that exceeded the sum of their family's EFC and aid other than from Pell grants. Denying Pell grants to those students would further increase the cost of obtaining an undergraduate education and might cause some of them to pursue less postsecondary education or to forgo it altogether. Furthermore, some families may not be able or willing to contribute the EFC amount.

An argument against the third alternative is that high-income families who are eligible for Pell grants on the basis of the EFC formula because they have several children in college at the same time might not qualify on the basis of the FPL formula. Thus, that alternative would limit benefits for some families with several members in college.

RELATED OPTIONS: Mandatory Spending, "Eliminate or Reduce the Add-On to Pell Grants, Which Is Funded With Mandatory Spending" (page 26), "Reduce or Eliminate Subsidized Loans for Undergraduate Students" (page 31); Revenues, "Eliminate Certain Tax Preferences for Education Expenses" (page 244)

RELATED CBO PUBLICATIONS: *Federal Aid for Postsecondary Students* (June 2018), www.cbo.gov/publication/53736; *Distribution of Federal Support for Students Pursuing Higher Education in 2016* (June 2018), www.cbo.gov/publication/53732; *The Pell Grant Program: Recent Growth and Policy Options* (September 2013), www.cbo.gov/publication/44448; *Options to Change Interest Rates and Other Terms on Student Loans* (June 2013), www.cbo.gov/publication/44318

Discretionary Spending—Option 28 Function 600

Increase Payments by Tenants in Federally Assisted Housing

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Spending												
Budget authority	0	-0.6	-1.2	-1.8	-2.5	-3.2	-3.3	-3.4	-3.4	-3.5	-6.1	-22.9
Outlays	0	-0.3	-0.9	-1.5	-2.2	-2.9	-3.2	-3.3	-3.4	-3.5	-4.9	-21.2

This option would take effect in October 2019.

Background

The federal government provides housing assistance directly to low-income tenants through the Housing Choice Voucher program (sometimes called Section 8), public housing, and project-based rental assistance. Those three types of assistance, which are funded by the Department of Housing and Urban Development, generally require tenants to pay 30 percent of their household income (after certain adjustments) toward housing expenses; the federal government covers the balance of the tenants' rent, up to established limits. In 2016, by the Congressional Budget Office's estimate, expenditures for all three programs came to roughly $8,000 per recipient household. That amount includes rent subsidies as well as payments to the local public housing agencies and contractors that administer the programs.

Option

Under this option, tenants' rental contribution would gradually increase from 30 percent of adjusted household income in 2019 to 35 percent in 2024 and then remain at that higher rate.

Effects on the Budget

Provided that federal appropriations were reduced accordingly, those higher rent contributions would decrease outlays from 2019 through 2028 by a total of $21 billion: $10 billion for the Housing Choice Voucher program, $4 billion for public housing, and $7 billion for project-based rental assistance, CBO estimates. People in 3.9 million low-income households would pay an increasing share of their income for rent through 2024, at which point the average annual increase in household rent paid by tenants would be $810 (an amount equivalent to 5 percent of their average adjusted household income).

Decreases in federal outlays would equal increases in tenants' rental contributions. That relationship would probably hold even if the increase in tenants' contribution was three times larger—15 percentage points—than the one examined here (5 percentage points). The relationship would no longer hold if the increase was so large that demand for housing assistance fell significantly. However, even if tenants' rental contribution increased by 15 percentage points, demand for housing assistance would probably not ease substantially. In 2015, more than 8 million households were eligible for housing assistance but not receiving any and were paying more than 50 percent of their household income in rent. (The number increases to almost 12 million if households that spend more than 30 percent of their income on rent are considered.) CBO expects that many of those households would enroll in a housing assistance program even if their expected rental contribution was 45 percent of their income.

Uncertainty about the budgetary effects of this option stems from uncertainty about the option's effects on tenants' incentives to work. Because a larger share of any increase in tenants' income would go toward rent, the incentive for tenants to boost their earnings would decrease under the option. CBO's estimate does not incorporate a response by tenants to that incentive. Separately from the changes in behavior stemming from the option itself, if actual increases in income for lower-income households were higher or lower than CBO projects, savings associated with the option would increase or decrease accordingly.

Other Effects

One argument for this option is that even if tenants' required rental contribution was increased to 35 percent of their income, that share might still be lower than the share of income paid by their counterparts who do not receive housing assistance.

An argument against implementing this option is that assisted renters would have less money to purchase other necessary goods and services, such as food, health care, and transportation. In addition, by increasing the proportion of income that tenants are required to pay for rent, the option would reduce the incentive for participants to boost their income.

RELATED OPTIONS: Discretionary Spending, "Reduce Funding for the Housing Choice Voucher Program or Eliminate the Program" (page 184); Revenues, "Repeal the Low-Income Housing Tax Credit" (page 276)

RELATED CBO PUBLICATIONS: *Federal Housing Assistance for Low-Income Households* (September 2015), www.cbo.gov/publication/50782; *Growth in Means-Tested Programs and Tax Credits for Low-Income Households* (February 2013), www.cbo.gov/publication/43934; *An Overview of Federal Support for Housing* (November 2009), www.cbo.gov/publication/41219

Discretionary Spending—Option 29 Function 600

Reduce Funding for the Housing Choice Voucher Program or Eliminate the Program

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
						Reduce Funding for the Housing Choice Voucher Program						
Change in Spending												
Budget authority	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	-4	-9
Outlays	0	-1	-1	-1	-1	-1	-1	-1	-1	-1	-4	-9
						Eliminate the Housing Choice Voucher Program						
Change in Spending												
Budget authority	0	-3	-5	-8	-11	-14	-17	-20	-24	-27	-27	-129
Outlays	0	-2	-5	-8	-10	-13	-17	-20	-23	-27	-25	-125

This option would take effect in October 2019.

Background

The Housing Choice Voucher program (sometimes called Section 8) provides federally funded vouchers that recipients can use to help pay the rent on units that they find in the private housing market. (Property owners choose whether to participate in the program.) To receive assistance, a household must have income that is below a specified level, and it must wait for a voucher to become available. Although roughly 20 million households qualify for federal rental assistance on the basis of their income, only about one-quarter of those households receive it because funding for the three discretionary spending programs that provide it is limited.

Recipients usually pay 30 percent of their household income, after certain deductions, toward their rent. The value of the voucher is the difference between a household's rental payment and the limit on rent for the area. That limit, which is determined annually by the Department of Housing and Urban Development, is based on the benchmark rent charged for standard rental housing in the area. In some areas, the benchmark rent is set at the 40th percentile (meaning that it is less than 60 percent of rents in the area) and in others, at the 50th percentile. Recipients can continue to use their vouchers even if they move within the same area or out of the area.

Each year, households leave the program for various reasons—some because of the dissolution of their family, others because of a violation of the program's rules, and still others because of increases in income which cause them to no longer be eligible for a voucher. The vouchers that had been used by those households are reissued, to the extent that funding is available, to eligible households on waiting lists for federal housing subsidies. The Congressional Budget Office estimates that the projected amount of budget authority in the baseline for the program would support 2.3 million households in 2020 and 2.1 million households in 2028.

Option

This option includes two alternatives for reducing spending on vouchers. Lawmakers could reduce funding for the voucher program by 5 percent starting in 2020, mainly by not reissuing vouchers when households leave the program. Alternatively, lawmakers could eliminate the program gradually by reducing the baseline budget authority by about $3 billion in 2020 and by an additional $3 billion (cumulatively) in each year from 2021 through 2028, at which point the budget authority would be zero.

Effects on the Budget

Reducing funding for the voucher program by 5 percent each year starting in 2020 would decrease federal spending by $9 billion from 2020 through 2028, and eliminating the program altogether would decrease spending by $125 billion over that period, CBO estimates. (The federal government will spend $9,400 per year, on average, for each household that receives a voucher in 2019, CBO estimates.) Reducing funding for the program by 5 percent in 2020 would result in about 115,000 fewer households receiving housing assistance from the federal government, in CBO's estimation. Eliminating the program would leave about 2.2 million households, corresponding to about 5 million people, without housing assistance from the federal government in 2028.

Decreases in federal outlays associated with reducing funding for the voucher program by 5 percent starting in 2020 reflect CBO's assumption that spending would decline in accordance with historical patterns. The Congress generally provides a portion of the funding for the program a year in advance; consequently, CBO assumes that some of the reduction in budget authority would not result in lower outlays until the following year. Decreases in federal outlays associated with eliminating the housing choice voucher program reflect CBO's assumption that budget authority for the program would be eliminated over nine years and that spending would fall accordingly.

Uncertainty about the budgetary effects of reducing funding for or eliminating the housing choice voucher program stems from uncertainty about whether actual appropriations would match CBO's baseline projections. The budget authority for the option is based on CBO's baseline projection of discretionary budget authority, which starts with the most recently appropriated amount and then grows with inflation.

Other Effects

An argument in support of reducing funding for the voucher program by 5 percent is that no one would lose assistance as a direct result of such a reduction. That is because the reduction in the number of vouchers that it would require would be less than the number of households that CBO expects to leave the program in a given year. In 2017, for example, about 190,000 voucher-subsidized households (or about 8 percent of participating households) left the program.

One argument in support of eliminating the voucher program entirely is that providing assistance to some households through the program is unfair to other households that qualify for federally assisted rental housing but do not receive assistance. (That number is three times as large as the number of households that receive assistance from those programs.) Unassisted households must pay their own rent in full, and at least four-fifths of those households spend more than 30 percent of their income on rent.

An argument against reducing funding for the program is that doing so would lengthen the time that eligible but unassisted households would have to wait to receive assistance. In 2017, the households that were added to the voucher program had been waiting for 32 months, on average. That number probably understates the amount of time that households have to wait for assistance because many waiting lists are periodically closed to new applicants.

An argument against eliminating the voucher program entirely is that doing so would probably increase overcrowding and homelessness. Under that alternative, about 2 million households that would receive vouchers in 2028 under current law would no longer receive housing assistance.

RELATED OPTIONS: Discretionary Spending, “Increase Payments by Tenants in Federally Assisted Housing” (page 182); Revenues, “Repeal the Low-Income Housing Tax Credit” (page 276)

RELATED CBO PUBLICATIONS: *Federal Housing Assistance for Low-Income Households* (September 2015), www.cbo.gov/publication/50782; *Growth in Means-Tested Programs and Tax Credits for Low-Income Households* (February 2013), www.cbo.gov/publication/43934; *An Overview of Federal Support for Housing* (November 2009), www.cbo.gov/publication/41219

Discretionary Spending—Option 30 Function 700

End Enrollment in VA Medical Care for Veterans in Priority Groups 7 and 8

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Discretionary Spending												
Budget authority	0	-5.7	-5.9	-6.1	-6.3	-6.6	-6.8	-7.0	-7.2	-7.5	-24.0	-59.1
Outlays	0	-5.0	-5.7	-6.0	-6.2	-6.4	-6.7	-6.9	-7.1	-7.4	-22.9	-57.4
Change in Mandatory Outlays	0	2.8	2.9	3.0	3.1	3.2	3.3	3.4	3.5	3.6	11.8	28.8

This option would take effect in October 2019.

Discretionary savings accrue to the Department of Veterans Affairs. Increases in mandatory outlays are projected for the Medicare and Medicaid programs and for federal spending on subsidies provided through the health insurance marketplaces established under the Affordable Care Act.

Background

The Department of Veterans Affairs (VA) offers a wide range of medical care to veterans, including providing inpatient and outpatient care, filling prescriptions, and offering assistive devices to veterans. That care is provided at little or no charge to enrolled veterans. Veterans who seek medical care from VA are assigned to one of eight priority groups on the basis of disability status and income, among other factors. For example, enrollees in priority groups 1, 2, and 3 generally have service-connected disabilities (as determined by VA), and their income does not affect eligibility for VA medical care. Veterans in priority group 7 do not have service-connected disabilities, and their annual income is above a national threshold (about $32,000 for a household of one in 2017) set by VA but below a (generally higher) geographically adjusted threshold. Those in priority group 8 do not have service-connected disabilities, and their income is above both the national and the geographic thresholds. In 2017, about 2 million veterans were in priority groups 7 and 8.

Although veterans in priority groups 7 and 8 do not pay enrollment fees, they make copayments, and VA can bill their private insurance plans for reimbursement. Together, the copayments and reimbursements cover about 14 percent of VA's costs of care for those groups. In 2017, VA incurred $6 billion in net costs for those patients, or about 9 percent of the department's net spending for veterans' medical care. When priority groups were established in 1996, the Secretary of the Department of Veterans Affairs was given the authority to decide which groups VA would serve each year. Because of budgetary constraints, VA ended enrollment of veterans in priority group 8 in 2003. Veterans who were enrolled at that time were allowed to remain in VA's health care system. In 2009, enrollment was reopened to certain veterans in that group.

Option

This option would end enrollment in VA's health care system for veterans in priority groups 7 and 8: No new enrollees would be accepted, and current enrollees would be disenrolled starting in October 2019.

Effects on the Budget

The Congressional Budget Office estimates that ending enrollment for veterans without service-connected disabilities and whose income exceeds the national threshold would reduce discretionary spending by $57 billion from 2020 through 2028. Under this option, about 2 million fewer veterans would be enrolled in VA's health care system each year. Because not all enrolled veterans use VA medical care each year, an average of about 1 million veterans would no longer be treated by VA in any given year. The result would be an average annual savings of about $6,000 per disenrolled patient over that period.

Mandatory spending for other federal health care programs—such as Medicare and Medicaid and federal subsidies provided through the health insurance marketplaces established under the Affordable Care Act—would increase because enrollees would seek medical care through other sources. (More than half of the enrollees in priority groups 7 and 8 are over the age of 65.) CBO estimates that, overall, mandatory spending would rise by $29 billion between 2020 and 2028 under this option.

The greatest sources of uncertainty in this estimate of savings over the next 10 years are CBO's estimates of the number of veterans affected by the option and how their reliance on other forms of health care might change. Under current law, enrollees in priority groups 7 and 8 receive nearly 20 percent of their medical care from VA. As the health care delivery and insurance markets evolve over the projection period, that pattern of reliance might change.

Other Effects

An advantage of this option is that VA could focus on veterans with the greatest service-connected medical needs and the fewest financial resources. In 2017, nearly 90 percent of enrollees in priority groups 7 and 8 had other health care coverage, mostly through Medicare or private health insurance. As a result, the vast majority of veterans who would lose access to VA health care would have other sources of coverage, including the health insurance marketplaces.

A disadvantage of the option is that veterans in priority groups 7 and 8 who have come to rely on VA, even in part, might find their health care disrupted. Some veterans—particularly those with income just above the thresholds—might find it difficult to obtain other care.

RELATED CBO PUBLICATIONS: *Comparing the Costs of the Veterans' Health Care System With Private-Sector Costs* (December 2014), www.cbo.gov/publication/49763; testimony of Heidi L.W. Golding, Principal Analyst for Military and Veterans' Compensation, before the Senate Committee on Veterans' Affairs, *Potential Costs of Health Care for Veterans of Recent and Ongoing U.S. Military Operations* (July 27, 2011), www.cbo.gov/publication/41585; *Potential Costs of Veterans' Health Care* (October 2010), www.cbo.gov/publication/21773

Discretionary Spending—Option 31 Multiple Functions

Reduce the Annual Across-the-Board Adjustment for Federal Civilian Employees' Pay

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Spending												
Budget authority	0	-0.9	-2.1	-3.4	-4.8	-6.3	-7.8	-9.4	-11.1	-13.0	-11.2	-58.7
Outlays	0	-0.8	-2.1	-3.4	-4.7	-6.2	-7.7	-9.4	-11.1	-12.9	-11.0	-58.2

This option would take effect in January 2020.

Background

Under the Federal Employees Pay Comparability Act of 1990 (FEPCA), most federal civilian employees receive a pay adjustment each January. As specified by that law, the size of the adjustment is set at the annual rate of increase in the employment cost index (ECI) for wages and salaries of workers in private industry minus 0.5 percentage points. The across-the-board increase as spelled out in FEPCA does not, however, always occur. The President can limit the size of the increase if he or she determines that a national emergency exists or that serious economic conditions call for such action. Similarly, the Congress can authorize an adjustment that differs from the one sought by the President. In each year since 2011, policymakers have either lowered the annual across-the-board adjustment for federal employees below the percentage specified in FEPCA or canceled it altogether.

Option

This option would reduce the annual across-the-board adjustment specified in FEPCA by 0.5 percentage points. From 2020 through 2028, the adjustment would equal the growth rate in the ECI minus 1 percentage point. If the growth rate for the ECI is less than 1 percent, which has not occurred during the 27 years the index has been recorded, then no across-the-board adjustment would be granted for that year.

Effects on the Budget

Provided that federal appropriations were reduced accordingly, federal outlays would decline by $58 billion from 2020 through 2028, the Congressional Budget Office estimates. Outlays would fall by $800 million in 2020, and the reduction would grow to $13 billion in 2028. The growth in the annual savings is a result of the smaller pay raises accumulating over time; by 2028, federal employees' pay would be 4 percent lower under this option than it would be otherwise.

The largest source of uncertainty in the estimate of savings over the next 10 years is the projected size of the federal civilian workforce. Over the past 20 years, the federal workforce has fluctuated between 1.8 million employees (in calendar year 2001) and 2.3 million employees (in calendar year 2010). Another source of uncertainty in the projected savings stems from the timing of retirement for eligible employees. If a significant number of retirement-eligible federal workers decide to retire as a result of the smaller increases in pay, then larger retirement costs could boost mandatory spending, which would offset some of the savings in compensation produced under this option. (CBO has not formally estimated the magnitude of those costs, but preliminary research indicates that they would offset only a small portion of the savings.)

For alternative approaches that would reduce the across-the-board adjustment by more than 0.5 percentage points, a couple of considerations could factor more heavily into the estimated savings. First, the increase in mandatory spending from workers' retiring earlier could become substantial. That is because the growth of future annuity payments is based on salary growth for employees who continue to work; for retirees age 62 or older, however, that calculation is based on the consumer price index. Thus, large cuts to the across-the-board adjustment would cause additional years of service to reduce the size of workers' future annuity payments, which could prompt many of those workers to retire instead of continuing to work. Second, the option includes the stipulation that it would not result in across-the-board adjustments that reduced salaries, because research indicates that workers are very averse to such reductions. In CBO's estimation, that stipulation would not affect the savings for this option, but it could reduce the savings from alternative approaches that imposed larger reductions to the across-the-board adjustment.

Other Effects

Compensation for federal civilian employees constitutes about 18 percent of discretionary spending. One argument for this option is that reducing the annual across-the-board adjustment is a relatively straightforward way to substantially cut spending across agencies. In addition, those cuts may not significantly affect the agencies' ability to retain employees for the roughly 40 percent of jobs that do not require a bachelor's degree because those employees would probably still receive higher compensation than similar workers in the private-sector earn, on average.

An argument against this option is that it could make it more difficult for the federal government to recruit and retain qualified employees, especially for agencies that require workers with advanced degrees and professional skills. Recent research suggests that smaller salary increases have led to fewer employees continuing to work for the federal government. Other research suggests that federal workers with professional and advanced degrees are paid less than their private-sector counterparts. Thus, smaller across-the-board adjustments in federal pay would widen the gap in compensation between federal and private-sector workers for jobs that require more education.

RELATED OPTION: Discretionary Spending, "Reduce the Size of the Federal Workforce Through Attrition" (page 190)

RELATED CBO PUBLICATIONS: Justin Falk and Nadia Karamcheva, *Comparing the Effects of Current Pay and Defined Benefit Pensions on Employee Retention,* Working Paper 2018-06 (June 2018), www.cbo.gov/publication/54056; *Comparing the Compensation of Federal and Private-Sector Employees, 2011 to 2015* (April 2017), www.cbo.gov/publication/52637; *Analysis of Federal Civilian and Military Compensation* (January 2011), www.cbo.gov/publication/22002

Discretionary Spending—Option 32 Multiple Functions

Reduce the Size of the Federal Workforce Through Attrition

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Spending												
Budget authority	0	-0.6	-2.0	-3.4	-4.3	-4.7	-4.9	-5.0	-5.2	-5.3	-10.3	-35.4
Outlays	0	-0.6	-1.9	-3.3	-4.3	-4.7	-4.8	-5.0	-5.2	-5.3	-10.2	-35.2

This option would take effect in October 2019.

Background

In 2017, the federal government employed about 2.1 million civilian workers, excluding Postal Service employees. About 43 percent worked in the Department of Defense or Department of Homeland Security, and roughly 17 percent were employed by the Department of Veterans Affairs. The rest worked in agencies that provide a variety of public services—regulating businesses, investigating crimes, collecting taxes, and administering programs for the elderly, poor, and disabled, for example. The largest costs that the federal government incurs for its civilian employees are for salaries, future retirement benefits, and health insurance.

Option

This option would prohibit selected federal agencies from hiring more than one employee for every two workers who leave, until the number of federal civilian employees at agencies the President allowed to be affected was reduced by 10 percent. Agencies would be limited in their ability to replace those employees with contractors or to increase compensation for new hires because their appropriations would be decreased accordingly. The President would be allowed to exclude an agency from the requirement to replace every two workers with one worker under certain conditions—because of a national security concern or an extraordinary emergency, for instance, or if the performance of a critical mission required doing so.

Effects on the Budget

This option would reduce the deficit by $35 billion from 2019 through 2028, the Congressional Budget Office estimates. CBO arrived at that figure by combining estimates of the reduction in hiring with estimates of the average cost of compensating a hire. About two-thirds of the federal civilian workforce would be exempt from the requirement, in CBO's estimation, leaving an affected workforce of about 700,000 and a total reduction in that workforce of about 70,000. Given recent rates of employee turnover, the government would reach that total by hiring about 21,000 fewer employees in each year through 2022 and about 6,000 fewer employees in 2023. By the end of 2020, CBO expects, the average cost of compensating an employee would be about $72,000 for his or her first full year of employment. Thus, if employees are hired at roughly the same rate throughout the year, the amount spent on them would be reduced by about $800 million in the first year after enactment of this or a similar option. The deficit would fall by a smaller amount—$600 million—because about one-fifth of employees are paid from fees their agency collects for providing certain services, such as customs fees and patent registration fees. CBO expects that decreasing the number of people providing those services would reduce those collections by an equal amount. By 2028, the reduction in the deficit would grow to $5.3 billion as the effects of reduced hiring on the size of the workforce accumulated.

A large source of uncertainty in this option's estimate of savings over the next 10 years is CBO's estimate of the portion of workers who would be exempt from this requirement. To determine that number, CBO examined data from the two most recent government shutdowns. On the basis of the number of employees who continued working during those shutdowns, CBO estimates that about two-thirds of the federal civilian workforce would be exempt from this requirement. However, it is unclear whether the President would respond to this option the way past Presidents responded to temporary shutdowns.

A second large source of uncertainty is the portion of nonexempt workers whose compensation is provided from agency collections. Depending on which agencies the President chose to exempt from this requirement, the fraction of the reduction in budgetary authority that represented a decrease in offsetting collections would vary. That is because the employees whose compensation is funded by such collections are unevenly spread across agencies.

Alternative approaches that set more or less stringent limits on the fraction of departing workers that agencies could replace might lead to the President's exempting more or fewer agencies from the limit. For example, the savings from a hiring freeze (in which case agencies are not allowed to hire any employees for every two who leave) would be less than twice the savings generated by this option if the freeze constrained the ability of more agencies to perform critical missions.

Other Effects

An argument for this option is that some agencies could continue to provide crucial services with a smaller workforce by operating more efficiently and by eliminating services that are not cost-effective. The number of management and supervisory positions has increased in many agencies as the workforce has aged, and research suggests that, in some cases, the additional layers of management hamper performance. This option could encourage agencies to reduce the number of managers and supervisors through attrition as people in those positions retire over the next few years. Research also suggests that federal workers in the roughly 40 percent of jobs that do not require a college degree earn more than their counterparts in the private sector. If private-sector compensation is indicative of the value of those positions, then the savings generated by trimming that part of the workforce would exceed the value of the services that those jobs produce.

An argument against this option is that trends in federal employment suggest that the federal workforce might already be under strain from previous cost-cutting measures and that further reductions could impair the government's ability to fulfill parts of its mission. The federal civilian workforce has grown little over the past 20 years, whereas both the number of people the government serves (as measured by the population of the United States) and federal spending per person have grown substantially. Moreover, the workforce at most agencies has shrunk, and the modest growth in the total number of federal civilian employees largely reflects hiring for the Department of Homeland Security (which was established in 2002) and the Department of Veterans Affairs (which increased the volume of services it provides to veterans). Workforce reductions at those or other agencies would probably reduce the quality and quantity of some of the services provided and could have other negative effects, such as increasing the amount of fraud and abuse in some government programs. Lastly, because this option would be phased in as workers left their positions, federal agencies would have little control over the timing of the workforce reductions.

RELATED OPTION: Discretionary Spending, "Reduce the Annual Across-the-Board Adjustment for Federal Civilian Employees' Pay" (page 188)

RELATED CBO PUBLICATION: *Comparing the Compensation of Federal and Private-Sector Employees, 2011 to 2015* (April 2017), www.cbo.gov/publication/52637

Discretionary Spending—Option 33 Multiple Functions

Reduce Funding for Certain Grants to State and Local Governments

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Reduce Department of Energy Grants for Energy Conservation and Weatherization												
Change in Spending												
Budget authority	0	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.6	-1.5
Outlays	0	*	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-1.2
Reduce Environmental Protection Agency Funding for Wastewater and Drinking Water Infrastructure and Other Grants												
Change in Spending												
Budget authority	0	-0.9	-1.8	-1.9	-1.9	-1.9	-2.0	-2.1	-2.1	-2.2	-6.4	-16.7
Outlays	0	-0.1	-0.7	-1.4	-1.8	-1.9	-1.9	-2.0	-2.0	-2.1	-4.0	-14.0
Reduce Department of Housing and Urban Development Funding for Community Development Block Grants												
Change in Spending												
Budget authority	0	-0.8	-1.6	-1.7	-1.7	-1.7	-1.8	-1.8	-1.8	-1.9	-5.8	-14.8
Outlays	0	*	-0.2	-0.7	-1.3	-1.6	-1.7	-1.7	-1.8	-1.8	-2.2	-10.7
Reduce Funding for Certain Department of Education Grants												
Change in Spending												
Budget authority	0	-0.4	-0.7	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.9	-2.6	-6.8
Outlays	0	*	-0.2	-0.6	-0.7	-0.8	-0.8	-0.8	-0.8	-0.8	-1.5	-5.5
Reduce Funding for Certain Department of Justice Grants												
Change in Spending												
Budget authority	0	-0.7	-1.5	-1.5	-1.5	-1.6	-1.6	-1.6	-1.7	-1.7	-5.2	-13.4
Outlays	0	-0.1	-0.5	-0.9	-1.2	-1.4	-1.5	-1.6	-1.6	-1.6	-2.7	-10.5
Total												
Change in Spending												
Budget authority	0	-2.8	-5.8	-5.9	-6.1	-6.2	-6.4	-6.5	-6.7	-6.8	-20.7	-53.2
Outlays	0	-0.3	-1.7	-3.7	-5.1	-5.8	-6.1	-6.2	-6.4	-6.5	-10.8	-41.9

This option would take effect in October 2019.

* = between -$50 million and zero.

Background

The federal government provided $675 billion in grants to state and local governments in 2017. Those grants redistribute resources among communities around the country, finance local projects that may have national benefits, encourage policy experimentation by state and local governments, and promote national priorities.

Although federal grants to state and local governments fund a wide variety of programs, spending is concentrated in the areas of health care, income security, education, the environment, and transportation. The conditions that accompany those federal funds vary substantially: Some grant programs give state and local governments broad flexibility in spending federal funds, whereas others impose more stringent conditions.

Option

This option would reduce funding for a group of grants by 50 percent over two years. New funding would be decreased by 25 percent in 2020 and by 50 percent for the remaining years through 2028. (The grants are illustrative of those made by the federal government to state and local governments.) The option includes several changes that could be implemented individually or together. Those changes would reduce funding for the following programs:

- The Department of Energy's grants for energy conservation and weatherization through the Weatherization and Intergovernmental Programs Office.
- The Environmental Protection Agency's (EPA's) grants for wastewater and drinking water infrastructure, as well as other grants that help states implement federal water, air, waste, and chemical programs.
- The Department of Housing and Urban Development's Community Development Block Grant (CDBG) program.
- Certain Department of Education grants, like those for the 21st Century Community Learning Centers, which fund nonacademic programs that address the physical, emotional, and social well-being of students.
- Certain Department of Justice grants to nonprofit community organizations and state and local law enforcement agencies. Those grants include State and Local Law Enforcement Assistance programs, Juvenile Justice Programs, Community Oriented Policing Services grants, and grants administered through the Office on Violence Against Women.

More details on the individual grant programs appear in similar options presented in the Congressional Budget Office's March 2011 version of this report.

Effects on the Budget

If all of those reductions were put in place, federal spending would decline by $42 billion from 2020 through 2028, provided that federal appropriations were reduced accordingly. During the 10-year budget period, outlays would decline by less than budget authority because some spending for grant programs occurs in years after the year in which it is authorized. Grants made through the CDBG program are used by state and local governments over eight years, for example, the longest period for this group of grants. (More than 90 percent of those CDBG outlays occur within four years of funding.) EPA's grants for wastewater and drinking water infrastructure and the Department of Education's grants have the shortest spending period in this group, with outlays completed over the four years following funding.

If budget authority for this group of programs was reduced by more or less than 50 percent, a proportionate reduction in outlays would probably result. However, eliminating the programs completely would probably impose shutdown costs that would limit savings in the near term.

Relatively little uncertainty surrounds this option's estimated savings relative to CBO's baselines for the programs. (The formula block grants provided in the CDBG program, for example, are spent slowly but predictably.) Uncertainty about how actual appropriations will compare with CBO's baseline projections contributes to the overall uncertainty about this estimate, however.

Other Effects

The main argument for this option is that the concerns addressed by those grant programs are primarily local, so allowing state and local governments to decide whether to continue to pay for the programs would probably lead to a more efficient allocation of resources. According to that reasoning, if state and local governments had to bear the full costs of those activities, they might be more careful in weighing those costs against potential benefits when making spending decisions. In addition, federal funding might not always provide a net increase in spending for those activities because state and local governments might reduce their own funding of such programs in response to the availability of federal funds.

One argument against this option is that those grants support programs that the federal government prioritizes but that state and local governments may lack the incentive or funding to promote to the extent desirable from a national perspective. In fact, many state and local governments face fiscal constraints that might make it difficult for them to compensate for the loss of federal funds. In addition, reducing funding for grants that redistribute resources across jurisdictions could lead to more persistent inequities among communities or individuals. Less federal support could also limit the federal government's ability to encourage experimentation and innovation at the state and local levels and to learn from the different approaches taken to address a given policy issue.

RELATED CBO PUBLICATION: *Federal Grants to State and Local Governments* (March 2013), www.cbo.gov/publication/43967

Discretionary Spending—Option 34 Multiple Functions

Repeal the Davis-Bacon Act

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Discretionary Spending												
Spending authority	0	-1.0	-2.0	-2.1	-2.1	-2.1	-2.2	-2.2	-2.3	-2.3	-7.1	-18.4
Budget authority	0	-0.5	-0.9	-1.0	-1.0	-1.0	-1.0	-1.1	-1.1	-1.1	-3.4	-8.6
Outlays	0	-0.4	-1.1	-1.3	-1.4	-1.5	-1.5	-1.6	-1.6	-1.6	-4.3	-12.1
Change in Mandatory Outlays	0	*	*	*	*	*	*	*	*	*	-0.1	-0.3

This option would take effect in October 2019.

Spending authority includes budget authority as well as obligation limitations (such as those for certain transportation programs). The estimates are relative to the Congressional Budget Office's adjusted April 2018 baseline, further adjusted to exclude the extrapolation over the 2019–2028 period of the large amount of emergency funding for disaster assistance provided in 2018 to the Federal Emergency Management Agency.

* = between -$50 million and zero.

Background

Since 1935, the Davis-Bacon Act has required that workers on all federally funded or federally assisted construction projects whose contracts total more than $2,000 be paid no less than the prevailing wages in the area where the project is located. (A federally assisted construction project is paid for in whole or in part with funds provided by the federal government or borrowed using the credit of the federal government.) The Department of Labor determines prevailing wages on the basis of the wages and benefits earned by at least 50 percent of the workers doing a particular type of job or on the basis of the average wages and benefits paid to workers performing that type of job.

Option

This option would repeal the Davis-Bacon Act and reduce appropriations accordingly. The government's authority to enter into obligations for certain transportation programs would likewise be reduced.

Effects on the Budget

If that change was implemented, the federal government would spend less on construction, saving $12 billion in discretionary outlays from 2019 through 2028, the Congressional Budget Office estimates. Mandatory spending on federally funded or federally assisted construction projects would also decline, but by less than $1 billion over that period. (The largest component of that mandatory spending is construction funded through the Tennessee Valley Authority.) Savings would generally accrue to federal agencies that engage in construction projects. In 2018, about half of all federal or federally assisted construction was funded through the Department of Transportation, although a significant portion of federal construction projects were funded through the Department of Defense, the Department of Housing and Urban Development, and the Department of Veterans Affairs.

In general, savings in outlays are smaller than savings in budget authority for construction projects because the outlays occur over many years. However, the rate at which those outlays occur can vary for different types of projects. Because repealing the Davis-Bacon Act would affect many types of federally funded or federally assisted construction projects, the difference between budget authority savings and outlay savings in this option represents the average difference across the affected projects.

CBO's estimate of the savings associated with this option is primarily based on the agency's estimates of federal spending on construction and of the share of that spending that would be eliminated if the Davis-Bacon Act was repealed. In CBO's estimation, repealing the Davis-Bacon Act would reduce total federal spending on construction by 0.9 percent. Most of those savings—0.8 percentage points—would result from a reduction in wages and benefits. The other 0.1 percentage point would stem from a reduction in compliance costs associated with the Davis-Bacon Act. In addition to a reduction in federal spending on construction, there would be a small amount of savings for the Department of Labor associated with the elimination of the act's administrative costs.

The largest source of uncertainty in this option is CBO's estimate of the share of federal spending on construction that would be eliminated by repealing the Davis-Bacon Act. Some research suggests that repealing prevailing wage laws by eliminating the act would not result in savings (Azari-Rad, Philips, and Prus 2003), whereas other research suggests that repealing such laws would result in greater savings than CBO estimates (Dunn, Quigley, and Rosenthal 2005).

Other Effects

An argument for repealing the Davis-Bacon Act is that, since the 1930s, other policies (including a federal minimum wage) have been put in place that ensure minimum wages for workers employed in federal or federally assisted construction. Moreover, when prevailing wages (including fringe benefits) are higher than the wages and benefits that would be paid in the absence of the Davis-Bacon Act, the act distorts the market for construction workers. In that situation, federally funded or federally assisted construction projects are likely to use more capital and less labor than they otherwise would, thus reducing the employment of construction workers. Additional arguments for repealing the Davis-Bacon Act are that the paperwork associated with the act makes compliance more difficult for small firms than for large firms and that the act is difficult for the federal government to administer effectively. For instance, prevailing wage rates are based on surveys and are supposed to be issued for job classifications by county. However, survey responses are often insufficient to generate county-level estimates of prevailing wages for some occupations. Finally, under current law some agencies charge people separate fees or higher rates than they otherwise would to fund certain federal construction projects. To the extent that those agencies passed on the savings from reduced constructions costs to their users, those users would experience lower costs for services.

One argument against repealing the Davis-Bacon Act is that doing so would lower the earnings of some construction workers. Another argument against such a change is that it might jeopardize the quality of construction at federally funded or federally assisted projects. When possible, managers of some construction projects would decrease costs by paying a lower wage than is permitted under the Davis-Bacon Act. As a result, they might attract workers who are less skilled or do lower-quality work. Also, if one of the objectives of federal projects is to increase earnings for the local population, repealing the Davis-Bacon Act might undermine that aim. The act prevents out-of-town firms from coming into an area, using lower-paid workers from other regions of the country to compete with local contractors for federal work, and then leaving the area upon completion of the work.

WORK CITED: Hamid Azari-Rad, Peter Philips, and Mark J. Prus, "State Prevailing Wage Laws and School Construction Costs," *Industrial Relations*, vol. 42, no. 3 (June 2003), pp. 445–457, https://doi.org/10.1111/1468-232X.00299; Sarah Dunn, John M. Quigley, and Larry A. Rosenthal, "The Effects of Prevailing Wage Requirements on the Cost of Low-Income Housing," *Industrial and Labor Relations Review*, vol. 59, no.1 (October 2005), pp. 141–157, https://doi.org/10.1177/001979390505900108

CHAPTER

4

Revenue Options

In 2018, the federal government collected $3.3 trillion in revenues, equal to 16.4 percent of the nation's gross domestic product (GDP). Individual income taxes were the largest source of revenues, accounting for 51 percent of the total. Social insurance taxes (primarily payroll taxes collected to support Social Security and Medicare) accounted for 35 percent. Six percent of the total was from corporate income taxes. Other receipts made up the remaining 8 percent (see Figure 4-1).

The Congressional Budget Office estimates that revenues would be greater if not for tax expenditures—so called because they resemble federal spending to the extent that they provide financial assistance for specific activities, entities, or groups of people through special exclusions, exemptions, or deductions from gross income or special credits, preferential tax rates, or deferrals of tax liability. More than 200 tax expenditures are provided under the individual and corporate income tax system. Those tax expenditures cause revenues to be lower than they would be otherwise for any given schedule of tax rates.[1]

Trends in Revenues

Over the past 50 years, total federal revenues have averaged 17.4 percent of GDP—ranging from a high of 20.0 percent in 2000 to a low of 14.6 percent in 2009 and 2010 (see Figure 4-2). That variation in total revenues as a share of GDP has primarily resulted from fluctuations in receipts of individual income tax payments and, to a lesser extent, in collections of corporate income taxes.

In CBO's baseline, which projects federal spending and revenues over a 10-year period and incorporates the assumption that current law will generally remain unchanged, total revenues increase from 16.5 percent of GDP in 2019 to 18.5 percent of GDP in 2028. Revenues are projected to rise steadily from 2019 through 2025, reaching 17.5 percent of GDP, and then to increase sharply following the scheduled expiration of many temporary provisions of Public Law 115-97 (originally called the Tax Cuts and Jobs Act and referred to as the 2017 tax act in this volume) on December 31, 2025. (See Box 4-1 for an overview of the provisions contained in the 2017 tax act.)

Individual and Corporate Income Taxes

From 1968 to 2018, revenues from individual income taxes have ranged from slightly more than 6 percent of GDP (in 2010) to slightly less than 10 percent of GDP (in 2000). Since the 1960s, corporate income taxes have fluctuated between about 1 percent and about 4 percent of GDP.

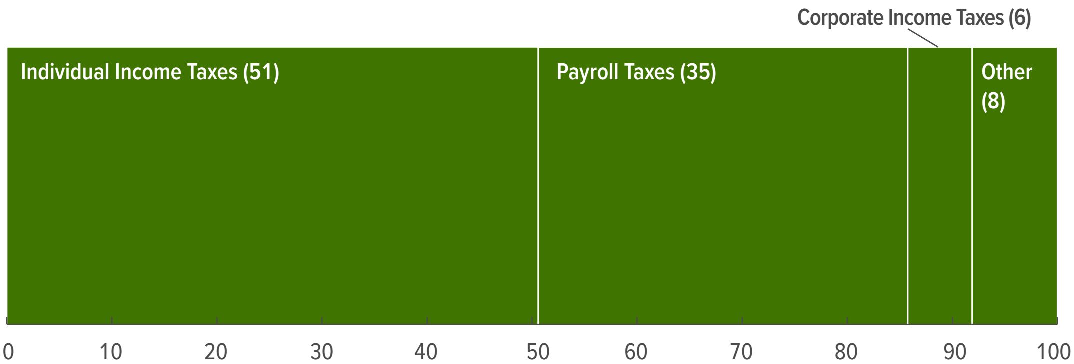
The variation in revenues generated by individual and corporate income taxes has stemmed in part from changes in economic conditions and from how those changes have interacted with the tax code. For example, in the absence of legislated tax reductions, receipts from individual income taxes tend to grow as a share of GDP because of a phenomenon known as real bracket creep, which occurs when income rises faster than prices, pushing an ever-larger share of income into higher tax brackets. Although certain parameters of the tax code—including tax brackets—are indexed, or adjusted to include the effects of inflation, income can still be subject to higher tax rates if it grows faster than prices. In addition, because some parameters of the tax system are not indexed, taxes can increase as a share of GDP even if incomes are not rising faster than prices. During economic downturns, corporate profits generally fall as a share of GDP, causing corporate tax revenues to shrink, and declines in household income tend to push a greater share of total income into lower tax brackets, resulting in lower revenues from individual income taxes. Thus, total income tax revenues automatically rise as a share of GDP

1. For a more thorough discussion of tax expenditures, see Joint Committee on Taxation, *Estimates of Federal Tax Expenditures for Fiscal Years 2018–2022*, JCX-81-18 (October 4, 2018), https://tinyurl.com/ybqzbo7q; and Congressional Budget Office, *The Distribution of Major Tax Expenditures in the Individual Income Tax System* (May 2013), www.cbo.gov/publication/43768.

Figure 4-1.

Composition of Revenues, 2018

Percentage of Total Revenues



Individual income tax receipts were the largest component of revenues in 2018, accounting for more than half of the total.

Source: Congressional Budget Office, using data from the Office of Management and Budget.

Other sources of revenues include excise taxes, estate and gift taxes, earnings of the Federal Reserve System, customs duties, and miscellaneous fees and fines.

when the economy is strong and decline in relation to GDP when the economy is weak.

Social Insurance Taxes

Social insurance taxes, by contrast, have been a relatively stable source of federal revenues. From the 1960s through the 1980s, receipts from those taxes increased as a share of GDP because of increases in their rates, in the number of people paying the taxes, and in the share of wages subject to the taxes. For most of the past three decades, legislation has not had a substantial effect on social insurance taxes, and the primary base for those taxes—wages and salaries—has varied less as a share of GDP than have other sources of income. In 2011 and 2012, however, a temporary reduction in the Social Security tax rate caused receipts from social insurance taxes to drop; when that provision expired at the end of 2012, social insurance receipts as a share of GDP returned to their historical level—close to 6 percent of GDP.

Other Revenue Sources

Revenues from other taxes and fees declined in relation to the size of the economy over the 1968–2018 period, mainly because receipts from excise taxes—which are levied on goods and services such as gasoline, alcohol, tobacco, and air travel—have decreased as a share of GDP over time. That decline is chiefly attributable to the fact that those taxes are usually levied on the basis of the quantity of goods sold rather than their cost, and the rates and fees have generally not kept up with inflation.

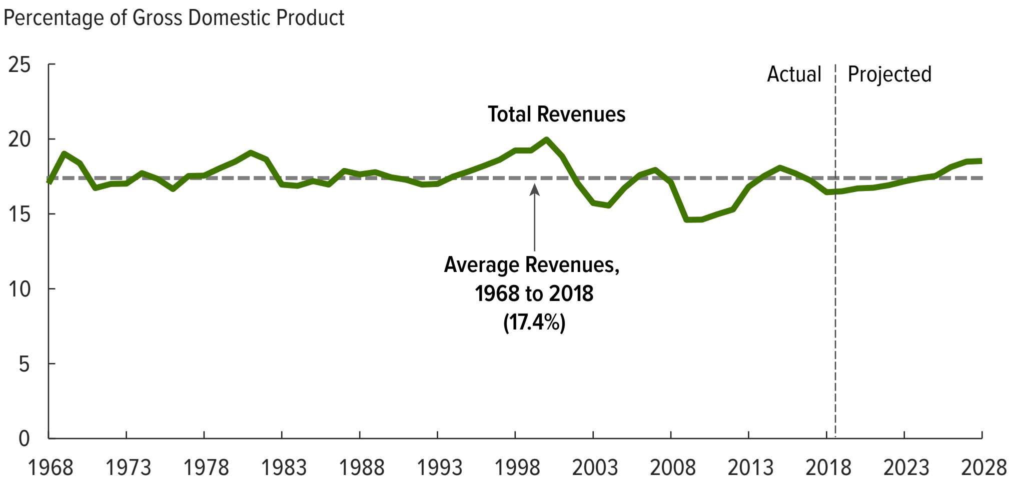
Method Underlying Revenue Estimates

Although CBO prepared or contributed to the revenue estimates for a few options in this chapter, nearly all of the estimates were prepared by the Joint Committee on Taxation (JCT), which provides CBO with revenue estimates for legislation dealing with income, estate and gift, excise, or payroll taxes that is under consideration by the Congress. JCT and CBO's revenue estimates measure the budgetary effects of options against CBO's April 2018 baseline, which reflects the assumption that current laws will generally remain in effect—specifically, that scheduled changes in provisions of the tax code will take effect and no additional changes to those provisions will be enacted.[2] Almost all of the estimates in the chapter are based on a scenario in which the option would become

2. For more information on JCT's methodology for estimating revenues, see Joint Committee on Taxation, *Summary of Economic Models and Estimating Practices of the Staff of the Joint Committee on Taxation*, JCT-46-11 (September 19, 2011), http://go.usa.gov/xkMyd. As specified in the Balanced Budget and Emergency Deficit Control Act of 1985, CBO's baseline reflects the assumption that expiring excise taxes dedicated to trust funds will be extended (unlike other expiring tax provisions, which are assumed to follow the schedules set forth in current law). For more information on CBO's baseline, see Congressional Budget Office, *The Budget and Economic Outlook: 2018 to 2028* (April 2018), www.cbo.gov/publication/53651.

