Analytical Perspectives

BUDGET OF THE U. S. GOVERNMENT

Fiscal Year 2018

Office of Management and Budget

Analytical Perspectives

BUDGET OF THE U. S. GOVERNMENT

Fiscal Year 2018

Office of Management and Budget

THE BUDGET DOCUMENTS

Budget of the United States Government, Fiscal Year 2018 contains the Budget Message of the President, information on the President's priorities, and summary tables.

Analytical Perspectives, Budget of the United States Government, Fiscal Year 2018 contains analyses that are designed to highlight specified subject areas or provide other significant presentations of budget data that place the budget in perspective. This volume includes economic and accounting analyses; information on Federal receipts and collections; analyses of Federal spending; information on Federal borrowing and debt; baseline or current services estimates; and other technical presentations.

The *Analytical Perspectives* volume also has supplemental materials that are available on the internet at *www.budget.gov/budget/Analytical_Perspectives* and on the Budget CD-ROM. These supplemental materials include tables showing the budget by agency and account and by function, subfunction, and program.

Appendix, Budget of the United States Government, Fiscal Year 2018 contains detailed information on the various appropriations and funds that constitute the budget and is designed primarily for the use of the Appropriations Committees. The *Appendix* contains more detailed financial information on individual programs and appropriation accounts than any of the other budget documents. It includes for each agency: the proposed text of appropriations language; budget schedules for each account; legislative proposals; narrative explanations of each budget account; and proposed general provisions applicable to the appropriations of entire agencies or group of agencies. Information is also provided on certain activities whose transactions are not part of the budget totals.

ELECTRONIC SOURCES OF BUDGET INFORMATION

The information contained in these documents is available in electronic format from the following sources:

Internet. All budget documents, including documents that are released at a future date, spreadsheets of many of the budget tables, and a public use budget database are available for downloading in several formats from the internet at *www.budget.gov/budget*. Links to documents and materials from budgets of prior years are also provided.

Budget CD-ROM. The CD-ROM contains all of the printed budget documents in fully indexed PDF format along with the software required for viewing the documents.

The Internet and CD-ROM also include many of the budget tables in spreadsheet format, and supplemental materials that are part of the *Analytical Perspectives* volume. It also includes *Historical Tables* that provide data on budget receipts, outlays, surpluses or deficits, Federal debt, and Federal employment over an extended time period, generally from 1940 or earlier to 2018 or 2022.

For more information on access to electronic versions of the budget documents (except CD-ROMs), call (202) 512-1530 in the D.C. area or toll-free (888) 293-6498. To purchase the Budget CD-ROM or printed documents call (202) 512-1800.

GENERAL NOTES

1. All years referenced for budget data are fiscal years unless otherwise noted. All years referenced for economic data are calendar years unless otherwise noted.
2. At the time of this writing, only one of the annual appropriations bills for 2017 had been enacted (the Military Construction and Veterans Affairs Appropriations Act), as well as the Further Continuing and Security Assistance Appropriations Act, which provided 2017 discretionary funding for certain Department of Defense accounts; therefore, the programs provided for in the remaining 2017 annual appropriations bills were operating under a continuing resolution (Public Law 114-223, division C, as amended). For these programs, references to 2017 spending in the text and tables reflect the levels provided by the continuing resolution.
3. Detail in this document may not add to the totals due to rounding.

U.S. GOVERNMENT PUBLISHING OFFICE, WASHINGTON 2017

For sale by the Superintendent of Documents, U.S. Government Publishing Office
Internet: bookstore.gpo.gov Phone: toll free (866) 512-1800; DC area (202) 512-1800
Fax: (202) 512-2104 Mail: Stop IDCC, Washington, DC 20402-0001

TABLE OF CONTENTS

*Available on the Internet at *http://www.whitehouse.gov/omb/budget/Analytical_Perspectives/* and on the *Budget* CD-ROM

LIST OF CHARTS AND TABLES

LIST OF CHARTS AND TABLES

LIST OF CHARTS

LIST OF TABLES

Page

*Available on the Internet at *http://www.budget.gov/budget/Analytical_Perspectives* and on the *Budget* CD-ROM

*Available on the Internet at *http://www.budget.gov/budget/Analytical_Perspectives* and on the *Budget* CD-ROM

*Available on the Internet at *http://www.budget.gov/budget/Analytical_Perspectives* and on the *Budget* CD-ROM

**Available on the Internet at *http://www.whitehouse.gov/omb/budget/Analytical_Perspectives* only

INTRODUCTION

1. INTRODUCTION

The *Analytical Perspectives* volume presents analyses that highlight specific subject areas or provide other significant data that place the President's 2018 Budget in context and assist the public, policymakers, the media, and researchers in better understanding the budget. This volume complements the main Budget volume, which presents the President's budget policies and priorities, and the Budget Appendix volume, which provides appropriations language, schedules for budget expenditure accounts, and schedules for selected receipt accounts.

Presidential budgets have included separate analytical presentations of this kind for many years. The 1947 Budget and subsequent budgets included a separate section entitled "Special Analyses and Tables" that covered four, and later more, topics. For the 1952 Budget, the section was expanded to 10 analyses, including many subjects still covered today, such as receipts, investment, credit programs, and aid to State and local governments. With the 1967 Budget this material became a separate volume entitled "Special Analyses," and included 13 chapters. The material has remained a separate volume since then, with the exception of the Budgets for 1991–1994, when all of the budget material was included in one volume. Beginning with the 1995 Budget, the volume has been named *Analytical Perspectives*.

Several supplemental tables as well as several longer tables that were previously published within the volume are available at *http://www.budget.gov/budget/Analytical_Perspectives* and on the Budget CD-ROM. These tables are shown in the List of Tables in the front of this volume with an asterisk instead of a page number.

OVERVIEW OF THE CHAPTERS

Economic and Budget Analyses

Economic Assumptions and Interactions with the Budget. This chapter reviews recent economic developments; presents the Administration's assessment of the economic situation and outlook; compares the economic assumptions on which the 2018 Budget is based with the assumptions for last year's Budget and those of other forecasters; provides sensitivity estimates for the effects on the Budget of changes in specified economic assumptions; and reviews past errors in economic projections.

Long-Term Budget Outlook. This chapter assesses the long-term budget outlook under current policies and under the Budget's proposals. It focuses on 25-year projections of Federal deficits and debt to illustrate the long-term impact of the Administration's proposed policies, and shows how alternative long-term budget assumptions affect the results. It also discusses the uncertainties of the long-term budget projections and discusses the actuarial status of the Social Security and Medicare programs.

Federal Borrowing and Debt. This chapter analyzes Federal borrowing and debt and explains the budget estimates. It includes sections on special topics such as trends in debt, debt held by the public net of financial assets and liabilities, investment by Government accounts, and the statutory debt limit.

Management

Social Indicators. This chapter presents a selection of statistics that offers a numerical picture of the United States and illustrates how this picture has changed over time. Included are economic, demographic and civic, socioeconomic, health, security and safety, and environmental and energy statistics.

Building and Using Evidence to Improve Government Effectiveness. This chapter discusses evidence and its role in improving government programs and policies. It articulates important principles and practices including building and using a portfolio of evidence, developing a learning agenda, building an evidence infrastructure, and making better use of administrative data.

Strengthening the Federal Workforce. This chapter presents summary data on Federal employment and compensation, and discusses the initial approach the Administration is taking with Federal human capital management.

Budget Concepts and Budget Process

Budget Concepts. This chapter includes a basic description of the budget process, concepts, laws, and terminology, and includes a glossary of budget terms.

Coverage of the Budget. This chapter describes activities that are included in budget receipts and outlays (and are therefore classified as "budgetary") as well as those activities that are not included in the Budget (and are therefore classified as "non-budgetary"). The chapter also defines the terms "on-budget" and "off-budget" and includes illustrative examples.

Budget Process. This chapter discusses proposals to improve budgeting and fiscal sustainability within individual programs as well as across Government.

Federal Receipts

Governmental Receipts. This chapter presents information on estimates of governmental receipts, which consist of taxes and other compulsory collections. It includes descriptions of tax-related legislation enacted in the last year and describes proposals affecting receipts in the 2018 Budget.

Offsetting Collections and Offsetting Receipts. This chapter presents information on collections that offset outlays, including collections from transactions with the public and intragovernmental transactions. In addition, this chapter presents information on "user fees," charges associated with market-oriented activities and regulatory fees. A detailed table, "Table 12–4, Offsetting Receipts by Type" is available at the Internet address cited above and on the Budget CD-ROM.

Tax Expenditures. This chapter describes and presents estimates of tax expenditures, which are defined as revenue losses from special exemptions, credits, or other preferences in the tax code.

Special Topics

Aid to State and Local Governments. This chapter presents crosscutting information on Federal grants to State and local governments. The chapter also includes a table showing historical grant spending, and a table with budget authority and outlays for grants in this Budget. Tables showing State-by-State spending for major grant programs are available at the Internet address cited above and on the Budget CD-ROM.

Strengthening Federal Statistics. This chapter discusses the vital role of the Federal government's statistical agencies and programs in generating data that citizens, businesses, and governments need to make informed decisions. This chapter also provides examples of innovative developments and applications throughout the Federal statistical community and highlights 2018 Budget proposals for the Government's principal statistical programs.

Information Technology. This chapter addresses Federal information technology (IT), highlighting initiatives to improve IT management through modern solutions to enhance service delivery. The Administration will engage agencies with PortfolioStat reviews of IT investments, advancing modernization and cost reduction through the Data Center Optimization Initiative, use of shared services, migrations to cloud-computing, and leveraging Federal buying power. Digital experts will continue to transform many of the Government's highest impact programs, while cybersecurity will be strengthened through the Continuous Diagnostics and Mitigation (CDM) program, and developing new strategies to meet emerging threats.

Federal Investment. This chapter discusses Federally-financed spending that yields long-term benefits. It presents information on annual spending on physical capital, research and development, and education and training.

Research and Development. This chapter presents a crosscutting review of research and development funding in the Budget.

Credit and Insurance. This chapter provides crosscutting analyses of the roles, risks, and performance of Federal credit and insurance programs and Government-sponsored enterprises (GSEs). The chapter covers the major categories of Federal credit (housing, education, small business and farming, energy and infrastructure, and international) and insurance programs (deposit insurance, pension guarantees, disaster insurance, and insurance against terrorism-related risks). Five additional tables address transactions including direct loans, guaranteed loans, and Government-sponsored enterprises. These tables are available at the Internet address cited above and on the Budget CD-ROM.

Budgetary Effects of the Troubled Asset Relief Program. The chapter provides special analyses of the Troubled Asset Relief Program (TARP) as described in Sections 202 and 203 of the Emergency Economic Stabilization Act of 2008, including information on the costs of TARP activity and its effects on the deficit and debt.

Federal Drug Control Funding. This chapter displays enacted and proposed drug control funding for Federal departments and agencies.

Note: Previous *Analytical Perspectives* volumes included a "Homeland Security Funding Analysis" chapter, and provided additional detailed information on the Internet address cited above and on the Budget CD-ROM. P.L. 115–31 eliminated the statutory reporting requirement for this information. Therefore, this information is not included in this year's Budget and it will not be included in future Budgets.

Technical Budget Analyses

Current Services Estimates. This chapter presents estimates of what receipts, outlays, and the deficit would be if current policies remained in effect, consistent with the baseline rules in the Balanced Budget and Emergency Deficit Control Act of 1985 (BBEDCA). Two detailed tables addressing factors that affect the baseline and providing details of baseline budget authority and outlays are available at the Internet address cited above and on the Budget CD-ROM.

Trust Funds and Federal Funds. This chapter provides summary information about the two fund groups in the budget—Federal funds and trust funds. In addition, for the major trust funds and certain Federal fund programs, the chapter provides detailed information about income, outgo, and balances.

Comparison of Actual to Estimated Totals. This chapter compares the actual receipts, outlays, and deficit for 2016 with the estimates for that year published in the 2016 Budget, published in February 2015.

The following materials are available at the Internet address cited above and on the Budget CD-ROM:

Detailed Functional Table

Detailed Functional Table. Table 25–1, "Budget Authority and Outlays by Function, Category, and Program," displays budget authority and outlays for major Federal program categories, organized by budget function (such as health care, transportation, or national defense), category, and program.

Federal Budget by Agency and Account

The Federal Budget by Agency and Account. Table 26–1, "Federal Budget by Agency and Account," displays budget authority and outlays for each account, organized by agency, bureau, fund type, and account.

The following report is available at the Internet address cited above:

California Bay-Delta Federal Budget Crosscut

California Bay-Delta Federal Budget Crosscut. The California Bay-Delta interagency budget crosscut report includes an estimate of Federal funding by each of the participating Federal agencies to carry out its responsibilities under the California Bay-Delta Program, fulfilling the reporting requirements of section 106 of Public Law 108-361.

ECONOMIC ASSUMPTIONS AND INTERACTIONS WITH THE BUDGET

2. ECONOMIC ASSUMPTIONS AND INTERACTIONS WITH THE BUDGET

This chapter presents the economic assumptions that underlie the Administration's Fiscal Year 2018 Budget.[1] It describes the recent performance of the U.S. economy, explains the Administration's projections for key macroeconomic variables, compares them with forecasts prepared by other prominent institutions and discusses the uncertainty inherent in producing an eleven-year forecast.

After contracting by more than 4 percent over 2007 to 2009, the United States economy has experienced stable but only relatively modest growth, especially when compared with past recoveries. From the trough in the second quarter of 2009, it took about two years for the economy to recover its previous output peak, much longer than in the other recoveries since World War II. Over the first three years of recoveries from previous postwar recessions, average output growth was a little over 5 percent annually. In the first three years following the most recent recession, average annual growth was only about 2.3 percent.

The disappointing recovery is motivating this Administration's aggressive economic strategy, which entails policies aimed at reforming the tax code and the regulatory framework. In addition, the Administration will introduce policies to encourage domestic energy development and investments in infrastructure, reform the health care system, negotiate more attractive trade agreements, and reduce (and eventually eliminate) Federal budget deficits. Such actions should encourage investment by American firms, stimulate productivity growth, and slow the expected decline in the labor force participation rate, leading to stronger growth in output and putting more Americans to work.

This chapter proceeds as follows:

- The first section reviews the performance of the U.S. economy since the publication of the 2017 Budget, examining a broad array of economic outcomes.
- The second section provides a detailed exposition of the Administration's economic forecast for the 2018 Budget, discussing how a number of macroeconomic variables are expected to evolve over the years 2017 to 2027.
- The third section compares the forecast of the Administration with those prepared by the Congressional Budget Office, the Federal Open Market Committee of the Federal Reserve, and the Blue Chip panel of private sector forecasters.
- The fourth section discusses the sensitivity of the Administration's projections of Federal receipts and outlays to fluctuations in the main macroeconomic variables discussed in the forecast.
- The fifth section considers the errors and possible biases[2] in past Administration forecasts, comparing them with the errors in forecasts produced by the Congressional Budget Office and the Blue Chip panel.
- The sixth section combines results on the sensitivity of the budget deficit to economic assumptions with information on past accuracy of Administration forecasts to provide a sense of the uncertainty associated with the Administration's forecast of the budget balance.

Recent Economic Performance[3]

The U.S. economy continued to exhibit subdued growth throughout 2016. In the fourth quarter of 2016, real Gross Domestic Product (GDP) was 2.0 percent higher than it had been in the fourth quarter of the preceding year. This came on the heels of real GDP growing at a 1.9 percent rate over the four quarters of 2015, and an average growth rate of 2.1 percent (fourth quarter-on-fourth quarter) since 2010. Among the demand components of GDP, real consumer spending accounted for most of the growth in 2016, with consumption of nondurables and services contributing 1.5 percentage points and consumption of durable goods contributing a further 0.7 percentage point, on a fourth quarter-over-fourth quarter basis. Gross private domestic investment and government consumption and gross investment made only minor positive contributions to growth, while net exports had a negative impact. On the supply side, weak productivity growth limited overall growth during 2016, as it has over the past several years. Over the four quarters of 2016, real output per hour in the nonfarm business sector grew by only 1.1 percent, well below the long run average of 2.1 percent during the post-World War II period.

Labor Markets—Labor markets improved in 2016 across a broad array of metrics. The unemployment rate continued to decline, falling from 5.0 percent at the end of 2015 to 4.7 percent at the end of 2016, and further to 4.4 percent in April of 2017, below the long-term average of 5.8 percent. During the first three months of 2017, the labor force participation rate averaged 63.0 percent, up from 62.7 percent in 2015 and and 62.8 percent in 2016. Although the participation rate has stabilized somewhat

[1] Economic performance is discussed in terms of calendar years. Budget figures are discussed in terms of fiscal years.

[2] As discussed later in this chapter, "bias" here is defined in the statistical sense and refers to whether previous Administrations' forecasts have tended to make positive or negative forecast errors on average.

[3] The statistics in this section are based on information available in early May 2017.

following a steep decline since 2000, it is expected to fall further as the baby boom generation continues retiring in large numbers. The proportion of the labor force employed part-time for economic reasons has fallen to 3.3 percent in April 2017, well below its peak of over 6.0 percent during the Great Recession. Furthermore, the proportion of the labor force unemployed for longer than 27 weeks has fallen to 1.0 percent from a peak of nearly 4.4 percent.

In spite of these improvements, several metrics suggest that the economy has not regained the ground it had lost. Compared with the last business cycle peak at the end of 2007, the proportion of the labor force working part-time for economic reasons and the proportion unemployed for more than 27 weeks are still elevated, as are the shares of the working-age population only marginally attached to the labor force or too discouraged to look for work. The labor force participation rate among men aged 20 years old or older has fallen faster than that of the population as a whole, and the same is true of those who have only a high school diploma. Real average hourly wages for production and nonsupervisory workers have grown more slowly than real output since the end of 2007. At the end of 2016, the employment-to-population ratio for Americans aged between 25 and 34 years old was still a full percentage point below where it was at the start of the Great Recession. Even among workers older than 25 with a bachelor's degree or higher, the unemployment rate has stopped falling and remains above the rates seen before the recession started.

Housing—The housing market continued to bolster the broader economy in 2016. House prices, as measured by the Federal Housing Finance Agency's (FHFA) purchase-only index, were 6.2 percent higher in December 2016 than in December 2015, while the S&P-Case Shiller price index (another closely watched measure) estimated the appreciation at 5.5 percent. Higher house prices help fortify household balance sheets and support personal consumption expenditures. They also encourage further activity in the housing sector. Residential fixed investment increased 1.1 percent over the four quarters of 2016. The number of housing starts rose from an annual rate of less than 1.2 million in December 2015 to nearly 1.3 million in December 2016, or a 9.9 percent increase. Building permits increased 2.2 percent over the same period.

Some weakness still remains in the housing market, however. As of February, while the FHFA index was about 8.0 percent higher than its pre-crisis peak, the S&P-Case Shiller index had only barely regained its previous apex. Homeownership rates have steadily declined since the recession began and were near an all-time low at the end of 2016.

Consumption—Consumer spending was a primary driver of growth in 2016, and at close to 70 percent of the economy, it is essential to overall growth. Consumption growth was spread over a number of different categories, including motor vehicles and parts (8.6 percent over the four quarters of 2016), furnishings and household equipment (6.1 percent), recreational goods and vehicles (11.3 percent), food and beverages (4.9 percent), and medical care (4.7 percent).

Investment—Disappointingly, growth in nonresidential fixed investment was negative in 2016. A 3.8 percent decline in spending on equipment over the four quarters of 2016 offset a modest (1.9 percent) increase in spending on structures and a more robust (4.3 percent) rise in intellectual property products. Growth in overall private investment (residential and nonresidential) has been below its postwar average in each of the last three years. Such weakness is likely to be problematic for future productivity growth.

Government—Overall demand from the government added modestly to GDP in 2016, with the State and local sector driving growth in this component. Government consumption and gross investment rose by 0.2 percent over the four quarters of 2016, with 0.4 percent growth coming from State and local governments. Federal purchases, in contrast, were negative. The Federal deficit edged up to 3.2 percent of GDP in fiscal year 2016, the first increase since the end of the Great Recession. While deficits might be expected to lead to higher interest rates and subsequent crowding out of private investment, the low interest rate environment that has obtained in recent years has mitigated this potentially negative force.

Monetary Policy—After holding nominal interest rates near zero for seven years, the Federal Open Market Committee of the Federal Reserve raised the target range for the federal funds rate by 25 basis points at the end of 2015. After a moderate pause, the Federal Reserve continued normalization of monetary policy, with a 25 basis point increase in December 2016 and another in March 2017. In its March policy statement, the FOMC cited "solid" job gains and expectations for continued strengthening of labor markets, as well as rates of inflation around the 2.0 percent target, as reasons for tightening policy. Similarly, the yield on the 10-year Treasury note has also increased recently, from an average of 1.6 percent in the third quarter of 2016 to an average of 2.4 percent during the first quarter of 2017.

Oil and Gas Production—After reaching a post-financial crisis peak above $100 per barrel, crude oil prices began to tumble in mid-2014. They continued to fall in 2015 and bottomed out around $30 in early 2016. Prices have since rebounded, rising above the $50 mark in late 2016. Higher oil prices act as a kind of tax on consumers' purchasing power, so their net decline from $100 per barrel in early 2014 to just above $50 per barrel recently has effectively raised disposable incomes, which has supported consumer spending. With new technology such as hydraulic fracturing, U.S. oil producers have emerged as important swing producers in global oil markets, helping to lower prices and moderate price fluctuations. Domestic production of crude oil averaged about 8.9 million barrels per day in 2016, up from 7.5 million barrels per day in 2013, although slightly down from 9.4 million barrels per day in 2015. The decline from 2015 reflects the decline in oil prices. Production of natural gas has experienced a qualitatively similar path, with production averaging about 72.3 billion cubic feet per day in 2016, down 2.5 percent from 2015 production levels, but still 9.1 percent higher than in 2013.

External Sector—Although real exports grew by 1.5 percent over the four quarters of 2016, real imports grew by an even faster 2.6 percent. As a result, net exports became slightly more negative in 2016, coming in at -$563.0 billion, compared with -$540.0 billion in 2015. Worldwide, 2016 was a weak year for economic growth. The growth rate of real GDP was below 2 percent in all of the other G-7 countries, according to International Monetary Fund (IMF) data.[4] Many large emerging market countries (with the exception of India) have experienced lower growth rates in recent years, while countries such as Brazil and Russia have gone through deep recessions. These developments, as well as a strengthening dollar, have contributed to the soft performance of U.S. exports. Looking ahead, it is possible that faster global growth and better trade agreements will help U.S. export performance to improve.

[4] The other G-7 countries are Canada, France, Germany, Italy, Japan, and the United Kingdom.

Economic Projections

The Administration's economic forecast is based on information available at the end of February 2017 and includes projections for a number of important macroeconomic variables. The forecast is used to inform the Fiscal Year 2018 Budget and rests on the central assumption that all of the President's policy proposals will be enacted.

Table 2–1. ECONOMIC ASSUMPTIONS[1]

(Calendar Years, Dollar Amounts In Billions)

	Actual		Projections										
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Gross Domestic Product (GDP)													
Levels, Dollar Amounts in Billions:													
Current Dollars	18037	18566	19367	20237	21197	22253	23379	24563	25806	27111	28483	29924	31439
Real, Chained (2009) Dollars	16397	16660	17045	17458	17928	18452	19005	19576	20163	20768	21391	22033	22694
Chained Price Index (2009=100), Annual Average	110.0	111.4	113.6	115.9	118.2	120.6	123.0	125.5	128.0	130.5	133.1	135.8	138.5
Percent Change, Fourth Quarter over Fourth Quarter:													
Current Dollars	3.0	3.5	4.4	4.5	4.9	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Real, Chained (2009) Dollars	1.9	1.9	2.3	2.5	2.8	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Chained Price Index (2009=100)	1.1	1.6	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Percent Change, Year over Year:													
Current Dollars	3.7	2.9	4.3	4.5	4.7	5.0	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Real, Chained (2009) Dollars	2.6	1.6	2.3	2.4	2.7	2.9	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Chained Price Index (2009=100)	1.1	1.3	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Incomes, Billions of Current Dollars													
Domestic Corporate Profits	1702	1684	1806	1859	1928	1972	2033	2086	2154	2228	2311	2452	2581
Employee Compensation	9693	10102	10556	11037	11572	12171	12801	13466	14169	14909	15698	16497	17339
Wages and Salaries	7855	8189	8551	8950	9384	9880	10387	10922	11489	12085	12725	13371	14066
Other Taxable Income [2]	4290	4385	4587	4785	5025	5325	5669	5990	6314	6628	6938	7253	7545
Consumer Price Index (All Urban) [3]:													
Level (1982–1984 = 100), Annual Average	237.0	240.0	246.2	251.8	257.5	263.3	269.3	275.4	281.6	288.0	294.5	301.1	307.9
Percent Change, Fourth Quarter over Fourth Quarter	0.4	1.8	2.5	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Percent Change, Year over Year	0.1	1.3	2.6	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Unemployment Rate, Civilian, Percent													
Fourth Quarter Level	5.0	4.7	4.5	4.4	4.7	4.7	4.8	4.8	4.8	4.8	4.8	4.8	4.8
Annual Average	5.3	4.9	4.6	4.4	4.6	4.7	4.8	4.8	4.8	4.8	4.8	4.8	4.8
Federal Pay Raises, January, Percent													
Military [4]	1.0	1.3	2.1	1.9	NA	NA	NA	NA	NA	NA	NA	NA	NA
Civilian [5]	1.0	1.3	2.1	2.1	NA	NA	NA	NA	NA	NA	NA	NA	NA
Interest Rates, Percent													
91-Day Treasury Bills [6]	*	0.3	0.8	1.5	2.1	2.6	2.9	3.0	3.0	3.1	3.1	3.1	3.1
10-Year Treasury Notes	2.1	1.8	2.7	3.3	3.4	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8

[1] Based on information available as of end of Febuary 2017
[2] Rent, interest, dividend, and proprietors' income components of personal income
[3] Seasonally adjusted CPI for all urban consumers
[4] Percentages apply to basic pay only; percentages to be proposed for years after 2018 have not yet been determined.
[5] Overall average increase, including locality pay adjustments. Percentages to be proposed for years after 2018 have not yet been determined.
[6] Average rate, secondary market (bank discount basis)
* 0.05 percent or less

The Administration's projections are reported in Table 2-1 and summarized below.

Real GDP—In the near term, real GDP is expected to grow faster than in recent years, with a 2.3 percent growth rate in 2017 and a 2.5 percent rate in 2018, on a fourth quarter-over-fourth quarter basis. The Administration's policies for simplifying taxes, cutting regulation, building infrastructure, reforming health care, boosting domestic energy production and eliminating deficits are expected to improve the supply side of the U.S. economy to allow these growth rates. As for demand, lower taxes and an expected pick up in global growth in 2017 and 2018 should bolster demand for American goods and services.

Long-Run Growth—In the longer term, the rate of growth in GDP is expected to increase gradually to 3.0 percent by 2020, and the Administration expects it to remain at that pace for the duration of the forecast window. The Administration projects a permanently higher trend growth rate as a result of its productivity-enhancing policies, such as tax reform, infrastructure investments, reductions in regulation, and a greatly improved fiscal outlook. Expected GDP growth of 3.0 percent per year is slightly below the average growth rate seen in the post-World War II period.

Unemployment—As of April 2017, the unemployment rate stood at 4.4 percent. The Administration expects the unemployment rate to stay low over the next several years, with an annual average of 4.4 percent in 2018. After that, the forecast assumes that it will gradually rise back toward 4.8 percent, a rate roughly consistent with stable inflation. Theory suggests that when the unemployment rate is at this rate, pressures on inflation are broadly in balance, threatening neither excessive inflation nor deflation.

Interest Rates—As growth increases, the Administration expects that interest rates will begin to rise to values more consistent with historical experience. The rate on the 91-day Treasury bill is expected to increase gradually from 0.8 percent in 2017 to 3.1 percent in 2024. The interest rate on the 10-year Treasury note is expected to rise in a similar fashion, from 2.7 percent in 2017 to 3.8 percent in the long run. Economic theory suggests that real GDP growth rates and interest rates are positively correlated, so interest rates are likely to be propelled higher by the stronger growth that the Administration anticipates.

Inflation—Since the onset of the financial crisis, inflation, whether measured by the GDP price index, the Consumer Price Index (CPI), or the price index for Personal Consumption Expenditures (PCE), has been subdued compared with the post-World War II average. This observation holds even when looking at the "core" indexes that exclude volatile food and energy prices. The Administration expects CPI inflation to rise to 2.5

Table 2–2. COMPARISON OF ECONOMIC ASSUMPTIONS IN THE 2017 AND 2018 BUDGETS

(Calendar Years, Dollar Amounts In Billions)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Nominal GDP:											
2017 Budget Assumptions [1]	18780	19626	20466	21363	22287	23258	24272	25329	26428	27576	28773
2018 Budget Assumptions	18566	19367	20237	21197	22253	23379	24563	25806	27111	28483	29924
Real GDP (2009 Dollars):											
2017 Budget Assumptions [1]	16839	17273	17694	18108	18524	18950	19386	19832	20288	20754	21232
2018 Budget Assumptions	16660	17045	17458	17928	18452	19005	19576	20163	20768	21391	22033
Real GDP (Percent Change)[2]:											
2017 Budget Assumptions [1]	2.7	2.5	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
2018 Budget Assumptions	1.6	2.3	2.4	2.7	2.9	3.0	3.0	3.0	3.0	3.0	3.0
GDP Price Index (Percent Change)[2]:											
2017 Budget Assumptions [1]	1.6	1.8	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
2018 Budget Assumptions	1.3	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Consumer Price Index (All-Urban; Percent Change)[2]:											
2017 Budget Assumptions	1.5	2.1	2.1	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.3
2018 Budget Assumptions	1.3	2.6	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Civilian Unemployment Rate (Percent)[3]:											
2017 Budget Assumptions	4.7	4.5	4.6	4.6	4.7	4.7	4.8	4.9	4.9	4.9	4.9
2018 Budget Assumptions	4.9	4.6	4.4	4.6	4.7	4.8	4.8	4.8	4.8	4.8	4.8
91-Day Treasury Bill Rate (Percent)[3]:											
2017 Budget Assumptions	0.7	1.8	2.6	3.1	3.3	3.4	3.4	3.3	3.3	3.2	3.2
2018 Budget Assumptions	0.3	0.8	1.5	2.1	2.6	2.9	3.0	3.0	3.1	3.1	3.1
10-Year Treasury Note Rate (Percent)[3]:											
2017 Budget Assumptions	2.9	3.5	3.9	4.1	4.2	4.2	4.2	4.2	4.2	4.2	4.2
2018 Budget Assumptions	1.8	2.7	3.3	3.4	3.8	3.8	3.8	3.8	3.8	3.8	3.8

[1] Adjusted for July 2016 NIPA Revisions
[2] Calendar Year over Calendar Year
[3] Calendar Year Average
* 0.05 percent or less

percent in 2017 (on a fourth quarter-over-fourth quarter basis), before settling down to 2.3 percent in the long run. The GDP price index is forecast to rise to 2.0 percent in 2017 (on a fourth-quarter-over-fourth-quarter basis) and maintain that rate throughout the forecast window.

Changes in Economic Assumptions from Last Year's Budget—Table 2-2 compares the Administration's forecast for the 2018 Budget with that from the 2017 Budget, submitted by the previous Administration. The most notable difference is the upward revision to medium- and longer-term GDP growth. Compared with the previous forecast, the Administration expects much faster output growth, as a result of its policies designed to boost productivity and labor force participation. These include deregulation, tax reform, an improved fiscal outlook, inducements for infrastructure investment, and health care reform, which should boost investment and bolster the incentives to save. The Administration's expectations for inflation differ little from the previous forecast, except for the slight boost in CPI inflation in 2017 and 2018 due to higher demand. The forecast for the unemployment rate is also broadly similar, although the Administration's projections have the unemployment rate dropping to a trough of 4.4 percent, lower than was previously expected, and it has a slightly lower estimate of the unemployment rate at which inflation pressures are broadly balanced. On 91-day Treasury bills, the Budget's terminal rate is

Table 2–3. COMPARISON OF ECONOMIC ASSUMPTIONS

(Calendar Years)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Nominal GDP:												
2018 Budget	18566	19367	20237	21197	22253	23379	24563	25806	27111	28483	29924	31439
CBO	18563	19352	20114	20838	21565	22381	23261	24182	25143	26142	27181	28258
Blue Chip	18570	19336	20221	21099	21973	22883	23831	24843	25872	26943	28059	29222
Real GDP (Year-over-Year):												
2018 Budget	1.6	2.3	2.4	2.7	2.9	3.0	3.0	3.0	3.0	3.0	3.0	3.0
CBO	1.6	2.3	2.0	1.7	1.5	1.8	1.9	1.9	1.9	1.9	1.9	1.9
Blue Chip	1.6	2.1	2.4	2.1	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0
Real GDP (Fourth Quarter-over-Fourth Quarter):												
2018 Budget	1.9	2.3	2.5	2.8	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
CBO	1.8	2.3	1.9	1.6	1.6	1.9	1.9	1.9	1.9	1.9	1.9	1.9
Blue Chip	1.9	2.1	2.4	2.1	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0
Federal Reserve Median Projection	1.9	2.1	2.1	1.9	1.8 longer run							
GDP Price Index [1]:												
2018 Budget	1.3	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
CBO	1.3	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.1	2.0
Blue Chip	1.3	2.0	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
Consumer Price Index (CPI-U) [1]:												
2018 Budget	1.3	2.6	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
CBO	1.3	2.4	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Blue Chip	1.3	2.4	2.2	2.3	2.4	2.3	2.3	2.3	2.4	2.4	2.4	2.4
Unemployment Rate [2]:												
2018 Budget	4.9	4.6	4.4	4.6	4.7	4.8	4.8	4.8	4.8	4.8	4.8	4.8
CBO	4.9	4.6	4.4	4.5	4.9	5.0	5.0	5.0	4.9	4.9	4.9	4.9
Blue Chip	4.9	4.5	4.3	4.5	4.6	4.6	4.7	4.7	4.7	4.7	4.7	4.7
Federal Reserve Median Projection [3]	4.9	4.5	4.5	4.5	4.7 longer run							
Interest Rates [2]:												
91-Day Treasury Bills (discount basis):												
2018 Budget	0.3	0.8	1.5	2.1	2.6	2.9	3.0	3.0	3.1	3.1	3.1	3.1
CBO	0.3	0.7	1.1	1.7	2.3	2.7	2.8	2.8	2.8	2.8	2.8	2.8
Blue Chip	0.3	1.0	1.8	2.4	2.7	2.8	2.8	2.8	2.9	2.9	2.9	2.9
10-Year Treasury Notes												
2018 Budget	1.8	2.7	3.3	3.4	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
CBO	1.8	2.3	2.5	2.8	3.1	3.4	3.5	3.6	3.6	3.6	3.6	3.6
Blue Chip	1.8	2.6	3.1	3.6	3.7	3.8	3.8	3.8	3.9	3.9	3.9	3.9

Sources: Administration; CBO, The Budget and Economic Outlook: 2017 to 2027, January 2017; March 2017 and May 2017 Blue Chip Economic Indicators, Aspen Publishers, Inc.; Federal Reserve Open Market Committee, March 15, 2017

[1] Year-over-Year Percent Change

[2] Annual Averages, Percent

[3] Median of Fourth Quarter Values

just slightly below that of the 2017 Budget. The yield on the 10-year Treasury note is lower at all points of the forecast horizon relative to the 2017 Budget. This decline is largely driven by the secular trend towards lower interest rates observed in the data. If the Administration's growth forecast had been lower, the interest rate on 10-year Treasuries would be lower still.

Comparison with Other Forecasts

For some additional perspective on the Administration's forecast, this section compares it with others prepared by the Congressional Budget Office (CBO), the Federal Open Market Committee of the Federal Reserve (FOMC), and the Blue Chip panel of private sector forecasters. There are some important differences to bear in mind when making such a comparison.

The most important difference between these forecasts is that they make different assumptions about the implementation of the Administration's policies. As already noted, the Administration's forecast assumes full implementation of these proposals. At the opposite end of the spectrum, CBO produces a forecast that assumes no changes to current law. It is not clear to what extent the FOMC participants and the Blue Chip panel incorporate policy implementation. The Blue Chip, in particular, compiles a large number of private sector forecasts, which are marked by considerable heterogeneity across individual forecasters and their policy expectations.

A second difference is the publication dates of the various forecasts. While the forecasts put out by the Administration, the Blue Chip, and the FOMC were finalized around March 2017, the CBO forecast was published earlier, in January of 2017.

In spite of these differences, the forecasts share several attributes. All of them project a further short-run decline in unemployment, followed by a rise back toward a rate consistent with stable inflation. They all project a minor near-term spike in inflation, followed by a stable path at its long-run rate. The differences among the near-term forecasts for real output growth are not too large Finally, they all foresee a gradual rise in interest rates over the course of the forecast horizon. What separates the Administration's forecast from those of the other bodies is their respective views on real output growth in the long run.

Real GDP—The Administration forecasts a higher path for real GDP growth compared with the CBO, FOMC, and Blue Chip forecasts. Over 2017 and 2018, its real GDP forecast is fairly similar to those at the high end of the Blue Chip panel. The CBO and FOMC, on the other hand, expect a noticeably slower expansion in output in the very short term. After 2018, the Administration's forecast diverges from the other forecasts, with a growth rate 0.7 percentage points faster than the next fastest in 2019 and a full percentage point faster than the others at the end of the forecast window. This reflects the Administration's expectation of full implementation of its policy proposals; other forecasters are unlikely to be operating under the same assumption.

Unemployment—On the unemployment rate, the Administration's expectations are largely aligned with those of the other forecasters. Along with the Administration, the CBO and the Blue Chip panel expect modest further declines in unemployment in 2018. The FOMC expects slightly less improvement, projecting a low point of 4.5 percent. After 2018, all forecasters project a gradual uptick in the unemployment rate to their respective estimates of the long-term rate (4.8 percent for the Administration, 4.9 percent for the CBO, and 4.7 percent for the FOMC and the Blue Chip panel).

Interest Rates—For both short- and long-term rates, the CBO's projections follow a generally lower path throughout the forecast window than those of either the Administration or the Blue Chip panel. The Administration's forecasts for short- and long-term interest rates finish in similar places relative to the Blue Chip, but the respective paths are slightly different. The Blue Chip panel and the Administration expect relatively steep increases over the next couple of years in the 91-day Treasury bill rate, but the Blue Chip path is slightly steeper. The Administration foresees a sharper increase in the interest rate on 10-year Treasury notes in the near term.

Inflation—Expectations for inflation are similar across the Administration, the CBO, and the Blue Chip. All three anticipate a bump in CPI inflation in 2017 (with the Administration expecting a slightly greater increase), before it turns back toward its long run rate. The Blue Chip and the CBO expect an inflation rate of 2.4 percent in the long run, while the Administration expects a 2.3 percent long run rate. For the GDP price index, the three forecasts also exhibit little disagreement, other than a marginally higher long-run rate from the Blue Chip panel.

Sensitivity of the Budget to Economic Assumptions

Federal spending and tax collections are heavily influenced by developments in the economy. Receipts are a function of growth in incomes for households and firms. Spending on social assistance programs may rise when the economy enters a downturn, while increases in spending on Social Security and other programs are dependent on consumer price inflation. A robust set of projections for macroeconomic variables assists in budget planning, but unexpected developments in the economy have ripple effects for Federal spending and revenues. This section seeks to provide an understanding of the magnitude of the effects that unforeseen changes in the economy can have on the budget.

To make these assessments, the Administration relies on a set of rules of thumb that can predict how certain spending and revenue categories will react to a change in a given subset of macroeconomic variables, holding almost everything else constant. These rules of thumb provide a sense of the broad changes one would expect after a given development, but they cannot anticipate how policy makers would react and potentially change course in such an event. For example, if the economy were to suffer an unexpected recession, the rules of thumb suggest that tax revenues would decline and that spending on programs such as unemployment insurance would go up. In such a situation, however, policy makers might cut taxes to stimulate the economy, and such behavior would not be accounted for by the historical relationships captured by the rules of thumb.

Another caveat is that it is often unrealistic to suppose that one macroeconomic variable might change but that others would remain constant. Most macroeconomic variables interact with each other in complex and subtle ways. These are important considerations to bear in mind when examining Table 2-4.

For real growth and employment:

- The first panel in the table illustrates the effect on the deficit resulting from a 1 percentage point reduction in real GDP growth, relative to the Administration's forecast, in 2017 that is followed by a subsequent recovery in 2018 and 2019. The unemployment rate is assumed to be half a percentage point higher in 2017 before returning to the baseline level in 2018 and 2019. The table shows that receipts would temporarily be somewhat lower and outlays would temporarily be higher. The long run effect on the budget deficit would be an increase of $110 billion over the eleven-year forecast horizon, due in large part to higher interest payments resulting from higher short-run deficits.

- The next panel in the table reports the effect of a reduction of 1 percentage point in real GDP growth in 2017 that is not subsequently made up by faster growth in 2018 and 2019. In addition, the natural rate of unemployment is assumed to rise by half a percentage point relative to that assumed in the Administration's forecasts. Here, the effect on the Budget deficit is more substantial, as receipts are lowered in every year of the forecast, while outlays rise gradually over the forecast window. This is because unemployment will be higher, leading to lower tax revenues and higher outlays on unemployment insurance, as well as higher interest payments that follow from increased short-run deficits.

- The third panel in the table shows the impact of a GDP growth rate that is permanently reduced by 1 percentage point, while the unemployment rate is not affected. This is the sort of situation that would arise if, for example, the economy were hit by a permanent decline in productivity growth. In this case, the effect on the Budget deficit is quite large, with receipts being reduced substantially throughout the forecast window and outlays rising due to higher interest payments. The accumulated effect over the eleven-year horizon is an additional $3.1 trillion of deficits.

For inflation and interest rates:

- The fourth panel in Table 2-4 shows the effect on the Budget in the case of a 1 percentage point higher rate of inflation and a 1 percentage point higher nominal interest rate in 2017. Both inflation and interest rates return to their assumed levels in 2018. This would result in a permanently higher price level and level of nominal GDP over the course of the forecast horizon. The effect on the Budget deficit would be fairly modest, although receipts would increase slightly more than outlays over the eleven years. This is because revenues would respond more quickly to price increases than outlays, which are set in advance. Over the years from 2017-2027, the Budget deficit would be smaller by about $32 billion.

- The fifth panel in the table illustrates the effects on the Budget deficit of an inflation rate and an interest rate 1 percentage point higher than projected in every year of the forecast. As in the previous case, the overall effect on the deficit over the forecast is modest (only $85 billion accumulated), and receipts rise faster than outlays because more spending decisions are determined in advance of price increases. It is still important to note, however, that faster inflation implies that the real value of Federal spending would be eroded.

- The next panel reports the effect on the deficit resulting from an increase in interest rates in every year of the forecast, with no accompanying increase in inflation. The result is a much higher accumulated deficit, as the Federal Government would have to make much higher interest payments on its debt. Receipts would be slightly higher as the Federal Reserve would earn more on its holdings of securities and households would pay higher taxes on interest income, but these increases would not offset the effect on outlays.

- The seventh panel in the table reports the effect on the Budget deficit of an inflation rate 1 percentage point higher than projected in every year of the forecast window, while the interest rate remains as forecast. In this case, the result is a much smaller deficit over the eleven years of the forecast relative to the baseline. Permanently faster inflation results in much higher revenues over the next eleven years, which helps to reduce interest payments on debt. Outlays rise due to higher cost-of-living increases on items such as Social Security, though not so much as to offset the revenue increases.

- Finally, the table shows the effect on the budget deficit if the Federal government were to borrow an additional $100 billion in 2017, while all of the other projections remain constant. Outlays rise over the forecast window by an accumulated $32.7 billion, due to higher interest payments.

It is important to note that these simple approximations that inform the sensitivity analysis are symmetric. This means that the effect of, for example, a 1 percentage point higher rate of growth over the forecast horizon would be of the same magnitude as a 1 percentage point reduction in growth, though with the opposite sign.

Table 2–4. SENSITIVITY OF THE BUDGET TO ECONOMIC ASSUMPTIONS
(Fiscal Years; In Billions Of Dollars)

Budget Effect	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	Total of Budget Effects: 2017-2027
Real Growth and Employment:												
Budgetary effects of 1 percent lower real GDP growth:												
(1) For calendar year 2017 only, with real GDP recovery in 2018–2019:1												
Receipts	–16.2	–26.0	–13.4	–2.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	–57.1
Outlays	6.9	16.5	8.3	2.3	2.4	2.6	2.6	2.7	2.7	2.8	2.9	52.7
Increase in deficit (+)	23.1	42.5	21.6	4.5	2.3	2.5	2.5	2.6	2.6	2.7	2.8	109.7
(2) For calendar year 2017 only, with no subsequent recovery: [1]												
Receipts	–16.2	–34.4	–40.2	–42.1	–44.1	–46.3	–48.5	–50.9	–53.3	–55.9	–58.6	–490.5
Outlays	6.9	20.1	22.3	23.9	26.8	29.1	31.8	34.8	37.7	41.0	44.1	318.5
Increase in deficit (+)	23.1	54.5	62.5	66.0	70.9	75.4	80.2	85.7	91.0	97.0	102.7	809.0
(3) Sustained during 2017–2027, with no change in unemployment:												
Receipts	–16.2	–51.0	–93.0	–138.6	–188.1	–242.0	–300.0	–363.2	–431.1	–504.2	–582.8	–2,910.2
Outlays	–0.1	0.1	1.3	3.9	8.5	14.1	20.7	28.6	37.7	48.3	60.9	224.0
Increase in deficit (+)	16.2	51.2	94.3	142.5	196.5	256.1	320.6	391.8	468.8	552.5	643.7	3,134.2
Inflation and Interest Rates:												
Budgetary effects of 1 percentage point higher rate of:												
(4) Inflation and interest rates during calendar year 2017 only:												
Receipts	17.0	34.0	36.5	37.0	38.8	40.7	42.6	44.7	46.9	49.2	51.6	439.0
Outlays	20.4	39.3	36.6	37.6	37.7	39.0	37.8	38.3	38.6	40.2	41.5	407.0
Decrease in deficit (–)	3.4	5.3	0.2	0.7	–1.1	–1.7	–4.8	–6.4	–8.3	–9.0	–10.1	–31.8
(5) Inflation and interest rates, sustained during 2017–2027:												
Receipts	17.0	51.8	91.4	133.9	181.2	233.1	289.7	352.2	420.0	494.1	574.7	2,839.3
Outlays	18.4	60.6	105.6	152.8	202.5	257.6	308.7	360.9	422.4	484.4	550.1	2,923.9
Increase in deficit (+)	1.4	8.8	14.2	18.9	21.3	24.4	19.0	8.7	2.3	–9.7	–24.6	84.6
(6) Interest rates only, sustained during 2017–2027:												
Receipts	1.0	2.3	2.9	3.2	3.6	3.9	4.3	4.6	4.9	5.1	5.3	41.0
Outlays	6.6	27.9	47.4	65.2	82.9	100.3	114.9	128.4	139.3	149.8	159.5	1,022.3
Increase in deficit (+)	5.6	25.6	44.5	62.0	79.4	96.4	110.7	123.8	134.4	144.7	154.3	981.3
(7) Inflation only, sustained during 2017–2027:												
Receipts	16.0	49.5	88.5	130.6	177.5	229.0	285.2	347.3	414.8	488.5	568.9	2,795.6
Outlays	11.8	32.6	58.2	87.6	119.7	157.6	194.2	233.1	283.9	335.5	391.8	1,905.9
Decrease in deficit (–)	–4.2	–16.9	–30.3	–43.0	–57.8	–71.4	–91.0	–114.1	–130.9	–153.0	–177.1	–889.7
Interest Cost of Higher Federal Borrowing:												
(8) Outlay effect of $100 billion increase in borrowing in 2017	0.4	1.3	2.0	2.7	3.2	3.5	3.7	3.8	3.9	4.1	4.2	32.7

[1] The unemployment rate is assumed to be 0.5 percentage point higher per 1 percent shortfall in the level of real GDP.

Forecast Errors for Growth, Inflation, and Interest Rates

As with any forecast, the Administration's projections will not be fully accurate. It is impossible to foresee every eventuality over a one–year horizon, much less ten or more years. This section evaluates the historical accuracy of the forecasts of past Administrations for real GDP, inflation, and short-term interest rates, especially as compared with the accuracy of forecasts produced by the CBO or Blue Chip panel. For this exercise, forecasts produced by all three entities going as far back as the Fiscal Year 1983 Budget are compared with realized values of these important variables.

The results of this exercise are reported in Table 2-5 and contain three different measures of accuracy. The first is the average forecast error. When a forecaster has an average forecast error of zero, it may be said that the forecast has historically been unbiased, in the sense that realized values of the variables have not been systematically above or below the forecasted value. The second is the average absolute value of the forecast error, which offers a sense of the magnitude of errors. Even if the past forecast errors average to zero, the errors may have been of a very large magnitude, with both positive and negative values. Finally, the table reports the square root of the mean of squared forecast error (RMSE). This metric

Table 2–5. FORECAST ERRORS, JANUARY 1982-PRESENT

	Administration	CBO	Blue Chip
REAL GDP ERRORS			
2-Year Average Annual Real GDP Growth			
Mean Error	0.2	–0.1	–0.1
Mean Absolute Error	1.2	1.0	1.1
Root Mean Square Error	1.5	1.3	1.4
6-Year Average Annual Real GDP Growth			
Mean Error	0.4	0.1	0.1
Mean Absolute Error	1.1	1.0	0.9
Root Mean Square Error	1.3	1.2	1.1
INFLATION ERRORS			
2-Year Average Annual Change in the GDP Price Index			
Mean Error	0.3	0.3	0.4
Mean Absolute Error	0.7	0.7	0.7
Root Mean Square Error	0.9	0.9	0.8
6-Year Average Annual Change in the GDP Index			
Mean Error	0.4	0.5	0.7
Mean Absolute Error	0.6	0.8	0.9
Root Mean Square Error	0.8	1.0	1.0
INTEREST RATE ERRORS			
2-Year Average 91-Day Treasury Bill Rate			
Mean Error	0.3	0.5	0.6
Mean Absolute Error	1.0	0.9	1.0
Root Mean Square Error	1.2	1.3	1.2
6-Year Average 91-Day Treasury Bill Rate			
Mean Error	0.9	1.4	1.5
Mean Absolute Error	1.4	1.5	1.6
Root Mean Square Error	1.7	1.8	1.9

applies an especially harsh penalty to forecasting systems prone to large errors. The table reports these measures of accuracy at both the 2-year and the 6-year horizons, thus evaluating the relative success of different forecasts in the short run and in the medium term.

For real GDP growth rates, at both the 2-year and 6-year horizons, the mean forecast error suggests that all of the forecasts (Administration, the CBO, and the Blue Chip panel) have been broadly unbiased, with small average errors close to zero. The mean absolute error and the RMSE both suggest that the Administration's past forecasts have tended to make slightly larger errors than the others, but the difference has been minor.

When it comes to inflation, there is more evidence of some systematic bias in all three forecasts. The mean errors at the 2- and 6-year horizons are all positive and larger than the errors in projecting real GDP growth. This implies that the Administration, the CBO, and the Blue Chip have expected faster inflation than ultimately materialized. A closer look at the data reveals that the errors were largest in the 1980s, as the U.S. economy shifted from a period of high inflation in the 1970s to a period of more moderate price rises. The mean absolute error and the RMSE metrics imply that the errors in the Administration's inflation forecast have tended to be of smaller magnitude than those of the CBO or Blue Chip panel.

Finally, on interest rates, the story is similar to that for inflation. All of the forecasts have historically projected interest rates that were higher than what later occurred, probably because they expected higher inflation as shown above. Across the three forecasters, the Administration has generally made errors of lesser magnitude than the other two.

Uncertainty and the Deficit Projections

This section assesses the accuracy of past Budget forecasts for the deficit or surplus, measured at different time horizons. The results of this exercise are reported in Table 2-6, where the average error, the average absolute error, and the RMSE (as well as the standard deviation of the forecast error) are reported.

In the table, a negative number means that the Federal Government ran a greater surplus than was expected, while a positive number in the table indicates a smaller surplus or a larger deficit. In the current year in which the Budget is published, the Administration has tended to understate the surplus (or, equivalently, overstate the deficit). For every year beyond the current year, however, the historical pattern has been for the Budget deficit to

Table 2–6. DIFFERENCES BETWEEN ESTIMATED AND ACTUAL SURPLUSES OR DEFICITS FOR FIVE-YEAR BUDGET ESTIMATES SINCE 1986
(As A Percent Of Gdp)

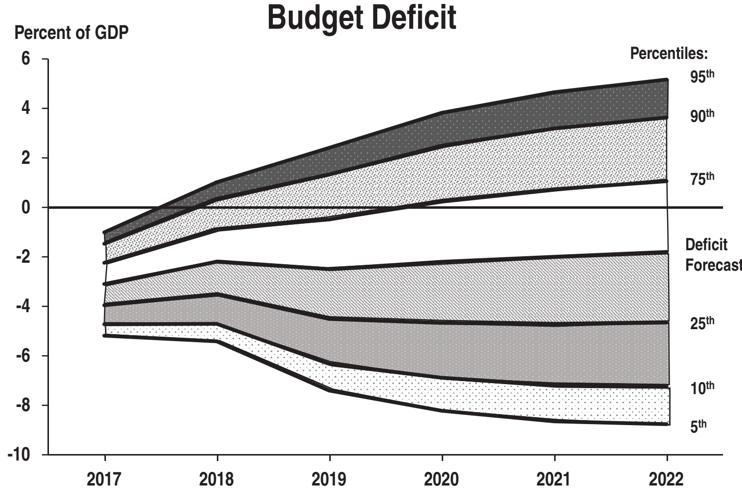
	Current Year Estimate	Budget Year Estimate	Estimate for Budget Year Plus: One Year (BY + 1)	Two Years (BY + 2)	Three Years (BY + 3)	Four Years (BY + 4)
Average Difference [1]	-0.8	0.2	1.1	1.7	2.1	2.5
Average Absolute Difference [2]	1.1	1.4	2.2	2.8	3.4	3.7
Standard Deviation	1.0	2.0	2.8	3.3	3.5	3.5
Root Mean Squared Error	1.3	2.0	3.0	3.7	4.0	4.2

[1] A positive number represents an overestimate of the surplus or an underestimate of the deficit. A negative number represents an overestimate of the deficit or an underestimate of the surplus.
[2] Average absolute difference is the difference without regard to sign.

be larger than the Administration expected. One possible reason for this is that past Administrations' policy proposals have not all been implemented.[5] The forecast errors tend to grow with the time horizon, which is not surprising given that there is much greater uncertainty in the medium run about both the macroeconomic situation and the specific details of policy enactments.

It is possible to construct a probabilistic range of outcomes for the deficit. This is accomplished by taking the RMSE of previous forecast errors and assuming that these errors are drawn from a normal distribution. This exercise is undertaken at every forecast horizon from the current Budget year to five years down the road. Chart 2-1 displays the projected range of possible deficits. In the chart, the middle line represents the Administration's expected budget balance and can be interpreted as the 50th percentile outcome. The rest of the lines in the chart may be read in the following fashion. The top line reports the 95th percentile of the distribution of outcomes over 2017 to 2022, meaning that there is a 95 percent probability that the actual balance in those years will be more negative than expressed by the line. Similarly, there is a 95 percent probability that the balance will be more positive than suggested by the bottom line in the chart. In 2017, there is a 95 percent chance of a budget deficit greater than 1.0 percent of GDP. By 2022, there is only a 5 percent chance of a budget deficit greater than 8.8 percent of GDP. In addition, the chart reports that there is a substantial probability of a budget surplus by 2022.

Chart 2-1. Range of Uncertainty for the Budget Deficit



[5] Additionally, CBO has on average underestimated the deficit in their forecasts.

3. LONG-TERM BUDGET OUTLOOK

While current Federal budget deficits are down from the string of trillion-dollar deficits that resulted from the 2008-2009 recession, the structural excess of spending over revenue will cause deficits to begin rising again soon and reach the trillion-dollar mark toward the end of the 10-year budget window. The long-term budget projections of current policy in this chapter show that the deficit will continue to rise dramatically beyond the 10-year window and that publicly held debt will exceed the size of the economy by 2036 unless significant reforms are enacted. The Administration is committed to reversing the trend of untenable Federal spending and to charting a path for more efficient, responsible, and sustainable use of taxpayer dollars while promoting economic growth.

While the detailed estimates of receipts and outlays in the President's Budget extend only 10 years, this chapter reviews the longer-term budget outlook, both under a continuation of current policies and under the policies proposed in the Budget. The projections discussed in this chapter are highly uncertain. Small changes in economic or other assumptions can make a large difference to the results. This is even more relevant for projections over longer horizons.

The chapter is organized as follows:

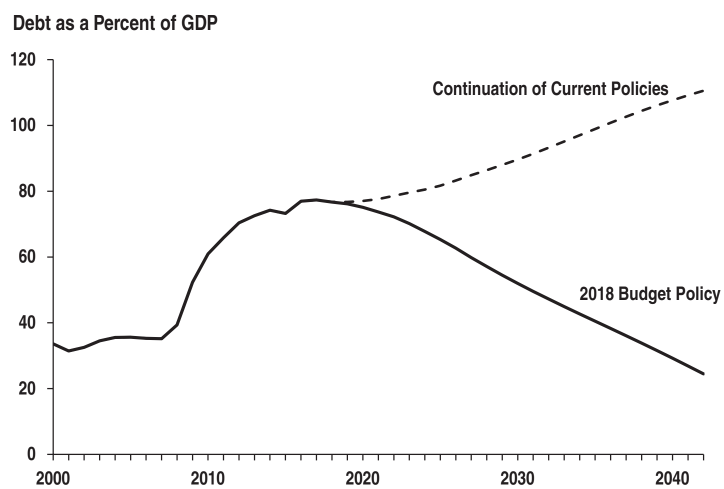
- The first section details the assumptions used to create the baseline projection and analyzes the long-term implications of leaving current policies in place. This forecast serves as a point of comparison against the proposals in the 2018 Budget in the second section.
- The second section demonstrates how the Administration's policies will significantly alter the current trajectory of the Federal budget by balancing the budget by 2027 and reducing the Federal debt. This course-correction will put the Nation on a sustainable path to maintain the financial health of the Federal government for future generations.
- The third section discusses alternative assumptions and uncertainties in the projections.
- The fourth section discusses the actuarial projections for Social Security and Medicare.
- The appendix provides further detail on data sources, assumptions, and other methods for estimation.

Both the Administration and the Congressional Budget Office (CBO) project that, absent any changes in policy, the deficit will increase this year and continue to escalate over the following 10 years. Chart 3-1 shows the path of debt as a percent of GDP under continuation of current policies, *without* the policy changes proposed in the President's Budget, as well as the debt trajectory under the President's policies. Under current policy, the ratio of debt to GDP will rise from 77 percent in 2017 to 85 percent in 2027, an increase of about eight percentage points over that period. In contrast, the debt ratio is projected to be 60 percent in 2027 under the proposed policy changes. By the end of the 25-year horizon, the difference in the debt burden—111 percent of GDP under current policy compared to 25 percent of GDP under Budget policy—is even starker.

Long-Run Projections under Continuation of Current Policies

For the 10-year budget window, the Administration produces both baseline projections, which show how deficits

Chart 3-1. Comparison of Publicly Held Debt



and debt would evolve under current policies, and projections showing the impact of proposed policy changes. Like the budget baseline more generally, long-term projections should provide policymakers with information about the Nation's expected fiscal trajectory in the absence of spending and tax changes. For this reason, the baseline projections in this chapter are based on a set of economic assumptions that remove the growth-increasing effects of the Administration's fiscal policies. In past Budgets, the baseline and policy projections used the same set of economic assumptions, but this approach would understate the severity of the current-law fiscal problem and fail to illustrate the full impact of the 2018 Budget policies.

The baseline long-term projections assume that current policy continues for Social Security, Medicare, Medicaid, other mandatory programs, and revenues.[1] For discretionary spending, it is less clear how to project a continuation of current policy. After the expiration of the statutory caps in 2021, both the Administration's and CBO's 10-year baselines assume that discretionary funding levels generally grow slightly above the rate of inflation (about 2.5 percent per year). Thereafter, the baseline long-run projections assume that per-person discretionary funding remains constant, which implies an annual growth rate of about three percent.

Over the next 10 years, debt rises from 77 percent of GDP last year to 85 percent of GDP in 2027. Beyond the 10-year horizon, debt increases more sharply, reaching 111 percent of GDP by 2042, the end of the 25-year projection window. The key drivers of that increase are an aging population and rapid health care cost growth, which combine to outpace growth in Federal revenues. Without policy changes, the public debt will continue to grow, increasing the burden on future generations.

[1] The long-run baseline projections are consistent with the Budget's baseline concept, which is explained in more detail in Chapter 22, "Current Services Estimates," in this volume. The projections assume full payment of scheduled Social Security and Medicare benefits without regard to the projected depletion of the trust funds for these programs. Additional baseline assumptions beyond the 10-year window are detailed in the appendix to this chapter.

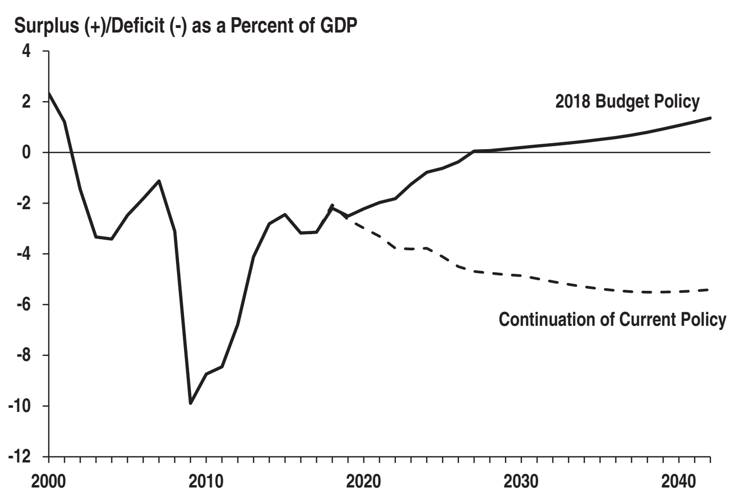
Aging population.—Over the next 10 years, an aging population will put significant pressure on the budget. In 2008, when the oldest members of the baby boom generation became eligible for early retirement under Social Security, the ratio of workers to Social Security beneficiaries was 3.2. By the end of the 10-year budget window, that ratio will fall to 2.4, and it will reach about 2.2 in the early 2030s, at which point most of the baby boomers will have retired.

With fewer active workers paying taxes and more retired workers eligible for Social Security, Medicare, and Medicaid (including long-term care), budgetary pressures will increase. Social Security program costs will grow from 4.9 percent of GDP today to 6.6 percent of GDP by 2042, with most of that growth occurring within the 10-year budget window. Likewise, even if per-beneficiary health care costs grew at the same rate as GDP per capita, Medicare and Medicaid costs would still increase substantially as a percent of GDP, due solely to the aging population.

Health costs.—Health care costs per capita have risen much faster than per-capita GDP growth for decades, leading both public and private spending on health care to increase as a share of the economy. While spending per enrollee has grown roughly in line with or more slowly than per-capita GDP in both the public and private sectors in recent years, slower per-enrollee growth is not projected to continue. Trends in per-enrollee costs, together with the demographic trends discussed above, are the primary drivers of long-term fiscal projections.

Based on projections of Medicare enrollment and expenditures included in the 2016 Medicare Trustees Report, the projections here assume that Medicare per-beneficiary spending growth will accelerate over the next few years, with the growth rate averaging about 0.8 percentage points above the growth rate of per-capita GDP over the next 25 years. (This average growth rate is still below the historical average for the last 25 years.) Under these assumptions, Medicare and Medicaid costs increase by a total of 2.6 percentage points as a percent of GDP by 2042.

Chart 3-2. Comparison of Annual Surplus/Deficit



Revenues.—Without any further changes in tax laws, revenues will grow slightly faster than GDP over the long run, but not fast enough to keep pace with the increase in social insurance costs that results from an aging population. The increase in revenues as a percent of GDP occurs primarily because individuals' real, inflation-adjusted incomes grow over time, and so a portion of their income falls into higher tax brackets. (Bracket thresholds are indexed for inflation but do not grow in real terms.)

The Impact of 2018 Budget Policies on the Long-Term Fiscal Outlook

To show the long-term effects of implementing new policies, expenditures and revenues are extended through the 25-year timeframe. The President's 2018 Budget proposal reduces deficits while continuing to invest in national security and other critical priorities that promote economic growth and ultimately balances the budget by decreasing non-defense discretionary and mandatory spending over the next 10 years. Beyond the 10-year window, most categories of mandatory spending grow at the same long-run rates as under the baseline projection, discretionary spending keeps up with inflation, and revenues continue as a fixed percentage of GDP based on their level in 2027. Details about the assumptions are available in the appendix.

As shown in Chart 3-2, 2018 Budget policies will reduce the deficit to below two percent of GDP by 2022 and ultimately lead to a balanced budget by 2027. Over the next decade and a half, the debt-to-GDP ratio reaches 47 percent of GDP and subsequently decreases. At the end of the 25-year horizon, the debt ratio would be the lowest since the start of the 1980s, representing significant progress in reducing the Federal debt burden.

One way to quantify the size of the Nation's long-term fiscal challenges is to determine the size of the increase in taxes or reduction in non-interest spending needed to reach a target debt-to-GDP ratio over a given period. There is no one optimal debt ratio, but two illustrative targets are keeping the debt ratio stable and reaching the average postwar debt ratio of 45 percent. Policy adjustments of about 1.4 percent of GDP would be needed each year to keep the debt ratio stable at 77 percent. Alternatively, policy adjustments of about 2.7 percent of GDP would steer the debt ratio to the postwar average by the end of the 25-year horizon. In comparison, the President's Budget policies are projected to decrease the debt ratio within 10 years and reduce it by 53 percentage points by 2042, more than satisfying the definition of fiscal sustainability.

The Budget achieves these fiscal goals through prioritizing expenditures that promote economic growth and security while improving the efficiency of the Federal government. For example, the President's Budget includes $200 billion to improve the Nation's crumbling infrastructure and an increase of $54 billion to defense spending for 2018. Reducing the regulatory burden will promote job creation, and tax reform will allow families to keep more of their earnings. At the same time, the Budget eliminates ineffective or duplicative programs and identifies ways to make Federal programs more efficient. Despite all the progress the Budget proposals make towards fiscal goals, some long-term challenges remain, particularly in Social Security and Medicare.

Uncertainty and Alternative Assumptions

Future budget outcomes depend on a host of unknowns: changing economic conditions, unforeseen international developments, unexpected demographic shifts, and unpredictable technological advances. The longer budget projections are extended, the more the uncertainties increase. These uncertainties make even short-run budget forecasting quite difficult. For example, the budget's projection of the deficit in five years is 1.8 percent of GDP, but a distribution of probable outcomes ranges from a deficit of 7.2 percent of GDP to a surplus of 3.6 percent of GDP, at the 10th and 90th percentiles, respectively.

Productivity and interest rates.— The rate of future productivity growth has a major effect on the long-run budget outlook (see Chart 3–3). Higher productivity growth improves the budget outlook, because it adds di-

Chart 3-3. Alternative Productivity and Interest Assumptions

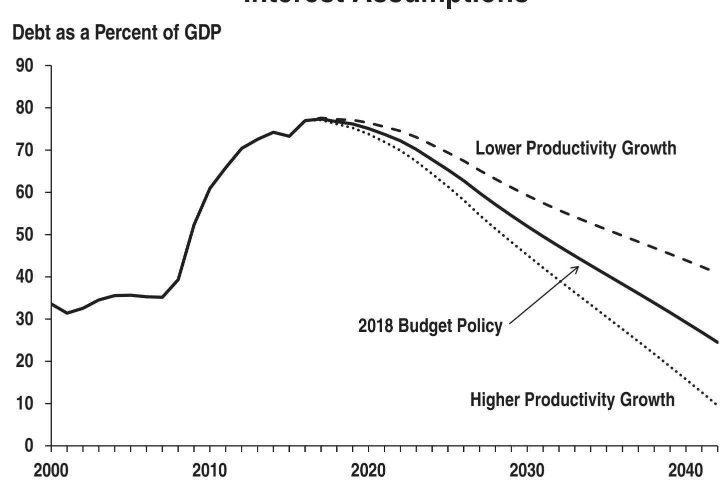


Table 3–1. DEBT PROJECTIONS IN 25 YEARS UNDER ALTERNATIVE BUDGET SCENARIOS
(Percent of GDP)

2018 Budget Policy	24.5
Health:	
Excess cost growth averages 1.5%	36.8
Zero excess cost growth	16.6
Discretionary Outlays:	
Grow with inflation and population	26.8
Grow with GDP	32.0
Revenues:	
Revenues rise as as a share of GDP, with bracket creep	20.2
Productivity and Interest:[1]	
Productivity grows by 0.25 percentage point per year faster than the base case	10.5
Productivity grows by 0.25 percentage point per year slower than the base case	39.7

[1] Interest rates adjust commensurately with increases or decreases in productivity.

rectly to the growth of the major tax bases while having a smaller effect on outlay growth. Meanwhile, productivity and interest rates tend to move together, but have opposite effects on the budget. Economic growth theory suggests that a 0.1 percentage point increase in productivity should be associated with a roughly equal increase in interest rates.

Productivity growth is also highly uncertain. For much of the last century, output per hour in nonfarm business grew at an average rate of around 2.1 percent per year, but there were long periods of sustained output growth at notably higher and lower rates than the long-term average. The base case long-run projections assume that real GDP per hour worked will grow at an average annual rate of 2.0 percent per year and assume interest rates on 10-year Treasury securities of 3.8 percent. The alternative scenarios illustrate the effect of raising and lowering the projected productivity growth rate by 0.25 percentage point and changing interest rates commensurately. At the end of the 25-year horizon, the public debt ranges from almost 11 percent of GDP in the high productivity scenario to 40 percent of GDP in the low productivity scenario. This variation highlights the importance of investment and smarter tax policy, which can contribute to higher productivity.

Health spending.—Health care cost growth represents another large source of uncertainty in the long-term budget projections. As noted above, the baseline projections follow the Medicare Trustees in assuming that Medicare per-beneficiary costs grow an average of about 0.8 percentage points faster than per-capita GDP growth over the next 25 years. But historically, especially prior to 1990, health care costs grew even more rapidly. Conversely, over the last few years, per-enrollee health care costs have grown roughly in line with or more slowly than GDP per capita, with particularly slow growth in Medicare and Medicaid.

Chart 3-4 shows the large impact that either slower or faster health care cost growth would have on the budget. If health care cost growth averaged 1.5 percentage points faster than per-capita GDP growth, the debt ratio in 25 years would increase from 25 percent of GDP under the base case Budget policy to 37 percent of GDP. If health care costs grew with GDP per capita, the debt ratio in 25 years would be 17 percent of GDP.

Policy assumptions.—As evident from the discussion of the 2018 Budget proposals, policy choices will also have a large impact on long-term budget deficits and debt. The base case policy projection for discretionary spending assumes that after 2027, discretionary spending grows with inflation (see Chart 3–5). Alternative assumptions are to grow discretionary spending with GDP or inflation and population. At the end of the 25-year horizon, the debt ratio ranges from 25 percent of GDP in the base case to 27 percent of GDP if discretionary spending grows with inflation and population and 32 percent of GDP if discretionary spending grows with GDP.

In the base case policy projection, tax receipts remain a constant percent of GDP after the budget window. Chart 3–6 shows an alternative receipts assumption. Without changes in law, revenues would gradually increase with

Chart 3-4. Alternative Health Care Costs

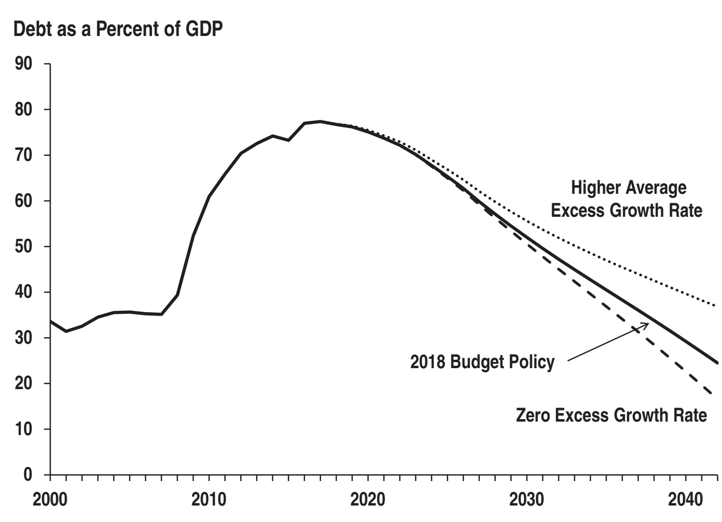
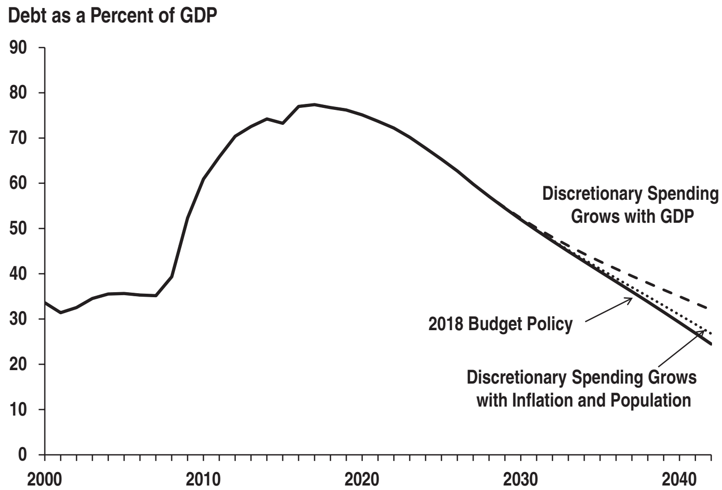


Chart 3-5. Alternative Discretionary Assumptions



rising real incomes adding to budget surpluses that can further improve the debt outlook. At the end of the 25-year horizon, the debt ratio falls from 25 percent of GDP in the base case to 20 percent of GDP in the alternative case where tax brackets are not regularly increased after 2027.

Finally, Chart 3-7 shows how uncertainties compound over the forecast horizon. As the chart shows, under the base case Budget policy projections, debt declines to 25 percent of GDP. Alternatively, assuming a combination of slower productivity growth and higher health care cost growth results in less debt reduction, with debt-to-GDP reaching 53 percent by the end of the window. Meanwhile, assuming a combination of higher productivity growth and slower health care cost growth results in the debt-to-GDP reaching 3 percent in 2042.

Despite the striking uncertainties, long-term projections are helpful in highlighting some of the known budget challenges on the horizon, especially the impact of an aging population. In addition, the projections highlight the need for policy awareness and potential action to address drivers of future budgetary costs.

Actuarial Projections for Social Security and Medicare

While the Administration's long-run projections focus on the unified budget outlook, Social Security and Medicare Hospital Insurance benefits are paid out of trust funds financed by dedicated payroll tax revenue. Projected trust fund revenues fall short of the levels necessary to finance projected benefits over the next 75 years.

The Social Security and Medicare Trustees' reports feature the actuarial balance of the trust funds as a summary measure of their financial status. For each trust fund, the balance is calculated as the change in receipts or program benefits (expressed as a percentage of taxable payroll) that would be needed to preserve a small positive balance in the trust fund at the end of a specified time pe-

Chart 3-6. Alternative Revenue Assumptions

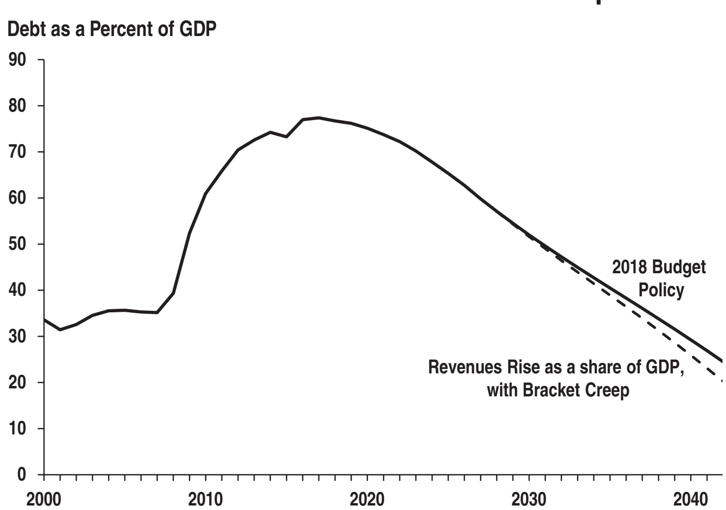
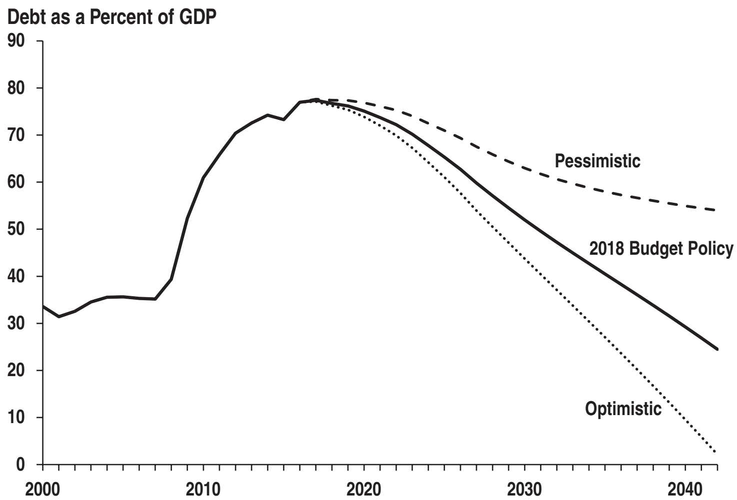


Chart 3-7. Long-Term Uncertainties



riod. The estimates cover periods ranging in length from 25 to 75 years.

Table 3–2 shows the projected income rate, cost rate, and annual balance for the Medicare HI and combined OASDI trust funds at selected dates under the Trustees' intermediate assumptions in the 2016 reports. There is a continued imbalance in the long-run projections of the HI program due to demographic trends and continued high per-person costs. The HI trust fund is projected to become insolvent in 2028.

As a result of reforms legislated in 1983, Social Security had been running a cash surplus with taxes exceeding costs up until 2009. This surplus in the Social Security trust fund helped to hold down the unified budget deficit. The cash surplus ended in 2009, when the trust fund began using a portion of its interest earnings to cover benefit payments. The 2016 Social Security Trustees' report projects that the trust fund will not return to cash surplus, but the program will continue to experience an overall surplus for several more years because of the interest earnings. After that, however, Social Security will begin to draw on its trust fund balances to cover current expenditures. Over time, as the ratio of workers to retirees falls, costs are projected to rise further while revenues excluding interest are projected to rise slightly. In the process, the Social Security trust fund, which was built up since 1983, would be drawn down and eventually be exhausted in 2034. These projections assume that benefits would continue to be paid in full despite the projected exhaustion of the trust fund to show the long-run implications of current benefit formulas. Under current law, not all scheduled benefits could be paid after the trust funds are exhausted. However, benefits could still be partially funded from current revenues. According to

Table 3–2. INTERMEDIATE ACTUARIAL PROJECTIONS FOR OASDI AND HI, 2016 TRUSTEES' REPORTS

	2015	2020	2030	2040	2080
	Percent of Payroll				
Medicare Hospital Insurance (HI):					
Income Rate	3.4	3.4	3.6	3.8	4.3
Cost Rate	3.4	3.5	4.2	4.8	5.1
Annual Balance	–0.1	–*	–0.6	–1.0	–0.8
Projection Interval			25 years	50 years	75 years
Actuarial Balance			–0.6	–0.7	–0.7
	Percent of Payroll				
Old Age Survivors and Disability Insurance (OASDI):					
Income Rate	13.0	13.0	13.2	13.2	13.3
Cost Rate	14.1	14.1	16.1	16.6	17.4
Annual Balance	–1.1	–1.2	–2.9	–3.4	–4.1
Projection Interval			25 years	50 years	75 years
Actuarial Balance			–1.5	–2.2	–2.7

* 0.05 percent or less.

the 2016 Trustees' report, beginning in 2034, 79 percent of projected Social Security scheduled benefits would be funded. This percentage would eventually decline to 74 percent by 2090.

TECHNICAL NOTE: SOURCES OF DATA AND METHODS OF ESTIMATING

The long-run budget projections are based on actuarial projections for Social Security and Medicare as well as demographic and economic assumptions. A simplified model of the Federal budget, developed at OMB, is used to compute the budgetary implications of these assumptions.

Demographic and economic assumptions.—For the years 2017-2027, the assumptions are drawn from the Administration's economic projections used for the 2018 Budget. The economic assumptions are extended beyond this interval by holding inflation, interest rates, and the unemployment rate constant at the levels assumed in the final year of the budget forecast. Population growth and labor force growth are extended using the intermediate assumptions from the 2016 Social Security Trustees' report. The projected rate of growth for real GDP is built up from the labor force assumptions and an assumed rate of productivity growth. Productivity growth, measured as real GDP per hour, is assumed to equal its average rate of growth in the Budget's economic assumptions—2.0 percent per year. For the baseline projections, GDP growth is adjusted to remove the growth-increasing effects of the Administration's fiscal policies.

Under Budget policies, CPI inflation holds stable at 2.3 percent per year, the unemployment rate is constant at 4.8 percent, the yield on 10-year Treasury notes is steady at 3.8 percent, and the 91-day Treasury bill rate is 3.0 percent. Consistent with the demographic assumptions in the Trustees' reports, U.S. population growth slows from nearly 1.0 percent per year to about two-thirds that rate by 2035, and slower rates of growth beyond that point. By the end of the 25-year projection period total population growth is slightly above 0.5 percent per year. Real GDP growth is projected to be less than its historical average of around 3.3 percent per year because the slowdown in population growth and the increase in the population over age 65 reduce labor supply growth. In these projections, real GDP growth averages between 2.5 percent and 2.9 percent per year for the period following the end of the 10-year budget window.

The economic and demographic projections described above are set by assumption and do not automatically change in response to changes in the budget outlook. This makes it easier to interpret the comparisons of alternative policies and is a reasonable simplification given the large uncertainties surrounding the long-run outlook.

Budget projections.—For the period through 2027, receipts and outlays in the baseline and policy projections follow the 2018 Budget's baseline and policy estimates respectively. Under Budget policies, total tax receipts are constant relative to GDP after 2027. Discretionary spending grows at the rate of growth in inflation outside the budget window. Long-run Social Security spending is projected by the Social Security actuaries using this chapter's long-run economic and demographic assumptions. Medicare benefits are projected based on a projection of beneficiary growth and excess health care cost growth from the 2016 Medicare Trustees' report current law baseline. Medicaid outlays are based on the economic and demographic projections in the model, which assume average excess cost growth of approximately 1.0 percentage point above growth in GDP per capita after 2027. For the policy projections, these assumptions are adjusted based on the Budget proposal to reform Medicaid funding to States starting in 2020. Other entitlement programs are projected based on rules of thumb linking program spending to elements of the economic and demographic projections such as the poverty rate.

4. FEDERAL BORROWING AND DEBT

Debt is the largest legally and contractually binding obligation of the Federal Government. At the end of 2016, the Government owed $14,168 billion of principal to the individuals and institutions who had loaned it the money to fund past deficits. During that year, the Government paid the public approximately $284 billion of interest on this debt. At the same time, the Government also held financial assets, net of financial liabilities other than debt, of $1,699 billion. Therefore, debt held by the public net of financial assets was $12,469 billion.