Figure 4-2.

Revenues



If current laws generally remained unchanged, revenues would gradually rise over the next decade—increasing from 16.5 percent of gross domestic product in 2019 to 18.5 percent by 2028.

Source: Congressional Budget Office.

The projected values shown are from Congressional Budget Office, *The Budget and Economic Outlook: 2018 to 2028* (April 2028), www.cbo.gov/publication/53651.

effective in January 2019. For certain options, new and novel administrative procedures would have to be set up in order to collect a tax; in those cases, the estimates are based on a scenario in which the option would become effective in January 2020. For each year in the projection period, the estimate represents the effect of the option on federal revenues in that fiscal year. Although taxes on wages are generally withheld as the income is earned, therefore increasing federal revenues in that same year, taxes on other income and the effects of deductions and credits generally do not affect federal revenues until taxpayers file their tax returns in the following calendar year.

The estimates in this chapter account for certain broader effects of the options. Estimates for some of the options include revenue offsets to capture the effect of a given option on the income bases for other taxes. The estimates generally also reflect changes in the behavior of households and businesses that would generate budgetary savings or costs, except for those changes that would affect total output in the economy. Some revenue options would affect outlays as well as revenues and so include an estimate of that outlay effect. The estimate for each option in this chapter reflects the effects of that option in isolation. If combined, the options might interact with one another in ways that could alter their effects on revenues and their impact on households and the economy.

Baseline

The estimates presented in this chapter show how projected revenues in CBO's April 2018 baseline would change if any of the options was implemented. That baseline accounts for the 2017 tax act, which included some provisions that are scheduled to expire over the course of the baseline's 10-year projection period. As a result, the revenue estimates for some options exhibit patterns that reflect the effects of those provisions and their expiration on the baseline. The tax act also made substantial changes to the tax code. Because it is difficult to anticipate how people, businesses, and various other entities will respond to those changes, the baseline projections are more uncertain than they would have been if the tax act had not been enacted.

Expiring Provisions. The 2017 tax act's expiring provisions include changes to the rates and structure of individual income taxes and to various tax expenditures; those provisions are scheduled to expire at the end of 2025. The tax act temporarily decreased individual income tax rates and changed the width of income tax brackets in a way that generally increased the number of taxpayers subject to lower income tax rates. Those lower rates temporarily reduce the value of some tax expenditures, and estimates for options that would change such tax expenditures reflect those changes in their value. The

Box 4-1.

Major Provisions of the 2017 Tax Act

The 2017 tax act made important changes to the tax system that apply to both businesses and individuals. They included changes to corporate and individual tax rates and to how businesses and individuals calculate their taxable income.

The 2017 tax act changed individual income taxes by lowering statutory tax rates but also broadening the tax base through various provisions. Most of the provisions involving individual income taxes expire at the end of 2025. Those temporary provisions include:

- A reduction in individual income tax rates,
- A reduction in the amount of income subject to the alternative minimum tax,
- Changes to the standard deduction and itemized deductions, and
- The replacement of personal and dependent exemptions with an expansion of the child tax credit and a new tax credit for other dependents.

In addition, the 2017 tax act made numerous changes to tax provisions that affect corporate and noncorporate businesses. Those changes include:

- A reduction in the corporate income tax rate to 21 percent,
- Modifications to the taxation of foreign income earned by U.S. corporations,
- An expansion of the tax base (that is, the total amount of income subject to tax) through the elimination of certain tax deductions,
- A provision that allows businesses to more rapidly deduct the costs of certain investments, and
- The creation of a new deduction for certain owners of pass-through businesses (businesses whose profits are not taxed directly through the corporate income tax but are "passed through" to the business's owners, who pay income taxes on their share of the profits).

2017 tax act also increased the standard deduction and made changes to itemized deductions. Together, those changes are estimated to reduce the number of itemizers from 49 million in 2017 to 18 million in 2018. The effects of the temporary reduction in the number of itemizers are reflected in the revenue estimates for options that limit itemized deductions.

Other expiring tax provisions affected the taxation of businesses. The 2017 tax act temporarily increased the percentage of the cost of investment in equipment that businesses can deduct in the year the investment is made. Until that increase is phased out at the end of 2027, it reduces taxable income against which other business deductions can be claimed. If that increase was extended permanently, then revenue estimates for options that would increase the tax rate on such income would be lower in subsequent years. Another provision of the tax act allowed many owners of pass-through entities (businesses, such as partnerships, whose profits are "passed through" to their owners) to claim a deduction equal to 20 percent of qualified business income through 2025. That temporary deduction also reduces taxable income under the individual income tax. If the deduction was extended permanently, the revenue estimates for options that would raise tax rates on that income would be lower in subsequent years.

Uncertainty. All revenue projections are uncertain because they depend on projections of the economy that influence the projections of wages and salaries, corporate profits, and other income. For example, if productivity growth was lower than forecast, receipts would be lower than projected in the baseline and, as a result, the revenue effects of options in this chapter would be different from the estimates shown. The April 2018 baseline is particularly uncertain because of the significant changes to the tax code introduced by the 2017 tax act. For example, there is uncertainty about how households and businesses will respond to changes in incentives to work, save, and invest in the United States and, as noted above, how households and businesses might react to the scheduled expiration of certain provisions. Other causes of uncertainty include the scope and content of regulations that have yet to be promulgated by the Treasury Department and the policies that state governments and foreign countries might change in response to the act. Because of all of those sources of uncertainty, revenues may deviate significantly from the baseline projections; as a result, the revenues raised by any option in this chapter could be significantly different from the estimates shown. Each option contains a discussion of the specific sources of uncertainty associated with the estimates.

Offsets Applied to Revenue Estimates

Conventional budget estimates incorporate the assumption that total output in the economy is fixed. Therefore, the estimate for any option that would increase an excise tax (or any other indirect tax imposed at an intermediate stage of production and sale) or the employer contribution for payroll taxes must reflect a reduction in the amount of income subject to income and payroll taxes. The revenue estimates for options in this chapter that increase indirect taxes or employer contributions for payroll taxes include an offset that accounts for that reduction.[3] The estimates reflect those adjustments in addition to accounting for the behavioral effects that are typically incorporated in every revenue estimate.

Excise Tax Offset. A higher excise tax would reduce the taxable income of households and businesses. The resulting reduction in income and payroll tax receipts would partially offset the increase in excise taxes. For each additional dollar of excise tax receipts raised in 2019, JCT applies an offset that reduces income and payroll taxes by $0.217, for a net increase of $0.783 in total tax receipts. The offset rate for each subsequent year reflects the tax regime that is in place that year.[4]

The specific set of individuals and businesses whose income would decline because of an excise tax increase depends on who bears the burden of that increase. For example, if businesses that produced the taxed good were unable to pass the additional cost of the excise tax on to consumers by raising prices, their income would fall, which, in turn, would reduce the revenues collected through direct taxes on that income.

Payroll Tax Offset. An increase in employers' contributions to payroll taxes would reduce taxable wages and benefits. The resulting reduction in individual income and payroll tax receipts would partially offset the increase in payroll taxes. Because options for changing payroll taxes may have different effects on people in different parts of the income distribution, the offset applied is particular to the payroll tax change that is being estimated. In a given year, the offset rate is a function of the tax regime that is in place that year.

The estimates account for a reduction in taxable wages and benefits because they incorporate the assumption that total compensation remains unchanged. Total compensation comprises taxable wages and benefits, nontaxable benefits, and employers' contributions to payroll taxes. If total compensation remains unchanged, then increases in employers' contributions to payroll taxes must reduce other forms of compensation. Decreases in taxable wages and benefits would reduce the base for individual income and payroll taxes.

Accounting for Changes in Behavior

The revenue estimates in this chapter generally reflect changes in the behavior of households and businesses. (The estimates do not, however, incorporate macroeconomic effects—that is, behavioral changes that affect total output in the economy, such as changes in the labor supply or in private investment resulting from changes in fiscal policy.)[5] An increase in taxes on alcoholic beverages, for example, is projected to result in a decline in alcohol consumption, and an increase in Social Security tax rates would prompt employers to change the composition of compensation, shifting from taxable compensation to forms of nontaxable compensation. The revenue estimates for those options incorporate such behavioral responses. In the first example, the decline in consumption would cause the increase in revenues to be smaller than it would be without that behavioral response, and in the second example, the change in compensation would cause individual income tax receipts to fall at the same time that payroll tax revenues rose.

3. For information on JCT's methodology in estimating income and payroll tax offsets to excise taxes, see Joint Committee on Taxation, *The Income and Payroll Tax Offset to Changes in Excise Tax Revenues*, JCX-59-11 (December 23, 2011), https://tinyurl.com/yaa7d856. For information on JCT's methodology in estimating offsets to payroll taxes, see Joint Committee on Taxation, *The Income and Payroll Tax Offset to Changes in Payroll Tax Revenues*, JCX-89-16 (November 18, 2016), https://tinyurl.com/yapdo8vc.

4. See Joint Committee on Taxation, *New Income and Payroll Tax Offsets to Changes in Excise Tax Revenues for 2018–2028*, JCX-8-18 (March 27, 2018), https://tinyurl.com/y7pz2qrz.

5. Under some circumstances, cost estimates for legislation would take such effects into account. For more information, see Chapter 1 of this report.

Accounting for Outlays

Some revenue options would affect outlays as well as revenues. For example, if the amount of a refundable tax credit exceeds a person's income tax liability before the credit is applied, the government pays part or all of the excess to that person, and that payment is recorded as an outlay in the budget. Thus, options that would change the eligibility for or amount of a refundable tax credit would generally cause a change in outlays. Changes in other provisions of tax law could also affect the allocation of refundable credits between outlays and receipts. For instance, if tax rates are increased but the eligibility requirements for and amounts of refundable tax credits remain the same, the total cost of refundable credits generally does not change. However, the portion of the refundable credits that offsets tax liabilities increases because the tax liabilities that can be offset are greater, and the portion of the credits classified as outlays falls correspondingly. For simplicity in presentation, the revenue estimates for options that would affect refundable tax credits represent the net effects on revenues and outlays combined.

Options that would expand the base for Social Security taxes would affect outlays as well. If options would require some or all workers to contribute more to the Social Security system, those workers would receive larger benefits when they retired or became disabled. For nearly all such options in this report, CBO anticipates that a change in Social Security benefit payments would be small from 2019 through 2028; therefore, the estimates for those options do not include those effects on outlays. One exception, however, is Option 20, which would increase the amount of earnings subject to the Social Security tax. In that case, the effects on Social Security outlays over the 10-year projection period would be greater; they are shown separately in the table for that option.

Combining Options

The revenue estimates for each option in this chapter reflect the effects of that option in isolation. If the option was combined with other changes to the tax code, as it would be if it was part of a broader legislative proposal, then its effects would interact with those of the other changes and the estimate for the provision would reflect those interactions. In that case, the estimated revenue effects could be quite different from the revenue estimates for the option in isolation.

Options in This Chapter

This chapter presents 40 options that are grouped into several categories according to the part of the tax system they would target: individual income tax rates, the individual income tax base, individual income tax credits, payroll taxes, taxation of income from businesses and other entities, taxation of income from worldwide business activity, excise taxes, other taxes and fees, and tax enforcement. The chapter generally does not include options that would target portions of the tax system that were substantially modified as part of the 2017 tax act because CBO generally did not include in this report options that would repeal recently enacted legislation. For each option in this chapter, there is a discussion of the advantages and disadvantages of increasing revenues through that approach.

Options for Raising Revenues

With one exception, the options included in this chapter would increase revenues by raising tax rates, imposing a new tax on income, or broadening the base for an existing tax. One option would instead raise revenues by increasing funding for the Internal Revenue Service's (IRS's) enforcement of tax law.

Options for Raising Existing Tax Rates or Fees. The chapter contains options to increase revenues by raising tax rates on individual income, corporate income, and income subject to payroll taxes. It also contains options that would increase tax rates or fees on various products to which an excise tax is currently applied.

Options for Imposing a New Tax or Fee. Other options in this chapter would raise revenues by introducing new taxes or fees on income, consumption, or certain activities. Those activities include financial transactions and the emission of greenhouse gases.

Options for Broadening the Tax Base. The tax base is broadened when taxes are extended to more people or applied to additional types or amounts of income. Extensions of the tax base are generally achieved by either eliminating or limiting existing tax expenditures. There are three main types of tax expenditures discussed in this chapter.

- *Tax exclusions* reduce the amount of income that filers must report on tax returns. Examples are the exclusions from taxable income of employment-based health insurance, net pension contributions and earnings, capital gains on assets transferred at death, and a portion of Social Security and Railroad Retirement benefits.

- *Tax deductions* are expenses that are subtracted from reported income in the calculation of taxable income. Examples are itemized deductions for certain taxes paid to state and local governments, mortgage interest payments, and charitable contributions.

- *Tax credits* reduce a taxpayer's tax liability. Credits can be either nonrefundable (meaning that they only offset the taxpayer's tax liability) or refundable (meaning that if they exceed the taxpayer's tax liability, the taxpayer receives a payment from the government). An example of a nonrefundable tax credit is the Lifetime Learning tax credit. Examples of refundable tax credits are the earned income tax credit and the additional child tax credit.

Some of the options presented in this chapter would eliminate current exclusions or deductions. Others would create new limits on tax expenditures or tighten existing limits on tax expenditures—for example, by restricting the set of filers who could receive any benefit from a given tax expenditure.

Option for Increasing Funding for IRS Enforcement. The chapter contains one option that would lift the statutory cap on discretionary spending in order to provide additional funding to the IRS for tax law enforcement. Such adjustments to the statutory cap are allowed under the Budget Control Act of 2011 (as modified by the Bipartisan Budget Act of 2018) for program integrity initiatives, including expansions of the IRS's enforcement activities. The option is included in this volume because it is estimated to raise more in revenues than it costs. Because of the budget guidelines—as specified by the Balanced Budget Act of 1997—used by the Congress, an increase in offsetting receipts resulting from a change in appropriations generally will not be scored for budget enforcement purposes.[6] However, if an appropriation bill or another bill containing increased funding for program integrity is enacted, CBO will incorporate the revenue effects of that provision in its next projection of the budget deficit.

Discussion of Options

For each option in this chapter, the text provides background information, describes the possible policy change or changes, presents and explains the estimated effects on revenues, and discusses the advantages and disadvantages of increasing revenues through that approach. The chapter contains one option—the option to reduce tax preferences for employment-based health insurance—that is structured differently from the other options in this chapter. That option would entail a variety of changes to current law, and the amount of federal savings it generated and the consequences for stakeholders—beneficiaries, employers, health care providers, insurers, and states—would depend crucially on the details of those changes.

Although some advantages are specific to particular options, others apply more broadly to all options that would increase revenues in the same manner. For example, options that would increase the rates of existing taxes would generally be simpler to implement than most other changes to the tax code. And options that would broaden the tax base by standardizing the treatment of similar activities would generally increase economic efficiency because they would reduce the extent to which taxpayers' decisions were influenced by tax considerations.

Some general disadvantages also apply to all options that would raise revenues in the same manner. For example, options that would increase individual income tax rates or payroll tax rates would reduce the returns from working (that is, after-tax wages), which would make other activities more attractive relative to working. Similarly, options that would increase taxes on business income would reduce the returns from business investment and thus result in decreased investment.

6. Specifically, Guideline 3 and Guideline 14 address the budgetary effects of increased funding for administrative activities. For more on scorekeeping guidelines, see House Committee on the Budget, *A Compendium of Laws and Rules of the Congressional Budget Process* (August 2015), https://go.usa.gov/xUMVF (PDF, 4.6 MB).

Revenues—Option 1

Increase Individual Income Tax Rates

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Revenues												
Raise all tax rates on ordinary income by 1 percentage point	55.2	82.5	86.9	91.4	95.9	100.4	105.2	95.3	94.1	98.5	411.9	905.4
Raise ordinary income tax rates in the four highest brackets by 1 percentage point	13.5	20.6	22.0	23.3	24.7	26.0	27.5	22.3	20.9	22.2	104.1	222.9
Raise ordinary income tax rates in the two highest brackets by 1 percentage point	7.2	11.0	11.6	12.3	13.0	13.7	14.4	13.2	13.1	13.9	55.1	123.4

Source: Staff of the Joint Committee on Taxation.

This option would take effect in January 2019.

The estimates include the effects on outlays resulting from changes in refundable tax credits.

Background

The 2017 tax act included a number of temporary changes to the individual income tax. For calendar years 2018 through 2025, taxable ordinary income earned by most individuals is subject to the following seven statutory rates: 10 percent, 12 percent, 22 percent, 24 percent, 32 percent, 35 percent, and 37 percent. (Taxable ordinary income is all income subject to the individual income tax other than most long-term capital gains and dividends, minus allowable adjustments, exemptions, and deductions.) At the end of 2025, nearly all of the modifications to the individual income tax system made by the 2017 tax act are scheduled to expire, and the rates will revert to those under pre-2018 tax law. Beginning in 2026, the statutory rates will be 10 percent, 15 percent, 25 percent, 28 percent, 33 percent, 35 percent, and 39.6 percent.

As specified by the tax code, different statutory tax rates apply to different portions of people's taxable ordinary income. Tax brackets—the income ranges to which the different rates apply—vary depending on taxpayers' filing status (see the table on the next page). For 2018, for example, a person filing singly with taxable income of $40,000 would pay a tax rate of 10 percent on the first $9,525 of taxable income, 12 percent on the next $29,175, and 22 percent on the remaining $1,300. The starting points for those income ranges are adjusted, or indexed, each year to include the effects of inflation. The 2017 tax act permanently changed the measure used to adjust for inflation from the consumer price index for all urban consumers (CPI-U) to a "chained" version of the CPI-U, which grows more slowly. Like the tax rates, the tax brackets will revert to those in effect under pre-2018 law (adjusted for inflation using the chained CPI-U) in 2026.

Income in the form of dividends and long-term capital gains (those realized on assets held for more than a year) is taxed under a separate rate schedule, with a maximum statutory rate of 20 percent. Income from all capital gains and dividends, along with other investment income received by higher-income taxpayers, is also subject to an additional tax of 3.8 percent.

Taxpayers who are subject to the alternative minimum tax (AMT) face statutory rates of 26 percent and 28 percent. (Over certain income ranges, the effective rate on each additional dollar of income is higher than the statutory rate. The AMT works in parallel with the regular income tax; it is similarly structured but has fewer exemptions, deductions, credits, and rates. Households must calculate the amount they owe under both the AMT and the regular income tax and pay the larger of the two amounts.) However, the AMT does not affect most of the highest-income taxpayers because the highest

Starting Points for Tax Brackets (2018 dollars)		Statutory Tax Rate on Ordinary Taxable Income (Percent)
Single Filers	Joint Filers	2018
0	0	10
9,525	19,050	12
38,700	77,400	22
82,500	165,000	24
157,500	315,000	32
200,000	400,000	35
500,000	600,000	37

statutory rate under the AMT is only 28 percent, and many deductions allowed under the regular income tax are also allowed under the AMT. The 2017 tax act significantly limited the reach of the AMT for calendar years 2018 through 2025 by increasing the amount of income that is exempt from the AMT and by limiting the deduction for state and local taxes under the regular income tax.

In 2016, the IRS reported that $6.6 trillion in income was taxed at ordinary rates, generating $1.4 trillion in revenues from 114 million returns. Almost a quarter ($1.6 trillion) of that income was taxed at the four highest rates, and about a tenth ($750 billion) was taxed at the two highest rates. Taxable income is projected to grow at a rate similar to gross domestic product between now and 2028, despite a drop in 2026, when temporary provisions of the 2017 tax act that affect the amount of income that is taxable are scheduled to expire. Those temporary provisions, which boost taxable income on net, include the repeal of personal exemptions, the limitation of certain itemized deductions, and an increase in the standard deduction.

Options

This option consists of three alternative approaches for increasing statutory rates under the individual income tax. Those alternatives are as follows:

- Raise all tax rates on ordinary income (income subject to the regular rate schedule) by 1 percentage point.
- Raise all tax rates on ordinary income in the top four brackets (24 percent and over from 2018 through 2025, and 28 percent and over after 2025) by 1 percentage point.
- Raise all tax rates on ordinary income in the top two brackets (35 percent and over) by 1 percentage point.

Effects on the Budget

If implemented, the first alternative would increase revenues by a total of $905 billion from 2019 through 2028, according to estimates by the staff of the Joint Committee on Taxation (JCT). Under that alternative, for example, in 2019, the top rate of 37 percent would increase to 38 percent, and in 2026, the top rate of 39.6 percent would increase to 40.6 percent.

The second and third alternatives would target specific individual income tax rates. Because those alternatives would affect smaller groups of taxpayers, they would raise significantly less revenue. Boosting rates only on ordinary income in the top four brackets by 1 percentage point would raise revenues by $223 billion from 2019 through 2028, according to JCT—much less than the first alternative. Boosting rates only on ordinary income in the top two brackets by 1 percentage point would raise even less revenue—$123 billion over that period, in JCT's estimation. The AMT would not significantly limit the effect of that increase in regular tax rates because most people who are subject to the top rate in the regular income tax are not subject to the AMT.

The growth in revenues under all approaches would be boosted from 2018 through 2025 by the temporary changes included in the 2017 tax act. Most notably, because the 2017 tax act sharply limits the reach of the AMT from 2018 through 2025, the share of taxpayers affected by changes in ordinary income tax rates will increase during that period. Consequently, raising tax rates would raise more revenues before 2026 than after.

The estimates shown here incorporate the effects of two behavioral responses among taxpayers: shifting income from taxable forms to nontaxable or tax-deferred forms and not reporting some income. Those behaviors could include tax planning to reduce income subject to higher tax rates, tax avoidance transactions, and tax evasion. For example, an increase in the ordinary income tax rate might result in an increased use of deferred compensation or an attempt to characterize ordinary income as capital gains income. However, the estimates do not incorporate changes in how much people would work or save in response to higher tax rates. For example, an increase in tax rates would discourage people from working because it would lower after-tax wages and salaries.

The estimates for this option are uncertain for two key reasons. First, the estimates rely on the Congressional Budget Office's 10-year projections of the economy and of individual income under current law. Those projections are inherently uncertain, but they are particularly uncertain because they reflect recently enacted changes to the tax system by the 2017 tax act. Second, the estimates rely on estimates of how taxpayers would shift income and change reported income in response to the change in tax rates. Those estimates are based on observed responses to prior changes to tax rates, which might differ from the responses to tax-rate changes considered here.

Other Effects

As a way to boost revenues, an increase in tax rates would offer some administrative advantages over other types of tax increases because it would require only minor changes to the current tax system. Furthermore, by boosting rates only on income in higher tax brackets, the second and third alternatives would increase the progressivity of the tax system: Those alternatives would impose a larger burden on people with more financial resources than on people with fewer resources.

Rate increases also would have drawbacks, however. Higher tax rates would reduce people's incentive to work and save. In addition, higher tax rates would cause economic resources to be allocated less efficiently than they would be under current law. That is because taxpayers would shift income from taxable to nontaxable or tax-deferred forms (by substituting tax-exempt bonds for other investments, for example, or by opting for more tax-exempt fringe benefits instead of cash compensation) or increase spending on tax-deductible items relative to other items (such as by paying more toward their home mortgage interest and spending less on other things).

RELATED OPTION: Revenues, "Raise the Tax Rates on Long-Term Capital Gains and Qualified Dividends by 2 Percentage Points and Adjust Tax Brackets" (page 207)

RELATED CBO PUBLICATIONS: *The Distribution of Household Income and Federal Taxes, 2013* (June 2016), www.cbo.gov/publication/51361; *Average Federal Tax Rates in 2007* (June 2010), www.cbo.gov/publication/42870; *The Individual Alternative Minimum Tax* (January 2010), www.cbo.gov/publication/41810; *Analyzing the Economic and Budgetary Effects of a 10 Percent Cut in Income Tax Rates* (December 2005), www.cbo.gov/publication/17507

Revenues—Option 2

Raise the Tax Rates on Long-Term Capital Gains and Qualified Dividends by 2 Percentage Points and Adjust Tax Brackets

											Total	
Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2019–2023	2019–2028
Change in Revenues												
Raise rates on long-term capital gains and dividends by 2 percentage points	1.8	7.1	7.0	7.1	7.4	7.7	7.8	7.8	7.9	8.2	30.4	69.6
Also align top two brackets to match the third and sixth brackets applicable to ordinary income	1.9	7.8	7.8	8.0	8.3	8.6	8.7	8.6	7.9	8.3	33.8	75.9
Also align top two brackets to match the third and fifth brackets applicable to ordinary income	2.0	8.5	8.5	8.7	9.0	9.3	9.5	9.4	8.1	8.5	36.7	81.4

Source: Staff of the Joint Committee on Taxation.

This option would take effect in January 2019.

Background

When individuals sell an asset for more than the price at which they obtained it, they generally realize a capital gain that is subject to taxation. Most taxable capital gains are realized from the sale of corporate stocks, other financial assets, real estate, and unincorporated businesses. Under current law, long-term capital gains (those realized on assets held for more than a year) are usually taxed at lower rates than other sources of income, such as wages and interest. Since 2003, qualified dividends, which include most dividends, have been taxed at the same rates as long-term capital gains. Generally, qualified dividends are paid by domestic corporations or certain foreign corporations (including, for example, foreign corporations whose stock is traded in one of the major securities markets in the United States).

As specified by the tax code, different statutory tax rates apply to different portions of people's long-term capital gains and qualified dividends, depending on the tax brackets in which each portion lies. (Tax brackets are ranges of total taxable income and vary depending on taxpayers' filing status.) Tax brackets are adjusted, or indexed, each year to include the effects of inflation. The brackets for 2018 are shown in the table on the next page.

Consider, for example, a person filing singly in 2018 with taxable income of $40,000, of which $5,000 is long-term capital gains and $35,000 is ordinary income—that is, all income subject to the individual income tax from sources other than long-term capital gains and qualified dividends. Because no tax on long-term capital gains is due on taxable income up to $38,600, such a person would not pay any capital gains tax on the $35,000 in ordinary income and the first $3,600 of his or her gains, but the remaining $1,400 in gains would be taxed at the 15 percent rate.

The 2017 tax act lowered most tax rates on ordinary income and modified the tax brackets that apply to that income but did not change the rates or tax brackets applicable to long-term capital gains and qualified dividends. As a result, the starting points for the 15 percent and the 20 percent brackets shown in the table above do not match the starting points for any of the income brackets used to determine taxes on ordinary income. (See Revenues, Option 1, "Increase Individual Income Tax Rates" for a description of those brackets.) However, that is true only through the end of 2025, when the changes to the tax treatment of ordinary income expire. Beginning in 2026, the starting points for the 15 percent and 20 percent rates for capital gains and qualified dividends will match the starting points for tax brackets

Starting Points for Tax Brackets (2018 dollars)		Statutory Tax Rate on Long-Term Capital Gains and Qualified Dividends (Percent)
Single Filers	Joint Filers	2018
0	0	0
38,600	77,200	15
425,800	479,000	20

applicable to ordinary income, as under pre-2018 law. No tax will be payable on capital gains and dividends in the first two tax brackets applicable to ordinary income; the starting point for the 15 percent rate on gains and dividends will match the starting point for the third tax bracket applicable to ordinary income, and the starting point for the 20 percent rate will match the starting point for the top tax bracket applicable to ordinary income.

The marginal tax rate (that is, the percentage of an additional dollar of income that is paid in taxes) on long-term capital gains and qualified dividends may be higher than the statutory rate for some higher-income taxpayers as a result of other provisions of the tax code. First, certain long-term gains and qualified dividends are included in net investment income, which is subject to the Net Investment Income Tax of 3.8 percent. Second, the expiration of certain provisions of the 2017 tax act at the end of 2025 will have implications for the computation of marginal tax rates, even though those expiring provisions do not explicitly refer to capital gains and dividends. For example, a provision that reduced the total value of certain itemized deductions claimed by higher-income taxpayers was temporarily eliminated by the 2017 tax act. When that provision comes back into effect in 2026, it will increase the share of income that is taxed.

In 2015, according to the Internal Revenue Service, about 15 million taxpayers realized net positive capital gains totaling $725 billion. The Congressional Budget Office projects that in 2019, approximately 16 million taxpayers will earn net positive capital gains totaling $955 billion. CBO estimates that those taxpayers will owe about $180 billion in taxes on those gains. Under current law, CBO projects that income from capital gains and dividends will grow more slowly than other sources of income from 2019 through 2028. That slower growth reflects the expectation that income from capital gains and dividends will return to levels consistent with their historical average share of gross domestic product.

Option

This option consists of three alternatives. The first alternative would raise the statutory tax rates on long-term capital gains and dividends by 2 percentage points but would not change the income brackets used to compute those tax rates. Both the second and the third alternative would combine that 2 percentage-point increase with changes to the income brackets that apply to long-term capital gains and qualifying dividends.

The second alternative would set the starting point for the 17 percent rate to be the same as the starting point for the third tax bracket applicable to ordinary income (for 2018, $38,700 for single filers and $77,400 for married couples filing jointly). The starting point for the 22 percent rate would match the starting point for the second-highest tax bracket for ordinary income (for 2018, $200,000 for single filers and $400,000 for joint filers).

The third alternative would make the same change to the starting point for the 17 percent rate, but the 22 percent rate for long-term capital gains and dividends would share its starting point with the third-highest tax bracket for ordinary income (for 2018, $157,500 for single filers and $315,000 for joint filers). None of the three alternatives would change other provisions of the tax code that affect taxes on capital gains and dividends.

Effects on the Budget

The staff of the Joint Committee on Taxation (JCT) estimates that the first alternative would raise federal revenues by $70 billion from 2019 through 2028. The second and third alternatives would raise revenues by $76 billion and $81 billion, respectively, over the same period, according to JCT's estimates. Those estimates reflect people's responses to the higher rates: The tax base would decline as investors responded to higher tax rates by deferring realizations of accrued gains, and corporations—in response to investors' concerns—would issue smaller dividends.

The second alternative would raise more revenues than the first because some gains and dividends taxable at the rate of 17 percent would instead be taxed at the rate of 22 percent. The third alternative would raise more revenues still because it would shift additional gains and dividends from the 17 percent rate to the 22 percent rate.

JCT's estimates are based on a scenario in which there would be no delay between the active consideration of legislation increasing the tax rates and the effective date of that increase. As a result, taxpayers would have no opportunity to change their behavior in anticipation of the change in the tax rates. If, instead, there was a gap between the consideration and the implementation of the legislation, then some taxpayers would accelerate the sale of various assets to occur before the higher rates were put in place. If this option, with an effective date of January 1, 2019, was changed to include such a gap, then the realization of gains from those accelerated sales would occur in 2018. In that case, compared with the estimates for the option, revenues would be higher in 2019, when tax returns for 2018 would be filed, and would be lower in later years. The magnitude of that shift would vary with the length of time between active consideration and the effective date.

The estimates for the option are uncertain because both the underlying projections of capital gains and dividend income and the estimated responses to the change in the tax rates are uncertain. Projections of capital gains and dividends rely on CBO's projections of economic activity, investment, and the stock market, all of which are inherently uncertain. Those projections are particularly uncertain because they reflect recently enacted changes to the tax system by the 2017 tax act. The estimates are also influenced by predictions of how the increase in tax rates would induce taxpayers to defer the realizations of accrued gains and corporations to reduce their issuance of dividends. Those predictions are based on observed responses to prior changes in tax rates, which might differ from the responses to changes considered here.

Other Effects

One advantage of raising tax rates on long-term capital gains and dividends is that it would reduce taxpayers' incentive to characterize labor compensation and profits as capital gains. Such mischaracterization occurs under current law even though the tax code and regulations governing taxes contain numerous provisions that attempt to limit it. Reducing the incentive to mischaracterize compensation and profits as capital gains would reduce the resources devoted to circumventing the rules.

Another argument for this option is that it would make taxation more progressive. Most capital gains are realized by people with significant wealth and income. Therefore, raising tax rates on long-term capital gains would impose, on average, a larger burden on people with significant financial resources than on people with fewer resources. However, older people, particularly retirees, also realize a substantial amount of capital gains. Although such people have greater wealth and income than younger people, on average, their lifetime income is not necessarily greater.

The second and third alternatives of this option would offer the additional advantage of simplifying the tax code. Under either of those alternatives, the thresholds for the 15 percent and 20 percent tax rates on capital gains would be aligned with the starting points of the brackets for ordinary income immediately, rather than in 2026.

A disadvantage of the option is that the higher tax rates on long-term capital gains and dividends would influence investment decisions by increasing the tax burden on some equity-financed corporate investments. Profits from those investments are taxed twice—once under the corporate income tax and then a second time, either when the profits are paid out as dividends or when they are retained and taxed later as capital gains on the sale of corporate stock. The increased tax burden would discourage investment funded through new issues of corporate stock and would also exacerbate an existing bias that favors debt-financed investment by businesses over equity-financed investments. It would also encourage the formation and expansion of noncorporate businesses, whose profits are taxed only once.

Another argument against implementing the option is related to the fact that, because capital gains are taxed when an asset is sold, taxation encourages people to defer the sale of their capital assets, or, in some instances, to never sell some of the assets during their lifetime. In the former case, the taxation of capital gains is postponed; in the latter case, it is avoided altogether because, if the asset is bequeathed and then sold by the heir, the capital gain is the difference between the sale price and the fair-market value as of the date of the previous owner's death (which is typically much smaller than what it would otherwise be). By raising tax rates on long-term capital gains and dividends, this option could further encourage people to hold on to their investments only for tax reasons, which could reduce economic efficiency by preventing some of those assets from being put to more productive uses.

RELATED OPTIONS: Revenues, "Increase Individual Income Tax Rates" (page 204), "Change the Tax Treatment of Capital Gains From Sales of Inherited Assets" (page 219), "Expand the Base of the Net Investment Income Tax to Include the Income of Active Participants in S Corporations and Limited Partnerships" (page 223), "Tax Carried Interest as Ordinary Income" (page 225), "Increase the Corporate Income Tax Rate by 1 Percentage Point" (page 266), "Impose a Tax on Financial Transactions" (page 298), "Tax Gains From Derivatives as Ordinary Income on a Mark-to-Market Basis" (page 301)

RELATED CBO PUBLICATIONS: *The Distribution of Asset Holdings and Capital Gains* (August 2016), www.cbo.gov/publication/51831; *The Distribution of Household Income and Federal Taxes, 2013* (June 2016), www.cbo.gov/publication/51361; *Taxing Capital Income: Effective Marginal Tax Rates Under 2014 Law and Selected Policy Options* (December 2014), www.cbo.gov/publication/49817; *The Distribution of Major Tax Expenditures in the Individual Income Tax System* (May 2013), www.cbo.gov/publication/43768; Tim Dowd, Robert McClelland, and Athiphat Muthitacharoen, *New Evidence on the Tax Elasticity of Capital Gains*, Working Paper 2012-09 (June 2012), www.cbo.gov/publication/43334

Revenues—Option 3

Eliminate or Modify Head-of-Household Filing Status

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Revenues												
Eliminate head-of-household filing status	10.7	15.8	16.6	17.6	18.5	19.3	20.5	16.2	14.7	15.3	79.2	165.3
Limit head-of-household filing status to unmarried people with a qualifying child under 17	4.2	6.2	6.6	7.0	7.3	7.8	8.2	6.6	6.1	6.3	31.3	66.2

Source: Staff of the Joint Committee on Taxation.

This option would take effect in January 2019.

Background

On their tax returns, people must indicate their filing status, which has implications for the amount of taxes they owe. Those who are not married generally file as single or as a head of household. Married people choose between filing jointly with their spouse and filing separately. In 2016, the most common filing status was single (48 percent), followed by married filing jointly (36 percent), head of household (14 percent), and married filing separately (2 percent).

A head of household receives several tax preferences that are not available to other unmarried individuals. Like other taxpayers, heads of households reduce their taxable income by claiming the standard deduction—which is a flat dollar amount—or by itemizing and deducting certain expenses, such as state and local taxes and charitable contributions. However, heads of households are eligible for a larger standard deduction ($18,000 in 2018) than other unmarried individuals (whose standard deduction is $12,000 in 2018).

Moreover, lower tax rates apply to a greater share of income earned by heads of households than other unmarried individuals. As specified by the tax code, different statutory tax rates apply to different portions of people's taxable ordinary income. (Taxable ordinary income is all income subject to the individual income tax other than most long-term capital gains and dividends, minus allowable adjustments, exemptions, and deductions.) For heads of households, compared with other unmarried taxpayers, a greater portion of income is taxed at the two lowest rates. Through the end of 2025, those rates are 10 percent and 12 percent. After 2025, they will be 10 percent and 15 percent. Other statutory rates are scheduled to rise as well.

Heads of households also qualify for some tax preferences at higher levels of income than those who file as single. For example, the saver's credit—which reduces taxes on up to 50 percent of contributions to certain retirement savings plans for low- and moderate-income taxpayers—begins to phase out at higher levels for heads of households than for single filers. After 2025, the personal and dependent exemptions (which were temporarily repealed by the 2017 tax act but will become effective again in 2026) and certain itemized deductions will also start to phase out at higher levels of income for heads of households than for single filers.

To qualify as a head of household, unmarried people must pay most of the costs of maintaining the household in which they have resided with a qualifying person for over half the year. The rules for claiming a qualifying person vary. In addition to meeting certain residency and relationship criteria, a child claimed as a qualifying person must be under the age of 19, under 24 and a full-time student, or permanently and totally disabled. Other dependent relatives, who also must meet residency and relationship criteria, must receive more than half their support from the head of household and have gross income below a specified amount ($4,150 in 2018).

In 2016, about 22 million unmarried taxpayers claimed head-of-household filing status on their tax returns. Of those taxpayers, nearly 19 million lived with a qualifying child.

Option

This option consists of two alternatives. The first alternative would eliminate the head-of-household filing status. The second would retain that status but limit it to taxpayers who pay more than half the costs of maintaining the household in which they have resided with a qualifying child under the age of 17.

Effects on the Budget

According to the staff of the Joint Committee on Taxation (JCT), eliminating the head-of-household filing status completely would raise $165 billion in revenues from 2019 through 2028. Limiting the head-of-household filing status to taxpayers with qualifying children under the age of 17 would raise $66 billion over that period, in JCT's estimation.

After 2025, the revenue estimates are lower, on net, than they would be if the amount of the standard deduction was not scheduled to decline. The lower standard deduction will decrease the tax benefits of filing as a head of household, causing fewer people to choose that filing status and thus reducing the revenue gains from repealing it or restricting eligibility for it. To some extent, that effect is offset by an increase in individual income tax rates in 2026, which would result in greater revenue gains after 2025; however, because most heads of households are already in relatively low rate brackets, those increases in tax rates have a smaller effect on the revenue estimates than the reduction in the standard deduction. (In 2016, 90 percent of filers claiming head-of-household status were subject to the two lowest statutory tax rates or did not owe any taxes on their ordinary income, and 82 percent claimed the standard deduction.)

There are several sources of uncertainty in the estimates. Those uncertain factors include the growth rate of personal income, the demographic characteristics of the U.S. population, and tax compliance. For example, the revenues raised by either alternative would probably be higher than estimated if the personal income of heads of households grew at a faster rate than the Congressional Budget Office currently projects, causing those taxpayers to be subject to higher statutory tax rates than anticipated. Revenues would also be higher than estimated if the number of single taxpayers reporting qualifying people in their home differed from current projections: The revenue gains from the option—especially the first alternative—would be higher, for example, if the number of single parents grew at a faster pace than is currently anticipated. Similarly, the gains in revenues would be lower if fewer taxpayers claimed the status than projected.

Other Effects

One argument in favor of the option is that the head-of-household filing status imposes marriage penalties. Marriage penalties occur when the combined amount of taxes paid by two unmarried people increases when they marry—most often when both spouses earn similar amounts of income. Thus, marriage penalties favor unmarried couples over married couples. For head-of-household filers, the standard deduction and the maximum amount of taxable income subject to the two lowest income tax rates are equal to more than half of those amounts for married couples filing joint returns. By contrast, the amounts for single filers are set at half the amounts for joint filers. Requiring all unmarried people to file as single would cause unmarried couples to be treated more similarly to married couples. Neither alternative, however, would eliminate marriage penalties entirely. For example, suppose that two unmarried people claimed head-of-household filing status, and both were eligible for the earned income tax credit (EITC)—a tax preference available only to taxpayers with income below a certain threshold. If those two people married, their combined income would make them ineligible for the EITC. In that case, under either alternative, they would both have to file as single when they were not married but would still incur a marriage penalty (through the loss of the EITC) when they wed. However, the size of that penalty would be smaller than if they had been able to file as heads of households before their marriage.

A closely related argument in favor of the option is that marriage penalties may create incentives for people to either remain unmarried or marry and misreport their filing status as a head of household. Although most research shows that marriage penalties have only a slight effect on people's decision to marry, studies of EITC compliance find that misreporting of marital status is one of the larger sources of erroneous claims. Eliminating or restricting the head-of-household filing status would reduce married people's incentives to misreport their filing status.

An argument for eliminating the head-of-household filing status, as the first alternative would, is that the criteria for eligibility are complicated: The rules are difficult for taxpayers to understand and difficult for the Internal Revenue Service to verify. That complexity probably also contributes to taxpayers' misreporting of their filing status on tax returns. By limiting the status to parents with children under the age of 17, the second alternative would help simplify the tax system by using the same age restrictions that apply to children claimed for the child tax credit. However, other complicated criteria would still be retained—in particular, the rules having to do with household maintenance and support, which require taxpayers to maintain extensive records of their expenses throughout the year.

An argument against eliminating or restricting the head-of-household filing status is that unmarried people living with a child or other dependent in their own home require more income to cover subsistence expenses than other unmarried people. The filing status is a way to provide assistance to low- and moderate-income taxpayers with dependent children or other relatives, though those benefits extend to higher-income taxpayers as well. Although the second alternative would preserve many taxpayers' ability to claim the head-of-household filing status, it would eliminate assistance for other taxpayers with similar needs—those whose dependents are age 17 or older.

Another argument against the option (especially the first alternative) concerns its effects on custodial parents who have existing child-support arrangements with the noncustodial parents of their children. Filing as a head of household provides at least one child-related tax benefit to a custodial parent who agrees to allow the noncustodial parent to claim the child tax credit and, after 2025, the dependent exemption. Some divorced parents may have negotiated child-support agreements that were based on the splitting of those child-related tax benefits. In those circumstances, the loss of the head-of-household filing status would make the custodial parent's after-tax income lower than anticipated when the support agreement was signed. If either of the alternatives was implemented, some affected parents might agree to adjust the support payments to reflect the change in tax law, but others might not have the same opportunity to renegotiate the terms of the support agreement. To reduce the burden on divorced parents, policymakers could retain the head-of-household filing status (either temporarily or permanently) for taxpayers with child-support agreements in place prior to enactment of the option.

RELATED CBO PUBLICATION: *Effective Marginal Tax Rates for Low- and Moderate-Income Workers in 2016* (November 2015), www.cbo.gov/publication/50923

Revenues—Option 4

Curtail the Deduction for Charitable Giving

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Revenues												
Limit deductibility to charitable contributions in excess of 2 percent of adjusted gross income	2.7	13.6	14.3	15.0	15.6	16.1	16.6	19.6	30.3	31.7	61.2	175.6
Limit deductibility to cash contributions	2.6	13.1	13.5	14.0	14.5	14.9	15.4	16.6	20.2	20.9	57.7	145.7

Source: Staff of the Joint Committee on Taxation.

This option would take effect in January 2019.

Background

Current law allows taxpayers who itemize to deduct the value of their contributions to qualifying charitable organizations. (Taxpayers whose deductible expenses are less than the standard deduction can minimize their tax liability by claiming the standard deduction instead.) By lowering the after-tax cost of donating to charities, the deduction provides an added incentive to donate.

Two restrictions apply to the deduction. First, deductible charitable contributions may not exceed a certain percentage of a taxpayer's adjusted gross income (AGI). (AGI includes income from all sources not specifically excluded by the tax code, minus certain deductions.) The 2017 tax act temporarily increased that percentage from 50 percent to 60 percent for cash contributions through the end of 2025 but retained the 50 percent limit for other types of contributions. In 2026, that temporary provision will expire, and subsequent deductions of both cash and noncash charitable contributions may not exceed 50 percent of a taxpayer's AGI. The second restriction, which was temporarily lifted by the 2017 tax act but will resume in 2026, reduces the total value of certain itemized deductions—including the deduction for charitable donations—if the taxpayer's AGI exceeds certain thresholds ($315,100 for taxpayers filing singly and $378,100 for taxpayers filing jointly in 2026). Those thresholds will be adjusted, or indexed, to include the effects of inflation.

Deductions for charitable contributions accounted for 3 percent of AGI among those who itemized on their 2016 tax returns. Taxpayers claimed $234 billion in charitable contributions, $169 billion of which was in the form of cash, on 37 million tax returns. Because of temporary changes enacted in the 2017 tax act, including an increase in the standard deduction, the Congressional Budget Office projects that the number of taxpayers who itemize will fall by more than 60 percent beginning in 2018 and the total value of itemized deductions will fall by about 35 percent. Absent those legislated changes, the amount of itemized deductions was projected to grow slightly faster than income.

Option

This option consists of two alternatives that would curtail the deduction for charitable donations. Under the first alternative, only the amount of a taxpayer's contributions that exceeded 2 percent of his or her AGI would be deductible. Under the second alternative, the deduction would be eliminated for noncash contributions. Both alternatives would be limited to taxpayers who itemize, and higher-income taxpayers would still be subject to the additional reduction in the total value of certain deductions after 2025.

Effects on the Budget

The first alternative would increase revenues by $176 billion from 2019 through 2028, the staff of the Joint Committee on Taxation (JCT) estimates. The second alternative would increase revenues by $146 billion over that period, according to JCT. Under both alternatives, the increase in revenues would be larger after the expansion of the standard deduction and decrease in statutory individual income tax rates under the 2017 tax act expire. Following the decrease in the standard deduction, more taxpayers will itemize deductions instead of claiming the standard deduction; as a result, either alternative would affect more taxpayers. Higher tax rates will also increase the value of itemized deductions.

The estimates incorporate taxpayers' responses to the two alternatives. Taxpayers would alter their charitable donations because of the changes in those donations' deductibility. Under the first alternative, people who contribute less than 2 percent of their AGI would no longer have a tax incentive to donate, and many of them would reduce their contributions. That alternative would also encourage taxpayers who had planned to make gifts over several years to combine donations in a single tax year to qualify for the deduction. Under the second alternative, a taxpayer would have less incentive to make in-kind contributions, though taxpayers could sell the items they would have donated and donate the proceeds. (Sales of capital assets would, however, be subject to the capital gains tax.) Those responses make the estimated increase in revenues under either alternative smaller than it would be otherwise.

The estimates are uncertain for two key reasons. First, the estimates rely on CBO's 10-year projections of the economy and individual income under current law. Those projections are inherently uncertain, but they are particularly uncertain because they reflect recently enacted changes to the tax system by the 2017 tax act. Second, the effects of either alternative would depend on how taxpayers altered their charitable giving in response to the increased after-tax cost of giving. The estimates are based on how taxpayers have responded to prior changes in the after-tax cost of giving, which may differ from the response to the changes considered here.

Other Effects

An argument in favor of this option is that, even if they could not be deducted, a significant share of charitable donations would probably still be made. Therefore, allowing taxpayers to deduct charitable contributions is economically inefficient because it results in a large loss of federal revenues for a very small increase in charitable giving. People who make small donations are often less responsive to the tax incentive to make charitable contributions than people who make large contributions. For taxpayers who contribute more than 2 percent of their AGI to charity, the first alternative would maintain the current tax incentive to increase their donations but at much less cost to the federal government. And because most charitable contributions are made in cash, the second alternative would largely maintain the incentive to make donations.

Another advantage of this option is that it would simplify the tax code. Limiting the deduction to contributions in excess of 2 percent of AGI would match the treatment of unreimbursed employee expenses, such as job-related travel costs and union dues, that applied in the past and will apply again after 2025. The option would also increase tax compliance. Deductions of smaller contributions—those amounting to less than \$250—are more likely to be erroneous because they do not require the same degree of documentation as deductions of larger contributions. Moreover, the value of in-kind contributions may be overvalued by taxpayers and is difficult for the government to verify.

A disadvantage of this option is that it would cause charitable giving to decline, albeit by only a small amount, JCT and CBO estimate. Although people who make larger donations would still have an incentive to give under the first alternative, they would have slightly lower after-tax income because of the smaller deduction and therefore might reduce their contributions (although by a lesser percentage than people making smaller donations). Under the second alternative, taxpayers would have less incentive to donate goods and services. Taxpayers might consequently shift away from making those types of donations, even if charitable organizations would prefer in-kind donations instead of cash.

RELATED OPTION: Revenues, "Eliminate Itemized Deductions" (page 216)

RELATED CBO PUBLICATIONS: *Options for Changing the Tax Treatment of Charitable Giving* (May 2011), www.cbo.gov/publication/41452; *The Estate Tax and Charitable Giving* (July 2004), www.cbo.gov/publication/15823; *Effects of Allowing Nonitemizers to Deduct Charitable Contributions* (December 2002), www.cbo.gov/publication/14230

Revenues—Option 5

Eliminate Itemized Deductions

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Revenues	37.4	71.7	76.5	80.9	84.6	87.7	90.6	201.1	286.5	295.1	351.1	1,312.0

Source: Staff of the Joint Committee on Taxation.

This option would take effect in January 2019.

Background

When preparing their income tax returns, taxpayers may choose either to take the standard deduction—which is a flat dollar amount—or to itemize and deduct certain expenses, such as state and local taxes, mortgage interest, charitable contributions, and some medical expenses. Taxpayers benefit from itemizing when the value of their deductions exceeds the amount of the standard deduction. (For 2018, that amount ranged from $12,000 for a single filer to $24,000 for a married couple filing jointly.) The fact that those expenses are deductible reduces the cost of incurring them, so, in effect, the itemized deductions serve as subsidies for undertaking deductible activities. Most of the tax savings from itemized deductions constitute a "tax expenditure" by the federal government. (Tax expenditures resemble federal spending by providing financial assistance for specific activities, entities, or groups of people.)

The tax code imposes several limits on the amount of itemized deductions taxpayers can claim. For 2018, taxpayers cannot deduct more than $10,000 in state and local taxes, nor can they deduct home mortgage interest on loan amounts in excess of $750,000. For some types of expenses (such as medical expenses), only the amount that exceeds a certain percentage of the taxpayer's adjusted gross income (AGI) can be deducted. (AGI includes income from all sources not specifically excluded by the tax code, minus certain deductions.)

Many tax rules relating to deductions will change in 2026, when most changes to the individual income tax system made by the 2017 tax act expire. The size of the standard deduction will be reduced by roughly 50 percent, making itemization a better choice for many taxpayers. Several restrictions on deductions that were put in place by the act will no longer be in effect. The limit on state and local taxes will be removed, and the limitation on mortgage interest will revert to the higher amount ($1.1 million) set by pre-2018 tax law. Additionally, several itemized deductions (such as the deductions for unreimbursed employee expenses and tax preparation fees) that were temporarily eliminated by the 2017 act will be reinstated. And a provision that reduced the total value of certain itemized deductions by 3 percent of the amount by which a taxpayer's AGI exceeded a specified threshold will come back into effect. The net effect of those changes will be to increase the number of taxpayers who itemize and the amount of deductions they claim.

In 2015, almost 45 million taxpayers itemized their deductions, according to the Internal Revenue Service. Their itemized deductions totaled almost $1.3 trillion; by comparison, if those taxpayers had claimed the standard deduction, their taxable income would have been $800 billion higher. The change in taxes from itemized deductions depends on the taxpayer's marginal tax rate (the percentage of an additional dollar of income that is paid in taxes). For instance, $10,000 in deductions reduces tax liability by $1,500 for someone in the 15 percent tax bracket and by $2,800 for someone in the 28 percent tax bracket. As a result of temporary changes enacted by the 2017 tax act, the Congressional Budget Office projects that the number of itemizers will fall by more than 60 percent from 2017 to 2018 and the value of those itemized deductions will fall by about 35 percent. Absent those legislated changes, the amount of itemized deductions was projected to grow slightly faster than income.

Option

This option would eliminate all itemized deductions. As a result, all taxpayers who would otherwise itemize deductions would have to claim the standard deduction, which generally would be of less value to them. Taxpayers who would have claimed the standard deduction would be unaffected by the change.

Effects on the Budget

If implemented, this option would increase revenues by $1.312 billion from 2019 through 2028, the staff of the Joint Committee on Taxation estimates. That estimate incorporates expected reductions in spending by taxpayers on deductible activities. For example, taxpayers would be likely to decrease their charitable contributions and mortgage indebtedness under this option.

The increase in revenues from this option would rise sharply after most changes to the individual income tax system made by the 2017 tax act expire at the end of 2025, for two reasons. As noted above, the expiration of those changes will substantially increase the number of taxpayers who itemize and the amount of deductions they claim. Consequently, the increase in revenues from eliminating deductions would be much larger in later years. Second, marginal tax rates are generally higher after 2025 than under the 2017 tax act.

The estimated increase in revenues from this option is uncertain because both the underlying projection of itemized deductions and the estimated response to the change in the tax treatment of those deductions are uncertain. Projections of spending on deductible items are inherently uncertain because they are based on CBO's projections of the economy over the next decade. That uncertainty is compounded because the projections reflect the effects of the 2017 tax, which are also quite uncertain. Finally, the estimates rely on expectations of how taxpayers will change their behavior in response to changes in the tax treatment of itemized deductions. Those expectations are based on observed responses to past changes, which might differ from the response to tax changes considered here.

Other Effects

One argument for eliminating itemized deductions is that their availability encourages spending on deductible activities because of the tax benefits those activities provide; that tendency can lead to an inefficient allocation of economic resources. For example, the mortgage interest deduction distorts the housing market by prompting people to take out larger mortgages and buy more expensive houses, which pushes up home prices. People therefore invest less in other assets than they would if all investments were treated equally. And the deduction for state and local taxes encourages state and local governments to raise taxes and provide more services than they otherwise would (although some research indicates that total spending by state and local governments is not sensitive to that incentive). Eliminating itemized deductions would remove such incentives to spend more on certain goods or activities. Reducing taxpayers' engagement in some activities for which expenses can be deducted under current law—in particular, activities that primarily benefit those taxpayers—could improve the allocation of resources. However, reducing engagement in other activities for which expenses can be deducted—in particular, activities that offer widespread benefits—could worsen the allocation of resources. An oft-cited example of tax-deductible spending in the latter category is contributions to charitable organizations.

Another argument for eliminating itemized deductions is that taxpayers with higher income benefit more from those deductions because they have more expenses that can be deducted, which makes them more likely to itemize, and because the per-dollar tax benefit of those deductions depends on a taxpayer's marginal tax rate, which rises with income. CBO estimates that in calendar year 2013 (the most recent year for which estimates are available), more than 80 percent of the tax expenditures resulting from the three largest itemized deductions—for state and local taxes, mortgage interest, and charitable contributions—accrued to households with income in the highest quintile (or one-fifth) of the population (with 30 percent going to households in the top 1 percent of the population). In 2013, the tax benefit of those three deductions equaled 0.1 percent of after-tax income for households in the lowest income quintile, 0.4 percent for the middle quintile, 2.5 percent for the highest quintile, and 3.9 percent for the top percentile. Hence, reducing or eliminating them would increase the progressivity of the tax code—that is, it would increase average tax rates by more for higher-income taxpayers than for lower-income taxpayers.

A third argument for this option is that eliminating itemized deductions would simplify the tax code. Taxpayers would no longer have to keep records of their deductible expenses or enumerate them on the tax form.

An argument against this option is that some deductions are intended to yield a measure of taxable income that more accurately reflects a person's ability to pay taxes. For example, the deductions for payments of interest on money borrowed to purchase taxable investments, known as the investment interest expense deduction, allow people to subtract the costs they incurred to earn the income that is being taxed. And taxpayers with high medical expenses, casualty and theft losses, or state and local taxes have fewer resources than taxpayers with the same amount of income and smaller expenses or losses (all else being equal). Under this option, taxpayers would not be able to subtract those expenses from their taxable income.

Another argument against this option is that eliminating itemized deductions would disrupt many existing financial arrangements, especially in the housing market. Many homeowners have purchased homes under the presumption that they would be able to deduct much of the interest on their mortgages and their property taxes. Eliminating those deductions would make it more difficult for homeowners to meet their obligations. And such a change would also reduce the amount new homebuyers would be willing to pay, which would lower the prices of homes, on average. Lower housing prices would create further stress on the finances of existing owners.

RELATED OPTION: Revenues, "Curtail the Deduction for Charitable Giving" (page 214)

RELATED CBO PUBLICATIONS: *The Distribution of Major Tax Expenditures in the Individual Income Tax System* (May 2013), www.cbo.gov/publication/43768; Larry Ozanne, *Taxation of Owner-Occupied and Rental Housing,* Working Paper 2012-14 (November 2012), www.cbo.gov/publication/43691; *Options for Changing the Tax Treatment of Charitable Giving* (May 2011), www.cbo.gov/publication/41452; *The Deductibility of State and Local Taxes* (February 2008), www.cbo.gov/publication/41647

Revenues—Option 6

Change the Tax Treatment of Capital Gains From Sales of Inherited Assets

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Revenues	1.4	5.1	7.0	8.7	10.3	11.8	13.3	14.5	15.6	17.3	32.5	104.9

Source: Staff of the Joint Committee on Taxation.

This option would take effect in January 2019.

Background

When people sell an asset for more than the price at which they obtained it, they realize a net capital gain. That net gain is typically calculated as the sales price minus the asset's adjusted basis—generally the price at the time it was initially acquired plus the cost of any subsequent improvements, minus any deductions for depreciation. Net capital gains are included in taxable income in the year in which the sale occurs.

The tax treatment of capital gains resulting from the sale of inherited assets is different. To calculate the gains on inherited assets, taxpayers generally use the asset's fair-market value at the time of the owner's death—often referred to as stepped-up basis—instead of the adjusted basis derived from the asset's value when the decedent initially acquired it. As a result, when the heir sells the asset, capital gains taxes are assessed only on the change in the asset's value after the owner's death. Any appreciation in value that occurred while the decedent owned the asset is not included in taxable income and therefore is not subject to capital gains taxation. (However, the estate may be subject to the estate tax.)

Generally, capital gains resulting from the sale of inherited assets are taxed at the long-term capital gains rate that applies to assets held for more than one year, regardless of how long the heir has held the asset. There is not enough publicly available information to measure the share of long-term capital gains that results from sales of inherited assets. However, in total, 11 million taxpayers reported $635 billion in net long-term capital gains on their 2016 tax returns, and 8 million taxpayers reported $334 billion in net long-term capital losses. The Congressional Budget Office projects that income from capital gains will decline between 2019 and 2021 and then increase between 2022 and 2028.

Option

Under this option, taxpayers would generally adopt the adjusted basis of the decedent—known as carryover basis—on assets they inherit. As a result, the decedent's unrealized capital gain would be taxed at the heirs' tax rate when they eventually sell the assets. (For bequeathed assets that would be subject to both the estate tax and the capital gains tax, this option would adjust the basis of some of those assets to minimize the extent to which both taxes would apply to the appreciation in value.)

Effects on the Budget

If implemented, this option would increase revenues by $105 billion from 2019 through 2028, the staff of the Joint Committee on Taxation estimates. That estimate incorporates the response by some heirs to the change in the tax treatment of the sales of inherited assets. For an asset that rose in value before the owner's death, replacing stepped-up basis with carryover basis would increase the total amount of taxable capital gains realized when the asset is sold by the heir (unless the asset's value dropped after the owner's death by an amount equal to or greater than the appreciation that occurred while the owner was alive). As a result, heirs might choose to delay the sales of inherited assets (as they might for assets they purchased themselves) to defer capital gains taxes and thereby reduce their tax liability.

The estimate for this option is uncertain for two primary reasons. First, the estimate relies on CBO's economic projections, including those of the value of assets at their owners' death and of capital gains realizations, and such projections are inherently uncertain. Second, the estimate reflects taxpayers' anticipated responses to the change in the tax treatment of inherited assets, including delays in the sales of those assets, which are also uncertain.

Other Effects

One advantage of this option is that it would encourage people to shift investments to more productive uses during their lifetimes, rather than retaining those assets so that their heirs can benefit from the tax advantages offered by the stepped-up basis. The option, however, would not completely eliminate the incentive to delay the sale of assets solely for the tax advantages. An alternative approach would be to treat transfers of assets through bequest as a sale at the time of the transfer, making the capital gains taxable in that year. However, that method might force the owner to sell some portion of the assets at an inopportune time to pay the tax, which could be particularly problematic for nonliquid assets.

Another advantage is that using carryover basis to determine capital gains would decrease people's incentives to devote resources to tax planning rather than to more productive activities. For example, it would lessen the advantages of using certain tax shelters that allow people to borrow against their assets so that they can fund their current consumption and, after their death, the loan can be repaid with proceeds from the sale of their assets.

A disadvantage of this option is that heirs would find it difficult to determine the original value of the asset when the decedent had not adequately documented the basis of the asset. Additional provisions could be enacted to make it easier to value an asset, though they would probably reduce the amount of revenues raised. For example, heirs could have the choice of using carryover basis or setting the basis of an inherited asset at a specified percentage of the asset's value at the time they inherit it. Alternatively, to minimize the costs of recordkeeping, appreciated assets in estates that are valued below a certain threshold could be exempted from the carryover basis treatment (and the heirs could continue to use the stepped-up basis).

RELATED OPTION: Revenues, "Raise the Tax Rates on Long-Term Capital Gains and Qualified Dividends by 2 Percentage Points and Adjust Tax Brackets" (page 207)

RELATED CBO PUBLICATIONS: *The Distribution of Asset Holdings and Capital Gains* (August 2016), www.cbo.gov/publication/51831; *Federal Estate and Gift Taxes* (December 2009), www.cbo.gov/publication/41851

Revenues—Option 7

Eliminate the Tax Exemption for New Qualified Private Activity Bonds

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Revenues	0.1	0.6	1.3	2.0	2.7	3.5	4.3	5.1	5.8	6.5	6.7	31.8

Source: Staff of the Joint Committee on Taxation.

This option would take effect in January 2019.

Background

The U.S. tax code permits state and local governments to finance certain projects by issuing bonds whose interest payments are exempt from federal income taxes. As a result, those bonds pay lower rates of interest than they would if the interest payments were taxable. For the most part, proceeds from tax-exempt bonds are used to finance public projects, such as the construction of highways and schools. In some cases, however, state and local governments issue tax-exempt bonds to finance private-sector projects. Such bonds—known as qualified private activity bonds—may be used to fund private projects that provide at least some public benefits. Eligible projects include the construction or repair of infrastructure and certain activities, such as building schools and hospitals, undertaken by nonprofit organizations. (Those organizations are sometimes called 501(c)(3) entities after the section of the tax code that authorizes them.)

In 2015, a total of approximately $102 billion in qualified private activity bonds was issued by the 50 states, and slightly less than half (45 percent) of the proceeds were used for new investment. The remaining proceeds were used to issue new bonds that replaced existing bonds. At that time, Standard and Poor's reported that the yield on high-grade municipal bonds—a reasonable proxy for qualified private activity bonds—was 3.5 percent, well below the yield on corporate bonds of comparable creditworthiness (3.9 percent).

Option

This option would eliminate the tax exemption for new qualified private activity bonds beginning in 2019.

Effects on the Budget

The option would increase revenues by $32 billion from 2019 through 2028, according to estimates by the staff of the Joint Committee on Taxation. Federal revenues raised by this option would initially be small but would grow over time. That is because the interest income from any type of bond depends on the bond's outstanding principal amount and the rate of interest it pays. As the volume of debt rises, interest income increases as well (barring a drop in interest rates, which could lead existing debt to be refinanced at lower rates). And interest rates are projected to rise over the 2019–2028 period, which would cause the interest income that would become subject to tax under the option to grow even more rapidly. Hence, the effect on federal revenues is expected to increase.

Estimates of the federal revenues that would be raised through this option are uncertain. The estimates rely on the Congressional Budget Office's projections of interest rates over the next decade, which are inherently uncertain. The estimates also depend on several types of behavioral responses to this option—specifically, taxpayers' willingness to purchase bonds of state and local governments that no longer offer tax-free interest income, and those governments' willingness to incur such debt.

Other Effects

One argument for this option is that eliminating the tax exemption for new qualified private activity bonds would improve economic efficiency in some cases. For example, the owners of some of the infrastructure facilities that benefit from the tax exemption can capture—through fees and other charges—much of the value of the services they provide. Therefore, such investments probably would take place without a subsidy. In those instances, providing a tax exemption for the investments is inefficient because the exemption shifts resources from taxpayers to private investors without generating any additional public benefits. As another example, some private-sector projects funded through qualified private activity bonds might provide public benefits that are small relative to the existing tax exemption. In such cases, the subsidy could lead to investment in projects whose total value (counting private as well as public benefits) is less than their costs.

Another argument in favor of this option is that it would encourage nonprofit organizations to be more selective when choosing projects and, in general, to operate more efficiently. Nonprofit organizations do not pay federal income taxes on their investment income. Many nonprofit universities, hospitals, and other institutions use tax-exempt debt to finance projects that they could fund by selling their own assets. By holding on to those assets, they can earn an untaxed return that is greater than the interest they pay on their tax-exempt debt. Eliminating the tax exemption for the debt-financed projects of nonprofit organizations would put those projects on an even footing with projects financed through sales of assets. Further, the tightening of nonprofit organizations' financial constraints that would result from eliminating the tax exemption would encourage those organizations to operate more cost-effectively. As a consequence, however, nonprofits with few assets that they could liquidate to cover an increase in the cost of financing might be forced to curtail or even cease operations.

A disadvantage of this option is that some projects that would not be undertaken without a tax exemption might provide sufficient public benefits to warrant a subsidy. For example, although some privately funded roads specifically benefit the owners and operators (who can collect tolls from users), they also have broad social benefits (because they are part of a larger transportation network). State and local governments are increasingly looking to the private sector to undertake projects of that sort, and supporters of qualified private activity bonds argue that eliminating the tax exemption would remove an important source of funding for them.

However, if lawmakers wished to continue to support investments in infrastructure and other projects undertaken by the private sector, they could do so more efficiently by subsidizing those investments directly rather than through the tax system. Tax-exempt financing is inefficient for two reasons. First, the reduction in borrowing costs for issuers of tax-exempt bonds is less than the amount of federal revenues forgone through the tax exemption. (The interest rate on tax-exempt debt is determined by the market-clearing tax-exempt bond buyer, whose bond purchase establishes the price at which the amount of debt purchased by investors just matches the volume brought to market by tax-exempt borrowers. The market-clearing tax-exempt bond buyer is typically in a lower marginal income tax bracket—and hence willing to accept a lower tax-free rate of return—than the average tax-exempt bond buyer, who determines the amount of federal revenues forgone as a result of the tax exemption.) Second, the amount of the subsidy is determined by the tax code and does not vary among projects according to federal priorities. Lawmakers could, instead, provide a direct subsidy by guaranteeing loans or making loans available for certain private-sector projects at below-market rates of interest. By offering a direct subsidy rather than providing one through the tax system, the federal government could both select the types of projects receiving support and determine the amount of the subsidy.

RELATED CBO PUBLICATIONS: *Federal Support for Financing State and Local Transportation and Water Infrastructure* (October 2018), www.cbo.gov/publication/54549; testimony of Joseph Kile, Assistant Director for Microeconomic Studies, before the Senate Committee on Finance, *The Status of the Highway Trust Fund and Options for Paying for Highway Spending* (June 18, 2015), www.cbo.gov/publication/50297; testimony of Joseph Kile, Assistant Director for Microeconomic Studies, before the Panel on Public-Private Partnerships, House Committee on Transportation and Infrastructure, *Public-Private Partnerships for Highway Projects* (March 5, 2014), www.cbo.gov/publication/45157; *Federal Grants to State and Local Governments* (March 2013), www.cbo.gov/publication/43967; testimony of Frank Sammartino, Assistant Director for Tax Analysis, before the Senate Committee on Finance, *Federal Support for State and Local Governments Through the Tax Code* (April 25, 2012), www.cbo.gov/publication/43047; *Using Public-Private Partnerships to Carry Out Highway Projects* (January 2012), www.cbo.gov/publication/42685; *Tax Arbitrage by Colleges and Universities* (April 2010), www.cbo.gov/publication/21198; *Subsidizing Infrastructure Investment With Tax-Preferred Bonds,* A Joint CBO/JCT Study (October 2009), www.cbo.gov/publication/41359; *Nonprofit Hospitals and Tax Arbitrage* (attachment to a letter to the Honorable William "Bill" M. Thomas, December 6, 2006), www.cbo.gov/publication/18257

Revenues—Option 8

Expand the Base of the Net Investment Income Tax to Include the Income of Active Participants in S Corporations and Limited Partnerships

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Revenues	9.4	15.4	16.9	18.4	19.8	21.1	22.3	23.8	25.2	26.6	79.9	198.9

Source: Staff of the Joint Committee on Taxation.

This option would take effect in January 2019.

Background

In addition to the individual income tax, high-income taxpayers face two taxes on certain types of income above specified thresholds. The first—the Additional Medicare Tax—is a 0.9 percent tax on wages and self-employment income in excess of $250,000 for married taxpayers who file joint returns, $125,000 for married taxpayers who file separate returns, and $200,000 for single and head-of-household filers. The 2.9 percent Medicare Hospital Insurance tax also applies to all wages and self-employment income; as a result, high-income individuals are subject to a total Medicare-related tax on wages and self-employment income of 3.8 percent.

The second tax faced by high-income taxpayers—the Net Investment Income Tax (NIIT)—is a 3.8 percent tax on qualifying investment income, such as interest, dividends, capital gains, rents, royalties, and passive income from businesses not subject to the corporate income tax. Taxpayers are subject to the NIIT if their modified adjusted gross income (MAGI) exceeds certain thresholds: $250,000 for married taxpayers who file joint returns, $125,000 for married taxpayers who file separate returns, and $200,000 for everybody else. (For purposes of the NIIT, MAGI is the total of adjusted gross income and income earned abroad, which is typically excluded from taxable income.) For some taxpayers, qualifying investment income is greater than the amount by which MAGI exceeds the applicable threshold; in such cases, the tax applies only to the excess MAGI.

For virtually all labor and capital income that is derived from the activities of sole proprietorships, general partnerships, and C corporations (businesses that are subject to the corporate income tax) and that is above the income thresholds, the combination of Medicare-related taxes and the NIIT results in a uniform 3.8 percent marginal tax rate. (The marginal tax rate is the percentage of an additional dollar that is paid in taxes.) That income includes the net profits of sole proprietors and general partners, which are subject to Medicare-related taxes, and the interest, dividends, and capital gains paid by C corporations to their bondholders or shareholders, which are subject to the NIIT.

Income generated by other forms of businesses—specifically, limited partnerships (wherein certain partners are not liable for the debts of the business in excess of their initial investment) and S corporations (which are not subject to the corporate income tax because they meet certain criteria defined in subchapter S of the tax code)—may be excluded from both taxes under certain circumstances. If a high-income taxpayer is a passive investor in such a business (that is, if he or she does not actively participate in its operations), his or her share of the firm's net profits is subject to the NIIT. Most limited partners and some S corporation owners are passive investors and thus fall into that category. But if a high-income taxpayer is actively involved in running such a business, as some limited partners and most owners of S corporations are, his or her share of the firm's net profits is not subject to either the Additional Medicare Tax or the NIIT. (If the taxpayer receives a salary from the firm, however, that income would be subject to the Additional Medicare Tax.)

The Treasury Department has estimated that in 2013, 58 percent of S corporation income and 18 percent of partnership income was nonqualifying investment income. The Congressional Budget Office estimates that of the nonqualifying S corporation income, roughly three-quarters was received by S corporation owners who had incomes above the NIIT thresholds (approximately 600,000 taxpayers in 2012). Because the NIIT thresholds are not adjusted for inflation, the amount of nonqualifying investment income above those thresholds—an amount subject to neither the Additional Medicare Tax nor the NIIT—has grown faster than total individual income since 2012, and that pattern is projected to continue.

Option

This option would impose the NIIT on all income derived from business activity that is subject to the individual income tax but not to the Additional Medicare Tax, regardless of the business's organizational form or the taxpayer's level of participation in the business's operations.

Effects on the Budget

The staff of the Joint Committee on Taxation estimates that implementing this option would increase revenues by $199 billion between 2019 and 2028. That estimate is subject to uncertainty. For example, it relies on CBO's economic projections of the economy over the next decade under current law, which are uncertain. In addition, it relies on projections of businesses' organizational structures, which were made more uncertain by recent changes to tax law. Also, the estimate reflects certain anticipated behavioral changes by taxpayers, and accounting for those behavioral changes adds more uncertainty to the estimate.

Other Effects

An advantage of this option is that it would allow businesses with different organizational structures to be treated in a more uniform way for tax purposes. Entrepreneurs would therefore be more likely to select the form of organization that best suited their business rather than the form that minimized their tax liability. The option would also reduce the incentive for high-income owners of S corporations to reduce their Medicare-related taxes by accepting a salary that is less than the value of the labor they contribute. Finally, it would encourage people to base decisions about actively participating in running an S corporation or limited partnership on whether such participation would strengthen their business, not on whether it would avoid an additional tax liability.

A disadvantage of the option is that it would probably reduce total investment by the businesses that are affected by it. For example, if actively involved owners of an S corporation subject to the NIIT expanded their business, their after-tax return would be lower under this option than under current law. In some cases, it would probably be too low to justify the expansion. That argument implies that the NIIT should apply to fewer (or no) sources of income, not more.

An alternative approach would be to impose the Self-Employment Contributions Act tax (of which the Hospital Insurance tax is a part) and the Additional Medicare Tax on business income that is not subject to either the Additional Medicare Tax or the NIIT. In that scenario, the owners of all businesses except C corporations would be deemed self-employed and would be taxed in the same manner. If that approach was enacted, this option's goal of taxing business income more uniformly would be accomplished, and there would be no reason to subject that income to the NIIT. (See Revenues, Option 22, "Tax All Pass-Through Business Owners Under SECA and Impose a Material Participation Standard.")

RELATED OPTION: Revenues, "Tax All Pass-Through Business Owners Under SECA and Impose a Material Participation Standard" (page 261)

RELATED CBO PUBLICATION: *Taxing Businesses Through the Individual Income Tax* (December 2012), www.cbo.gov/publication/43750

Revenues—Option 9

Tax Carried Interest as Ordinary Income

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Revenues	1.0	1.4	1.5	1.4	1.4	1.4	1.4	1.4	1.5	1.5	6.7	14.0

Source: Staff of the Joint Committee on Taxation.

This option would take effect in January 2019.

Background

Investment funds—such as private equity, real estate, and hedge funds—are often organized as partnerships. Those partnerships typically have two types of partners: general partners and limited partners. General partners determine the partnership's investment strategy, seek contributions of capital and loans to acquire assets, manage those assets, and eventually sell them. Limited partners contribute capital to the partnership but do not participate in its management. General partners can invest their own capital in the partnership as well, but such investments usually represent a small share (between 1 percent and 5 percent) of the total capital invested.

General partners typically receive two types of compensation for managing a fund: a management fee tied to some percentage of the fund's assets and "carried interest" tied to some percentage of the fund's profits. For example, general partners may receive a management fee equal to 2 percent of the invested assets plus a 20 percent share of the profits as carried interest if returns from the fund exceed a threshold. The fee, less the fund's expenses, is subject to ordinary income tax and the self-employment tax. By contrast, carried interest associated with gains from the sale of an asset held for more than three years is usually taxed at the rate that applies to long-term capital gains, which is typically much lower than that for ordinary income, and that carried interest is also not subject to the self-employment tax.

Income from carried interest is not separately reported by taxpayers and is therefore not directly measured. Income from investment funds and from carried interest generally grows more rapidly than the economy during booms and more slowly than the economy during recessions. (Additional background information and data related to carried interest can be found in Joint Committee on Taxation 2007.)

Option

This option would treat carried interest that general partners receive for performing investment management services as labor income, taxable at ordinary income tax rates and subject to the self-employment tax. Income those partners receive as a return on their own capital contribution would not be affected.

Effects on the Budget

If implemented, the change would produce an estimated $14 billion in revenues from 2019 through 2028, according to the staff of the Joint Committee on Taxation. That estimate takes into account the anticipated responses of general partners, who would probably restructure their compensation to lower their taxes. For example, to make an investment requiring $100 million, the general partner could secure a $20 million interest-free nonrecourse loan (a loan secured by a pledge of collateral but for which the borrower is not personally liable) from the limited partners to invest in the fund, and the limited partners could separately invest $80 million directly in the fund. If the assets of the investment fund were sold for a profit after three or more years, the gains realized by the general partner on the $20 million loan would equal 20 percent of the fund's total gains. The general partner would then claim that income as a capital gain subject to the same lower tax rates as carried interest under current law. However, even if compensation agreements between limited partners and general partners were restructured in that manner, federal receipts would still rise, although by less than they would if restructuring was not feasible. That is because, under current law, the general partner is required to treat the forgone interest on the nonrecourse loan as income and pay tax on it at the higher ordinary rate. The revenue estimates shown above reflect the likelihood and the consequences of such restructuring.

The estimate for this option is uncertain because of uncertainty surrounding estimates of income from carried interest. The estimate also depends on the Congressional Budget Office's economic projections, which are inherently uncertain. General partners typically earn carried interest only when their fund generates a return in excess of a threshold, and their likelihood of earning that return depends on economic conditions. Additionally, there is uncertainty about the degree to which general partners would be able to employ strategies such as the use of nonrecourse loans to avoid recognizing carried interest as ordinary income.

Other Effects

An argument in favor of this option is that carried interest could be considered performance-based compensation for management services. By taxing carried interest as ordinary income, this option would make the treatment of carried interest consistent with that of many other forms of performance-based compensation, such as bonuses, royalties, and most stock options. In particular, the option would equalize the tax treatment of income that general partners received for performing investment management services and the income earned by corporate executives who do similar work. (For example, many corporate executives direct investment, arrange financing, purchase other companies, or spin off components of their enterprises, yet profits from those investment activities are not counted as individual capital gains for those executives and are therefore not taxed at preferential rates.)

An argument against this option is that a portion of the profits generated by the sale of an investment fund might be attributable to intangible assets, which are independent of the services provided by the general partner. By taxing the full carried interest—even the portion attributable to intangible assets—as labor income instead of capital gains, this option would treat general partners of investment funds differently from general partners in other industries. An alternative approach would be to allow a fraction of carried interest to continue to be treated as capital gains.

Another argument against the option is that, by reducing the expected after-tax compensation of general partners, it would reduce their incentive to start investment funds. That reduced incentive, in turn, could diminish innovation and possibly make private equity markets—and consequently businesses—less efficient. It is not clear, however, to what extent the current treatment of carried interest promotes innovation and market efficiency.

RELATED OPTIONS: Revenues, "Increase Individual Income Tax Rates" (page 204), "Raise the Tax Rates on Long-Term Capital Gains and Qualified Dividends by 2 Percentage Points and Adjust Tax Brackets" (page 207)

RELATED CBO PUBLICATION: Testimony of Peter R. Orszag, Director, before the House Committee on Ways and Means, *The Taxation of Carried Interest* (September 6, 2007), www.cbo.gov/publication/19113

WORK CITED: Joint Committee on Taxation, *Present Law and Analysis Relating to Tax Treatment of Partnership Carried Interests,* JCX-41-07 (July 10, 2007), https://tinyurl.com/yawwn7kv (PDF, 494 KB)

Revenues—Option 10

Include Disability Payments From the Department of Veterans Affairs in Taxable Income

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Revenues												
Include all disability payments in taxable income	0.7	7.6	8.2	8.8	9.9	10.0	9.8	10.8	13.1	13.7	35.2	92.7
Include disability payments in taxable income only for veterans with a disability rating of 20 percent or less	*	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.6	1.6	4.4

Source: Staff of the Joint Committee on Taxation.

This option would take effect in January 2019.

* = between zero and $50 million.

Background

The goal of the Department of Veterans Affairs (VA) disability system is to compensate veterans for earnings lost as a result of service-connected disabilities. By law, that compensation is meant to equal the average reduction in earnings experienced by civilian workers with similar medical conditions or injuries.

Compensable service-connected disabilities are medical problems incurred or aggravated during active duty, although not necessarily during the performance of military duties. Applicable conditions range widely in severity and type, from scars and hypertension to the loss of one or more limbs. The amount of a veteran's base payment is linked to his or her composite disability rating, which can account for multiple disabilities and is expressed from zero to 100 percent in increments of 10 percentage points. Lower ratings generally reflect that veterans' disabilities are less severe; in 2017, about one in three recipients of disability compensation were rated as either 10 percent or 20 percent disabled. Beneficiaries do not have to demonstrate that their conditions have reduced their earnings or interfere with their daily functioning.

Disability compensation is not means-tested (that is, restricted to those with income below a certain amount), and payments are exempt from federal and state income taxes. Veterans who have a job are eligible for benefits, and most working-age veterans who receive disability benefits are employed. Payments are in the form of monthly annuities and typically continue until the beneficiary's death. Because disability benefits are based on VA's calculation of average earnings lost as a result of specific conditions, payments do not reflect disparities in earnings that might result from differences in veterans' education, training, occupation, or motivation to work.

Although the number of veterans in the total population is declining, the number receiving VA disability payments has risen each year. Both the share of veterans receiving disability payments and the average amount of those payments have increased. Today, about 20 percent of veterans receive disability compensation; in 2000, only 9 percent of all veterans did. In 2017, VA paid about 4.6 million veterans an average of $15,400 each in disability benefits. Of those veterans, 1.3 million had a disability rating of 20 percent or less; their average payment was $2,200.

Option

This option consists of two alternative approaches to taxing VA disability benefits under the individual income tax. The first alternative would include all such disability payments in taxable income. The second alternative would include disability payments in taxable income only for veterans with a disability rating of 20 percent or less.

Effects on the Budget

The staff of the Joint Committee on Taxation (JCT) estimates that, if implemented, the first alternative would increase federal revenues by $93 billion from 2019 through 2028. The second alternative would raise federal revenues by a smaller amount—$4 billion—over that period, according to JCT's estimates.

The total benefits included in taxable income would be much larger under the first alternative than under the second alternative. As a result, the second alternative would raise federal revenues by a much smaller amount. Estimates of both alternatives reflect the scheduled increase in individual income tax rates that begins in 2026.

The estimates are uncertain for two main reasons. First, they rely on the Congressional Budget Office's projections of the veteran population and disability compensation, which are inherently uncertain. Second, they rely on estimates of how individuals would respond to the change in tax policy. Those estimates are based on observed responses to prior changes in policy, which might differ from the response to this option.

Other Effects

An argument in favor of the option is that including disability payments in taxable income would increase the equity of the tax system. Taxing VA disability payments would make tax liabilities similar among taxpayers with comparable amounts of combined income (from disability payments, earnings, and other sources). Eliminating income exclusions in the tax system moves the system toward one in which people in similar financial and family circumstances face similar tax rates. Further, military disability retirement pay—a type of disability compensation received by those who retired from service because of a disability—is included in taxable income unless it is related to combat injuries. Including VA disability benefits in taxable income would make the treatment of the two types of benefits more similar.

An argument against this option is that VA disability payments are connected to military service, which is unlike civilian employment because it confers distinctive benefits to society and imposes special risks on service members. By that logic, enhancements to pay and benefits for service members—including the current exclusion of disability compensation from taxation—could be seen as a way to recognize the hardships of military service. However, veterans are entitled to disability payments even for medical conditions unrelated to military duties, as long as those conditions were incurred while the individuals were serving on active duty. By contrast, disability benefits received by civilian workers for non-work-related injuries are taxable if the employer paid the premiums.

RELATED OPTIONS: Mandatory Spending, "Narrow Eligibility for Veterans' Disability Compensation by Excluding Certain Disabilities Unrelated to Military Duties" (page 107); Revenues, "Include Employer-Paid Premiums for Income Replacement Insurance in Employees' Taxable Income" (page 229)

RELATED CBO PUBLICATION: *Veterans' Disability Compensation: Trends and Policy Options* (August 2014), www.cbo.gov/publication/45615

Revenues—Option 11

Include Employer-Paid Premiums for Income Replacement Insurance in Employees' Taxable Income

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Revenues	19.2	34.9	34.4	33.8	33.1	34.1	35.2	36.4	39.8	40.9	155.4	341.9

Source: Staff of the Joint Committee on Taxation.

This option would take effect in January 2019.

To the extent that the option would affect Social Security payroll taxes, a portion of the revenues would be off-budget. In addition, the option would increase outlays for Social Security by a small amount. The estimates do not include those effects on outlays.

Background

Benefits that replace income for the unemployed, injured, or disabled are currently subject to different tax treatments. Whereas unemployment benefits are fully taxable, benefits paid through workers' compensation programs (for work-related injuries or illnesses) are tax-exempt. (The taxes and premiums that employers pay for those types of benefits are deductible and are not included in employees' taxable income.) Disability benefits (for non-work-related injuries) may be taxable, depending on who paid the premiums for the disability insurance. If the employer paid the premiums, the benefits are taxable (although the recipient's tax liability can be partly offset by special income tax credits for the elderly or disabled). If the employee paid the premiums out of after-tax income, the benefits are generally not taxable.

One broadly available form of income replacement insurance is unemployment insurance. In 2017, the taxes that employers paid under the Federal Unemployment Tax Act and to various state unemployment programs totaled $46 billion. However, there is no comprehensive information on the premiums and taxes for or the value of programs that provide insurance against lost wages and salaries because those programs are structured in various ways. The overall value of that insurance is expected to be a small fraction of the amount of covered wages and salaries. In the Congressional Budget Office's projections, total wages and salaries grow by an average of 4 percent each year over the next 10 years, from $8 trillion in 2017 to $13 trillion in 2028.

Option

This option would gradually eliminate any tax on income replacement benefits over a five-year period but would immediately include in employees' taxable income the value of several taxes, insurance premiums, and other contributions paid by employers. Specifically, all of the following would be subject to the individual income tax and the payroll taxes for Social Security and Medicare: the taxes that employers pay under the Federal Unemployment Tax Act and to various state unemployment programs, 50 percent of the premiums that employers pay for workers' compensation (excluding the portion covering medical expenses), and the portion of insurance premiums or contributions to pension plans that employers pay to fund disability benefits.

Effects on the Budget

This option would increase revenues by $342 billion over the 2019–2028 period, the staff of the Joint Committee on Taxation estimates. The revenue effect falls between 2020 and 2023 as the tax on income replacement benefits is phased out. Over the long term, gains in revenues would result almost entirely from the inclusion of workers' compensation premiums in employees' taxable income. The slightly higher estimated revenues in 2027 and 2028 reflect, in part, the expiration of lower individual income tax rates.

This option would increase employees' taxable earnings and therefore the wage base from which Social Security benefits are calculated. That change, in turn, would increase federal spending for Social Security. Between 2019 and 2028, that increase would be slight. However, it would grow after 2028 as more people whose premiums were taxed retired and began collecting Social

Security benefits. The estimates shown above do not include the effects of such increased federal spending on outlays.

The estimate for this option is uncertain because there is uncertainty about the total size of the programs that provide income replacement benefits. The estimate also depends on CBO's projections of wages and salaries under current law. Those projections are inherently uncertain. The estimate further relies on projections of individuals' choices about accepting available work and responses to the change in the taxation of income replacement insurance, which are likewise uncertain.

Other Effects

An advantage of this option is that it would eliminate many of the disparities that currently exist in the tax treatment of different kinds of income replacement insurance. For example, people who are unable to work because of an injury would not be taxed differently on the basis of whether their injury was related to their most recent job or a previous one. Another advantage of the option is that it would spread the tax burden among all workers covered by such insurance rather than placing the burden solely on beneficiaries, as is presently the case with unemployment insurance and employer-paid disability insurance. The effect on covered workers would be relatively small: Their after-tax earnings would fall, on average, by less than one-half of one percent. However, the effect would be greatest among low-wage workers, some of whom might work fewer hours or be less likely to seek work as a result.

A disadvantage of the option is that it would discourage unemployed individuals from accepting available work because, if unemployment benefits were no longer taxable, their disposable income would be higher while they were unemployed than is the case under current law. Research shows that higher after-tax unemployment benefits tend to lengthen periods of unemployment, particularly among those who have no savings and cannot obtain loans after they lose their job. (However, the increase in disposable income would also allow unemployed people more time to find a job that best matched their skill set.)

Another argument against the option is that it would not eliminate all disparities in how income replacement benefits are treated. For example, the income-replacement portion of adjudicated awards and out-of-court settlements for injuries not related to work and not covered by insurance would remain entirely exempt from taxation. Likewise, the extended unemployment benefits that the federal government sometimes provides during economic downturns would never be taxed, because no amount corresponding to an employer's contribution would ever have been included in the recipients' taxable income.