In addition, at the end of 2016 the Treasury had issued $5,372 billion of debt to Government accounts. As a result, gross Federal debt, which is the sum of debt held by the public and debt held by Government accounts, was $19,539 billion. Interest on the gross Federal debt was $430 billion in 2016. Gross Federal debt is discussed in more detail later in the chapter.

The $14,168 billion debt held by the public at the end of 2016 represents an increase of $1,051 billion over the level at the end of 2015. This increase is the result of the $585 billion deficit in 2016 and other financing transactions that increased the need to borrow by $466 billion. Debt held by the public increased from 73.3 percent of Gross Domestic Product (GDP) at the end of 2015 to 77.0 percent of GDP at the end of 2016. Meanwhile, financial assets net of liabilities grew by $464 billion in 2016, so that debt held by the public net of financial assets increased by $587 billion during 2016. Debt held by the public net of financial assets was 66.4 percent of GDP at the end of 2015 and 67.7 percent of GDP at the end of 2016. The deficit is estimated to increase to $603 billion, or 3.1 percent of GDP, in 2017, and then to decrease to $440 billion, or 2.2 percent of GDP, in 2018. The deficit is projected to increase temporarily in 2019, but then to decrease in nominal terms and as a percent of GDP in each of the subsequent years, reaching surplus in 2027. Debt held by the public is projected to grow to 77.4 percent of GDP at the end of 2017 and then to fall in each of the subsequent years, falling to 59.8 percent of GDP in 2027. Debt held by the public net of financial assets is expected to similarly grow to 68.2 percent of GDP at the end of 2017, then to decline in the following years, falling to 52.2 percent of GDP at the end of 2027.

Trends in Debt Since World War II

Table 4–1 depicts trends in Federal debt held by the public from World War II to the present and estimates from the present through 2022. (It is supplemented for earlier years by Tables 7.1–7.3 in the Budget's historical tables, available as supplemental budget material.[1]) Federal debt peaked at 106.1 percent of GDP in 1946, just after the end of the war. From that point until the 1970s, Federal debt as a percentage of GDP decreased almost every year because of relatively small deficits, an expanding economy, and unanticipated inflation. With households borrowing large amounts to buy homes and consumer durables, and with businesses borrowing large amounts to buy plant and equipment, Federal debt also decreased almost every year as a percentage of total credit market debt outstanding. The cumulative effect was impressive. From 1950 to 1975, debt held by the public declined from 78.5 percent of GDP to 24.5 percent, and from 53.3 percent of credit market debt to 17.9 percent. Despite rising interest rates, interest outlays became a smaller share of the budget and were roughly stable as a percentage of GDP.

Federal debt relative to GDP is a function of the Nation's fiscal policy as well as overall economic conditions. During the 1970s, large budget deficits emerged as spending grew faster than receipts and as the economy was disrupted by oil shocks and rising inflation. The nominal amount of Federal debt more than doubled, and Federal debt relative to GDP and credit market debt stopped declining for several years in the middle of the decade. Federal debt started growing again at the beginning of the 1980s, and increased to almost 48 percent of GDP by 1993. The ratio of Federal debt to credit market debt also rose during this period, though to a lesser extent. Interest outlays on debt held by the public, calculated as a percentage of either total Federal outlays or GDP, increased as well.

The growth of Federal debt held by the public was slowing by the mid-1990s. In addition to a growing economy, three major budget agreements were enacted in the 1990s, implementing spending cuts and revenue increases and significantly reducing deficits. The debt declined markedly relative to both GDP and total credit market debt, with the decline accelerating as budget surpluses emerged from 1997 to 2001. Debt fell from 47.8 percent of GDP in 1993 to 31.4 percent of GDP in 2001. Over that same period, debt fell from 26.3 percent of total credit market debt to 17.4 percent. Interest as a share of outlays peaked at 16.5 percent in 1989 and then fell to 8.9 percent by 2002; interest as a percentage of GDP fell by a similar proportion.

The progress in reducing the debt burden stopped and then reversed course beginning in 2002. A decline in the stock market, a recession, the attacks of September 11, 2001, and two major wars, and other policy changes all contributed to increasing deficits, causing debt to rise, both in nominal terms and as a percentage of GDP. Following the most recent recession, which began in December 2007, the deficit began increasing rapidly in 2008 and 2009, as the Government acted to rescue several major corporations and financial institutions as well as enact a major

[1] The historical tables are available at https://www.whitehouse.gov/omb/budget/Historicals and on the Budget CD-ROM.

Table 4–1. TRENDS IN FEDERAL DEBT HELD BY THE PUBLIC AND INTEREST ON THE DEBT HELD BY THE PUBLIC

(Dollar amounts in billions)

Fiscal Year	Debt held by the public:		Debt held by the public as a percent of:		Interest on the debt held by the public: [3]		Interest on the debt held by the public as a percent of: [3]	
	Current dollars	FY 2016 dollars [1]	GDP	Credit market debt [2]	Current dollars	FY 2016 dollars [1]	Total outlays	GDP
1946	241.9	2,450.9	106.1	N/A	4.2	42.4	7.6	1.8
1950	219.0	1,795.5	78.5	53.3	4.8	39.7	11.4	1.7
1955	226.6	1,632.7	55.7	42.1	5.2	37.4	7.6	1.3
1960	236.8	1,511.8	44.3	33.1	7.8	49.9	8.5	1.5
1965	260.8	1,559.2	36.7	26.4	9.6	57.3	8.1	1.3
1970	283.2	1,410.8	27.0	20.3	15.4	76.6	7.9	1.5
1975	394.7	1,449.1	24.5	17.9	25.0	91.8	7.5	1.6
1980	711.9	1,819.0	25.5	18.5	62.8	160.3	10.6	2.2
1985	1,507.3	2,939.4	35.3	22.2	152.9	298.2	16.2	3.6
1990	2,411.6	4,043.6	40.8	22.5	202.4	339.3	16.2	3.4
1995	3,604.4	5,333.4	47.5	26.3	239.2	353.9	15.8	3.2
2000	3,409.8	4,651.0	33.6	18.8	232.8	317.6	13.0	2.3
2005	4,592.2	5,588.4	35.6	17.1	191.4	232.9	7.7	1.5
2010	9,018.9	9,934.8	60.9	25.2	228.2	251.3	6.6	1.5
2011	10,128.2	10,934.6	65.9	27.5	266.0	287.2	7.4	1.7
2012	11,281.1	11,960.0	70.4	29.4	232.1	246.0	6.6	1.4
2013	11,982.7	12,492.8	72.6	30.1	259.0	270.0	7.5	1.6
2014	12,779.9	13,085.1	74.2	30.8	271.4	277.9	7.7	1.6
2015	13,116.7	13,273.5	73.3	30.6	260.6	263.8	7.1	1.5
2016	14,167.7	14,167.7	77.0	31.3	283.8	283.8	7.4	1.5
2017 estimate	14,823.8	14,556.5	77.4	N/A	324.6	318.7	8.0	1.7
2018 estimate	15,353.0	14,778.0	76.7	N/A	362.0	348.5	8.8	1.8
2019 estimate	15,957.4	15,058.6	76.2	N/A	419.2	395.6	9.7	2.0
2020 estimate	16,509.0	15,273.7	75.1	N/A	479.6	443.7	10.7	2.2
2021 estimate	17,023.6	15,441.0	73.7	N/A	536.6	486.7	11.6	2.3
2022 estimate	17,517.5	15,577.3	72.2	N/A	586.3	521.4	12.1	2.4
2023 estimate	17,887.0	15,593.9	70.2	N/A	628.0	547.5	12.7	2.5
2024 estimate	18,149.8	15,512.8	67.8	N/A	658.6	563.0	13.0	2.5
2025 estimate	18,378.9	15,400.6	65.3	N/A	679.2	569.2	12.8	2.4
2026 estimate	18,541.3	15,232.1	62.7	N/A	694.0	570.2	12.6	2.3
2027 estimate	18,575.2	14,960.7	59.8	N/A	708.8	570.8	12.4	2.3

N/A = Not available.

[1] Amounts in current dollars deflated by the GDP chain-type price index with fiscal year 2016 equal to 100.

[2] Total credit market debt owed by domestic nonfinancial sectors. Financial sectors are omitted to avoid double counting, since financial intermediaries borrow in the credit market primarily in order to finance lending in the credit market. Source: Federal Reserve Board flow of funds accounts. Projections are not available.

[3] Interest on debt held by the public is estimated as the interest on Treasury debt securities less the "interest received by trust funds" (subfunction 901 less subfunctions 902 and 903). The estimate of interest on debt held by the public does not include the comparatively small amount of interest paid on agency debt or the offsets for interest on Treasury debt received by other Government accounts (revolving funds and special funds).

stimulus bill. Since 2008, debt as a percent of GDP has grown rapidly, increasing from 35.2 percent at the end of 2007 to 77.0 percent at the end of 2016.

Under the proposals in the Budget, the deficit is projected to increase to $603 billion in 2017, and then generally fall in subsequent years, reaching a $16 billion surplus in 2027. Gross Federal debt is projected to increase slightly to 106.2 percent of GDP in 2017 and then decrease in each of the years thereafter. Debt held by the public as a percent of GDP is estimated to be 77.4 percent at the end of 2017, after which it falls in each of the subsequent years. Debt held by the public net of financial assets as a percent of GDP is estimated to grow to 68.2 percent at the end of 2017 and then fall in the following years, to 52.2 percent of GDP by the end of 2027.

Debt Held by the Public and Gross Federal Debt

The Federal Government issues debt securities for two main purposes. First, it borrows from the public to provide for the Federal Government's financing needs, including both the deficit and the other transactions requiring financing, most notably disbursements for direct student loans and other Federal credit programs.[2] Second, it issues debt to Federal Government accounts, primarily trust funds, that accumulate surpluses. By law, trust fund surpluses must generally be invested in Federal securities. The gross Federal debt is defined to consist of both the debt held by the public and the debt held by Government accounts. Nearly all the Federal debt has been issued by the Treasury and is sometimes called "public debt," but a small portion has been issued by other Government agencies and is called "agency debt."[3]

Borrowing from the public, whether by the Treasury or by some other Federal agency, is important because it represents the Federal demand on credit markets. Regardless of whether the proceeds are used for tangible or intangible investments or to finance current consumption, the Federal demand on credit markets has to be financed out of the saving of households and businesses, the State and local sector, or the rest of the world. Federal borrowing thereby competes with the borrowing of other sectors of the domestic or international economy for financial resources in the credit market. Borrowing from the public thus affects the size and composition of assets held by the private sector and the amount of saving imported from abroad. It also increases the amount of future resources required to pay interest to the public on Federal debt. Borrowing from the public is therefore an important concern of Federal fiscal policy. Borrowing from the public, however, is an incomplete measure of the Federal impact on credit markets. Different types of Federal activities can affect the credit markets in different ways. For example, under its direct loan programs, the Government uses borrowed funds to acquire financial assets that might otherwise require financing in the credit markets directly. (For more information on other ways in which Federal activities impact the credit market, see the discussion at the end of this chapter.) By incorporating the change in direct loan and other financial assets, debt held by the public net of financial assets adds useful insight into the Government's financial condition.

Issuing debt securities to Government accounts performs an essential function in accounting for the operation of these funds. The balances of debt represent the cumulative surpluses of these funds due to the excess of their tax receipts, interest receipts, and other collections over their spending. The interest on the debt that is credited to these funds accounts for the fact that some earmarked taxes and user fees will be spent at a later time than when the funds receive the monies. The debt securities are assets of those funds but are a liability of the general fund to the funds that hold the securities, and are a mechanism for crediting interest to those funds on their recorded balances. These balances generally provide the fund with authority to draw upon the U.S. Treasury in later years to make future payments on its behalf to the public. Public policy may result in the Government's running surpluses and accumulating debt in trust funds and other Government accounts in anticipation of future spending.

However, issuing debt to Government accounts does not have any of the credit market effects of borrowing from the public. It is an internal transaction of the Government, made between two accounts that are both within the Government itself. Issuing debt to a Government account is not a current transaction of the Government with the public; it is not financed by private saving and does not compete with the private sector for available funds in the credit market. While such issuance provides the account with assets—a binding claim against the Treasury—those assets are fully offset by the increased liability of the Treasury to pay the claims, which will ultimately be covered by the collection of revenues or by borrowing. Similarly, the current interest earned by the Government account on its Treasury securities does not need to be financed by other resources.

Furthermore, the debt held by Government accounts does not represent the estimated amount of the account's obligations or responsibilities to make future payments to the public. For example, if the account records the transactions of a social insurance program, the debt that it holds does not necessarily represent the actuarial present value of estimated future benefits (or future benefits less taxes) for the current participants in the program; nor does it necessarily represent the actuarial present value of estimated future benefits (or future benefits less taxes) for the current participants plus the estimated future participants over some stated time period. The future transactions of Federal social insurance and employee retirement programs, which own 90 percent of the debt held by Government accounts, are important in their own right and need to be analyzed separately. This can be done through information published in the actuarial and financial reports for these programs.[4]

This Budget uses a variety of information sources to analyze the condition of Social Security and Medicare, the Government's two largest social insurance programs. The excess of future Social Security and Medicare benefits rel-

[2] For the purposes of the Budget, "debt held by the public" is defined as debt held by investors outside of the Federal Government, both domestic and foreign, including U.S. State and local governments and foreign governments. It also includes debt held by the Federal Reserve.

[3] The term "agency debt" is defined more narrowly in the budget than customarily in the securities market, where it includes not only the debt of the Federal agencies listed in Table 4–4, but also certain Government-guaranteed securities and the debt of the Government-sponsored enterprises listed in Table 19–7 in the supplemental materials to the "Credit and Insurance" chapter. (Table 19-7 is available on the Internet at: https://www.whitehouse.gov/omb/budget/Analytical_Perspectives and on the Budget CD-ROM.)

[4] Extensive actuarial analyses of the Social Security and Medicare programs are published in the annual reports of the boards of trustees of these funds. The actuarial estimates for Social Security, Medicare, and the major Federal employee retirement programs are summarized in the *Financial Report of the United States Government*, prepared annually by the Department of the Treasury in coordination with the Office of Management and Budget, and presented in more detail in the financial statements of the agencies administering those programs.

Table 4–2. FEDERAL GOVERNMENT FINANCING AND DEBT

(In billions of dollars)

	Actual 2016	Estimate										
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Financing:												
Unified budget deficit/surplus (–)	584.7	602.5	440.2	525.9	488.0	455.8	441.7	318.7	209.1	175.6	110.5	–15.8
Other transactions affecting borrowing from the public:												
Changes in financial assets and liabilities:[1]												
Change in Treasury operating cash balance	154.6	–3.3	....	....	....	....	....	....	....	....	....	....
Net disbursements of credit financing accounts:												
Direct loan accounts	82.4	67.7	88.4	81.4	67.7	65.5	60.9	60.7	60.4	59.7	57.7	55.0
Guaranteed loan accounts	16.3	–9.4	2.4	–1.4	–2.4	–5.1	–7.1	–8.6	–5.3	–4.9	–4.7	–4.4
Troubled Asset Relief Program equity purchase accounts	0.1	–0.3	–*	–*	–*	–*	–*	–*	....	....	....	....
Subtotal, net disbursements	98.8	58.0	90.8	80.0	65.2	60.4	53.8	52.1	55.1	54.7	53.0	50.6
Net purchases of non-Federal securities by the National Railroad Retirement Investment Trust	0.4	–0.6	–1.2	–1.0	–1.0	–1.0	–1.1	–0.7	–0.8	–0.6	–0.5	–0.3
Net change in other financial assets and liabilities[2]	213.0	....	....	....	....	....	....	....	....	....	....	....
Subtotal, changes in financial assets and liabilities	466.9	54.1	89.6	78.9	64.2	59.3	52.7	51.4	54.3	54.1	52.5	50.3
Seigniorage on coins	–0.6	–0.5	–0.5	–0.5	–0.5	–0.5	–0.6	–0.6	–0.6	–0.6	–0.6	–0.6
Total, other transactions affecting borrowing from the public	466.4	53.6	89.1	78.4	63.7	58.8	52.2	50.8	53.8	53.5	51.9	49.7
Total, requirement to borrow from the public (equals change in debt held by the public)	1,051.0	656.1	529.2	604.3	551.7	514.6	493.9	369.5	262.9	229.1	162.3	33.9
Changes in Debt Subject to Statutory Limitation:												
Change in debt held by the public	1,051.0	656.1	529.2	604.3	551.7	514.6	493.9	369.5	262.9	229.1	162.3	33.9
Change in debt held by Government accounts	368.3	158.9	209.6	142.4	111.7	96.2	39.4	54.1	76.0	0.3	–20.1	–139.5
Less: change in debt not subject to limit and other adjustments	6.1	1.2	1.6	2.6	2.5	2.2	1.9	2.3	2.0	1.0	0.9	1.7
Total, change in debt subject to statutory limitation	1,425.5	816.2	740.4	749.3	665.9	612.9	535.2	425.9	340.9	230.3	143.2	–103.9
Debt Subject to Statutory Limitation, End of Year:												
Debt issued by Treasury	19,513.1	20,327.7	21,067.0	21,814.8	22,479.1	23,090.8	23,624.8	24,049.5	24,389.4	24,619.8	24,762.6	24,657.8
Less: Treasury debt not subject to limitation (–)[3]	–13.5	–11.9	–10.8	–9.3	–7.7	–6.5	–5.3	–4.1	–3.2	–3.2	–2.8	–2.0
Agency debt subject to limitation	*	*	*	*	*	*	*	*	*	*	*	*
Adjustment for discount and premium[4]	38.9	38.9	38.9	38.9	38.9	38.9	38.9	38.9	38.9	38.9	38.9	38.9
Total, debt subject to statutory limitation[5]	19,538.5	20,354.6	21,095.1	21,844.4	22,510.3	23,123.2	23,658.4	24,084.3	24,425.2	24,655.5	24,798.7	24,694.8
Debt Outstanding, End of Year:												
Gross Federal debt:[6]												
Debt issued by Treasury	19,513.1	20,327.7	21,067.0	21,814.8	22,479.1	23,090.8	23,624.8	24,049.5	24,389.4	24,619.8	24,762.6	24,657.8
Debt issued by other agencies	26.4	26.7	26.3	25.2	24.2	23.3	22.5	21.5	20.4	19.4	18.8	18.0
Total, gross Federal debt	19,539.4	20,354.4	21,093.3	21,840.0	22,503.3	23,114.1	23,647.4	24,070.9	24,409.8	24,639.2	24,781.4	24,675.8
As a percent of GDP	106.1%	106.2%	105.4%	104.3%	102.4%	100.1%	97.5%	94.4%	91.2%	87.6%	83.8%	79.5%
Held by:												
Debt held by Government accounts	5,371.7	5,530.6	5,740.2	5,882.6	5,994.3	6,090.5	6,129.9	6,184.0	6,260.0	6,260.3	6,240.1	6,100.6
Debt held by the public[7]	14,167.7	14,823.8	15,353.0	15,957.4	16,509.0	17,023.6	17,517.5	17,887.0	18,149.8	18,378.9	18,541.3	18,575.2
As a percent of GDP	77.0%	77.4%	76.7%	76.2%	75.1%	73.7%	72.2%	70.2%	67.8%	65.3%	62.7%	59.8%

*$50 million or less.

[1] A decrease in the Treasury operating cash balance (which is an asset) is a means of financing a deficit and therefore has a negative sign. An increase in checks outstanding (which is a liability) is also a means of financing a deficit and therefore also has a negative sign.

[2] Includes checks outstanding, accrued interest payable on Treasury debt, uninvested deposit fund balances, allocations of special drawing rights, and other liability accounts; and, as an offset, cash and monetary assets (other than the Treasury operating cash balance), other asset accounts, and profit on sale of gold.

[3] Consists primarily of debt issued by the Federal Financing Bank.

[4] Consists mainly of unamortized discount (less premium) on public issues of Treasury notes and bonds (other than zero-coupon bonds) and unrealized discount on Government account series securities.

[5] The statutory debt limit is approximately $19,809 billion, as increased after March 15, 2017.

[6] Treasury securities held by the public and zero-coupon bonds held by Government accounts are almost all measured at sales price plus amortized discount or less amortized premium. Agency debt securities are almost all measured at face value. Treasury securities in the Government account series are otherwise measured at face value less unrealized discount (if any).

[7] At the end of 2016, the Federal Reserve Banks held $2,463.5 billion of Federal securities and the rest of the public held $11,704.3 billion. Debt held by the Federal Reserve Banks is not estimated for future years.

ative to their dedicated income is very different in concept and much larger in size than the amount of Treasury securities that these programs hold.

For all these reasons, debt held by the public and debt held by the public net of financial assets are both better gauges of the effect of the budget on the credit markets than gross Federal debt.

Government Deficits or Surpluses and the Change in Debt

Table 4–2 summarizes Federal borrowing and debt from 2016 through 2027.[5] In 2016 the Government borrowed $1,051 billion, increasing the debt held by the public from $13,117 billion at the end of 2015 to $14,168 billion at the end of 2016. The debt held by Government accounts grew by $368 billion, and gross Federal debt increased by $1,419 billion to $19,539 billion.

Debt held by the public.—The Federal Government primarily finances deficits by borrowing from the public, and it primarily uses surpluses to repay debt held by the public.[6] Table 4–2 shows the relationship between the Federal deficit or surplus and the change in debt held by the public. The borrowing or debt repayment depends on the Government's expenditure programs and tax laws, on the economic conditions that influence tax receipts and outlays, and on debt management policy. The sensitivity of the budget to economic conditions is analyzed in Chapter 2, "Economic Assumptions and Interactions with the Budget," in this volume.

The total or unified budget consists of two parts: the on-budget portion; and the off-budget Federal entities, which have been excluded from the budget by law. Under present law, the off-budget Federal entities are the two Social Security trust funds (Old-Age and Survivors Insurance and Disability Insurance) and the Postal Service Fund.[7] The on-budget and off-budget surpluses or deficits are added together to determine the Government's financing needs.

Over the long run, it is a good approximation to say that "the deficit is financed by borrowing from the public" or "the surplus is used to repay debt held by the public." However, the Government's need to borrow in any given year has always depended on several other factors besides the unified budget surplus or deficit, such as the change in the Treasury operating cash balance. These other factors—"other transactions affecting borrowing from the public"—can either increase or decrease the Government's need to borrow and can vary considerably in size from year to year. The other transactions affecting borrowing from the public are presented in Table 4–2 (where an increase in the need to borrow is represented by a positive sign, like the deficit).

In 2016 the deficit was $585 billion while these other factors increased the need to borrow by $466 billion, or 44 percent of total borrowing from the public. As a result, the Government borrowed $1,051 billion from the public. The other factors are estimated to increase borrowing by $54 billion (8 percent of total borrowing from the public) in 2017, and $89 billion (17 percent) in 2018. In 2019–2027, these other factors are expected to increase borrowing by annual amounts ranging from $50 billion to $78 billion.

Three specific factors presented in Table 4–2 have historically been especially important.

Change in Treasury operating cash balance.—The cash balance increased by $40 billion, to $199 billion, in 2015, and by $155 billion, to $353 billion in 2016. The large increases in the cash balance reflect a number of factors. First, in 2015, Treasury announced that, for risk management purposes, it would seek to maintain a cash balance roughly equal to one week of Government outflows, with a minimum balance of about $150 billion. In addition, for debt management purposes, in November 2015 Treasury announced intentions to increase bill financing; because bills mature more frequently than other longer-dated debt, this financing decision effectively increases government outflows during any given week. Finally the timing of end-of-month auction settlements can often increase end-of-month cash balances dramatically. Changes in the operating cash balance, while occasionally large, are inherently limited over time. The operating cash balance is projected to fall by $3 billion, to $350 billion at the end of 2017. Decreases in cash—a means of financing the Government—are limited by the amount of past accumulations, which themselves required financing when they were built up. Increases are limited because it is generally more efficient to repay debt.

Net financing disbursements of the direct loan and guaranteed loan financing accounts.—Under the Federal Credit Reform Act of 1990 (FCRA), the budgetary program account for each credit program records the estimated subsidy costs—the present value of estimated net losses—at the time when the direct or guaranteed loans are disbursed. The individual cash flows to and from the public associated with the loans or guarantees, such as the disbursement and repayment of loans, the default payments on loan guarantees, the collection of interest and fees, and so forth, are recorded in the credit program's non-budgetary financing account. Although the non-budgetary financing account's cash flows to and from the public are not included in the deficit (except for their impact on subsidy costs), they affect Treasury's net borrowing requirements.[8]

In addition to the transactions with the public, the financing accounts include several types of intragovernmental transactions. They receive payment from the

[5] For projections of the debt beyond 2027, see Chapter 3, "Long-Term Budget Outlook."

[6] Treasury debt held by the public is measured as the sales price plus the amortized discount (or less the amortized premium). At the time of sale, the book value equals the sales price. Subsequently, it equals the sales price plus the amount of the discount that has been amortized up to that time. In equivalent terms, the book value of the debt equals the principal amount due at maturity (par or face value) less the unamortized discount. (For a security sold at a premium, the definition is symmetrical.) For inflation-indexed notes and bonds, the book value includes a periodic adjustment for inflation. Agency debt is generally recorded at par.

[7] For further explanation of the off-budget Federal entities, see Chapter 9, "Coverage of the Budget."

[8] The FCRA (sec. 505(b)) requires that the financing accounts be non-budgetary. They are non-budgetary in concept because they do not measure cost. For additional discussion of credit programs, see Chapter 19, "Credit and Insurance," and Chapter 8, "Budget Concepts."

credit program accounts for the subsidy costs of new direct loans and loan guarantees and for any upward reestimate of the costs of outstanding direct and guaranteed loans. They also receive interest from Treasury on balances of uninvested funds. The financing accounts pay any negative subsidy collections or downward reestimate of costs to budgetary receipt accounts and pay interest on borrowings from Treasury. The total net collections and gross disbursements of the financing accounts, consisting of transactions with both the public and the budgetary accounts, are called "net financing disbursements." They occur in the same way as the "outlays" of a budgetary account, even though they do not represent budgetary costs, and therefore affect the requirement for borrowing from the public in the same way as the deficit.

The intragovernmental transactions of the credit program, financing, and downward reestimate receipt accounts do not affect Federal borrowing from the public. Although the deficit changes because of the budgetary account's outlay to, or receipt from, a financing account, the net financing disbursement changes in an equal amount with the opposite sign, so the effects are cancelled out. On the other hand, financing account disbursements to the public increase the requirement for borrowing from the public in the same way as an increase in budget outlays that are disbursed to the public in cash. Likewise, receipts from the public collected by the financing account can be used to finance the payment of the Government's obligations, and therefore they reduce the requirement for Federal borrowing from the public in the same way as an increase in budgetary receipts.

Borrowing due to credit financing accounts was $99 billion in 2016. In 2017 credit financing accounts are projected to increase borrowing by $58 billion. After 2017, the credit financing accounts are expected to increase borrowing by amounts ranging from $51 billion to $91 billion over the next 10 years.

In some years, large net upward or downward reestimates in the cost of outstanding direct and guaranteed loans may cause large swings in the net financing disbursements. In 2016, there was a net downward reestimate of $5.6 billion, due to a large downward reestimate for Federal Housing Administration (FHA) Mutual Mortgage Insurance guarantees, partly offset by an upward reestimate for direct student loans. In 2017, there is a net upward reestimate of $49.3 billion, due largely to upward reestimates for student loan programs and FHA Mutual Mortgage Insurance guarantees.

Net purchases of non-Federal securities by the National Railroad Retirement Investment Trust (NRRIT).— This trust fund, which was established by the Railroad Retirement and Survivors' Improvement Act of 2001, invests its assets primarily in private stocks and bonds. The Act required special treatment of the purchase or sale of non-Federal assets by the NRRIT trust fund, treating such purchases as a means of financing rather than as outlays. Therefore, the increased need to borrow from the public to finance NRRIT's purchases of non-Federal assets is part of the "other transactions affecting borrowing from the public" rather than included as an increase in the deficit. While net purchases and redemptions affect borrowing from the public, unrealized gains and losses on NRRIT's portfolio are included in both the "other transactions" and, with the opposite sign, in NRRIT's net outlays in the deficit, for no net impact on borrowing from the public. In 2016, net increases, including purchases and gains, were $0.4 billion. A $0.6 billion net decrease is projected for 2017 and net annual decreases ranging from $0.3 billion to $1.2 billion are projected for 2018 and subsequent years.[9]

Net change in other financial assets and liabilities.— In addition to the three factors discussed above, in 2015 and 2016, the net change in other financial assets and liabilities was also particularly significant. Generally, the amounts in this category are relatively small. For example, this category decreased the need to borrow by $1 billion in 2012 and increased the need to borrow by $5 billion in 2011. However, in 2015, this "other" category reduced the need to borrow by a net $228 billion. Of the net $228 billion, $203 billion was due to the temporary suspension of the daily reinvestment of the Thrift Savings Plan (TSP) Government Securities Investment Fund (G-Fund).[10] The Department of the Treasury is authorized to suspend the issuance of obligations to the TSP G-Fund as an "extraordinary measure" if issuances could not be made without causing the public debt of the United States to exceed the debt limit. The suspension of the daily reinvestment of the TSP G-Fund resulted in the amounts being moved from debt held by the public to deposit fund balances, an "other" financial liability. Once Treasury is able to do so without exceeding the debt limit, Treasury is required to fully reinvest the TSP G-Fund and restore any foregone interest. Accordingly, the TSP G-Fund was fully reinvested in November 2015, returning the amount from deposit fund balances to debt held by the public. The debt ceiling and the use of the TSP G-Fund are discussed in further detail below. Due primarily to the $203 billion reinvestment, the net change in other financial assets of liabilities totaled $213 billion in 2016.

Debt held by Government accounts.—The amount of Federal debt issued to Government accounts depends largely on the surpluses of the trust funds, both on-budget and off-budget, which owned 90 percent of the total Federal debt held by Government accounts at the end of 2016. Net investment may differ from the surplus due to changes in the amount of cash assets not currently invested. In 2016, the total trust fund surplus was $185 billion, while trust fund investment in Federal securities increased by $314 billion. This $129 billion difference was primarily due to the Civil Service Retirement and Disability Fund (CSRDF). CSRDF had a surplus of $15 billion but net investment of $156 billion, largely as a result of reinvesting amounts that had been disinvested as part of the extraordinary measures that the Treasury Department is authorized to take with the fund when the Government is at the debt ceiling. For further details on

[9] The budget treatment of this fund is further discussed in Chapter 8, "Budget Concepts."

[10] The TSP is a defined contribution pension plan for Federal employees. The G-Fund is one of several components of the TSP.

such measures, see the discussion below. The remainder of debt issued to Government accounts is owned by a number of special funds and revolving funds. The debt held in major accounts and the annual investments are shown in Table 4–5.

Debt Held by the Public Net of Financial Assets and Liabilities

While debt held by the public is a key measure for examining the role and impact of the Federal Government in the U.S. and international credit markets and for other purposes, it provides incomplete information on the Government's financial condition. The U.S. Government holds significant financial assets, which can be offset against debt held by the public and other financial liabilities to achieve a more complete understanding of the Government's financial condition. The acquisition of those financial assets represents a transaction with the credit markets, broadening those markets in a way that is analogous to the demand on credit markets that borrowing entails. For this reason, debt held by the public is also an incomplete measure of the impact of the Federal Government in the United States and international credit markets.

One transaction that can increase both borrowing and assets is an increase to the Treasury operating cash balance. When the Government borrows to increase the Treasury operating cash balance, that cash balance also represents an asset that is available to the Federal Government. Looking at both sides of this transaction—the borrowing to obtain the cash and the asset of the cash holdings—provides much more complete information about the Government's financial condition than looking at only the borrowing from the public. Another example of a transaction that simultaneously increases borrowing from the public and Federal assets is Government borrowing to issue direct loans to the public. When the direct loan is made, the Government is also acquiring an asset in the form of future payments of principal and interest, net of the Government's expected losses on the loan. Similarly, when NRRIT increases its holdings of non-Federal securities, the borrowing to purchase those securities is offset by the value of the asset holdings.

The acquisition or disposition of Federal financial assets very largely explains the difference between the deficit for a particular year and that year's increase in debt held by the public. Debt held by the public net of financial assets is a measure that is conceptually closer to the measurement of Federal deficits or surpluses; cumulative deficits and surpluses over time more closely equal the debt held by the public net of financial assets than they do the debt held by the public.

Table 4–3 presents debt held by the public net of the Government's financial assets and liabilities. Treasury debt is presented in the Budget at book value, with no adjustments for the change in economic value that results from fluctuations in interest rates. The balances of credit financing accounts are based on projections of future cash flows. For direct loan financing accounts, the balance generally represents the net present value of anticipated future inflows such as principal and interest payments from borrowers. For guaranteed loan financing accounts, the balance generally represents the net present value of anticipated future outflows, such as default claim payments net of recoveries, and other collections, such as program fees. NRRIT's holdings of non-Federal securities are marked to market on a monthly basis. Government-sponsored enterprise (GSE) preferred stock is measured at market value.

Net financial assets increased by $464 billion, to $1,699 billion, in 2016. This $1,699 billion in net financial assets included a cash balance of $353 billion, net credit financing account balances of $1,255 billion, and other assets and liabilities that aggregated to a net asset of $91 billion. At the end of 2016, debt held by the public was $14,168 billion, or 77.0 percent of GDP. Therefore, debt held by the public net of financial assets was $12,469 billion, or 67.7 percent of GDP. As shown in Table 4–3, the value of the Government's net financial assets is projected to increase to $1,753 billion in 2017. While debt held by the public is expected to increase from 77.0 percent to 77.4 percent of GDP during 2017, debt held by the public net of financial assets is expected to increase from 67.7 percent to 68.2 percent of GDP.

Debt securities and other financial assets and liabilities do not encompass all the assets and liabilities of the Federal Government. For example, accounts payable occur in the normal course of buying goods and services; Social Security benefits are due and payable as of the end of the month but, according to statute, are paid during the next month; and Federal employee salaries are paid after they have been earned. Like debt securities sold in the credit market, these liabilities have their own distinctive effects on the economy. The Federal Government also has significant holdings of non-financial assets, such as land, mineral deposits, buildings, and equipment. The different types of assets and liabilities are reported annually in the financial statements of Federal agencies and in the *Financial Report of the United States Government*, prepared by the Treasury Department in coordination with the Office of Management and Budget (OMB).

Treasury Debt

Nearly all Federal debt is issued by the Department of the Treasury. Treasury meets most of the Federal Government's financing needs by issuing marketable securities to the public. These financing needs include both the change in debt held by the public and the refinancing—or rollover—of any outstanding debt that matures during the year. Treasury marketable debt is sold at public auctions on a regular schedule and, because it is very liquid, can be bought and sold on the secondary market at narrow bid-offer spreads. Treasury also sells to the public a relatively small amount of nonmarketable securities, such as savings bonds and State and Local Government Series securities (SLGS).[11] Treasury nonmarketable debt cannot be bought or sold on the secondary market.

[11] Under the SLGS program, the Treasury offers special low-yield securities to State and local governments and other entities for temporary investment of proceeds of tax-exempt bonds.

Table 4–3. DEBT HELD BY THE PUBLIC NET OF FINANCIAL ASSETS AND LIABILITIES
(Dollar amounts in billions)

	Actual 2016	Estimate 2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Debt Held by the Public:												
Debt held by the public	14,167.7	14,823.8	15,353.0	15,957.4	16,509.0	17,023.6	17,517.5	17,887.0	18,149.8	18,378.9	18,541.3	18,575.2
As a percent of GDP	77.0%	77.4%	76.7%	76.2%	75.1%	73.7%	72.2%	70.2%	67.8%	65.3%	62.7%	59.8%
Financial Assets Net of Liabilities:												
Treasury operating cash balance	353.3	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0	350.0
Credit financing account balances:												
Direct loan accounts	1,226.5	1,294.2	1,382.6	1,464.0	1,531.6	1,597.1	1,658.0	1,718.7	1,779.2	1,838.8	1,896.5	1,951.5
Guaranteed loan accounts	27.5	18.1	20.5	19.1	16.7	11.6	4.5	–4.1	–9.4	–14.3	–19.0	–23.4
Troubled Asset Relief Program equity purchase accounts	0.5	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
Subtotal, credit financing account balances	1,254.6	1,312.5	1,403.3	1,483.3	1,548.5	1,608.9	1,662.7	1,714.8	1,769.9	1,824.7	1,877.7	1,928.2
Government-sponsored enterprise preferred stock	108.6	108.6	108.6	108.6	108.6	108.6	108.6	108.6	108.6	108.6	108.6	108.6
Non-Federal securities held by NRRIT	24.1	23.5	22.4	21.3	20.3	19.3	18.2	17.5	16.7	16.1	15.5	15.3
Other assets net of liabilities	–42.0	–42.0	–42.0	–42.0	–42.0	–42.0	–42.0	–42.0	–42.0	–42.0	–42.0	–42.0
Total, financial assets net of liabilities	1,698.5	1,752.6	1,842.2	1,921.1	1,985.4	2,044.7	2,097.5	2,148.8	2,203.1	2,257.2	2,309.7	2,360.0
Debt Held by the Public Net of Financial Assets and Liabilities:												
Debt held by the public net of financial assets	12,469.2	13,071.2	13,510.9	14,036.2	14,523.7	14,978.9	15,420.0	15,738.1	15,946.7	16,121.7	16,231.5	16,215.1
As a percent of GDP	67.7%	68.2%	67.5%	67.0%	66.1%	64.9%	63.6%	61.7%	59.5%	57.3%	54.9%	52.2%

Treasury issues marketable securities in a wide range of maturities, and issues both nominal (non-inflation-indexed) and inflation-indexed securities. Treasury's marketable securities include:

Treasury Bills—Treasury bills have maturities of one year or less from their issue date. In addition to the regular auction calendar of bill issuance, Treasury issues cash management bills on an as-needed basis for various reasons such as to offset the seasonal patterns of the Government's receipts and outlays.

Treasury Notes—Treasury notes have maturities of more than one year and up to 10 years.

Treasury Bonds—Treasury bonds have maturities of more than 10 years. The longest-maturity securities issued by Treasury are 30-year bonds.

Treasury Inflation-Protected Securities (TIPS)—Treasury inflation-protected—or inflation-indexed—securities are coupon issues for which the par value of the security rises with inflation. The principal value is adjusted daily to reflect inflation as measured by changes in the Consumer Price Index (CPI-U-NSA, with a two-month lag). Although the principal value may be adjusted downward if inflation is negative, at maturity, the securities will be redeemed at the greater of their inflation-adjusted principal or par amount at original issue.

Floating Rate Securities—In 2014, Treasury began to issue floating rate securities, to complement its existing suite of fixed interest rate securities and to support its broader debt management objectives. Floating rate securities have a fixed par value but bear interest rates that fluctuate based on movements in a specified benchmark market interest rate. Treasury's floating rate notes are benchmarked to the Treasury 13-week bill. Currently, Treasury is issuing floating rate securities with a maturity of two years.

Historically, the average maturity of outstanding debt issued by Treasury has been about five years. The average maturity of outstanding debt was 70 months at the end of 2016. Over the last several years there have been many changes in financial markets that have ultimately resulted in significant structural demand for high-quality, shorter-dated securities such as Treasury bills. At the same time, Treasury bills as a percent of outstanding issuance had fallen to historically low levels of around 10 percent. In recognition of these structural changes, in November 2015, the Treasury announced that it would increase issuance of shorter-dated Treasury securities.

In addition to quarterly announcements about the overall auction calendar, Treasury publicly announces in advance the auction of each security. Individuals can participate directly in Treasury auctions or can purchase securities through brokers, dealers, and other financial institutions. Treasury accepts two types of auction bids: competitive and noncompetitive. In a competitive bid, the bidder specifies the yield. A significant portion of competitive bids are submitted by primary dealers, which are banks and securities brokerages that have been designated to trade in Treasury securities with the Federal Reserve System. In a noncompetitive bid, the bidder agrees to accept the yield determined by the auction.[12] At the close of the auction, Treasury accepts all eligible noncompetitive bids and then accepts competitive bids in ascending order beginning with the lowest yield bid until

[12] Noncompetitive bids cannot exceed $5 million per bidder.

the offering amount is reached. All winning bidders receive the highest accepted yield bid.

Treasury marketable securities are highly liquid and actively traded on the secondary market, which enhances the demand for Treasuries at initial auction. The demand for Treasury securities is reflected in the ratio of bids received to bids accepted in Treasury auctions; the demand for the securities is substantially greater than the level of issuance. Because they are backed by the full faith and credit of the United States Government, Treasury marketable securities are considered to be credit “risk-free.” Therefore, the Treasury yield curve is commonly used as a benchmark for a wide variety of purposes in the financial markets.

Whereas Treasury issuance of marketable debt is based on the Government’s financing needs, Treasury’s issuance of nonmarketable debt is based on the public’s demand for the specific types of investments. Increases in outstanding balances of nonmarketable debt, such as occurred in 2016, reduce the need for marketable borrowing.[13]

Agency Debt

A few Federal agencies other than Treasury, shown in Table 4–4, sell or have sold debt securities to the public and, at times, to other Government accounts. Currently, new debt is issued only by the Tennessee Valley Authority (TVA) and the Federal Housing Administration; the remaining agencies are repaying past borrowing. Agency debt was $26.4 billion at the end of 2016. Agency debt is less than one-quarter of one percent of Federal debt held by the public. Primarily as a result of TVA activity, agency debt is estimated to grow to $26.7 billion at the end of 2017 and then to decline to $26.3 billion at the end of 2018.

The predominant agency borrower is TVA, which had borrowings of $26.2 billion from the public as of the end of 2016, or 99 percent of the total debt of all agencies other than Treasury. TVA issues debt primarily to finance capital projects.

TVA has traditionally financed its capital construction by selling bonds and notes to the public. Since 2000, it has also employed two types of alternative financing methods, lease financing obligations and prepayment obligations. Under the lease financing obligations method, TVA signs long-term contracts to lease some facilities and equipment. The lease payments under these contracts ultimately secure the repayment of third party capital used to finance construction of the facility. TVA retains substantially all of the economic benefits and risks related to ownership of the assets.[14] Under the prepayment obligations method, TVA’s power distributors may prepay a portion of the price of the power they plan to purchase in the future. In return, they obtain a discount on a specific quantity of the future power they buy from TVA. The quantity varies, depending on TVA’s estimated cost of borrowing.

OMB determined that each of these alternative financing methods is a means of financing the acquisition of assets owned and used by the Government, or of refinancing debt previously incurred to finance such assets. They are equivalent in concept to other forms of borrowing from the public, although under different terms and conditions. The budget therefore records the upfront cash proceeds from these methods as borrowing from the public, not offsetting collections.[15] The budget presentation is consistent with the reporting of these obligations as liabilities on TVA’s balance sheet under generally accepted accounting principles. Table 4–4 presents these alternative financing methods separately from TVA bonds and notes to distinguish between the types of borrowing. At the end of 2016, lease financing obligations were $1.8 billion and obligations for prepayments were $0.2 billion.

Although the FHA generally makes direct disbursements to the public for default claims on FHA-insured mortgages, it may also pay claims by issuing debentures. Issuing debentures to pay the Government’s bills is equivalent to selling securities to the public and then paying the bills by disbursing the cash borrowed, so the transaction is recorded as being simultaneously an outlay and borrowing. The debentures are therefore classified as agency debt.

A number of years ago, the Federal Government guaranteed the debt used to finance the construction of buildings for the National Archives and the Architect of the Capitol, and subsequently exercised full control over the design, construction, and operation of the buildings. These arrangements are equivalent to direct Federal construction financed by Federal borrowing. The construction expenditures and interest were therefore classified as Federal outlays, and the borrowing was classified as Federal agency borrowing from the public.

Several Federal agencies borrow from the Bureau of the Fiscal Service (Fiscal Service) or the Federal Financing Bank (FFB), both within the Department of the Treasury. Agency borrowing from the FFB or the Fiscal Service is not included in gross Federal debt. It would be double counting to add together (a) the agency borrowing from the Fiscal Service or FFB and (b) the Treasury borrowing from the public that is needed to provide the Fiscal Service or FFB with the funds to lend to the agencies.

Debt Held by Government Accounts

Trust funds, and some special funds and public enterprise revolving funds, accumulate cash in excess of

[13] Detail on the marketable and nonmarketable securities issued by Treasury is found in the *Monthly Statement of the Public Debt*, published on a monthly basis by the Department of the Treasury.

[14] This arrangement is at least as governmental as a “lease-purchase without substantial private risk.” For further detail on the current budgetary treatment of lease-purchase without substantial private risk, see OMB Circular No. A–11, Appendix B.

[15] This budgetary treatment differs from the treatment in the *Monthly Treasury Statement of Receipts and Outlays of the United States Government* (Monthly Treasury Statement) Table 6 Schedule C, and the *Combined Statement of Receipts, Outlays, and Balances of the United States Government* Schedule 3, both published by the Department of the Treasury. These two schedules, which present debt issued by agencies other than Treasury, exclude the TVA alternative financing arrangements. This difference in treatment is one factor causing minor differences between debt figures reported in the Budget and debt figures reported by Treasury. The other factors are adjustments for the timing of the reporting of Federal debt held by NRRIT and treatment of the Federal debt held by the Securities Investor Protection Corporation.

Table 4–4. AGENCY DEBT
(In millions of dollars)

	2016 Actual		2017 Estimate		2018 Estimate	
	Borrowing/ Repayment(–)	Debt, End-of-Year	Borrowing/ Repayment(–)	Debt, End-of-Year	Borrowing/ Repayment(–)	Debt, End-of-Year
Borrowing from the public:						
Housing and Urban Development:						
Federal Housing Administration	....	19	....	19	....	19
Architect of the Capitol	–8	98	–9	89	–9	80
National Archives	–21	75	–23	52	–25	27
Tennessee Valley Authority:						
Bonds and notes	298	24,171	593	24,763	–185	24,578
Lease financing obligations	–114	1,818	–120	1,698	–125	1,573
Prepayment obligations	–100	210	–100	110	–100	10
Total, borrowing from the public	55	26,390	341	26,731	–444	26,287
Borrowing from other funds:						
Tennessee Valley Authority [1]	–2	4	....	4	....	4
Total, borrowing from other funds	–2	4	....	4	....	4
Total, agency borrowing	53	26,395	341	26,735	–444	26,291
Memorandum:						
Tennessee Valley Authority bonds and notes, total	297	24,175	593	24,768	–185	24,583

[1] Represents open market purchases by the National Railroad Retirement Investment Trust.

current needs in order to meet future obligations. These cash surpluses are generally invested in Treasury debt.

The total investment holdings of trust funds and other Government accounts increased by $368 billion in 2016. Net investment by Government accounts is estimated to be $159 billion in 2017 and $210 billion in 2018, as shown in Table 4–5. The holdings of Federal securities by Government accounts are estimated to increase to $5,740 billion by the end of 2018, or 27 percent of the gross Federal debt. The percentage is estimated to decrease gradually over the next 10 years.

The Government account holdings of Federal securities are concentrated among a few funds: the Social Security Old-Age and Survivors Insurance (OASI) and Disability Insurance (DI) trust funds; the Medicare Hospital Insurance (HI) and Supplementary Medical Insurance (SMI) trust funds; and four Federal employee retirement funds. These Federal employee retirement funds include two trust funds, the Military Retirement Fund and the Civil Service Retirement and Disability Fund, and two special funds, the uniformed services Medicare-Eligible Retiree Health Care Fund (MERHCF) and the Postal Service Retiree Health Benefits Fund (PSRHBF). At the end of 2018, these Social Security, Medicare, and Federal employee retirement funds are estimated to own 90 percent of the total debt held by Government accounts. During 2016–2018, the Military Retirement Fund has a large surplus and is estimated to invest a total of $205 billion, 28 percent of total net investment by Government accounts. CSRDF is projected to invest $183 billion, 25 percent of the net total. Some Government accounts are projected to have net disinvestment in Federal securities during 2016–2018.

Technical note on measurement.—The Treasury securities held by Government accounts consist almost entirely of the Government account series. Most were issued at par value (face value), and the securities issued at a discount or premium are traditionally recorded at par in the OMB and Treasury reports on Federal debt. However, there are two kinds of exceptions.

First, Treasury issues zero-coupon bonds to a very few Government accounts. Because the purchase price is a small fraction of par value and the amounts are large, the holdings are recorded in Table 4–5 at par value less unamortized discount. The only two Government accounts that held zero-coupon bonds during the period of this table are the Nuclear Waste Disposal Fund in the Department of Energy and the Pension Benefit Guaranty Corporation (PBGC). The total unamortized discount on zero-coupon bonds was $16.9 billion at the end of 2016.

Second, Treasury subtracts the unrealized discount on other Government account series securities in calculating "net Federal securities held as investments of Government accounts." Unlike the discount recorded for zero-coupon bonds and debt held by the public, the unrealized discount is the discount at the time of issue and is not amortized over the term of the security. In Table 4–5 it is shown as a separate item at the end of the table and not distributed by account. The amount was $9.8 billion at the end of 2016.

Debt Held by the Federal Reserve

The Federal Reserve acquires marketable Treasury securities as part of its exercise of monetary policy. For purposes of the Budget and reporting by the Department of the Treasury, the transactions of the Federal Reserve are considered to be non-budgetary, and accordingly the Federal Reserve's holdings of Treasury securities are included as part of debt held by the public.[16] Federal

[16] For further detail on the monetary policy activities of the Federal Reserve and the treatment of the Federal Reserve in the Budget, see Chapter 9, "Coverage of the Budget."

Table 4–5. DEBT HELD BY GOVERNMENT ACCOUNTS[1]

(In millions of dollars)

Description	Investment or Disinvestment (–)			Holdings, End of 2018 Estimate
	2016 Actual	2017 Estimate	2018 Estimate	
Investment in Treasury debt:				
Commerce:				
Public Safety trust fund	333	–*	8,740	9,073
Energy:				
Nuclear waste disposal fund[1]	1,746	996	1,043	37,684
Uranium enrichment decontamination fund	–686	–631	1,714	3,580
Health and Human Services:				
Federal hospital insurance trust fund	–3,249	6,193	19,513	217,915
Federal supplementary medical insurance trust fund	–2,793	3,025	27,120	93,481
Vaccine injury compensation fund	152	113	136	3,854
Child enrollment contingency fund	–1,482	7	–578	....
Homeland Security:				
Aquatic resources trust fund	–31	39	–25	1,925
Oil spill liability trust fund	707	716	736	6,402
National flood insurance reserve fund	784	–318	–337	384
Housing and Urban Development:				
Federal Housing Administration mutual mortgage fund	21,709	–7,666	7,219	35,994
Guarantees of mortgage-backed securities	3,031	1,714	496	18,164
Interior:				
Abandoned mine reclamation fund	–30	–32	–43	2,702
Federal aid in wildlife restoration fund	121	81	55	2,137
Environmental improvement and restoration fund	31	14	15	1,457
Natural resource damage assessment fund	564	509	200	1,500
Justice: Assets forfeiture fund	–32	–2,420	–1,644	2,109
Labor:				
Unemployment trust fund	9,408	12,224	14,000	80,000
Pension Benefit Guaranty Corporation[1]	5,229	2,877	4,173	30,614
State: Foreign service retirement and disability trust fund	201	162	200	18,708
Transportation:				
Airport and airway trust fund	685	518	1,389	15,307
Highway trust fund	56,962	–8,519	–12,427	43,683
Aviation insurance revolving fund	–254	326	81	2,279
Treasury:				
Exchange stabilization fund	1,907	–620	60	22,120
Treasury forfeiture fund	–3,501	–78	–1,075	1,537
Comptroller of the Currency assessment fund	121	6	22	1,684
Veterans Affairs:				
National service life insurance trust fund	–658	–647	–589	3,010
Veterans special life insurance fund	–85	–123	–144	1,433
Corps of Engineers: Harbor maintenance trust fund	93	90	290	9,066
Other Defense-Civil:				
Military retirement trust fund	60,086	67,661	76,964	735,671
Medicare-eligible retiree health care fund	7,689	11,843	11,508	236,833
Education benefits fund	–163	–188	–62	964
Environmental Protection Agency: Hazardous substance trust fund	–409	–124	–120	4,553
International Assistance Programs: Overseas Private Investment Corporation	46	76	66	5,808
Office of Personnel Management:				
Civil service retirement and disability trust fund	155,894	15,188	11,981	914,330
Postal Service retiree health benefits fund	6,258	3,134	189	54,818
Employees life insurance fund	1,209	1,226	1,431	47,824
Employees and retired employees health benefits fund	708	851	652	25,232
Social Security Administration:				

Table 4–5. DEBT HELD BY GOVERNMENT ACCOUNTS[1]—Continued
(In millions of dollars)

Description	Investment or Disinvestment (–) 2016 Actual	2017 Estimate	2018 Estimate	Holdings, End of 2018 Estimate
Federal old-age and survivors insurance trust fund[2]	30,063	23,348	–1,175	2,818,885
Federal disability insurance trust fund[2]	4,242	23,487	26,561	95,928
District of Columbia: Federal pension fund	29	6	–46	3,713
Farm Credit System Insurance Corporation: Farm Credit System Insurance fund	298	444	481	4,950
Federal Communications Commission: Universal service fund	–104	–1,200	–817	6,001
Federal Deposit Insurance Corporation: Deposit insurance fund	11,428	10,444	12,444	94,412
National Credit Union Administration: Share insurance fund	721	811	648	13,764
Postal Service fund[2]	1,365	–5,418	401	3,510
Railroad Retirement Board trust funds	–325	–23	–58	2,138
Securities Investor Protection Corporation[3]	345	165	110	2,980
United States Enrichment Corporation fund	7	–41	–1,580	....
Other Federal funds	–636	–310	–9	4,889
Other trust funds	831	–1,072	–262	5,014
Unrealized discount[1]	–2,260	....	....	–9,793
Total, investment in Treasury debt[1]	**368,307**	**158,863**	**209,647**	**5,740,225**
Investment in agency debt:				
Railroad Retirement Board:				
National Railroad Retirement Investment Trust	–2	....	....	4
Total, investment in agency debt[1]	**–2**	**.........**	**.........**	**4**
Total, investment in Federal debt[1]	**368,305**	**158,863**	**209,647**	**5,740,229**
Memorandum:				
Investment by Federal funds (on-budget)	55,218	20,131	34,373	590,428
Investment by Federal funds (off-budget)	1,365	–5,418	401	3,510
Investment by trust funds (on-budget)	279,677	97,315	149,487	2,241,271
Investment by trust funds (off-budget)	34,305	46,835	25,386	2,914,813
Unrealized discount[1]	–2,260	....	....	–9,793

* $500 thousand or less.

[1] Debt held by Government accounts is measured at face value except for the Treasury zero-coupon bonds held by the Nuclear Waste Disposal Fund and the Pension Benefit Guaranty Corporation (PBGC), which are recorded at market or redemption price; and the unrealized discount on Government account series, which is not distributed by account. Changes are not estimated in the unrealized discount. If recorded at face value, at the end of 2016 the debt figures would be $16.8 billion higher for the Nuclear Waste Disposal Fund and $0.1 billion higher for PBGC than recorded in this table.

[2] Off-budget Federal entity.

[3] Amounts on calendar-year basis.

Reserve holdings were $2,463 billion (17 percent of debt held by the public) at the end of 2016. Over the last 10 years, the Federal Reserve holdings have averaged 15 percent of debt held by the public. The historical holdings of the Federal Reserve are presented in Table 7.1 in the Budget's historical tables. The Budget does not project Federal Reserve holdings for future years.

Limitations on Federal Debt

Definition of debt subject to limit.—Statutory limitations have usually been placed on Federal debt. Until World War I, the Congress ordinarily authorized a specific amount of debt for each separate issue. Beginning with the Second Liberty Bond Act of 1917, however, the nature of the limitation was modified in several steps until it developed into a ceiling on the total amount of most Federal debt outstanding. This last type of limitation has been in effect since 1941. The limit currently applies to most debt issued by the Treasury since September 1917, whether held by the public or by Government accounts; and other debt issued by Federal agencies that, according to explicit statute, is guaranteed as to principal and interest by the U.S. Government.

The third part of Table 4–2 compares total Treasury debt with the amount of Federal debt that is subject to the limit. Nearly all Treasury debt is subject to the debt limit.

A large portion of the Treasury debt not subject to the general statutory limit was issued by the Federal Financing Bank. The FFB is authorized to have outstanding up to $15 billion of publicly issued debt. The FFB has on occasion issued this debt to CSRDF in exchange for equal amounts of regular Treasury securities. The FFB securities have the same interest rates and maturities as the Treasury securities for which they were exchanged. The FFB issued: $14 billion of securities to the CSRDF on November 15, 2004, with maturity dates ranging from June 30, 2009, through June 30, 2019; $9 billion to the CSRDF on October 1, 2013, with maturity dates from June 30, 2015, through June 30, 2024; and $3 billion of securities to the CSRDF on October 15, 2015, with maturity dates from June 30, 2026, through June 30, 2029. The outstanding balance of FFB debt held by CSRDF was $13 billion at the end of 2016 and is projected to be $11 billion at the end of 2017.

The Housing and Economic Recovery Act of 2008 created another type of debt not subject to limit. This debt, termed "Hope Bonds," was issued by Treasury to the FFB for the HOPE for Homeowners program. The outstanding balance of Hope Bonds was $494 million at the end of 2015. The bonds were fully redeemed in 2016 and no new issues are projected.

The other Treasury debt not subject to the general limit consists almost entirely of silver certificates and other currencies no longer being issued. It was $482 million at the end of 2016 and is projected to gradually decline over time.

The sole agency debt currently subject to the general limit, $209 thousand at the end of 2016, is certain debentures issued by the Federal Housing Administration.[17]

Some of the other agency debt, however, is subject to its own statutory limit. For example, the Tennessee Valley Authority is limited to $30 billion of bonds and notes outstanding.

The comparison between Treasury debt and debt subject to limit also includes an adjustment for measurement differences in the treatment of discounts and premiums. As explained earlier in this chapter, debt securities may be sold at a discount or premium, and the measurement of debt may take this into account rather than recording the face value of the securities. However, the measurement differs between gross Federal debt (and its components) and the statutory definition of debt subject to limit. An adjustment is needed to derive debt subject to limit (as defined by law) from Treasury debt. The amount of the adjustment was $38.9 billion at the end of 2016 compared with the total unamortized discount (less premium) of $60.4 billion on all Treasury securities.

Changes in the debt limit.—The statutory debt limit has been changed many times. Since 1960, the Congress has passed 82 separate acts to raise the limit, revise the definition, extend the duration of a temporary increase, or temporarily suspend the limit.[18]

The four most recent laws addressing the debt limit have each provided for a temporary suspension followed by an increase in an amount equivalent to the debt that was issued during that suspension period in order to fund commitments requiring payment through the specified end date. Most recently, the Bipartisan Budget Act of 2015 suspended the $18,113 billion debt ceiling from November 2, 2015, through March 15, 2017, and then raised the debt limit on March 16, 2017, by $1,696 billion to $19,809 billion.

At many times in the past several decades, including 2013, 2014, 2015, and 2017, the Government has reached the statutory debt limit before an increase has been enacted. When this has occurred, it has been necessary for the Department of the Treasury to take extraordinary measures to meet the Government's obligation to pay its bills and invest its trust funds while remaining below the statutory limit. On March 16, 2017, immediately following the end of the most recent debt limit suspension period, the Secretary of the Treasury sent a letter to Congress announcing that Treasury was beginning to take extraordinary measures.

As mentioned above, one such extraordinary measure is the partial or full suspension of the daily reinvestment of the Thrift Savings Plan G-Fund. The Treasury Secretary has statutory authority to suspend investment of the G-Fund in Treasury securities as needed to prevent the debt from exceeding the debt limit. Treasury determines each day the amount of investments that would allow the fund to be invested as fully as possible without exceeding the debt limit. At the end of February 2017, the TSP G-Fund had an outstanding balance of $226 billion. The Secretary is also authorized to suspend investments in the CSRDF and to declare a debt issuance suspension period, which allows him or her to redeem a limited amount of securities held by the CSRDF. The Postal Accountability and Enhancement Act of 2006 provides that investments in the Postal Service Retiree Health Benefits Fund shall be made in the same manner as investments in the CSRDF.[19] Therefore, Treasury is able to take similar administrative actions with the PSRHBF. The law requires that when any such actions are taken with the G-Fund, the CSRDF, or the PSRHBF, the Secretary is required to make the fund whole after the debt limit has been raised by restoring the forgone interest and investing the fund fully. Another measure for staying below the debt limit is disinvestment of the Exchange Stabilization Fund. The outstanding balance in the Exchange Stabilization Fund was $22 billion at the end of February 2017.

As the debt has neared the limit, including in 2017, Treasury has also suspended the issuance of SLGS to reduce unanticipated fluctuations in the level of the debt.

At times, Treasury has also adjusted the schedule for auctions of marketable securities. In October 2015, as Treasury neared the exhaustion of its extraordinary measures, Treasury postponed the 2-year note auction originally scheduled for Tuesday, October 27. After the November 2nd enactment of the Bipartisan Budget Act of 2015, Treasury rescheduled the auction for Wednesday, November 4.

In addition to these steps, Treasury has previously exchanged Treasury securities held by the CSRDF with borrowing by the FFB, which, as explained above, is not subject to the debt limit. This measure was most recently taken in October 2015.

The debt limit has always been increased prior to the exhaustion of Treasury's limited available administrative actions to continue to finance Government operations when the statutory ceiling has been reached. Failure to enact a debt limit increase before these actions were exhausted would have significant and long-term negative consequences. The Federal Government would be forced to delay or discontinue payments on its broad range of ob-

[17] At the end of 2016, there were also $18 million of FHA debentures not subject to limit.

[18] The Acts and the statutory limits since 1940 are listed in Table 7.3 of the Budget's historical tables, available at https://www.whitehouse.gov/omb/budget/Historicals.

[19] Both the CSRDF and the PSRHBF are administered by the Office of Personnel Management.

ligations, including Social Security and other payments to individuals, Medicaid and other grant payments to States, individual and corporate tax refunds, Federal employee salaries, payments to vendors and contractors, principal and interest payments on Treasury securities, and other obligations. If Treasury were unable to make timely interest payments or redeem securities, investors would cease to view U.S. Treasury securities as free of credit risk and Treasury's interest costs would increase. Because interest rates throughout the economy are benchmarked to the Treasury rates, interest rates for State and local governments, businesses, and individuals would also rise. Foreign investors would likely shift out of dollar-denominated assets, driving down the value of the dollar and further increasing interest rates on non-Federal, as well as Treasury, debt.

The debt subject to limit is estimated to increase to $20,355 billion by the end of 2017 and to $21,095 billion by the end of 2018. The Budget anticipates timely Congressional action to address the statutory limit as necessary before exhaustion of Treasury's extraordinary measures.

Federal funds financing and the change in debt subject to limit.—The change in debt held by the public, as shown in Table 4–2, and the change in debt held by the public net of financial assets are determined primarily by the total Government deficit or surplus. The debt subject to limit, however, includes not only debt held by the public but also debt held by Government accounts. The change in debt subject to limit is therefore determined both by the factors that determine the total Government deficit or surplus and by the factors that determine the change in debt held by Government accounts. The effect of debt held by Government accounts on the total debt subject to limit can be seen in the second part of Table 4–2. The change in debt held by Government accounts results in 14 percent of the estimated total increase in debt subject to limit from 2017 through 2027.

The budget is composed of two groups of funds, Federal funds and trust funds. The Federal funds, in the main, are derived from tax receipts and borrowing and are used for the general purposes of the Government. The trust funds, on the other hand, are financed by taxes or other receipts dedicated by law for specified purposes, such as for paying Social Security benefits or making grants to State governments for highway construction.[20]

A Federal funds deficit must generally be financed by borrowing, which can be done either by selling securities to the public or by issuing securities to Government accounts that are not within the Federal funds group. Federal funds borrowing consists almost entirely of Treasury securities that are subject to the statutory debt limit. Very little debt subject to statutory limit has been issued for reasons except to finance the Federal funds deficit. The change in debt subject to limit is therefore determined primarily by the Federal funds deficit, which is equal to the difference between the total Government deficit or surplus and the trust fund surplus. Trust fund surpluses are almost entirely invested in securities subject to the debt limit, and trust funds hold most of the debt held by Government accounts. The trust fund surplus reduces the total budget deficit or increases the total

[20] For further discussion of the trust funds and Federal funds groups, see Chapter 23, "Trust Funds and Federal Funds."

Table 4–6. FEDERAL FUNDS FINANCING AND CHANGE IN DEBT SUBJECT TO STATUTORY LIMIT

(In billions of dollars)

Description	Actual 2016	Estimate 2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Change in Gross Federal Debt:												
Federal funds deficit/surplus (–)	769.4	752.9	615.5	626.7	557.8	511.5	441.9	333.3	246.2	138.3	55.8	–198.5
Other transactions affecting borrowing from the public -- Federal funds [1]	465.9	54.2	90.3	79.5	64.7	59.8	53.3	51.5	54.6	54.1	52.4	50.0
Increase (+) or decrease (–) in Federal debt held by Federal funds	56.6	14.7	34.8	41.6	41.8	40.5	39.2	39.5	38.9	37.6	34.5	43.2
Adjustments for trust fund surplus/deficit not invested/ disinvested in Federal securities [2]	129.7	–6.8	–1.7	–1.0	–1.0	–1.0	–1.1	–0.7	–0.8	–0.6	–0.5	–0.3
Change in unrealized discount on Federal debt held by Government accounts	–2.3	....	....	....	....	....	....	....	....	....	....	....
Total financing requirements	1,419.3	815.0	738.9	746.7	663.3	610.8	533.3	423.6	338.9	229.4	142.2	–105.6
Change in Debt Subject to Limit:												
Change in gross Federal debt	1,419.3	815.0	738.9	746.7	663.3	610.8	533.3	423.6	338.9	229.4	142.2	–105.6
Less: increase (+) or decrease (–) in Federal debt not subject to limit	0.3	–1.2	–1.6	–2.6	–2.5	–2.2	–1.9	–2.3	–2.0	–1.0	–0.9	–1.7
Less: change in adjustment for discount and premium [3]	–6.4	....	....	....	....	....	....	....	....	....	....	....
Total, change in debt subject to limit	1,425.5	816.2	740.4	749.3	665.9	612.9	535.2	425.9	340.9	230.3	143.2	–103.9
Memorandum:												
Debt subject to statutory limit [4]	19,538.5	20,354.6	21,095.1	21,844.4	22,510.3	23,123.2	23,658.4	24,084.3	24,425.2	24,655.5	24,798.7	24,694.8

[1] Includes Federal fund transactions that correspond to those presented in Table 4-2, but that are for Federal funds alone with respect to the public and trust funds.

[2] Includes trust fund holdings in other cash assets and changes in the investments of the National Railroad Retirement Investment Trust in non-Federal securities.

[3] Consists of unamortized discount (less premium) on public issues of Treasury notes and bonds (other than zero-coupon bonds).

[4] The statutory debt limit is approximately $19,809 billion, as increased after March 15, 2017.

budget surplus, decreasing the need to borrow from the public or increasing the ability to repay borrowing from the public. When the trust fund surplus is invested in Federal securities, the debt held by Government accounts increases, offsetting the decrease in debt held by the public by an equal amount. Thus, there is no net effect on gross Federal debt.

Table 4–6 derives the change in debt subject to limit. In 2016 the Federal funds deficit was $769 billion, and other factors increased financing requirements by $466 billion. The change in the Treasury operating cash balance increased financing requirements by $155 billion, the net financing disbursements of credit financing accounts increased financing requirements by $99 billion, and other Federal fund factors increased financing requirements by $212 billion. As discussed earlier in this chapter, this net $212 billion in other factors was mainly due to the reinvestment of the TSP G-Fund. In addition, special funds and revolving funds, which are part of the Federal funds group, invested a net of $57 billion in Treasury securities. A $130 billion adjustment is also made for the difference between the trust fund surplus or deficit and the trust funds' investment or disinvestment in Federal securities (including the changes in NRRIT's investments in non-Federal securities). As discussed above, this unusually large adjustment amount is due primarily to reinvestment following the extraordinary measures taken with the CSRDF. As a net result of all these factors, $1,419 billion in financing was required, increasing gross Federal debt by that amount. Since Federal debt not subject to limit grew by $0.3 billion and the adjustment for discount and premium changed by $6 billion, the debt subject to limit increased by $1,425 billion, while debt held by the public increased by $1,051 billion.

Debt subject to limit is estimated to increase by $816 billion in 2017 and by $740 billion in 2018. The projected increases in the debt subject to limit are caused by the continued Federal funds deficit, supplemented by the other factors shown in Table 4–6. While debt held by the public increases by $4,407 billion from the end of 2016 through 2027, debt subject to limit increases by $5,156 billion.

Foreign Holdings of Federal Debt

During most of American history, the Federal debt was held almost entirely by individuals and institutions within the United States. In the late 1960s, foreign holdings were just over $10 billion, less than 5 percent of the total Federal debt held by the public. Foreign holdings began to grow significantly starting in the 1970s and now represent almost half of outstanding debt. This increase has been almost entirely due to decisions by foreign central banks, corporations, and individuals, rather than the direct marketing of these securities to foreign investors.

Table 4–7. FOREIGN HOLDINGS OF FEDERAL DEBT
(Dollar amounts in billions)

Fiscal Year	Debt held by the public			Change in debt held by the public [2]	
	Total	Foreign [1]	Percentage foreign	Total	Foreign
1965	260.8	12.2	4.7	3.9	0.3
1970	283.2	14.0	4.9	5.1	3.7
1975	394.7	66.0	16.7	51.0	9.1
1980	711.9	126.4	17.8	71.6	1.3
1985	1,507.3	222.9	14.8	200.3	47.3
1990	2,411.6	463.8	19.2	220.8	72.0
1995	3,604.4	820.4	22.8	171.3	138.4
2000	3,409.8	1,038.8	30.5	–222.6	–242.6
2005	4,592.2	1,929.6	42.0	296.7	135.1
2010	9,018.9	4,324.2	47.9	1,474.2	753.6
2011	10,128.2	4,912.1	48.5	1,109.3	587.9
2012	11,281.1	5,476.1	48.5	1,152.9	564.0
2013	11,982.7	5,652.8	47.2	701.6	176.7
2014	12,779.9	6,069.2	47.5	797.2	416.4
2015	13,116.7	6,105.9	46.6	336.8	36.7
2016	14,167.7	6,155.2	43.4	1,051.0	49.3

[1] Estimated by Treasury Department. These estimates exclude agency debt, the holdings of which are believed to be small. The data on foreign holdings are recorded by methods that are not fully comparable with the data on debt held by the public. Projections of foreign holdings are not available. The estimates include the effects of benchmark revisions in 1984, 1989, 1994, and 2000, annual June benchmark revisions for 2002–2010, and additional revisions.

[2] Change in debt held by the public is defined as equal to the change in debt held by the public from the beginning of the year to the end of the year.

Foreign holdings of Federal debt are presented in Table 4–7. At the end of 2016, foreign holdings of Treasury debt were $6,155 billion, which was 43 percent of the total debt held by the public.[21] Foreign central banks and other foreign official institutions owned 63 percent of the foreign holdings of Federal debt; private investors owned nearly all the rest. At the end of 2016, the nations holding the largest shares of U.S. Federal debt were China, which held 19 percent of all foreign holdings, and Japan, which held 18 percent. All of the foreign holdings of Federal debt are denominated in dollars.

Although the amount of foreign holdings of Federal debt has grown greatly over this period, the proportion that foreign entities and individuals own, after increasing abruptly in the very early 1970s, remained about 15–20 percent until the mid-1990s. During 1995–97, however, growth in foreign holdings accelerated, reaching 33 percent by the end of 1997. Foreign holdings of Federal debt resumed growth in the following decade, increasing to 48 percent by the end of 2008. Since 2008, foreign holdings as a percent of total Federal debt have remained relatively stable. Foreign holdings fell from 47 percent at the end of 2015 to 43 percent at the end of 2016. The dollar increase in foreign holdings was about 5 percent of total Federal borrowing from the public in 2016 and 31 percent over the last five years.

Foreign holdings of Federal debt are around 25 percent of the foreign-owned assets in the United States, depending on the method of measuring total assets. The foreign purchases of Federal debt securities do not measure the full impact of the capital inflow from abroad on the market for Federal debt securities. The capital inflow supplies additional funds to the credit market generally, and thus affects the market for Federal debt. For example, the capital inflow includes deposits in U.S. financial intermediaries that themselves buy Federal debt.

Federal, Federally Guaranteed, and Other Federally Assisted Borrowing

The Government's effects on the credit markets arise not only from its own borrowing but also from the direct loans that it makes to the public and the provision of assistance to certain borrowing by the public. The Government guarantees various types of borrowing by individuals, businesses, and other non-Federal entities, thereby providing assistance to private credit markets. The Government is also assisting borrowing by States through the Build America Bonds program, which subsidizes the interest that States pay on such borrowing. In addition, the Government has established private corporations—Government-sponsored enterprises—to provide financial intermediation for specified public purposes; it exempts the interest on most State and local government debt from income tax; it permits mortgage interest to be deducted in calculating taxable income; and it insures the deposits of banks and thrift institutions, which themselves make loans.

Federal credit programs and other forms of assistance are discussed in Chapter 19, "Credit and Insurance," in this volume. Detailed data are presented in tables accompanying that chapter.

[21] The debt calculated by the Bureau of Economic Analysis is different, though similar in size, because of a different method of valuing securities.

PERFORMANCE AND MANAGEMENT

5. SOCIAL INDICATORS

The social indicators presented in this chapter illustrate in broad terms how the Nation is faring in selected areas. Indicators are drawn from six domains: economic, demographic and civic, socioeconomic, health, security and safety, and environment and energy. The indicators shown in the tables in this chapter were chosen in consultation with statistical and data experts from across the Federal Government. These indicators are only a subset of the vast array of available data on conditions in the United States. In choosing indicators for these tables, priority was given to measures that are broadly relevant to Americans and consistently available over an extended period. Such indicators provide a current snapshot while also making it easier to draw comparisons and establish trends.

The measures in these tables are influenced to varying degrees by many Government policies and programs, as well as by external factors beyond the Government's control. They do not measure the impacts of Government policies. Instead, they provide a quantitative picture of the baseline on which future policies are set and useful context for prioritizing budgetary resources.

Economic.—The 2008-2009 economic downturn produced the worst labor market since the Great Depression. The employment-population ratio dropped sharply from its pre-recession level, and real GDP per person also declined.[1] The unemployment rate stood at 4.9 percent in 2016, down from a high of 10 percent in October 2009, and fell further to 4.4 percent in April 2017. Despite the recovery in the unemployment rate, growth in real GDP per person (5-year annual average) remains lower than in all but 7 years over the period from 1960 to 2007. The employment-population ratio also remains low relative to its pre-recession levels. From 1985 to 2007, the employment-population ratio ranged from 60.1 to 63.1 percent; after the 2008-2009 recession, it fell to 58.4 percent in 2011 and stood at 59.7 percent in 2016.

Over the entire period from 1960 to 2016, the primary pattern has been one of economic growth and rising living standards. Real GDP per person has tripled as technological advancements and accumulation of human and physical capital increased the Nation's productive capacity. The stock of physical capital including consumer durable goods, like cars and appliances, amounted to nearly $54 trillion in 2015, well over four times the size of the capital stock in 1960 after accounting for inflation.

However, national saving, a key determinant of future prosperity because it supports capital accumulation, remains low relative to historical standards, standing at 2.9 percent in 2016 versus an average of 6.9 percent over the period from 1960 to 2007. Meanwhile, the labor force participation rate, also critical for growth, has been on the decline since 2000. The labor force participation rates in 2015 and 2016 were the lowest since 1977.

In addition to the size of the economy, the structure of the economy has also changed considerably. From 2000 to 2015, goods-producing industries declined from 24.9 to 21.7 percent of total private goods and services (value added as a percent of GDP), while services-producing industries increased from 75.1 to 78.3 percent. This period coincided with a steep decline in manufacturing employment, potentially due to import competition from China and changes in technology.[2] The United States has experienced persistent trade deficits since the early 1980s, reaching a high of $714 billion in 2005 and standing at $501 billion in 2016. New business starts fell 29 percent from 2005 to 2010 and only increased 5 percent from 2010 through 2014.

Demographic and Civic.—The U.S. population steadily increased from 1970 to 2016, growing from 204 million to 323 million. Since 1970, the foreign born population has rapidly increased, more than quadrupling from about 10 million in 1970 to 43 million in 2015. Remittances from the foreign-born population to households abroad increased from $23.4 billion (0.23 percent of GDP) in 2000 to $44.9 billion (0.24 percent of GDP) in 2016. The U.S. population is getting older, due in part to the aging of the baby boomers, improvements in medical technology, and declining birth rates. For example, the rate of births per 1,000 women aged 15-44 dropped from a high of 118.3 in 1955 to 65.0 in 1976, and has hovered between 62.5 and 71.0 since then; in 2015, the rate was at its lowest ever on record, at 62.5 births.[3] From 1970 to 2015, the percent of the population aged 65 and over increased from 9.8 to 14.9, and the percent aged 85 and over increased from 0.7 to 2.0. In contrast, the percent of the population aged 17 and younger declined from 28.0 in 1980 to 22.8 in 2016.

The composition of American households and families has evolved considerably over time. The percent of Americans who have ever married continues to decline, as it has over the last five decades, falling since 1960 from 78.0 to 67.8 percent of Americans aged 15 and over. Average family sizes have also fallen over this period, a pattern that is typical among developed countries, from 3.7 to 3.1 members per family household. Births to unmarried women aged 15-17 and the fraction of single parent households both reached turning points in 1995 after increasing for over three decades. From 1995 to 2015, the number of births per 1,000 unmarried women aged 15-17 fell from 30 to 10, the lowest level on record. The fraction

[1] The employment-population ratio is the percent of the civilian, non-institutionalized population aged 16 and above that is employed.

[2] Autor, David H., David Dorn, and Gordon H. Hanson (2013). The China Syndrome: Local Labor Market Effects of Import Competition in the United States, American Economic Review, 103(6).

[3] Hamilton, B.E. et al. (2016). Births: Final data for 2015. National Vital Statistics Reports, 65(3). Hyattsville, MD: National Center for Health Statistics.

of single parent households stopped increasing in 1995, stabilizing at about 9 percent of all households.

Charitable giving among Americans, measured by the average charitable contribution per itemized tax return, has generally increased over the past 50 years.[4] The effects of the 2008-2009 recession are evident in the sharp drop in charitable giving from 2005 to 2010, but that decline was reversed by 2014.

Socioeconomic.—Education is a critical component of the Nation's economic growth and competitiveness, while also benefiting society in areas such as health, crime, and civic engagement. Between 1960 and 1980, the percentage of 25- to 34-year olds who have graduated from high school increased from 58 percent to 84 percent, a gain of 13 percentage points per decade. The rate of increase has slowed since then with a six percentage point gain over the past 35 years. The percentage of 25- to 34-year olds who have graduated from college continues to rise, from only 11 percent in 1960 to 34 percent in 2015. While the percentage of the population with a graduate degree has risen over time, the percentage of graduate degrees in science and engineering fell by half in the period between 1960 and 1980, from 22 percent to 11 percent, and stood at 15 percent in 2015.

Although national prosperity has grown considerably over the past 50 years, these gains have not been shared equally. Real disposable income per capita more than tripled since 1960, but for the median household, real income increased by only 19 percent since 1970, and has declined since 2000. The median wealth of households aged 55-64 declined from $311 thousand in 2004 to only $166 thousand in 2013. From 2000 to 2010, the poverty rate, the percentage of food-insecure households, and the percentage of Americans receiving benefits from the Supplemental Nutrition Assistance Program (formerly known as the Food Stamp Program), increased. These measures have declined over the past several years, but still remain high compared with levels prior to the 2008-2009 economic downturn.

After increasing from 1990 to 2005, homeownership rates have fallen continuously since the 2008 housing crisis. The share of families with children and severe housing cost burdens more than doubled from 8 percent in 1980 to 18 percent in 2010, before falling to 15 percent in 2015. The share of families with children and inadequate housing steadily decreased from a high of 9 percent in 1980 to a low of 5 percent in 2013, but has since increased to over 6 percent in 2015.

Health.—America has by far the most expensive health care system in the world with historically much higher rates of uninsured than many other countries with comparable wealth. National health expenditures as a share of GDP have increased from 5 percent in 1960 to nearly 18 percent in 2015. This increase in health care spending coincides with improvements in medical technologies that have improved health. However, the level of per capita health care spending in the United States is far greater than in other Organization for Economic Cooperation and Development (OECD) countries that have experienced comparable health improvements.[5] Average private health insurance premiums paid by individuals with private health insurance have increased by 22 percent (10 percent in 2016 dollars) since 2010.

Some key indicators of national health have improved since 1960. Life expectancy at birth increased by 9.1 years, from 69.7 in 1960 to 78.8 in 2015. Infant mortality fell from 26 to under 6 per 1,000 live births with a rapid decline occurring in the 1970s.

Improvements in health-related behaviors among Americans have been mixed. Although the percent of adults who smoke cigarettes in 2015 was less than half of what it was in 1970, rates of obesity have soared. In 1980, 15 percent of adults and 6 percent of children were obese; in 2014, 38 percent of adults and 17 percent of children were obese. Adult obesity continued to rise even as the share of adults engaging in regular physical activity increased from 15 percent in 2000 to 22 percent in 2015.

Security and Safety.—The last three decades have witnessed a remarkable decline in crime. From 1980 to 2015, the property crime rate dropped by 78 percent while the murder rate fell by 52 percent. However, the downward decline in the murder rate ended in 2014, with the rate rising between 2014 and 2015. The prison incarceration rate increased more than five-fold from 1970 through 2005, before declining by 8 percent from 2005 through 2015. Road transportation has become safer. Safety belt use increased by 19 percentage points from 2000 to 2016, and the annual number of highway fatalities fell by 33 percent from 1970 to 2015 despite the increase in the population.

The number of military personnel on active duty fell to its lowest level since at least 1960. The highest count of active duty military personnel was 3.1 million in 1970, reached during the Vietnam War. It now stands at 1.3 million. The number of veterans has declined from 29 million in 1980 to 21 million in 2016.

Environment and Energy.—Substantial progress has been made on air quality in the United States, with the concentration of particulate matter falling 37 percent from 2000 to 2015 and ground level ozone falling by 32 percent from 1990 to 2015. Gross greenhouse gas emissions per capita and per real dollar of GDP have fallen since at least 1990. As of 2016, 91 percent of the population receives drinking water from community water systems in compliance with water quality standards, which has remained relatively constant since 1995.

Technological advances and a shift in production patterns mean that Americans now use less than half as much energy per real dollar of GDP as they did 50 years ago, and per capita energy consumption is at its lowest since the 1960s despite rising income levels. From 2005 to 2016, coal production fell by 36 percent, with most of that decrease occurring from 2014 to 2016. The decrease in coal production since 2005 coincided with increases in the production of natural gas, petroleum, and renewable energy as well as new regulatory proposals and requirements.

[4] This measure includes charitable giving only among those who claim itemized deductions. It is therefore influenced by changes in tax laws and in the characteristics of those who itemize.

[5] Squires, D. and C. Anderson (2015). U.S. Health Care from a Global Perspective: Spending, Use of Services, Prices and Health in 13 Countries, The Commonwealth Fund.