RELATED OPTIONS: Revenues, "Include Disability Payments From the Department of Veterans Affairs in Taxable Income" (page 227), "Increase Taxes That Finance the Federal Share of the Unemployment Insurance System" (page 264)

RELATED CBO PUBLICATION: *Unemployment Insurance in the Wake of the Recent Recession* (November 2012), www.cbo.gov/publication/43734

Revenues—Option 12

Reduce Tax Subsidies for Employment-Based Health Insurance

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Replace the Excise Tax With a Limit on the Income and Payroll Tax Exclusions for Employment-Based Health Insurance Set at the 50th Percentile of Premiums												
Change in Mandatory Outlays	0	0	0	1	3	4	5	6	6	7	4	32
Change in Revenues[a]	0	0	0	51	76	84	93	111	122	132	127	670
Decrease (-) in the Deficit	0	0	0	-50	-73	-81	-88	-104	-116	-125	-123	-638
Replace the Excise Tax With a Limit on the Income and Payroll Tax Exclusions for Employment-Based Health Insurance Set at the 75th Percentile of Premiums												
Change in Mandatory Outlays	0	0	0	1	1	1	2	3	3	3	2	15
Change in Revenues[a]	0	0	0	19	28	32	37	46	51	57	47	270
Decrease (-) in the Deficit	0	0	0	-19	-26	-31	-35	-43	-48	-54	-45	-256
Replace the Excise Tax With a Limit on Only the Income Tax Exclusion for Employment-Based Health Insurance Set at the 50th Percentile of Premiums												
Change in Mandatory Outlays	0	0	0	1	1	1	2	3	2	3	2	14
Change in Revenues[a]	0	0	0	35	50	56	62	76	83	90	86	452
Decrease (-) in the Deficit	0	0	0	-34	-49	-55	-60	-73	-81	-87	-83	-438

Sources: Staff of the Joint Committee on Taxation; Congressional Budget Office.

This option would take effect in January 2022.

a. Estimates include the effects on Social Security payroll tax receipts, which are classified as off-budget.

Overview of the Issue

The federal tax system provides preferential treatment for health insurance that people buy through an employer. That treatment applies to payments and contributions made both by employers and by employees. Unlike cash compensation, employers' payments for their employees' health insurance premiums are excluded from income and payroll taxes. In most cases, the amount that workers pay for their own share of health insurance premiums is also excluded from income and payroll taxes. Contributions made to certain accounts by employers to pay for employees' health care costs are excluded from income and payroll taxes as well. In all, that favorable tax treatment cost the federal government about $300 billion in forgone revenues in 2018, and that cost will probably rise over time as the price of health care increases. Although a new excise tax will go into effect in 2022, somewhat reducing the tax exclusions' consequences, those exclusions will continue to have significant implications for the federal budget.

Further reducing the tax exclusion for employment-based health insurance—as outlined in this option—would raise federal revenues. However, it also would reduce the number of people with employment-based coverage, boost enrollment in the health insurance marketplaces established under the Affordable Care Act, and increase the number of people without insurance. Total spending on health care would be lower than it would have been otherwise because fewer people would have insurance.

Current Law. The federal tax system subsidizes employment-based health insurance both by excluding employers' premium payments from income and payroll taxes and by allowing employees at firms that offer "cafeteria plans"—which allow workers to choose between a taxable benefit, such as cash wages, and nontaxable fringe benefits—to pay their share of premiums without that share's being subject to income or payroll taxes. The tax system also subsidizes health care costs not covered by insurance by excluding from income and payroll taxes the contributions made to various accounts that employees can use to cover those costs. Examples include employees' contributions to flexible spending arrangements (FSAs), employers' contributions to health reimbursement arrangements (HRAs), and employers' and employees' contributions to health savings accounts (HSAs). On average, people with higher income (and thus higher tax rates) or more expensive health insurance plans receive larger subsidies.

The favorable tax treatment of employment-based health benefits is the federal government's largest single tax expenditure. (Tax expenditures are exclusions, deductions, preferential rates, deferrals, and credits in the tax system that resemble federal spending in that they provide financial assistance for specific activities, entities, or groups of people.) Including effects on both income taxes and payroll taxes, those exclusions are projected to equal 1.5 percent of gross domestic product in 2018.

The excise tax that is scheduled to start in 2022 will effectively reduce the tax subsidy for employment-based health insurance. It will be levied on employment-based health benefits—consisting of employers' and employees' currently taxable and tax-excluded contributions for health insurance premiums and contributions to FSAs, HRAs, or HSAs—whose value exceeds certain thresholds. The excise tax will thus curtail the current open-ended tax exclusions. Even when the excise tax is in effect, however, employment-based health insurance will still receive a significant tax subsidy, and that subsidy will still be larger for people with higher income.

The excise tax will equal 40 percent of the difference between the total value of tax-excluded contributions and the applicable threshold. The Congressional Budget Office and the staff of the Joint Committee on Taxation (JCT) project that some employers will change their offers of coverage to reduce their exposure to the tax. In the agencies' projections, which do not account for such changes, roughly 15 percent of people enrolled in an employment-based plan in 2022 have some taxable and tax-excluded contributions in excess of the thresholds. That share is projected to increase to roughly 25 percent by 2028. (However, CBO and JCT expect people's responses to the tax to reduce that share, as discussed below.)

In 2022, the thresholds are projected to be $11,200 for individual coverage and $30,100 for family coverage.* (Those thresholds will be slightly higher for retirees who are 55 to 64 years old and for workers in certain high-risk professions. Further adjustments will be made for age, sex, and other characteristics of an employer's workforce.) After 2022, the thresholds will be indexed to the growth of the chained consumer price index for all urban consumers (chained CPI-U), which measures inflation in a way that accounts for individuals' changing consumption as prices increase. Because health insurance premiums will probably continue to rise faster than inflation, the excise tax will most likely affect a growing number of people over time. As a result, revenues stemming from the tax are projected to rise from $8 billion in 2022 to $39 billion in 2028.

Effects of Current Law. The tax exclusions currently in effect encourage the use of employment-based insurance, making it likelier that healthy people will buy health insurance (which lowers the average cost of insurance and helps to limit a phenomenon known as adverse selection). At the same time, the subsidy for health insurance provided by the exclusion is likely to increase total spending on health care. Another effect is that higher-income workers receive larger subsidies than lower-income workers do.

Encouraging the Use of Employment-Based Insurance. By subsidizing employment-based health insurance, the tax exclusions encourage firms to offer it and workers to enroll in it. Such insurance would be attractive to employers and employees in any case because it pools risks within groups of workers and their families and reduces the administrative costs of marketing insurance policies and collecting premiums. But the tax exclusions give employment-based insurance additional appeal. In 2017, according to the Medical Expenditure Panel Survey, 85 percent of private-sector employees worked for an employer that offered health insurance coverage; 77 percent of those employees were eligible for that coverage (the rest were ineligible for various reasons, such as working only part time); and 73 percent of the eligible workers chose to enroll in the plan offered by their employer.

Reducing Adverse Selection. A major problem that can occur in insurance markets is adverse selection, in which less healthy people are likelier to buy health insurance (or to buy certain types of plans) than healthier people are. Adverse selection occurs because insurance provides more benefit to enrollees with above-average costs—and

[* Values corrected on June 28, 2019]

is therefore more attractive to them—and less benefit to people with below-average costs. As premiums increase to cover the less healthy enrollees, the healthier ones may stop buying insurance, which results in another price increase—a spiral that may continue until the market is very small or nonexistent. Adverse selection also can reduce markets' efficiency by making it harder for insurers to predict costs for a group of potential enrollees.

Employment-based health insurance and the tax subsidies that encourage its use limit adverse selection in several ways. Employers generally select a workforce on the basis of criteria other than health care costs, so most workforces consist of a mix of healthier and less healthy people. Pooling risks across such a workforce reduces the variability of average health care spending for the group. Also, once employers offer health insurance, they tend to pay a large share of premiums in order to encourage employees to enroll—making the employees' share small in relation to their expected health care costs, encouraging them to buy insurance, and reducing adverse selection. The tax exclusions also limit adverse selection by reducing the after-subsidy price of insurance, encouraging even the healthy to enroll.

Increasing Total Health Care Spending. For workers and their families who enroll in such coverage, the tax subsidies for employment-based health insurance encourage more spending on health care than would be the case without subsidies. That occurs because the subsidies encourage workers to favor health care over other goods and services that they could purchase and also because the tax exclusions encourage employers to compensate their workers with a combination of health insurance coverage and cash wages rather than entirely with cash wages (which the employees would be unlikely to spend on health care to the same extent). Furthermore, the tax exclusions are currently open-ended (and will be until the excise tax takes effect in 2022). That is, their value increases with an insurance plan's premium, encouraging people to enroll in plans that cover a greater number of services, cover more expensive services, or require enrollees to pay a smaller share of costs. As a result, people use more health care—and health care spending is higher—than would otherwise be the case.

That effect may have been lessened somewhat in recent years because employment-based insurance plans that require workers to pay a higher share of health costs have become more common. For example, 29 percent of people with employment-based coverage were enrolled in a high-deductible health plan in 2017, up from 8 percent in 2008.

Subsidizing Workers With Different Income Differently. Another concern about the tax exclusions is that they subsidize workers with different amounts of income differently. The value of the exclusions is generally larger for workers with higher income, partly because those workers face higher income tax rates (although they may face lower rates of payroll taxation) and partly because they are more likely to work for an employer that offers coverage. Because larger subsidies go to higher-income workers, who are more likely to buy insurance even without the tax exclusions, and smaller subsidies go to lower-income workers, who are less likely to buy coverage, the exclusions are an inefficient means of increasing the number of people who have health insurance, and they are regressive in the sense that they provide larger benefits to people with higher income.

The forthcoming excise tax will somewhat reduce the regressive nature of the tax exclusions. The excise tax will be levied on insurers and on employers who offer their own insurance plans, but economic theory and empirical evidence suggest that the cost will be passed on to workers. CBO and JCT expect that, in many cases, the tax burden will shift when employers and workers decide to avoid paying the tax by switching to health plans with premiums below the thresholds. In those cases, the money that would otherwise have been used to pay for the more expensive premiums would generally increase either workers' wages or employers' profits, both of which are taxable. Because workers with higher income will pay higher marginal tax rates on those increased wages, the regressive nature of the tax exclusions will be reduced. When employers and workers do not shift to lower-cost health plans to avoid the excise tax, the costs of that tax will be spread equally among affected workers, JCT and CBO expect. However, workers with higher income are more likely to be enrolled in high-cost plans and thus more likely to have their subsidies reduced by the excise tax. Nevertheless, most workers will have health benefits whose value is below the thresholds and therefore will be largely unaffected by the excise tax. Consequently, the existing tax subsidies and the new excise tax will continue to subsidize employment-based health insurance and to provide larger subsidies to higher-income people.

Key Design Choices That Would Affect Savings

Lawmakers who wanted to design laws to reduce the tax subsidies for employment-based health insurance could take various approaches. In general, reducing the tax subsidies for employment-based health insurance would tend to lower the number of people with such insurance. It also would increase out-of-pocket payments by people enrolled in employment-based insurance, which would decrease spending on health care and increase the financial burden on people with substantial health problems. The precise effect, however, would depend on the specific features of any policy change.

Lawmakers could cancel the excise tax that is scheduled to take effect under current law and instead subject contributions for health insurance premiums, along with contributions to various health-related accounts, to income or payroll taxation. If lawmakers did that, they would have to decide whether to tax all of the contributions or only some of them. For example, the exclusions could be retained, but with an upper limit that applied to all taxpayers, or the exclusions could be phased down for higher-income people. Such limits also could be allowed to vary according to other characteristics of employees—such as age, sex, or occupation—that are associated with average health care costs. (The forthcoming excise tax includes several adjustments of that sort. For instance, the threshold above which health care costs are taxed is higher for some groups of people whose average costs are high because they work in dangerous occupations.)

Lawmakers also would need to decide whether to subject the contributions to income taxation, payroll taxation, or both. On average, enrollees in employment-based plans face slightly higher federal income tax rates than payroll tax rates. Specifically, CBO and JCT estimate that those workers' average marginal income tax rate—that is, the rate that applies to the last dollar of their earnings—would be about 18 percent in 2022, whereas their average marginal payroll tax rate (including both the employer's and the employee's shares of payroll taxes) would be about 14 percent. Therefore, subjecting contributions to income taxation would raise slightly more revenues than subjecting them to payroll taxation, all else being equal, and doing both would raise the most revenues.

Even if the average income tax rate and the average payroll tax rate for enrollees in employment-based plans were the same, subjecting contributions to income taxation and payroll taxation would have very different effects on the tax liability of people in different income groups. Higher-income people are likely to have higher marginal income tax rates but lower marginal payroll tax rates than lower-income people. Among people with employment-based insurance, therefore, subjecting contributions to income taxation would raise the tax liability of higher-income people more than that of lower-income people. The opposite would be true if contributions were subject to payroll taxation.

Subjecting contributions to taxation would increase the after-tax price of people's employment-based health insurance and therefore reduce insurance coverage. However, CBO and JCT estimate that subjecting contributions to income taxation would yield smaller reductions in the number of people with health insurance than subjecting contributions to payroll taxation would (provided that the same upper limit applied in each case). As discussed above, for lower-income people, the average marginal tax rate is smaller for income taxes than for payroll taxes. Therefore, lower-income people would face smaller increases in the after-tax price of their employment-based health insurance if the contributions were subject to income taxation than if contributions were subject to payroll taxation. Consequently, low-income people would be less likely to forgo insurance if their contributions were subject to income taxation rather than payroll taxation. At the same time, because higher-income people, on average, face a higher marginal income tax rate than marginal payroll tax rate, more higher-income people would forgo insurance if their contributions were subject to income taxation than if they were subject to payroll taxation. However, that reduction in insurance coverage for higher-income people would be smaller than the reduction for lower-income people. (Higher-income people are less responsive to price changes in health insurance because they tend to have more assets to protect and higher demand for health care services.)

Specific Alternatives and Estimates

CBO and JCT analyzed three alternatives for reducing the tax subsidies for employment-based health insurance. Each alternative would take effect in 2022 and would replace the excise tax on high-cost plans with a limit on the tax exclusions. The first and second alternatives would limit the exclusions from income and payroll taxation; the third would limit the exclusion from income taxation but continue the unlimited exclusion from payroll taxation. Those policy changes would increase the tax liability and affect the behavior of people with high premiums for employment-based health plans, but the specific increases in taxes and changes in behavior would be different under each approach.

Each alternative was estimated using CBO and JCT's microsimulation models. Those models use a combination of detailed survey and administrative data to construct a nationally representative sample of employers and individuals in order to estimate the national distribution of health insurance coverage and taxes under current law and different policy scenarios. The advantage of using those models is that they simulate how employers and individuals make decisions about what type of health insurance coverage to offer and purchase on the basis of their income, firm or family size, expected health care spending, and the relative price and generosity of each health insurance option available to them. The models are also interactive in that they allow the choices firms and individuals make to affect the choices of other firms and individuals within the model. That allows the models to estimate the initial effects of a policy change and the subsequent behavioral responses to those changes. For example, if the costs of employment-based health insurance increased because of a change in the tax treatment of employers' premium contributions, microsimulation models are particularly useful for capturing the alternative insurance options and subsidies available to workers and for estimating the changes in coverage that would result from that type of price increase. As a result of those features, microsimulation models can better approximate the full range of behavioral responses that different types of employers and individuals would make in response to policy changes, as compared with other types of static economic models.

Replace the Excise Tax With a Limit on the Income and Payroll Tax Exclusions Set at the 50th Percentile of Premiums. The first alternative would eliminate the excise tax and instead impose a limit on the extent to which employers' and employees' contributions for health insurance premiums—and to FSAs, HRAs, and HSAs—could be excluded from income and payroll taxation. Specifically, starting in 2022, contributions that exceeded $7,800 a year for individual coverage and $18,500 for family coverage would be included in employees' taxable income—that is, they would be subject to both income and payroll taxes. Those limits, which are equal to the estimated 50th percentile of health insurance premiums paid by or through employers in 2020, would be indexed for inflation by means of the chained CPI-U, a measure of inflation that attempts to account for the effects of substitution on changes in the cost of living. The same limits would apply to the deduction for health insurance available to self-employed people. Because the limits would be lower than the thresholds scheduled to take effect for the excise tax—for example, $11,200 for individual coverage in 2022—federal tax subsidies would be lower as well.*

This alternative would decrease cumulative federal deficits by $638 billion by 2028, CBO and JCT project. On a net basis, $51 billion in additional revenues would be collected in 2022, and that amount would grow to $132 billion by 2028. The increasing amount of revenues that would be collected under this alternative would be the result of indexing the exclusion thresholds to the chained CPI-U, which would increase the threshold amounts at a lower rate than the projected growth of health insurance premiums. Over time, that would increase the share of insurance contributions subject to taxation. Those revenues would be slightly offset by $32 billion of additional outlays—the majority of which would be attributable to more people enrolling in subsidized nongroup insurance. By reducing the appeal of employment-based health insurance, it also would cause about 3 million fewer people to have such coverage in 2028 than would have it under current law. Of those people, about 2 million would buy coverage directly through the nongroup market (that is, either in the health insurance marketplaces or from insurers outside of the marketplaces); fewer than 500,000 would enroll in Medicaid; and about 1 million would be uninsured. (Those numbers do not add up to the total because of rounding.)

The reduction in the deficit would stem from several changes in revenues and outlays that partially offset one another. Income and payroll tax revenues would rise by $841 billion through 2028 because the number of people with employment-based coverage would decline and because many of those who retained such coverage would receive a smaller benefit from the tax exclusion. (For example, in 2028, the capped tax exclusions would reduce the combined federal income and payroll tax liability of policyholders with employment-based coverage by an average of $4,450; that reduction would be $6,242 under current law.) Because large employers are required by law to provide health insurance to their employees

[* Value corrected on June 28, 2019]

or pay certain penalties, additional penalty payments by large employers that no longer offered health insurance coverage to their employees also would increase revenues, although only by a small amount. However, additional tax credits for coverage purchased through the marketplaces would reduce revenues, as would the repeal of the excise tax. In all, revenues through 2028 would be $670 billion higher than under current law. The alternative also would boost federal outlays by $32 billion through 2028, primarily because of increased subsidies for insurance purchased through the marketplaces, increased spending on Medicaid, and Medicare "disproportionate share hospital" payments to inpatient facilities that serve a higher percentage of low-income patients.

Replace the Excise Tax With a Limit on the Income and Payroll Tax Exclusions Set at the 75th Percentile of Premiums. Like the first alternative, the second alternative would eliminate the excise tax and impose limits on the extent to which contributions could be excluded from income and payroll taxation. Under this alternative, however, the limits would be higher: $9,900 a year for individual coverage and $25,000 for family coverage. Those limits are equal to the estimated 75th percentile of health insurance premiums paid by or through employers in 2020 and inflated by the chained CPI-U.

The second alternative would decrease cumulative federal deficits by $256 billion by 2028, CBO and JCT estimate. Specifically, it would increase revenues by $270 billion and outlays by $15 billion. Under this alternative, the government would collect, on a net basis, $19 billion in additional revenues in 2022 and an additional $57 billion in 2028 compared with current law. Fewer revenues would be collected under this alternative than under the first alternative because the tax exclusion threshold would be higher. The amount of additional annual revenues collected would grow substantially by 2028 because the thresholds would grow at a lower rate than the projected growth of health insurance premiums, and those revenues would be offset by $15 billion in additional outlays. Also, like the first alternative, this one would reduce the appeal of employment-based health insurance, causing slightly more than 1 million fewer people to have such insurance in 2028 than would have it under current law. In that year, of those people affected by this alternative, slightly less than 1 million more people would buy coverage through the nongroup market, fewer than 500,000 people would enroll in Medicaid or the Children's Health Insurance Program, and fewer than 500,000 would be uninsured.

Replace the Excise Tax With a Limit on Only the Income Tax Exclusion Set at the 50th Percentile of Premiums. The third alternative would eliminate the excise tax and impose a limit on the extent to which contributions could be excluded from income taxation; exclusions for payroll taxation would remain unlimited. Specifically, starting in 2022, contributions that employers or workers made for health insurance—and for medical expenses through FSAs, HRAs, and HSAs—that exceeded $7,800 a year for individual coverage and $18,500 for family coverage would be included in employees' taxable income and subject to income taxes. Those are the same limits as the ones described in the first alternative, and once again, they would be indexed for inflation by means of the chained CPI-U. As noted above, limiting the tax exclusion for income taxes only would raise more revenues, and reduce insurance coverage less, than would limiting the exclusion for payroll taxes only (as long as the same limit applied in each case).

The third alternative would decrease cumulative federal deficits by $438 billion by 2028, CBO and JCT estimate: Revenues would be $452 billion higher, and outlays would be $14 billion higher. The amount of revenues collected would be lower than under the first alternative because health insurance contributions would still be exempt from payroll taxation. Outlays would offset revenues to a lesser degree than under the first and second alternatives because fewer people who gave up employment-based insurance would enroll in subsidized health insurance. This alternative would cause about 1.5 million fewer people to have employment-based insurance in 2028 than would have it under current law. Of those people, about 1 million would buy coverage through the nongroup market, fewer than 500,000 would enroll in Medicaid, and about 500,000 more would be uninsured.

Sources of Uncertainty

These estimates rely on the complex interaction of many variables and are therefore inherently uncertain. The stability of nongroup insurance markets under current law is one source of uncertainty. If the nongroup market was less stable than projected in CBO's baseline, nongroup coverage would be more expensive and less attractive as an alternative to employment-based coverage.

Consequently, CBO and JCT would expect more employers to offer such coverage (and more employees to take up such offers). This would increase, all else being equal, the amount of revenues collected under each alternative because more people would be enrolled in employment-based insurance. If nongroup insurance markets remained stable, or if they became more competitive over time, fewer people would enroll in employment-based coverage, which would reduce the amount of revenues that would be collected under these alternatives.

These estimates are also sensitive to changes in the price of employment-based health insurance. For example, if premiums for such coverage grew faster than in CBO and JCT's baseline projections, all else being equal, fewer people would enroll in such coverage, but an increased number of plans and employers would have premiums above the excise tax's threshold under current law. Under the alternatives discussed here, higher growth in premiums would increase the revenues collected by the federal government because a higher share of workers would have premiums that exceeded the alternatives' thresholds for tax exclusions. However, because a smaller number of workers would have employment-based coverage both under current law and under the option if premiums for employment-based coverage grew at faster rates than in CBO and JCT's baseline projections, the net effect of the option on federal revenues could be higher or lower than the estimates presented here.

Another source of uncertainty is employers' willingness to continue offering health insurance coverage. In recent years, offers of employment-based health insurance have generally remained stable, on average. Employers' decisions to offer coverage are affected by a variety of factors, including the availability of alternative sources of coverage, changes in the after-tax price of such coverage, and competition in the labor market. Firms may become more willing to drop offers of employment-based coverage as each of those factors changes over time. If that were the case, the change in coverage resulting from this option and the associated reduction in the deficit would both be larger.

Changes in the larger economy, such as a recession that resulted in increased unemployment, could also affect these estimates. In such a scenario, fewer people would be enrolled in employment-based health coverage, which would reduce the amount of revenues that would be collected under each alternative. By contrast, faster than expected economic growth could increase the number of people with employment-based coverage, thereby increasing the amount of taxes that would be collected under these alternatives.

Other Considerations

Reducing tax subsidies for employment-based health insurance would affect many aspects of health care in the United States, including the growth of health care costs, the health of the population, the decisions that employers and workers make about health insurance coverage, and the number of people without health insurance.

Effects on Health Care Costs. Replacing the excise tax with a limit on the tax exclusions that is lower than the excise tax thresholds would make health care spending lower than it would be under current law. The current tax subsidies for employment-based insurance give health insurance plans an incentive to cover more services, to cover more expensive services, and to require enrollees to pay a smaller share of the costs than would be the case otherwise. The excise tax will effectively scale back those tax subsidies. The alternatives examined here would increase taxes for a larger share of employment-based plans than the excise tax would—giving employers and their workers less incentive to buy expensive health insurance, reducing upward pressure on the price and use of health care, and encouraging more cost-effective use of care.

Effects on People's Health. By reducing the incentive to buy expensive coverage and increasing the incentive to buy insurance plans that require people to pay more out of pocket, all three of the alternatives analyzed here would reduce the amount of care received and worsen some people's health. That conclusion is supported by an experiment conducted by the RAND Corporation from 1974 to 1982 in which nonelderly participants were randomly assigned to health insurance plans (Newhouse and the Insurance Experiment Group 1993). The experiment showed that plans requiring more out-of-pocket payments reduced the use of both effective and less-effective care, as defined by a team of physicians. Differences in out-of-pocket requirements had no effect on most participants' health, but among the poorest and sickest participants, those who faced no requirements of that kind were healthier by some measures than those who did.

Effects on Employers' and Workers' Decisions About Health Care Coverage. By increasing the tax liability of people enrolled in high-cost employment-based plans more than the excise tax would, the alternatives considered here would probably increase the financial burden on some people with substantial health problems. In particular, some employers and workers would avoid the increased tax liability by shifting to plans with lower premiums and more limited benefits, which would increase costs the most for people who used the most services.

In general, workers with higher income face higher income tax rates and are more likely to enroll in plans with high premiums. Therefore, limiting the exclusion from income taxation, as the third alternative would do, would reduce that benefit more for people with higher income. The first and second alternatives, which would limit the exclusion not only for income taxation but also for payroll taxation, would still increase tax liabilities more for higher-income people, on average, because they tend to enroll in plans with higher premiums.

Under all three alternatives, employees of firms that had a less healthy workforce or that operated in an area with above-average health care costs would be more likely to see their tax liability increase. In higher-cost areas, those increases in people's tax liability might exert pressure on health care providers and insurers to reduce prices or decrease unnecessary care.

Although these alternatives would reduce total spending on health care, they would increase after-tax premiums for some people enrolled in employment-based insurance, particularly those whose premiums were above the limits imposed by each alternative and who therefore would be paying taxes on that portion of their premiums for the first time. In addition, because all three alternatives would impose a limit on the exclusion that was lower than the excise tax thresholds that are scheduled to go into effect under current law, employers would have a heightened incentive to keep premiums low, which could cause them to refrain from hiring older workers (who tend to spend more on health care and to raise average premiums) or to reduce the compensation of older workers. That effect would be particularly likely among employers with fewer employees over whom to spread risks.

Effects on the Number of Uninsured People. The tax increases in these alternatives would lead fewer employers to offer health insurance. Although most people whose employers stopped offering health insurance would instead buy coverage in the nongroup market, either in the health insurance marketplaces or elsewhere, CBO and JCT anticipate that some workers would forgo coverage.

RELATED CBO PUBLICATIONS: *Federal Subsidies for Health Insurance Coverage for People Under Age 65: 2018 to 2028* (May 2018), www.cbo.gov/publication/53826; *The Distribution of Major Tax Expenditures in the Individual Income Tax System* (May 2013), www.cbo.gov/publication/43768

WORK CITED: Joseph P. Newhouse and the Insurance Experiment Group, *Free for All?: Lessons From the RAND Health Insurance Experiment* (RAND Corporation, 1993)

Revenues—Option 13

Further Limit Annual Contributions to Retirement Plans

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Revenues	5.4	8.0	8.5	8.8	9.3	9.9	11.0	13.0	14.2	15.1	40.0	103.3

Source: Staff of the Joint Committee on Taxation.

This option would take effect in January 2019.

To the extent that the option would affect Social Security payroll taxes, a portion of the revenues would be off-budget. In addition, the option would increase outlays for Social Security by a small amount. The estimates do not include those effects on outlays.

Background

Current law allows taxpayers to make contributions to certain types of tax-preferred retirement plans, up to a maximum annual amount that varies depending on the type of plan and the age of the taxpayer. The most common such plans are defined contribution plans (any plan that does not guarantee a particular benefit amount upon retirement) and individual retirement accounts (IRAs). Defined contribution plans are sponsored by employers. Some—most commonly, 401(k) plans—accept contributions by employees; others are funded entirely by the employer. IRAs are established and funded by the participants themselves.

Most of the tax savings associated with retirement plans arise because the investment income that accrues in the account is either explicitly or effectively exempt from taxation. That is clearest in the case of Roth retirement plans—both IRAs and 401(k)s. Contributions to such plans cannot be excluded from taxable income; instead, the participant benefits by not paying tax on the investment income, either as it accrues or when it is withdrawn. More traditional types of tax-preferred retirement plans allow participants to exclude contributions from their taxable income and defer the payment of taxes until they withdraw funds. If the taxpayer is subject to the same tax rate that applied when contributions were made, the value of the deduction is offset by the tax on withdrawals. The actual tax benefit is equivalent to that provided by Roth plans—effectively exempting investment income from taxation. (In the traditional structure, however, the tax benefit can be higher or lower than under a Roth plan, depending on the difference between the participant's tax bracket at the time contributions are made and when withdrawals are made.)

The value of the tax exemption for investment earnings increases with the participant's income tax rate. Thus, an employee in the 12 percent tax bracket saves 12 cents on each dollar of investment income accrued in his or her retirement plan; however, an employee in the 35 percent tax bracket avoids taxes equal to 35 cents per dollar of investment income. (For some forms of investment income, such as capital gains, lower tax rates apply in each tax bracket, and the savings are smaller.)

People under the age of 50 may contribute up to $18,500 to 401(k) and similar employment-based plans in 2018; participants ages 50 and above are also allowed to make "catch-up" contributions of up to $6,000, enabling them to make as much as $24,500 in total contributions in 2018. In general, the limits on a person's contributions apply to all defined contribution plans combined. However, contributions to 457(b) plans, which are available primarily to employees of state and local governments, are subject to a separate limit. As a result, employees enrolled in both 401(k) and 457(b) plans can contribute the maximum amount to both plans; in 2018, some people's tax-preferred contributions can thus total as much as $49,000. Employers may also contribute to their workers' defined contribution plans, up to a maximum of $55,000 per person in 2018, less any contributions made by the employee.

In 2018, combined contributions to Roth and traditional IRAs are limited to $5,500 for taxpayers under the age of 50 and $6,500 for those ages 50 and above. The tax deduction for contributions to a traditional IRA is phased out above certain income thresholds if either the taxpayer or the taxpayer's spouse is covered by an employment-based plan (but nondeductible contributions—which still enable a taxpayer to defer taxes on investment gains until they are withdrawn—are allowable at any income level). Allowable contributions to Roth IRAs are phased out above certain income levels, and no contributions are permitted at incomes above $199,000 for married taxpayers who file joint returns, $10,000 for married taxpayers who file separate returns, or $135,000 for unmarried taxpayers. However, participants can circumvent those limits by making a nondeductible contribution to a traditional IRA and then converting the traditional IRA to a Roth IRA before any investment income can accrue. (The first use of such a conversion creates a tax liability on amounts already in the traditional IRA, but once those preexisting amounts are taxed, conversions of subsequent nondeductible contributions are tax-free.) Annual contribution limits for all types of plans are adjusted, or indexed, to include the effects of inflation, but only in $500 increments (increments of $1,000 in the case of the overall limit on contributions to defined contribution plans).

The Internal Revenue Service reported that 52 million individuals contributed to 401(k)–type plans in calendar year 2014, 8 percent of whom made the maximum allowable contribution. More recent information is available for IRAs: In 2015, almost 11 million individuals contributed to IRAs—40 percent of those to traditional IRAs and 60 percent to Roth IRAs. Of those contributing to traditional IRAs, 47 percent made the maximum allowable contribution, according to the Congressional Budget Office's estimates. Of those contributing to Roth IRAs, 34 percent contributed the maximum amount. Contributions to retirement plans generally increase with personal income, but the contribution limits increase only with inflation. Thus, the share of participants making the maximum allowable contribution tends to increase over time.

Option

Under this option, a participant's maximum allowable contributions would be reduced to $16,500 per year for 401(k)–type plans and $5,000 per year for IRAs, regardless of the person's age. The option would also require that all contributions to employment-based plans—including 457(b) plans—be subject to a single combined limit. Total allowable employer and employee contributions to a defined contribution plan would be reduced from $55,000 per year to $50,000. Finally, conversions of traditional IRAs to Roth IRAs would not be permitted for taxpayers whose income is above the top threshold for making Roth contributions.

Effects on the Budget

The lower limits on contribution amounts would increase revenues by $109 billion from 2019 through 2028, the staff of the Joint Committee on Taxation estimates. The constraints on Roth conversions would reduce revenues by $6 billion over that period, for a total increase of $103 billion. Higher estimates in the last three years reflect the expiration of lower individual income tax rates at the end of 2025.

The reduction in revenues associated with constraining Roth conversions largely reflects the loss of tax payments that would otherwise be due at the time existing balances in traditional IRAs were converted. But the longer-term effects on revenues of that aspect of the option would probably be different. The loss of Roth benefits for those above the threshold would result in the taxation of more investment income—whether because the investment income arising from nondeductible contributions would be taxed upon withdrawal from a traditional IRA, or because some individuals would shift their contributions to taxable accounts. Existing balances can be converted only once; thus, the revenues associated with conversions are expected to diminish over time until all participants who wish to convert their balances have done so. Similarly, the revenue loss from disallowing some conversions would also diminish over time. Eventually, the revenues gained by taxing more investment income would probably outweigh those lost from disallowing conversions.

The option would also affect federal outlays, but by much smaller sums. Reducing the amount that employers are allowed to contribute would lead to an increase in taxable wages—the base from which Social Security benefits are calculated—and thus would increase spending for Social Security by a small amount. (The estimates shown here do not account for those additional outlays.) The changes in contributions by employees would not affect the wage base for Social Security.

The estimate for this option is uncertain because it relies on projections and estimates that are uncertain. Specifically, it relies on projections of retirement plan contributions, which are based on CBO's economic projections of the economy over the next decade under current law, and on estimates of how taxpayers would change their saving behavior in response to the change in contribution limits.

Other Effects

One argument in favor of this option centers on fairness. The option would reduce the disparity in tax benefits that exists between higher- and lower-income taxpayers, in two ways. First, taxpayers directly affected by the option would make fewer contributions and accrue less tax-preferred investment income, so the greater benefit of the exemption to those in higher tax brackets would be reduced. Second, the option would affect more higher-income taxpayers than lower-income taxpayers. Although the limits on 401(k) contributions affected only 8 percent of participants in calendar year 2014, 53 percent of those participants had income in excess of $200,000 that year. The option also would level the playing field between those who currently benefit from higher contribution limits (people ages 50 and over and employees of state and local governments) and those subject to lower limits.

Also, the option's constraints on Roth conversions would reduce the complexity and improve the transparency of the tax system, making it easier for participants and nonparticipants alike to understand the tax ramifications of Roth accounts. Furthermore, the financial institutions managing the accounts would incur, and pass on to participants, fewer administrative costs. (Even greater transparency could be realized by eliminating the income thresholds and allowing everybody to contribute directly to a Roth IRA, but that would reduce revenues over the long term.)

The main argument against this option is that it would reduce the retirement saving of some lower- and moderate-income people. Eliminating the extra allowance for catch-up contributions in particular would adversely affect those ages 50 and over who might have failed to save enough for a comfortable retirement while raising their families. The amount that they could contribute to tax-preferred retirement accounts would be cut at precisely the time when reduced family obligations and impending retirement make them more likely to respond to tax incentives to save more.

In addition, further limiting total contributions to a defined contribution plan would create an incentive for some small businesses to terminate their plans (or not establish new ones) if the tax benefits to the owners of providing such plans were outweighed by the cost of administering them. To the extent that such plans were terminated, employees would then have to rely on IRAs, which would lead some to save less because of the lower contribution limits.

The net effect of the option on total private saving is uncertain. The majority of participants in tax-preferred plans contribute less than the maximum amount allowed under the option; the option would not affect their incentives to save. Among the remaining participants, however, the option's effects on such incentives would vary. CBO estimates that, overall, the option would reduce incentives to save among a small group of participants—those who contribute less than the current limit but more than the maximum amount allowed under the option. For taxpayers in that situation, each additional dollar saved above the option's limit (up to the current limit) would yield a smaller after-tax return than they would receive under current law. However, only 10 percent of participants in traditional IRAs (and a smaller percentage of participants in other types of plans) fell into that category in 2014. At the opposite end of the saving spectrum are people who currently contribute the maximum allowable amounts to tax-preferred retirement plans and contribute additional amounts to taxable accounts. The option would not reduce their after-tax return on each additional dollar saved because it would be in excess of the limit in either case. However, because the option would make their total after-tax retirement income lower than they currently anticipate, some of those people might choose to put more money in taxable accounts to make up for that loss, thereby increasing their saving. Low- and moderate-income people are more likely to fall into the group that would reduce their saving, whereas high-income people are more likely to fall into the group that would increase their saving, and it is not certain which effect would dominate.

RELATED OPTION: Revenues, "Tax Social Security and Railroad Retirement Benefits in the Same Way That Distributions From Defined Benefit Pensions Are Taxed" (page 242)

RELATED CBO PUBLICATION: *Use of Tax Incentives for Retirement Saving in 2006* (October 2011), www.cbo.gov/publication/42731

Revenues—Option 14

Tax Social Security and Railroad Retirement Benefits in the Same Way That Distributions From Defined Benefit Pensions Are Taxed

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Revenues	16.4	33.6	35.4	37.2	39.0	40.8	42.8	49.5	56.6	59.2	161.6	410.5

Source: Staff of the Joint Committee on Taxation.

This option would take effect in January 2019.

Background

Under current law, approximately 70 percent of the benefits paid by the Social Security and Railroad Retirement programs are not subject to the federal income tax. For recipients with income below a specified threshold, none of those benefits are taxable. Most recipients fall into that category, which represents the first of three income-based tiers. If the sum of a recipient's adjusted gross income, tax-exempt interest, and half of either Social Security benefits or Social Security–equivalent Tier I Railroad Retirement benefits exceeds $25,000 for single taxpayers or $32,000 for couples who file jointly, up to 50 percent of the benefits are taxable. Above a higher threshold—$34,000 for single filers and $44,000 for joint filers—as much as 85 percent of the benefits are taxable. (Adjusted gross income includes income from all sources not specifically excluded by the tax code, minus certain deductions.)

By contrast, distributions from defined benefit plans are taxable except for the portion that represents the recovery of an employee's "basis"—that is, his or her after-tax contributions to the plan. In the year that distributions begin, the recipient determines the percentage of each year's payment that is considered to be the nontaxable recovery of previous after-tax contributions; that determination is based on the cumulative amount of those contributions and projections of his or her life expectancy. Once the recipient has recovered his or her entire basis, all subsequent pension distributions are fully taxed. Aside from their treatment under the tax system, defined benefit plans are quite similar to the Social Security and Railroad Retirement programs.

In 2016, the Social Security Administration paid $911 billion in Old-Age, Survivors, and Disability Insurance benefits, and the Railroad Retirement Board paid $7 billion in Tier I Social Security–equivalent benefits. Altogether, the taxable amount of those benefits was $286 billion, as reported by the Internal Revenue Service, and taxes on that amount generated $56 billion in revenues. Benefit payments are projected to rise through 2028 as the population ages and members of the baby-boom generation retire, causing the number of beneficiaries to grow faster than the population. The amount of benefit payments that is taxable will grow faster than overall payments because the thresholds for determining the taxable portion are not adjusted for inflation.

Option

This option would treat Social Security and Railroad Retirement benefits in the same way that defined benefit pensions are treated—by defining a basis and taxing those benefits that exceed that amount. For employed individuals, the basis would be the payroll taxes they contributed to those programs (but not the equal amount that their employers paid on their behalf). For self-employed people, the basis would be the portion (50 percent) of their self-employment taxes that was not deductible from their taxable income.

Effects on the Budget

Under this option, revenues would increase by $411 billion from 2019 through 2028, the staff of the Joint Committee on Taxation estimates. That increase would be entirely due to higher taxes on the recipients of Social Security and Railroad Retirement benefits. Increases in revenues would be greater after temporary provisions of the 2017 tax act that lower ordinary rates and increase the standard deduction expire at the end of 2025.

The estimate reflects differences in the effects of the option among recipients of Social Security and Railroad Retirement benefits. The option would increase taxable income for many recipients both before and after they had fully recovered their past contributions to the system because the taxable portion of their benefits would increase. Some recipients would still not pay taxes on those benefits because they would have sufficient deductions and could make other adjustments, such that their overall taxable income would remain low enough for them to owe no federal income taxes.

The estimate for this option is uncertain because the underlying projection of Social Security and Railroad Retirement benefits is uncertain, as is the projection of payroll contributions that will determine both the benefit amount and the basis for future retirees. The estimate also relies on estimates of how taxpayers would shift their participation in the labor force in response to changes in their after-tax income from benefits.

Other Effects

An argument in favor of this option concerns equity. Taxing benefits from the Social Security and Railroad Retirement programs in the same way as those from defined benefit plans would make the tax system more equitable, in at least two ways. First, it would eliminate the preferential tax treatment that applies to Social Security benefits but not to pension benefits. For low- and middle-income taxpayers especially, that preference can cause elderly people with similar income to face very different tax liabilities depending on the mixture of retirement benefits they receive. Second, the option would treat elderly and nonelderly taxpayers with comparable income the same way.

Another benefit of the option is that it could simplify the preparation of tax returns for people who pay taxes on Social Security benefits under current law. Taxpayers currently have to calculate the taxable portion of those benefits themselves. Under the option, the Social Security Administration—which would have information on their lifetime contributions and life expectancy—would compute the taxable amount of benefits and provide that information to beneficiaries each year.

This option also has drawbacks. It would have the greatest impact on people who depend entirely on Social Security or Railroad Retirement benefits for their support. In addition, raising taxes on Social Security and Railroad Retirement benefits would provide current retirees or people nearing retirement little or no opportunity to adjust their saving or retirement strategies to mitigate the impact. The option could be phased in, but that would result in smaller revenue gains. Finally, the option would increase the number of elderly people who have to file tax returns, and calculating the percentage of each recipient's benefits that would be excluded from taxation would impose an additional burden on the Social Security Administration.

RELATED OPTION: Revenues, "Further Limit Annual Contributions to Retirement Plans" (page 239)

RELATED CBO PUBLICATION: *Social Security Policy Options, 2015* (December 2015), www.cbo.gov/publication/51011

Revenues—Option 15

Eliminate Certain Tax Preferences for Education Expenses

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Revenues	3.8	19.3	19.4	19.6	19.8	20.1	20.4	21.0	21.8	22.2	81.9	187.6

Source: Staff of the Joint Committee on Taxation.

This option would take effect in January 2019.

The estimates include the effects on outlays resulting from changes in refundable tax credits.

Background

Federal support for higher education takes many forms, including grants, subsidized loans, and tax preferences. Those tax preferences include several types of tax-advantaged accounts that allow families to save for postsecondary education, as well as education-related credits and a deduction. The major credits and the deduction in effect in 2018 are the following:

- The American Opportunity Tax Credit (AOTC) covers qualifying educational expenses for up to four years of postsecondary education. In 2018, the AOTC can total as much as $2,500 (100 percent of the first $2,000 in qualifying expenses and then 25 percent of the next $2,000). Up to 40 percent of the credit (or $1,000) is refundable—that is, families whose income tax liability (before the credit is applied) is less than the total amount of the credit may receive a portion of the credit as a payment. The amount of the AOTC gradually declines with income for higher-income tax filers. In 2018, the AOTC is reduced for married couples who file jointly and have modified adjusted gross income (MAGI) between $160,000 and $180,000 and for single filers with MAGI between $80,000 and $90,000. (Adjusted gross income comprises income from all sources not specifically excluded by the tax code, minus certain deductions. To determine eligibility for education-related tax credits, it is modified by adding certain foreign income and foreign housing allowances that are excluded from taxable income.) Neither the credit amount nor the income thresholds are adjusted, or indexed, to include the effects of inflation.

- The nonrefundable Lifetime Learning tax credit provides up to $2,000 for qualifying tuition and fees. (The credit equals 20 percent of each dollar of qualifying expenses up to a maximum of $10,000.) Only one Lifetime Learning credit may be claimed per tax return per year, but the expenses of more than one family member (a taxpayer, spouse, or dependent) may be included in the calculation. The Lifetime Learning credit can be used beyond the first four years of postsecondary education and by students taking less than half of a full-time course load. Taxpayers may not claim the Lifetime Learning credit and the AOTC for the same student in the same year. In 2018, the Lifetime Learning tax credit gradually declines with MAGI for joint filers whose MAGI is between $114,000 and $134,000 and for single filers whose MAGI is between $57,000 and $67,000. The income thresholds for those ranges are indexed.

- Tax filers may deduct from their taxable income up to $2,500 per year for interest payments on student loans. That deduction is available regardless of whether a tax filer itemizes deductions. In 2018, the interest deduction for student loans gradually declines with MAGI for joint filers with MAGI between $135,000 and $165,000 and for single filers with MAGI between $65,000 and $80,000. Although the maximum deduction is not indexed to include the effects of inflation, the income thresholds for those ranges are indexed.

Over 10 million taxpayers claimed a total of $18 billion in AOTC and Lifetime Learning tax credits on their 2016 tax returns. About 12 million taxpayers deducted a combined $13 billion of student loan interest. The projected effects of the tax preferences depend on taxpayers' incomes and expenditures on higher education.

Option

This option would eliminate the AOTC and the Lifetime Learning tax credit beginning in 2019. The option would also gradually eliminate the deductibility of interest expenses for student loans. Because students have borrowed money with the expectation that a portion of the interest would be deductible over the life of the loan, the interest deduction for student loans would be phased out in annual increments of $250 over a 10-year period.

Effects on the Budget

If implemented, the option would raise revenues by $188 billion from 2019 through 2028, the staff of the Joint Committee on Taxation estimates. Its effect on revenues would be greater after 2026 than in earlier years, following a scheduled increase in individual income tax rates and a reduction in the amounts of the standard deduction. Under current law, because the Lifetime Learning tax credit is not refundable and the AOTC is only partially so, the value of those credits will increase in 2026 for taxpayers who previously had no tax liability against which to apply the credits. In addition, the value of the deduction for student loan interest will increase because deductions are more valuable to taxpayers facing higher tax rates.

The estimate for this option is uncertain because the underlying projection of individual income tax revenues is uncertain. That projection relies on the Congressional Budget Office's projections of the economy and the distribution of income over the next decade under current law. Those projections are inherently uncertain, but they are particularly uncertain because they reflect recently enacted changes to the tax system by the 2017 tax act. In addition, the estimate relies on the number of students pursuing higher education and the costs of those programs in the future, which might differ from CBO's estimates in unexpected ways.

Other Effects

An argument in favor of the option is that current education-related tax benefits are not targeted to those who need assistance the most. Many low-income families do not have sufficient income tax liability to claim all—or in some cases, any—of those benefits. However, the cost of higher education may impose a greater burden on those families as a proportion of their income. Further, some research indicates that lower-income individuals and families may be more sensitive to the cost of higher education than those with higher income and thus more likely to enroll in higher education programs if tuition and fees are subsidized.

A second argument in favor of the option is that providing education benefits through the income tax system results in benefits that are poorly timed and adds complexity to the process. Families must pay tuition and fees before they can claim the education benefits on their tax returns. By contrast, federal spending programs such as the Federal Pell Grant Program are designed to provide assistance when the money is needed—at the time of enrollment. Further, providing education assistance through various credits and deductions, each with slightly different eligibility rules and benefit amounts, might make it difficult for families to determine which tax preferences would be the most advantageous for their particular economic circumstances.

A drawback of this option is that it would reduce some households' assistance for educational expenses unless federal outlays for education assistance were increased. The option would increase the financial burden on families with postsecondary students—particularly middle-income families who do not qualify for current federal spending programs. Students might respond by attending lower-cost schools, adjusting the amount they borrow through student loans, or reducing the amount of schooling they pursue. Another drawback is that despite the current system's complexity—which creates overlapping tax benefits—some families might find it easier to claim benefits on their tax returns (on which they already provide information about their family structure and income) than to fill out additional forms for assistance through other federal programs.

RELATED OPTIONS: Mandatory Spending, "Eliminate or Reduce the Add-On to Pell Grants, Which Is Funded With Mandatory Spending" (page 26), "Reduce or Eliminate Subsidized Loans for Undergraduate Students" (page 31); Discretionary Spending, "Tighten Eligibility for Pell Grants" (page 179)

RELATED CBO PUBLICATIONS: *Distribution of Federal Support for Students Pursuing Higher Education in 2016* (June 2018), www.cbo.gov/publication/53732; *Federal Aid for Postsecondary Students* (June 2018), www.cbo.gov/publication/53736; *Options to Change Interest Rates and Other Terms on Student Loans* (June 2013), www.cbo.gov/publication/44318; *Refundable Tax Credits* (January 2013), www.cbo.gov/publication/43767; *Costs and Policy Options for Federal Student Loan Programs* (March 2010), www.cbo.gov/publication/21018; *Private and Public Contributions to Financing College Education* (January 2004), www.cbo.gov/publication/15178

Revenues—Option 16

Lower the Investment Income Limit for the Earned Income Tax Credit and Extend That Limit to the Refundable Portion of the Child Tax Credit

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Revenues	*	1.0	0.9	1.0	1.0	1.0	0.9	1.0	0.7	0.7	3.9	8.2

Source: Staff of the Joint Committee on Taxation.

This option would take effect in January 2019.

The estimates represent the change in the overall budget balance that would result from the sum of changes to revenues and outlays.

* = between zero and $50 million.

Background

Low- and moderate-income people are eligible for certain refundable tax credits under the individual income tax if they meet specified criteria. Refundable tax credits differ from other tax preferences, such as deductions, in that their value may exceed the amount of income taxes that the person owes. Refundable tax credits thus can result in net payments from the government to a taxpayer: If the amount of a refundable tax credit exceeds a taxpayer's tax liability before that credit is applied, the government pays the excess to that person. Two refundable tax credits are available only to workers: the earned income tax credit (EITC) and the refundable portion of the child tax credit (referred to in the tax code as the additional child tax credit). In 2016, the number of taxpayers claiming the EITC and the refundable portion of the child tax credit were 27 million and 19 million, respectively.

To qualify for the EITC and the refundable portion of the child tax credit, people must meet several income requirements. First, they must have income from wages, salaries, or self-employment. Second, their adjusted gross income cannot exceed certain thresholds, which vary according to family characteristics. (Adjusted gross income is income from all sources not specifically excluded by the tax code, minus certain deductions. For purposes of determining eligibility for the child tax credit, adjusted gross income is modified by adding certain types of income excluded from taxable income.) For the EITC, the income thresholds for 2018 range from $15,270 for an unmarried worker who does not have a qualifying child to $54,884 for a married couple that files jointly and has three or more children. For the child tax credit, the income thresholds for taxpayers with one child in 2018 are $240,000 for an unmarried person and $440,000 for joint filers; the thresholds increase with the number of children in the family. (After 2025, those thresholds will revert to their amounts under pre-2018 law. For example, among those with one child, the thresholds will be $95,000 for unmarried workers and $130,000 for joint filers.) Finally, eligibility for the EITC is restricted to filers with investment income that is $3,500 or less in 2018. (Investment income comprises interest including tax-exempt interest, dividends, capital gains, royalties and rents from personal property, and returns from passive activities—that is, business pursuits in which the person is not actively involved.) For the EITC, the limitations on adjusted gross income and investment income are adjusted, or indexed, to include the effects of inflation. The income cutoff for the child tax credit, however, is not indexed.

According to the Internal Revenue Service (IRS), among taxpayers whose positive adjusted gross income was less than $50,000 and who also reported investment income in 2016, the most prevalent form was taxable interest: About 16 percent of those taxpayers reported, on average, about $110 in taxable interest income. (Some of those taxpayers probably had other forms of investment income, too.) That total, however, included the interest income of taxpayers over the age of 65. That age group contains the largest number of adult taxpayers reporting any interest income but also the smallest number claiming the two credits.

Option

This option would lower the EITC threshold for investment income to $1,750. As under current law, that threshold would be indexed to include the effects of inflation. Moreover, the option would extend that requirement to the refundable portion of the child tax credit.

Effects on the Budget

If implemented, the option would raise $8 billion from 2019 through 2028, according to estimates by the staff of the Joint Committee on Taxation. The annual revenues raised by the option would begin to decline after certain provisions of the 2017 tax act expire at the end of 2025; however, those effects would not be fully observed until 2027, when taxpayers file their 2026 tax returns and claim the credits. The expiration of a temporary expansion of the refundable portion of the child tax credit will cause the maximum amount of the additional credit to fall from $1,400 to $1,000, and the expiration of other provisions will cause statutory tax rates to increase and the amount of the standard deduction to decline. As a result, there will be greater income tax liability for the nonrefundable portion of the child tax credit to offset, which will reduce the value of the refundable portion of the credit.

The budgetary effect of further reducing the threshold on investment income to less than $1,750 would depend on a number of factors, including the distribution of investment income among those receiving credits and the average size of the credits received by the affected population under current law. As the threshold declined, for example, both the number of EITC claimants affected by the limitation and the average reduction in the credit received by the affected population would increase rapidly, in the Congressional Budget Office's assessment. One consideration is how people would respond to changes in the investment-income threshold. Some people would respond to those adjustments by shifting their investments to assets (such as cars) that do not immediately generate income or by changing the timing of the return from their investments (for example, by retaining stocks for longer periods in order to avoid realizing capital gains in years that those realizations would affect their eligibility).

A key source of uncertainty in the estimate is that it depends on CBO's projections of various factors that determine the return on an investment. For example, in CBO's projections, personal interest income grows at an average annual rate of 8 percent from 2019 through 2023 and 4 percent for the remainder of the projection period. If interest rates were higher than CBO's current projections, then more taxpayers would be affected by the option.

Other Effects

The main argument for the option is that it would better target the credits to people without substantial means by denying them to people who have low earnings but have other resources to draw upon. Asset tests—requirements that recipients do not have savings in bank accounts, stocks, or other types of investments whose value is above a specified threshold—serve a similar role in some spending programs that provide benefits to lower-income populations. However, such tests would be difficult for the IRS to administer because the agency does not collect information on the amount of assets held by individuals. By contrast, the IRS does have extensive information on taxpayers' income from bank accounts and most other types of investments, and much of that information is accurate because it is reported independently to the agency by financial institutions as well as by taxpayers on their returns.

An argument against the option is that it would reduce people's incentive to save, especially if their income from investments was near the threshold amount and they could become (or remain) eligible for the credits under the option by making small reductions in their assets. The option would probably have little effect on people with very low income because they have little means to save and invest.

RELATED OPTION: Revenues, "Require Earned Income Tax Credit and Child Tax Credit Claimants to Have a Social Security Number That Is Valid for Employment" (page 248)

RELATED CBO PUBLICATIONS: *Effective Marginal Tax Rates for Low- and Moderate-Income Workers in 2016* (November 2015), www.cbo.gov/publication/50923; *The Distribution of Major Tax Expenditures in the Individual Income Tax System* (May 2013), www.cbo.gov/publication/43768; *Growth in Means-Tested Programs and Tax Credits for Low-Income Households* (February 2013), www.cbo.gov/publication/43934; *Refundable Tax Credits* (January 2013), www.cbo.gov/publication/43767

Revenues—Option 17

Require Earned Income Tax Credit and Child Tax Credit Claimants to Have a Social Security Number That Is Valid for Employment

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Revenues	0.1	2.6	2.5	2.5	2.4	2.3	2.3	2.5	3.1	3.2	10.1	23.6

Source: Staff of the Joint Committee on Taxation.

This option would take effect in January 2019.

The estimates represent the change in the overall budget balance that would result from the sum of changes to revenues and outlays.

Background

The earned income tax credit (EITC) and the child tax credit provide assistance to low- and moderate-income taxpayers. Both credits are refundable: If the amount of the credit is greater than the amount of income taxes owed by the taxpayer before the credit is applied, the government pays the excess to that person. (Whereas the EITC is fully refundable, the amount of the refundable portion of the child tax credit is capped.) The nonrefundable and refundable portions of the two tax credits totaled $119 billion in 2016. Eligibility for the EITC and the refundable portion of the child tax credit is limited to people with income from wages, salaries, or self-employment.

Eligibility requirements for the two credits differ for noncitizens, however—especially the rules governing the provision of Social Security numbers. All EITC claimants and their qualifying children must have a Social Security number. For purposes of determining eligibility for the EITC, a noncitizen's Social Security number is considered invalid if it was issued by the Social Security Administration (SSA) solely to allow that individual to obtain benefits from a program entirely or partly financed by the federal government. That rule applies to both spouses, if claimants are married, and to claimants' qualifying children. As a result of that rule, many people who are not authorized to work in the United States (or whose children lack that authorization) are ineligible for the EITC.

However, some people can receive the EITC even though neither they nor their children possess a Social Security number that indicates they are authorized to work in the United States. Those individuals were issued Social Security numbers before 2003 because they needed them to obtain drivers' licenses or to open bank accounts. SSA no longer issues Social Security numbers for such purposes, but the agency did not rescind the numbers obtained before the ban. Because those Social Security numbers were provided to people who were not applying for federal benefits, the numbers are considered to be valid for purposes of receiving the EITC.

By contrast, noncitizens can claim the child tax credit as long as they have either Social Security numbers (including those issued to individuals for the sole purpose of receiving government benefits) or individual taxpayer identification numbers, which are issued by the Internal Revenue Service (IRS) to anyone who is required to file a tax return but cannot obtain a Social Security number. Their qualifying children, however, must have a Social Security number, and that number is considered valid only if it was issued by SSA solely to people authorized to work in the United States. After 2025, the requirements for identification numbers for qualifying children will revert to those in effect before 2018: The qualifying child must have a Social Security number (although there are no restrictions on the reason for its issuance) or an individual taxpayer identification number.

The IRS has statutory authority to deny claims for the EITC and, to some extent, the child tax credit if those claims do not include valid Social Security numbers. Under certain circumstances, the IRS can rely on simpler and less costly methods than audits to correct taxpayers' errors. In particular, the IRS is authorized to use "mathematical and clerical error" (or simply "math error") procedures to automatically deny the EITC when tax returns do not include valid Social Security numbers for the taxpayers and their children. Those procedures can also be used to deny the child tax credit if the child's Social Security number is invalid. Using math-error procedures prevents the credits from being paid to taxpayers and does not require the IRS to take further action, although taxpayers retain the right to dispute the IRS's decision.

The Congressional Budget Office projects the annual increases in the number of immigrants unauthorized to work in the United States to be relatively modest over the next decade. That projection reflects the effects of expected economic growth as well as the expected continuation of trends in immigration in recent years.

Option

Under this option, people who are not authorized to work in the United States would not be eligible for either the EITC or the child tax credit. For both credits, taxpayers, spouses, and qualifying children would be required to have Social Security numbers issued to U.S. citizens and noncitizens authorized to work in the United States. The IRS would be authorized to deny the credits using math-error procedures when taxpayers and their children do not have those types of Social Security numbers.

Effects on the Budget

If enacted, the option would raise $24 billion from 2019 through 2028, the staff of the Joint Committee on Taxation estimates. The expiration of certain individual income tax provisions at the end of 2025 affects the pattern of the estimates. Through 2026, revenues are projected to be roughly stable. Beginning in 2027, though, they would rise somewhat. That increase would occur because of the expiration of the provision requiring child tax credit claimants' qualifying children who are not citizens to have Social Security numbers that were issued only to those authorized to work. To some extent, that effect would be offset by the expiration of the temporary expansion of the child tax credit. (Neither effect would be observed until 2027, when taxpayers would file their 2026 tax return and claim the credits.)

The largest sources of uncertainty surrounding the estimate are CBO's projections of the flows of unauthorized immigrants to the United States. Another source of uncertainty concerns the number of unauthorized workers claiming the credits. If, for example, fewer unauthorized immigrants than projected claimed the credits, the option would raise less revenue.

Other Effects

The main advantage of this option is that it would eliminate some of the disparity that currently exists in the credits' eligibility rules, making them less confusing and easier to administer. Under the option, the requirements related to the possession of a valid Social Security number would be the same for both credits: Only taxpayers (and their children) who are authorized to work in the United States—U.S. citizens, lawful permanent residents, or people in the United States on temporary work visas—would be eligible for the EITC and the child tax credit. The IRS would be able to verify those requirements using data it already receives from SSA and immediately matches to tax returns, allowing the agency to prevent payment of the credits to ineligible noncitizens.

A disadvantage of the option is the additional burden it would impose on some individuals. Many noncitizens initially obtained Social Security numbers to receive federal benefits at a time when they were not authorized to work in the United States. If they subsequently became permanent residents or U.S. citizens, they may not have notified SSA of the change in their status. Under this option, those individuals would have to take the additional step of updating their work-authorization status with SSA to receive the EITC or the child tax credit. Those actions would also increase SSA's workload. Many immigrants, however, already have an incentive to inform SSA of changes in their immigration status because doing so allows their employers to confirm that they are authorized to work in the United States through E-Verify (a system administered by the Department of Homeland Security).

The option could be modified in several ways that would either limit or extend its application. As specified, the option would prevent some noncitizens with permanent work authorization from receiving the EITC and the child tax credit because other members of their family are not lawful permanent residents or do not have visas allowing them to work in the United States. For example, the IRS would deny the credits even if one parent was a lawful permanent resident if his or her spouse was not authorized to work in the United States. An alternative approach would be to allow the credits to be paid if only one spouse provides a valid Social Security number, but that approach would raise less revenue than the option would. Another effect of the option is that it would allow noncitizens who were issued Social Security numbers when they had temporary work visas to continue receiving the credits when those visas expired. The option could be modified to limit eligibility for the credits to U.S. citizens and lawful permanent residents, which would generate a greater increase in revenues. However, that restriction would be difficult to administer because Social Security records, which the IRS currently relies upon to verify the identity of taxpayers and which could also be used to determine work status, do not distinguish between noncitizens with temporary work visas and lawful permanent residents.

RELATED OPTION: Revenues, "Lower the Investment Income Limit for the Earned Income Tax Credit and Extend That Limit to the Refundable Portion of the Child Tax Credit" (page 246)

RELATED CBO PUBLICATIONS: *The 2018 Long-Term Budget Outlook* (June 2018), www.cbo.gov/publication/53919; *How Changes in Immigration Policy Might Affect the Federal Budget* (January 2015), www.cbo.gov/publication/49868; *Growth in Means-Tested Programs and Tax Credits for Low-Income Households* (February 2013), www.cbo.gov/publication/43934; *Refundable Tax Credits* (January 2013), www.cbo.gov/publication/43767

Revenues—Option 18

Increase the Payroll Tax Rate for Medicare Hospital Insurance

											Total	
Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2019–2023	2019–2028
Change in Revenues												
Increase rate by 1 percentage point	51.4	80.8	84.2	87.4	90.8	94.2	97.8	100.4	103.6	107.6	394.6	898.3
Increase rate by 2 percentage points	102.3	160.7	167.5	173.9	180.5	187.4	194.5	199.6	206.0	214.1	784.9	1,786.5

Source: Staff of the Joint Committee on Taxation.

This option would take effect in January 2019.

Background

The primary source of financing for Hospital Insurance (HI) benefits provided under Medicare Part A is the HI payroll tax. The basic HI tax is 2.9 percent of earnings. For employees, 1.45 percent is deducted from their paychecks and 1.45 percent is paid by their employers. Self-employed individuals generally pay 2.9 percent of their net self-employment income in HI taxes. Unlike the payroll tax for Social Security, which applies to earnings up to an annual maximum ($128,400 in 2018), the 2.9 percent HI tax is levied on total earnings.

Workers with higher earnings are also subject to a surtax on all earnings above a certain threshold: $200,000 for unmarried taxpayers and $250,000 for married couples who file jointly. At those thresholds, the portion of the HI tax that employees pay increases by 0.9 percentage points, to a total of 2.35 percent. The surtax does not apply to the portion of the HI tax paid by employers, which remains 1.45 percent of earnings, regardless of how much the worker earns.

Over the past 10 years, outlays for the HI program have grown at a much faster pace than revenues derived from the payroll tax. Since 2008, expenditures for HI have generally exceeded the program's total income—including interest credited to the Hospital Insurance Trust Fund—so the trust fund's balances have declined. The Congressional Budget Office projects that if current law remained in place, the balances would generally continue to fall until the HI trust fund was exhausted in 2026.

In 2017, HI receipts from payroll taxes totaled about $256 billion. In CBO's projections, HI receipts rise through 2028 at a rate slightly faster than gross domestic product (GDP), chiefly because wages and salaries are projected to rise as a share of GDP over the next decade.

Option

This option consists of two alternatives. The first alternative would increase the basic HI tax on total earnings by 1.0 percentage point. The second alternative would increase the basic HI tax on total earnings by 2.0 percentage points. Those rate increases would be evenly split between employers and employees. For example, for the 1.0 percentage-point increase, the basic rate for both employers and employees would increase by 0.5 percentage points, to 1.95 percent, resulting in a combined rate of 3.9 percent. The rate paid by self-employed people would also rise to 3.9 percent. For taxpayers with earnings above $200,000 ($250,000 for married couples who file jointly), the HI tax on earnings that exceeded the surtax threshold would increase from 3.8 percent to 4.8 percent. Employees would pay 2.85 percent, and employers would pay the remaining 1.95 percent.

Effects on the Budget

If implemented, the first alternative would increase revenues by $898 billion from 2019 through 2028, according to estimates by the staff of the Joint Committee on Taxation (JCT). JCT estimates that the second alternative would increase revenues by $1,787 billion over the same period, roughly double the increase of the first alternative. Those estimates incorporate the assumption that total compensation would remain unchanged but allow for behavioral responses to the higher tax. (Total compensation comprises taxable wages and benefits, nontaxable benefits, and employers' contributions to payroll taxes.)

If total compensation remained unchanged, then increases in employers' contributions to payroll taxes would have to reduce other forms of compensation. The decrease in taxable wages and benefits would reduce the income base for individual income and payroll taxes, partially offsetting the increase in employers' payroll taxes. The estimates for the option reflect that income and payroll tax offset.

In addition, the higher payroll tax would create an incentive for employers and employees to change the composition of compensation, shifting from taxable compensation to forms of nontaxable compensation. The estimates account for that behavioral response.

The estimates for this option are uncertain primarily because underlying projections of income subject to HI taxes are uncertain. The estimates rely on CBO's projections of the economy over the next decade, particularly projections of wages, income distribution, and employment. Those projections are inherently uncertain.

Other Effects

The main argument in favor of the option is that receipts from the HI payroll tax are currently not sufficient to cover the costs of the program, and increasing that tax would shrink the gap between the program's costs and the revenues that finance it. Each alternative would extend the exhaustion date for the HI trust fund beyond the 10-year projection period. (However, given the uncertainty in projections of Medicare spending, CBO does not make projections of the HI trust fund beyond the 10-year window and therefore cannot estimate its exhaustion date.) Another argument in support of the option is that an increase in the tax rate would be simpler to administer than most other types of tax increases because it would require relatively minor changes to the current tax system.

A drawback of the option is that it would encourage people to reduce the hours they work. When statutory tax rates increase, people have an incentive to work fewer hours because other uses of their time become relatively more attractive. (Increases in statutory tax rates can also cause people to work more hours, because having less after-tax income requires additional work to maintain the same standard of living. On balance, however, CBO estimates that the former effect would be greater than the latter effect.)

Another disadvantage of the option is that it would increase the tax burden of lower-income workers relative to that of workers with higher income. That is because a larger share of the income of lower-income families is, on average, from earnings, which are subject to the HI tax. As a result, an increase in the HI tax would represent a greater proportion of the income of lower-income taxpayers than would be the case for higher-income taxpayers. Moreover, because the option would not make any changes to the Medicare program, the increase in the tax burden would not be offset by greater Medicare benefits when people reached the age of 65.

RELATED OPTION: Revenues, "Increase the Payroll Tax Rate for Social Security" (page 253)

Revenues—Option 19

Increase the Payroll Tax Rate for Social Security

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Revenues												
Increase rate by 1 percentage point	44.7	63.8	66.4	69.1	71.8	74.7	77.6	74.8	82.2	85.3	315.8	715.5
Increase rate by 2 percentage points	88.8	126.8	132.0	137.4	142.8	148.4	154.2	158.6	163.4	169.6	627.8	1,422.1

Source: Staff of the Joint Committee on Taxation.

This option would take effect in January 2019.

The change in revenues would consist of an increase in receipts from Social Security payroll taxes (which would be off-budget), offset in part by a reduction in individual income tax revenues (which would be on-budget).

Background

Social Security—which consists of Old-Age and Survivors Insurance and Disability Insurance—is financed primarily by payroll taxes on employers, employees, and the self-employed. Only earnings up to a maximum, which is $128,400 in calendar year 2018, are subject to the tax. The maximum usually increases each year at the same rate as average wages in the economy. The Social Security tax rate is 12.4 percent of earnings. Employees have 6.2 percent of earnings deducted from their paychecks, and the remaining 6.2 percent is paid by their employers. Self-employed individuals generally pay 12.4 percent of their net self-employment income.

In 2017, Social Security receipts from payroll taxes totaled $850.6 billion. Of that amount, $806.4 billion was from payroll taxes assessed on employers and employees and $44.2 billion was from payroll taxes assessed on self-employed individuals. The Congressional Budget Office projects that receipts from Social Security payroll taxes will fall slightly as a share of gross domestic product (GDP) between 2017 and 2019, in part because the share of earnings above the maximum taxable amount is projected to increase. After that share stabilizes in 2019, receipts from Social Security payroll taxes are projected to rise as a share of GDP. A major reason for that growth is that wages and salaries are projected to rise as a share of GDP over the next decade.

Option

This option consists of two alternative increases to the Social Security payroll tax rate. The first alternative would increase the rate by 1 percentage point. The second alternative would increase it by 2 percentage points. Those rate increases would be evenly split between employers and employees. For example, for the 1 percentage-point increase, the rate for both employers and employees would increase by 0.5 percentage points, to 6.7 percent, resulting in a combined rate of 13.4 percent. The rate paid by self-employed people would also rise to 13.4 percent.

Effects on the Budget

If implemented, the first alternative would increase revenues by $716 billion from 2019 through 2028, according to estimates by the staff of the Joint Committee on Taxation (JCT). JCT estimates that the second alternative would increase revenues by $1,422 billion over the same period. The estimates presented here incorporate the assumption that total compensation remains unchanged but allow for behavioral responses to the higher tax. (Total compensation comprises taxable wages and benefits, nontaxable benefits, and employers' contributions to payroll taxes.)

If total compensation remains unchanged, then increases in employers' contributions to payroll taxes must reduce other forms of compensation. The decrease in taxable wages and benefits would reduce the income base for individual income and payroll taxes, partially offsetting the increase in employers' payroll taxes. The estimates for the option reflect that income and payroll tax offset.

The higher payroll tax would create an incentive for employers and employees to change the composition of compensation, shifting from taxable compensation to forms of nontaxable compensation. The estimates account for that behavioral response.

The estimates for this option are uncertain primarily because of the underlying projections of income subject to Social Security payroll taxes. The estimates rely on CBO's projections of the economy over the next decade, particularly projections of wages, the income distribution, and employment. Those projections are inherently uncertain.

Other Effects

An advantage of this option is that it would provide more revenues to the Social Security program, which, according to CBO's projections, eventually would not have sufficient income to finance the benefits that are due to beneficiaries under current law. If current law remained in place, Social Security tax revenues, which already are less than spending for the program, would grow more slowly than spending for Social Security. CBO projects that the combined Old-Age and Survivors Insurance and Disability Insurance trust funds would be exhausted in calendar year 2031. Each alternative would extend the insolvency date for the trust funds: The 1 percentage-point increase would delay their exhaustion by about four years, to calendar year 2035, and the 2 percentage-point increase would delay their exhaustion by about nine years, to calendar year 2040.

Another argument in support of the option is that an increase in the tax rate would be simpler to administer than most other types of tax increases because it would require relatively minor changes to the current tax system.

A drawback of the option is that it would encourage people to reduce the hours they work. When statutory tax rates increase, people have an incentive to work fewer hours because other uses of their time become relatively more attractive. (Increases in statutory tax rates can also cause people to work more hours, because having less after-tax income requires additional work to maintain the same standard of living. On balance, however, CBO estimates that the former effect would be greater than the latter effect.)

Another disadvantage of the option is that it would increase the tax burden of lower-income workers relative to that of workers with higher income. That is because a larger share of the income of lower-income households is, on average, from earnings that are below the taxable maximum and thus subject to the Social Security payroll tax. As a result, an increase in the Social Security payroll tax would represent a greater proportion of income for lower-income taxpayers than for higher-income taxpayers. Moreover, because the option would not make any changes to Social Security benefits, the increase in the tax burden would not be offset by greater Social Security benefits.

RELATED OPTIONS: Revenues, "Increase the Payroll Tax Rate for Medicare Hospital Insurance" (page 251), "Increase the Maximum Taxable Earnings for the Social Security Payroll Tax" (page 255), "Expand Social Security Coverage to Include Newly Hired State and Local Government Employees" (page 258)

RELATED CBO PUBLICATIONS: *CBO's 2018 Long-Term Projections for Social Security: Additional Information* (September 2018), www.cbo.gov/publication/54428; *The 2018 Long-Term Budget Outlook* (June 2018), www.cbo.gov/publication/53919; *Social Security Policy Options, 2015* (December 2015), www.cbo.gov/publication/51011

Revenues—Option 20

Increase the Maximum Taxable Earnings for the Social Security Payroll Tax

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Raise Taxable Share to 90 Percent												
Change in Outlays	0.1	0.3	0.6	1.0	1.4	1.9	2.5	3.2	4.0	4.9	3.4	19.8
Change in Revenues	23.9	77.0	81.0	83.4	84.9	86.8	89.0	90.9	92.6	95.2	350.2	804.9
Decrease (-) in the Deficit	-23.8	-76.7	-80.4	-82.4	-83.5	-84.9	-86.5	-87.7	-88.6	-90.3	-346.8	-785.1
Subject Earnings Greater Than $250,000 to Payroll Tax												
Change in Revenues	32.7	104.2	111.6	117.6	123.9	131.0	138.7	146.0	153.5	163.4	490.0	1,222.6

Sources: Staff of the Joint Committee on Taxation; Congressional Budget Office.

This option would take effect in January 2019.

The change in revenues would consist of an increase in receipts from Social Security payroll taxes (which would be off-budget), offset in part by a reduction in individual income tax revenues (which would be on-budget). The outlays would be for additional payments of Social Security benefits and would be classified as off-budget.

Background

Social Security—which consists of Old-Age and Survivors Insurance and Disability Insurance—is financed primarily by payroll taxes on employers, employees, and the self-employed. Only earnings up to a maximum, which is $128,400 in calendar year 2018, are subject to the tax. The Social Security tax rate is 12.4 percent of earnings. Employees have 6.2 percent of earnings deducted from their paychecks, and the remaining 6.2 percent is paid by their employers. Self-employed individuals generally pay 12.4 percent of their net self-employment income.

When payroll taxes for Social Security were first collected in 1937, about 92 percent of earnings from jobs covered by the program were below the maximum taxable amount. During most of the program's history, the maximum was increased only periodically, so the percentage varied greatly. It fell to a low of 71 percent in 1965 and by 1977 had risen to 85 percent. Amendments to the Social Security Act in 1977 boosted the amount of covered taxable earnings, which reached 90 percent in 1983. Those amendments also specified that the taxable maximum be adjusted, or indexed, annually to match the growth in average wages. Despite those changes, the percentage of earnings that is taxable has slipped in the past decade because earnings for the highest-paid workers have grown faster than average earnings. Thus, in 2016, about 83 percent of earnings from employment covered by Social Security fell below the maximum taxable amount.

In 2017, receipts from Social Security payroll taxes totaled $850.6 billion. Of that amount, $806.4 billion was from payroll taxes assessed on employers and employees, and $44.2 billion was from payroll taxes that self-employed individuals paid on their earnings. In the Congressional Budget Office's projections, receipts from Social Security payroll taxes fall slightly as a share of gross domestic product (GDP) between 2017 and 2019, in part because the share of earnings above the maximum taxable amount is projected to increase. After that share stabilizes in 2019, receipts from Social Security payroll taxes are projected to rise as a share of GDP. A major reason for that increase is that wages and salaries are projected to rise as a share of GDP over the next decade.

Option

This option considers two alternative approaches that would increase the share of earnings subject to payroll taxes.

The first alternative would increase the taxable share of earnings from jobs covered by Social Security to 90 percent in calendar year 2019. (In later years, the maximum would grow at the same rate as average wages, as it would under current law.)

The second alternative would apply the 12.4 percent payroll tax to earnings over $250,000 in addition to earnings below the maximum taxable amount under current law. The taxable maximum would continue to grow with average wages, but the $250,000 threshold would not change, so the gap between the two would shrink. CBO projects that the taxable maximum would exceed $250,000 in calendar year 2037; after that, all earnings from jobs covered by Social Security would be subject to the payroll tax. The current-law taxable maximum would still be used for calculating benefits, so scheduled benefits would not change under this alternative.

Effects on the Budget

Implementing the first alternative, which would raise the maximum taxable amount to $285,000 in calendar year 2019, would increase revenues by an estimated $805 billion from 2019 through 2028, according to the staff of the Joint Committee on Taxation (JCT). Because Social Security benefits are tied to the amount of earnings on which taxes are paid, however, some of that increase in revenues would be offset by additional benefits paid to people with earnings above the maximum taxable amount under current law. On net, this alternative would reduce federal budget deficits by an estimated $785 billion over the 10-year period. If the maximum taxable amount was adjusted by a different amount, the change in revenues would not necessarily be proportional because earnings are not evenly distributed.

Implementing the second alternative would raise $1,223 billion from 2019 through 2028, according to JCT. The estimates presented here incorporate the assumption that total compensation would remain unchanged but allow for behavioral responses to the higher tax. (Total compensation comprises taxable wages and benefits, nontaxable benefits, and employers' contributions to payroll taxes.)

If total compensation remained unchanged, then increases in employers' contributions to payroll taxes would have to reduce other forms of compensation. The decrease in taxable wages and benefits would reduce the income base for individual income and payroll taxes, partially offsetting the increase in employers' payroll taxes. The estimates for the option reflect that income and payroll tax offset.

In addition, the higher payroll tax would create an incentive for employers and employees to change the composition of compensation, shifting from taxable compensation to forms of nontaxable compensation. The estimates account for that behavioral response.

The estimates for this option are uncertain primarily because of uncertainty surrounding CBO's underlying projections of income subject to Social Security payroll taxes. Those projections rely on CBO's projections of the economy over the next decade—particularly projections of wages, the income distribution, and employment—which are inherently uncertain.

Other Effects

An advantage of either alternative is that it would increase revenues for the Social Security program, which, according to CBO's projections, will not have sufficient income to finance the benefits that are due to beneficiaries under current law. If current law remained in place, Social Security tax revenues, which already are less than spending for the program, would grow more slowly than spending for Social Security. In CBO's long-term projections of the economy and budget under current law, the combined Old-Age and Survivors Insurance and Disability Insurance trust funds are projected to be exhausted in calendar year 2031. The first alternative, which would increase the taxable share of earnings from jobs covered by Social Security to 90 percent, would delay the exhaustion of the combined trust funds by 5 years, to calendar year 2036. The second alternative, which would apply the 12.4 percent payroll tax to earnings over $250,000, would delay the exhaustion of the combined trust funds by 13 years, to calendar year 2044.

In addition, either alternative would make the payroll tax less regressive—that is, each would increase the tax burden on people with higher income. People with earnings above the maximum now pay a smaller percentage of their total earnings in payroll taxes than do people whose total earnings are below the maximum. Making more earnings taxable would increase payroll taxes for those high earners. (That change would also increase benefit payments for affected workers under the first alternative, but the tax increase would be much larger than the increase in benefits.) The second alternative would be more progressive than the first because it would affect only those with earnings above $250,000. (After 2037, when the current-law taxable maximum would exceed that threshold, it would affect those with earnings above the taxable maximum.)

A disadvantage of both alternatives is that raising the earnings cap would weaken the link between the taxes that workers pay into the system and the benefits they receive. That link has been an important aspect of Social Security since its inception. Under the first alternative, the increase in benefits would be modest relative to the increase in taxes, and under the second alternative, workers with higher earnings would pay additional taxes that would not increase their benefits.

Another drawback is that some people—those with earnings between the existing taxable limits and the higher thresholds under the first alternative, and those with earnings above the $250,000 threshold under the second alternative—would earn less after taxes for each additional hour worked. For those people, the decline in after-tax earnings would have two opposing effects. On the one hand, the lower earnings for each additional hour worked would make other uses of time relatively more attractive, so people would tend to work fewer hours. On the other hand, people also would tend to work more hours because having less after-tax income requires additional work to maintain the same standard of living. On balance, CBO estimates that the first effect would be greater than the second effect, and thus people in those earnings ranges would work less. However, people with earnings well above the limit established by the first alternative would not see any reduction in the return on their additional work, but they would have less income after taxes, which would encourage them to work more.

RELATED OPTIONS: Revenues, "Increase the Payroll Tax Rate for Social Security" (page 253), "Expand Social Security Coverage to Include Newly Hired State and Local Government Employees" (page 258)

RELATED CBO PUBLICATIONS: *CBO's 2018 Long-Term Projections for Social Security: Additional Information* (September 2018), www.cbo.gov/publication/54428; *The 2018 Long-Term Budget Outlook* (June 2018), www.cbo.gov/publication/53919; *Social Security Policy Options, 2015* (December 2015), www.cbo.gov/publication/51011

Revenues—Option 21

Expand Social Security Coverage to Include Newly Hired State and Local Government Employees

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Revenues	0.7	2.2	3.8	5.4	6.9	8.5	10.3	12.1	14.0	16.0	19.0	80.0

Source: Staff of the Joint Committee on Taxation.

This option would take effect in January 2019.

The change in revenues would consist of an increase in receipts from Social Security payroll taxes (which would be off-budget), offset in part by a reduction in individual tax revenues (which would be on-budget). In addition, the option would increase outlays for Social Security by a small amount. The estimates do not include those effects on outlays.

Background

Nearly all private-sector workers and federal employees are covered by Social Security, but a quarter of workers employed by state and local governments are not. Under federal law, state and local governments can opt out of enrolling their employees in the Social Security program as long as they provide a separate retirement plan for those workers. (State and local governments may also have their employees participate in both Social Security and a separate retirement plan.) By contrast, all federal employees hired after December 31, 1983, are covered by Social Security and pay the associated payroll taxes. Furthermore, all state and local government employees hired after March 31, 1986, and all federal government employees pay payroll taxes for Hospital Insurance (Medicare Part A).

Paying the Social Security payroll tax for 10 years generally qualifies workers (and certain family members) to receive Social Security retirement benefits. Employees must meet different work-related requirements to qualify for disability benefits or, in the event of their death, to allow certain family members to qualify for survivors' benefits. In 2017, Social Security receipts from payroll taxes totaled $850.6 billion.

Option

Under this option, Social Security coverage would be expanded to include all state and local government employees hired after December 31, 2018. Consequently, all newly hired state and local government employees would pay the Social Security payroll tax. That 12.4 percent tax on earnings, half of which is deducted from employees' paychecks and half of which is paid by employers, funds the Old-Age, Survivors, and Disability Insurance programs.

Effects on the Budget

If implemented, this option would increase revenues by a total of $80 billion from 2019 through 2028, the staff of the Joint Committee on Taxation estimates. That estimate incorporates the assumption that total compensation would remain unchanged but allows for behavioral responses to the higher tax. (Total compensation comprises taxable wages and benefits, nontaxable benefits, and employers' contributions to payroll taxes.)

If total compensation remained unchanged, then increases in employers' contributions to payroll taxes would have to reduce other forms of compensation. The decrease in taxable wages and benefits would reduce the income base for individual income and payroll taxes, partially offsetting the increase in employers' payroll taxes. The estimate for the option reflects that income and payroll tax offset.

In addition, the higher payroll tax would create an incentive for employers and employees to change the composition of compensation, shifting from taxable compensation to forms of nontaxable compensation. The estimate accounts for that behavioral response.

Although extending Social Security coverage to all newly hired state and local government employees would eventually increase the number of Social Security beneficiaries, that increase would have little impact on the federal government's spending for Social Security in the short term. From 2019 through 2028, outlays would increase by only a small amount because most people hired by state and local governments during that period would not begin receiving Social Security benefits for many years. However, the effects on outlays would grow in the following decades. The above estimate does not include any effects on outlays.

The estimate is uncertain because the Congressional Budget Office's underlying projections of income subject to Social Security payroll taxes and the number of workers who are not covered by Social Security are uncertain. Those projections rely on CBO's projections of the economy over the next decade—particularly projections of wages and employment—which are inherently uncertain. The estimate also relies on projections under current law of state and local governments' choices about enrolling workers in Social Security and projections of state and local governments' hiring and retention, which are likewise uncertain.

Other Effects

One argument for implementing this option is that it would slightly enhance the long-term viability of the Social Security program. CBO projects that, if current law remained unchanged, income dedicated to the program would be insufficient to cover benefits specified in law. Under the option, the additional benefit payments for the expanded pool of beneficiaries would amount to less, in the long term, than the additional revenues generated by newly covered employees. That is largely because, under current law, most of the newly hired workers would receive Social Security benefits anyway—either because they held other, covered jobs or because they were covered by a spouse's employment.

Another argument for implementing the option concerns fairness. Social Security benefits are intended to replace only a percentage of a worker's preretirement earnings. That percentage (referred to as the replacement rate) is higher for workers with low career earnings than for workers with higher earnings. But the standard formula for calculating Social Security benefits does not distinguish between people whose career earnings are low and people who only appear to have low career earnings because they spent a portion of their career in jobs that were not covered by Social Security. Under current law, to make the replacement rate more comparable for workers with similar earnings histories, standard benefits are reduced for retired government employees who have spent a substantial portion of their career in employment not covered by Social Security. However, that adjustment is imperfect and can affect various government employees differently. This option would eliminate those inequalities.

Finally, implementing this option would provide better retirement and disability benefits for many workers who move between government jobs and other types of employment. By facilitating job mobility, the option would enable some workers who would otherwise stay in state and local government jobs solely to maintain their public-employee retirement benefits to move to jobs in which they could be more productive. Many state and local government employees are reluctant to leave their jobs because pensions are structured to reward people who spend their entire careers in the same pension system. If their government service was covered by Social Security, they would be less reluctant to change jobs because they would remain in the Social Security system. State and local governments, however, might respond to greater turnover by reducing their investment in workers (by cutting training programs, for example), causing the productivity of state and local government employees to fall.

The main argument against the option concerns the impact it would have on the pension funds of affected state and local governments. That impact would depend on the preexisting structure of state and local government pension plans and how those plans would be restructured in response to this option. State or local governments could potentially have employees participate in Social Security in addition to their existing pension plans. Alternatively, their pension plans for new employees could be reduced or eliminated in response to the expansion of Social Security coverage: New employees would contribute less (or nothing) during their tenure, and they would receive smaller (or no) pension benefits when they retired. Implementing those changes would not be particularly difficult for fully funded pension plans, which could use their current assets to pay benefits for existing employers. However, many state and local government pension plans are underfunded, and such plans would probably need future contributions to fund the benefits received by current retirees or by those about to retire under the existing pension system. Any reduction in future contributions to such plans would increase the financial pressures on them.

RELATED OPTIONS: Revenues, "Increase the Payroll Tax Rate for Social Security" (page 253), "Increase the Maximum Taxable Earnings for the Social Security Payroll Tax" (page 255)

RELATED CBO PUBLICATIONS: *CBO's 2018 Long-Term Projections for Social Security: Additional Information* (September 2018), www.cbo.gov/publication/54428; *The 2018 Long-Term Budget Outlook* (June 2018), www.cbo.gov/publication/53919; *Social Security Policy Options, 2015* (December 2015), www.cbo.gov/publication/51011

Revenues—Option 22

Tax All Pass-Through Business Owners Under SECA and Impose a Material Participation Standard

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Revenues	6.7	12.4	14.0	15.6	17.0	17.9	18.8	19.5	20.2	21.0	65.7	163.1

Source: Staff of the Joint Committee on Taxation.

This option would take effect in January 2019.

Most of the revenues would be off-budget. In addition, the option would increase outlays for Social Security by a small amount. The estimates do not include those effects on outlays.

Background

Under current law, workers with earnings from businesses owned by other people contribute to Social Security and Medicare Part A through the Federal Insurance Contributions Act (FICA) tax. The tax rate for Social Security in 2018 is 12.4 percent of wages and salaries up to $128,400; that threshold increases each year with average wages. For Medicare Part A, the tax rate is 2.9 percent, and there is no ceiling on the amount of wages and salaries taxed. (If wages exceed certain thresholds—$250,000 for married taxpayers who file joint returns and $200,000 for unmarried people—an additional 0.9 percent tax is levied on the amount above the threshold.) The taxes are split equally between the employer and the employee.

By contrast, people with earnings from unincorporated businesses they own themselves contribute to Social Security and Medicare Part A through the Self-Employment Contributions Act (SECA) tax. Their tax base is self-employment income—which, unlike the FICA tax base of wages and salaries, includes some capital income in the form of business profits. The definition of self-employment income depends on whether the business owner is classified as a sole proprietor, a general partner (that is, a partner who is fully liable for the debts of the firm), or a limited partner (a partner whose liability for the firm's debts is limited to the amount he or she invests). Sole proprietors pay SECA taxes on their net business income (that is, receipts minus expenses). General partners pay SECA taxes on their "guaranteed payments" (amounts they are paid by the firm regardless of its profits) and on their share of the firm's net income. Limited partners pay SECA taxes solely on any guaranteed payments they receive and only if those payments represent compensation for labor services.

The definition of limited partners is determined at the state level and, as a result, varies among states. Since the enactment of federal laws distinguishing between the treatment of general and limited partners under SECA, many states have expanded eligibility for limited-partner status from strictly passive investors to certain partners who are actively engaged in the operation of businesses. Furthermore, all states have recognized new types of entities, such as the limited liability company (LLC), whose owners do not fit neatly into either of the two partnership categories.

The SECA tax rate is equal to the combined employer and employee rates for FICA taxes. The 0.9 percent Additional Medicare Tax applies to the SECA tax base as well. Both the $128,400 earnings limit on the Social Security component and the applicable threshold for the additional Medicare tax are reduced by the amount of wages subject to FICA when applied to the SECA tax base.

Unlike owners of unincorporated businesses, owners of S corporations—certain privately held corporations whose profits are not subject to the corporate income tax—pay FICA taxes as if they were employees. S corporations must pay their owners reasonable compensation, as defined in Internal Revenue Service (IRS) regulations, for any services they provide, and the owners must pay FICA taxes on that amount. The net income of the firm, after deducting that compensation, is passed through to the owners, whereupon it is subject to the individual income tax but not to the FICA or the SECA tax.

The IRS reported that 20 million individuals paid SECA taxes in 2016. The Congressional Budget Office estimates that in that year, approximately 3 million S corporation owners were actively involved in running their businesses. In CBO's estimation, that number represents a ceiling on the number of S corporation owners who were subject to the FICA tax.