Table 5–1. SOCIAL INDICATORS

	Calendar Years	1960	1970	1980	1990	1995	2000	2005	2010	2013	2014	2015	2016
	Economic												
	General Economic Conditions												
1	Real GDP per person (chained 2009 dollars)	17,198	23,024	28,325	35,794	38,167	44,475	48,090	47,720	49,317	50,119	51,054	51,523
2	Real GDP per person change, 5-year annual average	0.8	2.4	2.6	2.4	1.3	3.1	1.6	–0.1	0.3	1.3	1.4	1.4
3	Consumer Price Index [1]	12.5	16.4	34.8	55.2	64.4	72.7	82.5	92.1	98.4	100.0	100.1	101.4
4	Private goods producing (%)	#N/A	#N/A	#N/A	#N/A	#N/A	24.9	23.9	22.3	23.0	22.9	21.7	#N/A
5	Private services producing (%)	#N/A	#N/A	#N/A	#N/A	#N/A	75.1	76.1	77.7	77.0	77.1	78.3	#N/A
6	New business starts (thousands) [2]	#N/A	#N/A	452	477	513	482	544	385	404	404	#N/A	#N/A
7	Business failures (thousands) [3]	#N/A	#N/A	371	371	386	406	416	417	367	392	#N/A	#N/A
8	International trade balance (billions of dollars; + surplus / - deficit) [4]	3.5	2.3	–19.4	–80.9	–96.4	–372.5	–714.2	–494.7	–461.9	–490.2	–500.4	–500.6
	Jobs and Unemployment												
9	Labor force participation rate (%)	59.4	60.4	63.8	66.5	66.6	67.1	66.0	64.7	63.2	62.9	62.7	62.8
10	Employment (millions)	65.8	78.7	99.3	118.8	124.9	136.9	141.7	139.1	143.9	146.3	148.8	151.4
11	Employment-population ratio (%)	56.1	57.4	59.2	62.8	62.9	64.4	62.7	58.5	58.6	59.0	59.3	59.7
12	Payroll employment change - December to December, SA (millions)	–0.4	–0.5	0.3	0.0	2.2	2.0	2.5	1.1	2.3	3.0	2.7	2.2
13	Payroll employment change - 5-year annual average, NSA (millions)	0.7	2.0	2.7	2.8	1.6	2.9	0.4	–0.7	–0.2	1.5	2.3	2.5
14	Civilian unemployment rate (%)	5.5	4.9	7.1	5.6	5.6	4.0	5.1	9.6	7.4	6.2	5.3	4.9
15	Unemployment plus marginally attached and underemployed (%)	#N/A	#N/A	#N/A	#N/A	10.1	7.0	8.9	16.7	13.8	12.0	10.4	9.6
16	Receiving Social Security disabled-worker benefits (% of population) [5]	0.9	2.0	2.8	2.5	3.3	3.7	4.5	5.5	5.9	5.9	6.0	#N/A
	Infrastructure, Innovation, and Capital Investment												
17	Nonfarm business output per hour (average 5 year % change) [6]	1.8	2.1	1.2	1.6	1.6	2.8	3.2	1.9	1.5	1.1	0.6	0.6
18	Corn for grain production (million bushels)	3,907	4,152	6,639	7,934	7,400	9,915	11,112	12,425	13,829	14,216	13,601	15,226
19	Real net stock of fixed assets and consumer durable goods (billions of chained 2009 dollars)	11,383	16,921	23,265	30,870	34,246	40,217	46,305	50,332	52,139	52,930	53,814	#N/A
20	Population served by secondary wastewater treatment or better (%) [7]	#N/A	41.6	56.4	63.7	61.1	71.4	74.3	72.0	74.5	#N/A	#N/A	#N/A
21	Electricity net generation (kWh per capita)	4,202	7,486	10,076	12,170	12,594	13,475	13,723	13,335	12,859	12,850	12,707	12,622
22	Patents for invention, U.S. origin (per million population) [8]	#N/A	231	164	190	209	301	253	348	422	453	439	#N/A
23	Net national saving rate (% of GDP)	10.8	8.5	7.2	3.9	4.0	5.8	2.7	–0.8	2.5	3.3	3.3	2.9
24	R&D spending (% of GDP) [9]	2.52	2.44	2.21	2.54	2.40	2.61	2.50	2.73	2.74	2.75	2.78	#N/A
	Demographic and Civic												
	Population												
25	Total population (millions) [10]	#N/A	204.0	227.2	249.6	266.3	282.2	295.5	309.3	316.4	318.9	321.4	323.1
26	Foreign born population (millions) [11]	9.7	9.6	14.1	19.8	#N/A	31.1	37.5	40.0	41.3	42.4	43.3	#N/A
27	17 years and younger (%) [10]	#N/A	#N/A	28.0	25.7	26.1	25.7	24.9	24.0	23.3	23.1	22.9	22.8
28	65 years and older (%) [10]	#N/A	9.8	11.3	12.5	12.7	12.4	12.4	13.1	14.1	14.5	14.9	#N/A
29	85 years and older (%) [10]	#N/A	0.7	1.0	1.2	1.4	1.5	1.6	1.8	1.9	1.9	2.0	#N/A
	Household Composition												
30	Ever married (% of age 15 and older) [12]	78.0	75.1	74.1	73.8	72.9	71.9	70.9	69.3	68.6	68.3	68.2	67.8
31	Average family size [13]	3.7	3.6	3.3	3.2	3.2	3.2	3.1	3.2	3.1	3.1	3.1	3.1
32	Births to unmarried women age 15–17 (per 1,000 unmarried women age 15–17)	#N/A	17.1	20.6	29.6	30.1	23.9	19.4	16.8	11.9	10.6	9.6	#N/A
33	Single parent households (%)	4.4	5.2	7.5	8.3	9.1	8.9	8.9	9.1	9.1	8.9	8.8	8.7
	Civic and Cultural Engagement												
34	Average charitable contribution per itemized tax return (2014 dollars) [14]	2,240	2,222	2,563	3,222	3,426	4,547	4,654	3,962	4,462	4,790	#N/A	#N/A
35	Voting for President (% of voting age population) [15]	63.4	57.0	55.1	56.4	49.8	52.1	56.7	58.3	54.9	#N/A	#N/A	#N/A
36	Persons volunteering (% age 16 and older) [16]	#N/A	#N/A	#N/A	20.4	#N/A	#N/A	28.8	26.3	25.4	25.3	24.9	#N/A
37	Attendance at visual or performing arts activity, including movie-going (% age 18 and older) [17]	#N/A	#N/A	71.7	72.1	#N/A	70.1	#N/A	63.9	65.4	#N/A	66.5	#N/A
38	Reading: Novels or short stories, poetry, or plays (not required for work or school; % age 18 and older) [17]	#N/A	#N/A	56.4	54.2	#N/A	46.6	#N/A	50.2	45.0	#N/A	43.1	#N/A
	Socioeconomic												
	Education												
39	High school graduates (% of age 25–34) [18]	58.1	71.5	84.2	84.1	#N/A	83.9	86.4	87.2	88.6	89.1	89.7	#N/A
40	College graduates (% of age 25–34) [19]	11.0	15.5	23.3	22.7	#N/A	27.5	29.9	31.1	32.9	33.5	34.1	#N/A

Table 5–1. SOCIAL INDICATORS—Continued

	Calendar Years	1960	1970	1980	1990	1995	2000	2005	2010	2013	2014	2015	2016
41	Reading achievement score (age 17) [20]	N/A	285	285	290	288	288	283	286	287	N/A	N/A	N/A
42	Math achievement score (age 17) [21]	N/A	304	298	305	306	308	305	306	306	N/A	N/A	N/A
43	Science and engineering graduate degrees (% of total graduate degrees)	22.0	17.2	11.2	14.7	14.2	12.6	12.7	12.1	13.2	13.7	15.0	N/A
44	Receiving special education services (% of age 3–21 public school students)	N/A	N/A	10.1	11.4	12.4	13.3	13.7	13.0	12.9	13.0	N/A	N/A
	Income, Savings, and Inequality												
45	Real median income: all households (2014 dollars) [22]	N/A	47,593	48,518	52,684	52,664	57,790	56,224	53,568	54,525	53,718	56,516	N/A
46	Real disposable income per capita (chained 2009 dollars)	11,877	16,643	20,158	25,555	27,180	31,524	34,424	35,685	36,414	37,415	38,432	39,226
47	Adjusted gross income share of top 1% of all taxpayers	N/A	N/A	8.5	14.0	14.6	20.8	21.2	18.9	19.0	20.6	N/A	N/A
48	Adjusted gross income share of lower 50% of all taxpayers	N/A	N/A	17.7	15.0	14.5	13.0	12.9	11.7	11.5	11.3	N/A	N/A
49	Personal saving rate (% of disposable personal income)	10.0	12.6	10.6	7.8	6.4	4.2	2.6	5.6	5.0	5.6	5.8	5.8
50	Foreign remittances (billions of dollars) [23]	N/A	N/A	N/A	N/A	N/A	23.4	31.3	36.8	39.6	41.8	43.3	44.9
51	Poverty rate (%) [24]	22.2	12.6	13.0	13.5	13.8	11.3	12.6	15.1	14.8	14.8	13.5	N/A
52	Food-insecure households (% of all households) [25]	N/A	N/A	N/A	N/A	11.9	10.5	11.0	14.5	14.3	14.0	12.7	N/A
53	Supplemental Nutrition Assistance Program (% of population on SNAP)	N/A	3.3	9.5	8.2	9.9	6.1	8.9	13.5	15.0	14.6	14.2	13.5
54	Median wealth of households, age 55–64 (in thousands of 2013 dollars) [26]	78	N/A	153	177	175	243	311	192	166	N/A	N/A	N/A
	Housing												
55	Homeownership among households with children (%) [27]	N/A	N/A	N/A	63.6	65.1	67.5	68.4	65.5	62.5	61.0	59.5	N/A
56	Families with children and severe housing cost burden (%) [28]	N/A	N/A	8	10	12	11	14.5	17.9	15.7	15.4	15.1	N/A
57	Families with children and inadequate housing (%) [29]	N/A	N/A	9	9	7	7	5.4	5.3	5.0	5.6	6.3	N/A
	Health												
	Health Status												
58	Life expectancy at birth (years)	69.7	70.8	73.7	75.4	75.8	76.8	77.6	78.7	78.8	78.9	78.8	N/A
59	Infant mortality (per 1,000 live births)	26.0	20.0	12.6	9.2	7.6	6.9	6.9	6.1	6.0	5.8	5.9	N/A
60	Low birthweight [<2,500 gms] (% of babies)	7.7	7.9	6.8	7.0	7.3	7.6	8.2	8.2	8.0	8.0	8.1	N/A
61	Activity limitation (% of age 5–17) [30]	N/A	N/A	N/A	N/A	N/A	7.0	8.0	9.2	9.2	9.3	9.8	N/A
62	Activity limitation (% of age 18 and over) [31]	N/A	N/A	N/A	N/A	N/A	27.9	29.1	29.9	29.5	28.9	29.6	N/A
63	Difficulties with activities of daily living (% of age 65 and over) [32]	N/A	N/A	N/A	N/A	N/A	6.3	6.2	6.8	7.3	6.2	6.7	N/A
	Health Behavior												
64	Engaged in regular physical activity (% of age 18 and older) [33]	N/A	N/A	N/A	N/A	N/A	15.0	16.6	20.7	21.0	21.5	21.6	N/A
65	Obesity (% of age 20–74 with BMI 30 or greater) [34]	13.4	N/A	15.0	23.2	N/A	30.9	35.1	36.1	N/A	38.2	N/A	N/A
66	Obesity (% of age 2–19) [35]	N/A	N/A	5.5	10.0	N/A	13.9	15.4	16.9	N/A	17.2	N/A	N/A
67	Cigarette smokers (% of age 18 and older)	N/A	37.1	33.1	25.3	24.6	23.1	20.8	19.3	17.9	17.0	15.3	N/A
68	Heavier drinker (% of age 18 and older) [36]	N/A	N/A	N/A	N/A	N/A	4.3	4.8	5.2	5.3	5.2	5.0	N/A
	Access to Health Care												
69	Total national health expenditures (% of GDP)	5.0	6.9	8.9	12.1	13.3	13.3	15.5	17.4	17.2	17.4	17.8	N/A
70	Average single premium per enrolled employee at private-sector establishments (dollars) [37]	N/A	N/A	N/A	N/A	N/A	2,655	3,991	4,940	5,571	5,832	5,963	N/A
71	Average health insurance premium (dollars) [38]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2,782	2,980	3,107	3,258	3,391
72	Persons without health insurance (% of age 18–64) [39]	N/A	N/A	N/A	N/A	16.9	18.9	19.3	22.3	20.4	16.3	13.0	N/A
73	Persons without health insurance (% of age 17 and younger) [39]	N/A	N/A	N/A	N/A	13.0	12.6	9.3	7.8	6.5	5.5	4.5	N/A
74	Children age 19–35 months with recommended vaccinations (%) [40]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	56.6	70.4	71.6	72.2	N/A
	Security and Safety												
	Crime												
75	Property crimes (per 100,000 households) [41]	N/A	N/A	49,610	34,890	31,547	19,043	15,947	12,541	13,144	11,806	11,072	N/A
76	Violent crime victimizations (per 100,000 population age 12 or older) [42]	N/A	N/A	4,940	4,410	7,068	3,749	2,842	1,928	2,317	2,010	1,858	N/A
77	Murder rate (per 100,000 persons)	5.1	7.9	10.2	9.4	8.2	5.5	5.6	4.8	4.5	4.4	4.9	N/A
78	Prison incarceration rate (state and federal institutions, rate per 100,000 persons) [43]	118.8	95.8	145.6	311.9	430.4	508.8	518.2	523.3	500.5	491.7	476.7	N/A
	National Security												
79	Military personnel on active duty (thousands) [44]	2,475	3,065	2,051	2,044	1,518	1,384	1,389	1,431	1,382	1,338	1,314	1,301
80	Veterans (thousands)	22,534	26,976	28,640	27,320	26,198	26,551	24,521	23,032	22,299	21,999	21,681	21,368

Table 5–1. SOCIAL INDICATORS—Continued

	Calendar Years	1960	1970	1980	1990	1995	2000	2005	2010	2013	2014	2015	2016
	Transportation Safety												
81	Safety belt use (%)	N/A	N/A	N/A	N/A	N/A	70.7	81.7	85.1	87.2	86.7	88.5	90.1
82	Highway fatalities	36,399	52,627	51,091	44,599	41,817	41,945	43,510	32,999	32,894	32,744	35,092	N/A
	Environment and Energy												
	Air Quality and Greenhouse Gases												
83	Ground level ozone (ppm) [45]	N/A	N/A	0.101	0.090	0.091	0.082	0.080	0.073	0.067	0.068	0.069	N/A
84	Particulate matter 2.5 (ug/m3) [46]	N/A	N/A	N/A	N/A	N/A	13.5	12.8	9.9	8.9	8.8	8.5	N/A
85	Annual mean atmospheric CO2 concentration (Mauna Loa, Hawaii; ppm)	316.9	325.7	338.7	354.4	360.8	369.5	379.8	389.9	396.5	398.6	400.8	404.2
86	Gross greenhouse gas emissions (teragrams CO2 equivalent) [47]	N/A	N/A	N/A	6,363	6,709	7,214	7,313	6,926	6,680	6,740	6,587	N/A
87	Net greenhouse gas emissions, including sinks (teragrams CO2 equivalent)	N/A	N/A	N/A	5,544	5,923	6,462	6,582	6,208	5,917	5,978	5,828	N/A
88	Gross greenhouse gas emissions per capita (metric tons CO2 equivalent)	N/A	N/A	N/A	25.1	24.8	25.2	24.4	22.1	20.8	20.9	20.2	N/A
89	Gross greenhouse gas emissions per 2009$ of GDP (kilograms CO2 equivalent)	N/A	N/A	N/A	0.711	0.659	0.574	0.514	0.468	0.428	0.422	0.402	N/A
90	Population that receives drinking water in compliance with standards (%) [48]	N/A	N/A	N/A	N/A	83.8	90.8	88.5	92.2	91.2	92.5	91.1	91.2
	Energy												
91	Energy consumption per capita (million Btu)	250	331	344	338	342	350	339	315	307	309	303	301
92	Energy consumption per 2009$ GDP (thousand Btu per 2009$)	14.5	14.4	12.1	9.4	9.0	7.9	7.0	6.6	6.2	6.2	6.0	N/A
93	Electricity net generation from renewable sources, all sectors (% of total) [49]	19.7	16.4	12.4	11.8	11.5	9.4	8.8	10.4	12.8	13.2	13.3	14.9
94	Coal production (million short tons)	434	613	830	1,029	1,033	1,074	1,131	1,084	985	1,000	897	728
95	Natural gas production (dry) (trillion cubic feet) [50]	12.2	21.0	19.4	17.8	18.6	19.2	18.1	21.3	24.2	25.9	27.1	26.5
96	Petroleum production (million barrels per day)	8.0	11.3	10.2	8.9	8.3	7.7	6.9	7.5	10.1	11.8	12.8	12.4
97	Renewable energy production (quadrillion Btu)	2.9	4.1	5.4	6.0	6.6	6.1	6.2	8.1	9.2	9.6	9.5	10.1

N/A=Number is not available.

[1] Adjusted CPI-U. 2014=100.

[2] New business starts are defined as firms with positive employment in the current year and no paid employment in any prior year of the LBD. Employment is measured as of the payroll period including March 12th.

[3] Business failures are defined as firms with employment in the prior year that have no paid employees in the current year.

[4] Calculated as the value of U.S. exports of goods and services less the value of U.S. imports of goods and services, on a balance of payments basis. This balance is a component of the U.S. International Transactions (Balance of Payments) Accounts.

[5] Gross prevalence rate for persons receiving Social Security disabled-worker benefits among the estimated population insured in the event of disability at end of year. Gross rates do not account for changes in the age and sex composition of the insured population over time.

[6] Values for prior years have been revised from the prior version of this publication.

[7] Data correspond to years 1972, 1982, 1992, 1996, 2000, 2004, 2008, and 2012.

[8] Patent data adjusted by OMB to incorporate total population estimates from U.S. Census Bureau.

[9] The R&D to GDP ratio data are now revised to reflect the new methodology introduced in the 2013 comprehensive revision of the GDP and other National Income and Product Accounts by the U.S. Bureau of Economic Analysis (BEA). In late July 2013, BEA reported GDP and related statistics that were revised back to 1929. The new GDP methodology treats R&D as investment in all sectors of the economy, among other methodological changes. The net effects of these changes are somewhat higher levels of GDP year to year and corresponding decreases in the R&D to GDP ratios reported annually by the National Science Foundation (NSF). For further details see NSF's InfoBrief "R&D Recognized as Investment in U.S. Gross Domestic Product Statistics: GDP Increase Slightly Lowers R&D-to-GDP Ratio" at http://www.nsf.gov/statistics[2015] nsf[15315] nsf15315.pdf.

[10] Data source and values for 2010 to 2015 have been updated relative to the prior version of this publication.

[11] Data source for 1960 to 2000 is the decennial census; data source for 2006, 2010, 2011, 2012, 2013, 2014, and 2015 is the American Community Survey.

[12] For 1960, age 14 and older.

[13] Average size of family households. Family households are those in which there is someone present who is related to the householder by birth, marriage, or adoption.

[14] Charitable giving reported as itemized deductions on Schedule A.

[15] Data correspond to years 1964, 1972, 1980, 1992, 1996, 2000, 2004, 2008, and 2012. The voting statistics in this table are presented as ratios of official voting tallies, as reported by the U.S. Clerk of the House, to population estimates from the Current Population Survey.

[16] Refers to those who volunteered at least once during a one-year period, from September of the previous year to September of the year specified. For 1990, refers to 1989 estimate from the CPS Supplement on volunteers.

[17] The 1980, 1990, 2000, and 2010 data come from the 1982, 1992, 2002, and 2008 waves of the Survey of Public Participation in the Arts, respectively.

[18] For 1960, includes those who have completed 4 years of high school or beyond. For 1970 and 1980, includes those who have completed 12 years of school or beyond. For 1990 onward, includes those who have completed a high school diploma or the equivalent.

[19] For 1960 to 1980, includes those who have completed 4 or more years of college. From 1990 onward, includes those who have a bachelor's degree or higher.

[20] Data correspond to years 1971, 1980, 1990, 1994, 1999, 2004, 2008, and 2012.

[21] Data correspond to years 1973, 1982, 1990, 1994, 1999, 2004, 2008, and 2012.

[22] Beginning with 2013, data are based on redesigned income questions. The source of the 2013 data is a portion of the CPS ASEC sample which received the redesigned income questions, approximately 30,000 addresses. For more information, please see the report Income and Poverty in the United States: 2014, U.S. Census Bureau, Current Population Reports, P60-252.

Table 5–1. SOCIAL INDICATORS—Continued

[23] Foreign remittances, referred to as 'personal transfers' in the U.S. International Transactions (Balance of Payments) Accounts, consist of all transfers in cash or in kind sent by the foreign-born population resident in the United States to households resident abroad.

[24] The poverty rate does not reflect noncash government transfers. Beginning with 2013, data are based on redesigned income questions. The source of the 2013 data is a portion of the CPS ASEC sample which received the redesigned income questions, approximately 30,000 addresses. For more information, please see the report Income and Poverty in the United States: 2014, U.S. Census Bureau, Current Population Reports, P60-252.

[25] Food-insecure classification is based on reports of three or more conditions that characterize households when they are having difficulty obtaining adequate food, out of a total of 10 such conditions.

[26] Data values shown are 1962, 1983, 1989, 1995, 2001, 2004, 2010, and 2013. For 1962, the data source is the SFCC; for subsequent years, the data source is the SCF

[27] Some data interpolated.

[28] Expenditures for housing and utilities exceed 50 percent of reported income. Some data interpolated.

[29] Inadequate housing has moderate to severe problems, usually poor plumbing, or heating or upkeep problems. Some data interpolated.

[30] Total activity limitation includes receipt of special education services; assistance with personal care needs; limitations related to the child's ability to walk; difficulty remembering or periods of confusion; limitations in any activities because of physical, mental, or emotional problems.

[31] Activity limitation among adults aged 18 and over is defined as having a basic action difficulty in one or more of the following: movement, emotional, sensory (seeing or hearing), or cognitive.

[32] Activities of daily living include personal care activities: bathing or showering, dressing, getting in or out of bed or a chair, using the toilet, and eating. Persons are considered to have an ADL limitation if any condition(s) causing the respondent to need help with the specific activities was chronic.

[33] Participation in leisure-time aerobic and muscle-strengthening activities that meet 2008 Federal physical activity guidelines.

[34] BMI refers to body mass index. The 1960, 1980, 1990, 2000, 2005, 2010, 2014 data correspond to survey years 1960-1962, 1976-1980, 1988-1994, 1999-2000, 2005-2006, 2009-2010, and 2013-2014, respectively.

[35] Percentage at or above the sex-and age-specific 95th percentile BMI cutoff points from the 2000 CDC growth charts. The 1980, 1990, 2000, 2005, 2010, 2014 data correspond to survey years 1976-1980, 1988-1994, 1999-2000, 2005-2006, 2009-2010, and 2013-2014, respectively.

[36] Heavier drinking is based on self-reported responses to questions about average alcohol consumption and is defined as, on average, more than 14 drinks per week for men and more than 7 drinks per week for women.

[37] Includes only employees of private-sector establishments that offer health insurance.

[38] Unpublished data. This is the mean total private health insurance premium paid by an individual or family for the private coverage that person is on. If a person is covered by more than one plan, the premiums for the plans are added together. Those who pay no premiums towards their plans are included in the estimates.

[39] A person was defined as uninsured if he or she did not have any private health insurance, Medicare, Medicaid, CHIP (1999-2015), state-sponsored, other government-sponsored health plan (1997-2015), or military plan. Beginning in 2014, a person with health insurance coverage through the Health Insurance Marketplace or state-based exchanges was considered to have private coverage. A person was also defined as uninsured if he or she had only Indian Health Service coverage or had only a private plan that paid for one type of service such as accidents or dental care. In 1993-1996 Medicaid coverage is estimated through a survey question about having Medicaid in the past month and through participation in Aid to Families with Dependent Children (AFDC) or Supplemental Security Income (SSI) programs. In 1997 to 2015, Medicaid coverage is estimated through a question about current Medicaid coverage. Beginning in the third quarter of 2004, a Medicaid probe question was added to reduce potential errors in reporting Medicaid status. Persons under age 65 with no reported coverage were asked explictly about Medicaid coverage.

[40] Recommended vaccine series consists of 4 or more doses of either the diphtheria, tetanus toxoids, and pertussis vaccine (DTP), the diphtheria and tetanus toxoids vaccine (DT), or the diphtheria, tetanus toxoids, and acellular pertussis vaccine (DTaP); 3 or more doses of any poliovirus vaccine; 1 or more doses of a measles-containing vaccine (MCV); 3 or more doses or 4 or more doses of Haemophilus influenzae type b vaccine (Hib) depending on Hib vaccine product type (full series Hib); 3 or more doses of hepatitis B vaccine; 1 or more doses of varicella vaccine; and 4 or more doses of pneumococcal conjugate vaccine (PCV).

[41] Property crimes, including burglary, motor vehicle theft, and property theft, reported by a sample of households. Includes property crimes both reported and not reported to law enforcement.

[42] Violent crimes include rape, robbery, aggravated assault, and simple assault. Includes crimes both reported and not reported to law enforcement. Due to methodological changes in the enumeration method for NCVS estimates from 1993 to present, use caution when comparing 1980 and 1990 criminal victimization estimates to future years. Estimates from 1995 and beyond include a small number of victimizations, referred to as series victimizations, using a new counting strategy. High-frequency repeat victimizations, or series victimizations, are six or more similar but separate victimizations that occur with such frequency that the victim is unable to recall each individual event or describe each event in detail. Including series victimizations in national estimates can substantially increase the number and rate of violent victimization; however, trends in violence are generally similar regardless of whether series victimizations are included. See Methods for Counting High-Frequency Repeat Victimizations in the National Crime Victimization Survey, NCJ 237308, BJS web, April 2012 for further discussion of the new counting strategy and supporting research.

[43] Prior to 1977, the National Prisoners Statistics (NPS) Program reports were based on custody population. Beginning in 1977, the report reoriented to jurisdiction population. Generally, State inmates housed in local jails because of overcrowding are considered to be under State jurisdiction. Most, but not all, States reserve prison for offenders sentenced to a year or more.

[44] For all years, the actuals reflect Active Component only excluding full-time Reserve Component members and RC mobilized to active duty. End Strength for 2016 is preliminary.

[45] Ambient ozone concentrations based on 212 monitoring sites meeting minimum completeness criteria.

[46] Ambient PM2.5 concentrations based on 480 monitoring sites meeting minimum completeness criteria.

[47] The gross emissions indicator does not include sinks, which are processes (sometimes naturally occurring) that remove greenhouse gases from the atmosphere. Gross emissions are therefore more indicative of trends in energy consumption and efficiency than are net emissions.

[48] Percent of the population served by community water systems that receive drinking water that meets all applicable health - based drinking water standards.

[49] Includes net generation from solar thermal and photovoltaic (PV) energy at utility-scale facilities. Does not include distributed (small-scale) solar thermal or photovoltaic generation.

[50] Dry natural gas is also known as consumer-grade natural gas.

Table 5–2. SOURCES FOR SOCIAL INDICATORS

	Indicator	Source
	Economic	
	General Economic Conditions	
1	Real GDP per person (chained 2009 dollars)	Bureau of Economic Analysis, National Economic Accounts Data. http://www.bea.gov/national/
2	Real GDP per person change, 5-year annual average	Bureau of Economic Analysis, National Economic Accounts Data. http://www.bea.gov/national/
3	Consumer Price Index	Bureau of Labor Statistics, BLS Consumer Price Index Program. https://www.bls.gov/cpi/
4	Private goods producing (%)	Bureau of Economic Analysis, National Economic Accounts Data. http://www.bea.gov/national/
5	Private services producing (%)	Bureau of Economic Analysis, National Economic Accounts Data. http://www.bea.gov/national/
6	New business starts (thousands)	U.S. Census Bureau, Business Dynamics Statistics. https://www.census.gov/ces/dataproducts/bds/
7	Business failures (thousands)	U.S. Census Bureau, Business Dynamics Statistics. https://www.census.gov/ces/dataproducts/bds/
8	International trade balance (billions of dollars; + surplus / - deficit)	Bureau of Economic Analysis, International Economics Accounts, https://www.bea.gov/International/index.htm
	Jobs and Unemployment	
9	Labor force participation rate (%)	Bureau of Labor Statistics, Current Population Survey. https://www.bls.gov/cps
10	Employment (millions)	Bureau of Labor Statistics, Current Population Survey. https://www.bls.gov/cps
11	Employment-population ratio (%)	Bureau of Labor Statistics, Current Population Survey. https://www.bls.gov/cps
12	Payroll employment change - December to December, SA (millions)	Bureau of Labor Statistics, Current Employment Statistics program. https://www.bls.gov/ces/
13	Payroll employment change - 5-year annual average, NSA (millions)	Bureau of Labor Statistics, Current Employment Statistics program. https://www.bls.gov/ces/
14	Civilian unemployment rate (%)	Bureau of Labor Statistics, Current Population Survey. https://www.bls.gov/cps
15	Unemployment plus marginally attached and underemployed (%)	Bureau of Labor Statistics, Current Population Survey. https://www.bls.gov/cps
16	Receiving Social Security disabled-worker benefits (% of population)	Social Security Administration, Office of Research, Evaluation, and Statistics, Annual Statistical Supplement to the Social Security Bulletin, (tables 4.C1 and 5.A4). http://www.ssa.gov/policy/docs/statcomps/supplement/
	Infrastructure, Innovation, and Capital Investment	
17	Nonfarm business output per hour (average 5 year % change)	Bureau of Labor Statistics, Major Sector Productivity Program. https://www.bls.gov/lpc/
18	Corn for grain production (million bushels)	National Agricultural Statistics Service, Agricultural Estimates Program. http://www.nass.usda.gov/
19	Real net stock of fixed assets and consumer durable goods (billions of chained 2009 dollars)	Bureau of Economic Analysis, National Economic Accounts Data. http://www.bea.gov/national/
20	Population served by secondary wastewater treatment or better (%)	U.S. Environmental Protection Agency, Clean Watersheds Needs Survey. http://www.epa.gov/cwns
21	Electricity net generation (kWh per capita)	U.S. Energy Information Administration (EIA) calculation from: EIA, Monthly Energy Review (March 2017); and Table 7.2a https://www.eia.gov/totalenergy/data/monthly/; and U.S. Census Bureau, Population Division, Vintage 2016 Population Estimates (2010-2016) https://www.census.gov/data/tables/2016/demo/popest/nation-total.html
22	Patents for invention, U.S. origin (per million population)	U.S. Patent and Trademark Office, Patent Technology Monitoring Team, U.S. Patent Statistics Chart, Calendar Years 1963-2015. https://www.uspto.gov/web/offices/ac/ido/oeip/taf/us_stat.htm; and, U.S. Census Bureau, Population Division.
23	Net national saving rate (% of GDP)	Bureau of Economic Analysis, National Economic Accounts Data. http://www.bea.gov/national/
24	R&D spending (% of GDP)	National Science Foundation, National Patterns of R&D Resources. http://www.nsf.gov/statistics/natlpatterns/
	Demographic and Civic	
	Population	
25	Total population (millions)	U.S. Census Bureau, Population Division, Vintage 2016 Population Estimates (2016), Vintage 2015 Population Estimates (2010-2015), 2000-2010 Intercensal Estimates (2000-2005), 1990-1999 Intercensal Estimates (1990-1995), 1980-1990 Intercensal Estimates (1980), 1970-1980 Intercensal Estimates (1970).
26	Foreign born population (millions)	U.S. Census Bureau, Population Division, Decennial Census and American Community Survey. http://www.census.gov/prod/www/abs/decennial/ and http://www.census.gov/acs
27	17 years and younger (%)	U.S. Census Bureau, Population Division, Vintage 2016 Population Estimates (2016), Vintage 2015 Population Estimates (2010-2015), 2000-2010 Intercensal Estimates (2000-2005), 1990-1999 Intercensal Estimates (1990-1995), 1980-1990 Intercensal Estimates (1980), 1970-1980 Intercensal Estimates (1970).
28	65 years and older (%)	U.S. Census Bureau, Population Division, Vintage 2016 Population Estimates (2016), Vintage 2015 Population Estimates (2010-2015), 2000-2010 Intercensal Estimates (2000-2005), 1990-1999 Intercensal Estimates (1990-1995), 1980-1990 Intercensal Estimates (1980), 1970-1980 Intercensal Estimates (1970).

Table 5–2. SOURCES FOR SOCIAL INDICATORS—Continued

	Indicator	Source
29	85 years and older (%)	U.S. Census Bureau, Population Division, Vintage 2016 Population Estimates (2016), Vintage 2015 Population Estimates (2010-2015), 2000-2010 Intercensal Estimates (2000-2005), 1990-1999 Intercensal Estimates (1990-1995), 1980-1990 Intercensal Estimates (1980), 1970-1980 Intercensal Estimates (1970).
	Household Composition	
30	Ever married (% of age 15 and older)	U.S. Census Bureau, Current Population Survey. http://www.census.gov/hhes/families/
31	Average family size	U.S. Census Bureau, Current Population Survey. http://www.census.gov/hhes/families/
32	Births to unmarried women age 15-17 (per 1,000 unmarried women age 15-17)	National Center for Health Statistics, National Vital Statistics System (natality); Births: Final data for 2015: https://www.cdc.gov/nchs/data/nvsr/nvsr66/nvsr66_01.pdf.
33	Single parent households (%)	U.S. Census Bureau, Current Population Survey. http://www.census.gov/hhes/families/
	Civic and Cultural Engagement	
34	Average charitable contribution per itemized tax return (2014 dollars)	U.S. Internal Revenue Service, Statistics of Income - Individual Income Tax Returns (IRS Publication 1304). http://www.irs.gov/uac/SOI-Tax-Stats-Individual-Income-Tax-Returns-Publication-1304-(Complete-Report)
35	Voting for President (% of voting age population)	The Office of the Clerk of the U.S. House of Representatives and the U.S. Census Bureau, Current Population Survey. http://www.census.gov/cps/
36	Persons volunteering (% age 16 and older)	Bureau of Labor Statistics, Current Population Survey. https://www.bls.gov/cps
37	Attendance at visual or performing arts activity, including movie-going (% age 18 and older)	The National Endowment for the Arts, Survey of Public Participation in the Arts & Annual Arts Basic Survey.
38	Reading: Novels or short stories, poetry, or plays (not required for work or school; % age 18 and older)	The National Endowment for the Arts, Survey of Public Participation in the Arts & Annual Arts Basic Survey.
	Socioeconomic	
	Education	
39	High school graduates (% of age 25-34)	U.S. Census Bureau, Decennial Census and American Community Survey. http://www.census.gov/prod/www/decennial.html and http://www.census.gov/acs
40	College graduates (% of age 25-34)	U.S. Census Bureau, Decennial Census and American Community Survey. http://www.census.gov/prod/www/decennial.html and http://www.census.gov/acs
41	Reading achievement score (age 17)	National Center for Education Statistics, National Assessment of Educational Progress. https://nces.ed.gov/nationsreportcard/
42	Math achievement score (age 17)	National Center for Education Statistics, National Assessment of Educational Progress. https://nces.ed.gov/nationsreportcard/
43	Science and engineering graduate degrees (% of total graduate degrees)	National Center for Education Statistics, Integrated Postsecondary Education Data System. http://nces.ed.gov/ipeds/
44	Receiving special education services (% of age 3-21 public school students)	National Center for Education Statistics, Digest of Education Statistics, 2012. http://nces.ed.gov/programs/digest/d12/tables/dt12_046.asp
	Income, Savings, and Inequality	
45	Real median income: all households (2014 dollars)	U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplements. http://www.census.gov/hhes/www/income/data/historical/household/
46	Real disposable income per capita (chained 2009 dollars)	Bureau of Economic Analysis, National Economic Accounts Data. http://www.bea.gov/national/
47	Adjusted gross income share of top 1% of all taxpayers	U.S. Internal Revenue Service, Statistics of Income. http://www.irs.gov/uac/SOI-Tax-Stats-Individual-Statistical-Tables-by-Tax-Rate-and-Income-Percentile
48	Adjusted gross income share of lower 50% of all taxpayers	U.S. Internal Revenue Service, Statistics of Income. http://www.irs.gov/uac/SOI-Tax-Stats-Individual-Statistical-Tables-by-Tax-Rate-and-Income-Percentile
49	Personal saving rate (% of disposable personal income)	Bureau of Economic Analysis, National Economic Accounts Data. http://www.bea.gov/national/
50	Foreign remittances (billions of dollars)	Bureau of Economic Analysis, International Economics Accounts, https://www.bea.gov/International/index.htm
51	Poverty rate (%)	U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplements. http://www.census.gov/hhes/www/poverty/publications/pubs-cps.html
52	Food-insecure households (% of all households)	Economic Research Service, Household Food Security in the United States report series. http://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/readings.aspx
53	Supplemental Nutrition Assistance Program (% of population on SNAP)	Food and Nutrition Service, USDA
54	Median wealth of households, age 55-64 (in thousands of 2013 dollars)	Board of Governors of the Federal Reserve System, Survey of Consumer Finances 2013 Estimates inflation-adjusted to 2013 dollars (Internal Data) http://www.federalreserve.gov/econresdata/scf/scfindex.htm
	Housing	
55	Homeownership among households with children (%)	U.S. Census Bureau, American Housing Survey (Current Housing Report). Estimated by Housing and Urban Development's Office of Policy Development and Research. http://www.census.gov/housing/ahs
56	Families with children and severe housing cost burden (%)	U.S. Census Bureau, American Housing Survey. Tabulated by Housing and Urban Development's Office of Policy Development and Research. http://www.census.gov/housing/ahs

Table 5–2. SOURCES FOR SOCIAL INDICATORS—Continued

	Indicator	Source
57	Families with children and inadequate housing (%)	U.S. Census Bureau, American Housing Survey. Tabulated by Housing and Urban Development's Office of Policy Development and Research. http://www.census.gov/housing/ahs
	Health	
	Health Status	
58	Life expectancy at birth (years)	National Center for Health Statistics, National Vital Statistics System: Health, United States 2016 forthcoming, Table 15.
59	Infant mortality (per 1,000 live births)	National Center for Health Statistics, National Vital Statistics System: Health, United States, 2016 forthcoming, Table 11.
60	Low birthweight [<2,500 gms] (% of babies)	National Center for Health Statistics, National Vital Statistics System (natality); Births: Final data for 2015: https://www.cdc.gov/nchs/data/nvsr/nvsr66/nvsr66_01.pdf.
61	Activity limitation (% of age 5-17)	National Center for Health Statistics, National Health Interview Survey; America's Children in Brief: Key National Indicators of Well-Being, 2016, Table HEALTH5, crude percentages; http://www.childstats.gov/americaschildren/tables/health5.asp?popup=true (2000-2014 data); America's Children in Brief: Key National Indicators of Well-Being, 2017 forthcoming (2015 data).
62	Activity limitation (% of age 18 and over)	National Center for Health Statistics, National Health Interview Survey, http://www.cdc.gov/nchs/nhis.htm: Health, United States, 2016 forthcoming, Table 42, age-adjusted.
63	Difficulties with activities of daily living (% of age 65 and over)	National Center for Health Statistics, National Health Interview Survey: http://www.cdc.gov/nchs/nhis.htm (unpublished data).
	Health Behavior	
64	Engaged in regular physical activity (% of age 18 and older)	National Center for Health Statistics, National Health Interview Survey, http://www.cdc.gov/nchs/nhis.htm: Health, United States, 2016 forthcoming, Table 57, age adjusted.
65	Obesity (% of age 20-74 with BMI 30 or greater)	National Center for Health Statistics, National Health and Nutrition Examination Survey, http://www.cdc.gov/nchs/nhanes.htm. Health E-stat: http://www.cdc.gov/nchs/data/hestat/obesity_adult_13_14/obesity_adult_13_14.pdf.
66	Obesity (% of age 2-19)	National Center for Health Statistics, National Health and Nutrition Examination Survey, http://www.cdc.gov/nchs/nhanes.htm. Health E-stat: http://www.cdc.gov/nchs/data/hestat/obesity_child_13_14/obesity_child_13_14.pdf.
67	Cigarette smokers (% of age 18 and older)	National Center for Health Statistics, National Health Interview Survey, http://www.cdc.gov/nchs/nhis.htm: Health, United States, 2016 forthcoming, Table 47 and unpublished data (1970 and 1980 data), age adjusted.
68	Heavier drinker (% of age 18 and older)	National Center for Health Statistics, National Health Interview Survey, http://www.cdc.gov/nchs/nhis.htm: Health, United States, 2014, Table 58 and unpublished data (2014 and 2015 data), age adjusted.
	Access to Health Care	
69	Total national health expenditures (% of GDP)	Centers for Medicare and Medicaid Services, National Health Expenditures Data. http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/index.html
70	Average single premium per enrolled employee at private-sector establishments (dollars)	Agency for Healthcare Research and Quality, Medical Expenditure Panel Survey. https://meps.ahrq.gov
71	Average health insurance premium (dollars)	Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey, 2010-2015, Family Core component.
72	Persons without health insurance (% of age 18-64)	National Center for Health Statistics, National Health Interview Survey.
73	Persons without health insurance (% of age 17 and younger)	National Center for Health Statistics, National Health Interview Survey.
74	Children age 19-35 months with recommended vaccinations (%)	National Center for Immunization and Respiratory Diseases, National Immunization Survey: http://www.cdc.gov/vaccines/imz-managers/coverage/nis/child/: Health, United States, 2016 forthcoming, Table 66.
	Security and Safety	
	Crime	
75	Property crimes (per 100,000 households)	Bureau of Justice Statistics, National Crime Victimization Survey. http://www.bjs.gov/index.cfm?ty=dcdetail&iid=245
76	Violent crime victimizations (per 100,000 population age 12 or older)	Bureau of Justice Statistics, National Crime Victimization Survey. http://www.bjs.gov/index.cfm?ty=dcdetail&iid=245
77	Murder rate (per 100,000 persons)	Federal Bureau of Investigation, Uniform Crime Reports, Crime in the United States. http://www.fbi.gov/about-us/cjis/ucr/ucr
78	Prison incarceration rate (state and federal institutions, rate per 100,000 persons)	U.S. Department of Justice, Bureau of Justice Statistics, National Prisoner Statistics Program. https://www.bjs.gov/index.cfm?ty=dcdetail&iid=269
	National Security	
79	Military personnel on active duty (thousands)	ES actuals for 1960 and 1970 as reported in Table 2-11 of the DoD Selected Manpower Statistics for FY 1997 (DoD WHS, Directorate for Information Operations and Reports). The source for the remaining fiscal year actuals are the Service budget justification books.
80	Veterans (thousands)	U.S. Department of Veterans Affairs. 1960-1999 (Annual Report of the Secretary of Veterans Affairs); 2000-2009 (VetPop07); 2010-2012 (VetPop11); 2013-2015 (VetPop2014), Office of the Actuary. http://www.va.gov/vetdata/Veteran_Population.asp

Table 5–2. SOURCES FOR SOCIAL INDICATORS—Continued

	Indicator	Source
	Transportation Safety	
81	Safety belt use (%)	National Highway Traffic Safety Administration, National Center for Statistics and Analysis. https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812351
82	Highway fatalities	National Highway Traffic Safety Administration, National Center for Statistics and Analysis. https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812261
	Environment and Energy	
	Air Quality and Greenhouse Gases	
83	Ground level ozone (ppm)	U.S. Environmental Protection Agency, AirTrends Website. https://www.epa.gov/air-trends/ozone-trends
84	Particulate matter 2.5 (ug/m3)	U.S. Environmental Protection Agency, AirTrends Website. https://www.epa.gov/air-trends/particulate-matter-pm25-trends
85	Annual mean atmospheric CO_2 concentration (Mauna Loa, Hawaii; ppm)	National Oceanic and Atmospheric Administration. http://www.esrl.noaa.gov/gmd/ccgg/trends/
86	Gross greenhouse gas emissions (teragrams CO_2 equivalent)	U.S. Environmental Protection Agency (2017). Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2015 (EPA Publication No. 431-P-17-001. https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks
87	Net greenhouse gas emissions, including sinks (teragrams CO2 equivalent)	U.S. Environmental Protection Agency (2017). Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2015 (EPA Publication No. 431-P-17-001. https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks
88	Gross greenhouse gas emissions per capita (metric tons CO2 equivalent)	U.S. Environmental Protection Agency (2017). Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2015 (EPA Publication No. 431-P-17-001. https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks
89	Gross greenhouse gas emissions per 2009$ of GDP (kilograms CO2 equivalent)	U.S. Environmental Protection Agency (2017). Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2015 (EPA Publication No. 431-P-17-001. https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks
90	Population that receives drinking water in compliance with standards (%)	U.S. Environmental Protection Agency, 2016a. Safe Drinking Water Information System, Federal Version. https://cfpub.epa.gov/roe/indicator.cfm?i=45#1
	Energy	
91	Energy consumption per capita (million Btu)	U.S. Energy Information Administration, Monthly Energy Review (March 2017), Table 1.7 https://www.eia.gov/totalenergy/data/monthly
92	Energy consumption per 2009$ GDP (thousand Btu per 2009$)	U.S. Energy Information Administration, Monthly Energy Review (March 2017), Table 1.7 https://www.eia.gov/totalenergy/data/monthly/
93	Electricity net generation from renewable sources, all sectors (% of total)	U.S. Energy Information Administration, Monthly Energy Review (March 2017), Table 7.2a https://www.eia.gov/totalenergy/data/monthly/
94	Coal production (million short tons)	U.S. Energy Information Administration, Monthly Energy Review (April 2017), Table 6.1 https://www.eia.gov/totalenergy/data/monthly
95	Natural gas production (dry) (trillion cubic feet) /50	U.S. Energy Information Administration, Monthly Energy Review (April 2017), Table 4.1 https://www.eia.gov/totalenergy/data/monthly
96	Petroleum production (million barrels per day)	U.S. Energy Information Administration, Monthly Energy Review (April 2017), Table 3.1 https://www.eia.gov/totalenergy/data/monthly
97	Renewable energy production (quadrillion Btu)	U.S. Energy Information Administration, Monthly Energy Review (April 2017), Table 10.1 https://www.eia.gov/totalenergy/data/monthly

6. BUILDING AND USING EVIDENCE TO IMPROVE GOVERNMENT EFFECTIVENESS

An effective and efficient Federal government requires evidence—evidence about where needs are greatest, what works and what does not work, where and how programs could be improved, and evidence about how programs of yesterday may no longer be suited for today or prepare us for tomorrow. Strong evidence about policies and programs should be acted upon, suggestive evidence should be considered, and where evidence is weak it should be built to enable better decisions in the future. Agencies should integrate quality evidence and rigorous evaluation into budget, management, and policy decisions through a broad set of activities. Doing so requires the infrastructure and capacity to credibly build and use evidence and develop a culture of learning and continuous improvement. With a strong evidence infrastructure and culture agencies constantly (1) ask and answer questions that help them find, implement, and sustain effective programs and practices, (2) identify and improve or eliminate ineffective programs and practices, (3) test promising programs and practices to see if they are effective and can be replicated, and (4) find lower cost ways to achieve better results.

Building a Portfolio of Evidence

Government agencies should use a range of evidence types and analytical and management tools to learn what works and what does not, for whom and under what circumstances, and how to improve results. Evidence refers to facts or information indicating whether a belief or proposition is true or valid. Evidence can be quantitative or qualitative and may come from a variety of sources, including performance measurement, program evaluations, statistical series, retrospective reviews, data analytics, and other science and research. A portfolio of evidence may include:

- Impact evaluations, including randomized control trials and rigorous quasi-experimental designs, which can answer questions about a program's impact relative to a counterfactual—i.e. whether the outcome was achieved because of the program or due to some other factor.
- Process or implementation evaluations that can answer questions about whether a program is implemented as designed and whether the program structure is sound.
- Performance monitoring and measurement that can answer questions about program efficiency, outputs, and outcomes, but not about causal impact.
- Statistics and other forms of research and analysis that can provide insight into trends, strategies, and underlying processes.

There are multiple ways to assess policies and programs. The best approach or method depends on the specific information that is needed to answer key policy, programmatic, or operational questions, and on practical and methodological considerations. While many forms of evidence are complementary, some evidence that is useful for one purpose may not be useful for another. For example, performance measures are an essential resource for agencies to understand ongoing, real-time program performance so they can use that information to build a culture of continuous improvement, but they often do not answer certain key questions, including the effects of programs. Evaluations provide context for the performance measures and help us better understand what can and cannot be learned from them. In particular, rigorous impact evaluations, especially randomized experiments, can provide the most credible information on the impact of the program on outcomes, isolated from the effects of other factors. Combining performance and evaluation information, and using the results of one to inform the design of the other, can be very powerful in understanding program performance and ensuring that a program is maximizing performance and impact on an ongoing basis.

One example of building evidence to improve government effectiveness in the FY 2018 Budget is at the Department of Education, which is refocusing and expanding its signature tiered evidence program, Education Innovation and Research (EIR), to provide grants to implement and evaluate innovative approaches to supporting private school choice. The President's Budget requests $370 million for EIR, with $250 million reserved for building evidence on the effectiveness of private school choice programs. In another example from the Budget, the Administration is requesting that Congress give the government's disability programs authority to mandate participation in demonstration projects. With this authority the Administration proposes to conduct an aggressive set of rigorous experiments to improve the labor force participation of people with disabilities.

Developing a Learning Agenda

Agencies are encouraged to adopt a "learning agenda" in which they collaboratively identify the critical questions that, when answered, will help their programs to be more effective, and to plan to answer those questions using the most appropriate tools. An agency learning agenda will:

- Identify the most important questions that need to be answered in order to improve program implementation and performance. These questions should reflect the priorities and needs of Administration and agency leadership, policy and program offices, program partners at state and local levels, researchers and additional stakeholders, as well as legislative requirements and Congressional interests.

- Strategically prioritize these questions given the level of current understanding, available resources, feasibility, and other considerations to determine which studies or analyses will help the agency make the most informed decisions.
- Identify the most appropriate tools and methods (e.g. evaluations, research, analytics, and/or performance measures) to answer each question.
- Conduct studies, evaluations, and analyses using the most rigorous methods that are feasible and most appropriate.
- Disseminate findings in ways that are accessible and useful to Administration and agency leadership, policy and program offices, state and local partners, practitioners, and other key stakeholders—including integrating results into performance measurement and strategic planning.
- Act on the results by using the information for policy decisions and continuous program improvement.

Implementing a learning agenda approach creates an environment that encourages individuals, offices, and teams to reflect on and learn from their experience and from others. It requires a planned approach to learning in the context of evidence-based decision-making and improving program performance through evaluation and analysis. A learning agenda should be flexible and also reinforce and maximize efforts throughout the life of a program. Once integrated into agency processes, the agenda can help staff and partners learn rapidly to enable iterative course corrections and improvements.

Building an Evidence Infrastructure

Optimal development and use of evidence is made possible by an integrated infrastructure. A strong evidence infrastructure requires a variety of capacities, and developing and supporting the use of evidence and evaluation in decision-making requires coordination between those managing the operations of a program, including administrative data collection and maintenance, and those responsible for using data and evaluation to understand program effectiveness. It requires strong leadership from multiple levels of an agency—policy officials, program administrators, performance managers, strategic planning, policy and budget staff, evaluators, and statistical staff—to ensure that data and evidence are developed, analyzed, understood, and appropriately acted upon. To build the capacity to generate and use evidence, agencies should:

- Ensure that staff with appropriate analytic skills and backgrounds are hired, supported, and effectively deployed.
- Safeguard the ability of Federal principal statistical agencies to objectively design, collect, process, edit, compile, store, analyze, release, and disseminate data.
- Build or support independent evaluation offices to conduct rigorous, independent evaluations.
- Invest in improving administrative data infrastructure, access, and quality, including collecting better quality data from entities receiving federal funding.
- Make better use of existing administrative data to build evidence.
- Utilize new tools and methods such as rapid-cycle iterative evaluation and approaches that utilize behavioral science.
- Expand the building and use of evidence in grant programs.
- Partner with other agencies to share data or jointly design and fund studies.

Centralized or chief evaluation offices play an important role in an evidence infrastructure that can develop and sustain agency capacity to build and use evidence. A recent Government Accountability Office (GAO) report found that Federal agencies with a centralized evaluation authority reported greater evaluation coverage of their performance goals and were more likely to use evaluation results in decision making[1]. Centralized or chief evaluation offices are often essential for ensuring that key evidence and evaluation principles are reflected in practice. The establishment of a centralized evaluation office and an official, public evaluation policy that reflects these principles is a particularly strong and mutually reinforcing combination. A centralized office allows the agency to credibly establish the independence and transparency of its evaluation activity, develop the specialized expertise required to implement rigorous evaluations, and have a centralized entity responsible for coordinating and disseminating research findings.

The Federal evidence infrastructure plays a critical role in supporting State and local efforts to build and use evidence. For example, the Department of Education (ED) has supported a suite of resources that helps States and districts find and develop evidence-based education interventions that work for them, while strongly protecting student privacy. The What Works Clearinghouse's (WWC) Find What Works tool allows educators and policymakers to find education programs and interventions shown to work in a particular context. The Regional Educational Laboratories serve as the primary dissemination partner for the WWC while also helping States and localities build and use evidence to improve student outcomes. Where existing evidence is weak or nonexistent, States and districts can use ED's new "RCT-YES" and Rapid Cycle Evaluation Coach tools to rigorously evaluate innovative, locally tailored educational practices and also use the new CostOut tool to estimate an intervention's costs and cost-effectiveness. ED also provides more inten-

[1] Government Accountability Office Publication No. 15-25, "*Program Evaluation: Some Agencies Reported that Networking, Hiring, and Involving Program Staff Help Build Capacity*," November 2014.

sive support at low cost through Research Collaborations Grants, which funds partnerships between research institutions and State or local education agencies to promote evidence-building on topics that have important implications for student outcomes, and through Low-Cost, Short Duration Evaluations of Education Interventions Grants, which support rigorous evaluations of education interventions that State or local education agencies believe will provide meaningful improvements in student outcomes within a short period of time. Since protecting student privacy is an essential feature of all education research, ED's Privacy Technical Assistance Center provides timely information and updated guidance on privacy, confidentiality, and security practices through a variety of resources, including training materials and opportunities to receive direct assistance with improving the privacy, security, and confidentiality of longitudinal data systems.

Making Better Use of Administrative Data to Build Evidence

Making better use of the administrative data—the data government already collects—is an especially promising strategy for building evidence. Administrative data are data collected by government entities for program administration, transparency, regulatory, or law enforcement purposes. Administrative data, especially when linked across programs or to survey data, can often make both performance measurement and rigorous program evaluations more informative, less costly, and less burdensome to data providers. Federal and state administrative data include rich information on labor market outcomes, health care, criminal justice, housing, and other important topics, but they are often greatly underutilized in evaluating program effects as well as in day-to-day performance measurement and for informing the public about how society and the economy are faring. Given this, a critical part of an evidence infrastructure is helping agencies make better use of administrative data while ensuring individual privacy and data security.

In recent years, Federal agencies have steadily made progress improving the use of administrative data for evidence building. Some agencies are creating capacity to support research and evaluation in a particular policy area, but most Federal agencies could make greater use of administrative data to build evidence or allow those outside government to do so. In addition, many agencies have data that would be useful to other agencies, other levels of government, or outside researchers and citizens to help understand and improve programs. Yet not all agencies have the technological infrastructure, legislative authority, or expertise needed to utilize, share, or link data themselves, nor does it make sense to duplicate these capacities at every agency.

Federal statistical agencies already play a leading role in bringing together data from multiple sources while protecting privacy, confidentiality, and data security. Statistical agencies use data to create a wide variety of statistical products that can be securely accessed by researchers inside and outside of government to conduct a broad array of policy- and program-relevant analyses. High-capacity statistical agencies have partnered with other Federal agencies to link and analyze administrative and survey data for evidence building purposes. For example, the work of the Census Bureau's Center for Administrative Records Research and Applications (CARRA) builds on the Bureau's existing strengths by developing a comprehensive infrastructure to prepare and share administrative data. The Census Bureau's infrastructure links a variety of different data sets, allowing pilot projects to measure outcomes such as mobility, earnings, and employment. Current pilots are measuring labor market outcomes for individuals with former military service and those who obtained manufacturing credentials, and the Census Bureau continues to enhance its secure infrastructure for processing and linking data sets to support evidence-building pilots. Partnerships such as these build on the critical capacities that statistical agencies already have in order to make better use of existing data without creating unnecessary duplication.

Using a Portfolio of Evidence

The credible use of evidence in decision-making requires an understanding of what conclusions can and, equally important, cannot be drawn from the information. Evidence should be rigorous, relevant, transparent, independent, and generated in an ethical manner. Evidence has varying degrees of credibility, and the strongest evidence generally comes from a portfolio of high-quality evidence rather than a single study or data point, i.e., from multiple sources and/or multiple studies covering different aspects and nuances of the topic. Whenever possible, critical decisions should be made based on a body of evidence that has been generated about a particular topic or intervention. One example is the Reemployment Services and Eligibility Assessments (RESEA) program at the Department of Labor. The program was originally created in 2005 and was aimed at reducing improper payments in the Unemployment Insurance (UI) program. Initial research of this program suggested that it was effective at reducing State's UI benefit costs, often in excess of the program's cost. A 2011 random assignment evaluation again showed the program's cost-effectiveness, particularly in Nevada, which was providing more intensive reemployment services and reducing UI benefit costs at a higher rate than the other states studied, more than offsetting the additional program costs. A follow-up evaluation of the Nevada program demonstrated that the intensive reemployment services were helping participants get back to work faster and at higher wages than the control group of UI claimants. As a result of this research, Congress increased appropriations for the program, ultimately approving an expanded national program more closely resembling Nevada's. The FY 2018 Budget proposes to continue this expansion of the RESEA program by proposing mandatory funding to provide these services to the one-half of UI claimants profiled as most likely to exhaust benefits before returning to employment.

Conclusion

There has been meaningful progress in recent years toward building and using evidence for better government, and a bipartisan consensus has emerged regarding the need for further progress. This is especially the case when considering the potential for using existing administrative data for research and evaluation. The bipartisan Commission on Evidence-Based Policymaking is considering how data, research, and evaluation are currently used to build evidence and improve public programs and policies, and how to strengthen evidence-building to inform program and policy design and implementation. The Commission will present its recommendations this Fall, and the Administration looks forward to working with Congress to increase the production and use of evidence throughout the government and for public use. More and better use of evidence would allow us to determine where needs are greatest, and what programs are and are not working and why, in order to develop a more effective and efficient Federal government. Using evidence to improve government is what taxpayers expect—smart and careful use of limited resources to best address national priorities.

7. STRENGTHENING THE FEDERAL WORKFORCE

The Federal Workforce Today

The Federal Government has more than 2.1 million civilian workers and 1.3 million active duty military serving throughout the country and the world. Chart 7-1 broadly shows the personnel trends in the Federal security related agencies (inclusive of the Departments of Defense, Homeland Security, Justice, State, and Veterans Affairs) and non-security agencies, in comparison to state and local governments and the private sector.

Table 7-1 shows actual Federal civilian full-time equivalent (FTE) levels in the Executive Branch by agency for fiscal years (FY) 2015 and 2016, with estimates for 2017 and 2018. When it comes to the FTE estimates for 2017, note that at the time the Budget was prepared, only one of the annual appropriations bills had been enacted. Funding provided for the remaining 2017 annual appropriations bills were operating under a continuing resolution, and FTE estimates reflect this funding. Actual 2017 FTE levels are likely to be different, to account for final appropriations, administrative decisions within agencies, and other factors.

Estimated employment levels for 2018 are higher than the 2016 actual FTE levels, but a decrease from the 2017 estimates, all of which are around 2.1 million civilian employees. From 2017 to 2018, increases totaling approximately 23,000 FTE are seen across 7 of the 24 Chief Financial Officers (CFO) Act agencies, and decreases totaling approximately 24,000 FTE occur across 17 of the CFO Act agencies. The increases are primarily driven by growth of civilians in three security-related agencies (Departments of Defense, Veterans Affairs and Homeland Security). Table 7-2 shows actual 2016 total and estimated 2017 and 2018 total Federal employment, including the Uniformed Military, Postal Service, Judicial and Legislative branches.

Total compensation (pay and personnel benefits) is summarized in Table 7-3. A Congressional Budget Office (CBO) April 2017 report found Federal employees on average received a combined 17 percent higher wage and benefits package than the private sector average over the 2011-2015 time period. However, that represented a range that was broken down by educational level. Taking into account educational level, employees with a professional degree received about 18 percent less in total compensation, while those with a high school degree or less received 53 percent higher total compensation.

The Federal government continues to offer a generous package of retirement benefits. CBO found that on average the cost of benefits was 47 percent higher for Federal civilian employees than for private-sector employees, with the Federal defined benefit pension plan (a predetermined set amount regardless of market fluctuation) being the most important contributing factor to cost differences between the two sectors. Consistent with the goal of reining in Federal government spending in many areas, as well as to bring Federal retirement benefits more in line with the private sector, adjustments to reduce the long term costs associated with these benefits are included in this Budget. These proposals include: increasing employee payments to the defined benefit Federal Employee Retirement System (FERS) pension such that the employee will generally be paying the same amount as the employing agency; and, reducing or eliminating cost of living adjustments for existing and future retirees. Increases to employee pension contributions would be phased in at a rate of one percent per year to lessen the impact on existing Federal employees.

Chart 7-5 shows how Federal pay raises have compared to increases in private sector wages since 1978. The Administration proposes a 1.9 percent pay increase for Federal civilian employees, and a 2.1 percent pay increase for uniformed service members for calendar year 2018.

Using data from the Bureau of Labor Statistics on full-time, full-year workers, Table 7-4 breaks all Federal and private sector jobs into 22 occupation groups to demonstrate the differences in composition between the Federal and private workforces. Charts 7-2 and 7-3 present trends in educational levels for the Federal and private sector workforces over the past two decades. Chart 7-4 shows the trends in average age in both the Federal and private sectors over the past two decades.

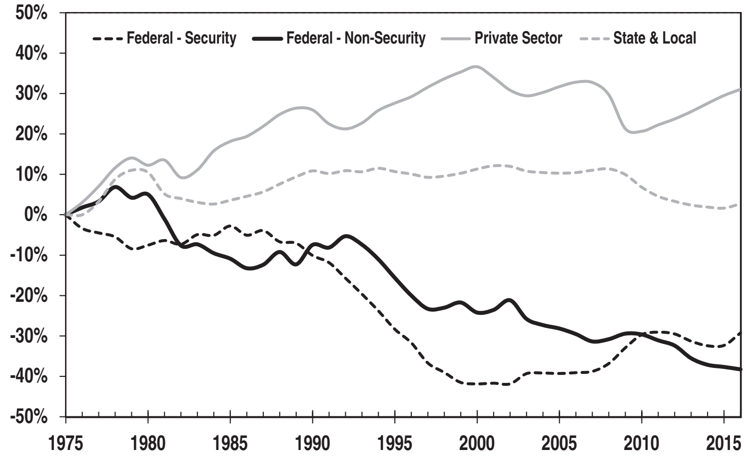
In 2016 (as of September 2016), the Federal workforce is 63.6 percent White, 18.4 percent Black, 8.6 percent Hispanic, 5.8 percent Asian, 0.5 percent Native Hawaiian/Pacific Islander, 1.6 percent American Indian/Alaska Native, and 1.4 percent Non-Hispanic/Multi-Racial. Men comprised 56.8 percent of all Federal permanent employees and women 43.2 percent. Veterans are 31.1 percent of the entire Federal workforce, with 12.7 percent of the veterans disabled. By comparison, veterans comprise approximately 6 percent of the private sector non-agricultural workforce.

The Federal Workforce Going Forward

Despite growing citizen dissatisfaction with the cost and performance of the Federal government, too often the focus has been on creating new programs instead of eliminating or reforming ineffective programs. The result has been too many overlapping and outdated programs, rules, and processes, and Federal employees stuck in a system that is not working. The Federal government should be lean, accountable, and more effective.

To begin addressing this challenge, on January 23, 2017, the President issued a Presidential Memorandum (Hiring Freeze PM) imposing a Federal “Hiring Freeze.”

Chart 7-1. Changes from 1975 to 2016 in Employment/Population by Sector



Source: Office of Personnel Management and the Bureau of Labor Statistics.
Notes: Federal excludes the military and Postal Service. Security agencies include the Department of Defense, the Department of Homeland Security, the Department of State, and the Department of Veterans Affairs. Non-Security agencies include the remainder of the Executive Branch. State & Local excludes educational workers.

This ensured immediate action was taken to halt the growth of the Federal workforce until a "long-term plan to reduce the size of the Federal Government's workforce" was put in place. On March 16, 2017, the President submitted his Budget Blueprint to Congress proposing to eliminate funding for programs that are unnecessary, outdated, or not working. Additionally, on March 13, 2017, the President issued an Executive Order (Reorganization EO) directing the Office of Management and Budget (OMB) to submit a comprehensive plan to reorganize Executive Branch departments and agencies. OMB Memorandum M-17-22, "Comprehensive Plan for Reforming the Federal Government and Reducing the Federal Civilian Workforce," provided agencies with guidance on fulfilling the requirements of the Hiring Freeze PM and the Reorganization EO while aligning those initiatives with the Federal budget and performance planning processes. OMB directed agencies to identify workforce reductions over a four-year period (FY 2018 through 2022) consistent with forthcoming OMB guidance on 2019 Budget submissions. The Agency Reform Plans combined with public input and cross-cutting proposals developed by OMB will inform a Government-wide Reform Plan that will be published as part of the President's 2019 Budget in February 2018.

Examining the Government's Mission

As discussed above, the Reorganization EO and the Hiring Freeze PM directed the development of a Government-wide Reform Plan for the Executive Branch, including a long-term plan to reduce the Federal workforce. The objectives of this broad reform effort are to: 1) create a lean, accountable, more efficient government that works for the American people; 2) focus the Federal government on effectively and efficiently delivering those programs that are the highest needs to citizens and where there is a unique Federal role rather than assuming current programs are optimally designed or even needed; 3) align the Federal workforce to meet the needs of today and the future rather than the requirements of the past; and 4) strengthen agencies by removing barriers that hinder front-line employees from delivering results.

Agencies are drafting Agency Reform Plans that fundamentally examine the agency's mission, as well as rethinking how the Federal government can deliver services to its customers, and evaluating options on both cost and quality dimensions. Agencies' analyses are based on several factors, including whether a function is: duplicative, essential, appropriate as a Federal role, cost-beneficial, efficient and effective, and providing an adequate level of customer service. This analysis will help drive operational changes to improve performance, efficiency, and effectiveness and it will inform agency-driven assessments about whether to restructure, merge, or eliminate certain functions and programs.

For example, the growth of the Federal government has included programs and functions that may be better delivered by the private sector, non-profits, or local, state, or tribal governments. In these instances, an Agency Reform Plan might identify these functions and include a plan for divesting these functions to more appropriate entities. In other instances, Federal agencies or programs may have outlived their initial purpose and are performing work that no longer meet the needs of the American public. In some cases, programs were created without the knowledge or coordination of similar programs in other agencies. This has resulted in duplicative programs and functions—such as 16 Federal agencies responsible for food safety, according to the annual Government Accountability Office report on opportunities to reduce

Table 7–1. FEDERAL CIVILIAN EMPLOYMENT IN THE EXECUTIVE BRANCH

(Civilian employment as measured by full-time equivalents (FTE) in thousands, excluding the Postal Service)

Agency	Actual		Estimate		Change: 2017 to 2018	
	2015	2016	2017	2018	FTE	Percent
Cabinet agencies						
Agriculture	85.9	86.8	88.4	83.8	–4.6	–5.2%
Commerce	40.4	40.3	43.6	42.6	–1.0	–2.2%
Defense--Military Programs	725.0	725.3	730.6	740.1	9.4	1.3%
Education	4.1	4.1	4.2	4.0	–0.2	–3.8%
Energy	14.7	14.9	15.5	15.2	–0.2	–1.4%
Health and Human Services	70.6	72.6	74.6	75.1	0.5	0.7%
Homeland Security	179.3	183.5	181.3	189.3	8.0	4.4%
Housing and Urban Development	8.3	8.0	7.9	7.7	–0.2	–2.7%
Interior	63.5	64.2	64.0	60.0	–4.1	–6.3%
Justice	113.6	114.9	118.6	116.2	–2.4	–2.1%
Labor	16.6	16.5	16.3	15.9	–0.4	–2.3%
State	34.0	32.1	33.8	32.4	–1.4	–4.0%
Transportation	54.3	54.3	55.4	55.3	–0.2	–0.3%
Treasury	95.1	93.4	93.1	87.3	–5.9	–6.3%
Veterans Affairs	335.3	345.1	356.4	364.1	7.8	2.2%
Other agencies -- excluding Postal Service						
Broadcasting Board of Governors	1.7	1.6	1.7	1.6	–0.1	–6.5%
Bureau of Consumer Financial Protection	1.5	1.6	1.7	1.6	–0.2	–9.3%
Corps of Engineers--Civil Works	21.6	21.8	21.9	21.9	....	....
Environmental Protection Agency	14.7	14.7	15.5	11.7	–3.8	–24.3%
Equal Employment Opportunity Commission	2.2	2.2	2.1	2.0	–0.1	–6.2%
Federal Communications Commission	1.7	1.6	1.6	1.4	–0.2	–12.2%
Federal Deposit Insurance Corporation	6.8	6.5	6.8	6.7	–0.1	–1.3%
Federal Trade Commission	1.1	1.2	1.2	1.1	–*	–1.9%
General Services Administration	11.1	11.2	12.1	11.6	–0.5	–3.9%
International Assistance Programs	5.6	5.7	5.7	5.3	–0.4	–7.3%
National Aeronautics and Space Administration	17.3	17.1	17.4	17.3	–*	–0.2%
National Archives and Records Administration	2.8	2.9	2.9	2.8	–0.1	–2.4%
National Credit Union Administration	1.2	1.2	1.2	1.2	–*	–1.8%
National Labor Relations Board	1.6	1.5	1.6	1.3	–0.3	–17.3%
National Science Foundation	1.4	1.4	1.4	1.4	*	0.1%
Nuclear Regulatory Commission	3.7	3.5	3.6	3.3	–0.3	–8.6%
Office of Personnel Management	5.0	5.1	5.7	5.9	0.2	4.1%
Securities and Exchange Commission	4.3	4.6	4.6	4.5	–0.1	–2.0%
Small Business Administration	3.1	3.2	3.3	3.2	–0.1	–1.7%
Smithsonian Institution	4.9	4.9	5.2	5.1	–*	–0.5%
Social Security Administration	63.9	63.7	61.7	62.0	0.3	0.5%
Tennessee Valley Authority	10.9	10.7	10.7	10.3	–0.3	–3.0%
All other small agencies	13.2	13.4	13.9	13.6	–0.3	–2.2%
Total, Executive Branch civilian employment	2,042.0	2,057.3	2,087.0	2,086.0	–1.0	–*

* 50 or less.

duplication, overlap or fragmentation in Government. In other cases, the complex web of agencies and programs with the same nominal purpose adds unnecessary burden to the public, as it becomes unclear which agency a citizen or business needs to turn to when seeking Government services. While these programs may be well-intentioned, they inhibit the Government from achieving the best results with limited resources. In developing their Agency Reform Plans, agencies will consider each of these scenarios and identify steps for creating a leaner, accountable, more efficient government.

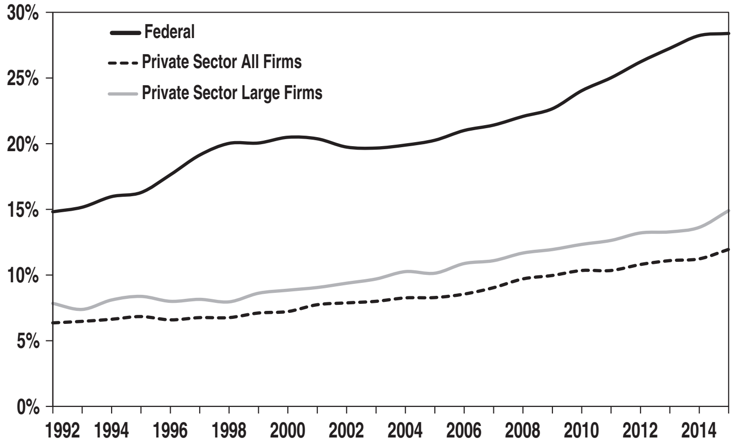
This review of agency missions and scopes of function is a critical step to ensure we are building the workforce needed for the future rather than the past.

Building Organizational Effectiveness and Efficiency

As the Administration reviews the mission and scope of Federal Government, organizations must ensure they have the resources and skills to deliver on the mission.

To ensure resources are used effectively and efficiently, agencies are working on proposals outlining ways that

Chart 7-2. Masters Degree or Above By Year for Federal and Private Sector



Source: 1992-2016 Current Population Survey, Integrated Public Use Microdata Series.

Notes: Federal excludes the military and Postal Service, but includes all other Federal workers. Private Sector excludes the self-employed. Neither category includes State and local government workers. Large firms have at least 1,000 workers. This analysis is limited to full-time, full-year workers, i.e. those with at least 1,500 annual hours of work and presents five-year averages. Educational attainment is as of March in the year following the year on the horizontal axis.

they could: better use technology and improve underlying business processes; streamline and eliminate processes; shift to alternative delivery models; streamline mission-support functions; leverage existing solutions for common requirements; and build a portfolio of evidence to show "what works."

The Administration will explore how to improve effectiveness and efficiency based on what will work best within each operational context. While the typical shared service and contracting strategies are available (and are encouraged to the extent practicable), there is flexibility for agencies to propose creative alternative delivery solutions such as co-location of facilities and services, increased

Table 7–2. TOTAL FEDERAL EMPLOYMENT
(As measured by Full-Time Equivalents)

Description	2016 Actual	2017 Estimate	2018 Estimate	Change: 2017 to 2018	
				FTE	PERCENT
Executive Branch Civilian:					
All Agencies, Except Postal Service	2,057,256	2,086,959	2,085,973	–986	–*
Postal Service [1]	632,276	588,965	588,380	–585	–0.1%
Subtotal, Executive Branch Civilian	2,689,532	2,675,924	2,674,353	–1,571	0.1%
Executive Branch Uniformed Military:					
Department of Defense [2]	1,343,801	1,336,589	1,352,081	15,492	1.1%
Department of Homeland Security (USCG)	39,992	40,045	41,460	1,415	3.4%
Commissioned Corps (DOC, EPA, HHS)	6,910	6,930	7,060	130	1.8%
Subtotal, Uniformed Military	1,390,703	1,383,564	1,400,601	17,037	1.2%
Subtotal, Executive Branch	4,080,235	4,059,488	4,074,954	15,466	0.4%
Legislative Branch [3]	29,718	33,154	33,530	376	1.1%
Judicial Branch	32,657	33,197	33,541	344	1.0%
Grand Total	4,142,610	4,125,839	4,142,025	16,186	0.4%

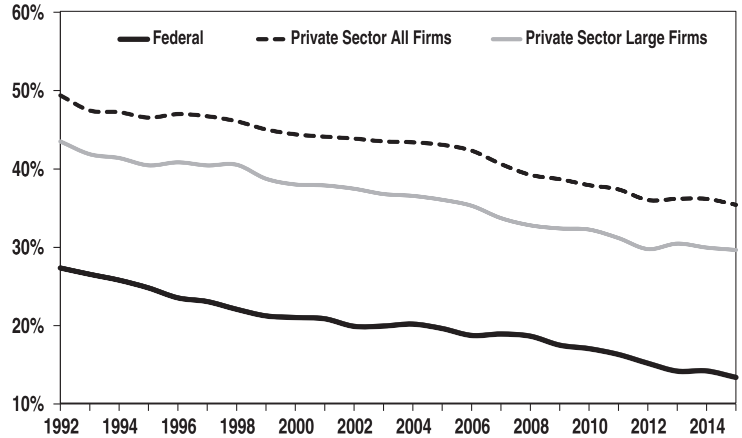
[1] Includes Postal Rate Commission.

[2] Includes activated Guard and Reserve members on active duty. Does not include Full-Time Support (Active Guard & Reserve (AGRSs)) paid from Reserve Component appropriations.

[3] FTE data not available for the Senate (positions filled were used for actual year and extended at same level).

* Non-zero less than 0.1%

Chart 7-3. High School Graduate or Less By Year for Federal and Private Sectors



Source: 1992-2016 Current Population Survey, Integrated Public Use Microdata Series.

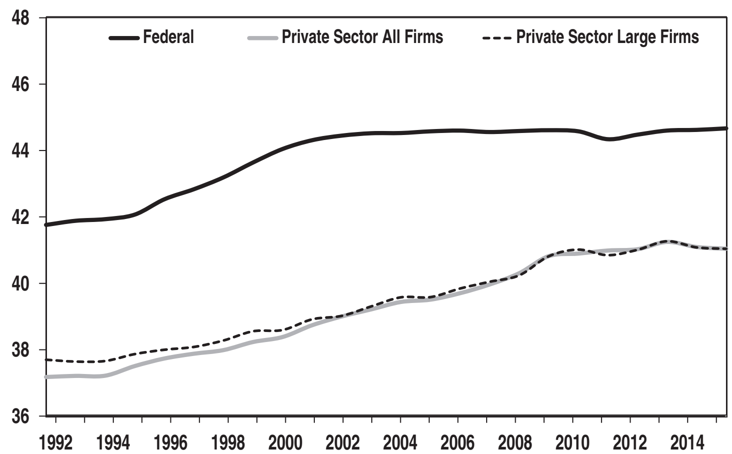
Notes: Federal excludes the military and Postal Service, but includes all other Federal workers. Private Sector excludes the self-employed. Neither category includes State and local government workers. Large firms have at least 1,000 workers. This analysis is limited to full-time, full-year workers, i.e. those with at least 1,500 annual hours of work and presents five-year averages. Educational attainment is as of March in the year following the year on the horizontal axis.

online service delivery, and inter-agency alignment of services. As agencies are fundamentally rethinking missions and operations, these proposals may alter the composition of skills necessary for the workforce of the future.

Reshaping the Workforce

Any meaningful discussion of Government reform must include an examination of the Federal workforce to ensure it is aligned to meet the needs of today and the future, rather than adhering to requirements of the past

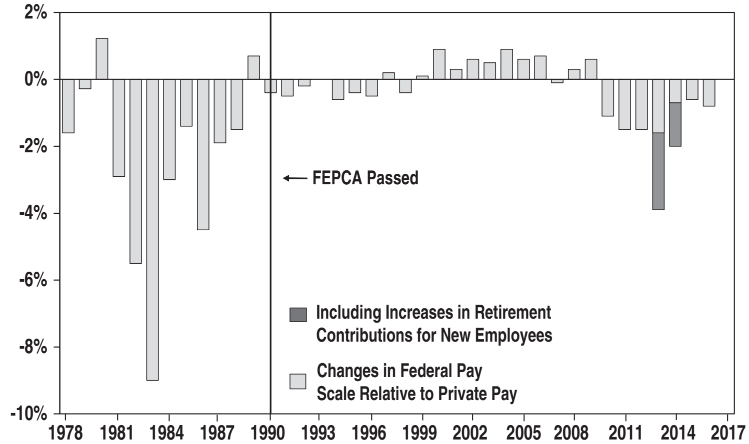
Chart 7-4. Average Age by Year for Federal and Private Sectors



Source: 1992-2016 Current Population Survey, Integrated Public Use Microdata Series.

Notes: Federal excludes the military and Postal Service, but includes all other Federal workers. Private Sector excludes the self-employed. Neither category includes State and local government workers. Large firms have at least 1,000 workers. This analysis is limited to full-time, full-year workers, i.e. those with at least 1,500 annual hours of work and presents five-year averages. Educational attainment is as of March in the year following the year on the horizontal axis.

Chart 7-5. Pay Raises for Federal vs. Private Workforce



Source: Public Laws, Executive Orders, and the Bureau of Labor Statistics.
Notes: Federal pay is for civilians and includes base and locality pay. Private pay is measured by the Employment Cost Index wages and salaries, private industry workers series, lagged 15 months. In 1993 and 2017 no difference existed between the sectors.

that are obsolete. The Hiring Freeze PM put a pause on the hiring of Federal civilian employees across the board in the Executive Branch, while requiring OMB to develop recommendations for a Government-wide long-term workforce reduction plan. The hiring pause allowed the Administration to take the first steps toward a thoughtful effort to reshape the Federal workforce to more optimally meet mission and functional needs. The Hiring Freeze PM applied to all executive departments and agencies regardless of the sources of their operational and programmatic funding, but not to military personnel in the Armed Forces. The Administration allowed exceptions to ensure public safety and security, as well as certain exemptions for critical functions. The hiring freeze ended April 12, 2017 with a requirement for agencies to begin working on long-term Agency Reform Plans to reduce the size of the Federal civilian workforce. Agency plans will be incorporated into a Government-wide Reform Plan.

To lift the hiring freeze, OMB also required agencies to take action immediately to achieve near-term workforce reductions and savings, including planning for budget levels that were released in the 2018 Budget Blueprint, and consistent with budget levels in this full 2018 Budget. Agency Heads maintained the discretion to determine the best method to accomplish this task. Notably, agencies were asked to examine the total cost of their operations (and not just FTE counts or headcounts) to incentivize more optimal operational decisions. Agency long-term planning must be done within the broader reorganization effort to align the civilian workforce to evolving needs.

As agencies look at how they can operate more efficiently and effectively, it is important to continue monitoring employee engagement as a key indicator of success. The Office of Personnel Management will continue the annual Federal Employee Viewpoint Survey (FEVS), a collection of 84 questions that measure employees' perceptions of whether, and to what extent, conditions characterizing successful organizations are present in their agencies. Using the FEVS results, agencies will continue to monitor employee engagement trends, using an aggregate Employee Engagement Index derived from a subset of the questions, as well as trends in additional questions relating to other facets of organizational effectiveness.

In 2016, agencies were able to analyze data from more than 20,000 distinct work units across the Federal government, which allows for insight into the workforce. The 2016 survey found that while many work units and agencies had a highly engaged workforce, others need leadership and management attention. One issue that is common across agencies is that fewer than 30 percent of employees believe managers will address a poor performer who cannot or will not improve.

While FEVS results generally show that managers are not always perceived by employees as effectively managing performance issues, it is important to note that supervisors and agency managers find personnel processes overly complex and difficult to navigate. Most agencies are subject to more than 3,400 Federal personnel regulatory provisions. Agency human resources staff are familiar with many, but often not all, of the rules. This voluminous set of regulations becomes a barrier to managers when it comes to basic human resources functions, including hiring top talent or dealing with poorly performing employees.