Option

This option would require the owners of all unincorporated businesses and S corporations to pay SECA taxes and would change the tax base in some cases. Owners of S corporations would no longer pay FICA taxes on their reasonable compensation. And for partners (including LLC members), the SECA tax base would no longer depend on whether the taxpayer was classified as a general partner or a limited partner. For both S corporation owners and partners, the SECA tax base would depend on whether the taxpayer was actively involved in running the business. That active involvement would be determined using the Internal Revenue Code's existing definition of a material participant. That definition specifies several criteria, but one commonly used standard is engagement in the operation of the business for more than 500 hours during a given year. S corporation owners and partners categorized as material participants would pay SECA taxes on both their guaranteed payments and their share of the firm's net income. Those who were not deemed to be material participants but were nonetheless actively involved in running their businesses would pay SECA taxes on their reasonable compensation. All sole proprietors would be considered material participants.

Effects on the Budget

According to the staff of the Joint Committee on Taxation, the option would increase federal revenues by an estimated $163 billion from 2019 through 2028. Because that estimate relies on CBO's economic projections of the economy, which drive estimates of the pass-through business income that would be affected by the option over the next decade, it retains the uncertainty associated with those projections.

The increase in revenues would be due to the increased taxes on owners of S corporations and on limited partners classified as material participants, whose entire share of the firm's net income, instead of just their reasonable compensation or guaranteed payments, would be subject to the SECA tax. To put the effects of the material participation standard in context, CBO has estimated that 65 percent of the partnership income of material participants was included in the SECA tax base in 2004. Under the option, that percentage would increase to 100.

By contrast, the option would lower taxes for the minority of general partners who were not material participants by excluding from SECA taxation their share of the firm's net income in excess of their reasonable compensation. CBO has estimated that 15 percent of the partnership income of nonmaterial participants was included in the SECA tax base in 2004. That percentage would decline under the option; however, because of the reasonable-compensation requirement, it would not fall to zero.

By increasing, on net, the earnings base from which Social Security benefits are calculated, the option also would slightly increase federal spending for Social Security over the long term. (The estimate does not include that effect on outlays, which would be very small over the next decade.)

The estimate reflects anticipated responses by some owners of S corporations and limited partnerships, more of whom would face an incentive to reorganize as C corporations—and thus lower the total amount of taxes they pay—under the option than under current law. The uncertainty surrounding how many businesses would undergo such a conversion under the option adds to the uncertainty of the estimate. That uncertainty about conversions magnifies existing uncertainty about how many businesses will convert to C corporations solely in response to individual and corporate income tax rate reductions under the 2017 tax act.

Other Effects

An advantage of this option is that it would eliminate the ambiguity created by the emergence of new types of business entities that were not anticipated when the laws governing Social Security were last amended. The treatment of partners and LLC members under the SECA tax would be determined entirely by federal law and would ensure that owners who were actively engaged in the operation of a business could not legally exclude a portion of their labor compensation from the tax base. Moreover, because all firms not subject to the corporate income tax would be treated the same, businesses would be more likely to choose their form of organization on the basis of what allowed them to operate most efficiently rather than what minimized their tax liability.

Other arguments in favor of the option are that it would improve compliance with the tax code and reduce the complexity of preparing tax returns for some firms. Under current law, many S corporations have an incentive to minimize their owners' FICA tax liability by paying them less than reasonable compensation. By subjecting S corporation owners to the SECA tax, the option would make it impossible for material participants to benefit from that practice. Even businesses that reorganized as C corporations would have a smaller incentive to pay less than reasonable compensation to their owners because doing so would reduce their deductions and thus increase their corporate income tax liability. In addition, the option would simplify recordkeeping for S corporations whose owners were all deemed to be material participants because reasonable compensation for those owners would no longer need to be estimated.

A disadvantage of the option is that additional income from capital would be subject to the SECA tax, making the tax less like FICA, which applies to virtually no income from capital. Having to pay the SECA tax on profits could deter some people from starting a business, leading them instead to work for somebody else and pay the FICA tax on their wages. The option could also result in new efforts to recharacterize business income as either rental income or interest income, neither of which is subject to the FICA or the SECA tax. Furthermore, by giving more businesses an incentive to switch to C corporation status, the option would ensure that the choice of organizational form was still driven, to some extent, by a desire to minimize tax liability. Finally, the option would place an additional administrative burden on many partnerships and LLCs, because those entities would be required to determine reasonable compensation for any members considered to be nonmaterial participants.

RELATED OPTIONS: Revenues, "Expand the Base of the Net Investment Income Tax to Include the Income of Active Participants in S Corporations and Limited Partnerships" (page 223), "Increase the Payroll Tax Rate for Medicare Hospital Insurance" (page 251), "Increase the Payroll Tax Rate for Social Security" (page 253), "Increase the Maximum Taxable Earnings for the Social Security Payroll Tax" (page 255)

RELATED CBO PUBLICATION: *The Taxation of Capital and Labor Through the Self-Employment Tax* (September 2012), www.cbo.gov/publication/43644

Revenues—Option 23

Increase Taxes That Finance the Federal Share of the Unemployment Insurance System

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Revenues	5.6	7.5	6.8	6.7	0.6	-1.9	-1.4	-1.3	-1.9	-2.5	27.1	18.1

This option would take effect in January 2019.

Background

The unemployment insurance (UI) system is a partnership between the federal government and state governments that provides a temporary weekly benefit to qualified workers who lose their job through no fault of their own. Funding for the state and federal portions of the UI system is drawn from payroll taxes imposed on employers under the State Unemployment Tax Act (SUTA) and the Federal Unemployment Tax Act (FUTA), respectively.

The states administer the UI system, establishing eligibility rules, setting regular benefit amounts, and paying those benefits to eligible people. State payroll taxes vary; each state sets a tax rate schedule and a maximum amount of wages that is subject to taxation. Revenues from SUTA taxes are deposited into dedicated state accounts that are included in the federal budget.

The federal government sets broad guidelines for the UI system, pays a portion of the administrative costs that state governments incur, and makes advances to states that lack the money to pay UI benefits. In addition, during periods of high unemployment, the federal government has often funded, either fully or partially, temporary emergency benefits, supplemental benefits, or both.

Under FUTA, employers pay taxes on up to $7,000 of each worker's wages; the revenues are deposited into several federal accounts. The amount of wages subject to the FUTA tax (the taxable wage base) is not adjusted, or indexed, to increase with inflation and has remained unchanged since 1983. The FUTA tax rate, which is 6.0 percent, is reduced by a credit of 5.4 percent for state UI taxes paid, for a net tax rate of 0.6 percent—or $42 per year for each employee earning at least $7,000 annually.

During and after the last recession, funds in the designated federal accounts were insufficient to pay the emergency and extended benefits authorized by the Congress, to pay the higher administrative costs that states incurred because of the greater number of people receiving benefits, or to make advances to several states that did not have sufficient funds to pay regular benefits. That shortfall necessitated that advances be made from the general fund of the U.S. Treasury to the federal accounts. Some of those advances must be repaid by the states, a process that the Congressional Budget Office expects will take several more years under current law.

In 2017, SUTA revenues were $38 billion and FUTA revenues were $8 billion. CBO projects that if current law remained in place, combined SUTA and FUTA revenues would decrease to $35 billion by 2021, continuing a trend that began in 2012, before rising to $61 billion by 2028. The increase in revenues in later years reflects CBO's expectation that many states would take action to maintain historic ratios of trust fund balances to wages and salaries.

Option

This option would expand the FUTA taxable wage base but decrease the tax rate. Specifically, the option would raise the amount of wages subject to the FUTA tax from $7,000 to $40,000 in 2019 and then index that threshold to the growth in future wages. It would also reduce the net FUTA tax rate, after accounting for the 5.4 percent state tax credit, from 0.6 percent under current law to 0.167 percent.

Expanding the FUTA taxable wage base would also increase SUTA taxes. Because federal law requires that each state's SUTA taxes be levied on a taxable wage base that is at least as large as that under FUTA, nearly all states would have to increase their taxable wage base to $40,000 if this approach was adopted. (The taxable wage base varies considerably from state to state. In 2018, 16 states have a base above $20,000, but only 2—Hawaii and Washington—have taxable wage bases above $40,000.) UI benefits would not be affected.

Effects on the Budget

CBO estimates that this option would raise revenues by $18 billion from 2019 to 2028. Under the option, revenues would rise initially but fall in later years. The initial rise would primarily be attributable to added proceeds from SUTA taxes. Most states would see a substantial increase in their tax bases that, without adjustments to the tax rate, would raise more revenue. CBO expects that beginning in 2020, many states would respond by reducing their UI tax rates but would leave those rates high enough to generate a net increase in revenues over the 2019–2028 period. (States with low UI account balances would be especially likely to allow the increase in the taxable wage base to generate additional revenues without promptly lowering UI tax rates.) The extra revenues generated during the initial years would also leave the states with larger trust fund balances than CBO projects they would have otherwise. That would reduce the need for states to raise revenues to maintain historic ratios of trust fund balances to wages and salaries. As a result, in later years, estimated revenues under this option are lower than CBO projects they would be under current law.

The estimate for this option is uncertain for two key reasons. First, the estimate relies on CBO's projections of the economy, including projections of labor force characteristics and wages and salaries, over the next decade. For example, if employment is lower than expected, fewer workers will be paying the FUTA and SUTA taxes; in that case, changes in the tax rates would have a smaller impact on revenues. Second, the estimate relies on projections of how states would respond to an increase in the tax base and to changes in their UI trust fund balances.

Other Effects

The main advantage of this option is that it would improve the financial condition of the federal portion of the UI system. By expanding the taxable wage base, it would also improve the financial condition of state UI systems. The additional revenues resulting from this option would allow federal UI accounts to more rapidly repay the outstanding advances from the Treasury's general fund and would better position those accounts to finance benefits during future recessions. By reducing states' reliance on transfers from the general fund, this option would decrease what are effectively loans from all taxpayers (including nonworkers) to workers who benefit from having insurance against unemployment.

An argument against this option is that employers would generally pass the increased FUTA taxes on to workers in the form of reduced earnings. By reducing workers' after-tax pay, this option might induce some people to drop out of, or choose not to enter, the workforce. Moreover, for some people in the workforce, the option would increase marginal tax rates by a small amount. (The marginal tax rate is the percentage of an additional dollar of income from labor or capital that is paid in taxes.) Because the increase in marginal tax rates would reduce the share of returns from additional work that those people could keep, CBO estimates that, on balance, it would tend to cause people to work less than they would have otherwise. However, given the small changes in after-tax pay and marginal tax rates that would result from this option, the effects on labor force participation and hours worked would probably be quite small.

The combination of a single tax rate and low thresholds on the amount of earnings subject to the tax makes the FUTA tax regressive—that is, FUTA taxes measured as a share of earnings decrease as earnings rise. Even so, because workers with lower prior earnings receive, on average, UI benefits that are a higher fraction of those earnings, the benefits are progressive. If taxes and benefits are considered together, the UI system is generally thought to be roughly proportional—neither progressive nor regressive—under current law. This option would reduce the regressivity of the FUTA tax.

RELATED OPTION: Revenues, "Include Employer-Paid Premiums for Income Replacement Insurance in Employees' Taxable Income" (page 229)

RELATED CBO PUBLICATION: *Unemployment Insurance in the Wake of the Recent Recession* (November 2012), www.cbo.gov/publication/43734

Revenues—Option 24

Increase the Corporate Income Tax Rate by 1 Percentage Point

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Revenues	4.6	6.8	7.8	8.4	9.5	10.4	11.2	11.9	12.7	13.0	37.1	96.3

Source: Staff of the Joint Committee on Taxation.

This option would take effect in January 2019.

Background

Following the enactment of the 2017 tax act, corporations that are subject to the U.S. corporate income tax face a single statutory rate of 21 percent. A corporation computes its taxable income by subtracting certain deductions from its gross income—for example, wages and the costs of goods sold, as well as depreciation for investment and most interest paid to the firm's bondholders. Corporations may also apply allowable tax credits against the amount of taxes they owe. After paying the corporate income tax, corporations can either retain their remaining profits or distribute them to shareholders. Some distributed profits are then taxed again under the individual income tax system as dividends or capital gains.

In general, the 21 percent tax rate applies to the taxable income of corporations earned from conducting business within the United States. Some income earned abroad is also taxed by the United States. The tax treatment of foreign income depends on its characteristics. Some income is taxed at the full U.S. statutory rate, and some is taxed at a reduced rate. In either case, taxpayers may claim a foreign tax credit that limits the extent to which that income is subject to both foreign and U.S. taxation. The foreign tax credit is subject to limits that are designed to ensure that the total amount of all credits claimed does not exceed the amount of U.S. tax that otherwise would have been due.

In 2017, when corporations were subject to a corporate income tax rate of up to 35 percent, receipts from corporate income taxes totaled $297 billion. Partly as a result of the 2017 tax act's reduction of that rate to 21 percent, tax receipts will decrease to $276 billion in 2019, in the Congressional Budget Office's estimation. Those receipts are projected to grow faster than gross domestic product through 2025 and then grow at the same rate thereafter.

Option

This option would increase the corporate income tax rate by 1 percentage point, to 22 percent.

Effects on the Budget

The option would increase revenues by $96 billion from 2019 to 2028, the staff of the Joint Committee on Taxation estimates.

The estimate for this option reflects changes in the use of tax credits. An increase in the corporate tax rate would increase corporations' ability to use tax credits, rather than carrying them forward to a future year, to offset some of the additional corporate tax liabilities arising from the higher tax rate. That use of credits would reduce revenues from the higher corporate income tax rate.

The estimate also incorporates firms' responses to the higher tax rate. The option would increase corporations' incentives to adopt strategies to reduce the amount of taxes they owe. Those anticipated responses make the estimated increase in revenues smaller than it would be otherwise.

The estimate for this option is uncertain because the underlying projections of the economy, including corporate profits and taxable income, are uncertain. CBO's projections of the economy over the next decade and projections of taxable corporate income under current law are particularly uncertain because they reflect recently enacted changes to the tax system by the 2017 tax act. Additionally, estimates of how corporations would respond to the option are based on observed responses to prior changes in tax law, which might differ from the responses to the change considered here.

Other Effects

The major argument in favor of this option concerns its simplicity. As a way to raise revenues, an increase in the corporate income tax rate would be easier to implement than most other types of business tax increases because it would require only minor changes to the current tax-collection system.

The option would also increase the progressivity of the tax system to the extent that the owners of capital, who tend to have higher income than other taxpayers, bear the burden of the corporate income tax. (However, because the corporate tax reduces capital investment in the United States, it reduces workers' productivity and wages relative to what they otherwise would be, meaning that at least some portion of the economic burden of the tax over the longer term falls on workers—making an increase in corporate tax rates less progressive than it would be if that burden was fully borne by the owners of capital. That effect on capital investment is not reflected in the revenue estimate.)

An argument against the option is that it would reduce economic efficiency by exacerbating tax-related distortions of firms' decisions. The corporate income tax distorts firms' choices about how to structure their organizations and whether to finance investment by issuing debt or by issuing equity. Increasing the corporate income tax rate would raise the overall tax rate on corporate income. As a result, it would be more advantageous for some firms to organize so that they were no longer subject to the corporate income tax (and were instead taxed only under the individual income tax as an S corporation or partnership) solely to reduce their tax liabilities. Raising the corporate tax rate would also increase the value of deductions. As a result, companies might increase their reliance on debt financing because interest payments, unlike dividend payments to shareholders, can be deducted. Carrying more debt might increase some companies' risk of default.

Another concern that might be raised about the option is that it would make it less attractive to earn income in the United States relative to earning income abroad. Tax rate differences among countries can influence businesses' choices about how and where to invest; to the extent that firms shift their investment and activities to countries with low taxes with the goal of reducing their tax liability at home, economic efficiency declines because firms are not allocating resources to their most productive use. Tax rate differences among countries also create an incentive for businesses to shift reported income to lower-tax countries without changing their actual investment decisions or moving their activities. That practice, known as "profit shifting," erodes the corporate tax base and requires tax planning that wastes resources. Increasing the corporate rate would strengthen those incentives to shift investment and reported income abroad. However, other factors, such as the skill level of a country's workforce and its capital stock, also affect corporations' decisions about where to incorporate and invest.

RELATED CBO PUBLICATIONS: *An Analysis of Corporate Inversions* (September 2017), www.cbo.gov/publication/53093; *International Comparisons of Corporate Income Tax Rates* (March 2017), www.cbo.gov/publication/52419; *Taxing Capital Income: Effective Marginal Tax Rates Under 2014 Law and Selected Policy Options* (December 2014), www.cbo.gov/publication/49817; *Taxing Businesses Through the Individual Income Tax* (December 2012), www.cbo.gov/publication/43750; Jennifer C. Gravelle, *Corporate Tax Incidence: Review of General Equilibrium Estimates and Analysis,* Working Paper 2010-03 (May 2010), www.cbo.gov/publication/21486; William C. Randolph, *International Burdens of the Corporate Income Tax*, Working Paper 2006-09 (August 2006), www.cbo.gov/publication/18067

Revenues—Option 25

Repeal Certain Tax Preferences for Energy and Natural Resource–Based Industries

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Revenues												
Repeal the expensing of exploration and development costs	0.3	0.4	0.4	0.4	0.4	0.3	0.2	*	*	*	1.9	2.3
Disallow the use of the percentage depletion allowance	0.4	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	2.8	6.1
Both alternatives above	0.7	1.0	1.0	1.0	1.0	0.9	0.9	0.7	0.7	0.7	4.7	8.4

Source: Staff of the Joint Committee on Taxation.

This option would take effect in January 2019.

* = between zero and $50 million.

Background

Extractive industries that produce oil, natural gas, coal, and hard minerals receive certain tax preferences relative to other industries. In particular, extractive industries receive more favorable tax treatment with regard to the timing of when costs can be deducted from taxable income.

One preference allows firms in the extractive industries to fully deduct (or "expense") certain costs in the year in which they are incurred. Producers of oil, gas, coal, and minerals are allowed to expense some of the costs associated with exploration and development. The costs that can be expensed include, in some cases, those related to excavating mines, drilling wells, and prospecting for hard minerals. Specifically, under current law, integrated oil and gas producers (that is, companies with substantial retailing or refining activity) and corporate coal and mineral producers can expense 70 percent of their costs; those companies are then able to deduct the remaining 30 percent over a period of 60 months. Independent oil and gas producers (companies without substantial retailing or refining activity) and noncorporate coal and mineral producers can fully expense their costs.

By contrast, firms in other industrial sectors are generally allowed to deduct only a portion of the investment costs they incurred that year and in previous years. In such cases, the percentage of the costs that can be deducted from taxable income in each year depends on the type of investment. There are exceptions, however. Firms with relatively small amounts of qualifying capital investments, primarily equipment, can expense the full costs of those items in the year in which they are incurred. (That exception is generally referred to as section 179 expensing.) In addition, a temporary provision included in the 2017 tax act (known as bonus depreciation) allows most of the costs of equipment to be expensed through 2022. After that, the portion of investments that can be expensed as bonus depreciation will gradually be reduced until the provision expires at the end of 2026.

A second preference for extractive industries concerns how cost-recovery deductions for natural resources are calculated. Extractive companies, unlike companies in other natural resource industries, can choose between using the cost depletion method, which allows for the recovery of investment costs as income is earned from those investments, or percentage depletion, which allows companies to deduct from their taxable income between 5 percent and 22 percent of the dollar value of material extracted during the year, depending on the type of resource and up to certain limits. (For example, oil and gas companies' eligibility for the percentage depletion allowance is limited to independent producers who operate domestically; for those firms, only the first 1,000 barrels of oil—or, for natural gas, oil equivalent—per well, per day, qualify, and the allowance is limited to 65 percent of overall taxable income.) The value of deductions allowed under the cost depletion method is limited to the value of the land and improvements related to extraction. Because the percentage depletion allowance is not limited in that way, it can be more generous than the cost depletion method. For each property they own, firms take a deduction for whichever is more generous: the percentage depletion allowance or the amount prescribed by the cost depletion system. By contrast, companies in other natural resource industries have less flexibility in how they can deduct their investment costs.

Option

This option consists of two approaches to limiting tax preferences for extractive industries. The first approach would replace the expensing of exploration and development costs for oil, gas, coal, and hard minerals with the methods for deducting costs that apply in other industries. (The option would still allow other costs that are unique to extractive industries, such as those associated with unproductive wells and mines, to be expensed.) The second approach would eliminate percentage depletion, forcing all companies to use cost depletion rather than choose the more generous of the two.

Effects on the Budget

The first approach would increase revenues by $2 billion over the 2019–2028 period, according to estimates by the staff of the Joint Committee on Taxation (JCT). The effect would be smaller in later years, even with the phasedown of bonus depreciation, because eliminating expensing would change only the timing of when costs were deducted: The option would reduce the deductions that could be taken in the year costs were incurred, but that would result in higher deductions in later years. The second approach would raise $6 billion over the 10-year period, according to JCT. If the two approaches were combined, revenues would increase by $8 billion over that time. All estimates account for reductions in the activities that would otherwise have received a tax preference in response to the less generous tax treatment.

The estimates for this option are uncertain for two key reasons. First, the projections of taxable income in extractive industries largely rely on the Congressional Budget Office's projections of total income, the size of different sectors within the economy, and energy prices. Those projections are subject to considerable uncertainty. The estimates also rely on estimates of how firms in extractive industries would change their investment decisions in response to the changes in tax policy, which are likewise uncertain.

Other Effects

The principal argument in favor of this option is that the two major tax preferences for extractive industries distort the allocation of society's resources in two key ways. First, for the economy as a whole, the preferences encourage an allocation of resources between the extractive industries and other industries that does not reflect market outcomes. When making investment decisions, companies take into account not only the market value of the output but also the tax advantage that expensing and percentage depletion provide. The tax preferences thus encourage some investments in drilling and mining that produce output with a smaller market value than similar investments would produce elsewhere. Second, the preferences encourage producers to extract more resources in a shorter amount of time. In the case of oil, for example, that additional drilling makes the United States less dependent on imported oil in the short run, but it accelerates the depletion of the nation's store of oil and could cause greater reliance on foreign producers in the long run.

An argument against this option is that it treats expenses that might be viewed as similar in different ways. In particular, exploration and development costs for extractive industries can be seen as analogous to research and development costs, which currently can be expensed by all businesses. A second argument against this option is that encouraging producers to continue exploring and developing domestic energy resources may enhance the ability of U.S. households and businesses to reduce their reliance on energy from other countries.

Another argument against this option is that it would alter permanent tax preferences for extractive industries but would not make any changes to temporary tax preferences for the renewable-energy sector. This volume, however, does not include options to eliminate or curtail temporary tax preferences. Under current law, temporary tax preferences for the renewable-energy sector, such as tax credits for investment in renewable energy, are scheduled to expire over the next several years; consequently, eliminating those preferences would not have a significant effect on deficits over the coming decade. Nonetheless, some temporary tax preferences are frequently extended and therefore resemble permanent tax preferences. For example, the tax credit for renewable-energy production is classified as temporary but has been in effect since 1992. JCT estimates that if policymakers extended that credit so that it remained in place from 2022 through 2028, federal revenues would be reduced by about $11 billion over that period. Limiting temporary tax preferences for renewable-energy sources would further reduce distortions in the way resources are allocated between the energy sector and other industries, as well as within the energy sector. However, producing energy from renewable sources may yield wider benefits to society that producers do not take into account, such as reductions in pollution or in dependence on foreign sources of energy as domestic reserves are depleted. In that case, preferential tax treatment could improve the allocation of resources.

RELATED OPTION: Revenues, "Require Half of Advertising Expenses to Be Amortized Over 5 or 10 Years" (page 273)

RELATED CBO PUBLICATIONS: *Federal Support for the Development, Production, and Use of Fuels and Energy Technologies* (November 2015), www.cbo.gov/publication/50980; *Energy Security in the United States* (May 2012), www.cbo.gov/publication/43012

Revenues—Option 26

Repeal the "LIFO" and "Lower of Cost or Market" Inventory Accounting Methods

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Revenues	6.5	13.0	13.0	13.0	7.0	1.0	1.1	1.1	1.1	1.1	52.5	57.9

Source: Staff of the Joint Committee on Taxation.

This option would take effect in January 2019.

Background

To compute its taxable income, a business must first deduct from its receipts the cost of purchasing or producing the goods it sold during the year, also known as the cost of goods sold. Most companies calculate the cost of the goods they sell in a year by adding the value of the inventory at the beginning of the year to the cost of goods purchased or produced during the year and then subtracting from that total the value of the inventory at the end of the year. To determine the value of its year-end inventory, a business must distinguish between goods that were sold from inventory that year and goods that remain in inventory. The tax code allows firms to choose from among several approaches for identifying and determining the value of such goods.

Firms can value items in their inventory on the basis of the cost of acquiring those goods. There are several approaches for assigning a cost to an item of inventory. To itemize and value goods in stock, firms can use the "specific identification" approach, which requires a detailed physical accounting in which each individual item in inventory is tracked and is matched to its actual cost (that is, the cost to purchase or produce that specific item). Other approaches do not require a firm to track each specific item of inventory. One alternative approach—"last in, first out" (LIFO)—permits them to assume that the last goods added to the inventory were the first ones sold. Under that approach, the value assigned to goods sold from inventory should approximate their current market value (that is, the cost of replacing them). Yet another alternative approach—"first in, first out" (FIFO)—is based on the assumption that the first goods sold from a business's inventory were the first to be added to that inventory.

Firms that do not use the LIFO approach to assign costs can value inventory using the "lower of cost or market" (LCM) method. The LCM method allows firms to use the current market value of an item (that is, the current-year cost to reproduce or repurchase it) in their calculation of year-end inventory values if that market value is less than the cost assigned to the item. In addition, businesses can qualify for the "subnormal goods" method of inventory valuation, which allows a company to value inventory below cost if its goods cannot be sold at cost because they are damaged or flawed.

In 2013, businesses valued their combined year-end inventory at more than $2.1 trillion, according to the Internal Revenue Service. Corporations and partnerships held 98 percent of that inventory. Among the 1.6 million corporations and partnerships reporting information on inventory valuations, almost all used a cost-based method to value at least some portion of their inventory, approximately one-third made use of the LCM method for at least some goods, and more than 7,000 indicated that they had designated some inventory as subnormal goods. The LIFO approach was used by about 12,000 businesses to value approximately $290 billion of inventory.

Option

This option would eliminate the LIFO approach to identifying inventory, as well as the LCM and subnormal-goods methods of inventory valuation. Businesses would be required to use either the specific-identification or the FIFO approach to account for goods in their inventory and to set the value of that inventory on the basis of cost. Those changes would be phased in over a period of four years.

Effects on the Budget

If implemented, the option would increase revenues by a total of $58 billion from 2019 through 2028, the staff of the Joint Committee on Taxation estimates.

The annual increase in revenues would be substantially larger from 2019 through 2023 than over the remainder of the 10-year period. That pattern reflects the effects of the option on the valuation of existing inventory. Companies that use approaches that would be eliminated by this option to identify inventory generally end up with lower taxable profits than they would using other approaches. Switching to another approach would force companies to revalue their existing inventory. That would cause a relatively large increase in taxable income during the four years over which the change was phased in and one additional year, because of variation in the timing of the financial year among companies. After the revaluation of existing inventory has occurred, the effect on revenues would be relatively small because companies could use only the specific-identification or FIFO approach to value their inventory going forward.

The estimate for this option is uncertain because it relies on the Congressional Budget Office's 10-year projections of corporate profits, investment, and inflation, which are inherently uncertain. In addition to those economic factors, the estimate depends on projections of firms' choices of inventory-valuation approaches. Those choices are also uncertain.

Other Effects

The main argument for this option is that it would align tax accounting rules with the way businesses tend to sell their goods. Under many circumstances, firms prefer to sell their oldest inventory first to minimize the risk that the products will become obsolete or damaged while in storage. In such cases, allowing firms to use alternative approaches to identify and value their inventories for tax purposes allows them to reduce their tax liabilities without changing their economic behavior. Under the LIFO approach, companies defer taxes on real (inflation-adjusted) gains when the prices of their goods are rising relative to general prices. Firms that use the LIFO approach can value items sold out of inventory on the basis of costs associated with newer—and more expensive—items when, in fact, the actual items sold may have been acquired or produced at a lower cost at some point in the past. By deducting those higher costs as the cost of production, firms can defer paying taxes on the amount their goods have appreciated until those goods are sold.

Another argument for this option is that the LCM and subnormal-goods methods of inventory accounting treat losses and gains asymmetrically by allowing firms to immediately recognize losses in the value of inventory but not requiring them to recognize gains. The LCM method will reduce the value of a business's year-end inventory if the market value of any item in the inventory is less than its assigned cost. Similarly, the subnormal-goods method of inventory valuation allows firms to immediately deduct the loss in a good's value, lowering the value of their year-end inventory. In either case, that lower value increases the deduction for the cost of goods sold and reduces taxable income. In effect, those methods allow firms to immediately deduct from taxable income the losses they incur from the decline in the value of their inventory without requiring them to include gains in the value of their inventory in taxable income.

An argument against this option is that the LIFO approach limits the effects of inflation on taxable income. When items sold from inventory are valued on the basis of past costs, price increases that occur between the time the inventory is purchased and the time its value is assessed raise taxable income. That effect tends to be greater under the FIFO approach than the LIFO approach because the latter values items sold from inventory using the purchase prices of more recently acquired goods, thus deferring the effects of inflation on taxable income. However, other elements of the corporate income tax also treat gains that are attributable to inflation as taxable income.

Another argument against this option is that the LCM and subnormal-goods methods of inventory valuation allow the value assigned to inventory to better reflect real changes in the value of underlying assets.

Revenues—Option 27

Require Half of Advertising Expenses to Be Amortized Over 5 or 10 Years

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Revenues												
Require half of advertising expenses to be amortized over 5 years	9.4	16.8	12.8	8.5	4.2	2.0	2.1	2.2	2.2	2.3	51.7	62.5
Require half of advertising expenses to be amortized over 10 years	10.6	20.4	18.8	17.2	15.5	13.7	11.9	10.1	8.1	6.1	82.5	132.4

Source: Staff of the Joint Committee on Taxation.

This option would take effect in January 2019.

Background

Business expenses can generally be categorized as either investments, which create assets whose value persists over a multiyear period, or current expenses, which go toward goods or services and do not generate any assets because the value of those goods or services dissipates during the first year after they are purchased. For example, the cost of a new piece of equipment is an investment, but routine maintenance of that equipment is a current expense. Investments and current expenses are often treated differently for tax purposes. For example, current expenses can be deducted from income in the year they are incurred, but some investment costs, such as the cost of constructing buildings, must be deducted over a multiyear period. The deductibility of many other investments is scheduled to change over the next decade under current law. For example, research and development costs incurred before 2022 are immediately deductible, but such costs incurred in 2022 and beyond must be amortized (that is, deducted in equal amounts) over five years. In addition, equipment costs are immediately deductible through 2022, but increasing shares of such costs will revert to multiyear recovery periods from 2022 through 2027, when immediate deductions will be limited to companies investing amounts below a specific threshold.

Advertising is treated by the tax system as a current expense and can therefore be immediately deducted. However, the intent of advertising varies. Some types of advertising are designed to move inventory over the short term (for example, by publicizing a sale that will last one week) and, like other current expenses, do not create longer-term value. Advertising can also create and enhance brand image—an intangible asset that retains value over a multiyear period. That type of advertising expense is more similar to an investment.

To the extent that advertising creates an intangible asset, the ability to deduct the cost immediately makes the effective tax rate on income from the investment lower than that for assets with multiyear cost-recovery periods. (Effective tax rates measure the impact of statutory tax rates and other features of the tax code in the form of a single rate that applies over the life of an investment.) The Congressional Budget Office has estimated that the effective tax rate on income from equity-financed purchases of brand-building advertising by businesses subject to the corporate income tax will be 8 percent for the foreseeable future. Once the temporary provisions of the 2017 tax act have expired, that rate will be lower than the effective tax rate on any other type of investment.

According to the Internal Revenue Service, in 2013, corporations deducted $285 billion in advertising expenses, or a little more than 1 percent of their business receipts. Since 2001, advertising expenses have been growing slightly slower than gross domestic product (GDP).

Option

This option consists of two alternatives. Both would recognize half of advertising expenses as current expenses, which can be immediately deducted. The other half would be treated as an investment in brand image and would be amortized over a period of years. Under the first alternative, that period of amortization would be 5 years; under the second alternative, it would be 10 years.

Effects on the Budget

The first alternative would increase revenues by $63 billion from 2019 through 2028, the staff of the Joint Committee on Taxation estimates. The second alternative would increase revenues by $132 billion over the same period.

The pattern of the revenue effects is quite different for the two alternatives. Under the first alternative, the vast majority of the revenue increase would occur in the first five years. In the first year, businesses would claim 60 percent of the advertising expenses they incurred that year (the 50 percent not subject to amortization plus an additional 10 percent representing one-fifth of the 50 percent subject to amortization). By the sixth year, the businesses would still claim 60 percent of the current-year expenses but, in addition, would claim 10 percent of expenses incurred in each of the prior four years. If advertising expenses did not grow each year, the amount claimed in the sixth year would equal the amount they can deduct under current law; as a result, there would be no revenue effect after the fifth year. However, because advertising expenses do grow each year, the projected revenue effects from 2024 on reflect that growth.

Under the second alternative, the initial amount of deductible expenses would be 55 percent of the current-year expense. For each of the next nine years, the deductible expense would ratchet up to account for 5 percent of expenses incurred in each of the prior years. The equilibrium reached in the sixth year under the first alternative would not be reached until the 11th year (2029) under the second alternative. After that, any positive effect on revenues would be due to the growth in advertising expenses.

The estimates for this option are uncertain for two key reasons. First, the estimates rely on CBO's projections of GDP and taxable corporate profits over the next decade under current law, which are uncertain. Second, accounting for how taxpayers might adjust their advertising expenses in response to the option introduces additional uncertainty.

Other Effects

An argument in favor of this option is that it would, once the temporary cost-recovery provisions of the 2017 tax act have expired, result in a more uniform treatment of different types of investments. A portion of advertising expenses serve to develop brand image and therefore more closely resemble investments than current expenses. What that portion is, however, has proved difficult to identify—the option's 50 percent rule mirrors other proposals that have been made. (Descriptions of those proposals can be found in Joint Committee on Taxation 2014; Senate Committee on Finance 2013.) By amortizing half of advertising expenses, the option would treat investments in brand image similarly to investments in other types of assets whose costs must be deducted over time. Treating investments similarly improves economic efficiency because it encourages businesses to choose investments on the basis of how they will improve productivity instead of how they will reduce a business's tax liability.

An argument against the option is that treating exactly 50 percent of advertising expenses as an investment ignores differences in how businesses utilize advertising. Retailers that primarily use advertising to inform consumers of sales would be required to amortize expenses that are not true investments. That would effectively raise the cost of short-term advertising, thereby hindering their ability to reduce their inventory. By contrast, manufacturers who mainly use advertising to build brand image would still be able to immediately deduct some of those investments. Furthermore, most research finds that the value of brand image typically declines more rapidly than implied by either the 5- or the 10-year amortization schedules. Particularly in the case of 10-year amortization, that could make the effective tax rate for brand-building advertising higher than the rate for other types of assets, which would undercut the uniformity argument. The option would also add to businesses' reporting burdens: In their financial statements, publicly traded corporations typically report the costs of advertising as a current expense, in accordance with generally accepted accounting principles.

Another effect of the option would be to reduce the amount businesses spend on advertising. That would hinder economic efficiency to the extent that advertising by businesses provides useful information to consumers.

However, to the extent that the content of such advertising is misleading, reducing its volume could improve economic efficiency. Furthermore, if businesses spent less on advertising, the price of advertising would decline, and nonbusiness entities would probably spend more on it. Such advertising would have both positive and negative effects on economic efficiency, depending on the usefulness and accuracy of its content.

RELATED OPTION: Revenues, “Repeal Certain Tax Preferences for Energy and Natural Resource–Based Industries” (page 268)

RELATED CBO PUBLICATION: *How Taxes Affect the Incentive to Invest in New Intangible Assets* (November 2018), www.cbo.gov/publication/54648

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Revenues—Option 28

Repeal the Low-Income Housing Tax Credit

											Total	
Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2019–2023	2019–2028
Change in Revenues	0.1	0.5	1.4	2.4	3.7	5.0	6.6	8.2	9.9	11.5	8.1	49.4

Source: Staff of the Joint Committee on Taxation.

This option would take effect in January 2019.

Background

Real estate developers who provide rental housing to people with low income may qualify for low-income housing tax credits (LIHTCs), which are designed to encourage investment in affordable housing. The credits cover a portion of the costs of constructing new housing units or substantially rehabilitating existing units; however, the credits cannot be claimed until the properties are completed and occupied. The taxpayers who claim the credits are usually investors in those properties, who provide developers with funding for the construction or rehabilitation in exchange for the credits. LIHTCs can be used to lower federal tax liability over a period of 10 years.

For a property to qualify for the credits, developers must agree to meet two requirements for at least 30 years. First, they must set aside a certain percentage of rental units for people whose income is below a certain threshold—either 20 percent of a project's units for people with income below 50 percent of the area's median income or 40 percent of the units for people with income below 60 percent of the median. (Developers can also set aside 40 percent of the units for a group of people whose average income is not above 60 percent of the area's median income, as long as no one person in that group has an income above 80 percent of the area's median income.) Second, developers must agree to limit the rent they charge on the units occupied by low-income people to 30 percent of a set portion of the area's median income—either 50 percent or 60 percent, depending on the developer's choice regarding the first requirement.

There are two types of credits. One is reserved for projects that receive financing through tax-exempt bonds; it generally equals up to 30 percent of the costs allocable to the set-aside units. The other type of credit generally equals up to 70 percent of costs allocable to the set-aside units. For qualifying projects in census tracts determined by the Department of Housing and Urban Development to have a large proportion of low-income households, the two types of credits cover more of those costs—up to 39 percent and up to 91 percent, respectively.

Each year, the federal government allocates funding for the 70 percent credit to each state on the basis of its number of residents. (Allocations of funding for the 30 percent credit are governed by per-state limits on the issue of tax-exempt bonds.) In 2003, that funding was set at $1.75 per resident or a minimum value of $2 million per state; those amounts were adjusted for inflation in each subsequent year through 2017. In 2018, that funding formula would have provided $2.40 per resident or a minimum of nearly $3 million per state; however, under the 2018 Consolidated Appropriations Act, states will receive an additional 12.5 percent in funding in each year from 2018 through 2021. Thus, the staff of the Joint Committee on Taxation (JCT) estimates that the tax expenditure for the LIHTC would increase over time.

Option

This option would repeal the LIHTC starting in 2019, although real estate investors could continue to claim credits granted before 2019 until their eligibility expired.

Effects on the Budget

Repealing the LIHTC would increase revenues by $49 billion from 2019 through 2028, according to JCT's estimates. Over that period, revenues would increase as the number of outstanding 10-year credits granted before 2019 declined.

The estimate for this option is uncertain because three factors make it difficult to anticipate exactly when or whether LIHTCs will be used. First, states generally fail to allocate a small number of credits each year, and those credits are put to use in other states in the following year. Second, developers lose allocated credits if their projects are not completed and occupied by the end of the second calendar year after the credits are allocated. Third, once developers complete a project and it is occupied, investors may delay their use of credits by one year.

Other Effects

One argument for repealing the LIHTC is that there are alternative ways to help people with low income obtain safe, affordable housing, generally at less cost to the government. For instance, the Housing Choice Voucher program—commonly referred to as Section 8 after the part of the legislation that authorized it—provides vouchers that help families pay rent for housing they choose, provided it meets minimum standards for habitation. The federal government sets limits on the amount of assistance provided by the vouchers. Such vouchers are typically less expensive for the government to provide than LIHTCs, primarily because in most housing markets where low-income households are situated, the costs of constructing a new building or substantially renovating an existing building are higher than the costs of simply using an existing building. (Other forms of federal housing assistance—project-based rental assistance and public housing—tend to be less expensive than the LIHTC for the same reason.) Further, people with very low income often cannot afford even the reduced rents in the set-aside units of LIHTC projects without additional subsidies.

An argument against implementing the option is that landlords might be less willing to accept vouchers in areas experiencing growing strength in their housing markets. LIHTCs could be more effective at preserving low-income housing in such areas because they are provided on the basis of 30-year contracts. In addition, by supporting the construction of new buildings and the substantial rehabilitation of existing buildings, LIHTCs can help improve neighborhoods. For example, some research suggests that the use of LIHTCs in blighted neighborhoods can increase property values near newly constructed buildings (Ellen and others 2007). However, because those benefits may be limited to the immediate neighborhoods, such projects might be more appropriately funded by local or state governments rather than the federal government.

RELATED OPTIONS: Discretionary Spending, "Increase Payments by Tenants in Federally Assisted Housing" (page 182), "Reduce Funding for the Housing Choice Voucher Program or Eliminate the Program" (page 184)

RELATED CBO PUBLICATIONS: *Federal Housing Assistance for Low-Income Households* (September 2015), www.cbo.gov/publication/50782; *An Overview of Federal Support for Housing* (November 2009), www.cbo.gov/publication/41219; *The Cost-Effectiveness of the Low-Income Housing Tax Credit Compared With Housing Vouchers* (April 1992), www.cbo.gov/publication/16375

WORK CITED: Ingrid Gould Ellen and others, "Does Federally Subsidized Rental Housing Depress Neighborhood Property Values?" *Journal of Policy Analysis and Management,* vol. 26, no. 2 (Spring 2007), pp. 257–280, http://dx.doi.org/10.1002/pam.20247

Revenues—Option 29

Increase All Taxes on Alcoholic Beverages to $16 per Proof Gallon and Index for Inflation

											Total	
Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2019–2023	2019–2028
Change in Revenues												
Increase tax	0	5.4	7.5	7.8	7.9	7.9	8.0	7.9	8.0	8.1	28.6	68.4
Increase tax and index for inflation	0	5.4	7.8	8.4	8.9	9.5	10.0	10.3	10.8	11.4	30.5	82.5

Source: Staff of the Joint Committee on Taxation.

This option would take effect in January 2020.

Background

Alcoholic beverages are not taxed uniformly. Specifically, the alcohol content of beer and wine is taxed at a much lower rate than the alcohol content of distilled spirits. The 2017 tax act made a number of temporary changes to the taxation of alcoholic beverages. Those changes expire after December 31, 2019. Beginning in 2020, distilled spirits will be taxed at a flat rate of $13.50 per proof gallon. (A proof gallon denotes a liquid gallon that is 50 percent alcohol by volume.) A tax rate of $13.50 per proof gallon translates to about 21 cents per ounce of pure alcohol. Beer will generally be subject to a tax rate of $18 per barrel, which is equivalent to about 10 cents per ounce of pure alcohol (under the assumption that the alcohol content of the beer is 4.5 percent). The excise tax on wine that is no more than 14 percent alcohol will be $1.07 per liquid gallon, or about 6 cents per ounce of pure alcohol (assuming an alcohol content of 13 percent). (Wines with high volumes of alcohol and sparkling wines face a higher tax per gallon.) Through 2019, tax rates are generally lower for quantities of alcoholic beverages below certain thresholds for producers of all sizes.

There are additional factors beyond those rate structures that affect how alcoholic beverages are taxed. Specific provisions of tax law can lower the effective tax rate for small quantities of beer and nonsparkling wine for certain small producers. Additionally, there is an exemption from tax for small volumes of beer and wine that are produced for personal or family use. States and some municipalities also tax alcohol; those rates vary substantially and sometimes exceed federal rates.

In 2017, federal collections from taxes on alcoholic beverages totaled about $11 billion. The Congressional Budget Office projects that if current law remained in place, after the expiration of the tax rate structure that currently applies to alcoholic beverages, receipts would grow by about 2 percent per year.

Option

This option consists of two alternatives. Both of those alternatives would take effect in January 2020.

The first alternative would standardize the base on which the federal excise tax is levied by using the proof gallon as the measure for all alcoholic beverages. The tax rate would be raised to $16 per proof gallon, or about 25 cents per ounce of alcohol. That alternative would also eliminate the provisions of tax law that lower effective tax rates for small producers, thus making the tax rate equal for all producers and quantities of alcohol.

A tax of $16 per proof gallon would raise the federal excise tax on a 750-milliliter bottle of distilled spirits from $2.14 to $2.54. The tax on a six-pack of beer at 4.5 percent alcohol by volume would increase from 33 cents to 81 cents, and the tax on a 750-milliliter bottle of wine with 13 percent alcohol by volume would increase from 21 cents to 82 cents.

The second alternative would also raise the tax rate to $16 per proof gallon and eliminate the provisions that lower effective tax rates for small producers, but it would adjust, or index, the tax for the effects of inflation thereafter.

Effects on the Budget
If implemented, the first alternative of this option would increase revenues by $68 billion from 2020 through 2028, the staff of the Joint Committee on Taxation (JCT) estimates. Indexing the tax for inflation under the second alternative would raise revenues by an additional $14 billion, for a total of $83 billion over the same period, according to JCT's estimates.