Rewarding top performers and dealing with poor performers is key to effectively managing the workforce. To directly address this seemingly intractable problem, all agencies must: review their employee performance management policies; provide management with training on how to address performance and conduct issues; eliminate non-statutory barriers to removing those who do not improve; and develop a mechanism to provide managers with real-time guidance to ensure managers take the appropriate steps. Poor performers and those with conduct

Table 7–3. PERSONNEL PAY AND BENEFITS
(In millions of dollars)

Description	2016 Actual	2017 Estimate	2018 Estimate	Change: 2017 to 2018 Dollars	Change: 2017 to 2018 Percent
Civilian Personnel Costs:					
Executive Branch (excluding Postal Service):					
Pay	181,206	189,584	195,929	6,345	3.3%
Benefits	74,580	77,809	79,908	2,099	2.7%
Subtotal	255,786	267,393	275,837	8,444	3.2%
Postal Service:					
Pay	36,208	35,853	35,768	-85	-0.2%
Benefits	19,051	18,967	18,177	-790	-4.2%
Subtotal	55,259	54,820	53,945	-875	-1.6%
Legislative Branch:					
Pay	2,036	2,147	2,228	81	3.8%
Benefits	614	680	709	29	4.3%
Subtotal	2,650	2,827	2,937	110	3.9%
Judicial Branch:					
Pay	3,095	3,375	3,418	43	1.3%
Benefits	988	1,047	1,073	26	2.5%
Subtotal	4,083	4,422	4,491	69	1.6%
Total, Civilian Personnel Costs	317,778	329,462	337,210	7,748	2.4%
Military Personnel Costs					
Department of Defense--Military Programs:					
Pay	96,160	96,118	97,856	1,738	1.8%
Benefits	44,135	44,261	43,693	-568	-1.3%
Subtotal	140,295	140,379	141,549	1,170	0.8%
All other Executive Branch uniform personnel:					
Pay	3,294	3,317	3,358	41	1.2%
Benefits	720	698	698	---	---
Subtotal	4,014	4,015	4,056	41	1.0%
Total, Military Personnel Costs	144,309	144,394	145,605	1,211	0.8%
Grand total, personnel costs	**462,087**	**473,856**	**482,815**	**8,959**	**1.9%**
ADDENDUM					
Former Civilian Personnel:					
Pensions	83,390	84,326	86,468	2,142	2.5%
Health benefits	11,695	12,004	12,984	980	8.2%
Life insurance	45	47	48	1	2.1%
Subtotal	95,130	96,377	99,500	3,123	3.2%
Former Military Personnel:					
Pensions	57,303	57,828	58,771	943	1.6%
Health benefits	9,629	9,898	10,413	515	5.2%
Subtotal	66,932	67,726	69,184	1,458	2.2%
Total, Former Personnel	162,062	164,103	168,684	4,581	2.8%

problems have long tainted the positive contributions of the vast majority of the Federal workforce. Managers spend a disproportionate amount of time addressing these individuals while the rest of the team must work harder to accomplish their mission. Freeing the managers and employees from the extra burden will allow more time and resources to developing and rewarding the rest of the workforce. Dispelling the myth that it is nearly impossible to hold employees accountable in the Federal government will enhance credibility and respect for the

Table 7–4. OCCUPATIONS OF FEDERAL AND PRIVATE SECTOR WORKFORCES
(Grouped by Average Private Sector Salary)

Occupational Groups	Percent	
	Federal Workers	Private Sector Workers
Highest Paid Occupations Ranked by Private Sector Salary		
Lawyers and judges	2.1%	0.6%
Engineers	4.5%	1.9%
Scientists and social scientists	5.0%	0.7%
Managers	12.2%	13.9%
Pilots, conductors, and related mechanics	2.1%	0.5%
Doctors, nurses, psychologists, etc.	7.2%	6.4%
Miscellaneous professionals	16.0%	9.0%
Administrators, accountants, HR personnel	6.3%	2.7%
Inspectors	1.1%	0.3%
Total Percentage	**56.5%**	**36.0%**
Medium Paid Occupations Ranked by Private Sector Salary		
Sales including real estate, insurance agents	1.2%	6.2%
Other miscellaneous occupations	3.3%	4.5%
Automobile and other mechanics	1.7%	3.1%
Law enforcement and related occupations	9.1%	0.7%
Office workers	2.3%	5.8%
Social workers	1.6%	0.5%
Drivers of trucks and taxis	0.8%	3.3%
Laborers and construction workers	3.1%	9.6%
Clerks and administrative assistants	13.2%	10.6%
Manufacturing	2.8%	7.5%
Total Percentage	**39.1%**	**51.8%**
Lowest Paid Occupations Ranked by Private Sector Salary		
Other miscellaneous service workers	2.3%	5.9%
Janitors and housekeepers	1.4%	2.4%
Cooks, bartenders, bakers, and wait staff	0.8%	4.0%
Total Percentage	**4.5%**	**12.2%**

Source: 2012–2016 Current Population Survey, Integrated Public Use Microdata Series.

Notes: Federal workers exclude the military and Postal Service, but include all other Federal workers in the Executive, Legislative, and Judicial Branches. However, the vast majority of these employees are civil servants in the Executive Branch. Private sector workers exclude the self-employed. Neither category includes state and local government workers. This analysis is limited to full-time, full-year workers, i.e. those with at least 1,500 annual hours of work.

many employees who uphold the nation's values for public service every day.

Fixing human capital issues that have developed over generations is complex and will take time to unwind and rebuild. Overall, the Administration is examining administratively burdensome agency activities and processes, including barriers to efficient human capital management that exist in policy, legislation, and regulation. There is a commitment to advocating for policies to help agencies manage their workforce in a more agile manner, reducing barriers employees face in their jobs, and providing flexibilities for agency leadership and management that will allow managers to adopt practices that are common in high performing organizations.

BUDGET CONCEPTS AND BUDGET PROCESS

8. BUDGET CONCEPTS

The budget system of the United States Government provides the means for the President and the Congress to decide how much money to spend, what to spend it on, and how to raise the money they have decided to spend. Through the budget system, they determine the allocation of resources among the agencies of the Federal Government and between the Federal Government and the private sector. The budget system focuses primarily on dollars, but it also allocates other resources, such as Federal employment. The decisions made in the budget process affect the Nation as a whole, State and local governments, and individual Americans. Many budget decisions have worldwide significance. The Congress and the President enact budget decisions into law. The budget system ensures that these laws are carried out.

This chapter provides an overview of the budget system and explains some of the more important budget concepts. It includes summary dollar amounts to illustrate major concepts. Other chapters of the budget documents discuss these amounts and more detailed amounts in greater depth.

The following section discusses the budget process, covering formulation of the President's Budget, action by the Congress, and execution of enacted budget laws. The next section provides information on budget coverage, including a discussion of on-budget and off-budget amounts, functional classification, presentation of budget data, types of funds, and full-cost budgeting. Subsequent sections discuss the concepts of receipts and collections, budget authority, and outlays. These sections are followed by discussions of Federal credit; surpluses, deficits, and means of financing; Federal employment; and the basis for the budget figures. A glossary of budget terms appears at the end of the chapter.

Various laws, enacted to carry out requirements of the Constitution, govern the budget system. The chapter refers to the principal ones by title throughout the text and gives complete citations in the section just preceding the glossary.

THE BUDGET PROCESS

The budget process has three main phases, each of which is related to the others:

1. Formulation of the President's Budget;

2. Action by the Congress; and

3. Execution of enacted budget laws.

Formulation of the President's Budget

The Budget of the United States Government consists of several volumes that set forth the President's fiscal policy goals and priorities for the allocation of resources by the Government. The primary focus of the Budget is on the budget year—the next fiscal year for which the Congress needs to make appropriations, in this case 2018. (Fiscal year 2018 will begin on October 1, 2017, and end on September 30, 2018.) The Budget also covers the nine years following the budget year in order to reflect the effect of budget decisions over the longer term. It includes the funding levels provided for the current year, in this case 2017, which allows the reader to compare the President's Budget proposals with the most recently enacted levels. The Budget also includes data on the most recently completed fiscal year, in this case 2016, so that the reader can compare budget estimates to actual accounting data.

In a normal year, the President begins the process of formulating the budget by establishing general budget and fiscal policy guidelines, usually by the spring of each year, at least nine months before the President transmits the budget to the Congress and at least 18 months before the fiscal year begins. (See the "Budget Calendar" later in this chapter.) Based on these guidelines, the Office of Management and Budget (OMB) works with the Federal agencies to establish specific policy directions and planning levels to guide the preparation of their budget requests.

During the formulation of the budget, the President, the Director of OMB, and other officials in the Executive Office of the President continually exchange information, proposals, and evaluations bearing on policy decisions with the Secretaries of the departments and the heads of the other Government agencies. Decisions reflected in previously enacted budgets, including the one for the fiscal year in progress, reactions to the last proposed budget (which the Congress is considering at the same time the process of preparing the forthcoming budget begins), and evaluations of program performance all influence decisions concerning the forthcoming budget, as do projections of the economic outlook, prepared jointly by the Council of Economic Advisers, OMB, and the Treasury Department.

In early fall, agencies submit their budget requests to OMB, where analysts review them and identify issues that OMB officials need to discuss with the agencies. OMB and the agencies resolve many issues themselves. Others require the involvement of White House policy officials and the President. This decision-making process is usually completed by late December. At that time, the final stage of developing detailed budget data and the preparation of the budget documents begins.

The decision-makers must consider the effects of economic and technical assumptions on the budget estimates. Interest rates, economic growth, the rate of inflation, the unemployment rate, and the number of people eligible for various benefit programs, among other factors, affect Government spending and receipts. Small changes in these assumptions can alter budget estimates by many billions of dollars. (Chapter 2, “Economic Assumptions and Interactions with the Budget,” provides more information on this subject.)

Thus, the budget formulation process involves the simultaneous consideration of the resource needs of individual programs, the allocation of resources among the agencies and functions of the Federal Government, and the total outlays and receipts that are appropriate in light of current and prospective economic conditions.

The law governing the President’s budget requires its transmittal to the Congress on or after the first Monday in January but not later than the first Monday in February of each year for the following fiscal year, which begins on October 1. The budget is usually scheduled for transmission to the Congress on the first Monday in February, giving the Congress eight months to act on the budget before the fiscal year begins. In years when a Presidential transition has taken place, this timeline for budget release is commonly extended to allow the new Administration sufficient time to take office and formulate its budget policy. While there is no specific timeline set for this circumstance, the detailed budget is usually completed and released in April or May. However, in order to aid the congressional budget process (discussed below), new Administrations often release a budget blueprint or “skinny budget” that contains broad spending outlines and descriptions of major policies and priorities in February or March.

Congressional Action[1]

The Congress considers the President’s budget proposals and approves, modifies, or disapproves them. It can change funding levels, eliminate programs, or add programs not requested by the President. It can add or eliminate taxes and other sources of receipts or make other changes that affect the amount of receipts collected.

The Congress does not enact a budget as such. Through the process of adopting a planning document called a budget resolution (described below), the Congress agrees on targets for total spending and receipts, the size of the deficit or surplus, and the debt limit. The budget resolution provides the framework within which individual congressional committees prepare appropriations bills and other spending and receipts legislation. The Congress provides spending authority—funding—for specified purposes in appropriations acts each year. It also enacts changes each year in other laws that affect spending and receipts. Both appropriations acts and these other laws are discussed in the following paragraphs.

In making appropriations, the Congress does not vote on the level of outlays (spending) directly, but rather on budget authority, or funding, which is the authority provided by law to incur financial obligations that will result in outlays. In a separate process, prior to making appropriations, the Congress usually enacts legislation that authorizes an agency to carry out particular programs, authorizes the appropriation of funds to carry out those programs, and, in some cases, limits the amount that can be appropriated for the programs. Some authorizing legislation expires after one year, some expires after a specified number of years, and some is permanent. The Congress may enact appropriations for a program even though there is no specific authorization for it or its authorization has expired.

The Congress begins its work on its budget resolution shortly after it receives the President’s budget. Under the procedures established by the Congressional Budget Act of 1974, the Congress decides on budget targets before commencing action on individual appropriations. The Act requires each standing committee of the House and Senate to recommend budget levels and report legislative plans concerning matters within the committee’s jurisdiction to the Budget Committee in each body. The House and Senate Budget Committees then each design and report, and each body then considers, a concurrent resolution on the budget—a congressional budget plan, or budget resolution. The budget resolution sets targets for total receipts and for budget authority and outlays, both in total and by functional category (see “Functional Classification” later in this chapter). It also sets targets for the budget deficit or surplus and for Federal debt subject to statutory limit.

The congressional timetable calls for the House and Senate to resolve differences between their respective versions of the congressional budget resolution and adopt a single budget resolution by April 15 of each year.

In the report on the budget resolution, the Budget Committees allocate the total on-budget budget authority and outlays set forth in the resolution to the Appropriations Committees and the other committees that have jurisdiction over spending. These committee allocations are commonly known as “302(a)” allocations, in reference to the section of the Congressional Budget Act that provides for them. The Appropriations Committees are then required to divide their 302(a) allocations of budget authority and outlays among their subcommittees. These subcommittee allocations are known as “302(b)” allocations. There are procedural hurdles associated with considering appropriations bills (“discretionary” spending) that would breach or further breach an Appropriations subcommittee’s 302(b) allocation. Similar procedural hurdles exist for considering legislation that would cause the 302(a) allocation for any committee to be breached or further breached. The Budget Committees’ reports may discuss assumptions about the level of funding for major programs. While these assumptions do not

[1] For a fuller discussion of the congressional budget process, see Bill Heniff Jr., Introduction to the Federal Budget Process (Congressional Research Service Report 98–721), and Robert Keith and Allen Schick, Manual on the Federal Budget Process (Congressional Research Service Report 98–720, archived).

bind the other committees and subcommittees, they may influence their decisions.

Budget resolutions may include "reserve funds," which permit adjustment of the resolution allocations as necessary to accommodate legislation addressing specific matters, such as health care or tax reform. Reserve funds are most often limited to legislation that is deficit neutral, including increases in some areas offset by decreases in others.

The budget resolution may also contain "reconciliation directives" (discussed below) to the committees responsible for tax laws and for mandatory spending—programs not controlled by annual appropriation acts—in order to conform the level of receipts and this type of spending to the targets in the budget resolution.

Since the concurrent resolution on the budget is not a law, it does not require the President's approval. However, the Congress considers the President's views in preparing budget resolutions, because legislation developed to meet congressional budget allocations does require the President's approval. In some years, the President and the joint leadership of Congress have formally agreed on plans to reduce the deficit or balance the budget. These agreements were then reflected in the budget resolution and legislation passed for those years.

If the Congress does not pass a budget resolution, the House and Senate typically adopt one or more "deeming resolutions" in the form of a simple resolution or as a provision of a larger bill. A deeming resolution may serve nearly all functions of a budget resolution, except it may not trigger reconciliation procedures in the Senate.

Once the Congress approves the budget resolution, it turns its attention to enacting appropriations bills and authorizing legislation. Appropriations bills are initiated in the House. They provide the budgetary resources for the majority of Federal programs, but only a minority of Federal spending. The Appropriations Committee in each body has jurisdiction over annual appropriations. These committees are divided into subcommittees that hold hearings and review detailed budget justification materials prepared by the Executive Branch agencies within the subcommittee's jurisdiction. After a bill has been drafted by a subcommittee, the full committee and the whole House, in turn, must approve the bill, sometimes with amendments to the original version. The House then forwards the bill to the Senate, where a similar review follows. If the Senate disagrees with the House on particular matters in the bill, which is often the case, the two bodies form a conference committee (consisting of some Members of each body) to resolve the differences. The conference committee revises the bill and returns it to both bodies for approval. When the revised bill is agreed to, first in the House and then in the Senate, the Congress sends it to the President for approval or veto.

Since 1977, when the start of the fiscal year was established as October 1, there have been only three fiscal years (1989, 1995, and 1997) for which the Congress agreed to and enacted every regular appropriations bill by that date. When one or more appropriations bills has not been agreed to by this date, Congress usually enacts a joint resolution called a "continuing resolution" (CR), which is an interim or stop-gap appropriations bill that provides authority for the affected agencies to continue operations at some specified level until a specific date or until the regular appropriations are enacted. Occasionally, a CR has funded a portion or all of the Government for the entire year.

The Congress must present these CRs to the President for approval or veto. In some cases, Presidents have rejected CRs because they contained unacceptable provisions. Left without funds, Government agencies were required by law to shut down operations—with exceptions for some limited activities—until the Congress passed a CR the President would approve. Shutdowns have lasted for periods of a day to several weeks.

The Congress also provides budget authority in laws other than appropriations acts. In fact, while annual appropriations acts fund the majority of Federal programs, they account for only about a third of the total spending in a typical year. Authorizing legislation controls the rest of the spending, which is commonly called "mandatory spending." A distinctive feature of these authorizing

BUDGET CALENDAR

The following timetable highlights the scheduled dates for significant budget events during a normal budget year:

Between the 1st Monday in January and the 1st Monday in February	President transmits the budget
Six weeks later	Congressional committees report budget estimates to Budget Committees
April 15	Action to be completed on congressional budget resolution
May 15	House consideration of annual appropriations bills may begin even if the budget resolution has not been agreed to.
June 10	House Appropriations Committee to report the last of its annual appropriations bills.
June 15	Action to be completed on "reconciliation bill" by the Congress.
June 30	Action on appropriations to be completed by House
July 15	President transmits Mid-Session Review of the Budget
October 1	Fiscal year begins

laws is that they provide agencies with the authority or requirement to spend money without first requiring the Appropriations Committees to enact funding. This category of spending includes interest the Government pays on the public debt and the spending of several major programs, such as Social Security, Medicare, Medicaid, unemployment insurance, and Federal employee retirement. This chapter discusses the control of budget authority and outlays in greater detail under "Budget Authority and Other Budgetary Resources, Obligations, and Outlays." Almost all taxes and most other receipts also result from authorizing laws. Article I, Section 7, of the Constitution provides that all bills for raising revenue shall originate in the House of Representatives. In the House, the Ways and Means Committee initiates tax bills; in the Senate, the Finance Committee has jurisdiction over tax laws.

The budget resolution often includes reconciliation directives, which require authorizing committees to recommend changes in laws that affect receipts or mandatory spending. They direct each designated committee to report amendments to the laws under the committee's jurisdiction that would achieve changes in the levels of receipts or reductions in mandatory spending controlled by those laws. These directives specify the dollar amount of changes that each designated committee is expected to achieve, but do not specify which laws are to be changed or the changes to be made. However, the Budget Committees' reports on the budget resolution frequently discuss assumptions about how the laws would be changed. Like other assumptions in the report, they do not bind the committees of jurisdiction but may influence their decisions. A reconciliation instruction may also specify the total amount by which the statutory limit on the public debt is to be changed.

The committees subject to reconciliation directives draft the implementing legislation. Such legislation may, for example, change the tax code, revise benefit formulas or eligibility requirements for benefit programs, or authorize Government agencies to charge fees to cover some of their costs. Reconciliation bills are typically omnibus legislation, combining the legislation submitted by each reconciled committee in a single act.

Such a large and complicated bill would be difficult to enact under normal legislative procedures because it usually involves changes to tax rates or to popular social programs, generally to reduce projected deficits. The Senate considers such omnibus reconciliation acts under expedited procedures that limit total debate on the bill. To offset the procedural advantage gained by expedited procedures, the Senate places significant restrictions on the substantive content of the reconciliation measure itself, as well as on amendments to the measure. Any material in the bill that is extraneous or that contains changes to the Federal Old-Age and Survivors Insurance and the Federal Disability Insurance programs is not in order under the Senate's expedited reconciliation procedures. Non-germane amendments are also prohibited. The House does not allow reconciliation bills to increase mandatory spending in net, but does allow such bills to increase deficits by reducing revenues. Reconciliation acts, together with appropriations acts for the year, are usually used to implement broad agreements between the President and the Congress on those occasions where the two branches have negotiated a comprehensive budget plan. Reconciliation acts have sometimes included other matters, such as laws providing the means for enforcing these agreements, as described under "Budget Enforcement."

Budget Enforcement

The Federal Government uses three primary enforcement mechanisms to control revenues, spending, and deficits. First, the Statutory Pay-As-You-Go Act of 2010, enacted on February 12, 2010, reestablished a statutory procedure to enforce a rule of deficit neutrality on new revenue and mandatory spending legislation. Second, the Budget Control Act of 2011 (BCA), enacted on August 2, 2011, amended the Balanced Budget and Emergency Deficit Control Act of 1985 (BBEDCA) by reinstating limits ("caps") on the amount of discretionary budget authority that can be provided through the annual appropriations process. Third, the BCA also created a Joint Select Committee on Deficit Reduction that was instructed to develop a bill to reduce the Federal deficit by at least $1.5 trillion over a 10-year period and imposed automatic spending cuts to achieve $1.2 trillion of deficit reduction over 9 years after the Joint Committee process failed to achieve its deficit reduction goal.

BBEDCA divides spending into two types—discretionary spending and direct or mandatory spending. Discretionary spending is controlled through annual appropriations acts. Funding for salaries and other operating expenses of government agencies, for example, is generally discretionary because it is usually provided by appropriations acts. Direct spending is more commonly called mandatory spending. Mandatory spending is controlled by permanent laws. Medicare and Medicaid payments, unemployment insurance benefits, and farm price supports are examples of mandatory spending, because permanent laws authorize payments for those purposes. Receipts are included under the same statutory enforcement rules that apply to mandatory spending because permanent laws generally control receipts.

Discretionary cap enforcement. BBEDCA specifies spending limits ("caps") on discretionary budget authority for 2012 through 2021. Similar enforcement mechanisms were established by the Budget Enforcement Act of 1990 and were extended in 1993 and 1997, but expired at the end of 2002. The caps originally established by the BCA were divided between security and nonsecurity categories for 2012 and 2013, with a single cap for all discretionary spending established for 2014 through 2021. The security category included discretionary budget authority for the Departments of Defense, Homeland Security, and Veterans Affairs, the National Nuclear Security Administration, the Intelligence Community Management account, and all budget accounts in the international affairs budget function (budget function 150). The nonsecurity category included all discretionary budget authority not included in the security category. As part of the enforcement mechanisms triggered by the failure of the BCA's Joint Committee process, the security and nonsecurity categories were redefined and established for all years through 2021. The "revised security category" includes discretionary budget authority in the defense budget function 050, which primarily consists of the Department of Defense. The "revised nonsecurity category" includes all discretionary budget authority not included in the defense budget function 050. The redefined categories are commonly referred to as the "defense" and "non-defense" categories, respectively, to distinguish them from the original categories.

Since the Joint Committee sequestration that was ordered on March 1, 2013, the Congress and the President have enacted two agreements to provide more resources to discretionary programs than would have been available under the Joint Committee enforcement mechanisms. These increases to the caps were paid for largely with savings in mandatory spending. The Bipartisan Budget Act (BBA) of 2013 set new discretionary caps for 2014 at $520.5 billion for the defense category and $491.8 billion for the non-defense category and for 2015 at $521.3 billion for the defense category and $492.4 billion for the non-defense category. The BBA of 2015 set new discretionary caps for 2016 at $548.1 billion for the defense category and $518.5 for the non-defense category and for 2017 at $551.1 billion for the defense category and $518.5 billion for the non-defense category. In addition, the BBA of 2013 reaffirmed the defense and non-defense category limits through 2021 and the BBA of 2015 left these in place after 2017. However, these limits are still subject to Joint Committee reductions if those procedures remain in place.

BBEDCA requires OMB to adjust the caps each year for: changes in concepts and definitions; appropriations designated by the Congress and the President as emergency requirements; and appropriations designated by the Congress and the President for Overseas Contingency Operations/Global War on Terrorism. BBEDCA also specifies cap adjustments (which are limited to fixed amounts) for: appropriations for continuing disability reviews and redeterminations by the Social Security Administration; the health care fraud and abuse control program at the Department of Health and Human Services; and appropriations designated by Congress as being for disaster relief.

BBEDCA requires OMB to provide cost estimates of each appropriations act in a report to the Congress within 7 business days after enactment of such act and to publish three discretionary sequestration reports: a "preview" report when the President submits the budget; an "update" report in August, and a "final" report within 15 days after the end of a session of the Congress.

The preview report explains the adjustments that are required by law to the discretionary caps, including any changes in concepts and definitions, and publishes the revised caps. The preview report may also provide a summary of policy changes, if any, proposed by the President in the Budget to those caps. The update and final reports revise the preview report estimates to reflect the effects of newly enacted discretionary laws. In addition, the update report must contain a preview estimate of the adjustment for disaster funding for the upcoming fiscal year.

If OMB's final sequestration report for a given fiscal year indicates that the amount of discretionary budget authority provided in appropriations acts for that year exceeds the cap for that category in that year, the President must issue a sequestration order canceling budgetary resources in nonexempt accounts within that category by the amount necessary to eliminate the breach. Under sequestration, each nonexempt account within a category is reduced by a dollar amount calculated by multiplying the enacted level of sequestrable budgetary resources in that account by the uniform percentage necessary to eliminate a breach within that category. BBEDCA specifies special rules for reducing some programs and exempts some programs from sequestration entirely. For example, any sequestration of certain health and medical care accounts is limited to 2 percent. Also, if a continuing resolution is in effect when OMB issues its final sequestration report, the sequestration calculations will be based on the annualized amount provided by that continuing resolution. During the 1990s and so far under the BCA caps, the threat of sequestration proved sufficient to ensure compliance with the discretionary spending limits. In that respect, discretionary sequestration can be viewed first as an incentive for compliance and second as a remedy for noncompliance.

Supplemental appropriations can also trigger spending reductions. From the end of a session of the Congress through the following June 30th, a within-session discretionary sequestration of current-year spending is imposed if appropriations for the current year cause a cap to be breached. In contrast, if supplemental appropriations enacted in the last quarter of a fiscal year (i.e., July 1 through September 30) cause the caps to be breached, the required reduction is instead achieved by reducing the applicable spending limit for the following fiscal year by the amount of the breach, because the size of the potential sequestration in relation to the unused funding remaining for the current year could severely disrupt agencies' operations.

Direct spending enforcement. The Statutory Pay-As-You-Go Act of 2010 requires that new legislation changing mandatory spending or revenue must be enacted on a "pay-as-you-go" (PAYGO) basis; that is, that the cumulative effects of such legislation must not increase projected on-budget deficits. Unlike the budget enforcement mechanism for discretionary programs, PAYGO is a permanent requirement, and it does not impose a cap on spending or a floor on revenues. Instead, PAYGO requires that legislation reducing revenues must be fully offset by cuts in mandatory programs or by revenue increases, and that any bills increasing mandatory spending must be fully offset by revenue increases or cuts in mandatory spending.

This requirement of deficit neutrality is not enforced on a bill-by-bill basis, but is based on two cumulative scorecards that tally the cumulative budgetary effects of PAYGO legislation as averaged over rolling 5- and 10-year periods starting with the budget year. Any impacts of PAYGO legislation on the current year deficit are counted as budget year impacts when placed on the scorecard. Like the discretionary caps, PAYGO is enforced by sequestration. Within 14 business days after a congressional session ends, OMB issues an annual PAYGO report and determines whether a violation of the PAYGO requirement has occurred. If either the 5- or 10-year scorecard shows net costs in the budget year column, the President is required to issue a sequestration order implementing across-the-board cuts to nonexempt mandatory programs by an amount sufficient to offset those net costs. The PAYGO effects of legislation may be directed in legislation by reference to statements inserted into the *Congressional Record* by the chairmen of the House and Senate Budget Committees. Any such estimates are determined by the Budget Committees and are informed by, but not required to match, the cost estimates prepared by the Congressional Budget Office (CBO). If this procedure is not followed, then the PAYGO effects of the legislation are determined by OMB. During the first year of statutory PAYGO, nearly half the bills included congressional estimates. In the subsequent six years, OMB estimates were used for all but one of the enacted bills due to the absence of a congressional estimate. Provisions of mandatory spending or receipts legislation that are designated in that legislation as an emergency requirement are not scored as PAYGO budgetary effects.

The PAYGO rules apply to the outlays resulting from outyear changes in mandatory programs made in appropriations acts and to all revenue changes made in appropriations acts. However, outyear changes to mandatory programs as part of provisions that have zero net outlay effects over the sum of the current year and the next five fiscal years are not considered PAYGO.

The PAYGO rules do not apply to increases in mandatory spending or decreases in receipts that result automatically under existing law. For example, mandatory spending for benefit programs, such as unemployment insurance, rises when the number of beneficiaries rises, and many benefit payments are automatically increased for inflation under existing laws. The Senate imposes points of order against consideration of tax or mandatory spending legislation that would violate the PAYGO principle, although the time periods covered by the Senate's rule and the treatment of previously enacted costs or savings may differ in some respects from the requirements of the Statutory Pay-As-You-Go Act of 2010.

The House, in contrast, imposes points of order on legislation increasing mandatory spending in net, whether or not those costs are offset by revenue increases, but the House rule does not constrain the size of tax cuts or require them to be offset.

Joint Committee reductions. The failure of the Joint Select Committee on Deficit Reduction to propose, and the Congress to enact, legislation to reduce the deficit by at least $1.2 trillion triggered automatic reductions to discretionary and mandatory spending in fiscal years 2013 through 2021. The reductions are implemented through a combination of sequestration of mandatory spending and reductions in the discretionary caps. These reductions have already been ordered to take effect for 2013 through 2018, with some modifications as provided for in the American Taxpayer Relief Act of 2012, the BBA of 2013, and the BBA of 2015. Unless any legislative changes are enacted, further reductions will be implemented by pro rata reductions to the discretionary caps from 2019 through 2021, which would be reflected in OMB's discretionary sequestration preview report for those years, and by a sequestration of non-exempt mandatory spending for 2019 onward, which would be ordered when the President's Budget is transmitted to Congress and would take effect beginning October 1 of the upcoming fiscal year.

OMB is required to calculate the amount of the deficit reduction required for 2019 onward as follows:

- The $1.2 trillion savings target is reduced by 18 percent to account for debt service.
- The resulting net savings of $984 billion is divided by nine to spread the reductions in equal amounts across the nine years, 2013 through 2021.
- The annual spending reduction of $109.3 billion is divided equally between the defense and non-defense functions.
- The annual reduction of $54.7 billion for each functional category of spending is divided proportionally between discretionary and direct spending programs, using as the base the discretionary cap, redefined as outlined in the discretionary cap enforcement section above, and the most recent baseline estimate of non-exempt mandatory outlays.
- The resulting reductions in defense and non-defense direct spending are implemented through a sequestration order released with the President's Budget and taking effect the following October 1st. The reductions in discretionary spending are applied as reductions in the discretionary caps, and are enforced through the discretionary cap enforcement procedures discussed earlier in this section.

Subsequent to the enactment of the BCA, the mandatory sequestration provisions were extended beyond 2021 by the BBA of 2013, which extended sequestration through 2023, P.L. 113-82, commonly referred to as the Military Retired Pay Restoration Act, which extended sequestration through 2024, and the BBA of 2015, which extended mandatory sequestration through 2025. Sequestration in these four years is to be applied using the same percentage reductions for defense and non-defense as calculated for 2021 under the procedures outlined above.[2]

The 2018 Budget proposes that the discretionary cap reductions for 2018 for the defense function, as ordered in the Joint Committee enforcement report issued simulta-

[2] The BBA of 2015 specified that, notwithstanding the 2 percent limit on Medicare sequestration in the BCA, in extending sequestration into 2025 the reduction in the Medicare program should be 4.0 percent for the first half of the sequestration period and zero for the second half of the period.

neously with the 2018 Budget, be reversed, and that the reductions that would otherwise apply to the defense cap instead be applied to the non-defense cap. The Budget further proposes that the outyear reductions to the caps for the defense category be reversed and replaced with further reductions to the non-defense category. In addition, the Budget proposes that the Joint Committee mandatory sequestration be extended to 2027. For more information on these proposals, see Chapter 10 of this volume, "Budget Process."

Budget Execution

Government agencies may not spend or obligate more than the Congress has appropriated, and they may use funds only for purposes specified in law. The Antideficiency Act prohibits them from spending or obligating the Government to spend in advance of an appropriation, unless specific authority to do so has been provided in law. Additionally, the Act requires the President to apportion the budgetary resources available for most executive branch agencies. The President has delegated this authority to OMB. Some apportionments are by time periods (usually by quarter of the fiscal year), some are by projects or activities, and others are by a combination of both. Agencies may request OMB to reapportion funds during the year to accommodate changing circumstances. This system helps to ensure that funds do not run out before the end of the fiscal year.

During the budget execution phase, the Government sometimes finds that it needs more funding than the Congress has appropriated for the fiscal year because of unanticipated circumstances. For example, more might be needed to respond to a severe natural disaster. Under such circumstances, the Congress may enact a supplemental appropriation.

On the other hand, the President may propose to reduce a previously enacted appropriation. The President may propose to either "cancel" or "rescind" the amount. If the President initiates the withholding of funds while the Congress considers his request, the amounts are apportioned as "deferred" or "withheld pending rescission" on the OMB-approved apportionment form. Agencies are instructed not to withhold funds without the prior approval of OMB. When OMB approves a withholding, the Impoundment Control Act requires that the President transmit a "special message" to the Congress. The historical reason for the special message is to inform the Congress that the President has unilaterally withheld funds that were enacted in regular appropriations acts. The notification allows the Congress to consider the proposed rescission in a timely way. The last time the President initiated the withholding of funds was in fiscal year 2000.

COVERAGE OF THE BUDGET

Federal Government and Budget Totals

The budget documents provide information on all Federal agencies and programs. However, because the laws governing Social Security (the Federal Old-Age and Survivors Insurance and the Federal Disability Insurance trust funds) and the Postal Service Fund require that the receipts and outlays for those activities be excluded from the budget totals and from the calculation of the deficit or surplus, the budget presents on-budget and off-budget totals. The off-budget totals include the Federal transactions excluded by law from the budget totals. The on-budget and off-budget amounts are added together to derive the totals for the Federal Government. These are sometimes referred to as the unified or consolidated budget totals.

It is not always obvious whether a transaction or activity should be included in the budget. Where there is a question, OMB normally follows the recommendation of the 1967 President's Commission on Budget Concepts to be comprehensive of the full range of Federal agencies, programs, and activities. In recent years, for example, the budget has included the transactions of the Affordable Housing Program funds, the Universal Service Fund, the Public Company Accounting Oversight Board, the Securities Investor Protection Corporation, Guaranty Agencies Reserves, the National Railroad Retirement Investment Trust, the United Mine Workers Combined Benefits Fund, the Federal Financial Institutions Examination Council, Electric Reliability Organizations (EROs) established pursuant to the Energy Policy Act of 2005, the Corporation for Travel Promotion, and the National Association of Registered Agents and Brokers.

In contrast, the budget excludes tribal trust funds that are owned by Indian tribes and held and managed by the Government in a fiduciary capacity on the tribes' behalf. These funds are not owned by the Government, the Government is not the source of their capital, and the Government's control is limited to the exercise of fiduciary duties. Similarly, the transactions of Government-sponsored enterprises, such as the Federal Home Loan Banks, are not included in the on-budget or off-budget totals. Federal laws established these enterprises for public policy purposes, but they are privately owned and operated corporations. Nevertheless, because of their public charters, the budget discusses them and reports summary financial data in the budget *Appendix* and in some detailed tables.

The budget also excludes the revenues from copyright royalties and spending for subsequent payments to copyright holders where (1) the law allows copyright owners and users to voluntarily set the rate paid for the use of protected material, and (2) the amount paid by users of copyrighted material to copyright owners is related to the frequency or quantity of the material used. The budget excludes license royalties collected and paid out by the Copyright Office for the retransmission of network broadcasts via cable collected under 17 U.S.C. 111 because these revenues meet both of these conditions. The budget includes the royalties collected and paid out for license fees for digital audio recording technology under 17 U.S.C. 1004, since the amount of license fees paid is unrelated to usage of the material.

The *Appendix* includes a presentation for the Board of Governors of the Federal Reserve System for information only. The amounts are not included in either the on-budget or off-budget totals because of the independent status of the System within the Government. However, the Federal Reserve System transfers its net earnings to the Treasury, and the budget records them as receipts.

Chapter 9 of this volume, "Coverage of the Budget," provides more information on this subject.

Table 8–1. TOTALS FOR THE BUDGET AND THE FEDERAL GOVERNMENT
(In billions of dollars)

	2016 Actual	Estimate	
		2017	2018
Budget authority			
Unified	3,973	4,111	4,279
On-budget	3,193	3,297	3,407
Off-budget	780	814	872
Receipts:			
Unified	3,268	3,460	3,654
On-budget	2,458	2,602	2,762
Off-budget	810	857	892
Outlays:			
Unified	3,853	4,062	4,094
On-budget	3,078	3,247	3,228
Off-budget	775	815	867
Deficit (–) / Surplus (+):			
Unified	–585	–603	–440
On-budget	–620	–644	–465
Off-budget	36	42	25

Functional Classification

The functional classification is used to organize budget authority, outlays, and other budget data according to the major purpose served—such as agriculture, transportation, income security, and national defense. There are 20 major functions, 17 of which are concerned with broad areas of national need and are further divided into subfunctions. For example, the Agriculture function comprises the subfunctions Farm Income Stabilization and Agricultural Research and Services. The functional classification meets the Congressional Budget Act requirement for a presentation in the budget by national needs and agency missions and programs. The remaining three functions—Net Interest, Undistributed Offsetting Receipts, and Allowances—enable the functional classification system to cover the entire Federal budget.

The following criteria are used in establishing functional categories and assigning activities to them:

- A function encompasses activities with similar purposes, emphasizing what the Federal Government seeks to accomplish rather than the means of accomplishment, the objects purchased, the clientele or geographic area served (except in the cases of functions 450 for Community and Regional Development, 570 for Medicare, 650 for Social Security, and 700 for Veterans Benefits and Services), or the Federal agency conducting the activity (except in the case of subfunction 051 in the National Defense function, which is used only for defense activities under the Department of Defense—Military).
- A function must be of continuing national importance, and the amounts attributable to it must be significant.
- Each basic unit being classified (generally the appropriation or fund account) usually is classified according to its primary purpose and assigned to only one subfunction. However, some large accounts that serve more than one major purpose are subdivided into two or more functions or subfunctions.

In consultation with the Congress, the functional classification is adjusted from time to time as warranted. Detailed functional tables, which provide information on Government activities by function and subfunction, are available online at *www.budget.gov/budget/Analytical_Perspectives* and on the *Budget CD-ROM*.

Agencies, Accounts, Programs, Projects, and Activities

Various summary tables in the *Analytical Perspectives* volume of the Budget provide information on budget authority, outlays, and offsetting collections and receipts arrayed by Federal agency. A table that lists budget authority and outlays by budget account within each agency and the totals for each agency of budget authority, outlays, and receipts that offset the agency spending totals is available online at: *www.budget.gov/budget/Analytical_Perspectives* and on the *Budget CD-ROM*. The *Appendix* provides budgetary, financial, and descriptive information about programs, projects, and activities by account within each agency.

Types of Funds

Agency activities are financed through Federal funds and trust funds.

Federal funds comprise several types of funds. Receipt accounts of the ***general fund***, which is the greater part of the budget, record receipts not earmarked by law for a specific purpose, such as income tax receipts. The general fund also includes the proceeds of general borrowing. General fund appropriations accounts record general fund expenditures. General fund appropriations draw from general fund receipts and borrowing collectively and, therefore, are not specifically linked to receipt accounts.

Special funds consist of receipt accounts for Federal fund receipts that laws have designated for specific purposes and the associated appropriation accounts for the expenditure of those receipts.

Public enterprise funds are revolving funds used for programs authorized by law to conduct a cycle of business-type operations, primarily with the public, in which outlays generate collections.

Intragovernmental funds are revolving funds that conduct business-type operations primarily within and between Government agencies. The collections and the outlays of revolving funds are recorded in the same budget account.

Trust funds account for the receipt and expenditure of monies by the Government for carrying out specific purposes and programs in accordance with the terms of a statute that designates the fund as a trust fund (such as the Highway Trust Fund) or for carrying out the stipulations of a trust where the Government itself is the beneficiary (such as any of several trust funds for gifts and donations for specific purposes). ***Trust revolving funds*** are trust funds credited with collections earmarked by law to carry out a cycle of business-type operations.

The Federal budget meaning of the term "trust," as applied to trust fund accounts, differs significantly from its private-sector usage. In the private sector, the beneficiary of a trust usually owns the trust's assets, which are managed by a trustee who must follow the stipulations of the trust. In contrast, the Federal Government owns the assets of most Federal trust funds, and it can raise or lower future trust fund collections and payments, or change the purposes for which the collections are used, by changing existing laws. There is no substantive difference between a trust fund and a special fund or between a trust revolving fund and a public enterprise revolving fund.

However, in some instances, the Government does act as a true trustee of assets that are owned or held for the benefit of others. For example, it maintains accounts on behalf of individual Federal employees in the Thrift Savings Fund, investing them as directed by the individual employee. The Government accounts for such funds in ***deposit funds***, which are not included in the budget. (Chapter 23 of this volume, "Trust Funds and Federal Funds," provides more information on this subject.)

Budgeting for Full Costs

A budget is a financial plan for allocating resources—deciding how much the Federal Government should spend in total, program by program, and for the parts of each program and deciding how to finance the spending. The budgetary system provides a process for proposing policies, making decisions, implementing them, and reporting the results. The budget needs to measure costs accurately so that decision makers can compare the cost of a program with its benefits, the cost of one program with another, and the cost of one method of reaching a specified goal with another. These costs need to be fully included in the budget up front, when the spending decision is made, so that executive and congressional decision makers have the information and the incentive to take the total costs into account when setting priorities.

The budget includes all types of spending, including both current operating expenditures and capital investment, and to the extent possible, both are measured on the basis of full cost. Questions are often raised about the measure of capital investment. The present budget provides policymakers the necessary information regarding investment spending. It records investment on a cash basis, and it requires the Congress to provide budget authority before an agency can obligate the Government to make a cash outlay. However, the budget measures only costs, and the benefits with which these costs are compared, based on policy makers' judgment, must be presented in supplementary materials. By these means, the budget allows the total cost of capital investment to be compared up front in a rough way with the total expected future net benefits. Such a comparison of total costs with benefits is consistent with the formal method of cost-benefit analysis of capital projects in government, in which the full cost of a capital asset as the cash is paid out is compared with the full stream of future benefits (all in terms of present values). (Chapter 17 of this volume, "Federal Investment," provides more information on capital investment.)

RECEIPTS, OFFSETTING COLLECTIONS, AND OFFSETTING RECEIPTS

In General

The budget records amounts collected by Government agencies two different ways. Depending on the nature of the activity generating the collection and the law that established the collection, they are recorded as either:

- ***Governmental receipts***, which are compared in total to outlays (net of offsetting collections and offsetting receipts) in calculating the surplus or deficit; or
- ***Offsetting collections*** or ***offsetting receipts***, which are deducted from gross outlays to calculate net outlay figures.

Governmental Receipts

Governmental receipts are collections that result from the Government's exercise of its sovereign power to tax or otherwise compel payment. Sometimes they are called receipts, budget receipts, Federal receipts, or Federal revenues. They consist mostly of individual and corporation income taxes and social insurance taxes, but also include excise taxes, compulsory user charges, regulatory fees, customs duties, court fines, certain license fees, and deposits of earnings by the Federal Reserve System. Total receipts for the Federal Government include both on-budget and off-budget receipts (see Table 8–1, "Totals for the Budget and the Federal Government," which appears earlier in this chapter.) Chapter 11 of this volume, "Governmental Receipts," provides more information on governmental receipts.

Offsetting Collections and Offsetting Receipts

Offsetting collections and offsetting receipts are recorded as offsets to (deductions from) spending, not as additions on the receipt side of the budget. These amounts are recorded as offsets to outlays so that the budget totals represent governmental rather than market activity and reflect the Government's net transactions with the public. They are recorded in one of two ways, based on interpretation of laws and longstanding budget concepts and practice. They are offsetting collections when the collections are authorized by law to be credited to expenditure accounts and are generally available for expenditure without further legislation. Otherwise, they are deposited in receipt accounts and called offsetting receipts; many of these receipts are available for expenditure without further legislation.

Offsetting collections and offsetting receipts result from any of the following types of transactions:

- ***Business-like transactions or market-oriented activities with the public***—these include voluntary collections from the public in exchange for goods or services, such as the proceeds from the sale of postage stamps, the fees charged for admittance to recreation areas, and the proceeds from the sale of Government-owned land; and reimbursements for damages. The budget records these amounts as *offsetting collections from non-Federal sources* (for offsetting collections) or as *proprietary receipts* (for offsetting receipts).

- ***Intragovernmental transactions***—collections from other Federal Government accounts. The budget records collections by one Government account from another as *offsetting collections from Federal sources* (for offsetting collections) or as *intragovernmental receipts* (for offsetting receipts). For example, the General Services Administration rents office space to other Government agencies and records their rental payments as offsetting collections from Federal sources in the Federal Buildings Fund. These transactions are exactly offsetting and do not affect the surplus or deficit. However, they are an important accounting mechanism for allocating costs to the programs and activities that cause the Government to incur the costs.

- ***Voluntary gifts and donations***—gifts and donations of money to the Government, which are treated as offsets to budget authority and outlays.

- ***Offsetting governmental transactions***—collections from the public that are governmental in nature and should conceptually be treated like Federal revenues and compared in total to outlays (e.g., tax receipts, regulatory fees, compulsory user charges, custom duties, license fees) but required by law or longstanding practice to be misclassified as offsetting. The budget records amounts from non-Federal sources that are governmental in nature as *offsetting governmental collections* (for offsetting collections) or as *offsetting governmental receipts* (for offsetting receipts).

Offsetting Collections

Some laws authorize agencies to credit collections directly to the account from which they will be spent and, usually, to spend the collections for the purpose of the account without further action by the Congress. Most revolving funds operate with such authority. For example, a permanent law authorizes the Postal Service to use collections from the sale of stamps to finance its operations without a requirement for annual appropriations. The budget records these collections in the Postal Service Fund (a revolving fund) and records budget authority in an amount equal to the collections. In addition to revolving funds, some agencies are authorized to charge fees to defray a portion of costs for a program that are otherwise financed by appropriations from the general fund and usually to spend the collections without further action by the Congress. In such cases, the budget records the offsetting collections and resulting budget authority in the program's general fund expenditure account. Similarly, intragovernmental collections authorized by some laws may be recorded as offsetting collections and budget authority in revolving funds or in general fund expenditure accounts.

Sometimes appropriations acts or provisions in other laws limit the obligations that can be financed by offsetting collections. In those cases, the budget records budget authority in the amount available to incur obligations, not in the amount of the collections.

Offsetting collections credited to expenditure accounts automatically offset the outlays at the expenditure account level. Where accounts have offsetting collections, the budget shows the budget authority and outlays of the account both gross (before deducting offsetting collections) and net (after deducting offsetting collections). Totals for the agency, subfunction, and overall budget are net of offsetting collections.

Offsetting Receipts

Collections that are offset against gross outlays but are not authorized to be credited to expenditure accounts are credited to receipt accounts and are called offsetting receipts. Offsetting receipts are deducted from budget authority and outlays in arriving at total net budget authority and outlays. However, unlike offsetting collections credited to expenditure accounts, offsetting receipts do not offset budget authority and outlays at the account level. In most cases, they offset budget authority and outlays at the agency and subfunction levels.

Proprietary receipts from a few sources, however, are not offset against any specific agency or function and are classified as undistributed offsetting receipts. They are deducted from the Government-wide totals for net budget authority and outlays. For example, the collections of rents and royalties from outer continental shelf lands are undistributed because the amounts are large and for the most part are not related to the spending of the agency that administers the transactions and the subfunction that records the administrative expenses.

Similarly, two kinds of intragovernmental transactions—agencies' payments as employers into Federal employee retirement trust funds and interest received by trust funds—are classified as undistributed offsetting receipts. They appear instead as special deductions in computing total net budget authority and outlays for the Government rather than as offsets at the agency level. This special treatment is necessary because the amounts are so large they would distort measures of the agency's activities if they were attributed to the agency.

User Charges

User charges are fees assessed on individuals or organizations for the provision of Government services and for the sale or use of Government goods or resources. The payers of the user charge must be limited in the authorizing legislation to those receiving special benefits from, or subject to regulation by, the program or activity beyond the benefits received by the general public or broad segments of the public (such as those who pay income taxes or customs duties). Policy regarding user charges is established in OMB Circular A–25, "User Charges." The term encompasses proceeds from the sale or use of Government goods and services, including the sale of natural resources (such as timber, oil, and minerals) and proceeds from asset sales (such as property, plant, and equipment). User charges are not necessarily dedicated to the activity they finance and may be credited to the general fund of the Treasury.

The term "user charge" does not refer to a separate budget category for collections. User charges are classified in the budget as receipts, offsetting receipts, or offsetting collections according to the principles explained previously.

See Chapter 12, "Offsetting Collections and Offsetting Receipts," for more information on the classification of user charges.

BUDGET AUTHORITY, OBLIGATIONS, AND OUTLAYS

Budget authority, obligations, and outlays are the primary benchmarks and measures of the budget control system. The Congress enacts laws that provide agencies with spending authority in the form of budget authority. Before agencies can use these resources—obligate this budget authority—OMB must approve their spending plans. After the plans are approved, agencies can enter into binding agreements to purchase items or services or to make grants or other payments. These agreements are recorded as obligations of the United States and deducted from the amount of budgetary resources available to the agency. When payments are made, the obligations are liquidated and outlays recorded. These concepts are discussed more fully below.

Budget Authority and Other Budgetary Resources

Budget authority is the authority provided in law to enter into legal obligations that will result in immediate or future outlays of the Government. In other words, it is the amount of money that agencies are allowed to commit to be spent in current or future years. Government officials may obligate the Government to make outlays only to the extent they have been granted budget authority.

The budget records new budget authority as a dollar amount in the year when it first becomes available for obligation. When permitted by law, unobligated balances of budget authority may be carried over and used in the next year. The budget does not record these balances as budget authority again. They do, however, constitute a budgetary resource that is available for obligation. In some cases, a provision of law (such as a limitation on obligations or a benefit formula) precludes the obligation of funds that would otherwise be available for obligation. In such cases, the budget records budget authority equal to the amount of obligations that can be incurred. A major exception to this rule is for the highway and mass transit programs financed by the Highway Trust Fund, where budget authority is measured as the amount of contract authority (described later in this chapter) provided in authorizing statutes, even though the obligation limitations enacted in annual appropriations acts restrict the amount of contract authority that can be obligated.

In deciding the amount of budget authority to request for a program, project, or activity, agency officials estimate the total amount of obligations they will need to incur to achieve desired goals and subtract the unobligated balances available for these purposes. The amount of budget authority requested is influenced by the nature of the programs, projects, or activities being financed. For current operating expenditures, the amount requested usually covers the needs for the fiscal year. For major procurement programs and construction projects, agencies generally must request sufficient budget authority in the first year to fully fund an economically useful segment of a procurement or project, even though it may be obligated over several years. This full funding policy is intended to ensure that the decision-makers take into account all costs and benefits fully at the time decisions are made to provide resources. It also avoids sinking money into a procurement or project without being certain if or when future funding will be available to complete the procurement or project.

Budget authority takes several forms:

- ***Appropriations***, provided in annual appropriations acts or authorizing laws, permit agencies to incur obligations and make payment;
- ***Borrowing authority***, usually provided in permanent laws, permits agencies to incur obligations but

requires them to borrow funds, usually from the general fund of the Treasury, to make payment;

- ***Contract authority***, usually provided in permanent law, permits agencies to incur obligations in advance of a separate appropriation of the cash for payment or in anticipation of the collection of receipts that can be used for payment; and
- ***Spending authority from offsetting collections***, usually provided in permanent law, permits agencies to credit offsetting collections to an expenditure account, incur obligations, and make payment using the offsetting collections.

Because offsetting collections and offsetting receipts are deducted from gross budget authority, they are referred to as negative budget authority for some purposes, such as Congressional Budget Act provisions that pertain to budget authority.

Authorizing statutes usually determine the form of budget authority for a program. The authorizing statute may authorize a particular type of budget authority to be provided in annual appropriations acts, or it may provide one of the forms of budget authority directly, without the need for further appropriations.

An appropriation may make funds available from the general fund, special funds, or trust funds, or authorize the spending of offsetting collections credited to expenditure accounts, including revolving funds. Borrowing authority is usually authorized for business-like activities where the activity being financed is expected to produce income over time with which to repay the borrowing with interest. The use of contract authority is traditionally limited to transportation programs.

New budget authority for most Federal programs is normally provided in annual appropriations acts. However, new budget authority is also made available through permanent appropriations under existing laws and does not require current action by the Congress. Much of the permanent budget authority is for trust funds, interest on the public debt, and the authority to spend offsetting collections credited to appropriation or fund accounts. For most trust funds, the budget authority is appropriated automatically under existing law from the available balance of the fund and equals the estimated annual obligations of the funds. For interest on the public debt, budget authority is provided automatically under a permanent appropriation enacted in 1847 and equals interest outlays.

Annual appropriations acts generally make budget authority available for obligation only during the fiscal year to which the act applies. However, they frequently allow budget authority for a particular purpose to remain available for obligation for a longer period or indefinitely (that is, until expended or until the program objectives have been attained). Typically, budget authority for current operations is made available for only one year, and budget authority for construction and some research projects is available for a specified number of years or indefinitely. Most budget authority provided in authorizing statutes, such as for most trust funds, is available indefinitely. If budget authority is initially provided for a limited period of availability, an extension of availability would require enactment of another law (see "Reappropriation" later in this chapter).

Budget authority that is available for more than one year and not obligated in the year it becomes available is carried forward for obligation in a following year. In some cases, an account may carry forward unobligated budget authority from more than one prior year. The sum of such amounts constitutes the account's ***unobligated balance***. Most of these balances had been provided for specific uses such as the multi-year construction of a major project and so are not available for new programs. A small part may never be obligated or spent, primarily amounts provided for contingencies that do not occur or reserves that never have to be used.

Amounts of budget authority that have been obligated but not yet paid constitute the account's ***unpaid obligations***. For example, in the case of salaries and wages, one to three weeks elapse between the time of obligation and the time of payment. In the case of major procurement and construction, payments may occur over a period of several years after the obligation is made. Unpaid obligations (which are made up of accounts payable and undelivered orders) net of the accounts receivable and unfilled customers' orders are defined by law as the ***obligated balances***. Obligated balances of budget authority at the end of the year are carried forward until the obligations are paid or the balances are canceled. (A general law provides that the obligated balances of budget authority that was made available for a definite period is automatically cancelled five years after the end of the period.) Due to such flows, a change in the amount of budget authority available in any one year may change the level of obligations and outlays for several years to come. Conversely, a change in the amount of obligations incurred from one year to the next does not necessarily result from an equal change in the amount of budget authority available for that year and will not necessarily result in an equal change in the level of outlays in that year.

The Congress usually makes budget authority available on the first day of the fiscal year for which the appropriations act is passed. Occasionally, the appropriations language specifies a different timing. The language may provide an ***advance appropriation***—budget authority that does not become available until one year or more beyond the fiscal year for which the appropriations act is passed. ***Forward funding*** is budget authority that is made available for obligation beginning in the last quarter of the fiscal year (beginning on July 1) for the financing of ongoing grant programs during the next fiscal year. This kind of funding is used mostly for education programs, so that obligations for education grants can be made prior to the beginning of the next school year. For certain benefit programs funded by annual appropriations, the appropriation provides for ***advance funding—***budget authority that is to be charged to the appropriation in the succeeding year, but which authorizes obligations to be incurred in the last quarter of the current fiscal year if necessary to meet benefit payments in excess of the specific amount appropriated for the year. When such authority is used, an adjustment is made to increase the budget authority for the fiscal year in which it is used and to reduce the budget authority of the succeeding fiscal year.

Provisions of law that extend into a new fiscal year the availability of unobligated amounts that have expired or would otherwise expire are called reappropriations. Reappropriations of expired balances that are newly available for obligation in the current or budget year count as new budget authority in the fiscal year in which the balances become newly available. For example, if a 2016 appropriations act extends the availability of unobligated budget authority that expired at the end of 2015, new budget authority would be recorded for 2016. This scorekeeping is used because a reappropriation has exactly the same effect as allowing the earlier appropriation to expire at the end of 2015 and enacting a new appropriation for 2016.

For purposes of BBEDCA and the Statutory Pay-As-You-Go Act of 2010 (discussed earlier under "Budget Enforcement"), the budget classifies budget authority as ***discretionary*** or ***mandatory***. This classification indicates whether an appropriations act or authorizing legislation controls the amount of budget authority that is available. Generally, budget authority is discretionary if provided in an annual appropriations act and mandatory if provided in authorizing legislation. However, the budget authority provided in annual appropriations acts for certain specifically identified programs is also classified as mandatory by OMB and the congressional scorekeepers. This is because the authorizing legislation for these programs entitles beneficiaries—persons, households, or other levels of government—to receive payment, or otherwise legally obligates the Government to make payment and thereby effectively determines the amount of budget authority required, even though the payments are funded by a subsequent appropriation.

Sometimes, budget authority is characterized as current or permanent. Current authority requires the Congress to act on the request for new budget authority for the year involved. Permanent authority becomes available pursuant to standing provisions of law without appropriations action by the Congress for the year involved. Generally, budget authority is current if an annual appropriations act provides it and permanent if authorizing legislation provides it. By and large, the current/permanent distinction has been replaced by the discretionary/mandatory distinction, which is similar but not identical. Outlays are also classified as discretionary or mandatory according to the classification of the budget authority from which they flow (see "Outlays" later in this chapter).

The amount of budget authority recorded in the budget depends on whether the law provides a specific amount or employs a variable factor that determines the amount. It is considered ***definite*** if the law specifies a dollar amount (which may be stated as an upper limit, for example, "shall not exceed …"). It is considered ***indefinite*** if, instead of specifying an amount, the law permits the amount to be determined by subsequent circumstances. For example, indefinite budget authority is provided for interest on the public debt, payment of claims and judgments awarded by the courts against the United States, and many entitlement programs. Many of the laws that authorize collections to be credited to revolving, special, and trust funds make all of the collections available for expenditure for the authorized purposes of the fund, and such authority is considered to be indefinite budget authority because the amount of collections is not known in advance of their collection.

Obligations

Following the enactment of budget authority and the completion of required apportionment action, Government agencies incur obligations to make payments (see earlier discussion under "Budget Execution"). Agencies must record obligations when they enter into binding agreements that will result in immediate or future outlays. Such obligations include the current liabilities for salaries, wages, and interest; and contracts for the purchase of supplies and equipment, construction, and the acquisition of office space, buildings, and land. For Federal credit programs, obligations are recorded in an amount equal to the estimated subsidy cost of direct loans and loan guarantees (see "Federal Credit" later in this chapter).

Outlays

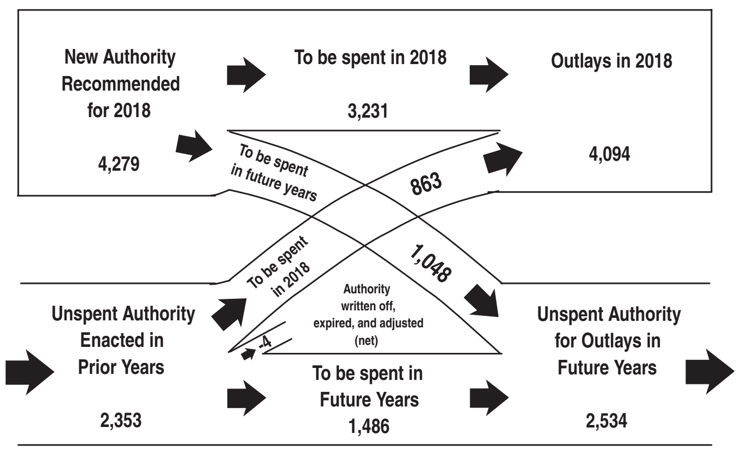
Outlays are the measure of Government spending. They are payments that liquidate obligations (other than most exchanges of financial instruments, of which the repayment of debt is the prime example). The budget records outlays when obligations are paid, in the amount that is paid.

Agency, function and subfunction, and Government-wide outlay totals are stated net of offsetting collections and offsetting receipts for most budget presentations. (Offsetting receipts from a few sources do not offset any specific function, subfunction, or agency, as explained previously, but only offset Government-wide totals.) Outlay totals for accounts with offsetting collections are stated both gross and net of the offsetting collections credited to the account. However, the outlay totals for special and trust funds with offsetting receipts are not stated net of the offsetting receipts. In most cases, these receipts offset the agency, function, and subfunction totals but do not offset account-level outlays. However, when general fund payments are used to finance trust fund outlays to the public, the associated trust fund receipts are netted against the bureau totals to prevent double-counting budget authority and outlays at the bureau level.

The Government usually makes outlays in the form of cash (currency, checks, or electronic fund transfers). However, in some cases agencies pay obligations without disbursing cash, and the budget nevertheless records outlays for the equivalent method. For example, the budget records outlays for the full amount of Federal employees' salaries, even though the cash disbursed to employees is net of Federal and State income taxes withheld, retirement contributions, life and health insurance premiums,

Chart 8-1. Relationship of Budget Authority to Outlays for 2018

(Billions of dollars)



and other deductions. (The budget also records receipts for the amounts withheld from Federal employee paychecks for Federal income taxes and other payments to the Government.) When debt instruments (bonds, debentures, notes, or monetary credits) are used in place of cash to pay obligations, the budget records outlays financed by an increase in agency debt. For example, the budget records the acquisition of physical assets through certain types of lease-purchase arrangements as though a cash disbursement were made for an outright purchase. The transaction creates a Government debt, and the cash lease payments are treated as repayments of principal and interest.

The budget records outlays for the interest on the public issues of Treasury debt securities as the interest accrues, not when the cash is paid. A small portion of Treasury debt consists of inflation-indexed securities, which feature monthly adjustments to principal for inflation and semiannual payments of interest on the inflation-adjusted principal. As with fixed-rate securities, the budget records interest outlays as the interest accrues. The monthly adjustment to principal is recorded, simultaneously, as an increase in debt outstanding and an outlay of interest.

Most Treasury debt securities held by trust funds and other Government accounts are in the Government account series. The budget normally states the interest on these securities on a cash basis. When a Government account is invested in Federal debt securities, the purchase price is usually close or identical to the par (face) value of the security. The budget generally records the investment at par value and adjusts the interest paid by Treasury and collected by the account by the difference between purchase price and par, if any.

For Federal credit programs, outlays are equal to the subsidy cost of direct loans and loan guarantees and are recorded as the underlying loans are disbursed (see “Federal Credit” later in this chapter).

The budget records refunds of receipts that result from overpayments by the public (such as income taxes withheld in excess of tax liabilities) as reductions of receipts, rather than as outlays. However, the budget records payments to taxpayers for refundable tax credits (such as earned income tax credits) that exceed the taxpayer’s tax liability as outlays. Similarly, when the Government makes overpayments that are later returned to the Government, those refunds to the Government are recorded as offsetting collections or offsetting receipts, not as governmental receipts.

Not all of the new budget authority for 2018 will be obligated or spent in 2018. Outlays during a fiscal year may liquidate obligations incurred in the same year or in prior years. Obligations, in turn, may be incurred against budget authority provided in the same year or against unobligated balances of budget authority provided in prior years. Outlays, therefore, flow in part from budget authority provided for the year in which the money is spent and in part from budget authority provided for prior years. The ratio of a given year’s outlays resulting from budget authority enacted in that or a prior year to the original amount of that budget authority is referred to as the outlay rate for that year.

As shown in the accompanying chart, $3,231 billion of outlays in 2018 (79 percent of the outlay total) will be made from that year’s $4,279 billion total of proposed new budget authority (a first-year outlay rate of 76 percent). Thus, the remaining $863 billion of outlays in 2018 (21 percent of the outlay total) will be made from budget authority enacted in previous years. At the same time, $1,048 billion of the new budget authority proposed for 2018 (24 percent of the total amount proposed) will not lead to outlays until future years.

As described earlier, the budget classifies budget authority and outlays as discretionary or mandatory. This classification of outlays measures the extent to which actual spending is controlled through the annual appropriations process. About 31 percent of total outlays in 2016 ($1,185 billion) were discretionary and the remaining 69 percent ($2,667 billion in 2016) were mandatory spending and net interest. Such a large portion of total spending is mandatory because authorizing rather than appropriations legislation determines net interest ($240 billion in 2016) and the spending for a few programs with large amounts of spending each year, such as Social Security ($910 billion in 2016) and Medicare ($588 billion in 2016).

The bulk of mandatory outlays flow from budget authority recorded in the same fiscal year. This is not necessarily the case for discretionary budget authority and outlays. For most major construction and procurement projects and long-term contracts, for example, the budget authority covers the entire cost estimated when the projects are initiated even though the work will take place and outlays will be made over a period extending beyond the year for which the budget authority is enacted. Similarly, discretionary budget authority for most education and job training activities is appropriated for school or program years that begin in the fourth quarter of the fiscal year. Most of these funds result in outlays in the year after the appropriation.

FEDERAL CREDIT

Some Government programs provide assistance through direct loans or loan guarantees. A ***direct loan*** is a disbursement of funds by the Government to a non-Federal borrower under a contract that requires repayment of such funds with or without interest and includes economically equivalent transactions, such as the sale of Federal assets on credit terms. A ***loan guarantee*** is any guarantee, insurance, or other pledge with respect to the payment of all or a part of the principal or interest on any debt obligation of a non-Federal borrower to a non-Federal lender. The Federal Credit Reform Act of 1990, as amended (FCRA), prescribes the budgetary treatment for Federal credit programs. Under this treatment, the budget records obligations and outlays up front, for the net cost to the Government (subsidy cost), rather than recording the cash flows year by year over the term of the loan. FCRA treatment allows the comparison of direct loans and loan guarantees to each other, and to other methods of delivering assistance, such as grants.

The cost of direct loans and loan guarantees, sometimes called the "subsidy cost," is estimated as the present value of expected payments to and from the public over the term of the loan, discounted using appropriate Treasury interest rates.[3] Similar to most other kinds of programs, agencies can make loans or guarantee loans only if the Congress has appropriated funds sufficient to cover the subsidy costs, or provided a limitation in an appropriations act on the amount of direct loans or loan guarantees that can be made.

The budget records the subsidy cost to the Government arising from direct loans and loan guarantees—the budget authority and outlays—in ***credit program accounts***. When a Federal agency disburses a direct loan or when a non-Federal lender disburses a loan guaranteed by a Federal agency, the program account disburses or outlays an amount equal to the estimated present value cost, or subsidy, to a non-budgetary credit ***financing account***. The financing accounts record the actual transactions with the public. For a few programs, the estimated subsidy cost is negative because the present value of expected Government collections exceeds the present value of expected payments to the public over the term of the loan. In such cases, the financing account pays the estimated subsidy cost to the program's negative subsidy receipt account, where it is recorded as an offsetting receipt. In a few cases, the offsetting receipts of credit accounts are dedicated to a special fund established for the program and are available for appropriation for the program.

The agencies responsible for credit programs must reestimate the subsidy cost of the outstanding portfolio of direct loans and loan guarantees each year. If the estimated cost increases, the program account makes an additional payment to the financing account equal to the change in cost. If the estimated cost decreases, the financing account pays the difference to the program's downward reestimate receipt account, where it is recorded as an offsetting receipt. The FCRA provides permanent indefinite appropriations to pay for upward reestimates.

If the Government modifies the terms of an outstanding direct loan or loan guarantee in a way that increases the cost as the result of a law or the exercise of administrative discretion under existing law, the program account records obligations for the increased cost and outlays the amount to the financing account. As with the original subsidy cost, agencies may incur modification costs only if the Congress has appropriated funds to cover them. A modification may also reduce costs, in which case the amounts are generally returned to the general fund, as the financing account makes a payment to the program's negative subsidy receipt account.

Credit financing accounts record all cash flows arising from direct loan obligations and loan guarantee commitments. Such cash flows include all cash flows to and from the public, including direct loan disbursements and repayments, loan guarantee default payments, fees, and recoveries on defaults. Financing accounts also record intragovernmental transactions, such as the receipt of subsidy cost payments from program accounts, borrowing and repayments of Treasury debt to finance program activities, and interest paid to or received from the Treasury. The cash flows of direct loans and of loan guarantees are recorded in separate financing accounts for programs that provide both types of credit. The budget totals exclude the transactions of the financing accounts because they are not a cost to the Government. However, since financing accounts record all credit cash flows to and from the public, they affect the means of financing a budget surplus or

[3] Present value is a standard financial concept that considers the time-value of money. That is, it accounts for the fact that a given sum of money is worth more today than the same sum would be worth in the future because interest can be earned.

deficit (see “Credit Financing Accounts” in the next section). The budget documents display the transactions of the financing accounts, together with the related program accounts, for information and analytical purposes.

The FCRA grandfathered the budgetary treatment of direct loan obligations and loan guarantee commitments made prior to 1992. The budget records these on a cash basis in ***credit liquidating accounts***, the same as they were recorded before FCRA was enacted. However, this exception ceases to apply if the direct loans or loan guarantees are modified as described above. In that case, the budget records the subsidy cost or savings of the modification, as appropriate, and begins to account for the associated transactions under FCRA treatment for direct loan obligations and loan guarantee commitments made in 1992 or later.

Under the authority provided in various acts, certain activities that do not meet the definition in FCRA of a direct loan or loan guarantee are reflected pursuant to FCRA. For example, the Emergency Economic Stabilization Act of 2008 (EESA) created the Troubled Asset Relief Program (TARP) under the Department of the Treasury, and authorized Treasury to purchase or guarantee troubled assets until October 3, 2010. Under the TARP, Treasury has purchased equity interests in financial institutions. Section 123 of the EESA provides the Administration the authority to treat these equity investments on a FCRA basis, recording outlays for the subsidy as is done for direct loans and loan guarantees. The budget reflects the cost to the Government of TARP direct loans, loan guarantees, and equity investments consistent with the FCRA and Section 123 of EESA, which requires an adjustment to the FCRA discount rate for market risks. Treasury equity purchases under the Small Business Lending Fund are treated pursuant to the FCRA, as provided by the Small Business Jobs Act of 2010.The 2009 increases to the International Monetary Fund (IMF) quota and New Arrangements to Borrow (NAB) enacted in the Supplemental Appropriations Act of 2009 were treated on a FCRA basis through 2015, with a risk adjustment to the discount rate, as directed in that Act. However, pursuant to Title IX of the Department of State, Foreign Operations, and Related Programs Appropriations Act, 2016, these transactions have been restated on a present value basis with a risk adjustment to the discount rate, and the associated FCRA accounts have been closed.

BUDGET DEFICIT OR SURPLUS AND MEANS OF FINANCING

When outlays exceed receipts, the difference is a deficit, which the Government finances primarily by borrowing. When receipts exceed outlays, the difference is a surplus, and the Government automatically uses the surplus primarily to reduce debt. The Federal debt held by the public is approximately the cumulative amount of borrowing to finance deficits, less repayments from surpluses, over the Nation’s history.

Borrowing is not exactly equal to the deficit, and debt repayment is not exactly equal to the surplus, because of the other transactions affecting borrowing from the public, or other means of financing, such as those discussed in this section. The factors included in the other means of financing can either increase or decrease the Government’s borrowing needs (or decrease or increase its ability to repay debt). For example, the change in the Treasury operating cash balance is a factor included in other means of financing. Holding receipts and outlays constant, increases in the cash balance increase the Government’s need to borrow or reduce the Government’s ability to repay debt, and decreases in the cash balance decrease the need to borrow or increase the ability to repay debt. In some years, the net effect of the other means of financing is minor relative to the borrowing or debt repayment; in other years, the net effect may be significant.

Borrowing and Debt Repayment

The budget treats borrowing and debt repayment as a means of financing, not as receipts and outlays. If borrowing were defined as receipts and debt repayment as outlays, the budget would always be virtually balanced by definition. This rule applies both to borrowing in the form of Treasury securities and to specialized borrowing in the form of agency securities. The rule reflects the commonsense understanding that lending or borrowing is just an exchange of financial assets of equal value—cash for Treasury securities—and so is fundamentally different from, say, paying taxes, which involve a net transfer of financial assets from taxpayers to the Government.

In 2016, the Government borrowed $1,051 billion from the public, bringing debt held by the public to $14,168 billion. This borrowing financed the $585 billion deficit in that year, partly offset by the net impacts of the other means of financing, such as changes in cash balances and other accounts discussed below.

In addition to selling debt to the public, the Treasury Department issues debt to Government accounts, primarily trust funds that are required by law to invest in Treasury securities. Issuing and redeeming this debt does not affect the means of financing, because these transactions occur between one Government account and another and thus do not raise or use any cash for the Government as a whole.

(See Chapter 4 of this volume, “Federal Borrowing and Debt,” for a fuller discussion of this topic.)

Exercise of Monetary Power

Seigniorage is the profit from coining money. It is the difference between the value of coins as money and their cost of production. Seigniorage reduces the Government’s need to borrow. Unlike the payment of taxes or other receipts, it does not involve a transfer of financial assets from the public. Instead, it arises from the exercise of the Government’s power to create money and the public’s desire to hold financial assets in the form of coins. Therefore, the budget excludes seigniorage from receipts and treats it as a means of financing other than borrowing from the public. The budget also treats proceeds from the sale of gold as a means of financing, since the value of gold is determined by its value as a monetary asset rather than as a commodity.

Credit Financing Accounts

The budget records the net cash flows of credit programs in credit financing accounts. These accounts include the transactions for direct loan and loan guarantee programs, as well as the equity purchase programs under TARP that are recorded on a credit basis consistent with Section 123 of EESA. Financing accounts also record equity purchases under the Small Business Lending Fund consistent with the Small Business Jobs Act of 2010. Credit financing accounts are excluded from the budget because they are not allocations of resources by the Government (see "Federal Credit" earlier in this chapter). However, even though they do not affect the surplus or deficit, they can either increase or decrease the Government's need to borrow. Therefore, they are recorded as a means of financing.

Financing account disbursements to the public increase the requirement for Treasury borrowing in the same way as an increase in budget outlays. Financing account receipts from the public can be used to finance the payment of the Government's obligations and therefore reduce the requirement for Treasury borrowing from the public in the same way as an increase in budget receipts.

Deposit Fund Account Balances

The Treasury uses non-budgetary accounts, called deposit funds, to record cash held temporarily until ownership is determined (for example, earnest money paid by bidders for mineral leases) or cash held by the Government as agent for others (for example, State and local income taxes withheld from Federal employees' salaries and not yet paid to the State or local government or amounts held in the Thrift Savings Fund, a defined contribution pension fund held and managed in a fiduciary capacity by the Government). Deposit fund balances may be held in the form of either invested or uninvested balances. To the extent that they are not invested, changes in the balances are available to finance expenditures and are recorded as a means of financing other than borrowing from the public. To the extent that they are invested in Federal debt, changes in the balances are reflected as borrowing from the public (in lieu of borrowing from other parts of the public) and are not reflected as a separate means of financing.

United States Quota Subscriptions to the International Monetary Fund (IMF)

The United States participates in the IMF through a quota subscription.[4] Financial transactions with the IMF are exchanges of monetary assets. When the IMF temporarily draws dollars from the U.S. quota, the United States simultaneously receives an equal, offsetting, interest-bearing, Special Drawing Right (SDR)-denominated claim in the form of an increase in the U.S. reserve position in the IMF. The U.S. reserve position in the IMF increases when the United States makes deposits in its account at the IMF when the IMF temporarily uses members' quota resources to make loans and decreases when the IMF returns funds to the United States as borrowing countries repay the IMF (and the cash flows from the reserve position to the Treasury letter of credit).

The budgetary treatment of appropriations for the IMF quota has changed over time. Prior to 1981, the transactions were not included in the budget because they are exchanges of cash for monetary assets (SDRs) of the same value. This was consistent with the scoring of other exchanges of monetary assets, such as deposits of cash in Treasury accounts at commercial banks.[5] As a result of an agreement reached with the Congress in 1980 that marked the start of appropriators' jurisdiction over changes to U.S. participation in the IMF quota (and later the NAB), the budget began to record budget authority for the quotas at the full value of the quota increase, but did not record outlays because of the continuing view that the transactions are exchanges of monetary assets of equal value. This scoring convention continued to be applied through 2008.[6] This approach worked as a method for scoring new legislation, but because it did not align well with existing budget concepts, it led to budget presentations and budgetary reporting that showed the full value of the quota increase as if it were a budgetary cost despite the reality that these resources involve an exchange of assets.

In 2009, Congress enacted increases in the U.S. participation in the quota and the NAB in the Supplemental Appropriations Act, 2009 (Public Law 111–32, Title XIV, International Monetary Programs) and directed that the increases in this Act be scored under the requirements of the Federal Credit Reform Act of 1990 (FCRA), with an adjustment to the discount rate for market risk. Accordingly, in the budget execution of the quota and the NAB increases provided by the Supplemental Appropriations Act, 2009, the Budget through 2015 reflected obligations and outlays for the estimated present value cost to the U.S. Government as if these transactions were direct loans under FCRA, plus an additional risk premium. While the FCRA model provided a framework for scoring new legislation, it did not reflect the actual circumstances of U.S. participation in the IMF quota and NAB, and budget execution and presentation were contrived to meet FRCA requirements with no real programmatic benefits.

Pursuant to Title IX of the Department of State, Foreign Operations, and Related Programs Appropriations Act,

[4] For a more detailed discussion of the history of the budgetary treatment of U.S. participation in the quota and NAB, see pages 139-141 in the Analytical Perspectives volume of the 2016 Budget As discussed in that volume, the budgetary treatment of the U.S. participation in the NAB is similar to the quota.

[5] The Report of the 1967 President's Commission on Budget Concepts notes that the IMF "is more like a bank in which funds are deposited and from which funds in the form of needed foreign currencies can be withdrawn."

[6] This budgetary treatment was also proposed again in the 2014 Budget, after the Supplemental Appropriations Act of 2009 was enacted.

2016, the estimated cost of the 2009 increases as well as the 2016 IMF quota increase and partial rescission of the NAB authorized by the Act are recorded on a present value basis with a fair value premium added to the Treasury discount rate, and the FCRA accounts associated with the 2009 increases have been closed. This statutory direction to measure cost on a present value basis provides an opportunity to rationalize the budgetary presentation of IMF quota and NAB increases enacted before 2009. From both the perspective of Treasury and the IMF, it is not practical to seek to distinguish and execute each enacted quota increase in different ways. The funds are commingled and executed as a single source and use of funding. Therefore, the budget presents all increases consistent with the present value scores for the 2009 and 2016 legislation. Specifically, the Budget records budget authority and outlays equal to the estimated present value, including the fair value adjustment to the discount rate, in the year that the quota increase is enacted, i.e., 2016. All concurrent and subsequent transactions between the Treasury and the IMF are treated as a non-budgetary means of financing, which do not directly affect receipts, outlays, or deficits. The only exception is that interest earnings on U.S. deposits in its IMF account are recorded as offsetting receipts. For transparency and to support future decisions concerning the U.S. level of participation in the IMF quota and the NAB, the Budget Appendix shows supplementary “below-the-lines” information about dollar value of the IMF quota, divided between the portion that is held in a Treasury letter of credit and the amount deposited in the U.S. reserve tranche at the IMF, and the NAB. The actual amounts are updated in the Budget to reflect changes in the dollar value of Special Drawing Rights that serve as the unit of measure for countries’ level of participation.

FEDERAL EMPLOYMENT

The budget includes information on civilian and military employment. It also includes information on related personnel compensation and benefits and on staffing requirements at overseas missions. Chapter 7 of this volume, “Strengthening the Federal Workforce,” provides employment levels measured in full-time equivalents (FTE). Agency FTEs are the measure of total hours worked by an agency’s Federal employees divided by the total number of one person’s compensable work hours in a fiscal year.

BASIS FOR BUDGET FIGURES

Data for the Past Year

The past year column (2016) generally presents the actual transactions and balances as recorded in agency accounts and as summarized in the central financial reports prepared by the Treasury Department for the most recently completed fiscal year. Occasionally, the budget reports corrections to data reported erroneously to Treasury but not discovered in time to be reflected in Treasury’s published data. In addition, in certain cases the Budget has a broader scope and includes financial transactions that are not reported to Treasury (see Chapter 24 of this volume, “Comparison of Actual to Estimated Totals,” for a summary of these differences).

Data for the Current Year

The current year column (2017) includes estimates of transactions and balances based on the amounts of budgetary resources that were available when the budget was prepared. In cases where the budget proposes policy changes effective in the current year, the data will also reflect the budgetary effect of those proposed changes.

Data for the Budget Year

The budget year column (2018) includes estimates of transactions and balances based on the amounts of budgetary resources that are estimated to be available, including new budget authority requested under current authorizing legislation, and amounts estimated to result from changes in authorizing legislation and tax laws.

The budget *Appendix* generally includes the appropriations language for the amounts proposed to be appropriated under current authorizing legislation. In a few cases, this language is transmitted later because the exact requirements are unknown when the budget is transmitted. The *Appendix* generally does not include appropriations language for the amounts that will be requested under proposed legislation; that language is usually transmitted later, after the legislation is enacted. Some tables in the budget identify the items for later transmittal and the related outlays separately. Estimates of the total requirements for the budget year include both the amounts requested with the transmittal of the budget and the amounts planned for later transmittal.

Data for the Outyears

The budget presents estimates for each of the nine years beyond the budget year (2019 through 2027) in order to reflect the effect of budget decisions on objectives and plans over a longer period.

Allowances

The budget may include lump-sum allowances to cover certain transactions that are expected to increase or decrease budget authority, outlays, or receipts but are not, for various reasons, reflected in the program details. For example, the budget might include an allowance to show the effect on the budget totals of a proposal that would affect many accounts by relatively small amounts, in order to avoid unnecessary detail in the presentations for the individual accounts.

Baseline

The budget baseline is an estimate of the receipts, outlays, and deficits or surpluses that would occur if no changes were made to current laws and policies during the period covered by the budget. The baseline assumes that receipts and mandatory spending, which generally are authorized on a permanent basis, will continue in the future consistent with current law and policy. The baseline assumes that the future funding for most discretionary programs, which generally are funded annually, will equal the most recently enacted appropriation, adjusted for inflation.

Baseline outlays represent the amount of resources that would be used by the Government over the period covered by the budget on the basis of laws currently enacted.

The baseline serves several useful purposes:

- It may warn of future problems, either for Government fiscal policy as a whole or for individual tax and spending programs.
- It may provide a starting point for formulating the President's Budget.
- It may provide a "policy-neutral" benchmark against which the President's Budget and alternative proposals can be compared to assess the magnitude of proposed changes.

The baseline rules in BBEDCA provide that funding for discretionary programs is inflated from the most recent enacted appropriations using specified inflation rates. Because the resulting funding would exceed the discretionary caps, the Administration's baseline includes adjustments that reduce overall discretionary funding to levels consistent with the caps. (Chapter 22 of this volume, "Current Services Estimates," provides more information on the baseline.)

PRINCIPAL BUDGET LAWS

The Budget and Accounting Act of 1921 created the core of the current Federal budget process. Before enactment of this law, there was no annual centralized budgeting in the Executive Branch. Federal Government agencies usually sent budget requests independently to congressional committees with no coordination of the various requests in formulating the Federal Government's budget. The Budget and Accounting Act required the President to coordinate the budget requests for all Government agencies and to send a comprehensive budget to the Congress. The Congress has amended the requirements many times and portions of the Act are codified in Title 31, United States Code. The major laws that govern the budget process are as follows:

Article 1, section 8, clause 1 of the Constitution, which empowers the Congress to collect taxes.

Article 1, section 9, clause 7 of the Constitution, which requires appropriations in law before money may be spent from the Treasury and the publication of a regular statement of the receipts and expenditures of all public money.

Antideficiency Act (codified in Chapters 13 and 15 of Title 31, United States Code), which prescribes rules and procedures for budget execution.

Balanced Budget and Emergency Deficit Control Act of 1985, as amended, which establishes limits on discretionary spending and provides mechanisms for enforcing discretionary spending limits.

Chapter 11 of Title 31, United States Code, which prescribes procedures for submission of the President's budget and information to be contained in it.

Congressional Budget and Impoundment Control Act of 1974 (Public Law 93–344), as amended. This Act comprises the:

- ***Congressional Budget Act of 1974***, as amended, which prescribes the congressional budget process; and
- ***Impoundment Control Act of 1974***, which controls certain aspects of budget execution.
- ***Federal Credit Reform Act of 1990, as amended (2 USC 661–661f),*** which the Budget Enforcement Act of 1990 included as an amendment to the Congressional Budget Act to prescribe the budget treatment for Federal credit programs.

Chapter 31 of Title 31, United States Code, which provides the authority for the Secretary of the Treasury to issue debt to finance the deficit and establishes a statutory limit on the level of the debt.

Chapter 33 of Title 31, United States Code, which establishes the Department of the Treasury as the authority for making disbursements of public funds, with the authority to delegate that authority to executive agencies in the interests of economy and efficiency.

Government Performance and Results Act of 1993 (Public Law 103–62, as amended) which emphasizes managing for results. It requires agencies to prepare strategic plans, annual performance plans, and annual performance reports.

Statutory Pay-As-You-Go Act of 2010, which establishes a budget enforcement mechanism generally requiring that direct spending and revenue legislation enacted into law not increase the deficit.

GLOSSARY OF BUDGET TERMS

Account refers to a separate financial reporting unit used by the Federal Government to record budget authority, outlays and income for budgeting or management information purposes as well as for accounting purposes. All budget (and off-budget) accounts are classified as being either expenditure or receipt accounts and by fund group. Budget (and off-budget) transactions fall within either of two fund group: (1) Federal funds and (2) trust funds. (Cf. Federal funds group and trust funds group.)

Accrual method of measuring cost means an accounting method that records cost when the liability is incurred. As applied to Federal employee retirement benefits, accrual costs are recorded when the benefits are earned rather than when they are paid at some time in the future. The accrual method is used in part to provide data that assists in agency policymaking, but not used in presenting the overall budget of the United States Government.

Advance appropriation means appropriations of new budget authority that become available one or more fiscal years beyond the fiscal year for which the appropriation act was passed.

Advance funding means appropriations of budget authority provided in an appropriations act to be used, if necessary, to cover obligations incurred late in the fiscal year for benefit payments in excess of the amount specifically appropriated in the act for that year, where the budget authority is charged to the appropriation for the program for the fiscal year following the fiscal year for which the appropriations act is passed.

Agency means a department or other establishment of the Government.

Allowance means a lump-sum included in the budget to represent certain transactions that are expected to increase or decrease budget authority, outlays, or receipts but that are not, for various reasons, reflected in the program details.

Balanced Budget and Emergency Deficit Control Act of 1985 (BBEDCA) refers to legislation that altered the budget process, primarily by replacing the earlier fixed targets for annual deficits with a Pay-As-You-Go requirement for new tax or mandatory spending legislation and with caps on annual discretionary funding. The Statutory Pay-As-You-Go Act of 2010, which is a standalone piece of legislation that did not directly amend the BBEDCA, reinstated a statutory pay-as-you-go rule for revenues and mandatory spending legislation, and the Budget Control Act of 2011, which did amend BBEDCA, reinstated discretionary caps on budget authority.

Balances of budget authority means the amounts of budget authority provided in previous years that have not been outlayed.

Baseline means a projection of the estimated receipts, outlays, and deficit or surplus that would result from continuing current law or current policies through the period covered by the budget.

Budget means the Budget of the United States Government, which sets forth the President's comprehensive financial plan for allocating resources and indicates the President's priorities for the Federal Government.

Budget authority (BA) means the authority provided by law to incur financial obligations that will result in outlays. (For a description of the several forms of budget authority, see "Budget Authority and Other Budgetary Resources" earlier in this chapter.)

Budget Control Act of 2011 refers to legislation that, among other things, amended BBEDCA to reinstate discretionary spending limits on budget authority through 2021 and restored the process for enforcing those spending limits. The legislation also increased the statutory debt ceiling; created a Joint Select Committee on Deficit Reduction that was instructed to develop a bill to reduce the Federal deficit by at least $1.5 trillion over a 10-year period; and provided a process to implement alternative spending reductions in the event that legislation achieving at least $1.2 trillion of deficit reduction was not enacted.

Budget resolution—see concurrent resolution on the budget.

Budget totals mean the totals included in the budget for budget authority, outlays, receipts, and the surplus or deficit. Some presentations in the budget distinguish on-budget totals from off-budget totals. On-budget totals reflect the transactions of all Federal Government entities except those excluded from the budget totals by law. Off-budget totals reflect the transactions of Government entities that are excluded from the on-budget totals by law. Under current law, the off-budget totals include the Social Security trust funds (Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds) and the Postal Service Fund. The budget combines the on- and off-budget totals to derive unified (i.e. consolidated) totals for Federal activity.

Budget year refers to the fiscal year for which the budget is being considered, that is, with respect to a session of Congress, the fiscal year of the government that starts on October 1 of the calendar year in which that session of Congress begins.

Budgetary resources mean amounts available to incur obligations in a given year. The term comprises new budget authority and unobligated balances of budget authority provided in previous years.

Cap means the legal limits for each fiscal year under BBEDCA on the budget authority and outlays (only if applicable) provided by discretionary appropriations.

Cap adjustment means either an increase or a decrease that is permitted to the statutory cap limits for each fiscal year under BBEDCA on the budget authority and outlays (only if applicable) provided by discretionary appropriations only if certain conditions are met. These conditions may include providing for a base level of funding, a designation of the increase or decrease by the Congress, (and in some circumstances, the President) pursuant to a section of the BBEDCA, or a change in concepts and definitions of funding under the cap. Changes in concepts and definitions require consultation with the Congressional Appropriations and Budget Committees.

Cash equivalent transaction means a transaction in which the Government makes outlays or receives collections in a form other than cash or the cash does not accurately measure the cost of the transaction. (For examples, see the section on "Outlays" earlier in this chapter.)

Collections mean money collected by the Government that the budget records as a governmental receipt, an offsetting collection, or an offsetting receipt.

Concurrent resolution on the budget refers to the concurrent resolution adopted by the Congress to set budgetary targets for appropriations, mandatory spending legislation, and tax legislation. These concurrent resolutions are required by the Congressional Budget Act of 1974, and are generally adopted annually.

Continuing resolution means an appropriations act that provides for the ongoing operation of the Government in the absence of enacted appropriations.

Cost refers to legislation or administrative actions that increase outlays or decrease receipts. (Cf. savings.)

Credit program account means a budget account that receives and obligates appropriations to cover the subsidy cost of a direct loan or loan guarantee and disburses the subsidy cost to a financing account.

Current services estimate—see Baseline.

Debt held by the public means the cumulative amount of money the Federal Government has borrowed from the public and not repaid.

Debt held by the public net of financial assets means the cumulative amount of money the Federal Government has borrowed from the public and not repaid, minus the current value of financial assets such as loan assets, bank deposits, or private-sector securities or equities held by the Government and plus the current value of financial liabilities other than debt.

Debt held by Government accounts means the debt the Treasury Department owes to accounts within the Federal Government. Most of it results from the surpluses of the Social Security and other trust funds, which are required by law to be invested in Federal securities.

Debt limit means the maximum amount of Federal debt that may legally be outstanding at any time. It includes both the debt held by the public and the debt held by Government accounts, but without accounting for offsetting financial assets. When the debt limit is reached, the Government cannot borrow more money until the Congress has enacted a law to increase the limit.

Deficit means the amount by which outlays exceed receipts in a fiscal year. It may refer to the on-budget, off-budget, or unified budget deficit.

Direct loan means a disbursement of funds by the Government to a non-Federal borrower under a contract that requires the repayment of such funds with or without interest. The term includes the purchase of, or participation in, a loan made by another lender. The term also includes the sale of a Government asset on credit terms of more than 90 days duration as well as financing arrangements for other transactions that defer payment for more than 90 days. It also includes loans financed by the Federal Financing Bank (FFB) pursuant to agency loan guarantee authority. The term does not include the acquisition of a federally guaranteed loan in satisfaction of default or other guarantee claims or the price support "loans" of the Commodity Credit Corporation. (Cf. loan guarantee.)

Direct spending—see mandatory spending.

Disaster funding means a discretionary appropriation that is enacted that the Congress designates as being for disaster relief. Such amounts are a cap adjustment to the limits on discretionary spending under BBEDCA. The total adjustment for this purpose cannot exceed a ceiling for a particular year that is defined as the total of the average funding provided for disaster relief over the previous 10 years (excluding the highest and lowest years) and the unused amount of the prior year's ceiling (excluding the portion of the prior year's ceiling that was itself due to any unused amount from the year before). Disaster relief is defined as activities carried out pursuant to a determination under section 102(2) of the Robert T. Stafford Disaster Relief and Emergency Assistance Act.

Discretionary spending means budgetary resources (except those provided to fund mandatory spending programs) provided in appropriations acts. (Cf. mandatory spending.)

Emergency requirement means an amount that the Congress has designated as an emergency requirement. Such amounts are not included in the estimated budgetary effects of PAYGO legislation under the requirements of the Statutory Pay-As-You-Go Act of 2010, if they are mandatory or receipts. Such a discretionary appropriation that is subsequently designated by the President as an emergency requirement results in a cap adjustment to the limits on discretionary spending under BBEDCA.

Entitlement refers to a program in which the Federal Government is legally obligated to make payments or provide aid to any person who, or State or local government that, meets the legal criteria for eligibility. Examples include Social Security, Medicare, Medicaid, and Food Stamps.

Federal funds group refers to the moneys collected and spent by the Government through accounts other than those designated as trust funds. Federal funds include general, special, public enterprise, and intragovernmental funds. (Cf. trust funds group.)

Financing account means a non-budgetary account (an account whose transactions are excluded from the budget totals) that records all of the cash flows resulting from post-1991 direct loan obligations or loan guarantee commitments. At least one financing account is associated with each credit program account. For programs that make both direct loans and loan guarantees, separate financing accounts are required for direct loan cash flows and for loan guarantee cash flows. (Cf. liquidating account.)

Fiscal year means the Government's accounting period. It begins on October 1st and ends on September 30th, and is designated by the calendar year in which it ends.

Forward funding means appropriations of budget authority that are made for obligation starting in the last quarter of the fiscal year for the financing of ongoing grant programs during the next fiscal year.

General fund means the accounts in which are recorded governmental receipts not earmarked by law for a specific purpose, the proceeds of general borrowing, and the expenditure of these moneys.

Government sponsored enterprises mean private enterprises that were established and chartered by the Federal Government for public policy purposes. They are classified as non-budgetary and not included in the Federal budget because they are private companies, and their securities are not backed by the full faith and credit of the Federal Government. However, the budget presents statements of financial condition for certain Government sponsored enterprises such as the Federal National Mortgage Association. (Cf. off-budget.)

Intragovernmental fund—see Revolving fund.

Liquidating account means a budget account that records all cash flows to and from the Government resulting from pre-1992 direct loan obligations or loan guarantee commitments. (Cf. financing account.)

Loan guarantee means any guarantee, insurance, or other pledge with respect to the payment of all or a part of the principal or interest on any debt obligation of a non-Federal borrower to a non-Federal lender. The term does not include the insurance of deposits, shares, or other withdrawable accounts in financial institutions. (Cf. direct loan.)

Mandatory spending means spending controlled by laws other than appropriations acts (including spending for entitlement programs) and spending for the Supplemental Nutrition Assistance Program, formerly food stamps. Although the Statutory Pay-As-You-Go Act of 2010 uses the term direct spending to mean this, mandatory spending is commonly used instead. (Cf. discretionary spending.)

Means of financing refers to borrowing, the change in cash balances, and certain other transactions involved in financing a deficit. The term is also used to refer to the debt repayment, the change in cash balances, and certain other transactions involved in using a surplus. By definition, the means of financing are not treated as receipts or outlays and so are non-budgetary.

Obligated balance means the cumulative amount of budget authority that has been obligated but not yet outlayed. (Cf. unobligated balance.)

Obligation means a binding agreement that will result in outlays, immediately or in the future. Budgetary resources must be available before obligations can be incurred legally.

Off-budget refers to transactions of the Federal Government that would be treated as budgetary had the Congress not designated them by statute as "off-budget." Currently, transactions of the Social Security trust funds and the Postal Service are the only sets of transactions that are so designated. The term is sometimes used more broadly to refer to the transactions of private enterprises that were established and sponsored by the Government, most especially "Government sponsored enterprises" such as the Federal Home Loan Banks. (Cf. budget totals.)

Offsetting collections mean collections that, by law, are credited directly to expenditure accounts and deducted from gross budget authority and outlays of the expenditure account, rather than added to receipts. Usually, they are authorized to be spent for the purposes of the account without further action by the Congress. They result from business-like transactions with the public, including payments from the public in exchange for goods and services, reimbursements for damages, and gifts or donations of money to the Government and from intragovernmental transactions with other Government accounts. The authority to spend offsetting collections is a form of budget authority. (Cf. receipts and offsetting receipts.)

Offsetting receipts mean collections that are credited to offsetting receipt accounts and deducted from gross budget authority and outlays, rather than added to receipts. They are not authorized to be credited to expenditure accounts. The legislation that authorizes the offsetting receipts may earmark them for a specific purpose and either appropriate them for expenditure for that purpose or require them to be appropriated in annual appropriation acts before they can be spent. Like offsetting collections, they result from business-like transactions or market-oriented activities with the public, including payments from the public in exchange for goods and services, reimbursements for damages, and gifts or donations of money to the Government and from intragovernmental transactions with other Government accounts. (Cf. receipts, undistributed offsetting receipts, and offsetting collections.)

On-budget refers to all budgetary transactions other than those designated by statute as off-budget (Cf. budget totals.)

Outlay means a payment to liquidate an obligation (other than the repayment of debt principal or other disbursements that are "means of financing" transactions). Outlays generally are equal to cash disbursements, but also are recorded for cash-equivalent transactions, such as the issuance of debentures to pay insurance claims, and in a few cases are recorded on an accrual basis such as interest on public issues of the public debt. Outlays are the measure of Government spending.

Outyear estimates mean estimates presented in the budget for the years beyond the budget year of budget authority, outlays, receipts, and other items (such as debt).

Overseas Contingency Operations/Global War on Terrorism (OCO/GWOT) means a discretionary appropriation that is enacted that the Congress and, subsequently, the President have so designated on an account by account basis. Such a discretionary appropriation that is designated as OCO/GWOT results in a cap adjustment to the limits on discretionary spending under BBEDCA. Funding for these purposes has most recently been associated with the wars in Iraq and Afghanistan.

Pay-as-you-go (PAYGO) refers to requirements of the Statutory Pay-As-You-Go Act of 2010 that result in a sequestration if the estimated combined result of new legislation affecting direct spending or revenue increases the on-budget deficit relative to the baseline, as of the end of a congressional session.

Public enterprise fund—see Revolving fund.

Reappropriation means a provision of law that extends into a new fiscal year the availability of unobligated amounts that have expired or would otherwise expire.

Receipts mean collections that result from the Government's exercise of its sovereign power to tax or otherwise compel payment. They are compared to outlays in calculating a surplus or deficit. (Cf. offsetting collections and offsetting receipts.)

Revolving fund means a fund that conducts continuing cycles of business-like activity, in which the fund charges for the sale of products or services and uses the proceeds to finance its spending, usually without requirement for annual appropriations. There are two types of revolving funds: Public enterprise funds, which conduct business-like operations mainly with the public, and intragovernmental revolving funds, which conduct business-like operations mainly within and between Government agencies. (Cf. special fund and trust fund.)

Savings refers to legislation or administrative actions that decrease outlays or increase receipts. (Cf. cost.)

Scorekeeping means measuring the budget effects of legislation, generally in terms of budget authority, receipts, and outlays, for purposes of measuring adherence to the Budget or to budget targets established by the Congress, as through agreement to a Budget Resolution.

Sequestration means the cancellation of budgetary resources. The Statutory Pay-As-You-Go Act of 2010 requires such cancellations if revenue or direct spending legislation is enacted that, in total, increases projected deficits or reduces projected surpluses relative to the baseline. The Balanced Budget and Emergency Deficit Control Act of 1985, as amended, requires such cancellations if discretionary appropriations exceed the statutory limits on discretionary spending.

Special fund means a Federal fund account for receipts or offsetting receipts earmarked for specific purposes and the expenditure of these receipts. (Cf. revolving fund and trust fund.)

Statutory Pay-As-You-Go Act of 2010 refers to legislation that reinstated a statutory pay-as-you-go requirement for new tax or mandatory spending legislation. The law is a standalone piece of legislation that cross-references BBEDCA but does not directly amend that legislation. This is a permanent law and does not expire.

Subsidy means the estimated long-term cost to the Government of a direct loan or loan guarantee, calculated on a net present value basis, excluding administrative costs and any incidental effects on governmental receipts or outlays.

Surplus means the amount by which receipts exceed outlays in a fiscal year. It may refer to the on-budget, off-budget, or unified budget surplus.

Supplemental appropriation means an appropriation enacted subsequent to a regular annual appropriations act, when the need for additional funds is too urgent to be postponed until the next regular annual appropriations act.

Trust fund refers to a type of account, designated by law as a trust fund, for receipts or offsetting receipts dedicated to specific purposes and the expenditure of these receipts. Some revolving funds are designated as trust funds, and these are called trust revolving funds. (Cf. special fund and revolving fund.)

Trust funds group refers to the moneys collected and spent by the Government through trust fund accounts. (Cf. Federal funds group.)

Undistributed offsetting receipts mean offsetting receipts that are deducted from the Government-wide totals for budget authority and outlays instead of being offset against a specific agency and function. (Cf. offsetting receipts.)

Unified budget includes receipts from all sources and outlays for all programs of the Federal Government, including both on- and off-budget programs. It is the most comprehensive measure of the Government's annual finances.

Unobligated balance means the cumulative amount of budget authority that remains available for obligation under law in unexpired accounts. The term "expired balances available for adjustment only" refers to unobligated amounts in expired accounts.

User charges are charges assessed for the provision of Government services and for the sale or use of Government goods or resources. The payers of the user charge must be limited in the authorizing legislation to those receiving special benefits from, or subject to regulation by, the program or activity beyond the benefits received by the general public or broad segments of the public (such as those who pay income taxes or custom duties).

9. COVERAGE OF THE BUDGET

The Federal budget is the central instrument of national policy making. It is the Government's financial plan for proposing and deciding the allocation of resources to serve national objectives. The budget provides information on the cost and scope of Federal activities to inform decisions and to serve as a means to control the allocation of resources. When enacted, it establishes the level of public goods and services provided by the Government.

Federal Government activities can be either "budgetary" or "non-budgetary." Those activities that involve direct and measurable allocation of Federal resources are budgetary. The payments to and from the public resulting from budgetary activities are included in the budget's accounting of outlays and receipts. Federal activities that do not involve direct and measurable allocation of Federal resources are non-budgetary and are not included in the budget's accounting of outlays and receipts. More detailed information about outlays and receipts may be found in Chapter 8, "Budget Concepts," of this volume.

The budget documents include information on some non-budgetary activities because they can be important instruments of Federal policy and provide insight into the scope and nature of Federal activities. For example, as discussed in more detail later, the budget documents show the transactions of the Thrift Savings Program (TSP), a collection of investment funds managed by the Federal Retirement Thrift Investment Board (FRTIB). Despite the fact that the FRTIB is budgetary and one of the TSP funds is invested entirely in Federal securities, the transactions of these funds are non-budgetary because current and retired Federal employees own the funds. The Government manages these funds only in a fiduciary capacity.

The budget also includes information on cash flows that are a means of financing Federal activity, such as for credit financing accounts. However, to avoid double-counting, means of financing amounts are not included in the estimates of outlays or receipts double counting because the costs of the underlying Federal activities are already reflected in the deficit.[1] Similarly, while budget totals of outlays and receipts do not include non-Federal costs resulting from Federal regulation, the Office of Management and Budget (OMB) annually reports on the costs and benefits of Federal regulation to non-Federal entities.[2] This chapter provides details about the budgetary and non-budgetary activities of the Federal Government.

Budgetary Activities

The Federal Government has used the unified budget concept—which consolidates outlays and receipts from Federal funds and trust funds, including the Social Security trust funds—since 1968, starting with the 1969 Budget. The 1967 President's Commission on Budget Concepts (the Commission) recommended the change to include the financial transactions of all of the Federal Government's programs and agencies. Thus, the budget includes information on the financial transactions of all 15 Executive departments, all independent agencies (from all three branches of Government), and all Government corporations.[3]

The budget reflects the legal distinction, described in more detail below, between on-budget activities and off-budget activities by showing outlays and receipts for both types of activities separately. Although there is a legal distinction between on-budget and off-budget activities, conceptually there is no difference between the two. Off-budget Federal activities reflect the same kinds of governmental roles as on-budget activities and result in outlays and receipts. Like on-budget activities, the Government funds and controls off-budget activities. The "unified budget" reflects the conceptual similarity between on-budget and off-budget activities by showing combined totals of outlays and receipts for both.

Many Government corporations are entities with business-type operations that charge the public for services at prices intended to allow the entity to be self-sustaining; although, some operate at a loss in order to provide subsidies to specific recipients. Often these entities are more independent than other agencies and have limited exemptions from certain Federal personnel requirements to allow for flexibility.

All accounts in Table 26-1, "Federal Budget by Agency and Account," in the supplemental materials to this volume are budgetary.[4] The majority of budgetary accounts are associated with the departments or other entities that are clearly Federal agencies. Some budgetary accounts reflect Government payments to entities that the Government created or chartered as private or non-Federal entities. Some of these entities receive

[1] For more information on means of financing, see the "Budget Deficit or Surplus and Means of Financing" section of Chapter 8, "Budget Concepts," in this volume.

[2] For the 2016 draft of the "Report to Congress on the Benefits and Costs of Federal Regulation and Unfunded Mandates on State, Local and Tribal Entities," see *https://obamawhitehouse.archives.gov/sites/default/files/omb/assets/legislative_reports/draft_2016_cost_benefit_report_12_14_2016_2.pdf*.

[3] Government corporations are Government entities that are defined as corporations pursuant to the Government Corporation Control Act, as amended (31 U.S.C. 9101), or elsewhere in law. Examples include the Commodity Credit Corporation, the Export-Import Bank of the United States, the Federal Crop Insurance Corporation, the Federal Deposit Insurance Corporation, the Millennium Challenge Corporation, the Overseas Private Investment Corporation, the Pension Benefit Guaranty Corporation, the Tennessee Valley Authority, the African Development Foundation (22 U.S.C. 290h-6), the Inter-American Foundation (22 U.S.C. 290f), the Presidio Trust (16 U.S.C. 460bb note), and the Valles Caldera Trust (16 U.S.C. 698v-4).

[4] Table 26-1 can be found at: *http://www.budget.gov/budget/analytical_perspectives.*

Table 9–1. COMPARISON OF TOTAL, ON-BUDGET, AND OFF-BUDGET TRANSACTIONS [1]
(In billions of dollars)

Year	Receipts			Outlays			Surplus or deficit (–)		
	Total	On-budget	Off-budget	Total	On-budget	Off-budget	Total	On-budget	Off-budget
1980	517.1	403.9	113.2	590.9	477.0	113.9	–73.8	–73.1	-0.7
1981	599.3	469.1	130.2	678.2	543.0	135.3	–79.0	–73.9	-5.1
1982	617.8	474.3	143.5	745.7	594.9	150.9	–128.0	–120.6	-7.4
1983	600.6	453.2	147.3	808.4	660.9	147.4	–207.8	–207.7	-0.1
1984	666.4	500.4	166.1	851.8	685.6	166.2	–185.4	–185.3	-0.1
1985	734.0	547.9	186.2	946.3	769.4	176.9	–212.3	–221.5	9.2
1986	769.2	568.9	200.2	990.4	806.8	183.5	–221.2	–237.9	16.7
1987	854.3	640.9	213.4	1,004.0	809.2	194.8	–149.7	–168.4	18.6
1988	909.2	667.7	241.5	1,064.4	860.0	204.4	–155.2	–192.3	37.1
1989	991.1	727.4	263.7	1,143.7	932.8	210.9	–152.6	–205.4	52.8
1990	1,032.0	750.3	281.7	1,253.0	1,027.9	225.1	–221.0	–277.6	56.6
1991	1,055.0	761.1	293.9	1,324.2	1,082.5	241.7	–269.2	–321.4	52.2
1992	1,091.2	788.8	302.4	1,381.5	1,129.2	252.3	–290.3	–340.4	50.1
1993	1,154.3	842.4	311.9	1,409.4	1,142.8	266.6	–255.1	–300.4	45.3
1994	1,258.6	923.5	335.0	1,461.8	1,182.4	279.4	–203.2	–258.8	55.7
1995	1,351.8	1,000.7	351.1	1,515.7	1,227.1	288.7	–164.0	–226.4	62.4
1996	1,453.1	1,085.6	367.5	1,560.5	1,259.6	300.9	–107.4	–174.0	66.6
1997	1,579.2	1,187.2	392.0	1,601.1	1,290.5	310.6	–21.9	–103.2	81.4
1998	1,721.7	1,305.9	415.8	1,652.5	1,335.9	316.6	69.3	–29.9	99.2
1999	1,827.5	1,383.0	444.5	1,701.8	1,381.1	320.8	125.6	1.9	123.7
2000	2,025.2	1,544.6	480.6	1,789.0	1,458.2	330.8	236.2	86.4	149.8
2001	1,991.1	1,483.6	507.5	1,862.8	1,516.0	346.8	128.2	–32.4	160.7
2002	1,853.1	1,337.8	515.3	2,010.9	1,655.2	355.7	–157.8	–317.4	159.7
2003	1,782.3	1,258.5	523.8	2,159.9	1,796.9	363.0	–377.6	–538.4	160.8
2004	1,880.1	1,345.4	534.7	2,292.8	1,913.3	379.5	–412.7	–568.0	155.2
2005	2,153.6	1,576.1	577.5	2,472.0	2,069.7	402.2	–318.3	–493.6	175.3
2006	2,406.9	1,798.5	608.4	2,655.1	2,233.0	422.1	–248.2	–434.5	186.3
2007	2,568.0	1,932.9	635.1	2,728.7	2,275.0	453.6	–160.7	–342.2	181.5
2008	2,524.0	1,865.9	658.0	2,982.5	2,507.8	474.8	–458.6	–641.8	183.3
2009	2,105.0	1,451.0	654.0	3,517.7	3,000.7	517.0	–1,412.7	–1,549.7	137.0
2010	2,162.7	1,531.0	631.7	3,457.1	2,902.4	554.7	–1,294.4	–1,371.4	77.0
2011	2,303.5	1,737.7	565.8	3,603.1	3,104.5	498.6	–1,299.6	–1,366.8	67.2
2012	2,450.0	1,880.5	569.5	3,536.9	3,029.4	507.6	–1,087.0	–1,148.9	61.9
2013	2,775.1	2,101.8	673.3	3,454.6	2,820.8	633.8	–679.5	–719.0	39.5
2014	3,021.5	2,285.9	735.6	3,506.1	2,800.0	706.1	–484.6	–514.1	29.5
2015	3,249.9	2,479.5	770.4	3,688.4	2,945.3	743.1	–438.5	–465.8	27.3
2016	3,268.0	2,457.8	810.2	3,852.6	3,077.9	774.7	–584.7	–620.2	35.5
2017 estimate	3,459.7	2,602.3	857.4	4,062.2	3,246.7	815.5	–602.5	–644.4	41.9
2018 estimate	3,654.3	2,762.1	892.2	4,094.5	3,227.8	866.7	–440.2	–465.7	25.5
2019 estimate	3,813.7	2,882.4	931.3	4,339.6	3,416.0	923.6	–525.9	–533.6	7.7
2020 estimate	3,982.1	3,010.3	971.8	4,470.1	3,482.3	987.8	–488.0	–472.0	-15.9
2021 estimate	4,160.9	3,134.1	1,026.8	4,616.7	3,564.7	1,052.0	–455.8	–430.6	-25.2
2022 estimate	4,390.1	3,308.8	1,081.3	4,831.7	3,708.1	1,123.6	–441.7	–399.3	-42.4

[1] Off-budget transactions consist of the Social Security trust funds and the Postal Service fund.

all or a majority of their funding from the Government. These include the Corporation for Public Broadcasting, Gallaudet University, Howard University, the Legal Services Corporation, the National Railroad Passenger Corporation (Amtrak), the Smithsonian Institution, the State Justice Institute, and the United States Institute of Peace. A related example is the Standard Setting Board, which is not a Federally created entity but since 2003 has received a majority of funding through a federally mandated assessment on public companies under the

Sarbanes-Oxley Act. Although the Federal payments to these entities are budgetary, the entities themselves are non-budgetary.

Whether the Government created or chartered an entity does not alone determine its budgetary status. The Commission recommended that the budget be comprehensive but it also recognized that proper budgetary classification required weighing all relevant factors regarding establishment, ownership, and control of an entity while erring on the side of inclusiveness. Generally, entities that are primarily Government owned or controlled are classified as budgetary. OMB determines the budgetary classification of entities in consultation with the Congressional Budget Office (CBO) and the Budget Committees of the Congress.

One recent example of a budgetary classification issue was for the Puerto Rico financial oversight board, created in June 2016 by the Puerto Rico Oversight, Management, and Economic Stability Act (PL 114-187). By statute, this oversight board is not a department, agency, establishment, or instrumentality of the Federal Government, but is an entity within the territorial government financed entirely by the territorial government. Because the flow of funds from the territory to the oversight board is mandated by Federal law, the budget reflects the allocation of resources by the territorial government to the new territorial entity as a receipt from the territorial government and an equal outlay to the oversight board, with net zero deficit impact. Because the oversight board itself is not a Federal entity, its operations are not included in the budget.

Another example involved the National Association of Registered Agents and Brokers (NARAB). NARAB allows for the adoption and application of insurance licensing, continuing education, and other nonresident producer qualification requirements on a multi-state basis. In other words, NARAB streamlines the ability of a nonresident insurer to become a licensed agent in another State. In exchange for providing enhanced market access, NARAB collects fees from its members. The Terrorism Risk Insurance Reauthorization Act of 2015 established the association. In addition to being statutorily established, which in itself is an indication that the entity is governmental, NARAB has a board of directors appointed by the President and confirmed by the Senate. It must also submit bylaws and an annual report to the Department of the Treasury and its primary function involves exercising a regulatory function.

Off-budget Federal activities.—Despite the Commission's recommendation that the budget be comprehensive, every year since 1971 at least one Federal program or agency has been presented as off-budget because of a legal requirement.[5] The Government funds such off-budget Federal activities and administers them according to Federal legal requirements. However, their net costs are excluded, by law, from the rest of the budget totals, also known as the "on-budget" totals.

Off-budget Federal activities currently consist of the U.S. Postal Service and the two Social Security trust funds: Old-Age and Survivors Insurance and Disability Insurance. Social Security has been classified as off-budget since 1986 and the Postal Service has been classified as off-budget since 1990.[6] Other activities that had been designated in law as off-budget at various times before 1986 have been classified as on-budget by law since at least 1985 as a result of the Balanced Budget and Emergency Deficit Control Act of 1985 (Public Law 99–177). Activities that were off-budget at one time but that are now on-budget are classified as on-budget for all years in historical budget data.

Social Security is the largest single program in the unified budget and it is classified by law as off-budget; as a result, the off-budget accounts constitute a significant part of total Federal spending and receipts. Table 9–1 divides total Federal Government outlays, receipts, and the surplus or deficit between on-budget and off-budget amounts. Within this table, the Social Security and Postal Service transactions are classified as off-budget for all years to provide a consistent comparison over time.

Non-Budgetary Activities

The Government characterizes some important Government activities as non-budgetary because they do not involve the direct allocation of resources.[7] These activities can affect budget outlays or receipts even though they have non-budgetary components.

Federal credit programs: budgetary and non-budgetary transactions.—Federal credit programs make direct loans or guarantee private loans to non-Federal borrowers. The Federal Credit Reform Act of 1990 (FCRA), as amended by the Balanced Budget Act of 1997, established the current budgetary treatment for credit programs. Under FCRA, the budgetary cost of a credit program, known as the "subsidy cost," is the estimated lifetime cost to the Government of a loan or a loan guarantee on a net present value basis, excluding administrative costs.

Outlays equal to the subsidy cost are recorded in the budget up front, as they are incurred—for example, when a loan is made or guaranteed. Credit program cash flows

[5] While the term "off-budget" is sometimes used colloquially to mean non-budgetary, the term has a meaning distinct from non-budgetary. Off-budget activities would be considered budgetary, absent legal requirement to exclude these activities from the budget totals.

[6] See 42 U.S.C. 911, and 39 U.S.C. 2009a, respectively. The off-budget Postal Service accounts consist of the Postal Service Fund, which is classified as a mandatory account, and the Office of the Inspector General and the Postal Regulatory Commission, both of which are classified as discretionary accounts. The Postal Service Retiree Health Benefits Fund is an on-budget mandatory account with the Office of Personnel Management. The off-budget Social Security accounts consist of the Federal Old-Age and Survivors Insurance trust fund and the Federal Disability Insurance trust fund, both of which have mandatory and discretionary funding.

[7] Tax expenditures, which are discussed in Chapter 13 of this volume, are an example of Government activities that could be characterized as either budgetary or non-budgetary. Tax expenditures refer to the reduction in tax receipts resulting from the special tax treatment accorded certain private activities. Because tax expenditures reduce tax receipts and receipts are budgetary, tax expenditures clearly have budgetary effects. However, the size and composition of tax expenditures are not explicitly recorded in the budget as outlays or as negative receipts and, for this reason, tax expenditures might be considered a special case of non-budgetary transactions.

to and from the public are recorded in non-budgetary financing accounts and the information is included in budget documents to provide insight into the program size and costs. For more information about the mechanisms of credit programs, see Chapter 8 of this volume, "Budget Concepts." More detail on credit programs is in Chapter 19 of this volume, "Credit and Insurance."

Deposit funds.—Deposit funds are non-budgetary accounts that record amounts held by the Government temporarily until ownership is determined (such as earnest money paid by bidders for mineral leases) or held by the Government as an agent for others (such as State income taxes withheld from Federal employees' salaries and not yet paid to the States). The largest deposit fund is the Government Securities Investment Fund, also known as the G-Fund, which is part of the TSP, the Government's defined contribution retirement plan. The Federal Retirement Thrift Investment Board manages the fund's investment for Federal employees who participate in the TSP (which is similar to private-sector 401(k) plans). The Department of the Treasury holds the G-Fund assets, which are the property of Federal employees, only in a fiduciary capacity; the transactions of the Fund are not resource allocations by the Government and are therefore non-budgetary.[8] For similar reasons, Native American -owned funds that are held and managed in a fiduciary capacity are also excluded from the budget.

Government-Sponsored Enterprises (GSEs).— Government-Sponsored Enterprises are privately owned and therefore distinct from government corporations. The Federal Government has chartered GSEs such as the Federal National Mortgage Association (Fannie Mae), the Federal Home Loan Mortgage Corporation (Freddie Mac), the Federal Home Loan Banks, the Farm Credit System, and the Federal Agricultural Mortgage Corporation to provide financial intermediation for specified public purposes. Although federally chartered to serve public-policy purposes, because GSEs are intended to be privately owned and controlled, with any public benefits accruing indirectly from the GSEs' business transactions, they are classified as non-budgetary. Estimates of the GSEs' activities can be found in a separate chapter of the Budget *Appendix*, and their activities are discussed in Chapter 19 of this volume, "Credit and Insurance."

In September 2008, in response to the financial market crisis, the director of the Federal Housing Finance Agency (FHFA)[9] placed Fannie Mae and Freddie Mac into conservatorship for the purpose of preserving the assets and restoring the solvency of these two GSEs. As conservator, FHFA has broad authority to direct the operations of these GSEs. However, these GSEs remain private companies with board of directors and management responsible for their day-to-day operations. This Budget continues to treat these two GSEs as non-budgetary private entities in conservatorship rather than as Government agencies. By contrast, CBO treats these GSEs as budgetary Federal agencies. Both treatments include budgetary and non-budgetary amounts.

While OMB reflects all of the GSEs' transactions with the public as non-budgetary, the payments from the Treasury to the GSEs are recorded as budgetary outlays and dividends received by the Treasury are recorded as budgetary receipts. Under CBO's approach, the subsidy costs of Fannie Mae's and Freddie Mac's past credit activities have already been recorded in the budget estimates; the subsidy costs of future credit activities will be recorded when the activities occur. Lending and borrowing activities between the GSEs and the public apart from the subsidy costs are treated as non-budgetary by CBO, and Treasury payments to the GSEs are intragovernmental transfers (from Treasury to the GSEs) that net to zero in CBO's budget estimates.

Overall, both the Budget's accounting and CBO's accounting present Fannie Mae's and Freddie Mac's gains and losses as Government receipts and outlays—which reduce or increase Government deficits. The two approaches, however, reflect the effect of the gains and losses in the budget at different times.

Other federally-created non-budgetary entities.— In addition to the GSEs, the Federal Government has created a number of other entities that are classified as non-budgetary. These include federally funded research and development centers (FFRDCs), non-appropriated fund instrumentalities (NAFIs), and other entities; some of these are non-profit entities and some are for-profit entities.[10]

FFRDCs are entities that conduct agency-specific research under contract or cooperative agreement. Some FFRDCs were created to conduct research for the Department of Defense but are administered by colleges, universities, or other non-profit entities. Despite this non-budgetary classification, many FFRDCs receive direct resource allocation from the Government and are

---

[8] The administrative functions of the Federal Retirement Thrift Investment Board are carried out by Government employees and included in the budget totals.

[9] FHFA is the regulator of Fannie Mae, Freddie Mac, and the Federal Home Loans Banks.

[10] Although most entities created by the Federal Government are budgetary, as discussed in this section, the GSEs and the Federal Reserve System were created by the Federal Government, but are classified as non-budgetary. In addition, Congress and the President have chartered, but not necessarily created, approximately 100 non-profit entities that are non-budgetary. These include patriotic, charitable, and educational organizations under Title 36 of the U.S. Code and foundations and trusts chartered under other titles of the Code. Title 36 corporations include the American Legion, the American National Red Cross, Big Brothers—Big Sisters of America, Boy Scouts of America, Future Farmers of America, Girl Scouts of the United States of America, the National Academy of Public Administration, the National Academy of Sciences, and Veterans of Foreign Wars of the United States. Virtually all of the non-profit entities chartered by the Government existed under State law prior to the granting of a Government charter, making the Government charter an honorary rather than governing charter. A major exception to this is the American National Red Cross. Its Government charter requires it to provide disaster relief and to ensure compliance with treaty obligations under the Geneva Convention. Although any Government payments (whether made as direct appropriations or through agency appropriations) to these chartered non-profits, including the Red Cross, would be budgetary, the non-profits themselves are classified as non-budgetary. On April 29, 2015, the Subcommittee on Immigration and Border Security of the Committee on the Judiciary in the U.S. House of Representatives adopted a policy prohibiting Congress from granting new Federal charters to private, non-profit organizations. This policy has been adopted by every subcommittee with jurisdiction over charters since the 101st Congress.

included as budget lines in various agencies. Examples of FFRDCs include the Center for Naval Analysis and the Jet Propulsion Laboratory.[11] Even though FFRDCs are non-budgetary, Federal payments to the FFRDC are budget outlays. In addition to Federal funding, FFRDCs may receive funding from non-Federal sources.

Non-appropriated fund instrumentalities (NAFIs) are entities that support an agency's current and retired personnel. Nearly all NAFIs are associated with the Departments of Defense, Homeland Security (Coast Guard), and Veterans Affairs. Most NAFIs are located on military bases and include the armed forces exchanges (which sell goods to military personnel and their families), recreational facilities, and childcare centers. NAFIs are financed by proceeds from the sale of goods or services and do not receive direct appropriations; thus, they are characterized as non-budgetary but any agency payments to the NAFIs are recorded as budget outlays.

A number of entities created by the Government receive a significant amount of non-Federal funding. Non-Federal individuals or organizations significantly control some of these entities. These entities include Gallaudet University, Howard University, and the Universal Services Administrative Company, among others.[12] Most of these entities receive direct appropriations or other recurring payments from the Government. The appropriations or other payments are budgetary and included in Table 26-1. However, many of these entities are themselves non-budgetary. Generally, entities that receive a significant portion of funding from non-Federal sources but are not controlled by the Government are non-budgetary.

Regulation.—Federal Government regulations often require the private sector or other levels of government to make expenditures for specified purposes that are intended to have public benefits, such as workplace safety and pollution control. Although the budget reflects the Government's cost of conducting regulatory activities, the costs imposed on the private sector as a result of regulation are treated as non-budgetary and not included in the budget. The annual Regulatory Plan and the semi-annual Unified Agenda of Federal Regulatory and Deregulatory Actions describe the Government's regulatory priorities and plans.[13] OMB has published the estimated costs and benefits of Federal regulation annually since 1997.[14]

Monetary policy.— As a fiscal policy tool, the budget is used by elected Government officials to promote economic growth and achieve other public policy objectives. Monetary policy is another tool that governments use to promote economic policy objectives. In the United States, the Federal Reserve System, which is composed of a Board of Governors and 12 regional Federal Reserve Banks, conducts monetary policy,. The Federal Reserve Act provides that the goal of monetary policy is to "maintain long-run growth of the monetary and credit aggregates commensurate with the economy's long run potential to increase production, so as to promote effectively the goals of maximum employment, stable prices, and moderate long-term interest rates."[15] The Full Employment and Balanced Growth Act of 1978, also known as the Humphrey-Hawkins Act, reaffirmed the dual goals of full employment and price stability.[16]

By law, the Federal Reserve System is a self-financing entity that is independent of the Executive Branch and subject only to broad oversight by the Congress. Consistent with the recommendations of the Commission, the effects of monetary policy and the actions of the Federal Reserve System are non-budgetary, with exceptions for the transfer to the Treasury of excess income generated through its operations. The Federal Reserve System earns income from a variety of sources including interest on Government securities, foreign currency investments and loans to depository institutions, and fees for services (e.g., check clearing services) provided to depository institutions. The Federal Reserve System remits to Treasury any excess income over expenses annually. For the fiscal year ending September 2016, Treasury recorded $115.7 billion in receipts from the Federal Reserve System. In addition to remitting excess income to Treasury, law requires the Federal Reserve to transfer a portion of its excess earnings to the Consumer Financial Protection Bureau (CFPB).[17]

The Board of Governors of the Federal Reserve is a Federal Government agency, but because of its independent status, its budget is not subject to Executive Branch review and is included in the Budget *Appendix* for informational purposes only. The Federal Reserve Banks are subject to Board oversight and managed by boards of directors chosen by the Board of Governors and member banks, which include all national banks and State banks that choose to become members. The budgets of the regional Banks are subject to approval by the Board of Governors and are not included in the Budget *Appendix*.

[11] The National Science Foundation maintains a list of FFRDCs at *www.nsf.gov/statistics/ffrdc*.

[12] Under section 415(b) of the Amtrak Reform and Accountability Act of 1997, (49 U.S.C. 24304 and note), Amtrak was required to redeem all of its outstanding common stock. Once all outstanding common stock is redeemed, Amtrak will be wholly-owned by the Government and, at that point, its non-budgetary status may need to be reassessed.

[13] The most recent Regulatory Plan and introduction to the Unified Agenda issued by the General Services Administration's Regulatory Information Service Center are available at *www.reginfo.gov* and at *www.gpoaccess.gov*.

[14] In the most recent draft report, OMB indicates that the estimated annual benefits of Federal regulations it reviewed from October 1, 2005, to September 30, 2015, range from $208 billion to $672 billion, while the estimated annual costs range from $57 billion to $85 billion.

[15] See 12 U.S.C. 225a.

[16] See 15 U.S.C. 3101 et seq.

[17] See section 1011 of Public Law 111-203 (12 U.S.C. 5491), (2010). The CFPB is an executive agency, led by a director appointed by the President and reliant on Federal funding, that serves the governmental function of regulating Federal consumer financial laws. Accordingly, it is included in the Budget.

10. BUDGET PROCESS

This chapter addresses two broad categories of budget reform. First, the chapter discusses proposals to improve budgeting and fiscal sustainability with respect to individual programs as well as across Government. These proposals include: an extension of the spending reductions required by the Joint Select Committee on Deficit Reduction; various initiatives to reduce improper payments; funding requested for disaster relief; limits on changes in mandatory programs in appropriations Acts; limits on advance appropriations; reforms in transportation and infrastructure spending; and proposals for the Pell Grant program. Second, the chapter describes the 2018 Budget proposals for budget enforcement and budget presentation. The budget enforcement proposals include a discussion of the system under the Statutory Pay-As-You-Go Act of 2010 (PAYGO) of scoring legislation affecting receipts and mandatory spending; reforms to account for debt service in cost estimates; administrative PAYGO actions affecting mandatory spending; discretionary spending caps; improvements to how Joint Committee sequestration is shown in the Budget; the budgetary treatment of the housing Government-sponsored enterprises and the United States Postal Service; and using fair value as a method of scoring credit programs.

These reforms combine fiscal responsibility with measures to provide citizens a more transparent, comprehensive, and accurate measure of the reach of the Federal budget. Together, the reforms and presentations discussed create a budget more focused on core Government functions and more accountable to the taxpayer.

I. BUDGET REFORM PROPOSALS

Joint Committee Enforcement

In August 2011, as part of the Budget Control Act of 2011 (BCA; Public Law 112-25), bipartisan majorities in both the House and Senate voted to establish the Joint Select Committee on Deficit Reduction to recommend legislation to achieve at least $1.5 trillion of deficit reduction over the period of fiscal years 2012 through 2021. The failure of the Congress to enact such comprehensive deficit reduction legislation to achieve the $1.5 trillion goal triggered a sequestration of discretionary and mandatory spending in 2013, led to reductions in the discretionary caps for 2014 through 2018, and forced additional sequestrations of mandatory spending in each of fiscal years 2014 through 2017. A further sequestration of mandatory spending is scheduled to take effect beginning on October 1 based on the order released with the 2018 Budget.

To date, various enacted legislation has changed the annual reductions required to the discretionary spending limits set in the BCA through 2017. The sequestration preview report issued with this budget reduced the 2018 discretionary caps according to current law. Going forward, the reductions to discretionary spending for fiscal years 2019 through 2021 are to be implemented in the sequestration preview report for each year by reducing the discretionary caps. Future reductions to mandatory programs are to be implemented by a sequestration of non-exempt mandatory budgetary resources in each of fiscal years 2019 through 2025, which is triggered by the transmittal of the President's Budget for each year and takes effect on the first day of the fiscal year.

The 2018 Budget proposes to continue mandatory sequestration into 2026 and 2027 to generate an additional $39 billion in deficit reduction. For discretionary programs, under current law, 2018 Joint Committee procedures reduce the defense cap from $603 billion to $549.1 billion and the non-defense cap from $553 billion to $515.7 billion. The 2018 Budget restores the Joint Committee reductions made to the defense category and pays for this increase by reducing the cap for non-defense by roughly the same amount. This results in a proposed defense cap of $603 billion for defense programs and a non-defense cap of $462 billion for non-defense programs. After 2018, the Budget sets aside the existing Joint Committee procedures for discretionary programs by proposing new caps for defense and non-defense programs through 2027. These funding levels will enhance our national security while maintaining fiscal responsibility by rebalancing the non-defense mission to focus on core Government responsibilities. See Table S–7 in the main *Budget* volume for the proposed annual discretionary caps.

Program Integrity Funding

Critical programs such as Social Security, Unemployment Insurance, Medicare, and Medicaid should be run efficiently and effectively. Therefore, the Administration proposes to make significant investments in activities to ensure that taxpayer dollars are spent correctly, by expanding oversight activities in the largest benefit programs and increasing investments in tax compliance and enforcement activities. In addition, the Administration supports a number of legislative and administrative reforms in order to reduce improper payments. Many of these proposals will provide savings for the Government and taxpayers, and will support Government-wide efforts to improve the management and oversight of Federal resources.

The Administration supports efforts to provide Federal agencies with the necessary resources and incentives to improve payment integrity, and to prevent, reduce, or recover improper payments. The Administration will continue to identify areas, in addition to those outlined in the Budget, where it can work with the Congress to further improve agency efforts.

Administrative Funding for Program Integrity.—There is compelling evidence that investments in administrative resources can significantly decrease the rate of improper payments and recoup many times their initial investment. The Social Security Administration (SSA) estimates that continuing disability reviews conducted in 2018 will yield net Federal program savings over the next 10 years of roughly $8 on average per $1 budgeted for dedicated program integrity funding, including the Old Age, Survivors, and Disability Insurance Program (OASDI), Supplemental Security Income (SSI), Medicare and Medicaid program effects. Similarly, for Health Care Fraud and Abuse Control (HCFAC) program integrity efforts, CMS actuaries conservatively estimate approximately $2 is saved or averted for every additional $1 spent.

Enacted Adjustments Pursuant to BBEDCA.—The Balanced Budget and Emergency Deficit Control Act of 1985, as amended (BBEDCA), recognized that a multi-year strategy to reduce the rate of improper payments, commensurate with the large and growing costs of the programs administered by the Social Security Administration and the Department of Health and Human Services, is a laudable goal. To support the overall goal, BBEDCA provided for adjustments to the discretionary spending limits through 2021 to allow for additional funding for specific program integrity activities to reduce improper payments in the Social Security programs and in the Medicare and Medicaid programs. Because the additional funding is classified as discretionary and the savings as mandatory, the savings cannot be offset against the funding for budget enforcement purposes. These adjustments to the discretionary caps are made only if appropriations bills increase funding for the specified program integrity purposes above specified minimum, or base levels. This method ensures that the additional funding provided in BBEDCA does not supplant other Federal spending on these activities and that such spending is not diverted to other purposes. The Bipartisan Budget Act of 2015 (BBA) increased the level of such adjustments for Social Security programs by a net $484 million over the 2017-2021 period, and it expanded the uses of cap adjustment funds to include cooperative disability investigation units, and special attorneys for fraud prosecutions.

The 2018 Budget supports full funding of the authorized cap adjustments for these programs through 2021 and proposes to extend the cap adjustments through 2027 at the rate of current services inflation assumed in the Budget. The 2018 Budget shows the baseline and policy levels at equivalent amounts. Accordingly, savings generated from such funding levels in the baseline for program integrity activities are reflected in the baselines for Social Security programs, Medicare, and Medicaid.

Social Security Administration Medical Continuing Disability Reviews and Non-Medical Redeterminations of SSI Eligibility.—For the Social Security Administration, the Budget's proposed $1,735 million in discretionary funding in 2018 ($273 million in base funding and $1,462 million in cap adjustment funding) will allow SSA to conduct 890,000 full medical CDRs and approximately 2.8 million SSI non-medical redeterminations of eligibility. Medical CDRs are periodic reevaluations to determine whether disabled OASDI or SSI beneficiaries continue to meet SSA's standards for disability. As a result of the discretionary funding requested in 2018, as well as the fully funded base and cap adjustment amounts in 2019 through 2027, the OASDI, SSI, Medicare and Medicaid programs would recoup almost $43 billion in gross Federal savings with additional savings after the 10-year period, according to estimates from SSA's Office of the Chief Actuary. Access to increased cap adjustment amounts and SSA's commitment to fund the fully loaded costs of performing the requested CDR and redetermination volumes would produce net deficit savings of $28 billion in the 10-year window, and additional savings in the outyears. These costs and savings are reflected in Table 10-1.

SSA is required by law to conduct medical CDRs for all beneficiaries who are receiving disability benefits under the OASDI program, as well as all children under age 18 who are receiving SSI. SSI redeterminations are also required by law. However, the frequency of CDRs and redeterminations is constrained by the availability of funds to support these activities. The mandatory savings from the base funding in every year and the enacted discretionary cap adjustment funding assumed for 2017 are included in the BBEDCA baseline, consistent with the levels amended by the BBA of 2015, because the baseline assumes the continued funding of program integrity activities. The Budget shows the savings that would result from the increase in CDRs and redeterminations made possible by the discretionary cap adjustment funding requested in 2018 through 2027. With access to program integrity cap adjustments, SSA is on track to eliminate the backlog of CDRs by the end of 2018 and remain current with program integrity workloads throughout the budget window.

As stated above, current estimates indicate that CDRs conducted in 2018 will yield a return on investment (ROI) of about $8 on average in net Federal program savings over 10 years per $1 budgeted for dedicated program integrity funding, including OASDI, SSI, Medicare and Medicaid program effects. Similarly, SSA estimates indicate that non-medical redeterminations conducted in 2018 will yield a ROI of about $3 on average of net Federal program savings over 10 years per $1 budgeted for dedicated program integrity funding, including SSI and Medicaid program effects. The Budget assumes the full cost of performing CDRs in 2017 and beyond to ensure that sufficient resources are available. The savings from one year of program integrity activities are realized over multiple years because some results find that beneficiaries are no longer eligible to receive OASDI or SSI benefits.

Redeterminations are periodic reviews of non-medical eligibility factors, such as income and resources, for the means-tested SSI program and can result in a revision of the individual's benefit level. However, the schedule of savings resulting from redeterminations will be different for the base funding and the cap adjustment funding in 2018 through 2027. This is because redeterminations of eligibility can uncover underpayment errors as well as overpayment errors. SSI recipients are more likely to initiate a redetermination of eligibility if they believe there are underpayments, and these recipient-initiated redeterminations are included in the base. The estimated savings per dollar spent on CDRs and non-medical redeterminations reflects an interaction with the state option to expand Medicaid coverage for individuals under age 65 with income less than 133 percent of poverty. As a result of this option, some SSI beneficiaries, who would otherwise lose Medicaid coverage due to a medical CDR or non-medical redetermination, would continue to be covered. In addition, some of the coverage costs for these individuals will be eligible for the enhanced Federal matching rate, resulting in higher Federal Medicaid costs in those states.

Health Care Fraud and Abuse Program.—The 2018 Budget proposes base and cap adjustment funding levels over the next 10 years and continues the program integrity cap adjustment through 2027. In order to maintain level of effort, the base amount increases annually over the 10-year period. The cap adjustment is set at the levels specified under BBEDCA through 2021 and then increases annually based on inflation from 2022 through 2027. The mandatory savings from both the base and cap adjustment are included in the Medicare and Medicaid baselines.

The discretionary base funding of $311 million plus an additional $6 million adjustment for inflation and cap adjustment of $434 million for HCFAC activities in 2018 are designed to reduce the Medicare improper payment rate, support the Health Care Fraud Prevention & Enforcement Action Team (HEAT) initiative and reduce Medicaid improper payment rates. The investment will also allow CMS to deploy innovative efforts that focus on improving the analysis and application of data, including state-of-the-art predictive modeling capabilities, in order to prevent potentially wasteful, abusive, or fraudulent payments before they occur. The funding is to be allocated among CMS, the Health and Human Services Office of Inspector General, and the Department of Justice (DOJ).

Over 2018 through 2027, as reflected in Table 10-1, this $5.25 billion investment in HCFAC cap adjustment funding will generate approximately $11.7 billion in savings to Medicare and Medicaid, for new net deficit reduction of $6.4 billion over the 10-year period, reflecting prevention and recoupment of improper payments made to providers, as well as recoveries related to civil and criminal penalties.

Mandatory Program Integrity Initiatives.—The mandatory and receipt savings from other program integrity initiatives that are included in the 2018 Budget, beyond the expansion in resources resulting from the increases in administrative funding discussed above are shown in table 10-2. These savings total almost $149 billion over 10 years. These mandatory proposals to reduce improper payments reflect the importance of these issues to the Administration. Through these and other initiatives outlined in the Budget, the Administration can improve management efforts across the Federal Government.

Unemployment Insurance Program Integrity Package.—The Budget includes proposals aimed at improving integrity in the Unemployment Insurance (UI) program. The proposals would result in $67 million in PAYGO savings over 10 years, and would result in more than $2.2 billion in non-PAYGO savings. These proposals include savings that would allow States to reduce their unemployment taxes by $670 million. Included in this package are proposals to: allow for data disclosure to contractors for the Treasury Offset Program; expand State use of the Separation Information Data Exchange System (SIDES), which already improves program integrity by allowing States and employers to exchange information on reasons for a claimant's separation from employment and thereby helping States to determine UI eligibility; mandate the use of the National Directory of New Hires to conduct cross-matches for program integrity purposes; allow the Secretary to set corrective action measures for poor State performance; require States to cross-match claimants against the Prisoner Update Processing System (PUPS),

Table 10–1. PROGRAM INTEGRITY DISCRETIONARY CAP ADJUSTMENTS, INCLUDING MANDATORY SAVINGS

(Outlays in millions of dollars)

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2018 - 2027 Total
Social Security Program Integrity:											
Discretionary Costs[1]	1,462	1,410	1,309	1,302	1,350	1,400	1,452	1,506	1,561	1,619	14,371
Mandatory Savings[2]	–93	–2,084	–3,117	–3,792	–4,647	–4,942	–5,152	–5,869	–6,330	–6,772	–42,798
Net Savings	1,369	–674	–1,808	–2,490	–3,297	–3,542	–3,700	–4,363	–4,769	–5,153	–28,427
Health Care Fraud and Abuse Control Program:											
Discretionary Costs[1]	434	454	475	496	514	533	553	574	595	617	5,245
Mandatory Savings[3]	–923	–980	–1,040	–1,102	–1,158	–1,202	–1,246	–1,294	–1,341	–1,391	–11,677
Net Savings	–489	–526	–565	–606	–644	–669	–693	–720	–746	–774	–6,432

[1] The discretionary costs are equal to the outlays associated with the budget authority levels authorized in BBEDCA through 2021; the costs for each of 2022 through 2027 are equal to the outlays associated with the budget authority levels inflated from the 2021 level, using the 2018 Budget assumptions. The levels in baseline are equal to the 2018 Budget policy. The mandatory savings from the cap adjustment funding are included in the baselines for Social Security, Medicare, and Medicaid programs.

[2] This is based on SSA's Office of the Chief Actuary's estimates of savings.

[3] These savings are based on estimates from the HHS Office of the Actuary for return on investment (ROI) from program integrity activities.

which is currently used by some States; and allow States to retain five percent of overpayment and tax investigation recoveries to fund program integrity activities.

Reemployment Services and Eligibility Assessments (RESEA).— The Budget also includes a mandatory proposal to fund RESEA for one-half of all UI claimants profiled as most likely to exhaust benefits. The related Reemployment and Eligibility Assessment initiative was begun in 2005 to finance in-person interviews at American Job Centers (also known as "One-Stop Career Centers"), to assess UI beneficiaries' need for job finding services and their continued eligibility for benefits. Research, including a random-assignment evaluation, shows that a combination of eligibility reviews and reemployment services reduces the time on UI, increases earnings, and reduces improper payments to claimants who are not eligible for benefits. Based on this research, the Budget proposes to expand funding for the RESEA initiative to allow States to conduct robust reemployment services along with REAs. These reemployment services may include the development of reemployment and work search plans, provision of skills assessments, career counseling, job matching and referrals, and referrals to training as appropriate.

The Budget proposal includes $2.7 billion in PAYGO outlays for States to provide RESEA services to focus on UI claimants identified as most likely to exhaust their UI benefits and on newly separated veterans claiming unemployment compensation for ex-servicemembers (UCX), resulting in net non-PAYGO deficit reduction of $6.7 billion. These savings consist of reductions in UI benefit payments of an estimated $8.1 billion, as well as a net reduction in business taxes of $1.4 billion. In total, this proposal is estimated to reduce the deficit by $4 billion over 10 years.

Because most unemployment claims are now filed by telephone or online, in-person assessments conducted in the Centers can help determine the continued eligibility for benefits and the adequacy of work search, verify the identity of beneficiaries where there is suspicion of possible identity theft, and provide a referral to reemployment assistance for those who need additional help. The benefit savings from this initiative are short-term because the maximum UI benefit period is limited, typically 26 weeks for regular State UI programs.

Preventing Improper Payments in Social Security.— Overall, the Budget proposes legislation that would avert close to $1.6 billion in improper payments in Social Security over 10 years. While much of this savings is considered off-budget and would be non-PAYGO, about $718 million from various proposals would be PAYGO savings.

- ***Hold Fraud Facilitators Liable for Overpayments.—***The Budget proposes to hold fraud facilitators liable for overpayments by allowing SSA to recover the overpayment from a third party if the third party was responsible for making fraudulent statements or providing false evidence that allowed the beneficiary to receive payments that should not have been paid. This proposal would result in an estimated $8 million in savings over 10 years.

- ***Government-wide Use of Custom and Border Protection (CBP) Entry/Exit Data to Prevent Improper Payments.—***The Budget proposes the use of CBP Entry/Exit data to prevent improper OASDI and Supplemental Security Insurance (SSI) payments. Generally, U.S. citizens can receive benefits regardless of residence. Non-citizens may be subject to additional residence requirements depending on the country of residence and benefit type. However, an SSI beneficiary who is outside the United States for 30 consecutive days is not eligible for benefits for that month. These data have the potential to be useful across the Government to prevent improper payments. This proposal would result in an estimated $177 million in savings over 10 years.

- ***Allow SSA to Use Commercial Databases to Verify Real Property Data in the SSI Program.—*** The Budget proposes to reduce improper payments and lessen recipients' reporting burden by authorizing SSA to use private commercial databases to check for ownership of real property (i.e. land and buildings), which could affect SSI eligibility. Consent to allow SSA to access these databases would be a condition of benefit receipt for new beneficiaries and current beneficiaries who complete a determination. All other current due process and appeal rights would be preserved. This proposal would result in savings of $559 million over 10 years.

- ***Increase the Overpayment Collection Threshold for OASDI.—***The Budget would change the minimum monthly withholding amount for recovery of Social Security benefit overpayments to reflect the increase in the average monthly benefit since the Agency established the current minimum of $10 in 1960. By changing this amount from $10 to 10% of the monthly benefit payable, SSA would recover overpayments more quickly and better fulfill its stewardship obligations to the combined Social Security Trust Funds. The SSI program already utilizes the 10% rule. Debtors could still pay less if the negotiated amount would allow for repayment of the debt in 36 months. If the beneficiary cannot afford to have his or her full benefit payment withheld because he or she cannot meet ordinary and necessary living expenses, the beneficiary may request partial withholding. To determine a proper partial withholding amount, SSA negotiates (as well as renegotiates at the overpaid beneficiary's request) a partial withholding rate. This proposal would result in savings of $848 million over 10 years.

- ***Authorize SSA to Use All Collection Tools to Recover Funds in Certain Scenarios.—***The Budget also proposes to allow SSA a broader range of collection tools when someone improperly receives a benefit after the beneficiary has died. Currently, if a spouse cashes a benefit payment (or does not return a directly deposited benefit) for an individual who has died and the spouse is also not receiving benefits on that individual's record, SSA has more lim-

Table 10–2. MANDATORY AND RECEIPT SAVINGS FROM OTHER PROGRAM INTEGRITY INITIATIVES

(Deficit increases (+) or decreases (–) in millions of dollars)

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	10-year total
Mandatory Program Integrity Initiatives:											
Department of Labor:											
Unemployment Insurance Program Integrity Package [1]	–94	–215	–251	–249	–243	–211	–253	–249	–241	–228	–2,234
PAYGO effects	–12	–17	–10	–8	–7	–4	–2	–4	–1	–2	–67
Non-PAYGO effects	–82	–198	–241	–241	–236	–207	–251	–245	–240	–226	–2,167
Reemployment Services and Eligibility Assessments [1]	....	–88	–541	–562	–522	–411	–413	–493	–499	–519	–4,048
PAYGO effects	....	260	272	281	291	301	309	317	325	333	2,689
Non-PAYGO effects	....	–348	–813	–843	–813	–712	–722	–810	–824	–852	–6,737
Social Security Administration:											
Hold Fraud Facilitators Liable for Overpayments (non-PAYGO)	....	....	–1	–1	–1	–1	–1	–1	–1	–1	–8
Government Wide Use of CBP Entry/Exit Data to Prevent Improper Payment	....	....	–1	–4	–9	–18	–24	–28	–36	–39	–159
Government Wide Use of CBP Entry/Exit Data to Prevent Improper Payment (non-PAYGO).	....	....	....	–1	–2	–2	–2	–3	–4	–4	–18
Allow SSA to Use Commercial Databases to Verify Real Property Data in the SSI Program.	–12	–28	–44	–53	–60	–69	–70	–68	–76	–79	–559
Increase the Overpayment Collection Threshold for OASDI (non-PAYGO)	–8	–26	–43	–59	–77	–93	–107	–135	–144	–156	–848
Authorize SSA to Use All Collection Tools to Recover Funds in Certain Scenarios (non-PAYGO)	....	–2	–2	–3	–4	–4	–5	–5	–5	–11	–41
Total, Preventing Improper Payments in Social Security	–20	–56	–91	–121	–153	–187	–209	–240	–266	–290	–1,622
Government-wide:											
Reduce Improper Payments Government-wide (non-PAYGO)	....	–719	–1,482	–2,383	–4,288	–4,549	–9,652	–20,480	–38,024	–57,633	–139,210
Other Program Integrity Initiatives:											
Exclude SSA debts from discharge in bankruptcy (non-PAYGO)	–9	–18	–23	–29	–34	–36	–38	–40	–43	–45	–315
Department of the Treasury:											
Increase oversight of paid tax return preparers [1]	–14	–31	–35	–38	–42	–47	–50	–55	–61	–66	–439
Provide more flexible authority for the IRS to address correctable errors [1]	–30	–61	–64	–65	–67	–70	–71	–74	–76	–77	–655
Total, Mandatory and Receipt Savings	**–167**	**–1,188**	**–2,487**	**–3,447**	**–5,349**	**–5,511**	**–10,686**	**–21,631**	**–39,210**	**–58,858**	**–148,534**
PAYGO Savings	–68	123	118	113	106	93	92	88	75	70	810
Non-PAYGO Savings	–99	–1,311	–2,605	–3,560	–5,455	–5,604	–10,778	–21,719	–39,285	–58,928	–149,344

[1] The estimate for this proposal includes effects on receipts in addition to changes in outlays. Receipt effects by proposal can be seen in table S–6, Mandatory and Receipt Proposals, in the main *Budget* volume.

ited collection tools available than would be the case if the spouse also receives benefits on the deceased individual's earning record. The Budget proposal would end this disparate treatment of similar types of improper payments and results in an estimated $41 million in savings over 10 years.

Reducing Improper Payments Government-Wide.— Even though the majority of government payments are made properly, any waste of taxpayer money is unacceptable. The Budget prioritizes shrinking the amount of improper cash out the door. Specifically, by 2027 the Budget proposes to curtail government-wide improper payments by half through actions to improve payment accuracy and tighten administrative controls. This proposal includes improvements in paperwork errors that contribute to the improper payment rate. Overall, the proposal will save approximately $139 billion over 10 years that would reduce the deficit, but is not included as a PAYGO savings.

Other Program Integrity Initiatives.—

Data Analytics to Improve Payment Accuracy.—At the core of Government-wide data analytics to improve payment accuracy is the Treasury Do Not Pay Business Center which includes a system that enables agencies to identify, prevent, capture, and recover payments at different phases of the payment life cycle using available databases. Do Not Pay analytics specialists are also available to work one-on-one with agencies to review payment data to identify and address internal control weaknesses that could result in improper payments. Furthermore, Treasury's team provides business process review services to support this work. The Do Not Pay initiative also incorporates other agency best practices and activities that further promote program integrity and benefits to the taxpayer. For example, the Bipartisan Budget Act of 2013 (BBA of 2013; Public Law 113-67) expanded the Do Not Pay initiative to include additional data collected by the Social Security Administration to prevent the improper payment of Federal funds to incarcerated individuals, and in 2015, the Do Not Pay Business Center began facilitating the Internal Revenue Service use of these data to prevent fraud committed by prisoners. Additional examples of agencies using data to improve payment accuracy include the Centers for Medicare & Medicaid Services' (CMS) Fraud Prevention System (FPS), a state-of-the-art predictive analytics technology used to identify and prevent fraud in the program; the Department of Defense Business Activity Monitoring tool; and the Department of Labor's Unemployment Insurance (UI) Integrity Center for Excellence, a Federal-State partnership which facilitates the development and implementation of integrity tools that help detect and reduce improper payments in state run programs.

The effective use of data analytics has provided insight into methods of reducing costs and improving performance and decision-making capabilities. As a result of the Initiative, agencies cumulatively identified and stopped over $5.9 billion of improper payments through the Do Not Pay Initiative as of the end of FY 2016. Agencies need available data to be timely, accurate, and relevant to their programs to improve their payment accuracy, and additional authorities will enhance data sharing on death, prisoners, and employment for payment accuracy, while maintaining privacy.

Use of the Death Master File to Prevent Federal Improper Payments.—The Administration is continuing to pursue opportunities to improve information sharing by developing or enhancing policy guidance, ensuring privacy protection, and developing legislative proposals to leverage available information and technology in determining benefit eligibility and other opportunities to prevent improper payments.

The Budget proposes to improve payment accuracy further by sharing available death data across Government agencies to prevent improper payments. This proposal would amend the Social Security Act to provide the Do Not Pay system at Treasury and agencies that use the system access to the full death data at SSA to prevent, identify, or recover improper payments. This proposal would include information received from a State, or any other source, about the deceased.

Exclude SSA Debts from Discharge in Bankruptcy.—Debts due to an overpayment of Social Security benefits are generally dischargeable in bankruptcy. The Budget includes a proposal to exclude such debts from discharge in bankruptcy, except when it would result in an undue hardship. This proposal would help ensure program integrity by increasing the amount of overpayments SSA recovers and would save $315 million over the 2018 through 2027 window.

Increase Oversight of Paid Tax Preparers.—This proposal would give the IRS the statutory authority to increase its oversight of paid tax return preparers. As more taxpayers use paid preparers, the quality of the preparers has a dramatic impact on whether taxpayers follow tax laws. Increasing the quality of paid preparers lessens the need for after-the-fact enforcement of tax laws and increases the amount of revenue that the IRS can collect. This proposal saves $439 million over the 2018 through 2027 period.

Provide the IRS with Greater Flexibility to Address Correctable Errors.—The Budget proposes to give the IRS expanded authority to correct errors on taxpayer returns. Current law only allows the IRS to correct errors on returns in certain limited instances, such as basic math errors or the failure to include the appropriate Social Security Number or Taxpayer Identification Number. This proposal would expand the instances in which the IRS could correct a taxpayer's return. For example, with this new authority, the IRS could deny a tax credit that a taxpayer had claimed on a tax return if the taxpayer did not include the required paperwork, or where government databases showed that the taxpayer-provided information was incorrect. This proposal would save $655 million over the 2018 through 2027 window.

Develop Accurate Cost Estimates.—OMB works with Federal agencies and CBO to develop PAYGO estimates for mandatory programs. OMB has issued guidance to agencies for scoring legislation under the statutory PAYGO Act of 2010. This guidance states that agencies must score the effects of program legislation on other programs if the programs are linked by statute. (For example, effects on Medicaid spending that are due to statutory linkages in eligibility for Supplemental Security Income benefits must be scored.) In addition, even when programs are not linked by statute, agencies may score effects on other programs if those effects are significant and well documented. Specifically, the guidance states: "Under certain circumstances, estimates may also include effects in programs not linked by statute where such effects are significant and well documented. For example, such effects may be estimated where rigorous experimental research or past program experience has established a high probability that changes in eligibility or terms of one program will have significant effects on participation in another program."

Disaster Relief Funding

Section 251(b)(2)(D) of BBEDCA includes a provision to adjust the discretionary caps for appropriations that the Congress designates in statute as provided for disaster relief. The law allows for a fiscal year's discretionary cap to be increased by no more than the average funding provided for disaster relief over the previous 10 years, excluding the highest and lowest years. The ceiling for each year's adjustment (as determined by the 10-year average) is then increased by the unused amount of the prior year's ceiling (excluding the portion of the prior year's ceiling that was itself due to any unused amount from the year before). Disaster relief is defined as activities carried out pursuant to a determination under section 102(2) of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5122(2)) for major disasters declared by the President. As required by law, OMB included in its Sequestration Update Report for FY 2017 a preview estimate of the 2017 adjustment for disaster relief. The ceiling for the disaster relief adjustment in 2017 was calculated to be $8,566 million. However, the

Continuing Appropriations and Military Construction, Veterans Affairs, and Related Agencies Appropriations Act, 2017, and Zika Response and Preparedness Act (Public Law 114-223) provided supplemental funding of $500 million for the Department of Housing and Urban Development's Community Development Fund (CDF) in 2016. OMB's seven-day-after report for Public Law 114-223 stated that this supplemental funding decreased the disaster ceiling for 2017 to $8,129 million. At the time the Budget was prepared, the Government was operating under a continuing resolution set in the Continuing Appropriations Act, 2017 (division C of Public Law 114-223, as amended by division A of Public Law 114-254) (the "CR"). The CR had provided for 2017 a continuing appropriation of $6,713 million for the Federal Emergency Management Agency's Disaster Relief Fund (DRF) and a full-year appropriation for HUD's CDF of $1,416 million. If final 2017 appropriations affirm this allocation with a final appropriation of $6,713 million for the DRF, such amounts would use the entire ceiling available in 2017.

OMB must include in its Sequestration Update Report for 2018 a preview estimate of the ceiling on the adjustment for disaster relief funding for 2018. This estimate will contain an average funding calculation that incorporates four years (2008 through 2011) using the definition of disaster relief from OMB's September 1, 2011 report and six years using the funding the Congress designated in 2012 through 2017 for disaster relief pursuant to BBEDCA excluding the highest and lowest years. As noted above, the entire ceiling may be used for 2017; therefore, no amount would be carried forward from 2017 into the 2018 preview estimate that will be included in OMB's August 2017 Sequestration Update Report for Fiscal Year 2018. Currently, based on enacted and continuing appropriations, OMB estimates the total adjustment available for disaster funding for 2018 at $7,366 million. Any revisions necessary to account for final 2017 appropriations will be includedin the 2018 Sequestration Update Report.

At this time, the Administration is requesting $6,793 million in funding for FEMA's DRF in 2018 to cover the costs of Presidentially declared major disasters, including identified costs for previously declared catastrophic events (defined by FEMA as events with expected costs that total more than $500 million) and the predictable annual cost of non-catastrophic events expected to obligate in 2018. For this program, the Budget requests funding for both known needs based on expected costs of prior declared disasters and the typical average expenditures in these programs. This is consistent with past practice of requesting and funding these as part of regular appropriations bills. Also consistent with past practice, the 2018 request level does not seek to pre-fund anticipated needs in other programs arising out of disasters that have yet to occur, nor does the Budget seek funding for potential catastrophic needs. As additional information about the need to fund prior or future disasters becomes available, additional requests, in the form of either 2017 supplemental appropriations (designated as either disaster relief or emergency requirements pursuant to BBEDCA) or budget amendments to the Budget, may be transmitted.

Under the principles outlined above, since the Administration does not have the adequate information about known or estimated needs that is necessary to state the total amount that will be requested in future years to be designated by the Congress for disaster relief, the Budget does not explicitly request to use the BBEDCA disaster designation in any year after the budget year. Instead, a placeholder for disaster relief is included in each of the out years that is equal to the current 2018 request. This funding level does not reflect a specific request but a placeholder amount that, along with other out year appropriations levels, will be decided on an annual basis as part of the normal budget development process.

Declining Disaster Relief Cap Adjustment

The allowable adjustment for disaster relief funding is declining to levels that approximate average annual Federal disaster assistance budget requests (which supports previously declared catastrophic disasters, future non-catastrophic disasters, and a limited amount of above-average future disaster activity). This amount will soon likely be insufficient to support the costs of future Presidentially declared disasters. Inflation, urbanization, and other factors may contribute to increasing future response and recovery costs. The decline of the cap adjustment results from the recent trend of relatively modest annual disaster appropriations over the past five fiscal years coupled with high-cost response and recovery efforts for Hurricanes Katrina and Sandy aging out of the rolling 10-year window used in the cap adjustment formula. The Administration will continue to review potential options for addressing the declining cap adjustment and looks forward to working with the Congress on disaster funding needs.

Limits on Changes in Mandatory Spending in Appropriations Acts (CHIMPs)

The discretionary spending caps in place since the enactment of the BCA in 2011 have been circumvented annually by the enactment of higher discretionary spending offset by reductions in mandatory budget authority with no net outlay savings. These spending offsets come from changes in mandatory programs, or CHIMPs, in the form of Congressionally-enacted rescissions or one-year delays of spending with net zero outlay reductions over time. Congress has started to reduce the reliance on CHIMPs with no net outlay reductions by setting decreasing limits in the budget resolution of $19.1 billion in 2016, $17.0 billion in 2018, and $15.0 billion in 2019. The Administration supports these efforts and limits the use of CHIMPs with no outlay savings to $13.9 billion in the 2018 Budget.

Limit on Discretionary Advance Appropriations

An advance appropriation first becomes available for obligation one or more fiscal years beyond the year for which the appropriations act is passed. Budget authority is recorded in the year the funds become available for obligation, not in the year the appropriation is enacted.

There are legitimate policy reasons to use advance appropriations to fund programs. However, advance appropriations can also be used in situations that lack a programmatic justification, as a gimmick to make room for expanded funding within the discretionary spending limits on budget authority for a given year under BBEDCA. For example, some education grants are forward funded (available beginning July 1 of the fiscal year) to provide certainty of funding for an entire school year, since school years straddle Federal fiscal years. This funding is recorded in the budget year because the funding is first legally available in that fiscal year. However, $22.6 billion of this funding is advance appropriated (available beginning three months later, on October 1) rather than forward funded. Prior Congresses increased advance appropriations and decreased the amounts of forward funding as a gimmick to free up room in the budget year without affecting the total amount available for a coming school year. This gimmick works because the advance appropriation is not recorded in the budget year but rather the following fiscal year. However, it works only in the year in which funds switch from forward funding to advance appropriations; that is, it works only in years in which the amounts of advance appropriations for such "straddle" programs are increased.

To curtail this gimmick, which allows over-budget funding in the budget year and exerts pressure for increased funding in future years by committing upfront a portion of the total budget authority limits under the discretionary caps in BBEDCA in those years, congressional budget resolutions since 2001 have set limits on the amount of advance appropriations. When the congressional limit equals the amount that had been advance appropriated in the most recent appropriations bill, there is no additional room to switch forward funding to advance appropriations, and so no room for this particular gimmick to operate in that year's budget.

The Budget includes $27,870 million in advance appropriations for 2019 and freezes them at this level in subsequent years. In this way, the Budget does not employ this potential gimmick. Moreover, the Administration supports limiting advance appropriations to the proposed level for 2019, below the limits included in sections 3202 and 3304 for the Senate and the House, respectively, of the Concurrent Resolution on the Budget for Fiscal Year 2016 (S. Con. Res. 11). Those limits apply only to the accounts explicitly specified in the joint explanatory statement of managers accompanying S. Con. Res. 11.

In addition, the Administration would allow discretionary advance appropriations for veterans medical care, as is required by the Veterans Health Care Budget Reform and Transparency Act (P.L. 111-81). The veterans medical care accounts in the Department of Veterans Affairs (VA) currently comprise Medical Services, Medical Support and Compliance, Medical Facilities, and Medical Community Care. The level of advance appropriations funding for veterans medical care is largely determined by the VA's Enrollee Health Care Projection Model. This actuarial model projects the funding requirement for over 90 types of health care services, including primary care, specialty care, and mental health. The remaining funding requirement is estimated based on other models and assumptions for services such as readjustment counseling and special activities. VA has included detailed information in its Congressional Budget Justifications about the overall 2019 veterans medical care funding request.

For a detailed table of accounts that have received discretionary and mandatory advance appropriations since 2016 or for which the Budget requests advance appropriations for 2019 and beyond, please refer to the Advance Appropriations chapter in the *Appendix*.

Wildland Fire Suppression Funding

The Administration continues to review potential administrative actions and legislative options to address longstanding concerns regarding how budgeting occurs for wildland fire suppression. The Administration will work with the Congress during the 2018 budget cycle to develop a responsible approach that addresses risk management, performance accountability, cost containment, and the role of State and local government partners in ensuring adequate funds are available for wildfire suppression without undue disruption to land management operations.

Budgetary Treatment of Surface Transportation Infrastructure Funding

Currently, surface transportation programs financed from the Highway Trust Fund (HTF) are treated as hybrids: contract authority is classified as mandatory, while outlays are classified as discretionary. Broadly speaking, this framework evolved as a mechanism to ensure that collections into the HTF (e.g., motor fuel taxes) were used to pay only for programs that benefit surface transportation users, and that funding for those programs would generally be commensurate with collections.

Contract authority is a unique form of mandatory budget authority (BA) that permits authorized programs to obligate Federal funds for expenditure in advance of appropriations. Obligations of contract authority authorized for surface transportation programs are then satisfied by outlays from the HTF. Unlike discretionary budget authority provided through annual appropriations bills (which is controlled through 302(b) allocations), most Federal funding for surface transportation programs is provided by the authorizing committees within the authorization bills in the form of contract authority.

The appropriations committees limit the annual obligations that HTF programs can incur in a given year. It is the annual obligation limitation that represents the actual spending level. Although authorization language prescribes obligation limitation levels for each year, the appropriators may adjust these amounts. Hence, both authorizers and appropriators have a hand in setting transportation spending. For scoring purposes, Congress and the Administration score budget authority from contract authority to the authorizers but score outlays from obligation limitations to the appropriators.

Highway Trust Fund Solvency.—The Highway Revenue Act of 1956 introduced the HTF to accelerate the development of the Interstate Highway System. In the 1970s the HTF's scope was expanded to include expenditures on mass transit. In 1982, a permanent Mass Transit Account with the HTF was created. Deposits to the HTF through the 1990s were historically more than sufficient to meet the surface transportation funding needs.

However, by the 2000s, deposits into the HTF began to level off as vehicle fuel efficiency continued to improve. At the same time, the investment needs continued to rise as the infrastructure, much of which was built in the 1960s and 1970s, deteriorated and required recapitalization. The cost of construction also generally increased. The Federal motor fuel tax rates had stayed constant since 1993. By 2008, balances that had been building in the HTF were spent down. The 2008-2009 recession and rising gasoline prices had led to a reduction in the consumption of fuel resulting in the HTF reaching the point of insolvency for the first time. Congress responded by providing the first in a series of General Fund transfers to the HTF to maintain solvency.

Recent passage of the Fixing America's Surface Transportation Act, or the FAST Act (Public Law 114-94), shored up the Highway Trust Fund and maintained the hybrid budgetary treatment through 2020. The FAST Act did not significantly amend transportation-related taxes or HTF authorization provisions beyond extending the authority to collect and spend revenue. Congress retained the Federal fuel tax rate at 18.4 cents per gallon for gasoline and 24.4 cents for diesel. To maintain HTF solvency, the FAST Act transferred $70 billion from the General Fund into the HTF. Since 2008, HTF tax revenues have been supplemented by $140 billion in General Fund transfers.

Highway Trust Fund in the 2018 Budget.—For 2018, the Administration is requesting obligation limitation levels for HTF programs equal to the Contract Authority levels provided in the FAST Act, and those levels are frozen at the 2018 level through 2027. The Budget also reflects the FAST Act contract authority levels for the remainder of the Act, through 2020. After 2020 contract authority is frozen at the 2020 level.

Beginning in 2021, the Budget assumes HTF outlays at levels supported with existing HTF tax receipts. DOT is unable to make reimbursements to States and grantees in excess of the receipts into the HTF. Relative to baseline levels, this presentation shows a reduction in total HTF outlays by $95 billion over the 2021-2027 window.

The fact that the HTF has required $140 billion in General Fund transfers to stay solvent points to the need for a comprehensive reevaluation of the surface transportation funding regime. While Congress and past Administrations have been unable to find a long-term funding solution to the HTF, many States and localities have raised new revenue sources to finance transportation expenditures. The Administration believes that the Federal government should incentivize more States and localities to finance their own transportation needs, as they are best equipped to know the right level and mix of infrastructure investments.