The higher excise tax would reduce taxable business and individual income. The resulting reduction in income and payroll tax receipts would partially offset the increase in excise taxes. The estimates for the option reflect that income and payroll tax offset. Furthermore, research shows that when alcohol costs more, it is consumed less. Therefore, increasing the tax on alcohol would contribute to a decline in consumption, which would also reduce revenues. That effect is reflected in the estimate.

The estimates for this option are uncertain because both the underlying projection of alcohol consumption and the estimated response to the change in the tax rate are uncertain. The underlying projection of alcohol consumption over the next decade is uncertain because it depends on how taxpayers will respond to temporary changes in tax rates occurring under current law. Similarly, the estimates depend on how taxpayers would respond to the permanent changes in tax rates introduced with this option. Those estimated responses are based on observed past responses to changes in the tax rate; those responses might differ from the response to the changes considered here.

Other Effects
Research shows that the consumption of alcohol creates costs for society that are not reflected in the pretax price of alcoholic beverages. Examples of those external costs include spending on health care that is related to alcohol consumption and covered by the public, losses in productivity stemming from alcohol consumption that are borne by entities or individuals other than the consumer, and the loss of lives and property that results from alcohol-related accidents and crime. One argument in favor of raising excise taxes on alcoholic beverages is that doing so would not only reduce alcohol use—and thus the external costs of that use—but also make consumers of alcoholic beverages pay a larger share of such costs.

Moreover, reducing alcohol consumption through increased excise taxes might be desirable, regardless of the effect on external costs, if lawmakers believe that consumers underestimate the harm they do to themselves by drinking. Heavy drinking is known to cause organ damage and cognitive impairment, and the link between highway accidents and drinking, which is especially strong among young drivers, is well documented. Substantial evidence also indicates that the use of alcohol at an early age can lead to heavy consumption later in life. When deciding how much to drink, people—particularly young people—may not adequately consider such long-term risks to their health. However, many other choices that people make—for example, to consume certain types of food or engage in risky sports—can also lead to health damage, and those activities are not taxed.

An increase in taxes on alcoholic beverages would have disadvantages as well. It would make a tax that is already regressive—one that takes up a greater percentage of income for low-income families than for middle- and upper-income families—even more so. In addition, it would affect not only problem drinkers but also drinkers who impose no costs on society and who thus would be unduly penalized. Furthermore, higher taxes would reduce consumption by some moderate drinkers. Evidence on the health effects of moderate drinking is mixed, but some studies have found moderate consumption to have health benefits and increase life expectancy.

In the longer term, changes in health and life expectancy resulting from reduced alcohol consumption would probably affect spending on federal health care, disability, and retirement programs. However, such changes in health and longevity potentially go in opposite directions for moderate and heavy drinkers, so the direction and magnitude of changes in spending are uncertain.

RELATED OPTION: Revenues, "Increase the Excise Tax on Tobacco Products by 50 Percent" (page 280)

RELATED CBO PUBLICATION: *Raising the Excise Tax on Cigarettes: Effects on Health and the Federal Budget* (June 2012), www.cbo.gov/publication/43319

Revenues—Option 30

Increase the Excise Tax on Tobacco Products by 50 Percent

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Mandatory Outlays	*	*	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.3	-0.9
Change in Revenues	3.5	4.6	4.3	4.3	4.2	4.2	4.1	4.0	3.9	3.9	20.9	41.0
Decrease (-) in the Deficit	-3.5	-4.6	-4.4	-4.4	-4.3	-4.3	-4.2	-4.1	-4.0	-4.0	-21.2	-41.9

Sources: Staff of the Joint Committee on Taxation; Congressional Budget Office.

This option would take effect in January 2019.

* = between -$50 million and zero.

Background

Both the federal government and state governments tax tobacco products. In 2018, the federal excise tax on cigarettes was just under $1.01 per pack, and the average state excise tax on cigarettes was $1.75 per pack. In addition, settlements that the major tobacco manufacturers reached with state attorneys general in 1998 require the manufacturers to pay about 60 cents per pack in fees. Together, those federal and state taxes and fees total $3.36 per pack of cigarettes, on average. Other tobacco products are also taxed, including cigars, pipe tobacco, and roll-your-own tobacco. Large cigars are taxed at 52.75 percent of the manufacturer's sales price, with a maximum tax of 40.26 cents per cigar. Pipe and roll-your-own tobacco are taxed at $2.83 and $24.78 per pound, respectively.

Collections from federal taxes on tobacco products totaled $14 billion in 2017. It is estimated that about 16 percent of adults are currently smokers, but the Congressional Budget Office projects that tobacco consumption will decline over the next decade, causing receipts to fall by about 2 percent per year over that time.

Option

This option would make several changes to the federal excise taxes on tobacco products. It would raise the tax on pipe tobacco to equal that for roll-your-own tobacco—from $2.83 to $24.78 per pound. It would also set a minimum tax rate on large cigars equal to the tax rate on cigarettes. In addition to those changes, the option would raise the federal excise tax on all tobacco products by 50 percent beginning in 2019. As a result, the federal tax on cigarettes would increase to about $1.51 per pack in that year.

Effects on the Budget

CBO and the staff of the Joint Committee on Taxation estimate that the option would reduce deficits by $42 billion from 2019 to 2028: Revenues would rise by $41 billion, and outlays would decline by almost $1 billion. The decrease in outlays would mainly result from reduced spending for Medicaid and Medicare.

The higher excise tax would reduce taxable business and individual income. The resulting reduction in income and payroll tax receipts would partially offset the increase in excise taxes. The estimates for the option reflect that income and payroll tax offset.

Increasing the tax on tobacco would contribute to a decline in smoking rates, which would reduce the amount of excise taxes raised by the option. The estimate incorporates that reduction. The decline in smoking rates would also lead to improvements in health and an increase in longevity. Although the budgetary impact of raising the excise tax on cigarettes would stem largely from the additional revenues generated by the tax (net of the reductions in income and payroll taxes noted above), changes in health and longevity also would affect federal outlays and revenues.

Improvements in the health status of the population would reduce the federal government's per-beneficiary spending for health care programs, which would initially reduce outlays for those programs. But that reduction in outlays would erode over time because of the increase in longevity. A larger elderly population would place greater demands on federal health care and retirement programs in the future. The effect of greater longevity on federal spending would eventually outweigh the effect of lower health care spending per beneficiary, and federal outlays would be higher after that than they are under current law.

The improvements in health would also raise revenues by reducing people's premiums for private health insurance. That increase in revenues would occur mainly because the reduction in employers' contributions to health insurance premiums, which are not subject to income or payroll taxes, would ultimately be passed on to workers in the form of higher taxable compensation. That increase in taxable compensation would increase income and payroll tax revenues.

The estimate for this option is uncertain because both CBO's underlying projection of tobacco consumption and the estimated response to the change in the tax rate are uncertain. The estimate of how taxpayers would respond to the increase in tobacco taxes is based on observed past responses to changes in the tax rate, which might differ from responses to the changes considered here.

Other Effects

One argument for raising the excise tax on tobacco is that tobacco consumers may underestimate the addictive power of nicotine and the harm that smoking causes. Teenagers in particular may not have the perspective necessary to evaluate the long-term effects of smoking. Extensive research shows that smoking causes a variety of diseases, including many types of cancer, cardiovascular diseases, and respiratory illnesses. Tobacco use is considered to be the largest preventable cause of early death in the United States. Raising the tax on tobacco would reduce the number of smokers, thereby reducing the damage that people would do to their long-term health. CBO estimates that a 50 percent increase in the excise tax would cause smoking rates to fall by roughly 3 percent, with younger smokers being especially responsive to higher cigarette prices. Smoking rates would remain lower in the future than they are expected to be under current law because a smaller share of future generations would take up smoking. However, many other choices that people make—for example, to consume certain types of food or engage in risky sports—also can lead to health damage, and those activities are not taxed. Also, studies on how people view the risks of smoking have yielded inconsistent results, with some research concluding that people underestimate those risks and other research finding the opposite.

Another argument for raising the excise tax on tobacco products is that smokers impose costs on nonsmokers that are not reflected in the pretax cost of tobacco. Those costs, which are known as external costs, include the damaging effects that tobacco smoke has on the health of nonsmokers and the higher health insurance premiums and greater out-of-pocket expenses that nonsmokers incur as a result. The higher tax would lead to improvements in health not only among smokers themselves but also among nonsmokers, who would no longer be exposed to secondhand smoke. Those improvements in health would, in turn, increase the longevity of nonsmokers as well as smokers. However, other approaches—aside from taxes—can reduce the external costs of smoking or make individual smokers bear at least some of those costs. For example, many local governments prohibit people from smoking inside restaurants and office buildings.

An argument against raising the tax on tobacco products concerns the regressive nature of that tax, which takes up a larger percentage of the earnings of lower-income families than of middle- and upper-income families. The greater burden of the tobacco tax on people with lower income occurs partly because lower-income people are more likely to smoke than are people from other income groups and partly because the amount that smokers spend on cigarettes does not rise appreciably with income.

RELATED OPTION: Revenues, "Increase All Taxes on Alcoholic Beverages to $16 per Proof Gallon and Index for Inflation" (page 278)

RELATED CBO PUBLICATION: *Raising the Excise Tax on Cigarettes: Effects on Health and the Federal Budget* (June 2012), www.cbo.gov/publication/43319

Revenues—Option 31

Increase Excise Taxes on Motor Fuels and Index for Inflation

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Revenues												
Increase the tax rates by 15 cents	15.2	21.9	22.7	23.5	24.2	25.0	25.6	25.8	26.2	26.9	107.5	237.1
Increase the tax rates by 35 cents	35.1	50.2	51.3	52.2	53.1	54.0	54.7	54.4	54.6	55.3	241.9	514.9

Source: Staff of the Joint Committee on Taxation.

This option would take effect in January 2019.

Background

Since 1993, federal excise tax rates on traditional motor fuels have been set at 18.4 cents per gallon of gasoline and 24.4 cents per gallon of diesel fuel. The revenues from those taxes are credited to the Highway Trust Fund to pay for highway construction and maintenance as well as for investment in mass transit. (A portion of the fuel tax—0.1 cent per gallon—is credited to the Leaking Underground Storage Tank Trust Fund.) Those tax rates are not adjusted for inflation; if they were, in 2019, they would be approximately 15 cents higher.

In 2017, revenues from the federal excise taxes on gasoline and diesel totaled $35.8 billion. Those revenues were generated from the sale of 184.7 billion gallons of motor fuels—an average of about 832 gallons per registered driver. In the Congressional Budget Office's 10-year economic projections, revenues from gasoline and diesel taxes decline at a rate of about 1 percent per year. Factors contributing to that projected decline include rising vehicle fuel economy (resulting from the increasing stringency of the federal Corporate Average Fuel Economy standards) and a slow rate of growth in the total miles traveled by vehicles.

Option

This option consists of two alternative increases in the excise tax rates on motor fuels. Under the first alternative, federal excise tax rates on gasoline and diesel fuel would be increased by 15 cents per gallon. Under the second alternative, those tax rates would be increased by 35 cents per gallon. Under each alternative, the tax would be indexed for inflation each year.

Effects on the Budget

According to estimates by the staff of the Joint Committee on Taxation (JCT), the first alternative would increase revenues by $237 billion from 2019 through 2028; the second alternative would increase revenues by $515 billion.

The higher excise taxes would reduce taxable business and individual income. The resulting reduction in income and payroll tax receipts would partially offset the increase in excise taxes. The estimates for the option reflect that income and payroll tax offset.

The revenue estimates also reflect drivers' anticipated responses to higher fuel taxes: By increasing the retail prices of motor fuels, the taxes would reduce fuel consumption (relative to what it would otherwise have been) both by discouraging driving and by encouraging the purchase of more fuel-efficient vehicles. Because the second alternative would be more salient to consumers, it would provoke greater responses, causing steeper reductions in fuel consumption. That is why, although the 35-cent tax increase is 2.3 times greater than the 15-cent increase, the revenues from the larger tax would be less than 2.3 times the revenues from the smaller tax.

The estimates for this option are uncertain because both the underlying projection of fuel use and the estimated responses to the change in the tax rates are uncertain. The projection of fuel use relies on CBO's projections of fuel economy and transportation choices under current law, and those projections are inherently uncertain. The estimates also rely on estimates of how individuals would respond to changes in the price of transportation resulting from increases in fuel taxes. Those estimates are based on observed responses to prior changes in taxes, which might differ from the responses to the fuel tax changes considered here.

Other Effects

One argument for increasing excise taxes on motor fuels is that the rates currently in effect are not sufficient to fully fund the federal government's spending on highways and transit. That spending has exceeded annual revenues from the fuel tax in every year since 2000. Federal tax rates on motor fuels were last increased in 1993; since then, the costs of labor and materials for maintaining and building highways and transit infrastructure have grown. CBO projects that if current law remained in place, a transfer of general revenues from the Treasury to the Highway Trust Fund authorized by the Fixing America's Surface Transportation Act would allow the fund to meet its obligations through 2020, but not in later years. For many years, the Congress has directed that roughly 80 percent of the taxes on motor fuels be credited to the trust fund's highway account and roughly 20 percent to its transit account. If those proportions remained the same under this option, and if funding for highways and transit was indexed for inflation, both of these alternatives would enable the Highway Trust Fund to meet its obligations through 2028 and beyond.

A second argument in favor of the option is that when users of highway infrastructure are charged according to the marginal (or incremental) costs of their use—including the "external costs" that such use imposes on society—economic efficiency is promoted. Some of the external costs—those associated with climate change and dependence on foreign oil—are directly related to the amount of motor fuel consumed. Imposing excise taxes on fuel therefore creates incentives to use highways and mass transit systems more efficiently. Because current fuel taxes do not cover those marginal costs, raising fuel tax rates would more accurately reflect the external costs created by the consumption of motor fuel. The second alternative would have a greater impact than the first because increasing the tax rate by a greater amount would create stronger incentives for taxpayers to drive less and to purchase more fuel-efficient vehicles. A further argument for the option is that increasing excise tax rates on motor fuels would incur relatively low collection costs because such taxes are already being collected.

An argument against this option is that because the two largest external costs of motor vehicle travel—traffic congestion and pavement damage—are not directly related to fuel use, it might be more economically efficient to adopt policies based on measurable factors that are more closely related to those costs. For example, imposing tolls or charging fees for driving at specific times in given areas would be more direct ways to alleviate congestion. Similarly, a levy on the number of miles driven by heavy trucks, reflecting their weight per axle, would more directly address the costs of pavement damage. However, creating the systems necessary to administer a tax on the number of vehicle miles traveled would be much more complex than increasing the existing excise taxes on fuels. Moreover, because fuel consumption has some external costs that do not depend on the number of miles traveled, maximizing economic efficiency would still require taxes on motor fuels.

Some other arguments against raising the tax rates on motor fuels involve issues of fairness. Such taxes impose a proportionally larger burden, as a share of income, on middle- and lower-income households (particularly those not well served by public transit) than they do on upper-income households. Those taxes also impose a disproportionate burden on rural households because the benefits of reducing vehicle emissions and congestion are greatest in densely populated, mostly urban, areas. They also disproportionately burden drivers of conventional gasoline- or diesel-powered vehicles, as drivers of battery-assisted or fully electric vehicles pay little or nothing in fuel taxes. Finally, to the extent that the trucking industry passed on the higher cost of fuel to consumers (in the form of higher prices for transported retail goods, for instance), those higher prices would increase the relative burden on low-income households, which spend a larger share of their income (compared with higher-income households) on food, clothing, and other transported goods.

RELATED OPTION: Revenues, "Impose an Excise Tax on Overland Freight Transport" (page 284)

RELATED CBO PUBLICATIONS: *Approaches to Making Federal Highway Spending More Productive* (February 2016), www.cbo.gov/publication/50150; testimony of Chad Shirley, Deputy Assistant Director of Microeconomic Studies, before the House Committee on Ways and Means, *The Status of the Highway Trust Fund and Options for Paying for Highway Spending* (June 2015), www.cbo.gov/publication/50298; *How Would Proposed Fuel Economy Standards Affect the Highway Trust Fund?* (May 2012), www.cbo.gov/publication/43198; *Alternative Approaches to Funding Highways* (March 2011), www.cbo.gov/publication/22059; *Effects of Gasoline Prices on Driving Behavior and Vehicle Markets* (January 2008), www.cbo.gov/publication/41657

Revenues—Option 32

Impose an Excise Tax on Overland Freight Transport

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Revenues	23.2	35.3	35.8	36.3	36.8	37.4	38.1	38.0	38.3	39.0	167.4	358.3

Source: Staff of the Joint Committee on Taxation.

This option would take effect in January 2019.

Background

Existing federal taxes related to overland freight transport consist of a tax on diesel fuel; excise taxes on new freight trucks, tires, and trailers; and an annual heavy-vehicle use tax. Revenues from those taxes are largely credited to the Highway Trust Fund, which finances road construction and maintenance and mass transit. Rail carriers, which generally operate on infrastructure they own and maintain, are currently exempt from the diesel fuel tax, other than an assessment of 0.1 cent per gallon for the Leaking Underground Storage Tank Trust Fund.

The Fixing America's Surface Transportation Act of 2015 established national policies to improve the movement of freight and provided funds from the Highway Trust Fund for two programs that focus on freight. It did not, however, establish any new revenue sources for the fund. Under current law, the Highway Trust Fund cannot incur negative balances. As a result, with its existing revenue sources, the trust fund will not be able to support spending at current levels (with adjustments for inflation) beyond 2020, the Congressional Budget Office estimates.

Overland freight transport is largely carried out by heavy-duty trucks—Class 7 and above in the Federal Highway Administration's (FHWA) classification system—or by rail. In 2015, FHWA estimated that tractor-trailer trucks (above Class 7) were driven about 175 billion miles, whereas single-unit trucks (including Class 7 and many smaller trucks that are not considered heavy-duty trucks) were driven about 110 billion miles. (Both totals include miles traveled without freight payloads.) Freight railcars traveled a total of about 36 billion miles in 2015, including unladen miles. Total freight transport by both truck and rail is projected to increase over time as the economy expands.

Option

This option would impose a new tax on freight transport by truck and rail. The tax would be 30 cents per mile on freight transport by heavy-duty trucks. Under the option, freight transport by rail would be subject to a tax of 12 cents per mile (per railcar). The tax would not apply to miles traveled by trucks or railcars without cargo.

Effects on the Budget

According to the staff of the Joint Committee on Taxation, the option would increase federal revenues by $358 billion from 2019 through 2028. The excise tax would reduce taxable business and individual income. The resulting reduction in income and payroll tax receipts would partially offset the increase in excise taxes. The estimates for the option reflect that income and payroll tax offset.

Carriers would respond to the new taxes in two ways that lower the estimated change in revenues by relatively small amounts. First, both taxes would increase shipping costs, which would slightly reduce the total amount of freight shipped because some shipments would no longer be profitable. Second, the relatively higher tax rate on truck transport would induce some shippers to shift a small portion of their freight business from truck to rail. The option could also induce shippers to shift a small amount of freight from either mode of transport to barge.

The amount of revenues raised through the tax would depend on the number of miles over which freight is transported by truck and rail in the future, which is uncertain for several reasons. The amount of freight shipped, the distances traveled, and shippers' choices of modes of transport are uncertain because they depend on developments in technology and economic conditions over the next decade, which are themselves uncertain. In addition, there is uncertainty surrounding how carriers would respond to the tax. The timing and amount of revenues raised by the tax would also depend on decisions about how to implement and administer it.

Other Effects

One argument for imposing an excise tax on freight transport is that it would promote economic efficiency. Freight transport imposes costs on society (known as external costs), including pavement damage, congestion, accidents, and emissions of air pollutants. The higher tax rate on truck transport is based on estimates of those external costs, which are higher for trucks than for railcars. An alternative approach to reducing those external costs would be increasing the fuel tax, which would better target emissions of air pollutants. However, imposing a tax on freight miles would more directly reduce the external costs of pavement damage, congestion, and accidents.

An argument against this option is that it would be more costly to administer than is the federal tax on diesel fuel—a primary source of funding for highway construction and maintenance. The option would require that carriers report their miles traveled and that systems be developed to collect the taxes and audit the reported distances.

An additional argument against this option is that the tax would probably be passed on to consumers through increases in the price of final goods. For many types of goods, the price increase would be relatively small because freight transport accounts for less than 5 percent of the cost of the merchandise. Even so, because lower-income consumers spend a larger fraction of their income on goods, the tax would be regressive—that is, it would be more burdensome for consumers with fewer economic resources than it would be for those with more economic resources.

RELATED OPTION: Revenues, "Increase Excise Taxes on Motor Fuels and Index for Inflation" (page 282)

RELATED CBO PUBLICATIONS: David Austin, *Pricing Freight Transport to Account for External Costs*, Working Paper 2015-03 (March 2015), www.cbo.gov/publication/50049; *Alternative Approaches to Funding Highways* (March 2011), www.cbo.gov/publication/22059; *Spending and Funding for Highways* (January 2011), www.cbo.gov/publication/22003; *Using Pricing to Reduce Traffic Congestion* (March 2009), www.cbo.gov/publication/20241

Revenues—Option 33

Impose Fees to Cover the Costs of Government Regulations and Charge for Services Provided to the Private Sector

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Establish Fees on Users of the St. Lawrence Seaway												
Change in Revenues	0	*	*	*	*	*	*	*	*	*	0.1	0.3
Increase Fees Charged to Industries to Recover the Full Costs of Registering Pesticides and Chemicals												
Change in Revenues	0	*	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.6
Charge Fees to Offset the Costs of Federal Rail-Safety Activities												
Change in Revenues	0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.7	1.8
Charge Transaction Fees to Fund the Commodity Futures Trading Commission												
Change in Revenues	0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.8	2.0
Assess New Fees to Cover the Costs of the Food and Drug Administration's Reviews of Advertising and Promotional Materials for Prescription Drugs and Biological Products												
Change in Revenues	0	*	*	*	*	*	*	*	*	*	*	0.1
Collect New Fees for Activities of the Food Safety and Inspection Service												
Change in Revenues	0	0.8	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.1	3.5	8.6
Set Grazing Fees for Federal Lands on the Basis of the Formulas Used to Set Fees for State-Owned Lands												
Change in Spending												
Budget authority	0	*	*	*	*	*	*	*	*	*	*	-0.2
Outlays	0	*	*	*	*	*	*	*	*	*	*	-0.2
Total												
Decrease (-) in the Deficit	0	-1.1	-1.4	-1.4	-1.5	-1.6	-1.6	-1.6	-1.6	-1.7	-5.4	-13.5

This option would take effect in October 2019.

Fees collected under this option could be recorded in the budget as offsetting collections (discretionary), offsetting receipts (usually mandatory), or revenues, depending on the specific legislative language used to establish them. For this option, the Congressional Budget Office categorized *changes* to fees that arise from the use of the government's sovereign power as changes to revenues, even if the agency was directed to record *existing* fees as offsetting collections or offsetting receipts.

* = between -$50 million and $50 million.

Background

The federal government imposes regulations on individuals and businesses to ensure the health and safety of the public and workers in regulated industries and to facilitate commerce. It also provides the private sector with a wide array of services and allows the use of public assets that have economic value, such as navigable waterways and grazing lands. To cover the costs of enforcing those regulations and to ensure that it receives compensation for the services that it provides, the government could impose a number of fees or increase existing ones. Those fees could be collected by several federal agencies and through various programs.

Option

This option would increase some existing fees and impose some new ones. Among the changes the government could make are the following:

- Establish fees on users of the St. Lawrence Seaway. The fee would offset appropriated funds for operations and maintenance of the seaway (a waterway that extends from the Atlantic Ocean to the Great Lakes) and would be equal to 100 percent of the adjusted appropriations in the Congressional Budget Office's baseline for the 2020–2028 period. (That amount is estimated by adjusting current-year appropriations by a measure of inflation.)

- Increase fees charged to industries to recover the full costs of registering pesticides under the Federal Insecticide, Fungicide, and Rodenticide Act and registering chemicals under the Toxic Substances Control Act. The current fees cover less than half of the Environmental Protection Agency's (EPA's) administrative costs of registering pesticides and chemicals. The higher fees, phased in over three years beginning in 2020, would offset appropriated funds for those administrative costs and would be equal to about 70 percent of the adjusted appropriations in CBO's baseline for the 2020–2028 period. (That amount is estimated by adjusting current-year appropriations by a measure of inflation.)

- Charge fees to offset the costs of federal rail-safety activities (such as safety inspections of tracks and equipment as well as accident investigations). The fees would offset appropriated funds for rail safety and would be equal to 100 percent of the adjusted appropriations in CBO's baseline for the 2020–2028 period. (That amount is estimated by adjusting current-year appropriations by a measure of inflation.)

- Charge transaction fees to fund the Commodity Futures Trading Commission. The fees would be assessed on futures, options, and swaps contracts and set to recover the commission's costs.

- Assess new fees to cover the costs of the Food and Drug Administration's reviews of advertising and promotional materials for prescription drugs and biological products. Fees would fund the current workload associated with regulating the promotion of those products to physicians and the advertising of those products directly to consumers. The Secretary of Health and Human Services would set the new fees, which would apply by product or by advertisement.

- Collect new fees for activities of the Food Safety and Inspection Service. Those fees would offset appropriated funds for inspection activities and would be equal to about 95 percent of the appropriations in CBO's baseline for the 2020–2028 period. (That amount is estimated by adjusting current-year appropriations by a measure of inflation.)

- Set grazing fees for federal lands on the basis of the state-determined formulas used to set grazing fees for state-owned lands. The federal grazing fee for 2018 is $1.41 per animal unit month (the amount of forage required by one cow and a calf for one month). This option would result in an average fee of about $5 per animal unit month.

Those changes are illustrative of the types of services or regulatory activities provided by the government for which fees could be charged or increased.

Effects on the Budget

If all fees considered here were implemented, they would increase income to the government by $14 billion from 2019 through 2028. For the fees included in this option that increase revenues, the estimate includes an income and payroll tax offset. That offset reflects the fact that the fee would reduce taxable business and individual income. The resulting reduction in income and payroll tax receipts would partially offset the revenues generated by the fee.

Lawmakers could achieve lower savings by establishing fees that offset only part of the federal costs associated with implementing the regulations or providing the services considered here. Lawmakers could achieve higher savings by adjusting those fees to more than offset federal costs, but that change would alter the nature of the option. The government's savings would be proportionally more for higher fees or less for lower fees, CBO expects.

Government income from this option would tend to increase over the next several years. Some of the changes would take time to implement—either because they would be phased in over time by design or because they would advance through the federal rulemaking process.

Changes in fees might alter the behavior of people subject to increased costs, and those responses would introduce uncertainty about the effects of the changes on the federal budget. For example, charging fees to offset the costs of federal rail-safety activities could prompt a shift of freight traffic to other modes of transportation, such as trucking. CBO projects that a limited share of freight traffic would shift away from rail, but that share could grow over time. In contrast, in CBO's assessment, new fees for activities of the Food Safety and Inspection Service would not affect industry behavior because producers cannot market products unless they are subject to inspection.

Whether the fees included in this option were recorded as revenues or as collections that are subtracted from discretionary or mandatory spending would depend on the nature of the fees and the terms of the legislation that imposed them. Most of the fees listed in this option would typically be classified as revenues in accordance with the guidance provided by the 1967 President's Commission on Budget Concepts. That guidance indicates that receipts from a fee that is imposed under the federal government's sovereign power should generally be recorded as revenues. However, lawmakers sometimes make the collection of fees subject to appropriation action; in those cases, the fees would be recorded as offsets to spending rather than as revenues.

Other Effects

An argument for implementing user fees is that private businesses would cover more of the costs of doing business, including the costs of ensuring the safety of their activities and products. That change would lead to a more efficient allocation of resources because businesses would make decisions based on a more complete assessment of costs. Currently, some of those costs—the Federal Railroad Administration's costs for rail-safety activities and the EPA's costs to register pesticides and chemicals, for example—are borne by the federal government.

Another argument in favor of this option is that the private sector would compensate the government for a greater share of the market value of services that benefit businesses (such as the operation and maintenance of the St. Lawrence Seaway) and for using or acquiring resources on public lands (such as grasslands for grazing). If consumers highly value the products and services that businesses provide, those businesses should be able to charge prices that cover all of their costs.

An argument against setting fees to cover the costs of regulation and recover the value of public services and resources is that some of the products and services provided by private businesses benefit people who neither produce nor consume those products and services. Thus, it is both fair and efficient for taxpayers to subsidize the provision of those benefits. For example, by lowering the cost of rail transportation, taxpayers' support for rail-safety activities reduces highway congestion and emissions of greenhouse gases. Similarly, support for the registration of new chemicals reduces the use of older chemicals, which may be more damaging to public health and to the environment.

Revenues—Option 34

Impose a 5 Percent Value-Added Tax

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Revenues												
Apply a 5 percent VAT to a broad base	0	200	310	320	330	340	360	360	370	380	1,160	2,970
Phase in a 5 percent VAT to apply to the same broad base	0	40	100	170	240	320	350	360	370	380	550	2,330
Apply a 5 percent VAT to a narrow base	0	130	200	210	210	220	230	230	240	250	750	1,920

Source: Staff of the Joint Committee on Taxation.

This option would take effect in January 2020.

Background

A value-added tax (VAT) is a type of consumption tax that is levied on the incremental increase in value of a good or service at each stage of the supply chain, until the full tax is paid by the final consumer. Although the United States does not have a broad consumption-based tax, federal excise taxes are imposed on the purchase of several goods (gasoline, alcohol, and tobacco products, for example). In addition, most states impose sales taxes, but, unlike a VAT, those are levied on the total value of goods and services sold.

More than 140 countries—including all members of the Organisation for Economic Co-operation and Development (OECD) except for the United States—have adopted VATs. The tax bases and rate structures of VATs differ greatly among countries. Most European countries have implemented VATs with a narrow tax base that excludes certain categories of goods and services, such as food, education, and health care. In Australia and New Zealand, the VAT has a much broader tax base, with exclusions generally limited only to those goods and services for which it is difficult to determine a value. In 2017, the average national VAT rate for OECD countries was 19.2 percent, ranging from 5 percent in Canada to 27 percent in Hungary. All OECD countries that impose a VAT also collect revenues from taxes on individual and corporate income.

In 2017, the personal consumption expenditures of U.S. households amounted to about $13.3 trillion. Two-thirds of that amount was spent on services, and the remaining one-third was spent on goods. Spending on housing and health care services accounted for more than half of the total consumption of services. Spending on nondurable goods—particularly food and beverages sold for consumption off-premises and pharmaceutical and other medical products—accounted for about two-thirds of the total consumption of goods.

Option

This option consists of three alternatives. Each of the alternatives would become effective on January 1, 2020—a year later than most of the other revenue options presented in this volume—to provide the Internal Revenue Service time to set up and administer the tax.

The first alternative would apply a 5 percent VAT to a broad base that would include most goods and services. Certain goods and services would be excluded from the base because their value is difficult to measure. Those include financial services without explicit fees, existing housing services, primary and secondary education, and other services provided by government agencies and nonprofit organizations for a small fee or at no cost. (Existing housing services encompass the monetary rents paid by tenants and rents imputed to owners who reside in their own homes. Although existing housing services would be excluded under this alternative, a tax on the purchase of new residential housing would cover all future consumption of housing services.) Government-reimbursed expenditures for health care—primarily costs paid by Medicare and Medicaid—would also be excluded from the tax base. Accounting for those exclusions, the tax base would encompass approximately 66 percent of household consumption in 2020.

The second alternative would gradually introduce a 5 percent VAT to the same broad base. The VAT would be phased in over five years, starting at 1 percent in 2020 and increasing by 1 percentage point each year.

The third alternative would apply a 5 percent VAT to a narrower base and would, like the first alternative, become fully effective in 2020. In addition to those items excluded under the broad base, the narrow base would exclude certain goods and services that are considered necessary for subsistence or that provide broad social benefits—specifically, new residential housing, food purchased for home consumption, health care, and postsecondary education. Accounting for those exclusions, the tax base would encompass about 42 percent of household consumption in 2020.

Each alternative would employ the "credit-invoice method," which is the most common method used by other countries to administer a VAT. Under that method, at each point in the production process, the total value of a business's sales of a particular product or service would be taxed, and the business would claim a credit for the taxes paid on the purchased inputs—such as materials and equipment—used to make the product or provide the service.

Certain goods and services could be either "zero-rated" (that is, taxed at a rate of zero percent) or exempt from the VAT; in either case, no VAT would be levied on the purchased items. If a purchased item was zero-rated, the seller could still claim a credit for the VAT that had been paid on the production inputs. By contrast, if a purchased item was exempted, the seller would not be able to claim a credit for the VAT paid on the production inputs.

Under all of the alternatives, primary and secondary education and other noncommercial services provided by government or nonprofit organizations for a small fee or at no cost would be zero-rated, and financial services and existing housing services would be exempt from the VAT. In addition, under the third alternative, food purchased for home consumption, new housing services, health care, and postsecondary education would be zero-rated.

Effects on the Budget

The staff of the Joint Committee on Taxation (JCT) estimates that, if implemented, the first alternative would increase federal revenues by $3.0 trillion from 2020 through 2028. The second and third alternatives would raise revenues by $2.3 trillion and $1.9 trillion, respectively, over that same period, according to JCT's estimates. Revenues would be lower under the second alternative than under the first alternative because the 5 percent VAT would be gradually phased in. The revenue estimates for the phase-in period account for reactions to that phase-in by taxpayers—first, shifts in the consumption of some goods to earlier years, when the VAT rate would be lower, and second, higher tax compliance resulting from lower VAT rates. Revenues raised under the third alternative would be lower than under the first alternative because the VAT would apply to a smaller tax base.

The VAT, like an excise tax, would reduce taxable business and individual income. The resulting reduction in income and payroll tax receipts would partially offset the revenues raised by the VAT. The estimates for the option reflect that income and payroll tax offset.

The estimates for this option are uncertain because of uncertainty surrounding future economic activity and taxpayers' responses to a VAT. There is particular uncertainty surrounding taxpayers' compliance with the VAT, which would depend on how it was implemented and might differ from the responses considered here. In addition, there is uncertainty about how consumers would substitute taxed goods and services with those not subject to the tax.

Other Effects

One argument in favor of the option is that it would raise revenues without discouraging saving and investment by taxpayers. In any given period, income can be either consumed or saved. Through exclusions, deductions, and credits, the individual tax system provides incentives that encourage saving, but those types of preferences do not apply to all methods of saving, and they increase the complexity of the tax system. In contrast to a tax levied on income, a VAT applies only to the amount of income consumed and therefore would not discourage private saving or investment in the economy.

A drawback of the option is that it would require the federal government to establish a new system to monitor compliance and collect the tax. As with any new tax, implementing a VAT would impose additional administrative costs on the federal government and additional compliance costs on businesses. Research has shown that at least some countries that have implemented a VAT have devoted significant resources to addressing and enforcing compliance. Because such costs are typically more burdensome for smaller businesses, many countries exempt some small businesses from the VAT.

Another argument against implementing a VAT is that, as specified under all of the alternatives in this option, it would probably be regressive—that is, it would be more burdensome for individuals and families with fewer economic resources than it would be for those with more resources. Because lower-income families generally consume a greater share of their income than higher-income families do, the distributional effects of a VAT would depend on its impact on consumer prices. (Phasing in the VAT, as the second alternative of this option would do, would probably limit the increase in prices from 2020 through 2024.) The regressivity of a VAT, however, depends significantly on the measure of income used to rank families. For example, the burden of a VAT in relation to a measure of lifetime income—which would account for both life-cycle income patterns and temporary fluctuations in annual income—would be less regressive than the burden of a VAT in relation to a measure of annual income, which would not account for those patterns and anomalies.

There are ways to design a VAT—or implement complementary policies—that could ameliorate distributional concerns. One way to make a VAT less regressive would be to exclude certain basic goods and services from the tax base, just as the third alternative of this option does. A VAT with a narrower tax base would be less regressive because low-income individuals and families spend a larger share of their budgets on those basic goods and services than higher-income individuals and families do. (Alternatively, lower rates could be applied to such items.) Those preferences, however, generally would make the VAT more complex and would reduce the revenues it generated. In addition, a VAT with a narrow base would distort economic decisions to a greater degree than would a VAT with a broader base because people could substitute goods or services not subject to the VAT for those that were. Another way to offset the regressive impact of a VAT would be to add exemptions or refundable credits under the federal income tax for low-income individuals and families or to increase the size of existing exemptions or credits. That approach, however, would add to the complexity of the individual income tax and reduce individual income tax revenues, offsetting some of the revenue gains from a VAT.

An alternative approach for raising a broad-based consumption tax would be to impose a national retail sales tax. A national retail sales tax would initially be easier to implement than a VAT. However, it would require the federal government to coordinate tax collection and administration with state and local governments. In addition, there are more incentives to underreport retail sales taxes because they are collected only when the final user of the product makes a purchase, whereas a VAT is collected throughout the entire production chain and reported by both the buyer and the seller until the final stage.

RELATED CBO PUBLICATIONS: *Comparing Income and Consumption Tax Bases* (July 1997), www.cbo.gov/publication/10599; *The Economic Effects of Comprehensive Tax Reform* (July 1997), www.cbo.gov/publication/10355; testimony of Robert D. Reischauer, Director, before the Senate Committee on Energy and Natural Resources, *Effects of Energy Taxes and Value-Added Taxes (VAT)* (February 24, 1993), www.cbo.gov/publication/20834; *Distributional Effects of Substituting a Flat-Rate Income Tax and a Value-Added Tax for Current Federal Income, Payroll, and Excise Taxes* (April 1992), www.cbo.gov/publication/20766; *Effects of Adopting a Value-Added Tax* (February 1992), www.cbo.gov/publication/20769

Revenues—Option 35

Impose a Tax on Emissions of Greenhouse Gases

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Revenues	66.0	103.4	105.9	108.2	111.2	115.1	118.9	119.5	123.2	127.1	494.7	1,099.0

Sources: Staff of the Joint Committee on Taxation; Congressional Budget Office.

This option would take effect in January 2019.

Background

The accumulation of greenhouse gases in the atmosphere—particularly carbon dioxide (CO_2), which is released when fossil fuels (such as coal, oil, and natural gas) are burned and as a result of deforestation—contributes to climate change, which imposes costs on countries around the globe, including the United States.

Many estimates suggest that the effect of climate change on the nation's economic output, and hence on federal tax revenues, will probably be small over the next 30 years and larger, but still modest, in the following few decades. Among the more certain effects of climate change on humans over the next several decades, some would be positive, such as reductions in deaths from cold weather and improvements in agricultural productivity in certain areas. However, others would be negative, such as declines in the availability of fresh water in areas dependent on snowmelt and the loss of property from high-tide flooding and from storm surges as sea levels rise. Uncertainty about the effects of climate change—and the potential for unlimited emissions to cause significant damage—grow substantially in the more distant future.

Scientists generally agree that reducing global emissions of greenhouse gases would decrease the magnitude of climate change and the expected costs and risks associated with it. The federal government regulates some emissions in an effort to reduce them; however, emissions are not directly taxed. A well-designed tax that covered most energy-related emissions would be expected to reduce emissions.

Greenhouse gas emissions are typically measured in CO_2 equivalents (CO_2e), which reflect the amount of carbon dioxide estimated to cause an equivalent amount of warming. Under current law, emissions are projected to decline from 5.4 billion metric tons of CO_2e in 2019 to 5.2 billion metric tons of CO_2e in 2028.

Option

This option would impose a tax of $25 per metric ton on most emissions of greenhouse gases in the United States—specifically, on most energy-related emissions of CO_2 (for example, from electricity generation, manufacturing, and transportation) and some other greenhouse gas emissions from large manufacturing facilities. To simplify implementation, as well as to provide incentives to deploy technologies that capture emissions generated in the production of electricity, the tax could be levied on oil producers, natural gas refiners (for sales outside the electricity sector), and electricity generators. The tax would increase at an annual inflation-adjusted rate of 2 percent.

Effects on the Budget

According to estimates made by the staff of the Joint Committee on Taxation and the Congressional Budget Office, implementing this option would increase federal revenues by $1,099 billion from 2019 through 2028. On average, about 5 billion metric tons of greenhouse gas emissions would be taxed each year over that period. Taxed emissions would be roughly 4 percent lower than projected under current law in 2019 and 11 percent lower in 2028. Despite the projected decline in emissions over the 10-year period, tax revenues would rise over time because the additional revenues caused by increases in the tax rate would more than offset the decrease in revenues caused by the decline in taxable emissions. A tax that was somewhat higher or somewhat lower than the $25 dollar per ton tax considered in this option would generate a roughly proportionally larger or smaller amount of revenues.

A tax on greenhouse gas emissions would reduce taxable business and individual income. The resulting reduction in income and payroll tax receipts would partially offset the increase in excise taxes. The estimate for the option reflects that income and payroll tax offset.

The estimate for this option is uncertain for two key reasons. First, the projected amount of emissions released in the absence of the tax depends on estimates of future economic activity and future changes in the relative prices of various fuels and energy technologies, both of which are uncertain. Second, even if projections of future emissions under current law are accurate, estimated reductions in emissions stemming from the tax are uncertain, in part because they depend on the development of new technologies and on individuals' and firms' reactions to the changes in prices that the tax would induce. CBO's estimates of reductions in emissions rely on past responses to such changes, as reported in the published literature.

Other Effects

An argument in favor of this option is that it would reduce U.S. emission of greenhouse gases and would do so in a cost-effective way. In particular, the tax would reduce emissions in a more cost-effective manner than regulations because such a tax would create uniform incentives for businesses and households throughout the economy to reduce their emissions. The tax would increase the cost of producing carbon-intensive goods and services in proportion to the amount of greenhouse gases emitted as a result of their production and consumption. Moreover, those cost increases would trigger corresponding increases in the prices of consumer goods. As a result, the tax would provide incentives for businesses to produce goods in ways that yield fewer emissions (for example, by generating electricity from wind rather than from coal) and for individuals to consume goods in ways that yield fewer emissions (for example, by driving less). Specifically, this tax would motivate emission reductions that cost less than $25 per ton to achieve, but not those that would cost more than $25 per ton.

Although the effects of climate change on the U.S. economy and on the federal budget are expected to be small in the next few decades, the effects are much more uncertain—and potentially far larger—in the more distant future. Many scientists think there is at least some risk that large changes in global temperatures will trigger catastrophic damage, causing substantial harm to human health and well-being as well as the economy. Moreover, greenhouse gases are long-lived, affecting the climate for many decades after they are emitted. As a result, delaying actions to limit emissions reduces the possibility of avoiding potentially harmful future effects. Because this option would take effect in January 2019, it would help avoid the compounded problems that might be caused by such delays.

An argument against a tax on greenhouse gas emissions is that curtailing U.S. emissions would burden the economy by raising the cost of producing emission-intensive goods and services while yielding uncertain benefits for U.S. residents. For example, most of the direct benefits of lessened emissions and associated reductions in climate change might occur outside of the United States over the next several decades, particularly in developing countries that are at greater risk from changes in weather patterns and an increase in sea levels.

Another argument against this option is that reductions in domestic emissions could be partially offset by increases in emissions overseas if carbon-intensive industries relocated to countries without restrictions on emissions or if reductions in energy consumption in the United States led to decreases in foreign fuel prices. More generally, averting the risk of future damage caused by emissions would depend on collective global efforts to cut emissions. Most analysts agree that reducing emissions in this country would have small effects on climate change if other countries with high levels of emissions did not also cut them substantially (although such reductions in the United States would still diminish the probability of catastrophic damage and could spur other countries to cut their emissions).

An alternative approach for reducing emissions of greenhouse gases in a cost-effective manner would be to establish a cap-and-trade program that set caps on such emissions in the United States. Under such a program, allowances that conveyed the right to emit one metric ton of CO_2e apiece would be sold at open auction. The overall number of allowances in a given year would be capped, and the cap would probably be lowered over time. If the caps were set to achieve the same cut in emissions that is anticipated from the tax, then the program would be expected to raise roughly the same amount of revenues between 2019 and 2028. In contrast with a tax, a cap-and-trade program would provide certainty about the quantity of emissions from sources that are subject to the cap (because it would directly limit those emissions), but it would not provide certainty about the costs that firms and households would face for the greenhouse gases that they continued to emit.

RELATED CBO PUBLICATIONS: *Effects of a Carbon Tax on the Economy and the Environment* (May 2013), www.cbo.gov/publication/44223; *How Policies to Reduce Greenhouse Gas Emissions Could Affect Employment* (May 2010), www.cbo.gov/publication/41257; *The Costs of Reducing Greenhouse-Gas Emissions* (November 2009), www.cbo.gov/publication/20933; *The Economic Effects of Legislation to Reduce Greenhouse-Gas Emissions* (September 2009), www.cbo.gov/publication/41266; *Potential Impacts of Climate Change in the United States* (May 2009), www.cbo.gov/publication/41180

Revenues—Option 36

Impose a Fee on Large Financial Institutions

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Revenues												
Impose a fee on institutions with assets of $50 billion or more	10.5	10.6	10.6	10.6	10.5	10.4	10.3	10.0	9.9	9.8	52.7	103.1
Impose a fee on institutions with assets of $250 billion or more	9.2	9.3	9.2	9.2	9.2	9.0	9.0	8.7	8.6	8.6	46.0	90.0

Sources: Staff of the Joint Committee on Taxation; Congressional Budget Office.