Infrastructure Initiative

The overriding goal of the Administration's infrastructure initiative is to bring about up to $1 trillion in new investment in the Nation's physical infrastructure through long-term reforms to how infrastructure projects are regulated, funded, delivered, and maintained. This proposal will include a combination of policy, regulatory, and legislative proposals, ranging from changes to existing programs, to the creation of new programs and initiatives to reshape how the Federal government invests, permits, and collaborates on infrastructure. The 2018 Budget includes $200 billion in mandatory outlays to support this effort, which the Administration will use to make targeted investments to incentivize State, local, private, and other partners to significantly expand their infrastructure investments.

Pell Grants

The Pell Grant program includes features that make it unlike other discretionary programs including that Pell Grants are awarded to all applicants who meet income and other eligibility criteria. This section provides some background on the unique nature of the Pell Grant program and explains how the Budget accommodates changes in discretionary costs.

Under current law, the Pell program has several notable features:

- The Pell Grant program acts like an entitlement program, such as the Supplemental Nutrition Assistance Program or Supplemental Security Income, in which everyone who meets specific eligibility requirements and applies for the program receives a benefit. Specifically, Pell Grant costs in a given year are determined by the maximum award set in statute, the number of eligible applicants, and the award for which those applicants are eligible based on their needs and costs of attendance. The maximum Pell award for the academic year 2017-2018 is $5,920, of which $4,860 was established in discretionary appropriations and the remaining $1060 is provided automatically by the College Cost Reduction and Access Act (CCRAA), as amended.

- The cost of each Pell Grant is funded by discretionary budget authority provided in annual appropriations acts, along with mandatory budget authority provided not only by the CCRAA, as amended, and the BCA, but also by amendments to the Higher Education Act of 1965 contained in the 2011 and 2012 appropriations acts. There is no programmatic difference between the mandatory and discretionary funding.

- If valid applicants are more numerous than expected, or if these applicants are eligible for higher awards than anticipated, the Pell Grant program will cost more than the appropriations provided. If the costs during one academic year are higher than provided for in that year's appropriation, the Department of

Education funds the extra costs with the subsequent year's appropriation.[1]

- To prevent deliberate underfunding of Pell costs, in 2006 the congressional and Executive Branch scorekeepers agreed to a special scorekeeping rule for Pell. Under this rule, the annual appropriations bill is charged with the full Congressional Budget Office estimated cost of the Pell Grant program for the budget year, plus or minus any cumulative shortfalls or surpluses from prior years. This scorekeeping rule was adopted by the Congress as §406(b) of the Concurrent Resolution on the Budget for Fiscal Year 2006 (H. Con. Res. 95, 109th Congress).

Given the nature of the program, it is reasonable to consider Pell Grants an individual entitlement for purposes of budget analysis and enforcement. The discretionary portion of the award funded in annual appropriations Acts counts against the discretionary spending caps pursuant to section 251 of BBEDCA and appropriations allocations established annually under §302 of the Congressional Budget Act.

The total cost of Pell Grants can fluctuate from year to year, even with no change in the maximum Pell Grant award, because of changes in enrollment, college costs, and family resources. In general, the demand for and costs of the program are countercyclical to the economy; more people go to school during periods of higher unemployment, but return to the workforce as the economy improves. In fact, the program experienced a spike in enrollment and costs during the recent recession, reaching a peak of 9.4 million students in 2011. This spike required temporary mandatory or emergency appropriations to fund the program well above the level that could have been provided as a practical matter by the regular discretionary appropriation. Since 2011, enrollment and costs have continued to decline, and the funding provided has lasted longer than anticipated. The 2018 Budget baseline expects program costs to stay within available resources, which include the discretionary appropriation, budget authority carried forward from the previous year, and extra mandatory funds, throughout the 10-year budget window (see Table 10-3). These estimates have changed significantly from year to year, which illustrates continuing uncertainty about Pell program costs, and the year in which a shortfall will reemerge.

The 2018 Budget reflects the Administration's commitment to ensuring students receive the maximum Pell Grant for which they are eligible, and enhances the program by supporting year-round Pell eligibility. First, the Budget provides sufficient resources to fully fund Pell Grants in the award years covered by the budget year, and subsequent years. The Budget provides $22.4 billion in discretionary budget authority in 2018, the same level of discretionary budget authority provided in the Furthering Continuing Appropriations Act, 2017 (P.L. 114-254). Level-funding Pell in 2018, combined with available budget authority from the previous year and mandatory funding provided in previous legislation, provides $13.6 billion more than is needed to fully fund the program in the 2018-19 award year.

In light of these additional resources, the Budget proposes a cancellation of $3.9 billion from the unobligated carryover from 2017. Then, with significant budget authority still available in the program, the Budget also proposes to provide more flexibility to students by sup-

[1] This ability to "borrow" from a subsequent appropriation is unique to the Pell program. It comes about for two reasons. First, like many education programs, Pell is "forward-funded"—the budget authority enacted in the fall of one year is intended for the subsequent academic year, which begins in the following July. Second, even though the amount of funding is predicated on the expected cost of Pell during one academic year, the money is made legally available for the full 24-month period covering the current fiscal year and the subsequent fiscal year. This means that, if the funding for an academic year proves inadequate, the following year's appropriation will legally be available to cover the funding shortage for the first academic year. The 2018 appropriation, for instance, will support the 2018-2019 academic year beginning in July 2018 but will become available in October 2017 and can therefore help cover any shortages that may arise in funding for the 2017-2018 academic year.

Table 10–3. DISCRETIONARY PELL FUNDING NEEDS
(Dollars in Billions)

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Discretionary Pell Funding Needs (Baseline)										
Estimated Program Cost for $4,860 Maximum Award	21.7	22.2	22.5	22.9	23.2	23.6	24.1	24.5	24.8	25.1
Cumulative Incoming Surplus	11.4	....	....	....	....	....	....	....	....	....
Mandatory Budget Authority Available	1.4	1.4	1.4	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Total Additional Budget Authority Needed	8.9	20.8	21.1	21.7	22.0	22.5	22.9	23.3	23.6	24.0
Fund Pell at 2017 Level	22.4	22.4	22.4	22.4	22.4	22.4	22.4	22.4	22.4	22.4
Surplus/Funding Gap from Prior Year		13.6	15.2	16.6	17.3	17.7	17.6	17.2	16.3	15.1
Cumulative Surplus/(Discretionary Funding Gap)	13.6	15.2	16.6	17.3	17.7	17.6	17.2	16.3	15.1	13.5
Effect of 2018 Budget Policies										
Year-Round Pell	–1.2	–1.2	–1.2	–1.3	–1.3	–1.3	–1.3	–1.3	–1.4	–1.4
Cancellation of Unobligated Balances	–3.9	....	....	....	....	....	....	....	....	....
Mandatory Funding Shift*	–0.3	–0.3	–0.3	–0.3	–0.3	–0.3	–0.3	–0.4	–0.4	–0.4
Surplus/Funding Gap from Prior Year		8.2	8.2	8.1	7.2	6.0	4.3	2.2	–0.5	–3.4
Cumulative Surplus/(Discretionary Funding Gap)	8.2	8.2	8.1	7.2	6.0	4.3	2.2	–0.5	–3.4	–6.7

* Some budget authority, provided in previous legislation and classified as mandatory, but used to meet discretionary Pell grant program funding needs, will be shifted to instead fund new costs associated with the mandatory add-on.

porting year-round Pell. This policy allows students the opportunity to earn a third semester of Pell Grant support during an award year, boosting Pell Grant aid disbursed by $1.5 billion in award year 2018 to approximately 900,000 students. Year-round Pell would also help incentivize students to complete their degrees faster, which can help them reduce their loan debt and enter the workforce sooner. Year-round Pell increases future discretionary Pell program costs by $13 billion over 10 years (see Table 10–3). With the proposed cancellation and the increase for year-round Pell, the Pell program still is expected to have sufficient discretionary funds until 2025.

II. BUDGET ENFORCEMENT AND BUDGET PRESENTATION

Statutory PAYGO

The Statutory Pay-As-You-Go Act of 2010 (PAYGO, or "the Act"; Public Law 111-139) was enacted on February 12, 2010. Drawing upon the PAYGO provisions enacted as part of the Budget Enforcement Act, the Act requires that, subject to specific exceptions, all legislation enacted during each session of the Congress changing taxes or mandatory expenditures and collections not increase projected deficits. Mandatory spending encompasses any spending except that controlled by the annual appropriations process.[2]

The Act established 5- and 10-year scorecards to record the budgetary effects of legislation; these scorecards are maintained by OMB and are published on the OMB web site. The Act also established special scorekeeping rules that affect whether all estimated budgetary effects of PAYGO bills are entered on the scorecards. Off-budget programs (primarily Social Security and the Postal Service) do not have budgetary effects for the purposes of PAYGO and are not counted. Provisions designated by the Congress in law as emergencies appear on the scorecards, but the effects are subtracted before computing the scorecard totals.

In addition to the exemptions in the PAYGO Act itself, the Congress has enacted laws affecting revenues or direct spending with a provision directing that the budgetary effects of all or part of the law be held off of the PAYGO scorecards. In the most recently completed Congressional session, one piece of legislation was enacted with such a provision.

The requirement of budget neutrality is enforced by an accompanying requirement of automatic across-the-board cuts in selected mandatory programs if enacted legislation, taken as a whole, does not meet that standard. If the Congress adjourns at the end of a session with net costs—that is, more costs than savings—in the budget-year column of either the 5- or 10-year scorecard, OMB is required to prepare, and the President is required to issue, a sequestration order implementing across-the-board cuts to non-exempt mandatory programs in an amount sufficient to offset the net costs on the PAYGO scorecards. The list of exempt programs and special sequestration rules for certain programs are contained in sections 255 and 256 of BBEDCA.

As was the case during the 1990s, the PAYGO sequestration has not been required during the seven Congressional sessions since the PAYGO Act reinstated the statutory PAYGO requirement. For each of those sessions, OMB's annual PAYGO reports showed net savings in the budget year column of both the 5- and 10-year scorecards. For the second session of the 114th Congress, the most recent session, enacted legislation placed costs of $478 million in each year of the 5-year scorecard and $980 million in each year of the 10-year scorecard. The new costs in 2017 lowered the balances of savings from prior sessions of the Congress in 2017, the budget year column, and resulted in total net savings of $4,418 million on the 5-year scorecard, and $14,468 million on the 10-year scorecard, so no sequestration was required.[3]

There are limitations to Statutory PAYGO's usefulness as a budget enforcement tool. Although the scorecard consistently shows net savings from legislation subject to the PAYGO rules, a number of laws that significantly increased deficits were enacted with provisions directing that these deficit effects be ignored for PAYGO purposes. PAYGO also suffers from the technical flaws of excluding off-budget programs, ignoring effects outside of the 11-year window, and excluding the debt service costs associated with direct changes in the deficit.

Estimating the Impacts of Debt Service

New legislation that affects direct spending and revenue will also indirectly affect interest payments on the national debt. These effects on interest payments can cause a significant budgetary impact; however, they are not captured in cost estimates that are required under the Statutory PAYGO Act of 2010, nor are they typically included in estimates of new legislation that are produced by the Congressional Budget Office. The Administration believes that cost estimates of new legislation could be improved by incorporating information on the effects of interest payments and looks forward to working with the Congress in making reforms in this area.

Administrative PAYGO

The Administration continues to review potential administrative actions by Executive Branch agencies affecting entitlement programs, as stated in a memorandum issued on May 23, 2005, by the Director of the Office of Management and Budget. This memo effectively established a PAYGO requirement for administrative actions involving mandatory spending programs, so that agen-

[2] Mandatory spending is termed direct spending in the PAYGO Act. The term mandatory encompasses entitlement programs, e.g., Medicare and Medicaid, and any funding not controlled by annual appropriations bills, such as the automatic availability of immigration examination fees to the Department of Homeland Security.

[3] OMB's annual PAYGO reports and other explanatory material about the PAYGO Act are available on OMB's website.

cies administering these programs have a requirement to keep costs low. Exceptions to this requirement are only provided in extraordinary or compelling circumstances.[4]

Discretionary spending limits

The BBEDCA baseline extends enacted or continuing appropriations at the account level assuming current services inflation but allowances are included to bring total base discretionary funding in line with the BBEDCA caps through 2021. Current law requires reductions to those discretionary caps in accordance with Joint Committee enforcement procedures put in place by the BCA. For 2018, the Budget supports maintaining the topline for base discretionary programs at the Joint Committee-enforced level but proposes rebalancing Federal responsibilities by restoring the reductions made to the defense cap by reducing the non-defense cap by about the same amount. After 2018, the Budget proposes new caps that shift resources from non-defense programs by further reducing the non-defense cap over the 2019–2027 window by 2 percent per year (the "2-penny" plan) while increasing the defense category spending by 2.1 percent per year. The Defense base cap estimates for 2019–2027 reflect inflated 2018 levels, not a policy judgment. The Administration will determine 2019–2027 defense funding levels in the 2019 Budget, in accordance with the National Security Strategy, National Defense Strategy, and Nuclear Posture Review that are currently under development. The discretionary cap policy levels are reflected in Table S–7 of the main *Budget* volume.

Further adjustments to the proposed discretionary caps

The discretionary non-defense caps proposed in the 2018 Budget are reduced further to account for policy decisions to remove the air traffic control programs from discretionary spending because of privatization and to reduce the contributions of Federal agencies to the retirement plans of civilian employees. These cap reductions would prevent the savings achieved by these reforms from being redirected to augment existing non-defense programs. Reforms to the retirement plans of Federal civilian employees would also yield savings in the defense category, but no reduction is included to allow for those savings to be redirected to critical national security investments within the category.

Air Traffic Control Privatization.—The Administration proposes to shift the Federal Aviation Administration's (FAA) air traffic control function into a non-governmental entity beginning in 2021. This proposal reduces the need for discretionary spending in the following FAA accounts: Facilities and Equipment; Research, Engineering, and Development; and Trust Fund Share accounts. The Budget reflects an annual reduction of $10.4 billion in budget authority from 2021 to 2027; this level was determined by measuring the amount allocated as a placeholder in the policy outyears to air traffic control activities under the proposed non-defense category.

Employer-Employee Share of Federal Employee Retirement.—The Budget proposes to reallocate the costs of Federal employee retirement by charging equal shares of employees' accruing retirement costs to employees and employers. The Budget takes the estimated reductions in the share of employee retirement paid by Federal agencies out of the cap levels starting in 2019. This proposal starts at a reduction of discretionary budget authority of $6.6 billion in 2019 and totals $70 billion in reduced discretionary spending over the 2019 to 2027 period.

Gross versus net reductions in Joint Committee sequestration

The net realized savings from Joint Committee mandatory sequestration are less than the amounts required by the sequestration calculation as a result of requirements in BBEDCA. The 2018 Budget shows the net effect of Joint Committee sequestration reductions by accounting for reductions in 2018 that remain in the sequestered account and become newly available for obligation in the year after sequestration, in accordance with section 256(k)(6) of BBEDCA. The BA and outlays from these "pop-up" resources are included in the baseline and policy estimates and amount to a cost of $2.5 billion in 2018. Additionally, the 2018 Budget accounts for $669 million in lost savings that results from the sequestration of certain interfund payments. Such payments produce no net deficit reduction.

Fannie Mae and Freddie Mac

The Budget continues to present Fannie Mae and Freddie Mac, the housing Government-sponsored enterprises (GSEs) currently in Federal conservatorship, as non-Federal entities. However, any Treasury equity investments in the GSEs would be recorded as budgetary outlays, and the dividends on those investments are recorded as offsetting receipts. In addition, the budget estimates reflect collections from the 10 basis point increase in GSE guarantee fees that was enacted under the Temporary Payroll Tax Cut Continuation Act of 2011 (P.L. 112-78). The baseline also reflects collections from a 4.2 basis point set-aside on each dollar of unpaid principal balance of new business purchases authorized under the Housing and Economic Recovery Act of 2008 (P.L. 111-289) to be remitted to several Federal affordable housing programs; the 2018 Budget proposes to eliminate the 4.2 basis point set-aside and discontinue funding for these programs. The GSEs are discussed in more detail in Chapter 20, "Credit and Insurance."

Postal Service Reforms

The Administration proposes reform of the Postal Service, necessitated by the serious financial condition of the Postal Service Fund. The proposals are discussed in the Postal Service and Office of Personnel Management sections of the *Appendix*.

The Postal Service is designated in statute as an off-budget independent establishment of the Executive

[4] For a review of the application of Administrative PAYGO, see *USDA's Application of Administrative PAYGO to Its Mandatory Spending Programs, GAO, October 31, 2011, GAO-11-921R*.

Branch. This designation and budgetary treatment was most recently mandated in 1989, in part to reflect the policy agreement that the Postal Service should pay for its own costs through its own revenues and should operate more like an independent business entity. Statutory requirements on Postal Service expenses and restrictions that impede the Postal Service's ability to adapt to the ongoing evolution to paperless written communications have made this goal increasingly difficult to achieve. To address its current financial and structural challenges, the Administration proposes reform measures to ensure that the Postal Service funds existing commitments to current and former employees from business revenues, not taxpayer funds. To reflect the Postal Services' practice since 2012 of using defaults to on-budget accounts to continue operations, despite losses, the Administration's baseline now reflects probable defaults to on-budget accounts at the Office of Personnel Management (OPM). This treatment allows for a clearer presentation of the Postal Service's likely actions in the absence of reform and more realistic scoring of reform proposals, with improvements in the Postal Service's finances reflected through lower defaults, and added costs for the Postal Service reflected as higher defaults. Under current scoring rules, savings from reform for the Postal Service affect the unified deficit but do not affect the PAYGO scorecard. Savings to OPM through lower projected defaults affect both the PAYGO scorecard and the unified deficit.

Fair Value for Credit Programs

Fair value is an approach to measuring the cost of Federal direct loan and loan guarantee programs that would align budget estimates with the market value of Federal assistance, typically by including risk premiums observed in the market. Under current budget rules, the cost of Federal credit programs is measured as the net present value of the estimated future cash flows resulting from a loan or loan guarantee discounted at the Treasury rate. These rules are defined in law by the Federal Credit Reform Act of 1990 (FCRA). In recent years, some analysts have argued that fair value estimates would better capture the true costs imposed on taxpayers from Federal credit programs and would align with private sector standard practices for measuring the value of loans and loan guarantees. The Congressional Budget Office (CBO), for instance, has stated that fair value would be a more comprehensive measure of the cost of Federal credit programs. The Concurrent Resolution on the Budget for Fiscal Year 2016 (S. Con. Res. 11) also included language supporting the use of fair value. The Administration supports proposals to improve the accuracy of cost estimates and is open to working with Congress to address any conceptual and implementation challenges necessary to implement fair value estimates for Federal credit programs.

Budget Presentation of Immigration Policy and Reforms

The Administration is exploring a future change to budget presentation that would make transparent the net budgetary effects of immigration programs and policy. The goal of such changes would be to better capture the impact of immigration policy decisions on the federal Government's fiscal path. Once the net effect of immigration on the Federal budget is more clearly illustrated, the American public can be better informed about options for improving policy outcomes and savings taxpayer resource. To that end, the Budget supports reforming the U.S. immigration system to encourage a merit-based system of entry for legal immigrants, ending the entry of illegal immigrants, and a substantial reduction in refugees slotted for domestic resettlement.

FEDERAL RECEIPTS

11. GOVERNMENTAL RECEIPTS

A simpler, fairer, and more efficient tax system is critical to growing the economy and creating jobs. Our outdated, overly complex, and burdensome tax system must be reformed to unleash America's economy, and create millions of new, better-paying jobs that enable American workers to meet their families' needs.

The Budget assumes deficit neutral tax reform, which the Administration will work closely with the Congress to enact.

The Administration has articulated several core principles that will guide its discussions with taxpayers, businesses, Members of Congress, and other stakeholders. Overall, the Administration believes that tax reform, both for individuals and businesses, should grow the economy and make America a more attractive business environment.

Tax relief for American families, especially middle-income families, should:

- Lower individual income tax rates;
- Expand the standard deduction, and help families struggling with child and dependent care expenses;
- Protect homeownership, charitable giving, and retirement saving;
- End the burdensome alternative minimum tax, which requires many taxpayers to calculate their taxes twice;
- Repeal the 3.8 percent Obamacare surcharge on capital gains and dividends, which further hinders capital formation; and
- Abolish the death tax, which penalizes farmers and small business owners who want to pass their family enterprises on to their children.

The Administration believes that business tax reform should:

- Reduce the tax rate on American businesses in order to fuel job creation and economic growth;
- Eliminate most special interest tax breaks to make the tax code more equitable, more efficient, and to help pay for lower business tax rates; and
- End the penalty on American businesses by transitioning to a territorial system of taxation, enabling these businesses to repatriate their newly earned overseas profits without incurring additional taxes. This transition would include a one-time repatriation tax on already accumulated overseas income.

Going forward, the President is committed to continue working with the Congress and other stakeholders to carefully and deliberatively build on these principles to create a tax system that is fair, simple, and efficient—one that puts Americans back to work and puts America first.

ESTIMATES OF GOVERNMENTAL RECEIPTS

Governmental receipts are taxes and other collections from the public that result from the exercise of the Federal Government's sovereign or governmental powers. The difference between governmental receipts and outlays is the surplus or deficit.

The Federal Government also collects income from the public from market-oriented activities. Collections from these activities, which are subtracted from gross outlays, rather than added to taxes and other governmental receipts, are discussed in Chapter 12, "Offsetting Collections and Offsetting Receipts," in this volume.

Total governmental receipts (hereafter referred to as "receipts") are estimated to be $3,459.7 billion in 2017, an increase of $191.7 billion or 5.9 percent from 2016. The estimated increase in 2017 is largely due to increases in payroll taxes, individual income taxes, and taxes on corporate income. Receipts in 2017 are estimated to be 18.1 percent of Gross Domestic Product (GDP), which is higher than in 2016, when receipts were 17.8 percent of GDP.

Receipts are estimated to rise to $3,654.3 billion in 2018, an increase of $194.6 billion or 5.6 percent relative to 2017. Receipts are projected to grow at an average annual rate of 4.7 percent between 2018 and 2022, rising to $4,390.1 billion. Receipts are projected to rise to $5,724.2 billion in 2027, growing at an average annual rate of 5.5 percent between 2022 and 2027. This growth is largely due to assumed increases in incomes resulting from both real economic growth and inflation.

As a share of GDP, receipts are projected to increase from 18.1 percent in 2017 to 18.3 percent in 2018, and to remain between 18.0 percent and 18.4 percent of GDP through 2027.

Table 11–1. RECEIPTS BY SOURCE—SUMMARY
(In billions of dollars)

	2016 Actual	Estimate										
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Individual income taxes	1,546.1	1,659.9	1,836.1	1,935.3	2,044.2	2,166.7	2,292.9	2,428.5	2,571.7	2,723.3	2,884.0	3,062.0
Corporation income taxes	299.6	323.6	354.9	374.8	401.2	400.5	414.4	425.0	438.9	454.8	475.1	496.6
Social insurance and retirement receipts	1,115.1	1,174.7	1,224.3	1,277.0	1,334.6	1,412.6	1,488.3	1,557.2	1,637.4	1,716.9	1,805.9	1,892.9
(On-budget)	*304.9*	*317.3*	*332.1*	*345.7*	*362.8*	*385.8*	*407.1*	*424.4*	*445.9*	*466.3*	*490.1*	*514.4*
(Off-budget)	*810.2*	*857.4*	*892.2*	*931.3*	*971.8*	*1,026.8*	*1,081.3*	*1,132.9*	*1,191.4*	*1,250.6*	*1,315.8*	*1,378.5*
Excise taxes	95.0	87.0	106.2	107.3	109.8	99.3	101.3	103.6	106.1	109.2	112.7	116.9
Estate and gift taxes	21.4	23.1	24.3	26.1	27.8	29.3	31.2	33.0	35.6	38.0	40.4	42.7
Customs duties	34.8	33.9	39.7	41.6	43.0	43.5	46.0	50.4	52.8	56.4	60.3	65.5
Miscellaneous receipts	156.0	157.4	123.8	111.6	106.6	109.0	120.9	131.8	141.5	151.5	158.5	167.6
Allowance to repeal and replace Obamacare	....	....	–55.0	–60.0	–85.0	–100.0	–105.0	–115.0	–120.0	–120.0	–120.0	–120.0
Total, receipts	**3,268.0**	**3,459.7**	**3,654.3**	**3,813.7**	**3,982.1**	**4,160.9**	**4,390.1**	**4,614.6**	**4,864.1**	**5,130.1**	**5,416.9**	**5,724.2**
(On-budget)	*2,457.8*	*2,602.3*	*2,762.1*	*2,882.4*	*3,010.3*	*3,134.1*	*3,308.8*	*3,481.7*	*3,672.7*	*3,879.5*	*4,101.1*	*4,345.7*
(Off-budget)	*810.2*	*857.4*	*892.2*	*931.3*	*971.8*	*1,026.8*	*1,081.3*	*1,132.9*	*1,191.4*	*1,250.6*	*1,315.8*	*1,378.5*
Total receipts as a percentage of GDP	17.8	18.1	18.3	18.2	18.1	18.0	18.1	18.1	18.2	18.2	18.3	18.4

LEGISLATION ENACTED IN 2016 THAT AFFECTS GOVERNMENTAL RECEIPTS

Several laws were enacted during 2016 that affect receipts. The major provisions of those laws that have a significant impact on receipts are described below.[1]

COAST GUARD AUTHORIZATION ACT OF 2015 (PUBLIC LAW 114-120)

This Act, which was signed into law on February 8, 2016, reauthorized the Coast Guard through September 30, 2017, and enacted various reforms. One of these reforms altered the criteria when the Secretary of Homeland Security may remit or cancel any part of a person's indebtedness to the United States or any U.S instrumentality. Cancellation of debt is typically a taxable event affecting governmental receipts.

TRADE FACILITATION AND TRADE ENFORCEMENT ACT OF 2015 (PUBLIC LAW 114-125)

This Act, which was signed into law on February 24, 2016, modified various requirements under the Tariff Act of 1930 and the Harmonized Tariff Schedule of the United States, provided certain trade preferences for Nepal, and increased the maximum penalty for failure to file a tax return within 60 days of the deadline, except for reasonable cause.

AIRPORT AND AIRWAY EXTENSION ACT OF 2016 (PUBLIC LAW 114-141)

This Act, which was signed into law on March 30, 2016, extended the authority to collect taxes that fund the Airport and Airway Trust Fund through July 15, 2016. The prior law exemption from domestic and international air passenger ticket taxes provided for aircraft in fractional ownership aircraft programs was also extended through that date. These taxes had been scheduled to expire after March 31, 2016, under prior law.

DEFEND TRADE SECRETS ACT OF 2016 (PUBLIC LAW 114-153)

This Act, which was signed into law on May 11, 2016, increased the maximum penalty for trade secret theft from $5,000,000 to the greater of $5,000,000 or three times the value of the stolen trade secret. These penalties are classified as governmental receipts.

PUERTO RICO OVERSIGHT, MANAGEMENT, AND ECONOMIC STABILITY ACT (PUBLIC LAW 114-187)

This Act, also known as PROMESA, which was signed into law on June 30, 2016, addressed Puerto Rico's debt by establishing an oversight board, and a process for restructuring debt including an automatic stay upon enactment. PROMESA creates an oversight board that is not a department, agency, establishment, or instrumentality of the Federal Government but is an entity within the territorial government, which is not subject to the supervision or control of any Federal agency. Although the Board's financing is derived entirely from the territorial government, the flow of funds from the territory to the Board is mandated by Federal law. Because Federal law prescribes the flow of funds to the Board, the budget reflects the allocation of resources by the territorial government to the new territorial entity as governmental receipts and a simultaneous payment to the oversight board in the same

[1] In the discussions of enacted legislation, years referred to are calendar years, unless otherwise noted.

amount, with a net zero Federal deficit impact, consistent with long-standing budgetary concepts.

FAA EXTENSION, SAFETY, AND SECURITY ACT OF 2016 (PUBLIC LAW 114-190)

This Act, which was signed into law on July 15, 2016, enacted aviation safety and security reforms, and extended the authority to collect taxes that fund the Airport and Airway Trust Fund through September 30, 2017. The prior law exemption from domestic and international air passenger ticket taxes provided for aircraft in fractional ownership aircraft programs was also extended through that date. These taxes had been scheduled to expire after July 15, 2016, under prior law.

UNITED STATES APPRECIATION FOR OLYMPIANS AND PARALYMPIANS ACT OF 2016 (PUBLIC LAW 114-239)

This Act, which was signed into law on October 7, 2016, excluded the value of any medal awarded or prize money received from the U.S. Olympic Committee on account of competition in the Olympic Games or Paralympic Games unless the taxpayer's adjusted gross income exceeded $1,000,000 or $500,000 if married but filing separately.

21ST CENTURY CURES ACT (PUBLIC LAW 114-255)

This Act, which was signed into law on December 13, 2016, created an exception to the group health plan requirements for qualified small employer health reimbursement arrangements. The amount of such arrangements was limited to $4,950 ($10,000 for arrangements which also covered employee's family members) and indexed to inflation.

NATIONAL DEFENSE AUTHORIZATION ACT FOR FISCAL YEAR 2017 (PUBLIC LAW 114-328)

This Act, which was signed into law on December 23, 2016, reauthorized the Department of Defense, and enacted various reforms. One of these reforms expanded when the Secretaries of the Army, the Navy, the Air Force, and Homeland Security may remit or cancel any part of a person's indebtedness to the United States or any U.S instrumentality. Cancellation of debt is typically a taxable event affecting governmental receipts.

BUDGET PROPOSALS

While the details of the Administration's reforms to individual and business taxes will be released at a later date, the budget does include several proposals which affect governmental receipts:

Extend CHIP funding through 2019.—The Authorization for the Children's Health Insurance Program (CHIP) currently expires at the end of 2017. The Administration proposes to extend CHIP funding for two years, through fiscal year 2019. As a result, on net, more children will be enrolled in CHIP and fewer children will be enrolled in Marketplace qualified health plans and employment-based health insurance. This will increase tax revenues and reduce outlays associated with the premium tax credit.

Establish Electronic Visa Update System (EVUS) user fee.—The Administration proposes to establish a user fee for EVUS, a new U.S. Customs and Border Protection (CBP) program to collect biographic and travel-related information from certain non-immigrant visa holders prior to traveling to the United States. This process will complement existing visa application processes and enhance CBP's ability to make pre-travel admissibility and risk determinations. CBP proposes to establish a user fee to fund the costs of establishing, providing, and administering the system.

Eliminate Corporation for Travel Promotion.—The Administration proposes to eliminate funding for the Corporation for Travel Promotion (also known as Brand USA) as part of the Administration's plans to move the nation towards fiscal responsibility and to redefine the proper role of the Federal Government. The Budget redirects the Electronic System for Travel Authorization (ESTA) surcharge currently deposited in the Travel Promotion Fund to the ESTA account at Customs and Border Protection with a portion to be transferred to the International Trade Administration.

Provide paid parental leave benefits.—The Administration proposes establishing a new benefit within the Unemployment Insurance (UI) program to provide up to six weeks paid leave to mothers, fathers, and adoptive parents. States are expected to adjust their UI tax structures to maintain sufficient balances in their Unemployment Trust Fund accounts.

Establish Unemployment Insurance (UI) solvency standard.—The Administration proposes to set a minimum solvency standard to encourage States to maintain sufficient balances in their UI trust funds. States that are currently below this minimum standard are expected to increase their State UI taxes to build up their trust fund balances. States that do not build up sufficient reserves will be subject to Federal Unemployment Tax Act credit reductions, increasing Federal UI receipts.

Improve Unemployment Insurance program integrity.—The Administration proposes a package of reforms to the UI program aimed at improving program integrity. These reforms are expected to reduce outlays in the UI program by reducing improper payments. In general, reduced outlays allow States to keep UI taxes lower, reducing overall receipts to the UI trust funds.

Provide mandatory Reemployment Services and Eligibility Assessments.—The Administration proposes mandatory funding to provide Reemployment Services and Eligibility Assessments (RESEAs) to the one-half of

UI claimants identified as most likely to exhaust benefits. RESEAs have been shown to reduce improper payments and to get claimants back to work more quickly, thereby reducing UI benefit outlays. In general, reduced outlays allow States to keep UI taxes lower, reducing overall receipts to the UI trust funds.

Offset overlapping unemployment and disability payments.—The Administration proposes to close a loophole that allows individuals to receive both UI and Disability Insurance (DI) benefits for the same period of joblessness. The proposal would offset the DI benefit to account for concurrent receipt of UI benefits. Under current law, concurrent receipt of DI benefits and unemployment compensation is allowable. Offsetting the overlapping benefits would discourage some individuals from applying for UI, reducing benefit outlays. The reduction in benefit outlays is accompanied by a reduction in States' UI tax receipts, which are held in the Unemployment Trust Fund.

Enact Federal Aviation Administration (FAA) air traffic control reform.—The Administration proposes to shift the FAA's air traffic control function into a non-governmental entity beginning in 2021. This proposal would reduce the collection of aviation excise taxes. The estimates in the Budget are illustrative of the aviation taxes that would be in place to fund the FAA's Airport Improvement Program. The reform proposal in the Budget assumes the ticket tax will end, but has not yet developed the precise tax rates for the remaining aviation excise taxes.

Reform the Essential Air Service.—The Administration proposes to reform the Essential Air Service (EAS) by eliminating discretionary funding and focusing on the remote airports that are most in need of subsidized commercial air service. The proposal will include a mix of reforms, including limits on per-passenger subsidies and higher average daily enplanements. These reforms would affect governmental receipts by reducing aviation overflight fees.

Require a social security number that is valid for work in order to claim child tax credit and earned income tax credit.—The Administration proposes requiring a social security number that is valid for work to claim the earned income tax credit or the child tax credit for the taxable year. For both credits, this requirement would apply to taxpayers (including the primary and secondary filer on a joint return) and all qualifying children.

Increase oversight of paid tax return preparers.—Paid tax return preparers have an important role in tax administration because they assist taxpayers in complying with their obligations under the tax laws. Incompetent and dishonest tax return preparers increase collection costs, reduce revenues, disadvantage taxpayers by potentially subjecting them to penalties and interest as a result of incorrect returns, and undermine confidence in the tax system. To promote high quality services from paid tax return preparers, the proposal would explicitly provide that the Secretary of the Treasury has the authority to regulate all paid tax return preparers. This proposal would be effective as of the date of enactment.

Provide the Internal Revenue Service (IRS) with greater flexibility to address correctable errors.—The Administration proposes to expand IRS authority to correct errors on taxpayer returns. Current statute only allows the IRS to correct errors on returns in certain limited instances, such as basic math errors or the failure to include the appropriate social security number or taxpayer identification number. This proposal would expand the instances in which the IRS could correct a taxpayer's return including cases where: (1) the information provided by the taxpayer does not match the information contained in government databases; (2) the taxpayer has exceeded the lifetime limit for claiming a deduction or credit; or (3) the taxpayer has failed to include with his or her return, certain documentation that is required by statute. The proposal would be effective on the date of enactment.

Provide authority to purchase and construct a new Bureau of Engraving and Printing (BEP) facility.—The Administration proposes to provide authority to the Bureau of Engraving and Printing to construct a more efficient production facility. This will reduce the cost incurred by the Federal Reserve for printing currency and therefore increase governmental receipts via increased deposits from the Federal Reserve to Treasury.

Reform inland waterways financing.—The Administration proposes to reform the laws governing the Inland Waterways Trust Fund, including establishing a fee to increase the amount paid by commercial navigation users of the inland waterways. In 1986, the Congress provided that commercial traffic on the inland waterways would be responsible for 50 percent of the capital costs of the locks, dams, and other features that make barge transportation possible on the inland waterways. The additional revenue would help finance future capital investments in these waterways to support economic growth. The current excise tax on diesel fuel used in inland waterways commerce will not produce sufficient revenue to cover these costs.

Increase employee contributions to Federal Employee Retirement System (FERS).—The Administration proposes to increase Federal employee contributions to FERS, equalizing employee and employer contributions to FERS so that half of the normal cost would be paid by each. For some specific occupations, such as law enforcement officers and firefighters, the cost of their retirement package necessitates a higher normal cost percentage. For those specific occupations, this proposal would increase, but not equalize employee contributions. This proposal is consistent with the goal of reining in Federal Government spending in many areas, and bringing Federal retirement benefits more in line with the private sector. This adjustment will reduce the long term cost to the Federal Government, by reducing the Government's contribution rate. To lessen the impact on employees, this proposal will be phased in over an estimated 6-year period. This reform would affect governmental receipts because Federal employee retirement contributions are classified as governmental receipts.

Repeal and replace Obamacare.—The Administration is committed to rescuing Americans from the failures of Obamacare and to expand choice, increase access, and lower premiums. Repealing and replacing Obamacare would affect governmental receipts.

Reform medical liability system.—The Administration proposes to reform medical liability beginning in 2018. This proposal has the potential to lower health insurance premiums, increasing taxable income and payroll tax receipts and reducing outlays associated with the premium tax credit.

Eliminate allocations to the Housing Trust Fund and Capital Magnet Fund.—The Administration proposes to eliminate an assessment on Fannie Mae and Freddie Mac that is used to fund the Housing Trust Fund and Capital Magnet Fund, two Federal programs that support affordable low-income housing. The resulting increase in taxable income at Fannie Mae and Freddie Mac would impact governmental receipts.

Table 11–2. EFFECT OF BUDGET PROPOSALS

(In millions of dollars)

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2018-2022	2017-2027
Extend CHIP funding through 2019	....	–49	219	367	67	....	....	....	....	....	....	604	604
Establish Electronic Visa Update System user fee	....	27	27	31	28	29	28	31	28	29	28	142	286
Eliminate Brand USA; make revenue available to CBP	....	–162	–170	–178	....	....	....	....	....	....	....	–510	–510
Transfer Electronic System for Travel Authorization receipts to International Trade Administration	....	162	171	178	185	193	200	208	215	223	230	889	1,965
Provide paid parental leave benefits	....	....	....	....	916	962	971	1,158	1,264	1,365	1,459	1,878	8,095
Establish an Unemployment Insurance (UI) solvency standard	....	....	....	758	1,894	2,568	1,045	1,833	1,072	1,488	2,254	5,220	12,912
Improve UI program integrity	....	....	–4	–8	–23	–42	–86	–57	–81	–102	–132	–77	–535
Provide for Reemployment Services and Eligibility Assessments	....	....	1	....	–18	–89	–238	–269	–229	–264	–284	–106	–1,390
Offset overlapping unemployment and disability payments	....	....	....	–1	–3	–7	–13	–18	–23	–46	–36	–11	–147
Reform Air Traffic Control	....	....	....	....	–14,391	–14,976	–15,627	–16,382	–17,302	–18,073	–18,881	–29,367	–115,632
Reform Essential Air Service	....	....	....	....	–129	–130	–132	–133	–134	–136	–137	–259	–931
Require social security number for Child Tax Credit & Earned Income Tax Credit	....	298	1,176	1,194	1,228	1,261	1,313	1,381	1,455	1,526	1,618	5,157	12,450
Increase oversight of paid tax return preparers	....	12	18	20	22	24	27	29	32	36	39	96	259
Provide more flexible authority for the IRS to address correctable errors	....	5	10	11	11	12	13	13	14	15	15	49	119
Provide authority for Bureau of Engraving and printing to construct new facility	....	15	74	3	–5	314	–5	–14	–3	–165	494	401	708
Reform inland waterways financing	....	108	107	106	105	104	103	103	101	100	100	530	1,037
Increase employee contributions to 50% of cost with 6-year phase-in (1% per year)	....	1,719	3,227	4,810	6,372	7,959	9,537	9,568	9,599	9,624	9,640	24,087	72,055
Repeal and replace Obamacare	....	–55,000	–60,000	–85,000	–100,000	–105,000	–115,000	–120,000	–120,000	–120,000	–120,000	–405,000	–1,000,000
Reform the medical liability system	....	24	222	545	982	1,468	2,054	2,666	3,053	3,261	3,444	3,241	17,719
Eliminate allocations to the Housing Trust Fund and Capital Magnet Fund	....	75	79	96	110	117	122	126	129	131	134	477	1,120
Total receipt effects of mandatory proposals	....	–52,766	–54,843	–77,068	–102,649	–105,233	–115,688	–119,757	–120,810	–120,987	–120,015	–392,559	–989,815

12. OFFSETTING COLLECTIONS AND OFFSETTING RECEIPTS

I. INTRODUCTION AND BACKGROUND

The Government records money collected in one of two ways. It is either recorded as a governmental receipt and included in the amount reported on the receipts side of the budget or it is recorded as an offsetting collection or offsetting receipt, which reduces (or "offsets") the amount reported on the outlay side of the budget. Governmental receipts are discussed in the previous chapter, "Governmental Receipts." The first section of this chapter broadly discusses offsetting collections and offsetting receipts. The second section discusses user charges, which consist of a subset of offsetting collections and offsetting receipts and a small share of governmental receipts.

As discussed below, offsetting collections and offsetting receipts are cash inflows to a budget account that are usually used to finance Government activities. The spending associated with these activities is included in total or "gross outlays." For 2016, gross outlays to the public were $4,352 billion,[1] or 23.6 percent of gross domestic product (GDP). Offsetting collections and offsetting receipts from the public are subtracted from gross outlays to the public to yield "net outlays," which is the most common measure of outlays cited and generally referred to as simply "outlays." For 2016, net outlays were $3,853 billion or 20.9 percent of GDP. Government-wide net outlays reflect the Government's net disbursements to the public and are subtracted from governmental receipts to derive the Government's deficit or surplus. For 2016, governmental receipts were $3,268 billion, or 17.8 percent of GDP, and the deficit was $585 billion, or 3.2 percent of GDP.

There are two sources of offsetting receipts and offsetting collections: from the public and from other budget accounts. In 2016, offsetting receipts and offsetting collections from the public were $499 billion, while intragovernmental offsetting receipts and offsetting collections were $1,141 billion. Regardless of how it is recorded (as governmental receipts, offsetting receipts, or offsetting collections), money collected from the public reduces the deficit or increases the surplus. In contrast, intragovernmental collections from other budget accounts exactly offset the payments made by these accounts, with no net impact on the deficit or surplus.[2]

When measured by the magnitude of the dollars collected, most offsetting collections and offsetting receipts from the public arise from business-like transactions with the public. Unlike governmental receipts, which are derived from the Government's exercise of its sovereign power, these offsetting collections and offsetting receipts arise primarily from voluntary payments from the public for goods or services provided by the Government. They are classified as offsets to outlays for the cost of producing the goods or services for sale, rather than as governmental receipts on the receipts side of the budget. Treating offsetting collections and offsetting receipts as offsets to outlays produces budget totals for receipts and (net) outlays that reflect the amount of resources allocated by the Government through collective political choice, rather than through the marketplace.[3] These activities include the sale of postage stamps, land, timber, and electricity; charging fees for services provided to the public (e.g., admission to national parks); and collecting premiums for health care benefits (e.g., Medicare Parts B and D).

A relatively small portion ($25.1 billion in 2016) of offsetting collections and offsetting receipts from the public is derived from the Government's exercise of its sovereign power. From a conceptual standpoint, these should be classified as governmental receipts. However, they are classified as offsetting rather than governmental receipts either because this classification has been specified in law or because these collections have traditionally been classified as offsets to outlays. Most of the offsetting collections and offsetting receipts in this category derive from fees from Government regulatory services or Government licenses, and include, for example, charges for regulating the nuclear energy industry, bankruptcy filing fees, immigration fees, food inspection fees, passport fees, and patent and trademark fees.[4]

A third source of offsetting collections and offsetting receipts is intragovernmental transfers. Examples of intragovernmental transfers include interest payments to funds that hold Government securities (such as the Social Security trust funds), general fund transfers to civilian and military retirement pension and health benefits

[1] Gross outlays to the public are derived by subtracting intragovernmental outlays from gross outlays. For 2016, gross outlays were $5,493 billion. Intragovernmental outlays are payments from one Government account to another Government account. For 2016, intragovernmental outlays totaled $1,141 billion.

[2] For the purposes of this discussion, "collections from the public" include collections from non-budgetary Government accounts, such as credit financing accounts and deposit funds. For more information on these non-budgetary accounts, see Chapter 9, "Coverage of the Budget."

[3] Showing collections from business-type transactions as offsets on the spending side of the budget follows the concept recommended by the Report of the President's Commission on Budget Concepts in 1967 and is discussed in Chapter 8 of this volume, "Budget Concepts."

[4] This category of receipts is known as "offsetting governmental receipts." Some argue that regulatory or licensing fees should be viewed as payments for a particular service or for the right to engage in a particular type of business. However, these fees are conceptually much more similar to taxes because they are compulsory, and they fund activities that are intended to provide broadly dispersed benefits, such as protecting the health of the public. Reclassifying these fees as governmental receipts could require a change in law, and because of conventions for scoring appropriations bills, would make it impossible for fees that are controlled through annual appropriations acts to be scored as offsets to discretionary spending.

funds, and agency payments to funds for employee health insurance and retirement benefits. Although these intragovernmental collections exactly offset the payments themselves, with no effect on the deficit or surplus, it is important to record these transactions in the budget to show how much the Government is allocating to fund various programs. For example, in the case of civilian retirement pensions, Government agencies make accrual payments to the Civil Service Retirement and Disability Fund on behalf of current employees to fund their future retirement benefits; the receipt of these payments to the Fund is shown in a single receipt account. Recording the receipt of these payments is important because it demonstrates the total cost to the Government today of providing this future benefit.

The final source of offsetting collections and offsetting receipts is gifts. Gifts are voluntary contributions to the Government to support particular purposes or reduce the amount of Government debt held by the public.

Although both offsetting collections and offsetting receipts are subtracted from gross outlays to derive net outlays, they are treated differently when it comes to accounting for specific programs and agencies. Offsetting collections are usually authorized to be spent for the purposes of an expenditure account and are generally available for use when collected, without further action by the Congress. Therefore, offsetting collections are recorded as offsets to spending within expenditure accounts, so that the account total highlights the net flow of funds.

Like governmental receipts, offsetting receipts are credited to receipt accounts, and any spending of the re-

Table 12–1. OFFSETTING COLLECTIONS AND OFFSETTING RECEIPTS FROM THE PUBLIC

(In billions of dollars)

	Actual 2016	Estimate 2017	Estimate 2018
Offsetting collections (credited to expenditure accounts):			
User charges:			
Postal Service stamps and other USPS fees (off-budget)	69.8	69.7	73.2
Defense Commissary Agency	5.3	5.5	5.0
Employee contributions for employees and retired employees health benefits funds	14.8	15.9	17.0
Sale of energy:			
Tennessee Valley Authority	44.2	43.2	43.7
Bonneville Power Administration	3.4	4.0	4.0
All other user charges	70.8	67.0	73.4
Subtotal, user charges	208.3	205.3	216.3
Other collections credited to expenditure accounts:			
Commodity Credit Corporation fund	6.8	7.7	7.4
Supplemental Security Income (collections from the States)	2.6	2.7	2.7
Other collections	20.9	19.9	20.1
Subtotal, other collections	30.2	30.2	30.2
Subtotal, offsetting collections	238.5	224.3	234.8
Offsetting receipts (deposited in receipt accounts):			
User charges:			
Medicare premiums	72.5	79.2	91.4
Spectrum auction, relocation, and licenses	8.4	0.0	8.8
Outer Continental Shelf rents, bonuses, and royalties	2.8	4.0	4.5
All other user charges	37.5	37.5	38.7
Subtotal, user charges deposited in receipt accounts	121.2	120.8	143.4
Other collections deposited in receipt accounts:			
Military assistance program sales	32.1	37.4	36.0
Interest received from credit financing accounts	41.5	45.0	46.7
Proceeds, GSE equity related transactions	11.5	23.4	17.3
All other collections deposited in receipt accounts	54.2	62.0	50.0
Subtotal, other collections deposited in receipt accounts	139.3	167.8	149.9
Subtotal, offsetting receipts	260.5	288.6	293.3
Total, offsetting collections and offsetting receipts from the public	**499.0**	**512.9**	**528.1**
Total, offsetting collections and offsetting receipts excluding off-budget	429.0	443.2	454.9
ADDENDUM:			
User charges that are offsetting collections and offsetting receipts [1]	329.5	326.1	359.6
Other offsetting collections and offsetting receipts from the public	169.5	186.8	168.5

[1] Excludes user charges that are classified on the receipts side of the budget. For total user charges, see Table 12-3.

Table 12–2. SUMMARY OF OFFSETTING RECEIPTS BY TYPE
(In millions of dollars)

Receipt Type	Actual 2016	Estimate					
		2017	2018	2019	2020	2021	2022
Intragovernmental	798,075	767,842	784,834	811,307	852,320	897,448	944,185
Receipts from non-Federal sources:							
Proprietary	240,616	275,225	271,135	276,618	287,823	297,906	310,955
Offsetting governmental	19,868	13,391	22,140	15,530	16,054	14,948	15,389
Total, receipts from non-Federal sources	260,484	288,616	293,275	292,148	303,877	312,854	326,344
Total, offsetting receipts	1,058,559	1,056,458	1,078,109	1,103,455	1,156,197	1,210,302	1,270,529

ceipts is recorded in separate expenditure accounts. As a result, the budget separately displays the flow of funds into and out of the Government. Offsetting receipts may or may not be designated for a specific purpose, depending on the legislation that authorizes their collection. If designated for a particular purpose, the offsetting receipts may, in some cases, be spent without further action by the Congress. When not designated for a particular purpose, offsetting receipts are credited to the general fund, which contains all funds not otherwise allocated and which is used to finance Government spending that is not financed out of dedicated funds. In some cases where the receipts are designated for a particular purpose, offsetting receipts are reported in a particular agency and reduce or offset the outlays reported for that agency. In other cases, the offsetting receipts are "undistributed," which means they reduce total Government outlays, but not the outlays of any particular agency.

Table 12–1 summarizes offsetting collections and offsetting receipts from the public. Note that this table does not include intragovernmental transactions. The amounts shown in the table are not evident in the commonly cited budget measure of outlays, which is already net of these collections and receipts. For 2018, the table shows that total offsetting collections and offsetting receipts from the public are estimated to be $528.1 billion or 2.6 percent of GDP. Of these, an estimated $234.8 billion are offsetting collections and an estimated $293.3 billion are offsetting receipts. Table 12–1 also identifies those offsetting collections and offsetting receipts that are considered user charges, as defined and discussed below.

As shown in the table, major offsetting collections from the public include proceeds from Postal Service sales, electrical power sales, loan repayments to the Commodity Credit Corporation for loans made prior to enactment of the Federal Credit Reform Act, and Federal employee payments for health insurance. As also shown in the table, major offsetting receipts from the public include premiums for Medicare Parts B and D, proceeds from military assistance program sales, rents and royalties from Outer Continental Shelf oil extraction, proceeds from auctions of the electromagnetic spectrum, dividends on holdings of preferred stock of the Government-sponsored enterprises, and interest income.

Tables 12–2 and 12–4 provide further detail about offsetting receipts, including both offsetting receipts from the public (as summarized in Table 12–1) and intragovernmental transactions. Table 12–4, formerly printed in this chapter, is available on the Internet at *www.budget.gov/budget/Analytical_Perspectives* and on the Budget CD-ROM. In total, offsetting receipts are estimated to be $1,078.1 billion in 2018; $784.8 billion are from intragovernmental transactions and $293.3 billion are from the public. The offsetting receipts from the public consist of proprietary receipts ($271.1 billion) and those classified as offsetting receipts by law or long-standing practice ($22.1 billion) and shown as offsetting governmental receipts in the table. Proprietary receipts from the public result from business-like transactions such as the sale of goods or services, or the rental or use of Government land. Offsetting governmental receipts are composed of fees from Government regulatory services or Government licenses that, absent a specification in law or a long-standing practice, would be classified on the receipts side of the budget.

II. USER CHARGES

User charges or user fees[5] refer generally to those monies that the Government receives from the public for market-oriented activities and regulatory activities. In combination with budget concepts, laws that authorize user charges determine whether a user charge is classified as an offsetting collection, an offsetting receipt, or a governmental receipt. Almost all user charges, as defined below, are classified as offsetting collections or offsetting receipts; for 2018, only an estimated 1.5 percent of user charges are classified as governmental receipts. As summarized in Table 12–3, total user charges for 2018 are estimated to be $365.0 billion with $359.6 billion being offsetting collections or offsetting receipts, and accounting for more than half of all offsetting collections and offsetting receipts from the public.

[5] In this chapter, the term "user charge" is generally used and has the same meaning as the term "user fee." The term "user charge" is the one used in OMB Circular No. A–11, "Preparation, Submission, and Execution of the Budget"; OMB Circular No. A–25, "User Charges"; and Chapter 8 of this volume, "Budget Concepts." In common usage, the terms "user charge" and "user fee" are often used interchangeably, and in *A Glossary of Terms Used in the Federal Budget Process*, GAO provides the same definition for both terms.

Table 12–3. GROSS OUTLAYS, USER CHARGES, OTHER OFFSETTING COLLECTIONS AND OFFSETTING RECEIPTS FROM THE PUBLIC, AND NET OUTLAYS
(In billions of dollars)

	Actual 2016	Estimate 2017	Estimate 2018
Gross outlays to the public	4,351.6	4,578.0	4,620.8
Offsetting collections and offsetting receipts from the public:			
User charges [1]	329.5	326.1	359.6
Other	169.5	186.8	168.5
Subtotal, offsetting collections and offsetting receipts from the public	499.0	512.9	528.1
Net outlays	3,852.6	4,064.0	4,105.6

[1] $4.4 billion of the total user charges for 2016 were classified as governmental receipts, and the remainder were classified as offsetting collections and offsetting receipts. $4.9 billion and $5.4 billion of the total user charges for 2017 and 2018 are classified as governmental receipts, respectively.

Definition. In this chapter, user charges refer to fees, charges, and assessments levied on individuals or organizations directly benefiting from or subject to regulation by a Government program or activity, where the payers do not represent a broad segment of the public such as those who pay income taxes.

Examples of business-type or market-oriented user charges and regulatory and licensing user charges include those charges listed in Table 12–1 for offsetting collections and offsetting receipts. User charges exclude certain offsetting collections and offsetting receipts from the public, such as payments received from credit programs, interest, and dividends, and also exclude payments from one part of the Federal Government to another. In addition, user charges do not include dedicated taxes (such as taxes paid to social insurance programs or excise taxes on gasoline) or customs duties, fines, penalties, or forfeitures.

Alternative definitions. The definition for user charges used in this chapter follows the definition used in OMB Circular No. A–25, "User Charges," which provides policy guidance to Executive Branch agencies on setting the amount for user charges. Alternative definitions may be used for other purposes. Much of the discussion of user charges below—their purpose, when they should be levied, and how the amount should be set—applies to these alternative definitions as well.

A narrower definition of user charges could be limited to proceeds from the sale of goods and services, excluding the proceeds from the sale of assets, and to proceeds that are dedicated to financing the goods and services being provided. This definition is similar to one the House of Representatives uses as a guide for purposes of committee jurisdiction. (See the Congressional Record, January 3, 1991, p. H31, item 8.) The definition of user charges could be even narrower by excluding regulatory fees and focusing solely on business-type transactions. Alternatively, the user charge definition could be broader than the one used in this chapter by including beneficiary- or liability-based excise taxes.[6]

Classification of user charges in the budget. As shown in the note to Table 12–3, most user charges are classified as offsets to outlays on the spending side of the budget, but a few are classified on the receipts side of the budget. An estimated $5.4 billion in 2018 of user charges are classified on the receipts side and are included in the governmental receipts totals described in the previous chapter, "Governmental Receipts." They are classified as receipts because they are regulatory charges collected by the Federal Government by the exercise of its sovereign powers. Examples include filing fees in the United States courts and agricultural quarantine inspection fees.

The remaining user charges, an estimated $359.6 billion in 2018, are classified as offsetting collections and offsetting receipts on the spending side of the budget. As discussed above in the context of all offsetting collections and offsetting receipts, some of these user charges are collected by the Federal Government by the exercise of its sovereign powers and conceptually should appear on the receipts side of the budget, but they are required by law or a long-standing practice to be classified on the spending side.

[6] Beneficiary- and liability-based taxes are terms taken from the Congressional Budget Office, *The Growth of Federal User Charges*, August 1993, and updated in October 1995. Gasoline taxes are an example of beneficiary-based taxes. An example of a liability-based tax is the excise tax that formerly helped fund the hazardous substance superfund in the Environmental Protection Agency. This tax was paid by industry groups to finance environmental cleanup activities related to the industry activity but not necessarily caused by the payer of the fee.

FEDERAL RECEIPTS

13. TAX EXPENDITURES

The Congressional Budget Act of 1974 (Public Law 93–344) requires that a list of "tax expenditures" be included in the budget. Tax expenditures are defined in the law as "revenue losses attributable to provisions of the Federal tax laws which allow a special exclusion, exemption, or deduction from gross income or which provide a special credit, a preferential rate of tax, or a deferral of tax liability." These exceptions may be viewed as alternatives to other policy instruments, such as spending or regulatory programs.

Identification and measurement of tax expenditures depends crucially on the baseline tax system against which the actual tax system is compared. The tax expenditure estimates presented in this document are patterned on a comprehensive income tax, which defines income as the sum of consumption and the change in net wealth in a given period of time.

An important assumption underlying each tax expenditure estimate reported below is that other parts of the Tax Code remain unchanged. The estimates would be different if tax expenditures were changed simultaneously because of potential interactions among provisions. For that reason, this document does not present a grand total for the estimated tax expenditures.

Tax expenditures relating to the individual and corporate income taxes are estimated for fiscal years 2016–2026 using two methods of accounting: current revenue effects and present value effects. The present value approach provides estimates of the revenue effects for tax expenditures that generally involve deferrals of tax payments into the future.

A discussion of performance measures and economic effects related to the assessment of the effect of tax expenditures on the achievement of program performance goals is presented in Appendix A. This section is a complement to the Government-wide performance plan required by the Government Performance and Results Act of 1992.

TAX EXPENDITURES IN THE INCOME TAX

Tax Expenditure Estimates

All tax expenditure estimates and descriptions presented here are based upon current tax law enacted as of July 1, 2016 and reflect the economic assumptions from the Mid-Session Review of the 2017 Budget. In some cases, expired or repealed provisions are listed if their revenue effects occur in fiscal year 2016 or later.

The total revenue effects for tax expenditures for fiscal years 2016–2026 are displayed according to the Budget's functional categories in Table 1. Descriptions of the specific tax expenditure provisions follow the discussion of general features of the tax expenditure concept.

Two baseline concepts—the normal tax baseline and the reference tax law baseline—are used to identify and estimate tax expenditures.[1] For the most part, the two concepts coincide. However, items treated as tax expenditures under the normal tax baseline, but not the reference tax law baseline, are indicated by the designation "normal tax method" in the tables. The revenue effects for these items are zero using the reference tax rules. The alternative baseline concepts are discussed in detail below.

Tables 2A and 2B report separately the respective portions of the total revenue effects that arise under the individual and corporate income taxes. The location of the estimates under the individual and corporate headings does not imply that these categories of filers benefit from the special tax provisions in proportion to the respective tax expenditure amounts shown. Rather, these breakdowns show the form of tax liability that the various provisions affect. The ultimate beneficiaries of corporate tax expenditures could be shareholders, employees, customers, or other providers of capital, depending on economic forces.

Table 3 ranks the major tax expenditures by the size of their 2017–2026 revenue effect. The first column provides the number of the provision in order to cross reference this table to Tables 1, 2A, and 2B, as well as to the descriptions below.

Interpreting Tax Expenditure Estimates

The estimates shown for individual tax expenditures in Tables 1 through 3 do not necessarily equal the increase in Federal revenues (or the change in the budget balance) that would result from repealing these special provisions, for the following reasons.

First, eliminating a tax expenditure may have incentive effects that alter economic behavior. These incentives can affect the resulting magnitudes of the activity or of other tax provisions or Government programs. For example, if capital gains were taxed at ordinary rates, capital gain realizations would be expected to decline, resulting in lower tax receipts. Such behavioral effects are not reflected in the estimates.

Second, tax expenditures are interdependent even without incentive effects. Repeal of a tax expenditure

[1] These baseline concepts are thoroughly discussed in Special Analysis G of the 1985 Budget, where the former is referred to as the pre-1983 method and the latter the post-1982 method.

provision can increase or decrease the tax revenues associated with other provisions. For example, even if behavior does not change, repeal of an itemized deduction could increase the revenue costs from other deductions because some taxpayers would be moved into higher tax brackets. Alternatively, repeal of an itemized deduction could lower the revenue cost from other deductions if taxpayers are led to claim the standard deduction instead of itemizing. Similarly, if two provisions were repealed simultaneously, the increase in tax liability could be greater or less than the sum of the two separate tax expenditures, because each is estimated assuming that the other remains in force. In addition, the estimates reported in Table 1 are the totals of individual and corporate income tax revenue effects reported in Tables 2A and 2B, and do not reflect any possible interactions between individual and corporate income tax receipts. For this reason, the estimates in Table 1 should be regarded as approximations.

Present-Value Estimates

The annual value of tax expenditures for tax deferrals is reported on a cash basis in all tables except Table 4. Cash-based estimates reflect the difference between taxes deferred in the current year and incoming revenues that are received due to deferrals of taxes from prior years. Although such estimates are useful as a measure of cash flows into the Government, they do not accurately reflect the true economic cost of these provisions. For example, for a provision where activity levels have changed over time, so that incoming tax receipts from past deferrals are greater than deferred receipts from new activity, the cash-basis tax expenditure estimate can be negative, despite the fact that in present-value terms current deferrals have a real cost to the Government. Alternatively, in the case of a newly enacted deferral provision, a cash-based estimate can overstate the real effect on receipts to the Government because the newly deferred taxes will ultimately be received.

Discounted present-value estimates of revenue effects are presented in Table 4 for certain provisions that involve tax deferrals or other long-term revenue effects. These estimates complement the cash-based tax expenditure estimates presented in the other tables.

The present-value estimates represent the revenue effects, net of future tax payments that follow from activities undertaken during calendar year 2015 which cause the deferrals or other long-term revenue effects. For instance, a pension contribution in 2016 would cause a deferral of tax payments on wages in 2016 and on pension fund earnings on this contribution (e.g., interest) in later years. In some future year, however, the 2016 pension contribution and accrued earnings will be paid out and taxes will be due; these receipts are included in the present-value estimate. In general, this conceptual approach is similar to the one used for reporting the budgetary effects of credit programs, where direct loans and guarantees in a given year affect future cash flows.

Tax Expenditure Baselines

A tax expenditure is an exception to baseline provisions of the tax structure that usually results in a reduction in the amount of tax owed. The 1974 Congressional Budget Act, which mandated the tax expenditure budget, did not specify the baseline provisions of the tax law. As noted previously, deciding whether provisions are exceptions, therefore, is a matter of judgment. As in prior years, most of this year's tax expenditure estimates are presented using two baselines: the normal tax baseline and the reference tax law baseline. Tax expenditures may take the form of credits, deductions, special exceptions and allowances.

The normal tax baseline is patterned on a practical variant of a comprehensive income tax, which defines income as the sum of consumption and the change in net wealth in a given period of time. The normal tax baseline allows personal exemptions, a standard deduction, and deduction of expenses incurred in earning income. It is not limited to a particular structure of tax rates, or by a specific definition of the taxpaying unit.

The reference tax law baseline is also patterned on a comprehensive income tax, but it is closer to existing law. Reference law tax expenditures are limited to special exceptions from a generally provided tax rule that serve programmatic functions in a way that is analogous to spending programs. Provisions under the reference law baseline are generally tax expenditures under the normal tax baseline, but the reverse is not always true.

Both the normal and reference tax baselines allow several major departures from a pure comprehensive income tax. For example, under the normal and reference tax baselines:

- Income is taxable only when it is realized in exchange. Thus, the deferral of tax on unrealized capital gains is not regarded as a tax expenditure. Accrued income would be taxed under a comprehensive income tax.
- There is a separate corporate income tax.
- Tax rates on noncorporate business income vary by level of income.
- Individual tax rates, including brackets, standard deduction, and personal exemptions, are allowed to vary with marital status.
- Values of assets and debt are not generally adjusted for inflation. A comprehensive income tax would adjust the cost basis of capital assets and debt for changes in the general price level. Thus, under a comprehensive income tax baseline, the failure to take account of inflation in measuring depreciation, capital gains, and interest income would be regarded as a negative tax expenditure (i.e., a tax penalty), and failure to take account of inflation in measuring interest costs would be regarded as a positive tax expenditure (i.e., a tax subsidy).

Although the reference law and normal tax baselines are generally similar, areas of difference include:

Tax rates. The separate schedules applying to the various taxpaying units are included in the reference law baseline. Thus, corporate tax rates below the maximum statutory rate do not give rise to a tax expenditure. The normal tax baseline is similar, except that, by convention, it specifies the current maximum rate as the baseline for the corporate income tax. The lower tax rates applied to the first $10 million of corporate income are thus regarded as a tax expenditure under the normal tax. By convention, the Alternative Minimum Tax is treated as part of the baseline rate structure under both the reference and normal tax methods.

Income subject to the tax. Income subject to tax is defined as gross income less the costs of earning that income. Under the reference tax rules, gross income does not include gifts defined as receipts of money or property that are not consideration in an exchange nor does gross income include most transfer payments from the Government.[2] The normal tax baseline also excludes gifts between individuals from gross income. Under the normal tax baseline, however, all cash transfer payments from the Government to private individuals are counted in gross income, and exemptions of such transfers from tax are identified as tax expenditures. The costs of earning income are generally deductible in determining taxable income under both the reference and normal tax baselines.[3]

Capital recovery. Under the reference tax law baseline no tax expenditures arise from accelerated depreciation. Under the normal tax baseline, the depreciation allowance for property is computed using estimates of economic depreciation.

Treatment of foreign income. Both the normal and reference tax baselines allow a tax credit for foreign income taxes paid (up to the amount of U.S. income taxes that would otherwise be due), which prevents double taxation of income earned abroad. Under the normal tax method, however, controlled foreign corporations (CFCs) are not regarded as entities separate from their controlling U.S. shareholders. Thus, the deferral of tax on income received by CFCs is regarded as a tax expenditure under this method. In contrast, except for tax haven activities, the reference law baseline follows current law in treating CFCs as separate taxable entities whose income is not subject to U.S. tax until distributed to U.S. taxpayers. Under this baseline, deferral of tax on CFC income is not a tax expenditure because U.S. taxpayers generally are not taxed on accrued, but unrealized, income.

Descriptions of Income Tax Provisions

Descriptions of the individual and corporate income tax expenditures reported on in this document follow. These descriptions relate to current law as of July 1, 2016.

National Defense

1. ***Exclusion of benefits and allowances to armed forces personnel.***—Under the baseline tax system, all compensation, including dedicated payments and in-kind benefits, should be included in taxable income because they represent accretions to wealth that do not materially differ from cash wages. As an example, a rental voucher of $100 is (approximately) equal in value to $100 of cash income. In contrast to this treatment, certain housing and meals, in addition to other benefits provided military personnel, either in cash or in kind, as well as certain amounts of pay related to combat service, are excluded from income subject to tax.

International Affairs

2. ***Exclusion of income earned abroad by U.S. citizens.***—Under the baseline tax system, all compensation received by U.S. citizens and residents is properly included in their taxable income. It makes no difference whether the compensation is a result of working abroad or whether it is labeled as a housing allowance. In contrast to this treatment, U.S. tax law allows U.S. citizens and residents who live abroad, work in the private sector, and satisfy a foreign residency requirement to exclude up to $80,000, plus adjustments for inflation since 2004, in foreign earned income from U.S. taxes. In addition, if these taxpayers are provided housing by their employers, then they may also exclude the cost of such housing from their income to the extent that it exceeds 16 percent of the earned income exclusion limit. This housing exclusion is capped at 30 percent of the earned income exclusion limit, with geographical adjustments. If taxpayers do not receive a specific allowance for housing expenses, they may deduct housing expenses up to the amount by which foreign earned income exceeds their foreign earned income exclusion.

3. ***Exclusion of certain allowances for Federal employees abroad.***—In general, all compensation received by U.S. citizens and residents is properly included in their taxable income. It makes no difference whether the compensation is a result of working abroad or whether it is labeled as an allowance for the high cost of living abroad. In contrast to this treatment, U.S. Federal civilian employees and Peace Corps members who work outside the continental United States are allowed to exclude from U.S. taxable income certain special allowances they receive to compensate them for the relatively high costs associated with living overseas. The allowances supplement wage income and cover expenses such as rent, education, and the cost of travel to and from the United States.

[2] Gross income does, however, include transfer payments associated with past employment, such as Social Security benefits.

[3] In the case of individuals who hold "passive" equity interests in businesses, the pro-rata shares of sales and expense deductions reportable in a year are limited. A passive business activity is defined generally to be one in which the holder of the interest, usually a partnership interest, does not actively perform managerial or other participatory functions. The taxpayer may generally report no larger deductions for a year than will reduce taxable income from such activities to zero. Deductions in excess of the limitation may be taken in subsequent years, or when the interest is liquidated. In addition, costs of earning income may be limited under the Alternative Minimum Tax.

Table 13–1. ESTIMATES OF TOTAL INCOME TAX EXPENDITURES FOR FISCAL YEARS 2016-2026

(In millions of dollars)

		Total from corporations and individuals											
		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2017-2026
National Defense													
1	Exclusion of benefits and allowances to armed forces personnel	12,280	12,650	11,460	11,500	11,860	12,320	12,820	13,370	13,940	14,560	15,210	129,690
International affairs:													
2	Exclusion of income earned abroad by U.S. citizens	6,280	6,600	6,930	7,280	7,640	8,020	8,420	8,840	9,290	9,750	10,240	83,010
3	Exclusion of certain allowances for Federal employees abroad	1,300	1,370	1,430	1,500	1,580	1,660	1,740	1,830	1,920	2,020	2,120	17,170
4	Inventory property sales source rules exception	4,270	4,630	5,020	5,440	5,900	6,400	6,940	7,530	8,170	8,860	9,610	68,500
5	Deferral of income from controlled foreign corporations (normal tax method)	102,100	107,200	112,560	118,190	124,100	130,310	136,820	143,660	150,850	158,390	166,310	1,348,390
6	Deferred taxes for financial firms on certain income earned overseas	15,320	16,080	16,880	17,730	18,620	19,550	20,520	21,550	22,630	23,760	24,950	202,270
General science, space, and technology:													
7	Expensing of research and experimentation expenditures (normal tax method)	7,190	7,110	7,660	8,680	9,640	10,430	11,130	11,770	12,470	13,220	14,020	106,130
8	Credit for increasing research activities	10,350	11,150	11,850	12,580	13,350	14,170	15,040	15,990	16,980	18,040	19,160	148,310
Energy:													
9	Expensing of exploration and development costs, fuels	–450	–650	–290	–30	120	200	260	290	290	300	350	840
10	Excess of percentage over cost depletion, fuels	410	400	510	560	610	690	810	960	1,100	1,200	1,350	8,190
11	Exception from passive loss limitation for working interests in oil and gas properties	60	40	40	40	40	30	30	30	30	30	20	330
12	Capital gains treatment of royalties on coal	150	150	150	140	140	150	150	150	160	170	170	1,530
13	Exclusion of interest on energy facility bonds	10	20	20	10	20	30	30	30	30	30	30	250
14	Energy production credit [1]	1,400	1,770	2,320	2,970	3,570	4,110	4,470	4,650	4,710	4,610	4,400	37,580
15	Marginal wells credit	0	70	70	30	0	0	0	0	0	0	0	170
16	Energy investment credit [1]	1,190	2,440	3,450	3,830	3,920	3,720	2,950	2,000	1,150	550	290	24,300
17	Alcohol fuel credits [2]	10	10	0	0	0	0	0	0	0	0	0	10
18	Bio-Diesel and small agri-biodiesel producer tax credits [3]	30	20	0	0	0	0	0	0	0	0	0	20
19	Tax credits for clean-fuel burning vehicles and refueling property	480	550	660	650	480	410	360	270	200	190	210	3,980
20	Exclusion of utility conservation subsidies	430	450	470	490	520	540	570	590	620	650	680	5,580
21	Credit for holding clean renewable energy bonds [4]	70	70	70	70	70	70	70	70	70	70	70	700
22	Deferral of gain from dispositions of transmission property to implement FERC restructuring policy	60	–190	–270	–210	–190	–150	–120	–70	–20	0	0	–1,220
23	Credit for investment in clean coal facilities	160	400	440	230	30	–20	–20	–20	–10	–10	0	1,020
24	Temporary 50% expensing for equipment used in the refining of liquid fuels	–1,760	–1,380	–1,140	–930	–740	–560	–370	–180	–40	0	0	–5,340
25	Natural gas distribution pipelines treated as 15-year property	140	140	150	150	150	120	60	–20	–100	–190	–270	190
26	Amortize all geological and geophysical expenditures over 2 years	70	60	60	60	70	80	90	70	60	40	40	630
27	Allowance of deduction for certain energy efficient commercial building property	80	10	–30	–30	–30	–30	–30	–30	–30	–30	–30	–260
28	Credit for construction of new energy efficient homes	210	170	70	30	10	0	0	0	0	0	0	280
29	Credit for energy efficiency improvements to existing homes	530	290	0	0	0	0	0	0	0	0	0	290
30	Credit for residential energy efficient property	1,450	1,460	1,500	1,550	1,470	1,270	640	150	20	0	0	8,060
31	Qualified energy conservation bonds [5]	30	30	30	30	30	30	30	30	30	30	30	300
32	Advanced Energy Property Credit	10	–30	–30	–30	–10	0	0	0	0	0	0	–100
33	Advanced nuclear power production credit	0	0	0	170	440	550	550	550	550	550	550	3,910
34	Reduced tax rate for nuclear decommissioning funds	160	190	220	240	250	270	280	290	300	320	330	2,690
Natural resources and environment:													
35	Expensing of exploration and development costs, nonfuel minerals	20	40	40	50	50	50	50	50	50	50	50	480
36	Excess of percentage over cost depletion, nonfuel minerals	430	420	430	440	440	440	430	430	420	410	390	4,250
37	Exclusion of interest on bonds for water, sewage, and hazardous waste facilities	420	450	470	500	540	610	670	700	740	780	800	6,260
38	Capital gains treatment of certain timber income	150	150	150	140	140	150	150	150	160	170	170	1,530
39	Expensing of multiperiod timber growing costs	330	340	360	380	390	420	420	430	430	440	440	4,050
40	Tax incentives for preservation of historic structures	460	470	470	480	490	510	520	530	540	540	550	5,100

Table 13–1. ESTIMATES OF TOTAL INCOME TAX EXPENDITURES FOR FISCAL YEARS 2016-2026—Continued

(In millions of dollars)

		Total from corporations and individuals											
		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2017-2026
41	Industrial CO2 capture and sequestration tax credit	110	150	180	80	0	0	0	0	0	0	0	410
42	Deduction for endangered species recovery expenditures	30	30	30	30	40	50	50	50	50	70	70	470
	Agriculture:												
43	Expensing of certain capital outlays	210	230	240	250	270	280	290	310	330	350	360	2,910
44	Expensing of certain multiperiod production costs	370	390	410	440	460	490	520	550	590	630	660	5,140
45	Treatment of loans forgiven for solvent farmers	40	50	50	50	50	50	60	60	60	60	70	560
46	Capital gains treatment of certain income	1,470	1,480	1,450	1,440	1,440	1,460	1,500	1,540	1,600	1,670	1,740	15,320
47	Income averaging for farmers	140	150	160	170	180	180	190	200	210	220	230	1,890
48	Deferral of gain on sale of farm refiners	20	20	20	20	20	20	30	30	30	30	30	250
49	Expensing of reforestation expenditures	60	60	60	60	70	80	80	80	80	90	90	750
	Commerce and housing:												
	Financial institutions and insurance:												
50	Exemption of credit union income	2,310	2,710	3,080	3,260	3,350	3,600	3,770	3,530	3,850	4,100	4,060	35,310
51	Exclusion and deferral of policyholder income earned on life insurance and annuity contracts	13,980	17,920	24,360	29,110	32,410	34,770	36,520	37,920	39,130	40,290	41,280	333,710
52	Exclusion or special alternative tax for small property and casualty insurance companies	50	50	50	60	60	60	60	70	70	70	80	630
53	Tax exemption of insurance income earned by tax-exempt organizations	690	720	740	780	830	870	890	910	930	950	970	8,590
54	Small life insurance company deduction	40	40	40	40	40	40	50	50	50	50	50	450
55	Exclusion of interest spread of financial institutions	470	500	510	530	550	570	580	590	600	610	620	5,660
	Housing:												
56	Exclusion of interest on owner-occupied mortgage subsidy bonds	1,200	1,270	1,330	1,390	1,530	1,730	1,860	1,990	2,090	2,170	2,250	17,610
57	Exclusion of interest on rental housing bonds	1,030	1,100	1,150	1,200	1,320	1,490	1,600	1,710	1,800	1,870	1,940	15,180
58	Deductibility of mortgage interest on owner-occupied homes	61,190	64,110	68,090	73,590	79,990	86,570	93,030	99,300	105,110	110,480	115,650	895,920
59	Deductibility of State and local property tax on owner-occupied homes	34,470	36,540	38,940	41,590	44,410	47,170	49,930	52,770	55,670	58,560	61,280	486,860
60	Deferral of income from installment sales	1,620	1,630	1,620	1,620	1,630	1,660	1,700	1,750	1,820	1,890	1,970	17,290
61	Capital gains exclusion on home sales	43,310	46,130	48,470	50,920	53,500	56,200	59,050	62,040	65,180	68,470	71,940	581,900
62	Exclusion of net imputed rental income	105,610	109,620	112,670	114,740	116,270	119,520	122,870	126,310	129,850	133,480	137,220	1,222,550
63	Exception from passive loss rules for $25,000 of rental loss	7,120	7,480	7,800	8,080	8,290	8,490	8,670	8,820	8,980	9,250	9,370	85,230
64	Credit for low-income housing investments	8,630	8,740	8,850	8,950	9,090	9,280	9,490	9,730	10,010	10,290	10,200	94,630
65	Accelerated depreciation on rental housing (normal tax method)	1,610	2,200	2,920	3,660	4,440	5,290	6,170	6,930	7,660	8,360	9,060	56,690
66	Discharge of mortgage indebtedness	3,340	1,090	0	0	0	0	0	0	0	0	0	1,090
	Commerce:												
67	Discharge of business indebtedness	–150	–50	10	10	10	20	30	40	50	50	50	220
68	Exceptions from imputed interest rules	50	50	60	60	60	70	70	80	80	80	90	700
69	Treatment of qualified dividends	27,980	28,810	29,850	30,940	32,100	33,370	34,720	36,160	37,690	39,290	40,990	343,920
70	Capital gains (except agriculture, timber, iron ore, and coal)	109,530	110,270	108,560	107,620	107,780	109,210	111,760	115,240	119,500	124,450	129,800	1,144,190
71	Capital gains exclusion of small corporation stock	540	700	850	1,050	1,210	1,320	1,420	1,520	1,600	1,660	1,710	13,040
72	Step-up basis of capital gains at death	49,990	51,990	54,070	56,230	58,480	60,820	63,250	65,780	68,420	71,150	74,000	624,190
73	Carryover basis of capital gains on gifts	7,790	7,520	7,180	6,960	6,890	6,960	7,020	7,060	7,140	7,260	7,410	71,400
74	Ordinary income treatment of loss from small business corporation stock sale	50	50	50	50	50	50	50	50	50	50	50	500
75	Deferral of gains from like-kind exchanges	7,330	7,690	8,080	8,500	8,920	9,360	9,830	10,320	10,840	11,380	11,940	96,860
76	Depreciation of buildings other than rental housing (normal tax method)	–8,830	–9,000	–9,390	–10,010	–10,750	–11,420	–12,090	–12,750	–13,490	–13,950	–14,360	–117,210
77	Accelerated depreciation of machinery and equipment (normal tax method)	44,630	47,080	50,320	52,420	–11,620	–20,710	–830	11,810	23,160	32,860	40,480	224,970
78	Expensing of certain small investments (normal tax method)	3,920	3,580	3,660	3,840	7,730	8,350	7,470	7,210	7,140	7,250	7,570	63,800
79	Graduated corporation income tax rate (normal tax method)	3,300	3,000	2,650	2,460	2,370	2,360	2,380	2,380	2,380	2,410	2,250	24,640
80	Exclusion of interest on small issue bonds	150	160	170	170	190	220	240	260	270	280	280	2,240

Table 13–1. ESTIMATES OF TOTAL INCOME TAX EXPENDITURES FOR FISCAL YEARS 2016-2026—Continued
(In millions of dollars)

		Total from corporations and individuals											
		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2017-2026
81	Deduction for US production activities	15,860	16,420	17,160	17,900	18,650	19,440	20,250	21,110	21,990	22,910	23,880	199,710
82	Special rules for certain film and TV production	280	200	110	60	30	0	0	0	0	0	0	400
Transportation:													
83	Tonnage tax	70	80	80	90	90	90	100	100	110	110	120	970
84	Deferral of tax on shipping companies	20	20	20	20	20	20	20	20	20	20	20	200
85	Exclusion of reimbursed employee parking expenses	2,940	3,060	3,170	3,280	3,410	3,520	3,610	3,750	3,850	4,020	4,160	35,830
86	Exclusion for employer-provided transit passes	1,010	1,080	1,140	1,210	1,290	1,370	1,440	1,520	1,600	1,630	1,690	13,970
87	Tax credit for certain expenditures for maintaining railroad tracks	140	60	0	0	0	0	0	0	0	0	0	60
88	Exclusion of interest on bonds for Highway Projects and rail-truck transfer facilities	210	200	190	170	170	160	160	140	140	130	130	1,590
Community and regional development:													
89	Investment credit for rehabilitation of structures (other than historic)	20	20	20	20	20	20	20	20	20	20	20	200
90	Exclusion of interest for airport, dock, and similar bonds	680	720	750	790	870	980	1,060	1,120	1,190	1,230	1,280	9,990
91	Exemption of certain mutuals' and cooperatives' income	140	150	150	150	150	160	160	160	170	170	180	1,600
92	Empowerment zones	140	110	50	30	30	10	10	10	0	0	0	250
93	New markets tax credit	1,290	1,300	1,200	1,050	980	890	760	610	440	280	90	7,600
94	Credit to holders of Gulf Tax Credit Bonds.	230	240	250	260	300	320	350	380	400	420	430	3,350
95	Recovery Zone Bonds [6]	130	130	140	140	160	180	190	210	220	230	240	1,840
96	Tribal Economic Development Bonds	40	40	40	40	50	50	60	60	70	70	70	550
Education, training, employment, and social services:													
	Education:												
97	Exclusion of scholarship and fellowship income (normal tax method)	3,290	3,410	3,500	3,560	3,690	3,820	3,960	4,100	4,240	4,400	4,550	39,230
98	Tax credits and deductions for postsecondary education expenses [7]	15,530	15,620	15,450	15,590	15,720	15,730	15,720	15,720	15,690	15,630	15,520	156,390
99	Education Individual Retirement Accounts	30	40	40	40	40	40	40	50	50	50	50	440
100	Deductibility of student-loan interest	1,950	1,970	2,010	2,050	2,130	2,150	2,200	2,270	2,290	2,330	2,410	21,810
101	Qualified tuition programs	1,740	1,920	2,110	2,300	2,490	2,700	2,910	3,140	3,390	3,650	3,930	28,540
102	Exclusion of interest on student-loan bonds	440	460	480	500	560	620	680	730	760	790	820	6,400
103	Exclusion of interest on bonds for private nonprofit educational facilities	2,260	2,380	2,490	2,600	2,870	3,230	3,490	3,730	3,920	4,080	4,220	33,010
104	Credit for holders of zone academy bonds [8]	160	170	180	170	150	130	110	90	80	60	50	1,190
105	Exclusion of interest on savings bonds redeemed to finance educational expenses	30	30	30	30	30	40	40	40	40	50	50	380
106	Parental personal exemption for students age 19 or over	4,220	4,210	4,310	4,470	4,600	4,720	4,830	4,940	5,030	5,100	5,180	47,390
107	Deductibility of charitable contributions (education)	5,110	5,480	5,890	6,330	6,730	7,100	7,490	7,860	8,250	8,630	9,000	72,760
108	Exclusion of employer-provided educational assistance	850	900	950	990	1,040	1,090	1,140	1,200	1,260	1,320	1,380	11,270
109	Special deduction for teacher expenses	210	210	210	210	220	220	260	270	270	270	270	2,410
110	Discharge of student loan indebtedness	90	100	100	100	110	110	110	110	120	120	120	1,100
111	Qualified school construction bonds [9]	650	650	650	650	650	650	650	650	650	650	650	6,500
	Training, employment, and social services:												
112	Work opportunity tax credit	1,160	1,310	1,350	1,390	1,010	480	300	230	170	130	100	6,470
113	Employer provided child care exclusion	950	1,000	1,060	1,140	1,200	1,280	1,350	1,440	1,530	1,620	1,710	13,330
114	Employer-provided child care credit	10	10	10	10	10	10	10	10	10	10	10	100
115	Assistance for adopted foster children	560	580	610	650	680	720	760	800	840	890	930	7,460
116	Adoption credit and exclusion	300	310	320	340	360	350	370	360	370	370	380	3,530
117	Exclusion of employee meals and lodging (other than military)	4,540	4,650	4,770	4,910	5,040	5,170	5,300	5,430	5,560	5,700	5,830	52,360
118	Credit for child and dependent care expenses	4,570	4,600	4,710	4,860	4,990	5,090	5,200	5,300	5,420	5,530	5,650	51,350
119	Credit for disabled access expenditures	10	10	10	10	10	10	10	10	10	10	10	100
120	Deductibility of charitable contributions, other than education and health	44,070	47,450	51,180	55,030	58,590	61,930	65,250	68,510	71,820	75,090	78,270	633,120
121	Exclusion of certain foster care payments	450	480	500	520	540	560	580	600	610	630	650	5,670
122	Exclusion of parsonage allowances	940	990	1,040	1,090	1,150	1,210	1,280	1,340	1,410	1,490	1,570	12,570
123	Indian employment credit	50	40	20	20	20	20	10	10	10	10	10	170

Table 13–1. ESTIMATES OF TOTAL INCOME TAX EXPENDITURES FOR FISCAL YEARS 2016-2026—Continued

(In millions of dollars)

		Total from corporations and individuals											
		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2017-2026
124	Credit for employer differential wage payments	0	0	0	10	10	10	20	20	20	20	20	130
	Health:												
125	Exclusion of employer contributions for medical insurance premiums and medical care [10]	210,190	222,030	235,830	250,760	265,170	280,990	297,880	315,770	334,890	355,060	376,330	2,934,710
126	Self-employed medical insurance premiums	7,170	7,590	7,960	8,320	8,870	9,410	9,880	10,350	10,830	11,350	11,920	96,480
127	Medical Savings Accounts / Health Savings Accounts	5,730	6,850	8,160	9,720	11,570	13,770	16,410	19,530	23,230	27,650	32,920	169,810
128	Deductibility of medical expenses	7,970	8,680	9,920	11,550	13,450	15,610	17,970	20,850	24,250	27,790	32,090	182,160
129	Exclusion of interest on hospital construction bonds	3,480	3,670	3,840	4,010	4,430	4,990	5,370	5,740	6,040	6,290	6,510	50,890
130	Refundable Premium Assistance Tax Credit [11]	2,070	2,410	3,170	3,810	4,620	5,700	6,010	6,170	6,500	6,710	6,900	52,000
131	Credit for employee health insurance expenses of small business [12]	160	160	170	150	140	100	120	90	60	30	20	1,040
132	Deductibility of charitable contributions (health)	4,980	5,360	5,780	6,220	6,620	7,000	7,380	7,740	8,110	8,490	8,850	71,550
133	Tax credit for orphan drug research	1,720	2,060	2,480	2,970	3,570	4,280	5,130	6,160	7,390	8,880	10,650	53,570
134	Special Blue Cross/Blue Shield tax benefits	630	610	610	610	600	590	570	540	510	460	400	5,500
135	Tax credit for health insurance purchased by certain displaced and retired individuals [13]	30	30	20	10	0	0	0	0	0	0	0	60
136	Distributions from retirement plans for premiums for health and long-term care insurance	440	460	480	500	520	540	560	580	600	620	650	5,510
	Income security:												
137	Child credit [14]	24,180	24,460	24,710	24,710	24,520	24,140	23,750	23,300	22,820	22,330	21,840	236,580
138	Exclusion of railroad retirement (Social Security equivalent) benefits	300	310	310	300	290	270	260	240	220	200	180	2,580
139	Exclusion of workers' compensation benefits	10,030	10,100	10,170	10,240	10,320	10,390	10,460	10,530	10,610	10,680	10,760	104,260
140	Exclusion of public assistance benefits (normal tax method)	570	590	600	620	640	670	680	700	730	740	690	6,660
141	Exclusion of special benefits for disabled coal miners	30	20	20	20	20	10	10	10	10	10	10	140
142	Exclusion of military disability pensions	230	240	250	260	270	290	300	310	330	340	360	2,950
	Net exclusion of pension contributions and earnings:												
143	Defined benefit employer plans	70,400	70,690	70,980	70,970	69,880	68,360	66,180	63,730	61,360	58,340	54,710	655,200
144	Defined contribution employer plans	61,770	64,610	69,420	76,450	81,250	89,270	95,350	112,370	117,620	122,660	129,460	958,460
145	Individual Retirement Accounts	16,410	17,900	19,170	20,680	22,310	23,970	25,200	26,560	26,550	26,720	26,800	235,860
146	Low and moderate income savers credit	1,270	1,240	1,260	1,270	1,290	1,320	1,330	1,350	1,350	1,360	1,380	13,150
147	Self-Employed plans	28,050	30,820	33,780	37,050	40,500	44,040	47,890	52,080	56,640	61,590	66,980	471,370
	Exclusion of other employee benefits:												
148	Premiums on group term life insurance	2,460	2,580	2,680	2,780	2,880	2,980	3,080	3,190	3,310	3,430	3,550	30,460
149	Premiums on accident and disability insurance	320	320	330	330	330	340	340	340	350	350	350	3,380
150	Income of trusts to finance supplementary unemployment benefits	20	20	30	40	40	40	50	50	50	50	50	420
151	Income of trusts to finance voluntary employee benefits associations	1,110	1,170	1,220	1,280	1,340	1,400	1,470	1,540	1,610	1,690	1,770	14,490
152	Special ESOP rules	2,030	2,090	2,150	2,210	2,290	2,350	2,430	2,510	2,580	2,670	2,750	24,030
153	Additional deduction for the blind	40	40	40	40	50	50	50	60	60	70	80	540
154	Additional deduction for the elderly	2,940	3,110	3,350	3,560	3,800	4,000	4,260	4,600	4,900	5,250	5,620	42,450
155	Tax credit for the elderly and disabled	10	10	10	10	10	10	10	0	0	0	0	60
156	Deductibility of casualty losses	370	390	400	410	420	440	450	460	470	480	490	4,410
157	Earned income tax credit [15]	1,550	1,760	1,820	3,780	3,890	2,080	2,200	2,330	2,430	2,560	2,660	25,510
	Social Security:												
	Exclusion of social security benefits:												
158	Social Security benefits for retired and disabled workers and spouses, dependents and survivors	36,140	38,440	40,580	42,920	44,850	46,530	48,140	49,700	51,380	53,260	55,330	471,130
159	Credit for certain employer contributions to social security	1,000	1,030	1,080	1,120	1,170	1,220	1,270	1,330	1,380	1,440	1,500	12,540
	Veterans benefits and services:												
160	Exclusion of veterans death benefits and disability compensation	6,770	7,290	7,720	7,980	8,250	8,520	8,780	9,060	9,340	9,630	9,930	86,500
161	Exclusion of veterans pensions	440	470	500	520	540	560	590	610	630	650	680	5,750
162	Exclusion of GI bill benefits	1,550	1,690	1,790	1,880	1,960	2,050	2,140	2,240	2,340	2,440	2,550	21,080
163	Exclusion of interest on veterans housing bonds	10	10	10	10	10	10	10	10	20	20	20	130

Table 13–1. ESTIMATES OF TOTAL INCOME TAX EXPENDITURES FOR FISCAL YEARS 2016-2026—Continued
(In millions of dollars)

	Total from corporations and individuals											
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2017-2026
General purpose fiscal assistance:												
164 Exclusion of interest on public purpose State and local bonds	28,890	30,500	31,910	33,350	36,780	41,420	44,640	47,700	50,180	52,250	54,050	422,780
165 Build America Bonds [16]	0	0	0	0	0	0	0	0	0	0	0	0
166 Deductibility of nonbusiness State and local taxes other than on owner-occupied homes	56,230	59,750	63,340	67,230	71,710	75,950	80,170	84,600	89,100	93,590	97,830	783,270
Interest:												
167 Deferral of interest on U.S. savings bonds	980	970	960	950	940	940	930	920	910	900	890	9,310
Addendum: Aid to State and local governments:												
Deductibility of:												
Property taxes on owner-occupied homes	34,470	36,540	38,940	41,590	44,410	47,170	49,930	52,770	55,670	58,560	61,280	486,860
Nonbusiness State and local taxes other than on owner-occupied homes	56,230	59,750	63,340	67,230	71,710	75,950	80,170	84,600	89,100	93,590	97,830	783,270
Exclusion of interest on State and local bonds for:												
Public purposes	28,890	30,500	31,910	33,350	36,780	41,420	44,640	47,700	50,180	52,250	54,050	422,780
Energy facilities	10	20	20	10	20	30	30	30	30	30	30	250
Water, sewage, and hazardous waste disposal facilities	420	450	470	500	540	610	670	700	740	780	800	6,260
Small-issues	150	160	170	170	190	220	240	260	270	280	280	2,240
Owner-occupied mortgage subsidies	1,200	1,270	1,330	1,390	1,530	1,730	1,860	1,990	2,090	2,170	2,250	17,610
Rental housing	1,030	1,100	1,150	1,200	1,320	1,490	1,600	1,710	1,800	1,870	1,940	15,180
Airports, docks, and similar facilities	680	720	750	790	870	980	1,060	1,120	1,190	1,230	1,280	9,990
Student loans	440	460	480	500	560	620	680	730	760	790	820	6,400
Private nonprofit educational facilities	2,260	2,380	2,490	2,600	2,870	3,230	3,490	3,730	3,920	4,080	4,220	33,010
Hospital construction	3,480	3,670	3,840	4,010	4,430	4,990	5,370	5,740	6,040	6,290	6,510	50,890
Veterans' housing	10	10	10	10	10	10	10	10	20	20	20	130

[1] Firms can take an energy grant in lieu of the energy production credit or the energy investment credit for facilities whose construction began in 2009, 2010, or 2011. The effect of the grant on outlays (in millions of dollars) is as follows: 2016 $750; 2017 $500; and $0 thereafter.