This option would take effect in January 2019.

Background

In the wake of the financial crisis that occurred between 2007 and 2009, legislators and regulators adopted a number of measures designed to prevent the failure of large, systemically important financial institutions and to resolve any future failures without putting taxpayers at risk. One of those measures provided the Federal Deposit Insurance Corporation (FDIC) with orderly liquidation authority. That authority is intended to allow the FDIC to quickly and efficiently settle the obligations of such institutions, which can include companies that control one or more banks (known as bank holding companies) or firms that predominantly engage in lending, insurance, securities trading, or other financial activities. In the event that a large financial institution fails, the FDIC will be appointed to liquidate the company's assets in an orderly manner and thus maintain the institution's critical operations in an effort to avoid repercussions throughout the financial system.

Nonetheless, if one or more very large financial institutions were to fail, particularly during a period of broader economic distress, the FDIC might need to borrow funds from the Treasury to implement orderly liquidation authority. The law mandates that those funds be repaid through recoveries from failed firms or future assessments on surviving firms. As a result, individuals and businesses dealing with those firms could be affected by the costs of the assistance provided to the financial system. For example, if a number of large firms failed and substantial cash infusions were needed to resolve those failures, the assessment required to repay the Treasury would have to be set at a very high amount. Under some circumstances, the surviving firms might not be able to pay that assessment without making significant changes to their operations or activities. Those changes could result in higher costs to borrowers and reduced access to credit at a time when the economy is under significant stress.

In 2017, the FDIC reported that bank holding companies' liabilities totaled $14 trillion. In addition, the Congressional Budget Office estimates that the FDIC's orderly liquidation authority covers total liabilities of approximately the same amount at nonbank financial institutions. Liabilities for bank holding companies and nonbank financial institutions are projected to increase at a somewhat slower rate than nominal gross domestic product (which is based on current-dollar values and not adjusted for inflation) through 2028.

Option

Under this option, beginning in 2019, an annual fee would be imposed on bank holding companies (including foreign banks operating in the United States) and nonbank financial companies with total assets above a certain threshold. The annual fee would be 0.15 percent of firms' covered liabilities, defined primarily as total liabilities less deposits insured by the FDIC. (Covered liabilities also include certain types of noncore capital—distinct from core capital, which consists of equity capital and disclosed reserves—and exclude certain reserves required for insurance policies.) CBO estimates that in 2017, financial institutions' covered liabilities totaled $9 trillion for firms with assets in excess of $50 billion and $8 trillion for firms with assets in excess of $250 billion.

The sums collected would be deposited in an interest-bearing fund that would be available for the FDIC's use when exercising orderly liquidation authority. The outlays necessary to carry out the FDIC's orderly liquidation authority are estimated to be the same under this option as under current law.

This option consists of two alternatives. Under the first alternative, the asset threshold would be $50 billion; that amount is consistent with the threshold under current law at which financial institutions are subject to assessments to recover losses from the FDIC's use of orderly liquidation authority. Under the second alternative, the asset threshold would be $250 billion; that amount is consistent with the threshold for enhanced supervision and prudential standards for certain bank holding companies established by the Economic Growth, Regulatory Relief, and Consumer Protection Act of 2018.

Effects on the Budget

If implemented on January 1, 2019, such a fee would generate revenues from 2019 through 2028 totaling $103 billion if the asset threshold was $50 billion and $90 billion if the threshold was $250 billion, according to estimates by the staff of the Joint Committee on Taxation and CBO. The fee would reduce taxable business and individual income. The resulting reduction in income and payroll tax receipts would partially offset the revenues raised by the fee. The estimates for the option reflect that income and payroll tax offset.

In its projections of spending and revenues under current law for the 2019–2028 period, CBO accounted for the probability that orderly liquidation authority would have to be used and that an assessment would have to be levied on surviving firms to cover some of the government's costs. In CBO's estimation, net proceeds from such assessments would total roughly $6 billion over the next decade under the $50 billion asset threshold and $5 billion under the $250 billion threshold. CBO expects that the receipts from the fee would provide a significant source of funds for the FDIC to carry out orderly liquidation authority and thus reduce the assessment that would be needed during the coming decade. To determine the net effect on revenues, CBO subtracted the projected assessments under current law from the amount of revenues the new fee is projected to generate ($109 billion under the $50 billion asset threshold and $95 billion under the $250 billion threshold). By that calculation, revenues would increase by $103 billion under the lower asset threshold and $90 billion under the higher asset threshold from 2019 through 2028.

The estimates for this option are uncertain for two key reasons. First, the estimates rely on CBO's projections of assets covered by orderly liquidation authority under current law, which are in large part determined by CBO's projections of economic output. Second, the underlying projections of the effects of the failure of large financial institutions are uncertain, particularly because they reflect a small probability of a financial crisis in each year.

Other Effects

The main advantage of this option is that it would help defray the economic costs of providing a financial safety net by generating revenues when the economy is not in a financial crisis, rather than in the immediate aftermath of one. Another advantage of the option is that it would provide an incentive for banks to keep their assets below the asset threshold, diminishing the risk of spillover effects to the broader economy from a future failure of a particularly large institution (although at the expense of potential economies of scale). Alternatively, if larger financial institutions reduced their dependence on liabilities subject to the fee and increased their reliance on equity, their vulnerability to future losses would be reduced. The fee also would improve the relative competitive position of small and medium-sized banks by charging the largest institutions for the greater government protection they receive.

The option would have two main disadvantages. Unless the fee was risk-based, stronger financial institutions that posed less systemic risk—and consequently paid lower interest rates on their debt as a result of their lower risk of default—would face a proportionally greater increase in costs than would weaker financial institutions. In addition, the fee could reduce the profitability of larger institutions (if it was not passed on to customers), which might create an incentive for them to take greater risks in pursuit of higher returns to offset their higher costs.

At 0.15 percent, the fee would probably not be so high as to cause financial institutions to significantly change their financial structure or activities. The fee could nevertheless affect institutions' tendency to take various business risks, but the net direction of that effect is uncertain: In some ways, it would encourage risk-taking, and in other ways, it would discourage risk-taking. One approach might be to vary the amount of the fee so that it reflected the risk posed by each institution, but it might be difficult to assess that risk precisely.

RELATED OPTION: Revenues, "Impose a Tax on Financial Transactions" (page 298)

RELATED CBO PUBLICATIONS: *The Budgetary Impact and Subsidy Costs of the Federal Reserve's Actions During the Financial Crisis* (May 2010), www.cbo.gov/publication/21491; letter to the Honorable Charles E. Grassley providing information on the President's proposal for a "Financial Crisis Responsibility Fee" (March 4, 2010), www.cbo.gov/publication/21020

Revenues—Option 37

Impose a Tax on Financial Transactions

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Revenues	-43.9	22.0	70.2	93.2	100.7	103.7	106.2	106.3	107.9	110.4	242.2	776.7

Source: Staff of the Joint Committee on Taxation.

This option would take effect in January 2020, although some changes to revenues would occur earlier.

Background

The United States is home to large financial markets with a large amount of daily trading. In June 2018, the total dollar value of U.S. stocks was roughly $30 trillion, and the value of outstanding bond market debt was about $42 trillion. More than $1 trillion in stocks and bonds—collectively referred to as securities—is traded on a typical business day, including about $300 billion in stock and over $800 billion in debt (which is mostly concentrated in Treasury securities). In addition, trillions of dollars in derivatives (contracts requiring one or more payments that are calculated by reference to the change in an observable variable), measured at their notional value (the total amount of the variable referenced by the derivative), are traded every business day. Those transactions may affect the taxes of individuals who engage in them, depending on the gain or loss those individuals realize; however, there is currently no per-transaction tax imposed under U.S. federal tax law. (The Securities and Exchange Commission charges a very small fee—generally 0.0013 percent—on most transactions to recover its regulatory costs; in 2018, those transaction fees totaled about $2 billion.)

Option

This option would impose a tax on the 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. (Such payments are generally just a small fraction of the derivatives' notional value.) Trading costs for high-frequency traders tend to be very low—in many cases less than 0.1 percent of the value of the securities traded—so this option would generate a notable increase in trading costs for them.

The tax would not apply to the initial issuance of stock or debt securities, transactions of debt obligations with fixed maturities of no more than 100 days, or currency transactions (although transactions involving currency derivatives would be taxed). The tax would be imposed on transactions that occurred within the United States and on transactions that took place outside of the country and involved at least one U.S. taxpayer (whether a corporation, partnership, citizen, or resident).

The option would be effective a year later than nearly all of the other revenue options in this volume, so the tax would apply to transactions occurring after December 31, 2019. That delay would provide the government and firms sufficient time to develop and implement the new reporting systems that would be necessary to collect the tax.

Effects on the Budget

This option would increase revenues by $777 billion from 2019 through 2028, according to an estimate by the staff of the Joint Committee on Taxation (JCT). The tax on financial transactions would reduce taxable business and individual income. The resulting reduction in income and payroll tax receipts would partially offset the revenues generated by the tax. The estimate for the option reflects that income and payroll tax offset.

The estimate accounts for several effects that would reduce the revenues raised by the transaction tax. The option would lead to a loss in revenues in 2019 because the transaction tax would immediately lower the value of financial assets. That reduction in the value of financial assets would cause an ongoing reduction in capital gains. In addition, JCT's estimate reflects the expectation that financial transactions would be underreported until 2022, when all reporting systems could be expected to be in place. Revenues would be lower if the implementation of the option had to be phased in because of delays in developing the new reporting systems.

The additional revenues generated by the option would depend significantly on the extent to which the number of transactions subject to the tax declined in response to the policy. The higher the tax rate was set, the greater the amount by which transactions would decline. For that reason, doubling the tax rate would not double the amount raised by the option. (Similarly, cutting the tax rate in half would lead to less than a 50 percent decline in the amount of revenues raised.) With even higher tax rates, revenues could actually fall, for two reasons. First, the higher the tax rate was set, the larger would be the indirect loss in revenues from the drop in asset values and, therefore, the loss in revenues from the taxation of capital gains. Second, a higher tax rate would reduce the revenues generated by the financial transaction tax once the percentage by which the transactions decreased exceeded the percentage by which the tax rate increased.

The estimate for the option is uncertain for two key reasons. The estimate relies on the Congressional Budget Office's projections of the economy and market activity over the next decade, which are inherently uncertain. A bigger source of uncertainty, however, is how much transactions would drop in response to a tax. If the response was smaller than expected, the tax would raise more revenues than estimated here.

Other Effects

One argument in favor of a tax on financial transactions is that it would significantly reduce the amount of short-term speculation and computer-assisted high-frequency trading that currently takes place and direct the resources dedicated to those activities to more productive uses. Some high-frequency trading involves speculation that can destabilize markets, increase volatility, and lead to disruptive events, such as the October 1987 stock market crash and the more recent "flash crash" that occurred when the stock market temporarily plunged on May 6, 2010. Although neither of those events had significant effects on the general economy, the potential exists for negative spillovers from future events.

A disadvantage of the option is that the tax would discourage all short-term trading, not just speculation—including some transactions by well-informed traders that stabilize markets and help establish efficient prices that reflect more information about the fundamental value of assets. Empirical evidence suggests that, on balance, a transaction tax could make asset prices less stable. In particular, a number of studies have concluded that higher transaction costs lead to more, rather than less, volatility in prices. (However, much of that evidence is from studies conducted before the rise of high-frequency trading, which now accounts for a significant share of trading in the stock market.)

The tax could also have a number of negative effects on the economy stemming from its effects on asset prices, the cost of capital for firms, and the frequency of trading. Traders and investors would seek to recoup the cost of trading by raising the return they required on financial assets, thereby lowering the prices of those assets. The tax would be small relative to the returns that investors with long-term horizons could earn, so the effect on asset prices would be partly mitigated if traders and investors reduced the frequency of their trading—but less frequent trading would lower liquidity and reduce the amount of information reflected in prices. Consequently, investment could decline (even though higher tax revenues would lower federal borrowing and thus increase the funds available for investment) because of increases in the cost of issuing debt and equity securities that would be subject to the tax and potential negative effects on derivatives trading, which could make it more difficult to efficiently distribute risk in the economy. The cost to the Treasury of issuing federal debt could increase because of the increase in trading costs and the reduction in liquidity. Household wealth would decline with the reduction in asset prices, which would lower consumption.

In addition, traders would have an incentive to reduce the taxes they owed, either by developing alternative securities not subject to the transaction tax or by moving their trading out of the country (although offshore trades by U.S. taxpayers would be taxed). Such effects would be mitigated if other countries enacted financial transaction taxes. Several members of the European Union have such taxes, and since 2011, members have been negotiating whether to implement a common system of transaction taxes.

RELATED OPTIONS: Revenues, "Raise the Tax Rates on Long-Term Capital Gains and Qualified Dividends by 2 Percentage Points and Adjust Tax Brackets" (page 207), "Impose a Fee on Large Financial Institutions" (page 295), "Tax Gains From Derivatives as Ordinary Income on a Mark-to-Market Basis" (page 301)

RELATED CBO PUBLICATION: Letter to the Honorable Orrin G. Hatch responding to questions about the effects of a tax on financial transactions that would be imposed by the Wall Street Trading and Speculators Tax Act, H.R. 3313 or S. 1787 (December 12, 2011), www.cbo.gov/publication/42690

Revenues—Option 38

Tax Gains From Derivatives as Ordinary Income on a Mark-to-Market Basis

Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total 2019–2023	Total 2019–2028
Change in Revenues	0.6	3.9	3.3	1.8	1.6	1.6	1.5	1.5	1.4	1.4	11.2	18.7

Source: Staff of the Joint Committee on Taxation.

This option would take effect in January 2019.

Background

A derivative is a contract requiring one or more payments that are calculated by reference to the change in an observable variable (often, but not always, the value of an asset) after the contract is entered into. The simplest derivatives are contracts to exchange an asset—for example, equity stocks, commodities, or foreign currencies—at a future date and at a predetermined price. Such simple derivatives can be flexible contracts that are privately negotiated between parties, known as forwards, or standardized contracts that are actively traded on exchanges and are known as futures. There are also a variety of more complex derivatives, such as options and swaps. In an option, one party has the right to buy (or sell) the underlying asset at a predetermined price at any time before the contract expires. In a swap, the derivative is not tied to a specific asset; instead, it involves the exchange of cash flows that depend on uncertain variables, such as interest rates or exchange rates.

Derivatives are used for a variety of purposes, including hedging (insuring against changes in an asset price, foreign exchange rate, or interest rate) and speculating (betting on changes in an asset's price). Taxpayers can also use derivatives to lower their tax liability, because a derivative contract can delay the realization of gains from an investment—and, as a result, potentially reduce the tax rate applied to those gains—without altering the magnitude or riskiness of that investment.

There are two main dimensions along which the tax treatment of derivatives can vary. The first is the timing of recognition of gains and losses for tax purposes. For some derivatives, gains or losses are not recognized until the underlying asset changes hands or the contract expires or is sold. Other derivatives are taxed on a mark-to-market basis—that is, their gains and losses are calculated and taxed each year on the basis of the year-to-year change in the derivative's fair-market value. The second dimension is the categorization of income and losses. Income from some derivatives is categorized as ordinary income. Income from other derivatives is categorized as short-term capital gains, which are taxed at the same rates as ordinary income, or as long-term capital gains, which may be taxed at a lower rate. (See Revenues, Option 2, "Raise the Tax Rates on Long-Term Capital Gains and Qualified Dividends by 2 Percentage Points and Adjust Tax Brackets" for background on the taxation of capital gains.)

The tax treatment of derivatives along the two dimensions described above depends on several factors, including the type of derivative. Gains or losses arising from derivatives that are traded outside of exchanges generally are taxed when the contract is settled, has expired, or is sold. By contrast, derivative contracts that are actively traded on exchanges and have a clear value, such as futures, generally are taxed on a mark-to-market basis. The gains and losses from such derivatives are subject to a hybrid rate: 60 percent of the gain or loss is taxed at the rate applied to long-term capital gains and 40 percent is taxed at the rate applied to short-term capital gains.

Two derivatives that are otherwise identical may be taxed differently on the basis of characteristics of the people who hold them. For example, if a derivative is held by a dealer in securities—even if it is not traded on exchanges—then it generally must be taxed on a mark-to-market basis. The same derivative held by an individual investor may be subject to tax only when it is settled or expires.

Like the characteristics of the holder, the purpose for which a derivative is held can also change how it is taxed.

As an example, if a derivative is used for hedging, then gains and losses arising from the derivative are taxed in the same way as the underlying income flow or asset. By contrast, gains and losses from derivatives used for speculation are often, though not always, treated as capital gains.

Taxpayers are required to report taxable gains from derivative contracts traded on organized exchanges to the Internal Revenue Service every year; however, they generally are not required to annually determine the market value of derivative contracts that are not traded on exchanges. For that reason, annual data on total taxable gains are not available. Because the value of derivatives depends on the business cycle, taxable gains are generally larger during periods of economic growth.

Option

Under this option, most derivatives would be taxed on a mark-to-market basis. All holders of those contracts would be required to compute their gains or losses at the end of each year on the basis of changes in the contracts' fair-market value during the year. Those gains and losses would be taxed as ordinary income. (When the market value of a derivative could not be readily ascertained, taxpayers would be allowed to rely on its book value, as long as that value was estimated in accordance with accepted accounting standards.)

The option would exempt certain derivatives related to real estate and those used for hedging by businesses. In addition, the option would not extend to employee stock options, insurance contracts, or annuities.

Effects on the Budget

If implemented, this option would increase revenues by $19 billion from 2019 through 2028, the staff of the Joint Committee on Taxation estimates. That estimate incorporates expected reductions in the use of derivatives, which would occur because the option would increase the tax rate on gains from derivatives and would also make it significantly more difficult for taxpayers to use derivatives to lower the amount of taxes they owed.

The increase in revenues would be modest because under current tax law, at least one of the two parties in most derivative transactions is already taxed on a mark-to-market basis. Over the 2019–2028 period, the increase in revenues would be larger in earlier years because, on net, the mark-to-market regime would accelerate the taxation of gains. Initially, the revenue effect would be driven by that earlier taxation. In later years, the revenue effect would be smaller because gains that otherwise would have been taxed in those years had already been taxed in earlier years, which would offset the increase in revenues from the accelerated taxes.

The estimate for this option is uncertain because the current market value of derivatives that would be affected by the option is uncertain. Additionally, the Congressional Budget Office's projections of the economy, which affects the volume of derivatives, are uncertain. The market value of derivatives that are taxable in a given year largely depends on business-cycle fluctuations. The extent to which taxpayers would respond to this option by changing their reliance on derivatives for investing and managing risks is also uncertain. Few comparable tax changes have occurred in the past, so the empirical evidence on how people would respond to such a change is limited.

Other Effects

An argument in favor of this option is that it would eliminate a legal strategy that enables some taxpayers to reduce their taxes. Sophisticated taxpayers are able to use derivatives to lower their tax rate by advancing the recognition of losses but delaying the recognition of gains. Implementing a mark-to-market tax regime would reduce such opportunities for tax avoidance by giving taxpayers less control over the timing of gains and losses from the sales of their assets. The resulting increase in tax payments would be progressive, because the taxpayers who use derivative contracts to lower their tax liability tend to be wealthier and have higher incomes.

Another argument in favor of this option is that it would simplify the taxation of derivatives by applying the same tax treatment to most derivatives. In the case of derivatives that are difficult to value, it would make their tax treatment more consistent with their accounting treatment. However, the option could introduce new complexity into the tax system if extensive rulemaking was required to prevent opportunities for abuse in the valuation of such derivatives.

An argument against this option is that taxing unrealized capital gains on an asset before it is sold is onerous when the asset is not divisible or could not be readily sold on exchanges. By taxing derivatives on the basis of increases in their fair-market value before they are liquidated, this option would confront some taxpayers with an immediate tax liability even when they did not have the liquidity to meet it. An alternative approach would be to restrict the mark-to-market regime to derivatives that can be easily sold on exchanges. That approach would address taxpayers' concerns about liquidity but would also limit the advantages of the mark-to-market regime.

The option would reduce the use of derivatives for speculation by treating gains on those derivatives as ordinary income instead of capital gains. The overall effect of that reduction on financial markets is uncertain. On the one hand, speculation has a stabilizing effect on the financial system and the economy because it induces asset prices to move toward levels that reflect the true economic value of those assets. On the other hand, irrational or excessive speculation has a destabilizing effect on asset prices, the financial system, and the economy.

RELATED OPTIONS: Revenues, "Raise the Tax Rates on Long-Term Capital Gains and Qualified Dividends by 2 Percentage Points and Adjust Tax Brackets" (page 207), "Impose a Tax on Financial Transactions" (page 298)

Revenues—Option 39

Increase Federal Civilian Employees' Contributions to the Federal Employees Retirement System

											Total	
Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2019–2023	2019–2028
Change in Revenues	1.4	2.9	4.2	5.6	5.5	5.4	5.3	5.2	5.0	4.8	19.7	45.4

This option would take effect in January 2019.

Background

The federal government provides most of its civilian employees with a defined benefit retirement plan through the Federal Employees Retirement System (FERS) or its predecessor, the Civil Service Retirement System. The plan provides retirees with a monthly benefit in the form of an annuity. Those annuities are jointly funded by the employees and the federal agencies that hire them. Employees contribute a portion of their salary to the plan, and those contributions are subject to income and payroll taxes. Whereas agencies' contributions to FERS do not have any effect on total federal spending or revenues because they are intragovernmental payments, employees' contributions are counted as federal revenues. Annuity payments made to FERS beneficiaries represent federal spending.

Over 90 percent of federal employees participate in FERS, and most of them contribute 0.8 percent of their salary toward their future annuity. The contribution rates for most employees hired since 2012, however, are higher. First, the Middle Class Tax Relief and Job Creation Act of 2012 increased the contribution rate to 3.1 percent for most employees hired after December 31, 2012. Then, the Bipartisan Budget Act of 2013 increased the contribution rate further, to 4.4 percent, for most employees hired after December 31, 2013.

Option

Under this option, most employees enrolled in FERS would contribute 4.4 percent of their salary toward their retirement annuity. The contribution rate would thus increase by 3.6 percentage points for employees who enrolled in FERS before 2013 and by 1.3 percentage points for employees who enrolled in FERS in 2013. The increased contribution rates would be phased in over the next four years. The dollar amount of future annuities would not change under the option, and the option would not affect employees hired in 2014 or later who already make or will make the larger contributions under the Bipartisan Budget Act. Agencies' contributions would remain the same under the option.

Effects on the Budget

If implemented, the option would increase federal revenues by $45 billion from 2019 through 2028, the Congressional Budget Office estimates. Annual revenues would increase gradually in the first four years as the increased contribution rate was phased in. For example, drawing on payroll data from the Office of Personnel Management, CBO estimates that in 2019, approximately 1.9 million FERS employees with an average annual salary of about $88,000 would see their contribution rate increase by 0.9 percentage points, on average. By 2022, all federal workers enrolled in FERS would be contributing 4.4 percent of their salary toward their retirement annuity. Because the option would affect only current workers hired in 2013 or earlier, the government's savings would gradually decline as those workers retired or left federal employment.

The estimate for this option is uncertain because both the underlying projection of federal workers' salaries and the projection of the number of workers who would be affected by the option are uncertain. The estimate is based on past rates of employee retention and on CBO's projections of growth in earnings. The amount of revenues raised by the option could diverge from the estimate if there are unanticipated changes in federal workers' salaries or in the rates at which those workers leave federal employment. If salary growth is higher or lower than projected, then revenues under the option would also be higher or lower than projected. If employee retention declines as a result of the option and workers who leave the federal workforce are replaced with workers who are paid less, then revenues under the option would probably be lower than projected. In its estimate of the effect on the budget, CBO did not consider potential changes in employee retention that might result from this option.

Other Effects

An argument in favor of this option is that it would bring federal workers' total compensation more in line with that of workers in the private sector. Federal employees receive, on average, more total compensation—the sum of wages and benefits—than private-sector workers in similar occupations and with similar education and experience. In fact, a substantial number of private-sector employers no longer provide health insurance for their retirees or defined benefit retirement annuities, instead offering only defined contribution retirement plans that are less costly. By contrast, the federal government provides a defined benefit retirement plan, a defined contribution retirement plan, and health insurance in retirement. Therefore, even if federal employees hired before 2014 had to contribute more toward their annuity, their total compensation would, on average, still be higher than that available in the private sector. In addition, because this option would not change the compensation of federal employees hired after 2014, who are already contributing 4.4 percent of their salary toward their retirement annuity, the option would probably not affect the quality of new recruits.

An argument against this option is that it would cause retention rates to decline, particularly among highly qualified federal employees. In fact, recent research suggests that federal employees are about twice as likely to leave their jobs following reductions in take-home pay compared with similar reductions in future retirement benefits. The effects on retention appear to be stronger among workers who are rated more highly in terms of performance. In addition, employees who have served long enough to be eligible for a FERS annuity immediately upon leaving the federal workforce are forgoing annuity payments by remaining in federal service. Some of those employees might choose to retire instead of making larger contributions to the annuity in addition to forgoing payments. Also, some highly qualified federal employees have more lucrative job opportunities in the private sector than in the federal government, in part because private-sector salaries have grown faster than federal salaries since 2010. More of those employees would leave for the private sector under this option.

The option would also further accentuate the difference in the timing of compensation provided by the federal government and the private sector. Because many private-sector employers no longer provide health insurance for their retirees or defined benefit retirement annuities, a significantly greater share of total compensation in the private sector is paid to workers immediately, whereas federal employees receive a larger portion of their compensation in retirement. If that shift by private firms indicates that workers prefer to receive more of their compensation right away, then shifting federal compensation in the opposite direction—which this option would do, by reducing current compensation while maintaining retirement benefits—would be detrimental to the retention of federal employees. If lawmakers wanted to reduce the total compensation of federal employees while maintaining or increasing the share of compensation that is provided immediately, they could consider modifying the formula used to calculate federal annuities (see Appendix, Mandatory Spending, "Reduce Pension Benefits for New Federal Retirees") or making other changes to salaries and benefits (see Appendix, Mandatory Spending, "Eliminate the Special Retirement Supplement for New Federal Retirees").

RELATED OPTIONS: Appendix, Mandatory Spending, "Reduce Pension Benefits for New Federal Retirees" (page 310), "Eliminate the Special Retirement Supplement for New Federal Retirees" (page 310)

RELATED CBO PUBLICATIONS: Justin Falk and Nadia Karamcheva, *Comparing the Effects of Current Pay and Defined Benefit Pensions on Employee Retention*, Working Paper 2018-06 (June 2018), www.cbo.gov/publication/54056; *Options for Changing the Retirement System for Federal Civilian Workers* (August 2017), www.cbo.gov/publication/53003; *Comparing the Compensation of Federal and Private-Sector Employees, 2011 to 2015* (April 2017), www.cbo.gov/publication/52637

Revenues—Option 40

Increase Appropriations for the Internal Revenue Service's Enforcement Initiatives

											Total	
Billions of Dollars	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2019–2023	2019–2028
Change in Outlays	0.5	1.0	1.5	2.0	2.5	2.5	2.5	2.5	2.5	2.5	7.5	20.0
Change in Revenues	0.3	1.1	2.5	4.1	5.8	7.2	8.1	8.6	8.8	8.8	13.8	55.3
Increase or Decrease (-) in the Deficit	0.2	-0.1	-1.0	-2.1	-3.3	-4.7	-5.6	-6.1	-6.3	-6.3	-6.3	-35.3

Source: Congressional Budget Office.

This option would take effect in October 2019.

Because of the budget scorekeeping guidelines used by the Congress, the revenue changes attributable to this option would not be counted for budget enforcement purposes. However, if an appropriation bill or another bill providing funding for this option is enacted, CBO's next projection of the budget deficit would incorporate its effects on revenues.

Background

In 2018, the Internal Revenue Service (IRS) received appropriations totaling $11.4 billion—about 20 percent less than it received in 2010, when appropriations for the IRS reached their highest level from 1998 through 2018. (To compute that percentage change, the Congressional Budget Office converted the dollar amounts to 2018 dollars to remove the effects of inflation. For personnel costs, inflation was measured using the employment cost index for wages and salaries of private industry workers; for all other spending, the measure of inflation was the chain-type price index for U.S. gross domestic product.) Since 2010, the biggest reductions in the IRS's appropriations have been in funding for enforcement (although enforcement still received the largest share of funding—43 percent—in 2018). The reduction in enforcement funding has coincided with a drop in audits: The percentage of tax returns audited declined from 0.9 percent in 2010 to 0.5 percent in 2017.

Increasing the funding for the IRS's enforcement initiatives (often referred to as program integrity initiatives)—activities, such as expansions of audits and collections, that could improve compliance with the tax system—would, in CBO's estimation, cause federal revenues to increase. Because of the budget scorekeeping guidelines used by the Congress, those additional revenues would not be counted for budget enforcement purposes. However, if an appropriation bill or another bill providing increased funding for program integrity initiatives is enacted, CBO's next estimate of the budget deficit would incorporate the effects of that provision on revenues.

Option

This option would increase the IRS's funding for enforcement initiatives by $500 million in 2019. Those new initiatives that began in 2019, which would increase the number of audits of both individuals and businesses and enhance collection actions, would remain in effect through 2028 and beyond. From 2020 through 2023, the option would raise the IRS's appropriations for audits and collection actions by additional amounts, in annual increments of $500 million. From 2024 to 2028, the increase in appropriations for enforcement activities would remain at $2.5 billion. As a consequence, the appropriation for IRS enforcement would be over 35 percent higher in 2028 than the amount projected under current law, in CBO's estimation. Like the initiatives that would begin in 2019, new initiatives in each year over the next decade would remain in effect through 2028 and beyond.

Effects on the Budget

CBO estimates that the option would raise revenues by $55 billion from 2019 through 2028. On net, accounting for the total increase to the IRS's appropriations over that period, which would equal $20 billion, the option would reduce the deficit by $35 billion. Those estimates include only the revenues received by the IRS during the 10-year window; the estimates exclude taxes owed by taxpayers as a result of audits conducted through 2028 but not collected by the IRS until after that year.

To implement a new initiative, CBO anticipates that the IRS would have to hire and train new staff (and possibly provide more training for current personnel) and modify its computer programs. Therefore, in CBO's assessment, the new compliance initiatives would not be fully implemented until they had been in effect for three years. As a consequence, the return on investment (ROI)—the increase in revenues resulting from an additional dollar of appropriations—would increase gradually over the first three years an initiative was in effect. For example, CBO projects that the ROI for the 2019 initiatives would be $1.20 in that year and would rise to $5.20 in 2021, when staff training and computer upgrades were completed.

In CBO's assessment, taxpayers would gradually become aware of some of the changes in the IRS's enforcement techniques associated with the initiatives. In response, they would shift to other, less detectible forms of tax evasion. As a consequence, the ROI for the 2019 initiatives would fall from $5.20 to $4.20 by the end of the 10-year period, CBO estimates.

CBO expects that the IRS would tackle the areas of noncompliance with the highest ROI first (that is, it would begin with the least difficult cases to pursue). For that reason, CBO estimates that the ROIs on the 2020 initiatives would be lower than those on the 2019 initiatives, the ROIs on the 2021 initiatives would be lower than those on the 2020 initiatives, and so forth.

The largest source of uncertainty in the estimates relates to the limited data available for the computation of ROIs. The estimates are largely based on the IRS's past audits and collections. However, the IRS might use the additional appropriations to develop and implement new ways to audit taxpayers and to collect taxes owed. To the extent that those new initiatives diverged from the approaches used in the past, the revenues raised by the option would differ from the estimates reported above.

A second large source of uncertainty concerns which people would be subject to new enforcement activities, given that very different techniques are used to audit diverse categories of taxpayers. Because of the complexity of their returns, higher-income people and businesses are usually audited through face-to-face meetings with the IRS's auditors. Those audits also typically encompass most or all items required to be reported on tax returns. By contrast, most audits of lower- and moderate-income taxpayers focus on fewer issues and are conducted through correspondence. Thus, audits of higher-income people and businesses are more costly, on average, than audits of taxpayers with lower income. However, the amounts collected from audits of higher-income taxpayers are, on average, much larger than collections from audits of taxpayers with lower income.

A third source of uncertainty concerns the IRS's ability, at least initially, to implement new compliance initiatives. Outdated computer systems and a reduction in the number of experienced employees (as more employees become eligible for retirement in the next decade) would slow the implementation of new initiatives. If the hiring and training of staff and the updates to the IRS's computer systems for new initiatives took more than three years, the revenues raised by the option would be less than the estimates shown.

A fourth source of uncertainty is the extent to which taxpayers would respond to new enforcement initiatives by becoming more compliant with the tax code. The estimates do not reflect the very uncertain effects that enhanced enforcement might have on voluntary compliance.

Other Effects

The principal argument for the option is that increasing the IRS's resources would not only reduce the deficit, on net, but would also improve tax compliance without raising tax rates, broadening the tax base, or imposing new taxes. If the option was implemented, many taxpayers who are not compliant under the current tax system would pay the taxes they owe.

The main argument against the option is that increasing the number of audits would impose burdens on some compliant taxpayers, even though the audits would target noncompliant taxpayers. The criteria used to select taxpayers for audits are not perfect, and some compliant taxpayers would be audited. Although they had been compliant, they would potentially bear the costs of audits—for example, through payments to accountants and lawyers, earnings lost because of appointments with auditors, the monetary and nonmonetary costs associated with compiling documentation, and the anxiety caused by interactions with the IRS. Lower-income taxpayers, in particular, may not have sufficient resources to dispute assessments by the IRS. Some compliant taxpayers might pay the IRS's assessments simply because they viewed the costs of disputing those assessments as greater than the amount of taxes the IRS claimed was owed.

Although the option would boost tax collections, increasing funding for audits and collections—even by much more than the option specifies—would not be sufficient to substantially reduce noncompliance. Combining an increase in funding with legislation that expanded enforcement mechanisms (such as enabling the IRS to obtain more information that could be used to verify taxpayers' claims or imposing higher penalties) would probably be a more effective approach to significantly increase compliance and reduce the budget deficit. Simplifying or substantially changing the tax code would, to some extent, further improve compliance, although some approaches that would reduce noncompliance (for example, eliminating complicated rules that would limit the amount of a deduction) would also increase the deficit.

RELATED CBO PUBLICATIONS: Janet Holtzblatt and Jamie McGuire, *Factors Affecting Revenue Estimates of Tax Compliance Proposals*, Working Paper 2016-05 (November 2016), www.cbo.gov/publication/52199; *Estimating the Revenue Effects of Proposals to Increase Funding for Tax Enforcement* (June 2016), www.cbo.gov/publication/51699; *Additional Information on the Program Integrity Initiative for the Internal Revenue Service in the President's Budgetary Proposals for Fiscal Year 2012* (June 2011), www.cbo.gov/publication/41531

Appendix: Spending Options With Smaller Budgetary Effects

Most of the policy options presented earlier in this report would reduce the federal deficit by at least $10 billion over the 2019–2028 period, in the assessment of the Congressional Budget Office. This appendix presents an assortment of options that would save less than that. Some of the options were chosen to appear here because they appeared in previous editions of this report. Other options were chosen in response to strong Congressional interest.

Mandatory Spending Options

The following options would reduce the deficit by reducing mandatory spending.

Option A-1. Divest Two Agencies of Their Electric Transmission Assets

This option would reduce the government's role in electricity markets by divesting it of the transmission assets of the Southwestern Power Administration and the Western Area Power Administration. Those federal agencies market and transmit electricity for wholesale customers, such as cooperative, public, and private utilities. Once the assets were sold, the agencies would neither spend money on new transmission projects nor collect income from customers repaying the costs of past investment in electric transmission. CBO estimates that implementing this option would save $2.0 billion in mandatory spending over the 2019–2028 period, a sum reflecting $2.3 billion in sale proceeds and $0.3 billion in costs from forgone receipts. In addition, CBO estimates that implementing the option would reduce discretionary spending by $0.1 billion over that period. Those savings are uncertain and depend on various factors, such as the terms and characteristics of each asset sale and whether the past cash flows of the assets—which, once privatized, would no longer be subject to some statutory constraints—would accurately inform CBO's estimates of the assets' private-sector valuations.

Option A-2. Change the National Flood Insurance Program

Under this option, the federal government would stop offering discounted rates to households that bought insurance through the National Flood Insurance Program for "pre-FIRM" properties—that is, properties constructed before their community's first flood insurance rate map (FIRM) was created. The option would also eliminate an annual surcharge of $25 for primary residences and $250 for other properties. To replace the collections forgone by eliminating the surcharge, the option would increase the reserve fund assessment, which is currently set by the Federal Emergency Management Agency at 15 percent, to 23 percent. CBO estimates that implementing those changes would reduce spending by $1.3 billion over the 2019–2028 period. Those savings are uncertain, because two related factors are likewise uncertain: the number of pre-FIRM properties that would have received discounted rates in the absence of the changes and the way the changes would affect the number of property owners who chose to purchase insurance through the National Flood Insurance Program.

Option A-3. Tighten Eligibility for the Supplemental Nutrition Assistance Program

This option would eliminate broad-based categorical eligibility for the Supplemental Nutrition Assistance Program (SNAP) for some households. Specifically, for households that do not include an elderly or disabled person and are eligible for SNAP under current law because all household members receive or are authorized to receive noncash benefits from the Temporary Assistance for Needy Families (TANF) program, eligibility for SNAP would instead be determined through income and asset requirements. CBO estimates that the option would yield federal savings of $8.1 billion from 2019 to 2028. The largest source of uncertainty in that estimate is CBO's estimate of the number of participants who would be affected by the option. To estimate that number, CBO relies on administrative data that include detailed information about participants' income but do not generally include information about their assets. As a result, determining precisely how many people would remain eligible for SNAP if they were subject to the asset requirements is difficult.

RELATED OPTIONS: Mandatory Spending, "Convert Multiple Assistance Programs for Lower-Income People Into Smaller Block Grants to States" (page 89), "Eliminate Subsidies for Certain Meals in the National School Lunch, School Breakfast, and Child and Adult Care Food Programs" (page 92)

Option A-4. Reduce Pension Benefits for New Federal Retirees

This option would reduce spending on the Federal Employees Retirement System by decreasing the pensions of most federal workers who retired in January 2019 or later. For those retirees, the formula for calculating the basic annuity would be changed so that the annuity was based on the average of employees' earnings over the five consecutive years when they earned the most. (Currently, the annuity is based on the average of the three consecutive years when employees earned the most.) That change would save the federal government $2.9 billion from 2019 through 2028, CBO estimates. Those savings are uncertain and depend on a number of factors, including CBO's projections of salary growth and of when employees choose to retire.

RELATED OPTIONS: Revenues, "Increase Federal Civilian Employees' Contributions to the Federal Employees Retirement System" (page 304); Appendix, Mandatory Spending, "Eliminate the Special Retirement Supplement for New Federal Retirees" (page 310)

Option A-5. Eliminate the Special Retirement Supplement for New Federal Retirees

Part of the Federal Employees Retirement System is the Special Retirement Supplement—income that employees who are eligible to retire before age 62 can receive until they become eligible for Social Security benefits at that age. This option would eliminate the Special Retirement Supplement for federal workers who retired in January 2019 or later. The option would save the federal government $5.3 billion from 2019 through 2028, CBO estimates. Uncertainty about the option's savings stems from CBO's projections of federal workers' salary growth and retirement rates, which are themselves uncertain.

RELATED OPTIONS: Revenues, "Increase Federal Civilian Employees' Contributions to the Federal Employees Retirement System" (page 304); Appendix, Mandatory Spending, "Reduce Pension Benefits for New Federal Retirees" (page 310)

Discretionary Spending Options

The following options would reduce the deficit by reducing discretionary spending, provided that federal appropriations were reduced accordingly.

Option A-6. Eliminate Certain Forest Service Programs

This option would eliminate two entities within the U.S. Forest Service: the State and Private Forestry program and U.S. Forest Service R&D (Forest and Rangeland Research). Those entities examine and mitigate environmental concerns, such as threats to forests from insects, disease, and invasive plants. They also help businesses and other stakeholders sustainably manage and use natural resources—for instance, by developing new products, such as wood-based chemicals. Provided that federal appropriations were reduced accordingly, eliminating the programs would save $6.4 billion through 2028, CBO estimates. The eliminated appropriations would not immediately decrease outlays by the same amount because funds appropriated in one year are typically spent over many years. One source of CBO's uncertainty about the option's savings is that the process of shutting down programs might cost more than CBO anticipates, which could limit savings in the near term. Another is that the agency's baseline projections of the programs' costs, against which the option's savings are measured, are themselves uncertain.

Option A-7. Limit the Number of Cities Receiving Urban Areas Security Initiative Grants

This option would limit the cities receiving Urban Areas Security Initiative grants to the 10 cities at highest risk, as determined by the Department of Homeland Security. Cities use the grants for efforts to prevent terrorism and recover from it. Provided that federal appropriations were reduced accordingly, the option would save $1.2 billion through 2028, CBO estimates. Those savings are uncertain and depend on various factors, including the risk of terrorism in cities across the country.

Option A-8. Eliminate the International Trade Administration's Trade-Promotion Activities

The International Trade Administration (ITA) supports U.S. businesses that sell their goods and services abroad. Part of ITA's work is promoting trade by assisting domestic companies that are either new to the exporting process or trying to increase their exports. To do that, ITA assesses the companies' competitiveness in foreign markets and develops trade and investment policies to promote the companies' exports. This option would eliminate those trade-promotion activities. CBO estimates that eliminating them would save $3.0 billion through 2028, provided that federal appropriations were reduced accordingly. Uncertainty about this option's savings stems primarily from uncertainty about baseline projections of the activities' costs, against which those savings are measured. Furthermore, if ITA's priorities shifted between trade promotion and other activities, the expected savings would change as well.

Option A-9. Convert the Home Equity Conversion Mortgage Program Into a Direct Loan Program

This option would replace the Home Equity Conversion Mortgage (HECM) program with a direct loan program in 2020. Instead of guaranteeing reverse mortgages that private lenders originate, the Federal Housing Administration (FHA) would make loan disbursements directly to borrowers.

Using the budgetary procedures prescribed by the Federal Credit Reform Act of 1990, CBO projects that if FHA charged borrowers an interest rate similar to those charged by private lenders, the option would result in discretionary savings with a net present value of $3.1 billion from 2020 to 2028, provided that federal appropriations were reduced accordingly. (A present value is a single number that expresses a flow of current and future payments in terms of an equivalent lump sum paid today; the present value of future cash flows depends on the rate of interest, or discount rate, that is used to translate them into current dollars.) Using fair-value accounting—an alternative method that is based on market values and that more comprehensively accounts for the risk that the government assumes in guaranteeing or making loans—CBO projects that net discretionary savings would amount to $6.9 billion over the same period. The savings are uncertain and depend on a number of factors, including CBO's projections of interest rates, house prices, and the size of the HECM program, as well as CBO's assessment of how lenders and borrowers would react to such a change.

List of Tables and Figures

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About This Document

At the request of the House and Senate Committees on the Budget, the Congressional Budget Office periodically issues a compendium of budget options to help inform federal lawmakers about the implications of possible policy choices. This report, the latest in the series, presents 121 options for altering spending and revenues to reduce federal budget deficits.

The options come from a variety of sources, including legislative proposals, various Administrations' budget proposals, Congressional staff, other government entities, and private groups. The options are intended to reflect a range of possibilities rather than to rank priorities or present a comprehensive list. The inclusion or exclusion of a particular option does not represent an endorsement or rejection by CBO. In keeping with CBO's mandate to provide objective, impartial analysis, this report makes no recommendations.

This report is the result of work by more than 140 people at CBO, whose names are listed on the following pages, as well as the staff of the Joint Committee on Taxation. The report is available on CBO's website (www.cbo.gov/publication/54667).

CBO continually seeks feedback to make its work as useful as possible. Please send any feedback to communications@cbo.gov.

Keith Hall
Director
December 2018

Overview

The spending estimates that appear in this report were prepared by the staff of CBO's Budget Analysis Division (supervised by Theresa Gullo, Leo Lex, Sam Papenfuss, Christina Hawley Anthony, Tom Bradley, Kim Cawley, Chad Chirico, Sheila Dacey, David Newman, and Susan Willie); Health, Retirement, and Long-Term Analysis Division (supervised by David Weaver, Jessica Banthin, Alexandra Minicozzi, Lyle Nelson, and Julie Topoleski); and Financial Analysis Division (supervised by Sebastien Gay). Most of the revenue estimates were prepared by the staff of the Joint Committee on Taxation, although some were done by CBO's Tax Analysis Division (supervised by John McClelland, Ed Harris, and Joshua Shakin, as well as by Janet Holtzblatt, formerly of CBO) and Budget Analysis Division.

The discussions of the options were written and reviewed by analysts and managers throughout CBO in the four divisions just mentioned, the Microeconomic Studies Division (supervised by Joseph Kile and Chad Shirley), and the National Security Division (supervised by David Mosher and Edward G. Keating).

Molly Dahl coordinated work on the report and reviewed it. Wendy Edelberg, Mark Hadley, Jeffrey Kling, and Robert Sunshine reviewed it as well.

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