[2] The alternative fuel mixture credit results in a reduction in excise tax receipts (in millions of dollars) as follows: 2016 $590; 2017 $290 and $0 thereafter.

[3] In addition, the biodiesel producer tax credit results in a reduction in excise tax receipts (in millions of dollars) as follows: 2016 $2,650; 2017 $2,810 and $0 thereafter.

[4] In addition, the credit for holding clean renewable energy bonds has outlay effects of (in millions of dollars): 2016 $30; 2017 $30; 2018 $30; 2019 $30; 2020 $30; 2021 $30; 2022 $30; 2023 $30; 2024 $30; 2025, $30; and 2026 $30.

[5] In addition, the qualified energy conservation bonds have outlay effects of (in millions of dollars): 2016 $40; 2017 $40; 2018 $40; 2019 $40; 2020 $40; 2021 $40; 2022 $40; 2023 $40; 2024 $40; 2025, $40; and 2026 $40.

[6] In addition, recovery zone bonds have outlay effects (in millions of dollars) as follows: 2016 $220; 2017 $220; 2018 $220; 2019 $220; 2020 $220; 2021 $220; 2022 $220; 2023 $220; 2024 $220; 2025, $220; and 2026 $220.

[7] In addition, the tax credits and deductions for postsecondary education expenses have outlay effects of (in millions of dollars): 016 $4,630; 2017 $4,530; 2018 $4,570; 2019 $4,630; 2020 $4,660; 2021 $4,710; 2022 $4,760; 2023 $4,800; 2024 $4,840; 2025 $4,860; and 2026 $4,870

[8] In addition, the credit for holders of zone academy bonds has outlay effects of (in millions of dollars): 2016 $60; 2017 $60; 2018 $60; 2019 $60; 2020 $60; 2021 $60; 2022 $60; 2023 $60; 2024 $60; 2025 $60; and 2026 $60.

[9] In addition, the provision for school construction bonds has outlay effects of (in millions of dollars): 2016 $680; 2017 $730; 2018 $730; 2019 $730; 2020 $730; 2021 $730; 2022 $730; 2023 $730; 2024 $730; 2025 $730; and 2026 $730.

[10] In addition, the employer contributions for health have effects on payroll tax receipts (in millions of dollars) as follows: 2016 $130,380; 2017 $136,600; 2018 $144,110; 2019 $151,860; 2020 $158,700; 2021 $166,540; 2022 $175,190; 2023 $184,390; 2024 $194,210; 2025 $204,590; and 2026 $215,340.

[11] In addition, the premium assistance credit provision has outlay effects (in millions of dollars) as follows: 2016 $24,230; 2017 $32,240; 2018 $40,620; 2019 $51,220; 2020 $64,670; 2021 $70,140; 2022 $74,150; 2023 $77,420; 2024 $81,060; 2025 $84,670; and 2026 $88,980.

[12] In addition, the small business credit provision has outlay effects (in millions of dollars) as follows: 2016 $30; 2017 $30; 2018 $30; 2019 $30; 2020 $30; 2021 $20; 2022 $20; 2023 $20; 2024 $10; 2025 $10; and 2026 $0.

[13] In addition, the effect of the health coverage tax credit on receipts has outlay effects of (in millions of dollars) 2016 $10; 2017 $20; 2018 $30; 2019 $30; 2020 $10; and $0 thereafter.

[14] In addition, the effect of the child tax credit on receipts has outlay effects of (in millions of dollars): 2016 $29,990; 2017 $29,980; 2018 $29,620; 2019 $ 29,300; 2020 $29,100; 2021 $29,270; 2022 $29,360; 2023 $29,560 2024 $29,630; 2025 $29,720; and 2026 $29,800.

[15] In addition, the earned income tax credit on receipts has outlay effects of (in millions of dollars): 2016 $62,150; 2017 $62,070; 2018 $61,770; 2019 $ 60,130; 2020 $60,540; 2021 $63,880; 2022 $65,310; 2023 $67,020; 2024 $68,560; 2025 $70,080; and 2026 $71,560.

[16] In addition, the Build America Bonds have outlay effects of (in millions of dollars): 2016 $3,350; 2017 $3,610; 2018 $3,610, 2019 $3,610; 2020 $3,610; 2021 $3,610; 2022 $3,610; 2023 $3,610; 2024 $3,610; 2025, $3,610; and 2026 $3,610.

Note: Provisions with estimates denoted normal tax method have no revenue loss under the reference tax law method.

All estimates have been rounded to the nearest $10 million. Provisions with estimates that rounded to zero in each year are not included in the table.

Table 13–2A. ESTIMATES OF TOTAL CORPORATE INCOME TAX EXPENDITURES FOR FISCAL YEARS 2016-2026

(In millions of dollars)

		Total from corporations											
		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2017-26
National Defense													
1	Exclusion of benefits and allowances to armed forces personnel	0	0	0	0	0	0	0	0	0	0	0	0
International affairs:													
2	Exclusion of income earned abroad by U.S. citizens	0	0	0	0	0	0	0	0	0	0	0	0
3	Exclusion of certain allowances for Federal employees abroad	0	0	0	0	0	0	0	0	0	0	0	0
4	Inventory property sales source rules exception	4,270	4,630	5,020	5,440	5,900	6,400	6,940	7,530	8,170	8,860	9,610	68,500
5	Deferral of income from controlled foreign corporations (normal tax method)	102,100	107,200	112,560	118,190	124,100	130,310	136,820	143,660	150,850	158,390	166,310	1,348,390
6	Deferred taxes for financial firms on certain income earned overseas	15,320	16,080	16,880	17,730	18,620	19,550	20,520	21,550	22,630	23,760	24,950	202,270
General science, space, and technology:													
7	Expensing of research and experimentation expenditures (normal tax method)	6,350	6,300	6,910	7,930	8,800	9,520	10,150	10,740	11,370	12,060	12,790	96,570
8	Credit for increasing research activities	9,580	10,230	10,840	11,500	12,190	12,920	13,700	14,540	15,420	16,360	17,350	135,050
Energy:													
9	Expensing of exploration and development costs, fuels	-320	-470	-210	-20	90	150	190	210	210	220	260	630
10	Excess of percentage over cost depletion, fuels	330	320	410	450	490	550	650	770	880	960	1,080	6,560
11	Exception from passive loss limitation for working interests in oil and gas properties	0	0	0	0	0	0	0	0	0	0	0	0
12	Capital gains treatment of royalties on coal	0	0	0	0	0	0	0	0	0	0	0	0
13	Exclusion of interest on energy facility bonds	0	10	10	0	0	10	10	10	10	0	0	60
14	Energy production credit 1/	1,050	1,330	1,740	2,230	2,680	3,080	3,350	3,490	3,530	3,460	3,300	28,190
15	Marginal wells credit	0	20	20	10	0	0	0	0	0	0	0	
16	Energy investment credit 1/	890	1,830	2,590	2,870	2,940	2,790	2,210	1,500	860	410	220	18,220
17	Alcohol fuel credits 2/	0	0	0	0	0	0	0	0	0	0	0	0
18	Bio-Diesel and small agri-biodiesel producer tax credits 3/	20	10	0	0	0	0	0	0	0	0	0	10
19	Tax credits for clean-fuel burning vehicles and refueling property	130	150	170	130	90	80	60	40	30	40	50	840
20	Exclusion of utility conservation subsidies	30	30	30	30	30	30	30	30	30	30	30	300
21	Credit for holding clean renewable energy bonds 4/	20	20	20	20	20	20	20	20	20	20	20	200
22	Deferral of gain from dispositions of transmission property to implement FERC restructuring policy	60	-190	-270	-210	-190	-150	-120	-70	-20	0	0	-1,220
23	Credit for investment in clean coal facilities	140	360	400	210	30	-20	-20	-20	-10	-10	0	920
24	Temporary 50% expensing for equipment used in the refining of liquid fuels	-1,760	-1,380	-1,140	-930	-740	-560	-370	-180	-40	0	0	-5,340
25	Natural gas distribution pipelines treated as 15-year property	140	140	150	150	150	120	60	-20	-100	-190	-270	190
26	Amortize all geological and geophysical expenditures over 2 years	50	40	40	40	50	60	60	50	40	30	30	440
27	Allowance of deduction for certain energy efficient commercial building property	20	0	-10	-10	-10	-10	-10	-10	-10	-10	-10	-90
28	Credit for construction of new energy efficient homes	50	50	20	10	0	0	0	0	0	0	0	80
29	Credit for energy efficiency improvements to existing homes	0	0	0	0	0	0	0	0	0	0	0	0
30	Credit for residential energy efficient property	0	0	0	0	0	0	0	0	0	0	0	0
31	Qualified energy conservation bonds 5/	10	10	10	10	10	10	10	10	10	10	10	100
32	Advanced Energy Property Credit	10	-20	-20	-20	-10	0	0	0	0	0	0	-70
33	Advanced nuclear power production credit	0	0	0	170	440	550	550	550	550	550	550	3,910
34	Reduced tax rate for nuclear decommissioning funds	160	190	220	240	250	270	280	290	300	320	330	2,690
Natural resources and environment:													
35	Expensing of exploration and development costs, nonfuel minerals	20	40	40	50	50	50	50	50	50	50	50	480
36	Excess of percentage over cost depletion, nonfuel minerals	410	400	410	420	420	420	410	410	400	390	370	4,050
37	Exclusion of interest on bonds for water, sewage, and hazardous waste facilities	120	130	130	120	120	140	140	130	130	130	120	1,290
38	Capital gains treatment of certain timber income	0	0	0	0	0	0	0	0	0	0	0	0
39	Expensing of multiperiod timber growing costs	200	210	230	240	250	260	260	270	270	280	280	2,550

Table 13–2A. ESTIMATES OF TOTAL CORPORATE INCOME TAX EXPENDITURES FOR FISCAL YEARS 2016-2026—Continued

(In millions of dollars)

		Total from corporations											
		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2017-26
40	Tax incentives for preservation of historic structures	390	400	400	410	420	430	440	450	460	460	470	4,340
41	Industrial CO2 capture and sequestration tax credit	110	150	180	80	0	0	0	0	0	0	0	410
42	Deduction for endangered species recovery expenditures	10	10	10	10	20	20	20	20	20	30	30	190
	Agriculture:												
43	Expensing of certain capital outlays	10	20	20	20	20	20	20	20	30	30	30	230
44	Expensing of certain multiperiod production costs	20	30	30	30	30	40	40	40	50	50	50	390
45	Treatment of loans forgiven for solvent farmers	0	0	0	0	0	0	0	0	0	0	0	0
46	Capital gains treatment of certain income	0	0	0	0	0	0	0	0	0	0	0	0
47	Income averaging for farmers	0	0	0	0	0	0	0	0	0	0	0	0
48	Deferral of gain on sale of farm refiners	20	20	20	20	20	20	30	30	30	30	30	250
49	Expensing of reforestation expenditures	20	20	20	20	30	30	30	30	30	30	30	270
	Commerce and housing:												
	Financial institutions and insurance:												
50	Exemption of credit union income	2,310	2,710	3,080	3,260	3,350	3,600	3,770	3,530	3,850	4,100	4,060	35,310
51	Exclusion and deferral of policyholder income earned on life insurance and annuity contracts	1,470	1,740	2,140	2,470	2,730	2,960	3,160	3,360	3,550	3,740	3,930	29,780
52	Exclusion or special alternative tax for small property and casualty insurance companies	50	50	50	60	60	60	60	70	70	70	80	630
53	Tax exemption of insurance income earned by tax-exempt organizations	690	720	740	780	830	870	890	910	930	950	970	8,590
54	Small life insurance company deduction	40	40	40	40	40	40	50	50	50	50	50	450
55	Exclusion of interest spread of financial institutions	0	0	0	0	0	0	0	0	0	0	0	0
	Housing:												
56	Exclusion of interest on owner-occupied mortgage subsidy bonds	350	380	370	330	350	390	380	380	360	350	350	3,640
57	Exclusion of interest on rental housing bonds	300	330	320	290	300	340	330	320	310	300	300	3,140
58	Deductibility of mortgage interest on owner-occupied homes	0	0	0	0	0	0	0	0	0	0	0	0
59	Deductibility of State and local property tax on owner-occupied homes	0	0	0	0	0	0	0	0	0	0	0	0
60	Deferral of income from installment sales	0	0	0	0	0	0	0	0	0	0	0	0
61	Capital gains exclusion on home sales	0	0	0	0	0	0	0	0	0	0	0	0
62	Exclusion of net imputed rental income	0	0	0	0	0	0	0	0	0	0	0	0
63	Exception from passive loss rules for $25,000 of rental loss	0	0	0	0	0	0	0	0	0	0	0	0
64	Credit for low-income housing investments	8,200	8,300	8,410	8,500	8,640	8,820	9,020	9,240	9,510	9,780	9,690	89,910
65	Accelerated depreciation on rental housing (normal tax method)	260	370	500	630	770	920	1,070	1,200	1,320	1,430	1,540	9,750
66	Discharge of mortgage indebtedness												0
	Commerce:												
67	Discharge of business indebtedness	0	0	0	0	0	0	0	0	0	0	0	0
68	Exceptions from imputed interest rules	0	0	0	0	0	0	0	0	0	0	0	0
69	Treatment of qualified dividends	0	0	0	0	0	0	0	0	0	0	0	0
70	Capital gains (except agriculture, timber, iron ore, and coal)	0	0	0	0	0	0	0	0	0	0	0	0
71	Capital gains exclusion of small corporation stock	0	0	0	0	0	0	0	0	0	0	0	0
72	Step-up basis of capital gains at death	0	0	0	0	0	0	0	0	0	0	0	0
73	Carryover basis of capital gains on gifts	0	0	0	0	0	0	0	0	0	0	0	0
74	Ordinary income treatment of loss from small business corporation stock sale	0	0	0	0	0	0	0	0	0	0	0	0
75	Deferral of gains from like-kind exchanges	5,720	6,000	6,310	6,630	6,960	7,300	7,670	8,050	8,460	8,880	9,320	75,580
76	Depreciation of buildings other than rental housing (normal tax method)	-3,760	-3,920	-4,170	-4,490	-4,860	-5,170	-5,460	-5,750	-6,080	-6,280	-6,450	-52,630
77	Accelerated depreciation of machinery and equipment (normal tax method)	28,570	30,490	33,010	34,750	-5,150	-10,650	1,960	10,000	17,260	23,490	28,430	163,590
78	Expensing of certain small investments (normal tax method)	340	290	300	310	1,150	1,250	990	880	810	780	790	7,550

Table 13–2A. ESTIMATES OF TOTAL CORPORATE INCOME TAX EXPENDITURES FOR FISCAL YEARS 2016-2026—Continued

(In millions of dollars)

		Total from corporations											
		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2017-26
79	Graduated corporation income tax rate (normal tax method)	3,300	3,000	2,650	2,460	2,370	2,360	2,380	2,380	2,380	2,410	2,250	24,640
80	Exclusion of interest on small issue bonds	40	50	50	40	40	50	50	50	50	50	40	470
81	Deduction for US production activities	12,080	12,510	13,080	13,640	14,210	14,810	15,430	16,080	16,750	17,450	18,190	152,150
82	Special rules for certain film and TV production	220	160	90	50	20	0	0	0	0	0	0	320
	Transportation:												
83	Tonnage tax	70	80	80	90	90	90	100	100	110	110	120	970
84	Deferral of tax on shipping companies	20	20	20	20	20	20	20	20	20	20	20	200
85	Exclusion of reimbursed employee parking expenses	0	0	0	0	0	0	0	0	0	0	0	0
86	Exclusion for employer-provided transit passes	0	0	0	0	0	0	0	0	0	0	0	0
87	Tax credit for certain expenditures for maintaining railroad tracks	110	50	0	0	0	0	0	0	0	0	0	50
88	Exclusion of interest on bonds for Highway Projects and rail-truck transfer facilities	50	50	50	40	40	40	40	30	30	30	30	380
	Community and regional development:												
89	Investment credit for rehabilitation of structures (other than historic)	10	10	10	10	10	10	10	10	10	10	10	100
90	Exclusion of interest for airport, dock, and similar bonds	200	210	210	190	200	220	220	210	210	200	200	2,070
91	Exemption of certain mutuals' and cooperatives' income	140	150	150	150	150	160	160	160	170	170	180	1,600
92	Empowerment zones	70	50	20	10	10	0	0	0	0	0	0	90
93	New markets tax credit	1,260	1,270	1,170	1,030	960	870	740	590	430	270	80	7,410
94	Credit to holders of Gulf Tax Credit Bonds.	70	70	70	60	70	70	70	70	70	70	70	690
95	Recovery Zone Bonds 6/	40	40	40	30	40	40	40	40	40	40	40	390
96	Tribal Economic Development Bonds	10	10	10	10	10	10	10	10	10	10	10	100
	Education, training, employment, and social services:												
	Education:												
97	Exclusion of scholarship and fellowship income (normal tax method)	0	0	0	0	0	0	0	0	0	0	0	0
98	Tax credits and deductions for postsecondary education expenses 7/	0	0	0	0	0	0	0	0	0	0	0	0
99	Education Individual Retirement Accounts	0	0	0	0	0	0	0	0	0	0	0	0
100	Deductibility of student-loan interest	0	0	0	0	0	0	0	0	0	0	0	0
101	Qualified tuition programs	0	0	0	0	0	0	0	0	0	0	0	0
102	Exclusion of interest on student-loan bonds	130	140	130	120	130	140	140	140	130	130	130	1,330
103	Exclusion of interest on bonds for private nonprofit educational facilities	660	710	690	620	650	730	720	710	680	660	660	6,830
104	Credit for holders of zone academy bonds 8/	160	170	180	170	150	130	110	90	80	60	50	1,190
105	Exclusion of interest on savings bonds redeemed to finance educational expenses	0	0	0	0	0	0	0	0	0	0	0	0
106	Parental personal exemption for students age 19 or over	0	0	0	0	0	0	0	0	0	0	0	0
107	Deductibility of charitable contributions (education)	820	860	900	950	1,000	1,040	1,100	1,150	1,210	1,270	1,330	10,810
108	Exclusion of employer-provided educational assistance	0	0	0	0	0	0	0	0	0	0	0	0
109	Special deduction for teacher expenses	0	0	0	0	0	0	0	0	0	0	0	0
110	Discharge of student loan indebtedness	0	0	0	0	0	0	0	0	0	0	0	0
111	Qualified school construction bonds 9/	160	160	160	160	160	160	160	160	160	160	160	1,600
	Training, employment, and social services:												
112	Work opportunity tax credit	830	920	950	980	680	350	230	180	130	100	80	4,600
113	Employer provided child care exclusion	0	0	0	0	0	0	0	0	0	0	0	0
114	Employer-provided child care credit	10	10	10	10	10	10	10	10	10	10	10	100
115	Assistance for adopted foster children	0	0	0	0	0	0	0	0	0	0	0	0
116	Adoption credit and exclusion	0	0	0	0	0	0	0	0	0	0	0	0
117	Exclusion of employee meals and lodging (other than military)	0	0	0	0	0	0	0	0	0	0	0	0
118	Credit for child and dependent care expenses	0	0	0	0	0	0	0	0	0	0	0	0
119	Credit for disabled access expenditures	0	0	0	0	0	0	0	0	0	0	0	0
120	Deductibility of charitable contributions, other than education and health	1,720	1,790	1,860	1,930	2,010	2,090	2,170	2,250	2,340	2,430	2,530	21,400

Table 13–2A. ESTIMATES OF TOTAL CORPORATE INCOME TAX EXPENDITURES FOR FISCAL YEARS 2016-2026—Continued

(In millions of dollars)

		Total from corporations											
		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2017-26
121	Exclusion of certain foster care payments	0	0	0	0	0	0	0	0	0	0	0	0
122	Exclusion of parsonage allowances	0	0	0	0	0	0	0	0	0	0	0	0
123	Indian employment credit	30	20	10	10	10	10	0	0	0	0	0	60
124	Credit for employer differential wage payments	0	0	0	10	10	10	10	10	10	10	10	80
Health:													
125	Exclusion of employer contributions for medical insurance premiums and medical care 10/	0	0	0	0	0	0	0	0	0	0	0	0
126	Self-employed medical insurance premiums	0	0	0	0	0	0	0	0	0	0	0	0
127	Medical Savings Accounts / Health Savings Accounts	0	0	0	0	0	0	0	0	0	0	0	0
128	Deductibility of medical expenses	0	0	0	0	0	0	0	0	0	0	0	0
129	Exclusion of interest on hospital construction bonds	1,010	1,090	1,070	960	1,010	1,130	1,100	1,090	1,050	1,020	1,020	10,540
130	Refundable Premium Assistance Tax Credit 11/	0	0	0	0	0	0	0	0	0	0	0	0
131	Credit for employee health insurance expenses of small business 12/	60	60	70	60	60	50	50	40	20	10	10	430
132	Deductibility of charitable contributions (health)	230	240	250	260	270	290	300	310	320	340	350	2,930
133	Tax credit for orphan drug research	1,700	2,040	2,450	2,940	3,530	4,230	5,080	6,100	7,320	8,790	10,550	53,030
134	Special Blue Cross/Blue Shield tax benefits	630	610	610	610	600	590	570	540	510	460	400	5,500
135	Tax credit for health insurance purchased by certain displaced and retired individuals 13/	0	0	0	0	0	0	0	0	0	0	0	0
136	Distributions from retirement plans for premiums for health and long-term care insurance	0	0	0	0	0	0	0	0	0	0	0	0
Income security:													
137	Child credit 14/	0	0	0	0	0	0	0	0	0	0	0	0
138	Exclusion of railroad retirement (Social Security equivalent) benefits	0	0	0	0	0	0	0	0	0	0	0	0
139	Exclusion of workers' compensation benefits	0	0	0	0	0	0	0	0	0	0	0	0
140	Exclusion of public assistance benefits (normal tax method)	0	0	0	0	0	0	0	0	0	0	0	0
141	Exclusion of special benefits for disabled coal miners	0	0	0	0	0	0	0	0	0	0	0	0
142	Exclusion of military disability pensions	0	0	0	0	0	0	0	0	0	0	0	0
	Net exclusion of pension contributions and earnings:												
143	Defined benefit employer plans	0	0	0	0	0	0	0	0	0	0	0	0
144	Defined contribution employer plans	0	0	0	0	0	0	0	0	0	0	0	0
145	Individual Retirement Accounts	0	0	0	0	0	0	0	0	0	0	0	0
146	Low and moderate income savers credit	0	0	0	0	0	0	0	0	0	0	0	0
147	Self-Employed plans	0	0	0	0	0	0	0	0	0	0	0	0
	Exclusion of other employee benefits:												
148	Premiums on group term life insurance	0	0	0	0	0	0	0	0	0	0	0	0
149	Premiums on accident and disability insurance	0	0	0	0	0	0	0	0	0	0	0	0
150	Income of trusts to finance supplementary unemployment benefits	0	0	0	0	0	0	0	0	0	0	0	0
151	Income of trusts to finance voluntary employee benefits associations	0	0	0	0	0	0	0	0	0	0	0	0
152	Special ESOP rules	1,910	1,970	2,030	2,090	2,160	2,220	2,290	2,370	2,440	2,520	2,600	22,690
153	Additional deduction for the blind	0	0	0	0	0	0	0	0	0	0	0	0
154	Additional deduction for the elderly	0	0	0	0	0	0	0	0	0	0	0	0
155	Tax credit for the elderly and disabled	0	0	0	0	0	0	0	0	0	0	0	0
156	Deductibility of casualty losses	0	0	0	0	0	0	0	0	0	0	0	0
157	Earned income tax credit 15/	0	0	0	0	0	0	0	0	0	0	0	0
Social Security:													
	Exclusion of social security benefits:												
158	Social Security benefits for retired and disabled workers and spouses, dependents and survivors	0	0	0	0	0	0	0	0	0	0	0	0
159	Credit for certain employer contributions to social security	470	490	510	530	550	580	600	630	650	680	710	5,930
Veterans benefits and services:													
160	Exclusion of veterans death benefits and disability compensation	0	0	0	0	0	0	0	0	0	0	0	0

Table 13–2A. ESTIMATES OF TOTAL CORPORATE INCOME TAX EXPENDITURES FOR FISCAL YEARS 2016-2026—Continued

(In millions of dollars)

		Total from corporations											
		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2017-26
161	Exclusion of veterans pensions	0	0	0	0	0	0	0	0	0	0	0	0
162	Exclusion of GI bill benefits	0	0	0	0	0	0	0	0	0	0	0	0
163	Exclusion of interest on veterans housing bonds	0	0	0	0	0	0	0	0	0	0	0	0
General purpose fiscal assistance:													
164	Exclusion of interest on public purpose State and local bonds	8,400	9,080	8,860	8,000	8,360	9,390	9,170	9,040	8,740	8,490	8,440	87,570
165	Build America Bonds 16/	0	0	0	0	0	0	0	0	0	0	0	0
166	Deductibility of nonbusiness State and local taxes other than on owner-occupied homes	0	0	0	0	0	0	0	0	0	0	0	0
Interest:													
167	Deferral of interest on U.S. savings bonds	0	0	0	0	0	0	0	0	0	0	0	0
Addendum: Aid to State and local governments:													
	Deductibility of:												
	Property taxes on owner-occupied homes	0	0	0	0	0	0	0	0	0	0	0	0
	Nonbusiness State and local taxes other than on owner-occupied homes	0	0	0	0	0	0	0	0	0	0	0	0
	Exclusion of interest on State and local bonds for:												
	Public purposes	8,400	9,080	8,860	8,000	8,360	9,390	9,170	9,040	8,740	8,490	8,440	87,570
	Energy facilities	0	10	10	0	0	10	10	10	10	0	0	60
	Water, sewage, and hazardous waste disposal facilities	120	130	130	120	120	140	140	130	130	130	120	1,290
	Small-issues	40	50	50	40	40	50	50	50	50	50	40	470
	Owner-occupied mortgage subsidies	350	380	370	330	350	390	380	380	360	350	350	3,640
	Rental housing	300	330	320	290	300	340	330	320	310	300	300	3,140
	Airports, docks, and similar facilities	200	210	210	190	200	220	220	210	210	200	200	2,070
	Student loans	130	140	130	120	130	140	140	140	130	130	130	1,330
	Private nonprofit educational facilities	660	710	690	620	650	730	720	710	680	660	660	6,830
	Hospital construction	1,010	1,090	1,070	960	1,010	1,130	1,100	1,090	1,050	1,020	1,020	10,540
	Veterans' housing	0	0	0	0	0	0	0	0	0	0	0	0

See Table 1 footnotes for specific table information

Table 13–2B. ESTIMATES OF TOTAL INDIVIDUAL INCOME TAX EXPENDITURES FOR FISCAL YEARS 2016–2026

(In millions of dollars)

		Total from individuals											
		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2017–2026
National Defense													
1	Exclusion of benefits and allowances to armed forces personnel	12,280	12,650	11,460	11,500	11,860	12,320	12,820	13,370	13,940	14,560	15,210	129,690
International affairs:													
2	Exclusion of income earned abroad by U.S. citizens	6,280	6,600	6,930	7,280	7,640	8,020	8,420	8,840	9,290	9,750	10,240	83,010
3	Exclusion of certain allowances for Federal employees abroad	1,300	1,370	1,430	1,500	1,580	1,660	1,740	1,830	1,920	2,020	2,120	17,170
4	Inventory property sales source rules exception	0	0	0	0	0	0	0	0	0	0	0	0
5	Deferral of income from controlled foreign corporations (normal tax method)	0	0	0	0	0	0	0	0	0	0	0	0
6	Deferred taxes for financial firms on certain income earned overseas	0	0	0	0	0	0	0	0	0	0	0	0
General science, space, and technology:													
7	Expensing of research and experimentation expenditures (normal tax method)	840	810	750	750	840	910	980	1,030	1,100	1,160	1,230	9,560
8	Credit for increasing research activities	770	920	1,010	1,080	1,160	1,250	1,340	1,450	1,560	1,680	1,810	13,260
Energy:													
9	Expensing of exploration and development costs, fuels	–130	–180	–80	–10	30	50	70	80	80	80	90	210
10	Excess of percentage over cost depletion, fuels	80	80	100	110	120	140	160	190	220	240	270	1,630
11	Exception from passive loss limitation for working interests in oil and gas properties	60	40	40	40	40	30	30	30	30	30	20	330
12	Capital gains treatment of royalties on coal	150	150	150	140	140	150	150	150	160	170	170	1,530
13	Exclusion of interest on energy facility bonds	10	10	10	10	20	20	20	20	20	30	30	190
14	Energy production credit [1]	350	440	580	740	890	1,030	1,120	1,160	1,180	1,150	1,100	9,390
15	Marginal wells credit	0	50	50	20	0	0	0	0	0	0	0	
16	Energy investment credit [1]	300	610	860	960	980	930	740	500	290	140	70	6,080
17	Alcohol fuel credits [2]	10	10	0	0	0	0	0	0	0	0	0	10
18	Bio-Diesel and small agri-biodiesel producer tax credits [3]	10	10	0	0	0	0	0	0	0	0	0	10
19	Tax credits for clean-fuel burning vehicles and refueling property	350	400	490	520	390	330	300	230	170	150	160	3,140
20	Exclusion of utility conservation subsidies	400	420	440	460	490	510	540	560	590	620	650	5,280
21	Credit for holding clean renewable energy bonds [4]	50	50	50	50	50	50	50	50	50	50	50	500
22	Deferral of gain from dispositions of transmission property to implement FERC restructuring policy	0	0	0	0	0	0	0	0	0	0	0	0
23	Credit for investment in clean coal facilities	20	40	40	20	0	0	0	0	0	0	0	100
24	Temporary 50% expensing for equipment used in the refining of liquid fuels	0	0	0	0	0	0	0	0	0	0	0	0
25	Natural gas distribution pipelines treated as 15-year property	0	0	0	0	0	0	0	0	0	0	0	0
26	Amortize all geological and geophysical expenditures over 2 years	20	20	20	20	20	20	30	20	20	10	10	190
27	Allowance of deduction for certain energy efficient commercial building property	60	10	–20	–20	–20	–20	–20	–20	–20	–20	–20	–170
28	Credit for construction of new energy efficient homes	160	120	50	20	10	0	0	0	0	0	0	200
29	Credit for energy efficiency improvements to existing homes	530	290	0	0	0	0	0	0	0	0	0	290
30	Credit for residential energy efficient property	1,450	1,460	1,500	1,550	1,470	1,270	640	150	20	0	0	8,060
31	Qualified energy conservation bonds [5]	20	20	20	20	20	20	20	20	20	20	20	200
32	Advanced Energy Property Credit	0	–10	–10	–10	0	0	0	0	0	0	0	–30
33	Advanced nuclear power production credit	0	0	0	0	0	0	0	0	0	0	0	0
34	Reduced tax rate for nuclear decommissioning funds	0	0	0	0	0	0	0	0	0	0	0	0
Natural resources and environment:													
35	Expensing of exploration and development costs, nonfuel minerals	0	0	0	0	0	0	0	0	0	0	0	0
36	Excess of percentage over cost depletion, nonfuel minerals	20	20	20	20	20	20	20	20	20	20	20	200
37	Exclusion of interest on bonds for water, sewage, and hazardous waste facilities	300	320	340	380	420	470	530	570	610	650	680	4,970
38	Capital gains treatment of certain timber income	150	150	150	140	140	150	150	150	160	170	170	1,530
39	Expensing of multiperiod timber growing costs	130	130	130	140	140	160	160	160	160	160	160	1,500

Table 13–2B. ESTIMATES OF TOTAL INDIVIDUAL INCOME TAX EXPENDITURES FOR FISCAL YEARS 2016–2026—Continued

(In millions of dollars)

		Total from individuals											
		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2017–2026
40	Tax incentives for preservation of historic structures	70	70	70	70	70	80	80	80	80	80	80	760
41	Industrial CO2 capture and sequestration tax credit	0	0	0	0	0	0	0	0	0	0	0	0
42	Deduction for endangered species recovery expenditures	20	20	20	20	20	30	30	30	30	40	40	280
Agriculture:													
43	Expensing of certain capital outlays	200	210	220	230	250	260	270	290	300	320	330	2,680
44	Expensing of certain multiperiod production costs	350	360	380	410	430	450	480	510	540	580	610	4,750
45	Treatment of loans forgiven for solvent farmers	40	50	50	50	50	50	60	60	60	60	70	560
46	Capital gains treatment of certain income	1,470	1,480	1,450	1,440	1,440	1,460	1,500	1,540	1,600	1,670	1,740	15,320
47	Income averaging for farmers	140	150	160	170	180	180	190	200	210	220	230	1,890
48	Deferral of gain on sale of farm refiners	0	0	0	0	0	0	0	0	0	0	0	0
49	Expensing of reforestation expenditures	40	40	40	40	40	50	50	50	50	60	60	480
Commerce and housing:													
	Financial institutions and insurance:												
50	Exemption of credit union income	0	0	0	0	0	0	0	0	0	0	0	0
51	Exclusion and deferral of policyholder income earned on life insurance and annuity contracts	12,510	16,180	22,220	26,640	29,680	31,810	33,360	34,560	35,580	36,550	37,350	303,930
52	Exclusion or special alternative tax for small property and casualty insurance companies	0	0	0	0	0	0	0	0	0	0	0	0
53	Tax exemption of insurance income earned by tax-exempt organizations	0	0	0	0	0	0	0	0	0	0	0	0
54	Small life insurance company deduction	0	0	0	0	0	0	0	0	0	0	0	0
55	Exclusion of interest spread of financial institutions	470	500	510	530	550	570	580	590	600	610	620	5,660
	Housing:												
56	Exclusion of interest on owner-occupied mortgage subsidy bonds	850	890	960	1,060	1,180	1,340	1,480	1,610	1,730	1,820	1,900	13,970
57	Exclusion of interest on rental housing bonds	730	770	830	910	1,020	1,150	1,270	1,390	1,490	1,570	1,640	12,040
58	Deductibility of mortgage interest on owner-occupied homes	61,190	64,110	68,090	73,590	79,990	86,570	93,030	99,300	105,110	110,480	115,650	895,920
59	Deductibility of State and local property tax on owner-occupied homes	34,470	36,540	38,940	41,590	44,410	47,170	49,930	52,770	55,670	58,560	61,280	486,860
60	Deferral of income from installment sales	1,620	1,630	1,620	1,620	1,630	1,660	1,700	1,750	1,820	1,890	1,970	17,290
61	Capital gains exclusion on home sales	43,310	46,130	48,470	50,920	53,500	56,200	59,050	62,040	65,180	68,470	71,940	581,900
62	Exclusion of net imputed rental income	105,610	109,620	112,670	114,740	116,270	119,520	122,870	126,310	129,850	133,480	137,220	1,222,550
63	Exception from passive loss rules for $25,000 of rental loss	7,120	7,480	7,800	8,080	8,290	8,490	8,670	8,820	8,980	9,250	9,370	85,230
64	Credit for low-income housing investments	430	440	440	450	450	460	470	490	500	510	510	4,720
65	Accelerated depreciation on rental housing (normal tax method)	1,350	1,830	2,420	3,030	3,670	4,370	5,100	5,730	6,340	6,930	7,520	46,940
66	Discharge of mortgage indebtedness	3,340	1,090	0	0	0	0	0	0	0	0	0	1,090
	Commerce:												
67	Discharge of business indebtedness	–150	–50	10	10	10	20	30	40	50	50	50	220
68	Exceptions from imputed interest rules	50	50	60	60	60	70	70	80	80	80	90	700
69	Treatment of qualified dividends	27,980	28,810	29,850	30,940	32,100	33,370	34,720	36,160	37,690	39,290	40,990	343,920
70	Capital gains (except agriculture, timber, iron ore, and coal)	109,530	110,270	108,560	107,620	107,780	109,210	111,760	115,240	119,500	124,450	129,800	1,144,190
71	Capital gains exclusion of small corporation stock	540	700	850	1,050	1,210	1,320	1,420	1,520	1,600	1,660	1,710	13,040
72	Step-up basis of capital gains at death	49,990	51,990	54,070	56,230	58,480	60,820	63,250	65,780	68,420	71,150	74,000	624,190
73	Carryover basis of capital gains on gifts	7,790	7,520	7,180	6,960	6,890	6,960	7,020	7,060	7,140	7,260	7,410	71,400
74	Ordinary income treatment of loss from small business corporation stock sale	50	50	50	50	50	50	50	50	50	50	50	500
75	Deferral of gains from like-kind exchanges	1,610	1,690	1,770	1,870	1,960	2,060	2,160	2,270	2,380	2,500	2,620	21,280
76	Depreciation of buildings other than rental housing (normal tax method)	–5,070	–5,080	–5,220	–5,520	–5,890	–6,250	–6,630	–7,000	–7,410	–7,670	–7,910	–64,580
77	Accelerated depreciation of machinery and equipment (normal tax method)	16,060	16,590	17,310	17,670	–6,470	–10,060	–2,790	1,810	5,900	9,370	12,050	61,380
78	Expensing of certain small investments (normal tax method)	3,580	3,290	3,360	3,530	6,580	7,100	6,480	6,330	6,330	6,470	6,780	56,250

Table 13–2B. ESTIMATES OF TOTAL INDIVIDUAL INCOME TAX EXPENDITURES FOR FISCAL YEARS 2016–2026—Continued

(In millions of dollars)

		Total from individuals											
		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2017–2026
79	Graduated corporation income tax rate (normal tax method)	0	0	0	0	0	0	0	0	0	0	0	0
80	Exclusion of interest on small issue bonds	110	110	120	130	150	170	190	210	220	230	240	1,770
81	Deduction for US production activities	3,780	3,910	4,080	4,260	4,440	4,630	4,820	5,030	5,240	5,460	5,690	47,560
82	Special rules for certain film and TV production	60	40	20	10	10	0	0	0	0	0	0	80
Transportation:													
83	Tonnage tax	0	0	0	0	0	0	0	0	0	0	0	0
84	Deferral of tax on shipping companies	0	0	0	0	0	0	0	0	0	0	0	0
85	Exclusion of reimbursed employee parking expenses	2,940	3,060	3,170	3,280	3,410	3,520	3,610	3,750	3,850	4,020	4,160	35,830
86	Exclusion for employer-provided transit passes	1,010	1,080	1,140	1,210	1,290	1,370	1,440	1,520	1,600	1,630	1,690	13,970
87	Tax credit for certain expenditures for maintaining railroad tracks	30	10	0	0	0	0	0	0	0	0	0	10
88	Exclusion of interest on bonds for Highway Projects and rail-truck transfer facilities	160	150	140	130	130	120	120	110	110	100	100	1,210
Community and regional development:													
89	Investment credit for rehabilitation of structures (other than historic)	10	10	10	10	10	10	10	10	10	10	10	100
90	Exclusion of interest for airport, dock, and similar bonds	480	510	540	600	670	760	840	910	980	1,030	1,080	7,920
91	Exemption of certain mutuals' and cooperatives' income	0	0	0	0	0	0	0	0	0	0	0	0
92	Empowerment zones	70	60	30	20	20	10	10	10	0	0	0	160
93	New markets tax credit	30	30	30	20	20	20	20	20	10	10	10	190
94	Credit to holders of Gulf Tax Credit Bonds.	160	170	180	200	230	250	280	310	330	350	360	2,660
95	Recovery Zone Bonds [6]	90	90	100	110	120	140	150	170	180	190	200	1,450
96	Tribal Economic Development Bonds	30	30	30	30	40	40	50	50	60	60	60	450
Education, training, employment, and social services:													
	Education:												
97	Exclusion of scholarship and fellowship income (normal tax method)	3,290	3,410	3,500	3,560	3,690	3,820	3,960	4,100	4,240	4,400	4,550	39,230
98	Tax credits and deductions for postsecondary education expenses [7]	15,530	15,620	15,450	15,590	15,720	15,730	15,720	15,720	15,690	15,630	15,520	156,390
99	Education Individual Retirement Accounts	30	40	40	40	40	40	40	50	50	50	50	440
100	Deductibility of student-loan interest	1,950	1,970	2,010	2,050	2,130	2,150	2,200	2,270	2,290	2,330	2,410	21,810
101	Qualified tuition programs	1,740	1,920	2,110	2,300	2,490	2,700	2,910	3,140	3,390	3,650	3,930	28,540
102	Exclusion of interest on student-loan bonds	310	320	350	380	430	480	540	590	630	660	690	5,070
103	Exclusion of interest on bonds for private nonprofit educational facilities	1,600	1,670	1,800	1,980	2,220	2,500	2,770	3,020	3,240	3,420	3,560	26,180
104	Credit for holders of zone academy bonds [8]	0	0	0	0	0	0	0	0	0	0	0	0
105	Exclusion of interest on savings bonds redeemed to finance educational expenses	30	30	30	30	30	40	40	40	40	50	50	380
106	Parental personal exemption for students age 19 or over	4,220	4,210	4,310	4,470	4,600	4,720	4,830	4,940	5,030	5,100	5,180	47,390
107	Deductibility of charitable contributions (education)	4,290	4,620	4,990	5,380	5,730	6,060	6,390	6,710	7,040	7,360	7,670	61,950
108	Exclusion of employer-provided educational assistance	850	900	950	990	1,040	1,090	1,140	1,200	1,260	1,320	1,380	11,270
109	Special deduction for teacher expenses	210	210	210	210	220	220	260	270	270	270	270	2,410
110	Discharge of student loan indebtedness	90	100	100	100	110	110	110	110	120	120	120	1,100
111	Qualified school construction bonds [9]	490	490	490	490	490	490	490	490	490	490	490	4,900
	Training, employment, and social services:												
112	Work opportunity tax credit	330	390	400	410	330	130	70	50	40	30	20	1,870
113	Employer provided child care exclusion	950	1,000	1,060	1,140	1,200	1,280	1,350	1,440	1,530	1,620	1,710	13,330
114	Employer-provided child care credit	0	0	0	0	0	0	0	0	0	0	0	0
115	Assistance for adopted foster children	560	580	610	650	680	720	760	800	840	890	930	7,460
116	Adoption credit and exclusion	300	310	320	340	360	350	370	360	370	370	380	3,530
117	Exclusion of employee meals and lodging (other than military)	4,540	4,650	4,770	4,910	5,040	5,170	5,300	5,430	5,560	5,700	5,830	52,360
118	Credit for child and dependent care expenses	4,570	4,600	4,710	4,860	4,990	5,090	5,200	5,300	5,420	5,530	5,650	51,350
119	Credit for disabled access expenditures	10	10	10	10	10	10	10	10	10	10	10	100

Table 13–2B. ESTIMATES OF TOTAL INDIVIDUAL INCOME TAX EXPENDITURES FOR FISCAL YEARS 2016–2026—Continued

(In millions of dollars)

		Total from individuals											
		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2017–2026
120	Deductibility of charitable contributions, other than education and health	42,350	45,660	49,320	53,100	56,580	59,840	63,080	66,260	69,480	72,660	75,740	611,720
121	Exclusion of certain foster care payments	450	480	500	520	540	560	580	600	610	630	650	5,670
122	Exclusion of parsonage allowances	940	990	1,040	1,090	1,150	1,210	1,280	1,340	1,410	1,490	1,570	12,570
123	Indian employment credit	20	20	10	10	10	10	10	10	10	10	10	110
124	Credit for employer differential wage payments	0	0	0	0	0	0	10	10	10	10	10	50
Health:													
125	Exclusion of employer contributions for medical insurance premiums and medical care [10]	210,190	222,030	235,830	250,760	265,170	280,990	297,880	315,770	334,890	355,060	376,330	2,934,710
126	Self-employed medical insurance premiums	7,170	7,590	7,960	8,320	8,870	9,410	9,880	10,350	10,830	11,350	11,920	96,480
127	Medical Savings Accounts / Health Savings Accounts	5,730	6,850	8,160	9,720	11,570	13,770	16,410	19,530	23,230	27,650	32,920	169,810
128	Deductibility of medical expenses	7,970	8,680	9,920	11,550	13,450	15,610	17,970	20,850	24,250	27,790	32,090	182,160
129	Exclusion of interest on hospital construction bonds	2,470	2,580	2,770	3,050	3,420	3,860	4,270	4,650	4,990	5,270	5,490	40,350
130	Refundable Premium Assistance Tax Credit [11]	2,070	2,410	3,170	3,810	4,620	5,700	6,010	6,170	6,500	6,710	6,900	52,000
131	Credit for employee health insurance expenses of small business [12]	100	100	100	90	80	50	70	50	40	20	10	610
132	Deductibility of charitable contributions (health)	4,750	5,120	5,530	5,960	6,350	6,710	7,080	7,430	7,790	8,150	8,500	68,620
133	Tax credit for orphan drug research	20	20	30	30	40	50	50	60	70	90	100	540
134	Special Blue Cross/Blue Shield tax benefits	0	0	0	0	0	0	0	0	0	0	0	0
135	Tax credit for health insurance purchased by certain displaced and retired individuals [13]	30	30	20	10	0	0	0	0	0	0	0	60
136	Distributions from retirement plans for premiums for health and long-term care insurance	440	460	480	500	520	540	560	580	600	620	650	5,510
Income security:													
137	Child credit [14]	24,180	24,460	24,710	24,710	24,520	24,140	23,750	23,300	22,820	22,330	21,840	236,580
138	Exclusion of railroad retirement (Social Security equivalent) benefits	300	310	310	300	290	270	260	240	220	200	180	2,580
139	Exclusion of workers' compensation benefits	10,030	10,100	10,170	10,240	10,320	10,390	10,460	10,530	10,610	10,680	10,760	104,260
140	Exclusion of public assistance benefits (normal tax method)	570	590	600	620	640	670	680	700	730	740	690	6,660
141	Exclusion of special benefits for disabled coal miners	30	20	20	20	20	10	10	10	10	10	10	140
142	Exclusion of military disability pensions	230	240	250	260	270	290	300	310	330	340	360	2,950
	Net exclusion of pension contributions and earnings:	0	0	0	0	0	0	0	0	0	0	0	0
143	Defined benefit employer plans	70,400	70,690	70,980	70,970	69,880	68,360	66,180	63,730	61,360	58,340	54,710	655,200
144	Defined contribution employer plans	61,770	64,610	69,420	76,450	81,250	89,270	95,350	112,370	117,620	122,660	129,460	958,460
145	Individual Retirement Accounts	16,410	17,900	19,170	20,680	22,310	23,970	25,200	26,560	26,550	26,720	26,800	235,860
146	Low and moderate income savers credit	1,270	1,240	1,260	1,270	1,290	1,320	1,330	1,350	1,350	1,360	1,380	13,150
147	Self-Employed plans	28,050	30,820	33,780	37,050	40,500	44,040	47,890	52,080	56,640	61,590	66,980	471,370
	Exclusion of other employee benefits:	0	0	0	0	0	0	0	0	0	0	0	0
148	Premiums on group term life insurance	2,460	2,580	2,680	2,780	2,880	2,980	3,080	3,190	3,310	3,430	3,550	30,460
149	Premiums on accident and disability insurance	320	320	330	330	330	340	340	340	350	350	350	3,380
150	Income of trusts to finance supplementary unemployment benefits	20	20	30	40	40	40	50	50	50	50	50	420
151	Income of trusts to finance voluntary employee benefits associations	1,110	1,170	1,220	1,280	1,340	1,400	1,470	1,540	1,610	1,690	1,770	14,490
152	Special ESOP rules	120	120	120	120	130	130	140	140	140	150	150	1,340
153	Additional deduction for the blind	40	40	40	40	50	50	50	60	60	70	80	540
154	Additional deduction for the elderly	2,940	3,110	3,350	3,560	3,800	4,000	4,260	4,600	4,900	5,250	5,620	42,450
155	Tax credit for the elderly and disabled	10	10	10	10	10	10	10	0	0	0	0	60
156	Deductibility of casualty losses	370	390	400	410	420	440	450	460	470	480	490	4,410
157	Earned income tax credit [15]	1,550	1,760	1,820	3,780	3,890	2,080	2,200	2,330	2,430	2,560	2,660	25,510
Social Security:													
	Exclusion of social security benefits:												
158	Social Security benefits for retired and disabled workers and spouses, dependents and survivors	36,140	38,440	40,580	42,920	44,850	46,530	48,140	49,700	51,380	53,260	55,330	471,130
159	Credit for certain employer contributions to social security	530	540	570	590	620	640	670	700	730	760	790	6,610
Veterans benefits and services:													

Table 13–2B. ESTIMATES OF TOTAL INDIVIDUAL INCOME TAX EXPENDITURES FOR FISCAL YEARS 2016–2026—Continued

(In millions of dollars)

		Total from individuals											
		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2017–2026
160	Exclusion of veterans death benefits and disability compensation	6,770	7,290	7,720	7,980	8,250	8,520	8,780	9,060	9,340	9,630	9,930	86,500
161	Exclusion of veterans pensions	440	470	500	520	540	560	590	610	630	650	680	5,750
162	Exclusion of GI bill benefits	1,550	1,690	1,790	1,880	1,960	2,050	2,140	2,240	2,340	2,440	2,550	21,080
163	Exclusion of interest on veterans housing bonds	10	10	10	10	10	10	10	10	20	20	20	130
General purpose fiscal assistance:													
164	Exclusion of interest on public purpose State and local bonds	20,490	21,420	23,050	25,350	28,420	32,030	35,470	38,660	41,440	43,760	45,610	335,210
165	Build America Bonds [16]	0	0	0	0	0	0	0	0	0	0	0	0
166	Deductibility of nonbusiness State and local taxes other than on owner-occupied homes	56,230	59,750	63,340	67,230	71,710	75,950	80,170	84,600	89,100	93,590	97,830	783,270
Interest:													
167	Deferral of interest on U.S. savings bonds	980	970	960	950	940	940	930	920	910	900	890	9,310
Addendum: Aid to State and local governments:													
	Deductibility of:												
	Property taxes on owner-occupied homes	34,470	36,540	38,940	41,590	44,410	47,170	49,930	52,770	55,670	58,560	61,280	486,860
	Nonbusiness State and local taxes other than on owner-occupied homes	56,230	59,750	63,340	67,230	71,710	75,950	80,170	84,600	89,100	93,590	97,830	783,270
	Exclusion of interest on State and local bonds for:												
	Public purposes	20,490	21,420	23,050	25,350	28,420	32,030	35,470	38,660	41,440	43,760	45,610	335,210
	Energy facilities	10	10	10	10	20	20	20	20	20	30	30	190
	Water, sewage, and hazardous waste disposal facilities	300	320	340	380	420	470	530	570	610	650	680	4,970
	Small-issues	110	110	120	130	150	170	190	210	220	230	240	1,770
	Owner-occupied mortgage subsidies	850	890	960	1,060	1,180	1,340	1,480	1,610	1,730	1,820	1,900	13,970
	Rental housing	730	770	830	910	1,020	1,150	1,270	1,390	1,490	1,570	1,640	12,040
	Airports, docks, and similar facilities	480	510	540	600	670	760	840	910	980	1,030	1,080	7,920
	Student loans	310	320	350	380	430	480	540	590	630	660	690	5,070
	Private nonprofit educational facilities	1,600	1,670	1,800	1,980	2,220	2,500	2,770	3,020	3,240	3,420	3,560	26,180
	Hospital construction	2,470	2,580	2,770	3,050	3,420	3,860	4,270	4,650	4,990	5,270	5,490	40,350
	Veterans' housing	10	10	10	10	10	10	10	10	20	20	20	130

See Table 1 footnotes for specific table information

Table 13-3. INCOME TAX EXPENDITURES RANKED BY TOTAL FISCAL YEAR 2017-2026 PROJECTED REVENUE EFFECT
(In millions of dollars)

	Provision	2017	2018	2017-2026
125	Exclusion of employer contributions for medical insurance premiums and medical care [10]	222,030	235,830	2,934,710
5	Deferral of income from controlled foreign corporations (normal tax method)	107,200	112,560	1,348,390
62	Exclusion of net imputed rental income	109,620	112,670	1,222,550
70	Capital gains (except agriculture, timber, iron ore, and coal)	110,270	108,560	1,144,190
144	Defined contribution employer plans	64,610	69,420	958,460
58	Deductibility of mortgage interest on owner-occupied homes	64,110	68,090	895,920
166	Deductibility of nonbusiness State and local taxes other than on owner-occupied homes	59,750	63,340	783,270
143	Defined benefit employer plans	70,690	70,980	655,200
120	Deductibility of charitable contributions, other than education and health	47,450	51,180	633,120
72	Step-up basis of capital gains at death	51,990	54,070	624,190
61	Capital gains exclusion on home sales	46,130	48,470	581,900
59	Deductibility of State and local property tax on owner-occupied homes	36,540	38,940	486,860
147	Self-Employed plans	30,820	33,780	471,370
158	Social Security benefits for retired and disabled workers and spouses, dependents and survivors	38,440	40,580	471,130
164	Exclusion of interest on public purpose State and local bonds	30,500	31,910	422,780
69	Treatment of qualified dividends	28,810	29,850	343,920
51	Exclusion and deferral of policyholder income earned on life insurance and annuity contracts	17,920	24,360	333,710
137	Child credit [14]	24,460	24,710	236,580
145	Individual Retirement Accounts	17,900	19,170	235,860
77	Accelerated depreciation of machinery and equipment (normal tax method)	47,080	50,320	224,970
6	Deferred taxes for financial firms on certain income earned overseas	16,080	16,880	202,270
81	Deduction for US production activities	16,420	17,160	199,710
128	Deductibility of medical expenses	8,680	9,920	182,160
127	Medical Savings Accounts / Health Savings Accounts	6,850	8,160	169,810
98	Tax credits and deductions for postsecondary education expenses [7]	15,620	15,450	156,390
8	Credit for increasing research activities	11,150	11,850	148,310
1	Exclusion of benefits and allowances to armed forces personnel	12,650	11,460	129,690
7	Expensing of research and experimentation expenditures (normal tax method)	7,110	7,660	106,130
139	Exclusion of workers' compensation benefits	10,100	10,170	104,260
75	Deferral of gains from like-kind exchanges	7,690	8,080	96,860
126	Self-employed medical insurance premiums	7,590	7,960	96,480
64	Credit for low-income housing investments	8,740	8,850	94,630
160	Exclusion of veterans death benefits and disability compensation	7,290	7,720	86,500
63	Exception from passive loss rules for $25,000 of rental loss	7,480	7,800	85,230
2	Exclusion of income earned abroad by U.S. citizens	6,600	6,930	83,010
107	Deductibility of charitable contributions (education)	5,480	5,890	72,760
132	Deductibility of charitable contributions (health)	5,360	5,780	71,550
73	Carryover basis of capital gains on gifts	7,520	7,180	71,400
4	Inventory property sales source rules exception	4,630	5,020	68,500
78	Expensing of certain small investments (normal tax method)	3,580	3,660	63,800
65	Accelerated depreciation on rental housing (normal tax method)	2,200	2,920	56,690
133	Tax credit for orphan drug research	2,060	2,480	53,570
117	Exclusion of employee meals and lodging (other than military)	4,650	4,770	52,360
130	Refundable Premium Assistance Tax Credit [11]	2,410	3,170	52,000
118	Credit for child and dependent care expenses	4,600	4,710	51,350
129	Exclusion of interest on hospital construction bonds	3,670	3,840	50,890
106	Parental personal exemption for students age 19 or over	4,210	4,310	47,390
154	Additional deduction for the elderly	3,110	3,350	42,450
97	Exclusion of scholarship and fellowship income (normal tax method)	3,410	3,500	39,230
14	Energy production credit [1]	1,770	2,320	37,580
85	Exclusion of reimbursed employee parking expenses	3,060	3,170	35,830
50	Exemption of credit union income	2,710	3,080	35,310
103	Exclusion of interest on bonds for private nonprofit educational facilities	2,380	2,490	33,010
148	Premiums on group term life insurance	2,580	2,680	30,460
101	Qualified tuition programs	1,920	2,110	28,540
157	Earned income tax credit [15]	1,760	1,820	25,510
79	Graduated corporation income tax rate (normal tax method)	3,000	2,650	24,640
16	Energy investment credit [1]	2,440	3,450	24,300
152	Special ESOP rules	2,090	2,150	24,030

Table 13-3. INCOME TAX EXPENDITURES RANKED BY TOTAL FISCAL YEAR 2017-2026 PROJECTED REVENUE EFFECT—Continued
(In millions of dollars)

	Provision	2017	2018	2017-2026
100	Deductibility of student-loan interest	1,970	2,010	21,810
162	Exclusion of GI bill benefits	1,690	1,790	21,080
56	Exclusion of interest on owner-occupied mortgage subsidy bonds	1,270	1,330	17,610
60	Deferral of income from installment sales	1,630	1,620	17,290
3	Exclusion of certain allowances for Federal employees abroad	1,370	1,430	17,170
46	Capital gains treatment of certain income	1,480	1,450	15,320
57	Exclusion of interest on rental housing bonds	1,100	1,150	15,180
151	Income of trusts to finance voluntary employee benefits associations	1,170	1,220	14,490
86	Exclusion for employer-provided transit passes	1,080	1,140	13,970
113	Employer provided child care exclusion	1,000	1,060	13,330
146	Low and moderate income savers credit	1,240	1,260	13,150
71	Capital gains exclusion of small corporation stock	700	850	13,040
122	Exclusion of parsonage allowances	990	1,040	12,570
159	Credit for certain employer contributions to social security	1,030	1,080	12,540
108	Exclusion of employer-provided educational assistance	900	950	11,270
90	Exclusion of interest for airport, dock, and similar bonds	720	750	9,990
167	Deferral of interest on U.S. savings bonds	970	960	9,310
53	Tax exemption of insurance income earned by tax-exempt organizations	720	740	8,590
10	Excess of percentage over cost depletion, fuels	400	510	8,190
30	Credit for residential energy efficient property	1,460	1,500	8,060
93	New markets tax credit	1,300	1,200	7,600
115	Assistance for adopted foster children	580	610	7,460
140	Exclusion of public assistance benefits (normal tax method)	590	600	6,660
111	Qualified school construction bonds [9]	650	650	6,500
112	Work opportunity tax credit	1,310	1,350	6,470
102	Exclusion of interest on student-loan bonds	460	480	6,400
37	Exclusion of interest on bonds for water, sewage, and hazardous waste facilities	450	470	6,260
161	Exclusion of veterans pensions	470	500	5,750
121	Exclusion of certain foster care payments	480	500	5,670
55	Exclusion of interest spread of financial institutions	500	510	5,660
20	Exclusion of utility conservation subsidies	450	470	5,580
136	Distributions from retirement plans for premiums for health and long-term care insurance	460	480	5,510
134	Special Blue Cross/Blue Shield tax benefits	610	610	5,500
44	Expensing of certain multiperiod production costs	390	410	5,140
40	Tax incentives for preservation of historic structures	470	470	5,100
156	Deductibility of casualty losses	390	400	4,410
36	Excess of percentage over cost depletion, nonfuel minerals	420	430	4,250
39	Expensing of multiperiod timber growing costs	340	360	4,050
19	Tax credits for clean-fuel burning vehicles and refueling property	550	660	3,980
33	Advanced nuclear power production credit	0	0	3,910
116	Adoption credit and exclusion	310	320	3,530
149	Premiums on accident and disability insurance	320	330	3,380
94	Credit to holders of Gulf Tax Credit Bonds.	240	250	3,350
142	Exclusion of military disability pensions	240	250	2,950
43	Expensing of certain capital outlays	230	240	2,910
34	Reduced tax rate for nuclear decommissioning funds	190	220	2,690
138	Exclusion of railroad retirement (Social Security equivalent) benefits	310	310	2,580
109	Special deduction for teacher expenses	210	210	2,410
80	Exclusion of interest on small issue bonds	160	170	2,240
47	Income averaging for farmers	150	160	1,890
95	Recovery Zone Bonds [6]	130	140	1,840
91	Exemption of certain mutuals' and cooperatives' income	150	150	1,600
88	Exclusion of interest on bonds for Highway Projects and rail-truck transfer facilities	200	190	1,590
12	Capital gains treatment of royalties on coal	150	150	1,530
38	Capital gains treatment of certain timber income	150	150	1,530
104	Credit for holders of zone academy bonds [8]	170	180	1,190
110	Discharge of student loan indebtedness	100	100	1,100
66	Discharge of mortgage indebtedness	1,090	0	1,090
131	Credit for employee health insurance expenses of small business [12]	160	170	1,040

Table 13-3. INCOME TAX EXPENDITURES RANKED BY TOTAL FISCAL YEAR 2017-2026 PROJECTED REVENUE EFFECT—Continued
(In millions of dollars)

	Provision	2017	2018	2017-2026
23	Credit for investment in clean coal facilities	400	440	1,020
83	Tonnage tax	80	80	970
9	Expensing of exploration and development costs, fuels	–650	–290	840
49	Expensing of reforestation expenditures	60	60	750
21	Credit for holding clean renewable energy bonds [4]	70	70	700
68	Exceptions from imputed interest rules	50	60	700
26	Amortize all geological and geophysical expenditures over 2 years	60	60	630
52	Exclusion or special alternative tax for small property and casualty insurance companies	50	50	630
45	Treatment of loans forgiven for solvent farmers	50	50	560
96	Tribal Economic Development Bonds	40	40	550
153	Additional deduction for the blind	40	40	540
74	Ordinary income treatment of loss from small business corporation stock sale	50	50	500
35	Expensing of exploration and development costs, nonfuel minerals	40	40	480
42	Deduction for endangered species recovery expenditures	30	30	470
54	Small life insurance company deduction	40	40	450
99	Education Individual Retirement Accounts	40	40	440
150	Income of trusts to finance supplementary unemployment benefits	20	30	420
41	Industrial CO2 capture and sequestration tax credit	150	180	410
82	Special rules for certain film and TV production	200	110	400
105	Exclusion of interest on savings bonds redeemed to finance educational expenses	30	30	380
11	Exception from passive loss limitation for working interests in oil and gas properties	40	40	330
31	Qualified energy conservation bonds [5]	30	30	300
29	Credit for energy efficiency improvements to existing homes	290	0	290
28	Credit for construction of new energy efficient homes	170	70	280
13	Exclusion of interest on energy facility bonds	20	20	250
48	Deferral of gain on sale of farm refiners	20	20	250
92	Empowerment zones	110	50	250
67	Discharge of business indebtedness	–50	10	220
84	Deferral of tax on shipping companies	20	20	200
89	Investment credit for rehabilitation of structures (other than historic)	20	20	200
25	Natural gas distribution pipelines treated as 15-year property	140	150	190
15	Marginal wells credit	70	70	170
123	Indian employment credit	40	20	170
141	Exclusion of special benefits for disabled coal miners	20	20	140
124	Credit for employer differential wage payments	0	0	130
163	Exclusion of interest on veterans housing bonds	10	10	130
114	Employer-provided child care credit	10	10	100
119	Credit for disabled access expenditures	10	10	100
87	Tax credit for certain expenditures for maintaining railroad tracks	60	0	60
135	Tax credit for health insurance purchased by certain displaced and retired individuals [13]	30	20	60
155	Tax credit for the elderly and disabled	10	10	60
18	Bio-Diesel and small agri-biodiesel producer tax credits [3]	20	0	20
17	Alcohol fuel credits [2]	10	0	10
165	Build America Bonds [16]	0	0	0
32	Advanced Energy Property Credit	–30	–30	–100
27	Allowance of deduction for certain energy efficient commercial building property	10	–30	–260
22	Deferral of gain from dispositions of transmission property to implement FERC restructuring policy	–190	–270	–1,220
24	Temporary 50% expensing for equipment used in the refining of liquid fuels	–1,380	–1,140	–5,340
76	Depreciation of buildings other than rental housing (normal tax method)	–9,000	–9,390	–117,210

See Table 1 footnotes for specific table information

4. ***Inventory property sales source rules exception.***—The United States generally taxes the worldwide income of U.S. persons and business entities. Under the baseline tax system, taxpayers receive a credit for foreign taxes paid which is limited to the pre-credit U.S. tax on the foreign source income. In contrast, the sales source rules for inventory property under current law allow U.S. exporters to use more foreign tax credits by allowing the exporters to attribute a larger portion of their earnings to foreign sources than would be the case if the allocation of earnings was based on actual economic activity.

5. ***Deferral of income from controlled foreign corporations (normal tax method).***—Under the baseline tax system, the United States generally taxes the worldwide income of U.S. persons and business entities. In contrast, certain active income of foreign corporations controlled by U.S. shareholders is not subject to U.S. taxation when it is earned. The income becomes taxable only when the controlling U.S. shareholders receive dividends or other distributions from their foreign stockholding. The reference law tax baseline reflects this tax treatment where only realized income is taxed. Under the normal tax method, however, the currently attributable foreign source pre-tax income from such a controlling interest is considered to be subject to U.S. taxation, whether or not distributed. Thus, the normal tax method considers the amount of controlled foreign corporation income not yet distributed to a U.S. shareholder as tax-deferred income.

6. ***Deferred taxes for financial firms on certain income earned overseas.***—The United States generally taxes the worldwide income of U.S. persons and business entities. The baseline tax system would not allow the deferral of tax or other relief targeted at particular industries or activities. In contrast, the Tax Code allows financial firms to defer taxes on income earned overseas in an active business.

General Science, Space, and Technology

7. ***Expensing of research and experimentation expenditures (normal tax method).***—The baseline tax system allows a deduction for the cost of producing income. It requires taxpayers to capitalize the costs associated with investments over time to better match the streams of income and associated costs. Research and experimentation (R&E) projects can be viewed as investments because, if successful, their benefits accrue for several years. It is often difficult, however, to identify whether a specific R&E project is successful and, if successful, what its expected life will be. Because of this ambiguity, the reference law baseline tax system would allow expensing of R&E expenditures. In contrast, under the normal tax method, the expensing of R&E expenditures is viewed as a tax expenditure. The baseline assumed for the normal tax method is that all R&E expenditures are successful and have an expected life of five years.

8. ***Credit for increasing research activities.***—The baseline tax system would uniformly tax all returns to investments and not allow credits for particular activities, investments, or industries. In contrast, the Tax Code allows an R&E credit of up to 20 percent of qualified research expenditures in excess of a base amount. The base amount of the credit is generally determined by multiplying a "fixed-base percentage" by the average amount of the company's gross receipts for the prior four years. The taxpayer's fixed base percentage generally is the ratio of its research expenses to gross receipts for 1984 through 1988. Taxpayers can elect the alternative simplified credit regime, which equals 14 percent of qualified research expenses that exceed 50 percent of the average qualified research expenses for the three preceding taxable years.

Energy

9. ***Expensing of exploration and development costs.***—Under the baseline tax system, the costs of exploring and developing oil and gas wells would be capitalized and then amortized (or depreciated) over an estimate of the economic life of the well. This insures that the net income from the well is measured appropriately each year.

In contrast to this treatment, current law allows intangible drilling costs for successful investments in domestic oil and gas wells (such as wages, the cost of using machinery for grading and drilling, and the cost of unsalvageable materials used in constructing wells) to be deducted immediately, i.e., expensed. Because it allows recovery of costs sooner, expensing is more generous for the taxpayer than amortization. Integrated oil companies may deduct only 70 percent of such costs and must amortize the remaining 30 percent over five years. Non-integrated oil companies may expense all such costs. The same rule applies to the exploration and development costs of surface stripping and the construction of shafts and tunnels for other fuel minerals.

10. ***Excess of percentage over cost depletion.***—The baseline tax system would allow recovery of the costs of developing certain oil and mineral properties using cost depletion. Cost depletion is similar in concept to depreciation, in that the costs of developing or acquiring the asset are capitalized and then gradually reduced over an estimate of the asset's economic life, as is appropriate for measuring net income.

In contrast, the Tax Code generally allows independent fuel and mineral producers and royalty owners to take percentage depletion deductions rather than cost depletion on limited quantities of output. Under percentage depletion, taxpayers deduct a percentage of gross income from fossil fuel production. In certain cases the deduction is limited to a fraction of the asset's net income. Over the life of an investment, percentage depletion deductions can exceed the cost of the investment. Consequently, percentage depletion offers more generous tax treatment than would cost depletion, which would limit deductions to an investment's cost.

11. ***Exception from passive loss limitation for working interests in oil and gas properties.***—The baseline tax system accepts current law's general rule limiting taxpayers' ability to deduct losses from passive activities against nonpassive income (e.g., wages, interest, and dividends). Passive activities generally are defined as

Table 13–4. PRESENT VALUE OF SELECTED TAX EXPENDITURES FOR ACTIVITY IN CALENDAR YEAR 2016
(In millions of dollars)

	Provision	2016 Present Value of Revenue Loss
5	Deferral of income from controlled foreign corporations (normal tax method)	60,600
7	Expensing of research and experimentation expenditures (normal tax method)	3,090
21	Credit for holding clean renewable energy bonds	0
9	Expensing of exploration and development costs - fuels	150
35	Expensing of exploration and development costs - nonfuels	10
39	Expensing of multiperiod timber growing costs	120
44	Expensing of certain multiperiod production costs - agriculture	–140
43	Expensing of certain capital outlays - agriculture	–100
49	Expensing of reforestation expenditures	30
51	Exclusion and deferral of policyholder income earned on life insurance and annuity contracts [1]	12,720
65	Accelerated depreciation on rental housing	17,470
76	Depreciation of buildings other than rental	–3,430
77	Accelerated depreciation of machinery and equipment	20,250
78	Expensing of certain small investments (normal tax method)	940
104	Credit for holders of zone academy bonds	160
64	Credit for low-income housing investments	6,190
101	Qualified tuition programs	3,790
143	Defined benefit employer plans	30,510
144	Defined contribution employer plans	72,100
145	Exclusion of IRA contributions and earnings	1,390
145	Exclusion of Roth earnings and distributions	4,540
145	Exclusion of non-deductible IRA earnings	450
147	Exclusion of contributions and earnings for Self-Employed plans	5,120
164	Exclusion of interest on public-purpose bonds	14,900
	Exclusion of interest on non-public purpose bonds	3,880
170	Deferral of interest on U.S. savings bonds	260

[1] Estimate is for annuities only. Life insurance earnings are mostly excluded from taxable income.

those in which the taxpayer does not materially participate, and there are numerous additional considerations brought to bear on the determination of which activities are passive for a given taxpayer. Losses are limited in an attempt to limit tax sheltering activities. Passive losses that are unused may be carried forward and applied against future passive income.

An exception from the passive loss limitation is provided for a working interest in an oil or gas property that the taxpayer holds directly or through an entity that does not limit the liability of the taxpayer with respect to the interest. Thus, taxpayers can deduct losses from such working interests against nonpassive income without regard to whether they materially participate in the activity.

12. ***Capital gains treatment of royalties on coal.***—The baseline tax system generally would tax all income under the regular tax rate schedule. It would not allow preferentially low tax rates to apply to certain types or sources of income. For individuals, tax rates on regular income vary from 10 percent to 39.6 percent (plus a 3.8-percent surtax on high income taxpayers), depending on the taxpayer's income. In contrast, current law allows capital gains realized by individuals to be taxed at a preferentially low rate that is no higher than 20 percent (plus the 3.8-percent surtax). Certain sales of coal under royalty contracts qualify for taxation as capital gains rather than ordinary income, and so benefit from the preferentially low 20 percent maximum tax rate on capital gains.

13. ***Exclusion of interest on energy facility bonds.***—The baseline tax system generally would tax all income under the regular tax rate schedule. It would not allow preferentially low (or zero) tax rates to apply to certain types or sources of income. In contrast, the Tax Code allows interest earned on State and local bonds used to finance construction of certain energy facilities to be exempt from tax. These bonds are generally subject to the State private-activity-bond annual volume cap.

14. ***Energy production credit.***—The baseline tax system would not allow credits for particular activities, investments, or industries. Instead, it generally would seek to tax uniformly all returns from investment-like activities. In contrast, the Tax Code provides a credit for certain electricity produced from wind energy, biomass, geothermal energy, solar energy, small irrigation power, municipal solid waste, or qualified hydropower and sold to an unrelated party. Wind facilities must have begun construction before January 1, 2020. Facilities that begin construction in 2017 receive 80 percent of the credit,

facilities that begin construction in 2018 receive 60 percent of the credit, and facilities that begin construction in 2019 receive 40 percent of the credit. Qualified facilities producing electricity from sources other than wind must begin construction before January 1, 2017. In addition to the electricity production credit, an income tax credit is allowed for the production of refined coal for facilities placed in service before January 1, 2012. The Tax Code also provided an income tax credit for Indian coal facilities. . The Indian coal facilities credit expires on December 31, 2016.

15. Marginal wells credit.—A credit is provided for crude oil and natural gas produced from a qualified marginal well. A marginal well is one that does not produce more than 1,095 barrel-of-oil equivalents per year, with this limit adjusted proportionately for the number of days the well is in production. The credit is no more than $3.00 per barrel of qualified crude oil production and $0.50 per thousand cubic feet of qualified natural gas production. The credit for natural gas is reduced in proportion to the amount by which the reference price of natural gas at the wellhead exceeds $1.67 per thousand cubic feet and is zero for a reference price that exceeds $2.00. The credit for crude oil is reduced in proportion to the amount by which the reference price of oil exceeds $15.00 per barrel and is zero for a reference price that exceeds $18.00. All dollar amounts are adjusted for inflation from 2004.

16. ***Energy investment credit.***—The baseline tax system would not allow credits for particular activities, investments, or industries. Instead, it generally would seek to tax uniformly all returns from investment-like activities. However, the Tax Code provides credits for investments in solar and geothermal energy property, qualified fuel cell power plants, stationary microturbine power plants, geothermal heat pumps, small wind property and combined heat and power property. A temporary credit of up to 30 percent is available for certain qualified property placed in service before January 1, 2017. For solar energy, a temporary credit is available for property for which construction begins before January 1, 2022, and which is placed in service before January 1, 2024. The credit is 30 percent for property that begins construction before 2020, 26 percent for property that begins construction in 2020, and 22 percent for property that begins construction in 2021. A permanent 10 percent credit is available for geothermal property placed in service after December 31, 2017 and for qualified solar property for which construction begins after December 31, 2021 or that is placed in service after December 31, 2023. . Owners of renewable power facilities that qualify for the energy production credit may instead elect to take an energy investment credit at a rate specified by law.

17. ***Alcohol fuel credits.***—The baseline tax system would not allow credits for particular activities, investments, or industries. Instead, it generally would seek to tax uniformly all returns from investment-like activities. In contrast, the Tax Code provided an income tax credit for qualified cellulosic biofuel production which was renamed the Second generation biofuel producer credit. This provision expires on December 31, 2016.

18. ***Bio-diesel and small agri-biodiesel producer tax credits.***—The baseline tax system would not allow credits for particular activities, investments, or industries. Instead, it generally would seek to tax uniformly all returns from investment-like activities. However, the Tax Code allowed an income tax credit for Bio-diesel and for Bio-diesel derived from virgin sources. In lieu of the Bio-diesel credit, the taxpayer could claim a refundable excise tax credit. In addition, small agri-biodiesel producers were eligible for a separate income tax credit for biodiesel production and a separate credit was available for qualified renewable diesel fuel mixtures. This provision expires on December 31, 2016.

19. ***Tax credits for clean-fuel burning vehicles and refueling property.***—The baseline tax system would not allow credits for particular activities, investments, or industries. Instead, it generally would seek to tax uniformly all returns from investment-like activities. In contrast, the Tax Code allows credits for plug-in electric-drive motor vehicles, alternative fuel vehicle refueling property, two-wheeled plug-in electric vehicles, and fuel cell motor vehicles. These provisions, except for the plug-in electric-drive motor vehicle credit, expire after December 31, 2016.

20. ***Exclusion of utility conservation subsidies.***—The baseline tax system generally takes a comprehensive view of taxable income that includes a wide variety of (measurable) accretions to wealth. In certain circumstances, public utilities offer rate subsidies to non-business customers who invest in energy conservation measures. These rate subsidies are equivalent to payments from the utility to its customer, and so represent accretions to wealth, income that would be taxable to the customer under the baseline tax system. In contrast, the Tax Code exempts these subsidies from the non-business customer's gross income.

21. ***Credit for holding clean renewable energy bonds.***—The baseline tax system would uniformly tax all returns to investments and not allow credits for particular activities, investments, or industries. In contrast, the Tax Code provides for the issuance of Clean Renewable Energy Bonds which entitles the bond holder to a Federal income tax credit in lieu of interest. As of March 2010, issuers of the unused authorization of such bonds could opt to receive direct payment with the yield becoming fully taxable.

22. ***Deferral of gain from dispositions of transmission property to implement FERC restructuring policy.***—The baseline tax system generally would tax gains from sale of property when realized. It would not allow an exception for particular activities or individuals. However, the Tax Code allowed electric utilities to defer gains from the sale of their transmission assets to a FERC-approved independent transmission company. The sale of property must have been made prior to January 1, 2017.

23. ***Credit for investment in clean coal facilities.***—The baseline tax system would uniformly tax all returns to investments and not allow credits for particular activities, investments, or industries. In contrast, the

Tax Code provides investment tax credits for clean coal facilities producing electricity and for industrial gasification combined cycle projects.

24. ***Temporary 50 percent expensing for equipment used in the refining of liquid fuels.***—The baseline tax system allows the taxpayer to deduct the decline in the economic value of an investment over its economic life. However, the Tax Code provided for an accelerated recovery of the cost of certain investments in refineries by allowing partial expensing of the cost, thereby giving such investments a tax advantage. Qualified refinery property must have been placed in service before January 1, 2014.

25. ***Natural gas distribution pipelines treated as 15-year property.***—The baseline tax system allows taxpayers to deduct the decline in the economic value of an investment over its economic life. However, the Tax Code allows depreciation of natural gas distribution pipelines (placed in service between 2005 and 2011) over a 15 year period. These deductions are accelerated relative to deductions based on economic depreciation.

26. ***Amortize all geological and geophysical expenditures over two years.***—The baseline tax system allows taxpayers to deduct the decline in the economic value of an investment over its economic life. However, the Tax Code allows geological and geophysical expenditures incurred in connection with oil and gas exploration in the United States to be amortized over two years for non-integrated oil companies, a span of time that is generally shorter than the economic life of the assets.

27. ***Allowance of deduction for certain energy efficient commercial building property.***—The baseline tax system would not allow deductions in lieu of normal depreciation allowances for particular investments in particular industries. Instead, it generally would seek to tax uniformly all returns from investment-like activities. In contrast, the Tax Code allows a deduction for certain energy efficient commercial building property. The basis of such property is reduced by the amount of the deduction. This provision expires on December 31, 2016.

28. ***Credit for construction of new energy efficient homes.***—The baseline tax system would not allow credits for particular activities, investments, or industries. Instead, it generally would seek to tax uniformly all returns from investment-like activities. However, the Tax Code allowed contractors a tax credit of $2,000 for the construction of a qualified new energy-efficient home that had an annual level of heating and cooling energy consumption at least 50 percent below the annual consumption under the 2006 International Energy Conservation Code. The credit equaled $1,000 in the case of a new manufactured home that met a 30 percent standard or requirements for EPA's Energy Star homes. This provision expires on December 31, 2016.

29. ***Credit for energy efficiency improvements to existing homes.***—The baseline tax system would not allow credits for particular activities, investments, or industries. However, the Tax Code provided an investment tax credit for expenditures made on insulation, exterior windows, and doors that improved the energy efficiency of homes and met certain standards. The Tax Code also provided a credit for purchases of advanced main air circulating fans, natural gas, propane, or oil furnaces or hot water boilers, and other qualified energy efficient property. This provision expires on December 31, 2016.

30. ***Credit for residential energy efficient property.***—The baseline tax system would uniformly tax all returns to investments and not allow credits for particular activities, investments, or industries. However, the Tax Code provides a credit for the purchase of a qualified photovoltaic property and solar water heating property, as well as for fuel cell power plants, geothermal heat pumps and small wind property used in or placed on a residence. The credit for qualified solar electric and solar water heating property is 30 percent for property placed in service before January 1, 2020, 26 percent for property placed in service in 2020, and 22 percent for property placed in service in 2021. The credit for fuel cell, small wind, and geothermal heat pump property is 30 percent for property placed in service before January 1, 2017.

31. ***Credit for qualified energy conservation bonds.***—The baseline tax system would uniformly tax all returns to investments and not allow credits for particular activities, investments, or industries. However, the Tax Code provides for the issuance of energy conservation bonds which entitle the bond holder to a Federal income tax credit in lieu of interest. As of March 2010, issuers of the unused authorization of such bonds could opt to receive direct payment with the yield becoming fully taxable.

32. ***Advanced energy property credit.***—The baseline tax system would not allow credits for particular activities, investments, or industries. However, the Tax Code provides a 30 percent investment credit for property used in a qualified advanced energy manufacturing project. The Treasury Department may award up to $2.3 billion in tax credits for qualified investments.

33. ***Advanced nuclear power facilities production credit.***—The baseline tax system would not allow credits or deductions for particular activities, investments, or industries. Instead, it generally would seek to tax uniformly all returns from investment-like activities. In contrast, the Tax Code allows a tax credit equal to 1.8 cents times the number of kilowatt hours of electricity produced at a qualifying advanced nuclear power facility. A taxpayer may claim no more than $125 million per 1,000 megawatts of capacity. The Treasury Department may allocate up to 6,000 megawatts of credit-eligible capacity.

34. ***Reduced tax rate for nuclear decommissioning funds.***—The baseline tax system would uniformly tax all returns to investments and not allow special rates for particular activities, investments, or industries. In contrast, the Tax Code provides a special 20% tax rate for investments made by Nuclear Decommissioning Reserve Funds.

Natural Resources and Environment

35. ***Expensing of exploration and development costs.***—The baseline tax system allows the taxpayer to

deduct the depreciation of an asset according to the decline in its economic value over time. However, certain capital outlays associated with exploration and development of nonfuel minerals may be expensed rather than depreciated over the life of the asset.

36. ***Excess of percentage over cost depletion.***—The baseline tax system allows the taxpayer to deduct the decline in the economic value of an investment over time. Under current law, however, most nonfuel mineral extractors may use percentage depletion (whereby the deduction is fixed as a percentage of revenue) rather than cost depletion, with percentage depletion rates ranging from 22 percent for sulfur to 5 percent for sand and gravel. Over the life of an investment, percentage depletion deductions can exceed the cost of the investment. Consequently, percentage depletion offers more generous tax treatment than would cost depletion, which would limit deductions to an investment's cost.

37. ***Exclusion of interest on bonds for water, sewage, and hazardous waste facilities.***—The baseline tax system generally would tax all income under the regular tax rate schedule. It would not allow preferentially low (or zero) tax rates to apply to certain types or sources of income. In contrast, the Tax Code allows interest earned on State and local bonds used to finance construction of sewage, water, or hazardous waste facilities to be exempt from tax. These bonds are generally subject to the State private-activity-bond annual volume cap.

38. ***Capital gains treatment of certain timber.***—The baseline tax system generally would tax all income under the regular tax rate schedule. It would not allow preferentially low tax rates to apply to certain types or sources of income. However, under current law certain timber sales can be treated as a capital gain rather than ordinary income and therefore subject to the lower capital-gains tax rate. For individuals, tax rates on regular income vary from 10 percent to 39.6 percent (plus a 3.8-percent surtax on high income taxpayers), depending on the taxpayer's income. In contrast, current law allows capital gains to be taxed at a preferentially low rate that is no higher than 20 percent (plus the 3.8-percent surtax).

39. ***Expensing of multi-period timber growing costs.***—The baseline tax system requires the taxpayer to capitalize costs associated with investment property. However, most of the production costs of growing timber may be expensed under current law rather than capitalized and deducted when the timber is sold, thereby accelerating cost recovery.

40. ***Tax incentives for preservation of historic structures.***—The baseline tax system would not allow credits for particular activities, investments, or industries. However, expenditures to preserve and restore certified historic structures qualify for an investment tax credit of 20 percent under current law for certified rehabilitation activities. The taxpayer's recoverable basis must be reduced by the amount of the credit.

41. ***Industrial CO*2 *capture and sequestration tax credit***.—The baseline tax system would uniformly tax all returns to investments and not allow credits for particular activities, investments, or industries. In contrast, the Tax Code allows a credit for qualified carbon dioxide captured at a qualified facility and disposed of in secure geological storage. In addition, the provision allows a credit for qualified carbon dioxide that is captured at a qualified facility and used as a tertiary injectant in a qualified enhanced oil or natural gas recovery project. The credit is not allowed after the end of the calendar year in which 75 million metric tons of qualified carbon dioxide are certified as having been taken into account.

42. ***Deduction for endangered species recovery expenditures.***—The baseline tax system would not allow deductions in addition to normal depreciation allowances for particular investments in particular industries. Instead, it generally would seek to tax uniformly all returns from investment-like activities. In contrast, under current law farmers can deduct up to 25 percent of their gross income for expenses incurred as a result of site and habitat improvement activities that will benefit endangered species on their farm land, in accordance with site specific management actions included in species recovery plans approved pursuant to the Endangered Species Act of 1973.

Agriculture

43. ***Expensing of certain capital outlays.***—The baseline tax system requires the taxpayer to capitalize costs associated with investment property. However, farmers may expense certain expenditures for feed and fertilizer, for soil and water conservation measures and certain other capital improvements under current law.

44. ***Expensing of certain multiperiod production costs.***—The baseline tax system requires the taxpayer to capitalize costs associated with an investment over time. However, the production of livestock and crops with a production period greater than two years is exempt from the uniform cost capitalization rules (e.g., for costs for establishing orchards or structure improvements), thereby accelerating cost recovery.

45. ***Treatment of loans forgiven for solvent farmers.***—Because loan forgiveness increases a debtors net worth the baseline tax system requires debtors to include the amount of loan forgiveness as income or else reduce their recoverable basis in the property related to the loan. If the amount of forgiveness exceeds the basis, the excess forgiveness is taxable if the taxpayer is not insolvent. For bankrupt debtors, the amount of loan forgiveness reduces carryover losses, unused credits, and then basis, with the remainder of the forgiven debt excluded from taxation. Qualified farm debt that is forgiven, however, is excluded from income even when the taxpayer is solvent.

46. ***Capital gains treatment of certain income.***—For individuals, tax rates on regular income vary from 10 percent to 39.6 percent (plus a 3.8-percent surtax on high income taxpayers), depending on the taxpayer's income. The baseline tax system generally would tax all income under the regular tax rate schedule. It would not allow preferentially low tax rates to apply to certain types or sources of income. In contrast, current law allows capital gains to be taxed at a preferentially low rate that is

no higher than 20 percent (plus the 3.8-percent surtax). Certain agricultural income, such as unharvested crops, qualify for taxation as capital gains rather than ordinary income, and so benefit from the preferentially low 20 percent maximum tax rate on capital gains.

47. ***Income averaging for farmers.***—The baseline tax system generally taxes all earned income each year at the rate determined by the income tax. However, taxpayers may average their taxable income from farming and fishing over the previous three years.

48. ***Deferral of gain on sales of farm refiners.***—The baseline tax system generally subjects capital gains to taxes the year that they are realized. However, the Tax Code allows a taxpayer who sells stock in a farm refiner to a farmers' cooperative to defer recognition of the gain if the proceeds are re-invested in a qualified replacement property.

49. ***Expensing of reforestation expenditures***.—The baseline tax system requires the taxpayer to capitalize costs associated with an investment over time. In contrast, the Tax Code provides for the expensing of the first $10,000 in reforestation expenditures with 7-year amortization of the remaining expenses.

Commerce and Housing

This category includes a number of tax expenditure provisions that also affect economic activity in other functional categories. For example, provisions related to investment, such as accelerated depreciation, could be classified under the energy, natural resources and environment, agriculture, or transportation categories.

50. ***Exemption of credit union income.***—Under the baseline tax system, corporations pay taxes on their profits under the regular tax rate schedule. However, in the Tax Code the earnings of credit unions not distributed to members as interest or dividends are exempt from the income tax.

51. ***Exclusion and deferral of policyholder income earned on life insurance and annuity contracts.***— Under the baseline tax system, individuals and corporations generally pay taxes on their income when it is (actually or constructively) received or accrued, depending on their method of accounting. Nevertheless, the Tax Code provides favorable tax treatment for investment income earned within qualified life insurance and annuity contracts. In general, investment income credited to qualified life insurance contracts held until death is permanently exempt from income tax. Investment income distributed prior to the death of the insured is tax-exempt to the extent that investment in the contract is overstated (because amounts paid for the cost of life insurance protection are credited to investment in the contract). Any remaining distributed income is tax-deferred because, in general, it was not taxed when earned. Investment income credited to annuities is taxed only when distributed, and therefore also benefits from tax deferral.

52. ***Exclusion or special alternative tax for small property and casualty insurance companies.***—Under the baseline tax system, corporations pay taxes on their profits under the regular tax rate schedule. The baseline tax system would not allow preferentially low (or zero) tax rates to apply to certain types or sources of income. Under current law, however, stock non-life insurance companies are generally exempt from tax if their gross receipts for the taxable year do not exceed $600,000 and more than 50 percent of such gross receipts consist of premiums. Mutual non-life insurance companies are generally tax-exempt if their annual gross receipts do not exceed $150,000 and more than 35 percent of gross receipts consist of premiums. Also, non-life insurance companies with no more than $1.2 million of annual net premiums generally may elect to pay tax only on their taxable investment income.

53. ***Tax exemption of insurance income earned by tax-exempt organizations.***—Under the baseline tax system, corporations pay taxes on their profits under the regular tax rate schedule. The baseline tax system would not allow preferentially low (or zero) tax rates to apply to certain types or sources of income. Generally the income generated by life and property and casualty insurance companies is subject to tax, albeit under special rules. However, income from insurance operations conducted by such exempt organizations as fraternal societies, voluntary employee benefit associations, and others are exempt from tax.

54. ***Small life insurance company deduction.***—Under the baseline tax system, corporations pay taxes on their profits under the regular tax rate schedule. The baseline tax system would not allow preferentially low (or zero) tax rates to apply to certain types or sources of income. Under current law, small life insurance companies (with gross assets of less than $500 million) can deduct 60 percent of the first $3 million of otherwise taxable income. The deduction phases out for otherwise taxable income between $3 million and $15 million.

55. ***Exclusion of interest spread of financial institutions.***—The baseline tax system generally would tax all income under the regular tax rate schedule. It would not allow preferentially low (or zero) tax rates to apply to certain types or sources of income. Consumers and nonprofit organizations pay for some deposit-linked services, such as check cashing, by accepting a below-market interest rate on their demand deposits. If they received a market rate of interest on those deposits and paid explicit fees for the associated services, they would pay taxes on the full market rate and (unlike businesses) could not deduct the fees. The Government thus foregoes tax on the difference between the risk-free market interest rate and below-market interest rates on demand deposits, which under competitive conditions should equal the value added of deposit services.

56. ***Exclusion of interest on owner-occupied mortgage subsidy bonds.***—The baseline tax system generally would tax all income under the regular tax rate schedule. It would not allow preferentially low (or zero) tax rates to apply to certain types or sources of income. In contrast, the Tax Code allows interest earned on State and local bonds used to finance homes purchased by first-

time, low-to-moderate-income buyers to be exempt from tax. These bonds are generally subject to the State private-activity-bond annual volume cap.

57. ***Exclusion of interest on rental housing bonds.***—The baseline tax system generally would tax all income under the regular tax rate schedule. It would not allow preferentially low (or zero) tax rates to apply to certain types or sources of income. In contrast, the Tax Code allows interest earned on State and local government bonds used to finance multifamily rental housing projects to be tax-exempt.

58. ***Mortgage interest expense on owner-occupied residences.***—Under the baseline tax system, expenses incurred in earning income would be deductible. However, such expenses would not be deductible when the income or the return on an investment is not taxed. In contrast, the Tax Code allows an exclusion from a taxpayer's taxable income for the value of owner-occupied housing services and also allows the owner-occupant to deduct mortgage interest paid on his or her primary residence and one secondary residence as an itemized non-business deduction. In general, the mortgage interest deduction is limited to interest on debt no greater than the owner's basis in the residence, and is also limited to interest on debt of no more than $1 million. Interest on up to $100,000 of other debt secured by a lien on a principal or second residence is also deductible, irrespective of the purpose of borrowing, provided the total debt does not exceed the fair market value of the residence. As an alternative to the deduction, holders of qualified Mortgage Credit Certificates issued by State or local governmental units or agencies may claim a tax credit equal to a proportion of their interest expense.

59. ***Deduction for property taxes on real property.***—Under the baseline tax system, expenses incurred in earning income would be deductible. However, such expenses would not be deductible when the income or the return on an investment is not taxed. In contrast, the Tax Code allows an exclusion from a taxpayer's taxable income for the value of owner-occupied housing services and also allows the owner-occupant to deduct property taxes paid on real property.

60. ***Deferral of income from installment sales.***—The baseline tax system generally would tax all income under the regular tax rate schedule. It would not allow preferentially low (or zero) tax rates, or deferral of tax, to apply to certain types or sources of income. Dealers in real and personal property (i.e., sellers who regularly hold property for sale or resale) cannot defer taxable income from installment sales until the receipt of the loan repayment. Nondealers (i.e., sellers of real property used in their business) are required to pay interest on deferred taxes attributable to their total installment obligations in excess of $5 million. Only properties with sales prices exceeding $150,000 are includable in the total. The payment of a market rate of interest eliminates the benefit of the tax deferral. The tax exemption for nondealers with total installment obligations of less than $5 million is, therefore, a tax expenditure.

61. ***Capital gains exclusion on home sales.***—The baseline tax system would not allow deductions and exemptions for certain types of income. In contrast, the Tax Code allows homeowners to exclude from gross income up to $250,000 ($500,000 in the case of a married couple filing a joint return) of the capital gains from the sale of a principal residence. To qualify, the taxpayer must have owned and used the property as the taxpayer's principal residence for a total of at least two of the five years preceding the date of sale. In addition, the exclusion may not be used more than once every two years.

62. ***Exclusion of net imputed rental income.***—Under the baseline tax system, the taxable income of a taxpayer who is an owner-occupant would include the implicit value of gross rental income on housing services earned on the investment in owner-occupied housing and would allow a deduction for expenses, such as interest, depreciation, property taxes, and other costs, associated with earning such rental income. In contrast, the Tax Code allows an exclusion from taxable income for the implicit gross rental income on housing services, while in certain circumstances allows a deduction for some costs associated with such income, such as for mortgage interest and property taxes.

63. ***Exception from passive loss rules for $25,000 of rental loss.***—The baseline tax system accepts current law's general rule limiting taxpayers' ability to deduct losses from passive activities against nonpassive income (e.g., wages, interest, and dividends). Passive activities generally are defined as those in which the taxpayer does not materially participate and there are numerous additional considerations brought to bear on the determination of which activities are passive for a given taxpayer. Losses are limited in an attempt to limit tax sheltering activities. Passive losses that are unused may be carried forward and applied against future passive income. In contrast to the general restrictions on passive losses, the Tax Code exempts certain owners of rental real estate activities from "passive income" limitations. The exemption is limited to $25,000 in losses and phases out for taxpayers with income between $100,000 and $150,000.

64. ***Credit for low-income housing investments.***—The baseline tax system would uniformly tax all returns to investments and not allow credits for particular activities, investments, or industries. However, under current law taxpayers who invest in certain low-income housing are eligible for a tax credit. The credit rate is set so that the present value of the credit is equal to 70 percent for new construction and 30 percent for (1) housing receiving other Federal benefits (such as tax-exempt bond financing), or (2) substantially rehabilitated existing housing. The credit can exceed these levels in certain statutorily defined and State designated areas where project development costs are higher. The credit is allowed in equal amounts over 10 years and is generally subject to a volume cap.

65. ***Accelerated depreciation on rental housing.***—Under an economic income tax, the costs of acquiring a building are capitalized and depreciated over time in accordance with the decline in the property's eco-

nomic value due to wear and tear or obsolescence. This insures that the net income from the rental property is measured appropriately each year. Current law allows depreciation that is accelerated relative to economic depreciation. However, the depreciation provisions of the Tax Code are part of the reference law rules, and thus do not give rise to tax expenditures under reference law. Under normal law, in contrast, depreciation allowances reflect estimates of economic depreciation.

66. ***Discharge of mortgage indebtedness.***—Under the baseline tax system, all income would generally be taxed under the regular tax rate schedule. The baseline tax system would not allow preferentially low (or zero) tax rates to apply to certain types or sources of income. In contrast, the Tax Code allowed an exclusion from a taxpayer's taxable income for any discharge of indebtedness of up to $2 million ($1 million in the case of a married individual filing a separate return) from a qualified principal residence. The provision applied to debt discharged after January 1, 2007, and before January 1, 2017.

67. ***Discharge of business indebtedness.***—Under the baseline tax system, all income would generally be taxed under the regular tax rate schedule. The baseline tax system would not allow preferentially low (or zero) tax rates to apply to certain types or sources of income. In contrast, the Tax Code allows an exclusion from a taxpayer's taxable income for any discharge of qualified real property business indebtedness by taxpayers other than a C corporation. If the canceled debt is not reported as current income, however, the basis of the underlying property must be reduced by the amount canceled.

68. ***Exceptions from imputed interest rules.***—Under the baseline tax system, holders (issuers) of debt instruments are generally required to report interest earned (paid) in the period it accrues, not when received. In addition, the amount of interest accrued is determined by the actual price paid, not by the stated principal and interest stipulated in the instrument. But under current law, any debt associated with the sale of property worth less than $250,000 is exempted from the general interest accounting rules. This general $250,000 exception is not a tax expenditure under reference law but is under normal law. Current law also includes exceptions for certain property worth more than $250,000. These are tax expenditure under reference law and normal law. These exceptions include, sales of personal residences worth more than $250,000, and sales of farms and small businesses worth between $250,000 and $1 million.

69. ***Treatment of qualified dividends.***—The baseline tax system generally would tax all income under the regular tax rate schedule. It would not allow preferentially low tax rates to apply to certain types or sources of income. For individuals, tax rates on regular income vary from 10 percent to 39.6 percent (plus a 3.8-percent surtax on high income taxpayers), depending on the taxpayer's income. In contrast, under current law, qualified dividends are taxed at a preferentially low rate that is no higher than 20 percent (plus the 3.8-percent surtax).

70. ***Capital gains (except agriculture, timber, iron ore, and coal).***—The baseline tax system generally would tax all income under the regular tax rate schedule. It would not allow preferentially low tax rates to apply to certain types or sources of income. For individuals, tax rates on regular income vary from 10 percent to 39.6 percent (plus a 3.8-percent surtax on high income taxpayers), depending on the taxpayer's income. In contrast, under current law, capital gains on assets held for more than one year are taxed at a preferentially low rate that is no higher than 20 percent (plus the 3.8-percent surtax).

71. ***Capital gains exclusion of small corporation stock.***—The baseline tax system would not allow deductions and exemptions, or provide preferential treatment of certain sources of income or types of activities. In contrast, the Tax Code provided an exclusion of 50 percent, applied to ordinary rates with a maximum of a 28 percent tax rate, for capital gains from qualified small business stock held by individuals for more than 5 years; 75 percent for stock issued after February 17, 2009 and before September 28, 2010; and 100 percent for stock issued after September 27, 2010. A qualified small business is a corporation whose gross assets do not exceed $50 million as of the date of issuance of the stock.

72. ***Step-up basis of capital gains at death.***—Under the baseline tax system, unrealized capital gains would be taxed when assets are transferred at death. It would not allow for exempting gains upon transfer of the underlying assets to the heirs. In contrast, capital gains on assets held at the owner's death are not subject to capital gains tax under current law. The cost basis of the appreciated assets is adjusted to the market value at the owner's date of death which becomes the basis for the heirs.

73. ***Carryover basis of capital gains on gifts.***—Under the baseline tax system, unrealized capital gains would be taxed when assets are transferred by gift. In contrast, when a gift of appreciated asset is made under current law, the donor's basis in the transferred property (the cost that was incurred when the transferred property was first acquired) carries over to the donee. The carryover of the donor's basis allows a continued deferral of unrealized capital gains.

74. ***Deferral of capital gains from like-kind exchanges.***—The baseline tax system generally would tax all income under the regular tax rate schedule. It would not allow preferentially low (or zero) tax rates, or deferral of tax, to apply to certain types or sources of income. In contrast, current law allows the deferral of accrued gains on assets transferred in qualified like-kind exchanges.

75. ***Ordinary income treatment of loss from small business corporation stock sale.***—The baseline tax system limits to $3,000 the write-off of losses from capital assets, with carryover of the excess to future years. In contrast, the Tax Code allows up to $100,000 in losses from the sale of small business corporate stock (capitalization less than $1 million) to be treated as ordinary losses and fully deducted.

76. ***Depreciation of buildings other than rental housing.***—Under an economic income tax, the costs of acquiring a building are capitalized and depreciated over time in accordance with the decline in the property's economic value due to wear and tear or obsolescence. This

insures that the net income from the property is measured appropriately each year. Current law allows depreciation deductions that differ from those under economic depreciation. However, the depreciation provisions of the Tax Code are part of the reference law rules, and thus do not give rise to tax expenditures under reference law. Under normal law, in contrast, depreciation allowances reflect estimates of economic depreciation.

77. ***Accelerated depreciation of machinery and equipment.***—Under an economic income tax, the costs of acquiring machinery and equipment are capitalized and depreciated over time in accordance with the decline in the property's economic value due to wear and tear or obsolescence. This insures that the net income from the property is measured appropriately each year. Current law allows depreciation deductions that are accelerated relative to economic depreciation. However, the depreciation provisions of the Tax Code are part of the reference law rules, and thus do not give rise to tax expenditures under reference law. Under normal law, in contrast depreciation allowances reflect estimates of economic depreciation.

78. ***Expensing of certain small investments.***—Under the reference law baseline, the costs of acquiring tangible property and computer software would be depreciated using the Tax Code's depreciation provisions. Under the normal tax baseline, depreciation allowances are estimates of economic depreciation. However, the Tax Code allows qualifying investments by small businesses in tangible property and certain computer software to be expensed rather than depreciated over time.

79. ***Graduated corporation income tax rate.***—Because the corporate rate schedule is part of reference tax law, it is not considered a tax expenditure under the reference method. A flat corporation income tax rate is taken as the baseline under the normal tax method; therefore the lower rate is considered a tax expenditure under this concept.

80. ***Exclusion of interest on small issue bonds.***—The baseline tax system generally would tax all income under the regular tax rate schedule. It would not allow preferentially low (or zero) tax rates to apply to certain types or sources of income. In contrast, the Tax Code allows interest earned on small issue industrial development bonds (IDBs) issued by State and local governments to finance manufacturing facilities to be tax exempt. Depreciable property financed with small issue IDBs must be depreciated, however, using the straight-line method. The annual volume of small issue IDBs is subject to the unified volume cap discussed in the mortgage housing bond section above.

81. ***Deduction for U.S. production activities.***—The baseline tax system generally would tax all income under the regular tax rate schedule. It would not allow preferentially low (or zero) tax rates to apply to certain types or sources of income. In contrast, the Tax Code allows for a deduction equal to a portion of taxable income attributable to domestic production.

82. ***Special rules for certain film and TV production.***—The baseline tax system generally would tax all income under the regular tax rate schedule. It would not allow deductions and exemptions or preferentially low (or zero) tax rates to apply to certain types or sources of income. In contrast, the Tax Code allowed taxpayers to deduct up to $15 million per production ($20 million in certain distressed areas) in non-capital expenditures incurred during the year. This provision expires at the end of 2016.

Transportation

83. ***Tonnage tax.***—The baseline tax system generally would tax all profits and income under the regular tax rate schedule. U.S. shipping companies may choose to be subject to a tonnage tax based on gross shipping weight in lieu of an income tax, in which case profits would not be subject to tax under the regular tax rate schedule.

84. ***Deferral of tax on shipping companies.***—The baseline tax system generally would tax all profits and income under the regular tax rate schedule. It would not allow preferentially low (or zero) tax rates to apply to certain types or sources of income. In contrast, the Tax Code allows certain companies that operate U.S. flag vessels to defer income taxes on that portion of their income used for shipping purposes (e.g., primarily construction, modernization and major repairs to ships, and repayment of loans to finance these investments).

85. ***Exclusion of reimbursed employee parking expenses.***—Under the baseline tax system, all compensation, including dedicated payments and in-kind benefits, would be included in taxable income. Dedicated payments and in-kind benefits represent accretions to wealth that do not differ materially from cash wages. In contrast, the Tax Code allows an exclusion from taxable income for employee parking expenses that are paid for by the employer or that are received by the employee in lieu of wages. In 2016, the maximum amount of the parking exclusion is $255 per month. The tax expenditure estimate does not include any subsidy provided through employer-owned parking facilities.

86. ***Exclusion for employer-provided transit passes.***—Under the baseline tax system, all compensation, including dedicated payments and in-kind benefits, would be included in taxable income. Dedicated payments and in-kind benefits represent accretions to wealth that do not differ materially from cash wages. In contrast, the Tax Code allows an exclusion from a taxpayer's taxable income for passes, tokens, fare cards, and vanpool expenses that are paid for by an employer or that are received by the employee in lieu of wages to defray an employee's commuting costs. Due to a parity to parking provision, the maximum amount of the transit exclusion is $255 per month in 2016.

87. ***Tax credit for certain expenditures for maintaining railroad tracks.***—The baseline tax system would not allow credits for particular activities, investments, or industries. However, the Tax Code allowed eligible taxpayers to claim a credit equal to the lesser of 50 percent of maintenance expenditures and the product of $3,500 and the number of miles of track owned or

leased. This provision applies to maintenance expenditures in taxable years beginning before January 1, 2017.

88. ***Exclusion of interest on bonds for Highway Projects and rail-truck transfer facilities.***—The baseline tax system generally would tax all income under the regular tax rate schedule. It would not allow preferentially low (or zero) tax rates to apply to certain types or sources of income. In contrast, the Tax Code provides for $15 billion of tax-exempt bond authority to finance qualified highway or surface freight transfer facilities.

Community and Regional Development

89. ***Investment credit for rehabilitation of structures.***—The baseline tax system would uniformly tax all returns to investments and not allow credits for particular activities, investments, or industries. However, the Tax Code allows a 10-percent investment tax credit for the rehabilitation of buildings that are used for business or productive activities and that were erected before 1936 for other than residential purposes. The taxpayer's recoverable basis must be reduced by the amount of the credit.

90. ***Exclusion of interest for airport, dock, and similar bonds.***—The baseline tax system generally would tax all income under the regular tax rate schedule. It would not allow preferentially low (or zero) tax rates to apply to certain types or sources of income. In contrast, the Tax Code allows interest earned on State and local bonds issued to finance high-speed rail facilities and Government-owned airports, docks, wharves, and sport and convention facilities to be tax-exempt. These bonds are not subject to a volume cap.

91. ***Exemption of certain mutuals' and cooperatives' income.***—Under the baseline tax system, corporations pay taxes on their profits under the regular tax rate schedule. In contrast, the Tax Code provides for the incomes of mutual and cooperative telephone and electric companies to be exempt from tax if at least 85 percent of their revenues are derived from patron service charges.

92. ***Empowerment zones.***—The baseline tax system generally would tax all income under the regular tax rate schedule. It would not allow preferentially low tax rates to apply to certain types or sources of income, tax credits, and write-offs faster than economic depreciation. In contrast, the Tax Code allowed qualifying businesses in designated economically depressed areas to receive tax benefits such as an employment credit, increased expensing of investment in equipment, special tax-exempt financing, and certain capital gains incentives. A taxpayer's ability to accrue new tax benefits for empowerment zones expires on December 31, 2016.

93. ***New markets tax credit.***—The baseline tax system would not allow credits for particular activities, investments, or industries. However, the Tax Code allowed taxpayers who made qualified equity investments in a community development entity (CDE), which then made qualified investments in low-income communities, to be eligible for a tax credit that is received over 7 years. The total equity investment available for the credit across all CDEs is $3.5 billion for each calendar year 2010 through 2019, the last year for which credit allocations are authorized.

94. ***Credit to holders of Gulf and Midwest Tax Credit Bonds.***—The baseline tax system would not allow credits for particular activities, investments, or industries. Instead, under current law taxpayers that own Gulf and Midwest Tax Credit bonds receive a non-refundable tax credit rather than interest. The credit is included in gross income.

95. ***Recovery Zone Bonds.***—The baseline tax system would not allow credits for particular activities, investments, or industries. In addition, it would tax all income under the regular tax rate schedule. It would not allow preferentially low (or zero) tax rates to apply to certain types or sources of income. In contrast, the Tax Code allowed local governments to issue up $10 billion in taxable Recovery Zone Economic Development Bonds in 2009 and 2010 and receive a direct payment from Treasury equal to 45 percent of interest expenses. In addition, local governments could issue up to $15 billion in tax exempt Recovery Zone Facility Bonds. These bonds financed certain kinds of business development in areas of economic distress.

96. ***Tribal Economic Development Bonds.***—The baseline tax system generally would tax all income under the regular tax rate schedule. It would not allow preferentially low (or zero) tax rates to apply to certain types or sources of income. In contrast, the Tax Code was modified in 2009 to allow Indian tribal governments to issue tax exempt "tribal economic development bonds." There is a national bond limitation of $2 billion on such bonds.

Education, Training, Employment, and Social Services

97. ***Exclusion of scholarship and fellowship income.***—Scholarships and fellowships are excluded from taxable income to the extent they pay for tuition and course-related expenses of the grantee. Similarly, tuition reductions for employees of educational institutions and their families are not included in taxable income. From an economic point of view, scholarships and fellowships are either gifts not conditioned on the performance of services, or they are rebates of educational costs. Thus, under the baseline tax system of the reference law method, this exclusion is not a tax expenditure because this method does not include either gifts or price reductions in a taxpayer's gross income. The exclusion, however, is considered a tax expenditure under the normal tax method, which includes gift-like transfers of Government funds in gross income (many scholarships are derived directly or indirectly from Government funding).

98. ***Tax credits and deductions for post-secondary education expenses.***—The baseline tax system would not allow credits for particular activities, investments, or industries. Under current law in 2016, however, there were two credits and one deduction for certain postsecondary education expenses. The American Opportunity Tax Credit allows a partially refundable

credit of up to $2,500 per eligible student for qualified tuition and related expenses paid during each of the first four years of the student's post-secondary education. The credit is phased out for taxpayers with modified adjusted gross income between $160,000 and $180,000 if married filing jointly ($80,000 and $90,000 for other taxpayers), not indexed. The Lifetime Learning Credit allows a nonrefundable credit for 20 percent of an eligible student's qualified tuition and fees, up to a maximum credit per return of $2,000. In 2016, the credit is phased out ratably for taxpayers with modified AGI between $110,000 and $130,000 if married filing jointly ($55,000 and $65,000 for other taxpayers), indexed. The credit can be claimed in any year in which post-secondary education expenses are incurred. The deduction for post-secondary education expenses provides a maximum deduction of $4,000 for qualified post-secondary education expenses for taxpayers with modified adjusted gross income up to $130,000 if married filing jointly ($65,000 for other taxpayers). Taxpayers with modified adjusted gross income up to $160,000 if married filing jointly ($80,000 for other taxpayers) could deduct up to $2,000 of qualified post-secondary education expenses. This provision expired on December 31, 2016.

99. ***Education Individual Retirement Accounts (IRA).***—The baseline tax system generally would tax all income under the regular tax rate schedule. It would not allow preferentially low (or zero) tax rates to apply to certain types or sources of income. While contributions to an education IRA are not tax-deductible under current law, investment income earned by education IRAs is not taxed when earned, and investment income from an education IRA is tax-exempt when withdrawn to pay for a student's education expenses. The maximum contribution to an education IRA in 2016 is $2,000 per beneficiary. In 2016, the maximum contribution is phased down ratably for taxpayers with modified AGI between $190,000 and $220,000 if married filing jointly ($95,000 and $110,000 for other taxpayers).

100. ***Deductibility of student loan interest.***—The baseline tax system accepts current law's general rule limiting taxpayers' ability to deduct non-business interest expenses. In contrast, taxpayers may claim an above-the-line deduction of up to $2,500 on interest paid on an education loan. In 2016, the maximum deduction is phased down ratably for taxpayers with modified AGI between $130,000 and $160,000 if married filing jointly ($65,000 and $80,000 for other taxpayers).

101. ***Qualified tuition programs.***—The baseline tax system generally would tax all income under the regular tax rate schedule. It would not allow preferentially low (or zero) tax rates to apply to certain types or sources of income. Some States have adopted prepaid tuition plans, prepaid room and board plans, and college savings plans, which allow persons to pay in advance or save for college expenses for designated beneficiaries. Under current law, investment income, or the return on prepayments, is not taxed when earned, and is tax-exempt when withdrawn to pay for qualified expenses.

102. ***Exclusion of interest on student-loan bonds.***—The baseline tax system generally would tax all income under the regular tax rate schedule. It would not allow preferentially low (or zero) tax rates to apply to certain types or sources of income. In contrast, interest earned on State and local bonds issued to finance student loans is tax-exempt under current law. The volume of all such private activity bonds that each State may issue annually is limited.

103. ***Exclusion of interest on bonds for private nonprofit educational facilities.***—The baseline tax system generally would tax all income under the regular tax rate schedule. It would not allow preferentially low (or zero) tax rates to apply to certain types or sources of income. In contrast, under current law interest earned on State and local Government bonds issued to finance the construction of facilities used by private nonprofit educational institutions is not taxed.

104. ***Credit for holders of zone academy bonds.***—The baseline tax system would not allow credits for particular activities, investments, or industries. Under current law, however, financial institutions that own zone academy bonds receive a non-refundable tax credit rather than interest. The credit is included in gross income. Proceeds from zone academy bonds may only be used to renovate, but not construct, qualifying schools and for certain other school purposes. The total amount of zone academy bonds that may be issued was limited to $1.4 billion in 2009 and 2010. As of March 2010, issuers of the unused authorization of such bonds could opt to receive direct payment with the yield becoming fully taxable. An additional $0.4 billion of these bonds with a tax credit was authorized to be issued each year in 2011 through 2016.

105. ***Exclusion of interest on savings bonds redeemed to finance educational expenses.***—The baseline tax system generally would tax all income under the regular tax rate schedule. It would not allow preferentially low (or zero) tax rates to apply to certain types or sources of income. Under current law, however, interest earned on U.S. savings bonds issued after December 31, 1989 is tax-exempt if the bonds are transferred to an educational institution to pay for educational expenses. The tax exemption is phased out for taxpayers with AGI between $116,300 and $146,300 if married filing jointly ($77,550 and $92,550 for other taxpayers) in 2016.

106. ***Parental personal exemption for students age 19 or over.***—Under the baseline tax system, a personal exemption would be allowed for the taxpayer, as well as for the taxpayer's spouse and dependents who do not claim a personal exemption on their own tax returns. To be considered a dependent, a child would have to be under age 19. In contrast, the Tax Code allows taxpayers to claim personal exemptions for children aged 19 to 23, as long as the children are full-time students and reside with the taxpayer for over half the year (with exceptions for temporary absences from home, such as for school attendance).

107. ***Charitable contributions to educational institutions.***—The baseline tax system would not allow a deduction for personal expenditures. In contrast, the Tax

Code provides taxpayers a deduction for contributions to nonprofit educational institutions that are similar to personal expenditures. Moreover, taxpayers who donate capital assets to educational institutions can deduct the asset's current value without being taxed on any appreciation in value. An individual's total charitable contribution generally may not exceed 50 percent of adjusted gross income; a corporation's total charitable contributions generally may not exceed 10 percent of pre-tax income.

108. ***Exclusion of employer-provided educational assistance.***—Under the baseline tax system, all compensation, including dedicated payments and in-kind benefits, should be included in taxable income because they represent accretions to wealth that do not materially differ from cash wages. Under current law, however, employer-provided educational assistance is excluded from an employee's gross income, even though the employer's costs for this assistance are a deductible business expense. The maximum exclusion is $5,250 per taxpayer.

109. ***Special deduction for teacher expenses.***—The baseline tax system would not allow a deduction for personal expenditures. In contrast, the Tax Code allowed educators in both public and private elementary and secondary schools, who worked at least 900 hours during a school year as a teacher, instructor, counselor, principal or aide, to subtract up to $250 of qualified expenses, indexed to 2014, when determining their adjusted gross income (AGI).

110. ***Discharge of student loan indebtedness.***—Under the baseline tax system, all compensation, including dedicated payments and in-kind benefits, should be included in taxable income. In contrast, the Tax Code allows certain professionals who perform in underserved areas or specific fields, and as a consequence have their student loans discharged, not to recognize such discharge as income.

111. ***Qualified school construction bonds.***—The baseline tax system would not allow credits for particular activities, investments, or industries. Instead, it generally would seek to tax uniformly all returns from investment-like activities. In contrast, the Tax Code was modified in 2009 to provide a tax credit in lieu of interest to holders of qualified school construction bonds. The national volume limit is $22.4 billion over 2009 and 2010. As of March 2010, issuers of such bonds could opt to receive direct payment with the yield becoming fully taxable.

112. ***Work opportunity tax credit.***—The baseline tax system would not allow credits for particular activities, investments, or industries. Instead, it generally would seek to tax uniformly all returns from investment-like activities. In contrast, the Tax Code provides employers with a tax credit for qualified wages paid to individuals. The credit applies to employees who began work on or before December 31, 2020 and who are certified as members of various targeted groups. The amount of the credit that can be claimed is 25 percent of qualified wages for employment less than 400 hours and 40 percent for employment of 400 hours or more. Generally, the maximum credit per employee is $2,400 and can only be claimed on the first year of wages an individual earns from an employer. However, the credit for long-term welfare recipients can be claimed on second year wages as well and has a $9,000 maximum. Also, certain categories of veterans are eligible for a higher maximum credit of up to $9,600. Employers must reduce their deduction for wages paid by the amount of the credit claimed.

113. ***Employer-provided child care exclusion.***—Under the baseline tax system, all compensation, including dedicated payments and in-kind benefits, should be included in taxable income. In contrast, under current law up to $5,000 of employer-provided child care is excluded from an employee's gross income even though the employer's costs for the child care are a deductible business expense.

114. ***Employer-provided child care credit.***—The baseline tax system would not allow credits for particular activities, investments, or industries. In contrast, current law provides a credit equal to 25 percent of qualified expenses for employee child care and 10 percent of qualified expenses for child care resource and referral services. Employer deductions for such expenses are reduced by the amount of the credit. The maximum total credit is limited to $150,000 per taxable year.

115. ***Assistance for adopted foster children.***—Under the baseline tax system, all compensation, including dedicated payments and in-kind benefits, should be included in taxable income. Taxpayers who adopt eligible children from the public foster care system can receive monthly payments for the children's significant and varied needs and a reimbursement of up to $2,000 for nonrecurring adoption expenses; special needs adoptions receive the maximum benefit even if that amount is not spent. These payments are excluded from gross income under current law.

116. ***Adoption credit and exclusion.***—The baseline tax system would not allow credits for particular activities. In contrast, taxpayers can receive a tax credit for qualified adoption expenses under current law. Taxpayers may also exclude qualified adoption expenses provided or reimbursed by an employer from income, subject to the same maximum amounts and phase-out as the credit. The same expenses cannot qualify for tax benefits under both programs; however, a taxpayer may use the benefits of the exclusion and the tax credit for different expenses.

117. ***Exclusion of employee meals and lodging.***—Under the baseline tax system, all compensation, including dedicated payments and in-kind benefits, should be included in taxable income. In contrast, under current law employer-provided meals and lodging are excluded from an employee's gross income even though the employer's costs for these items are a deductible business expense.

118. ***Credit for child and dependent care expenses.***—The baseline tax system would not allow credits for particular activities or targeted at specific groups. In contrast, the Tax Code provides parents who work or attend school and who have child and dependent care expenses a tax credit. Expenditures up to a maximum $3,000 for one dependent and $6,000 for two or more dependents are

eligible for the credit. The credit is equal to 35 percent of qualified expenditures for taxpayers with incomes of up to $15,000. The credit is reduced to a minimum of 20 percent by one percentage point for each $2,000 of income in excess of $15,000.

119. ***Credit for disabled access expenditures.***—The baseline tax system would not allow credits for particular activities, investments, or industries. In contrast, the Tax Code provides small businesses (less than $1 million in gross receipts or fewer than 31 full-time employees) a 50-percent credit for expenditures in excess of $250 to remove access barriers for disabled persons. The credit is limited to $5,000.

120. ***Deductibility of charitable contributions, other than education and health.***—The baseline tax system would not allow a deduction for personal expenditures including charitable contributions. In contrast, the Tax Code provides taxpayers a deduction for contributions to charitable, religious, and certain other nonprofit organizations. Taxpayers who donate capital assets to charitable organizations can deduct the assets' current value without being taxed on any appreciation in value. An individual's total charitable contribution generally may not exceed 50 percent of adjusted gross income; a corporation's total charitable contributions generally may not exceed 10 percent of pre-tax income.

121. ***Exclusion of certain foster care payments.***—The baseline tax system generally would tax all income under the regular tax rate schedule. It would not allow preferentially low (or zero) tax rates to apply to certain types or sources of income. Foster parents provide a home and care for children who are wards of the State, under contract with the State. Under current law, compensation received for this service is excluded from the gross incomes of foster parents; the expenses they incur are nondeductible.

122. ***Exclusion of parsonage allowances.***—Under the baseline tax system, all compensation, including dedicated payments and in-kind benefits, would be included in taxable income. Dedicated payments and in-kind benefits represent accretions to wealth that do not differ materially from cash wages. In contrast, the Tax Code allows an exclusion from a clergyman's taxable income for the value of the clergyman's housing allowance or the rental value of the clergyman's parsonage.

123. ***Indian employment credit.***—The baseline tax system would not allow credits for particular activities, investments, or industries. Instead, it generally would seek to tax uniformly all returns from investment-like activities. In contrast, the Tax Code provides employers with a tax credit for qualified wages paid to employees who are enrolled members of Indian tribes. The amount of the credit that could be claimed is 20 percent of the excess of qualified wages and health insurance costs paid by the employer in the current tax year over the amount of such wages and costs paid by the employer in 1993. Qualified wages and health insurance costs with respect to any employee for the taxable year could not exceed $20,000. Employees have to live on or near the reservation where he or she work to be eligible for the credit. Employers must reduce their deduction for wages paid by the amount of the credit claimed. The credit does not apply to taxable years beginning after December 31, 2016.

124. Credit for employer differential wage payments.—The baseline tax system would not allow credits for particular activities, investments, or industries. In contrast, the Tax Code provides employers with a 20 percent tax credit for eligible differential wages paid to employees who are members of the uniformed services while on active duty for more than 30 days. The amount of eligible differential wage payments made to a qualified employee in a taxable year is capped at $20,000. Employers must reduce their deduction for wages paid by the amount of the credit claimed.

Health

125. ***Exclusion of employer contributions for medical insurance premiums and medical care.***—Under the baseline tax system, all compensation, including dedicated payments and in-kind benefits, should be included in taxable income. In contrast, under current law, employer-paid health insurance premiums and other medical expenses (including long-term care) are not included in employee gross income even though they are deducted as a business expense by the employee.

126. ***Self-employed medical insurance premiums.***—Under the baseline tax system, all compensation and remuneration, including dedicated payments and in-kind benefits, should be included in taxable income. In contrast, under current law self-employed taxpayers may deduct their family health insurance premiums. Taxpayers without self-employment income are not eligible for this special deduction. The deduction is not available for any month in which the self-employed individual is eligible to participate in an employer-subsidized health plan and the deduction may not exceed the self-employed individual's earned income from self-employment.

127. ***Medical Savings Accounts and Health Savings Accounts.***—Under the baseline tax system, all compensation, including dedicated payments and in-kind benefits, should be included in taxable income. Also, the baseline tax system would not allow a deduction for personal expenditures and generally would tax investment earnings. In contrast, individual contributions to Archer Medical Savings Accounts (Archer MSAs) and Health Savings Accounts (HSAs) are allowed as a deduction in determining adjusted gross income whether or not the individual itemizes deductions. Employer contributions to Archer MSAs and HSAs are excluded from income and employment taxes. Archer MSAs and HSAs require that the individual have coverage by a qualifying high deductible health plan. Earnings from the accounts are excluded from taxable income. Distributions from the accounts used for medical expenses are not taxable. The rules for HSAs are generally more flexible than for Archer MSAs and the deductible contribution amounts are greater (in 2016, $3,350 for taxpayers with individual coverage and $6,750 for taxpayers with family coverage). Thus, HSAs have largely replaced MSAs.

128. ***Deductibility of medical expenses.***—The baseline tax system would not allow a deduction for personal expenditures. In contrast, under current law personal expenditures for medical care (including the costs of prescription drugs) exceeding 7.5 percent of the taxpayer's adjusted gross income are deductible. For tax years beginning after 2012, only medical expenditures exceeding 10 percent of the taxpayer's adjusted gross income are deductible. However, for the years 2013, 2014, 2015 and 2016, if either the taxpayer or the taxpayer's spouse turns 65 before the end of the taxable year, the threshold remains at 7.5 percent of adjusted income. Beginning in 2017, the 10-percent threshold will apply to all taxpayers, including those over 65.

129. ***Exclusion of interest on hospital construction bonds.***—The baseline tax system generally would tax all income under the regular tax rate schedule. It would not allow preferentially low (or zero) tax rates to apply to certain types or sources of income. In contrast, under current law interest earned on State and local government debt issued to finance hospital construction is excluded from income subject to tax.

130. ***Refundable Premium Assistance Tax Credit.***—The baseline tax system would not allow credits for particular activities or targeted at specific groups. In contrast, for taxable years ending after 2013, the Tax Code provides a premium assistance credit to any eligible taxpayer for any qualified health insurance purchased through a Health Insurance Exchange. In general, an eligible taxpayer is a taxpayer with annual household income between 100% and 400% of the federal poverty level for a family of the taxpayer's size and that does not have access to affordable minimum essential health care coverage. The amount of the credit equals the lesser of (1) the actual premiums paid by the taxpayer for such coverage or (2) the difference between the cost of a statutorily-identified benchmark plan offered on the exchange and a required payment by the taxpayer that increases with income.

131. ***Credit for employee health insurance expenses of small business.***—The baseline tax system would not allow credits for particular activities or targeted at specific groups. In contrast, the Tax Code provides a tax credit to qualified small employers that make a certain level of non-elective contributions towards the purchase of certain health insurance coverage for its employees. To receive a credit, an employer must have fewer than 25 full-time-equivalent employees whose average annual full-time-equivalent wages from the employer are less than $50,000 (indexed for taxable years after 2013). However, to receive a full credit, an employer must have no more than 10 full-time employees, and the average wage paid to these employees must be no more than $25,000 (indexed for taxable years after 2013). A qualifying employer may claim the credit for any taxable year beginning in 2010, 2011, 2012, and 2013 and for up to two years for insurance purchased through a Health Insurance Exchange thereafter. For taxable years beginning in 2010, 2011, 2012, and 2013, the maximum credit is 35 percent of premiums paid by qualified taxable employers and 25 percent of premiums paid by qualified tax-exempt organizations. For taxable years beginning in 2014 and later years, the maximum tax credit increases to 50 percent of premiums paid by qualified taxable employers and 35 percent of premiums paid by qualified tax-exempt organizations.

132. ***Deductibility of charitable contributions to health institutions.***—The baseline tax system would not allow a deduction for personal expenditures including charitable contributions. In contrast, the Tax Code provides individuals and corporations a deduction for contributions to nonprofit health institutions. Tax expenditures resulting from the deductibility of contributions to other charitable institutions are listed under the education, training, employment, and social services function.

133. ***Tax credit for orphan drug research.***—The baseline tax system would not allow credits for particular activities, investments, or industries. In contrast, under current law drug firms can claim a tax credit of 50 percent of the costs for clinical testing required by the Food and Drug Administration for drugs that treat rare physical conditions or rare diseases.

134. ***Special Blue Cross/Blue Shield tax benefits.***—The baseline tax system generally would tax all profits under the regular tax rate schedule using broadly applicable measures of baseline income. It would not allow preferentially low tax rates to apply to certain types or sources of income. In contrast, Blue Cross and Blue Shield health insurance providers in existence on August 16, 1986 and certain other nonprofit health insurers are provided with special tax benefits, provided that their percentage of total premium revenue expended on reimbursement for clinical services provided to enrollees or for activities that improve health care quality is not less than 85 percent for the taxable year. Qualifying insurers may take as a deduction 100 percent of any net increase in their unearned premium reserves, instead of the 80 percent allowed other insurers. Qualifying insurers are also allowed a special deduction equal to the amount by which 25 percent of an insurer's health-claim expenses exceeds its beginning-of-the-year accounting surplus. The deduction is limited to the insurer's taxable income determined without the special deduction.

135. ***Tax credit for health insurance purchased by certain displaced and retired individuals.***—The baseline tax system would not allow credits for particular activities, investments, or industries. In contrast, the Tax Code provides a refundable tax credit of 72.5 percent for the purchase of health insurance coverage by individuals eligible for Trade Adjustment Assistance and certain Pension Benefit Guarantee Corporation pension recipients. This provision will expire on December 31, 2019.

136. ***Distributions from retirement plans for premiums for health and long-term care insurance.***—Under the baseline tax system, all compensation, including dedicated and deferred payments, should be included in taxable income. In contrast, the Tax Code provides for tax-free distributions of up to $3,000 from governmental retirement plans for premiums for health and long term care premiums of public safety officers.

Income Security

137. ***Child credit.***—The baseline tax system would not allow credits for particular activities or targeted at specific groups. Under current law, however, taxpayers with children under age 17 can qualify for a $1,000 partially refundable per child credit. Any unclaimed credit due to insufficient tax liability may be refundable – taxpayers may claim a refund for 15 percent of earnings in excess of a $3,000 floor, up to the amount of unused credit. Alternatively, taxpayers with three or more children may claim a refund of the amount of payroll taxes paid in excess of the Earned Income Tax Credit received (up to the amount of unused credit) if this results in a larger refund. The credit is phased out for taxpayers at the rate of $50 per $1,000 of modified AGI above $110,000 ($75,000 for single or head of household filers and $55,000 for married taxpayers filing separately).

138. ***Exclusion of railroad Social Security equivalent benefits.***—Under the baseline tax system, all compensation, including dedicated and deferred payments, should be included in taxable income. In contrast, the Social Security Equivalent Benefit paid to railroad retirees is not generally subject to the income tax unless the recipient's gross income reaches a certain threshold under current law. See provision number 158, Social Security benefits for retired workers, for discussion of the threshold.

139. ***Exclusion of workers' compensation benefits.***—Under the baseline tax system, all compensation, including dedicated payments and in-kind benefits, should be included in taxable income. However, workers compensation is not subject to the income tax under current law.

140. ***Exclusion of public assistance benefits.***—Under the reference law baseline tax system, gifts and transfers are not treated as income to the recipients. In contrast, the normal tax method considers cash transfers from the Government as part of the recipients' income, and thus, treats the exclusion for public assistance benefits under current law as a tax expenditure.

141. ***Exclusion of special benefits for disabled coal miners.***—Under the baseline tax system, all compensation, including dedicated payments and in-kind benefits, should be included in taxable income. However, disability payments to former coal miners out of the Black Lung Trust Fund, although income to the recipient, are not subject to the income tax.

142. ***Exclusion of military disability pensions.***—Under the baseline tax system, all compensation, including dedicated payments and in-kind benefits, should be included in taxable income. In contrast, most of the military disability pension income received by current disabled military retirees is excluded from their income subject to tax.

143. ***Defined benefit employer plans.***—Under the baseline tax system, all compensation, including deferred and dedicated payments, should be included in taxable income. In addition, investment income would be taxed as earned. In contrast, under current law certain contributions to defined benefit pension plans are excluded from an employee's gross income even though employers can deduct their contributions. In addition, the tax on the investment income earned by defined benefit pension plans is deferred until the money is withdrawn.

144. ***Defined contribution employer plans.***—Under the baseline tax system, all compensation, including deferred and dedicated payments, should be included in taxable income. In addition, investment income would be taxed as earned. In contrast, under current law individual taxpayers and employers can make tax-preferred contributions to employer-provided 401(k) and similar plans (e.g. 403(b) plans and the Federal Government's Thrift Savings Plan). In 2016, an employee could exclude up to $18,000 of wages from AGI under a qualified arrangement with an employer's 401(k) plan. Employees age 50 or over could exclude up to $24,000 in contributions. The defined contribution plan limit, including both employee and employer contributions, is $53,000 in 2016. The tax on contributions made by both employees and employers and the investment income earned by these plans is deferred until withdrawn.

145. ***Individual Retirement Accounts (IRAs).***—Under the baseline tax system, all compensation, including deferred and dedicated payments, should be included in taxable income. In addition, investment income would be taxed as earned. In contrast, under current law individual taxpayers can take advantage of traditional and Roth IRAs to defer or otherwise reduce the tax on the return to their retirement savings. The IRA contribution limit is $5,500 in 2016; taxpayers age 50 or over are allowed to make additional "catch-up" contributions of $1,000. Contributions to a traditional IRA are generally deductible but the deduction is phased out for workers with incomes above certain levels who, or whose spouses, are active participants in an employer-provided retirement plan. Contributions and account earnings are includible in income when withdrawn from traditional IRAs. Roth IRA contributions are not deductible, but earnings and withdrawals are exempt from taxation. Income limits also apply to Roth IRA contributions.

146. ***Low and moderate-income savers' credit.***—The baseline tax system would not allow credits for particular activities or targeted at specific groups. In contrast, the Tax Code provides an additional incentive for lower-income taxpayers to save through a nonrefundable credit of up to 50 percent on IRA and other retirement contributions of up to $2,000. This credit is in addition to any deduction or exclusion. The credit is completely phased out by $61,500 for joint filers, $46,125 for head of household filers, and $30,750 for other filers in 2016.

147. ***Self-employed plans.***—Under the baseline tax system, all compensation, including deferred and dedicated payments, should be included in taxable income. In addition, investment income would be taxed as earned. In contrast, under current law self-employed individuals can make deductible contributions to their own retirement plans equal to 25 percent of their income, up to a maximum of $53,000 in 2016. Total plan contributions are limited to 25 percent of a firm's total wages. The tax

on the investment income earned by self-employed SEP, SIMPLE, and qualified plans is deferred until withdrawn.

148. ***Premiums on group term life insurance.***—Under the baseline tax system, all compensation, including deferred and dedicated payments, should be included in taxable income. In contrast, under current law employer-provided life insurance benefits are excluded from an employee's gross income (to the extent that the employer's share of the total costs does not exceed the cost of $50,000 of such insurance) even though the employer's costs for the insurance are a deductible business expense.

149. ***Premiums on accident and disability insurance.***—Under the baseline tax system, all compensation, including dedicated payments and in-kind benefits, should be included in taxable income. In contrast, under current law employer-provided accident and disability benefits are excluded from an employee's gross income even though the employer's costs for the benefits are a deductible business expense.

150. ***Exclusion of investment income from Supplementary Unemployment Benefit Trusts.***—Under the baseline tax system, all compensation, including dedicated payments and in-kind benefits, should be included in taxable income. In addition, investment income would be taxed as earned. Under current law, employers may establish trusts to pay supplemental unemployment benefits to employees separated from employment. Investment income earned by such trusts is exempt from taxation.

151. ***Exclusion of investment income from Voluntary Employee Benefit Associations trusts.***—Under the baseline tax system, all compensation, including dedicated payments and in-kind benefits, should be included in taxable income. Under current law, employers may establish associations, or VEBAs, to pay employee benefits, which may include health benefit plans, life insurance, and disability insurance, among other employee benefits. Investment income earned by such trusts is exempt from taxation.

152. ***Special ESOP rules.***—ESOPs are a special type of tax-exempt employee benefit plan. Under the baseline tax system, all compensation, including dedicated payments and in-kind benefits, should be included in taxable income. In addition, investment income would be taxed as earned. In contrast, employer-paid contributions (the value of stock issued to the ESOP) are deductible by the employer as part of employee compensation costs. They are not included in the employees' gross income for tax purposes, however, until they are paid out as benefits. In addition, the following special income tax provisions for ESOPs are intended to increase ownership of corporations by their employees: (1) annual employer contributions are subject to less restrictive limitations than other qualified retirement plans; (2) ESOPs may borrow to purchase employer stock, guaranteed by their agreement with the employer that the debt will be serviced by his payment (deductible by him) of a portion of wages (excludable by the employees) to service the loan; (3) employees who sell appreciated company stock to the ESOP may defer any taxes due until they withdraw benefits; (4) dividends paid to ESOP-held stock are deductible by the employer; and (5) earnings are not taxed as they accrue.

153. ***Additional deduction for the blind.***—Under the baseline tax system, the standard deduction is allowed. An additional standard deduction for a targeted group within a given filing status would not be allowed. In contrast, the Tax Code allows taxpayers who are blind to claim an additional $1,550 standard deduction if single, or $1,250 if married in 2016.

154. ***Additional deduction for the elderly.***—Under the baseline tax system, the standard deduction is allowed. An additional standard deduction for a targeted group within a given filing status would not be allowed. In contrast, the Tax Code allows taxpayers who are 65 years or older to claim an additional $1,550 standard deduction if single, or $1,250 if married in 2016.

155. ***Tax credit for the elderly and disabled.***—Under the baseline tax system, a credit targeted at a specific group within a given filing status or for particular activities would not be allowed. In contrast, the Tax Code allows taxpayers who are 65 years of age or older, or who are permanently disabled, to claim a non-refundable tax credit equal to 15 percent of the sum of their earned and retirement income. The amount to which the 15-percent rate is applied is limited to no more than $5,000 for single individuals or married couples filing a joint return where only one spouse is 65 years of age or older or disabled, and up to $7,500 for joint returns where both spouses are 65 years of age or older or disabled. These limits are reduced by one-half of the taxpayer's adjusted gross income over $7,500 for single individuals and $10,000 for married couples filing a joint return.

156. ***Deductibility of casualty losses.***—Under the baseline tax system, neither the purchase of property nor insurance premiums to protect the property's value are deductible as costs of earning income. Therefore, reimbursement for insured loss of such property is not included as a part of gross income, and uninsured losses are not deductible. In contrast, the Tax Code provides a deduction for uninsured casualty and theft losses of more than $100 each, to the extent that total losses during the year exceed 10 percent of the taxpayer's adjusted gross income.

157. ***Earned income tax credit (EITC).***—The baseline tax system would not allow credits for particular activities or targeted at specific groups. In contrast, the Tax Code provides an EITC to low-income workers at a maximum rate of 45 percent of income. For a family with one qualifying child, the credit is 34 percent of the first $9,920 of earned income in 2016. The credit is 40 percent of the first $13,930 of income for a family with two qualifying children, and it is 45 percent of the first $13,930 of income for a family with three or more qualifying children. Low-income workers with no qualifying children are eligible for a 7.65-percent credit on the first $6,610 of earned income. The credit is phased out at income levels and rates which depend upon how many qualifying children are eligible and marital status. In 2016, the phase-down for married filers begins at incomes $5,550 greater than for otherwise similar unmarried filers. Earned income tax

credits in excess of tax liabilities owed through the individual income tax system are refundable to individuals.

Social Security

158. ***Social Security benefits for retired and disabled workers and spouses, dependents, and survivors.***—The baseline tax system would tax Social Security benefits to the extent that contributions to Social Security were not previously taxed. Thus, the portion of Social Security benefits that is attributable to employer contributions and to earnings on employer and employee contributions (and not attributable to employee contributions which are taxed at the time of contribution) would be subject to tax. In contrast, the Tax Code may not tax all of the Social Security benefits that exceed the beneficiary's contributions from previously taxed income. Actuarially, previously taxed contributions generally do not exceed 15 percent of benefits, even for retirees receiving the highest levels of benefits. Therefore, up to 85 percent of recipients' Social Security and Railroad Social Security Equivalent retirement benefits are included in (phased into) the income tax base if the recipient's provisional income exceeds certain base amounts. (Provisional income is equal to other items included in adjusted gross income plus foreign or U.S. possession income, tax-exempt interest, and one half of Social Security and Railroad Social Security Equivalent retirement benefits.) The untaxed portion of the benefits received by taxpayers who are below the income amounts at which 85 percent of the benefits are taxable is counted as a tax expenditure. Benefits paid to disabled workers and to spouses, dependents, and survivors are treated in a similar manner. Railroad Social Security Equivalent benefits are treated like Social Security benefits. See also provision number 138, Exclusion of railroad Social Security equivalent benefits.

159. ***Credit for certain employer social security contributions.***—Under the baseline tax system, employer contributions to Social Security represent labor cost and are deductible expenses. Under current law, however, certain employers are allowed a tax credit, instead of a deduction, against taxes paid on tips received from customers in connection with the providing, delivering, or serving of food or beverages for consumption, The tip credit equals the full amount of the employer's share of FICA taxes paid on the portion of tips, when added to the employee's non-tip wages, in excess of $5.15 per hour. The credit is available only with respect to FICA taxes paid on tips.

Veterans Benefits and Services

160. ***Exclusion of veterans death benefits and disability compensation.***—Under the baseline tax system, all compensation, including dedicated payments and in-kind benefits, should be included in taxable income because they represent accretions to wealth that do not materially differ from cash wages. In contrast, all compensation due to death or disability paid by the Veterans Administration is excluded from taxable income under current law.

161. ***Exclusion of veterans pensions.***—Under the baseline tax system, all compensation, including dedicated payments and in-kind benefits, should be included in taxable income because they represent accretions to wealth that do not materially differ from cash wages. Under current law, however, pension payments made by the Veterans Administration are excluded from gross income.

162. ***Exclusion of G.I. Bill benefits.***—Under the baseline tax system, all compensation, including dedicated payments and in-kind benefits, should be included in taxable income because they represent accretions to wealth that do not materially differ from cash wages. Under current law, however, G.I. Bill benefits paid by the Veterans Administration are excluded from gross income.

163. ***Exclusion of interest on veterans housing bonds.***—The baseline tax system generally would tax all income under the regular tax rate schedule. It would not allow preferentially low (or zero) tax rates to apply to certain types or sources of income. In contrast, under current law, interest earned on general obligation bonds issued by State and local governments to finance housing for veterans is excluded from taxable income.

General Government

164. ***Exclusion of interest on public purpose State and local bonds.***—The baseline tax system generally would tax all income under the regular tax rate schedule. It would not allow preferentially low (or zero) tax rates to apply to certain types or sources of income. In contrast, under current law interest earned on State and local government bonds issued to finance public-purpose construction (e.g., schools, roads, sewers), equipment acquisition, and other public purposes is tax-exempt. Interest on bonds issued by Indian tribal governments for essential governmental purposes is also tax-exempt.

165. ***Build America Bonds.***—The baseline tax system would not allow credits for particular activities or targeted at specific group. In contrast, the Tax Code in 2009 allowed State and local governments to issue taxable bonds through 2010 and receive a direct payment from Treasury equal to 35 percent of interest expenses. Alternatively, State and local governments could issue taxable bonds and the private lenders receive the 35-percent credit which is included in taxable income.

166. ***Deductibility of nonbusiness State and local taxes other than on owner-occupied homes.***—Under the baseline tax system, a deduction for personal consumption expenditures would not be allowed. In contrast, the Tax Code allows taxpayers who itemize their deductions to claim a deduction for State and local income taxes (or, at the taxpayer's election, State and local sales taxes) and property taxes, even though these taxes primarily pay for services that, if purchased directly by taxpayers, would not be deductible. (The estimates for this tax expenditure do not include the estimates for the

deductibility of State and local property tax on owner-occupied homes. See item 59.)

Interest

167. ***Deferral of interest on U.S. savings bonds.***— The baseline tax system would uniformly tax all returns to investments and not allow an exemption or deferral for particular activities, investments, or industries. In contrast, taxpayers may defer paying tax on interest earned on U.S. savings bonds until the bonds are redeemed.

APPENDIX

Performance Measures and the Economic Effects of Tax Expenditures

The Government Performance and Results Act of 1993 (GPRA) directs Federal agencies to develop annual and strategic plans for their programs and activities. These plans set out performance objectives to be achieved over a specific time period. Most of these objectives are achieved through direct expenditure programs. Tax expenditures – spending programs implemented through the tax code by reducing tax obligations for certain activities -- contribute to achieving these goals in a manner similar to direct expenditure programs.

Tax expenditures by definition work through the tax system and, particularly, the income tax. Thus, they may be relatively advantageous policy approaches when the benefit or incentive is related to income and is intended to be widely available. Because there is an existing public administrative and private compliance structure for the tax system, income-based programs that require little oversight might be efficiently run through the tax system. In addition, some tax expenditures actually simplify the operation of the tax system (for example, the exclusion for up to $500,000 of capital gains on home sales). Tax expenditures also implicitly subsidize certain activities in a manner similar to direct expenditures. For example, exempting employer-sponsored health insurance from income taxation is equivalent to a direct spending subsidy equal to the forgone tax obligations for this type of compensation. Spending, regulatory or tax-disincentive policies can also modify behavior, but may have different economic effects. Finally, a variety of tax expenditure tools can be used, e.g., deductions; credits; exemptions; deferrals; floors; ceilings; phase-ins; phase-outs; and these can be dependent on income, expenses, or demographic characteristics (age, number of family members, etc.). This wide range of policy instruments means that tax expenditures can be flexible and can have very different economic effects.

Tax expenditures also have limitations. In many cases they add to the complexity of the tax system, which raises both administrative and compliance costs. For example, personal exemptions, deductions, credits, and phase-outs can complicate filing and decision-making. The income tax system may have little or no contact with persons who have no or very low incomes, and does not require information on certain characteristics of individuals used in some spending programs, such as wealth or duration of employment. These features may reduce the effectiveness of tax expenditures for addressing socioeconomic disparities. Tax expenditures also generally do not enable the same degree of agency discretion as an outlay program. For example, grant or direct Federal service delivery programs can prioritize activities to be addressed with specific resources in a way that is difficult to emulate with tax expenditures.

Outlay programs have advantages where the direct provision of government services is particularly warranted, such as equipping and maintaining the armed forces or administering the system of justice. Outlay programs may also be specifically designed to meet the needs of low-income families who would not otherwise be subject to income taxes or need to file a tax return. Outlay programs may also receive more year-to-year oversight and fine tuning through the legislative and executive budget process. In addition, many different types of spending programs include direct Government provision; credit programs; and payments to State and local governments, the private sector, or individuals in the form of grants or contracts provide flexibility for policy design. On the other hand, certain outlay programs may rely less directly on economic incentives and private-market provision than tax incentives, thereby reducing the relative efficiency of spending programs for some goals. Finally, spending programs, particularly on the discretionary side, may respond less rapidly to changing activity levels and economic conditions than tax expenditures.

Regulations may have more direct and immediate effects than outlay and tax-expenditure programs because regulations apply directly and immediately to the regulated party (i.e., the intended actor), generally in the private sector. Regulations can also be fine-tuned more quickly than tax expenditures because they can often be changed as needed by the Executive Branch without legislation. Like tax expenditures, regulations often rely largely on voluntary compliance, rather than detailed inspections and policing. As such, the public administrative costs tend to be modest relative to the private resource costs associated with modifying activities. Historically, regulations have tended to rely on proscriptive measures, as opposed to economic incentives. This reliance can diminish their economic efficiency, although this feature can also promote full compliance where (as in certain safety-related cases) policymakers believe that trade-offs with economic considerations are not of paramount importance. Also, regulations generally do not directly affect Federal outlays or receipts. Thus, like tax expenditures, they may escape the degree of scrutiny that outlay programs receive. Some policy objectives are achieved using multiple approaches. For example, minimum wage legislation, the earned income tax credit, and the food stamp program (SNAP) are regulatory, tax expenditure, and direct outlay programs, respectively, all having the objective of improving the economic welfare of low-wage workers and families.

A Framework for Evaluating the Effectiveness of Tax Expenditures

Across all major budgetary categories - from housing and health to space, technology, agriculture, and national defense - tax expenditures make up a significant portion of Federal activity and affect every area of the economy. For these reasons, a comprehensive evaluation framework that examines incentives, direct results, and spillover effects will benefit the budgetary process by informing decisions on tax expenditure policy.

As described above, tax expenditures, like spending and regulatory programs, have a variety of objectives and economic effects. These include: encouraging certain types of activities (e.g., saving for retirement or investing in certain sectors); increasing certain types of after-tax income (e.g., favorable tax treatment of Social Security income); and reducing private compliance costs and Government administrative costs (e.g., the exclusion for up to $500,000 of capital gains on home sales). Some of these objectives are well suited to quantitative measurement and evaluation, while others are less well suited.

Performance measurement is generally concerned with inputs, outputs, and outcomes. In the case of tax expenditures, the principal input is usually the revenue effect. Outputs are quantitative or qualitative measures of goods and services, or changes in income and investment, directly produced by these inputs. Outcomes, in turn, represent the changes in the economy, society, or environment that are the ultimate goals of programs. Evaluations assess whether programs are meeting intended goals, but may also encompass analyzing whether initiatives are superior to other policy alternatives.

The Administration is working towards examining the objectives and effects of the wide range of tax expenditures in our budget, despite challenges related to data availability, measurement, and analysis. Evaluations include an assessment of whether tax expenditures are achieving intended policy results in an efficient manner, with minimal burdens on individual taxpayers, consumers, and firms; and an examination of possible unintended effects and their consequences.

As an illustration of how evaluations can inform budgetary decisions, consider education, and research investment credits.

Education. There are millions of individuals taking advantage of tax credits designed to help pay for educational expenses. There are a number of different credits available as well as other important forms of Federal support for higher education such as subsidized loans and grants. An evaluation would explore the possible relationships between use of the credits and the use of loans and grants, seeking to answer, for example, whether the use of credits reduce or increase the likelihood of the students applying for loans. Such an evaluation would allow stakeholders to determine the most effective program – whether it is a tax credit, a subsidized loan, or a grant.

Investment. A series of tax expenditures reduce the cost of investment, both in specific activities such as research and experimentation, extractive industries, and certain financial activities and more generally throughout the economy, through accelerated depreciation for plant and equipment. These provisions can be evaluated along a number of dimensions. For example, it is useful to consider the strength of the incentives by measuring their effects on the cost of capital (the return which investments must yield to cover their costs) and effective tax rates. The impact of these provisions on the amounts of corresponding forms of investment (e.g., research spending, exploration activity, equipment) might also be estimated. In some cases, such as research, there is evidence that the investment can provide significant positive externalities—that is, economic benefits that are not reflected in the market transactions between private parties. It could be useful to quantify these externalities and compare them with the size of tax expenditures. Measures could also indicate the effects on production from these investments such as numbers or values of patents, energy production and reserves, and industrial production. Issues to be considered include the extent to which the preferences increase production (as opposed to benefiting existing output) and their cost-effectiveness relative to other policies. Analysis could also consider objectives that are more difficult to measure but still are ultimate goals, such as promoting the Nation's technological base, energy security, environmental quality, or economic growth. Such an assessment is likely to involve tax analysis as well as consideration of non-tax matters such as market structure, scientific, and other information (such as the effects of increased domestic fuel production on imports from various regions, or the effects of various energy sources on the environment).

The tax proposals subject to these analyses include items that indirectly affect the estimated value of tax expenditures (such as changes in income tax rates), proposals that make reforms to improve tax compliance and administration, as well as proposals which would change, add, or delete tax expenditures.

Barriers to Evaluation. Developing a framework that is sufficiently comprehensive, accurate, and flexible is a significant challenge. Evaluations are constrained by the availability of appropriate data and challenges in economic modeling:

- Data availability. Data may not exist, or may not exist in an analytically appropriate form, to conduct rigorous evaluations of certain types of expenditures. For example, measuring the effects of tax expenditures designed to achieve tax neutrality for individuals and firms earning income abroad, and foreign firms could require data from foreign governments or firms which are not readily available.

- Analytical constraints. Evaluations of tax expenditures face analytical constraints even when data are available. For example, individuals might have access to several tax expenditures and programs aimed at improving the same outcome. Isolating the effect of a single tax credit is challenging absent a well-specified research design.

- Resources. Tax expenditure analyses are seriously constrained by staffing considerations. Evaluations typically require expert analysts who are often engaged in other more competing areas of work related to the budget.

The Executive Branch is focused on addressing these challenges to lay the foundation for the analysis of tax expenditures comprehensively, alongside evaluations of the effectiveness of direct spending initiatives.

SPECIAL TOPICS

14. AID TO STATE AND LOCAL GOVERNMENTS

The analysis in this chapter focuses on Federal spending that is provided to State and local governments, U.S. territories, and American Indian Tribal governments to help fund programs administered by those entities and provide economic support. This type of Federal spending is known as Federal grants-in-aid.[1] Under our Nation's federalist structure, States are sovereign entities and generally have the authority to legislate on all activity within their borders "concerning the promotion and regulation of safety, health, welfare, and economic activity."[2] The Federal Government's role is limited under the U.S. Constitution to the enumerated powers, and, under the Tenth Amendment, all of the authorities not given to the Federal government are reserved to the States and their people.[3] However, the Spending Clause of the Constitution has been interpreted to allow the Federal Government to provide funds to States (and other non-Federal entities) and to specify the terms and conditions that accompany acceptance of those funds.[4]

In the 19th century, most Federal grants came in the form of land and were used for canals, waterways, railroads, and land grant colleges.[5] During the Great Depression (1929-1939), the reach of Federal grants-in-aid expanded to meet income security and other social welfare needs. The Federal Emergency Relief Act of 1933 was the first piece of legislation that specifically provided fiscal relief to States through grants.[6] Federal grants, however, did not become a significant portion of Federal Government expenditures until after World War II. During the mid-part of the 20th century, the Eisenhower Administration made great investments in the National infrastructure system through the creation of the Interstate Highway program. Since the 1960s, there have been significant increases in grant spending for education, training, employment, and social services; income security; and health (primarily Medicaid). In the 1980s, there was an effort to control grant spending and reduce the number of Federal grants by combining programs into block grants.[7]

Today, there are 16 Executive Branch agencies and 15 independent agencies that provide grants to State and local governments, and grant spending has increased from 1.3 percent of GDP in 1960 to 3.6 percent of GDP in 2016. The increasing number of grants and size of grants has created overlap between programs, and complexity for grantees, and has made it difficult to compare program performance and conduct oversight.[8] As recipients of Federal grant funding, State and local governments may provide services directly to beneficiaries or States may act as a pass-through, disbursing grant funding to localities. The multiple layers of grants administration can increase the cost of administration and create inefficiencies and duplication.[9] Less Federal control gives State and local recipients more flexibility to use their knowledge of local conditions and needs to administer programs and projects more efficiently.[10]

The 2018 Budget refocuses Federal grants on the highest priority areas for Federal support, and recognizes a greater role for State and local governments, and the private sector as part of the Budget's proposals to restore Federal fiscal responsibility. The Budget provides $703 billion in outlays for aid to State and local governments in 2018, an increase of 2.4 percent from 2017. Total Federal grant spending is estimated to be 3.5 percent of GDP in 2018 and 17.2 percent of total Federal outlays. This Budget slows the growth of grant spending over the 10-year budget window and, in particular, starts to rein in the growth of Medicaid, which accounts for over 50 percent of total grant spending. The Budget proposes to cap Federal funding for the Medicaid program, to establish a State matching requirement for the Supplemental Nutrition Assistance Program, to eliminate the Community Development Block Grant and Social Services Block Grant programs, and to make other reductions that re-establish an appropriate Federal-State fiscal relationship and contribute to achieving a balanced Federal budget by 2027. Among other grant initiatives, the Budget proposes to establish a 25 percent non-Federal cost match for FEMA preparedness grant awards that currently require no cost match. The Budget also authorizes a new Federal Emergency Response Fund to rapidly respond to public health outbreaks, such as Zika Virus Disease, and reforms

[1] The Federal government also provides assistance in the form of payments for individuals, loans, insurance programs, and through the tax code. Historical Federal spending for payments for individuals may be found in the *Historical Tables* volume in tables 6.1, 11.1, 11.2, and 11.3. Information on Federal credit programs may be found in Chapter 19, "Credit and Insurance," in this volume. Chapter 13, "Tax Expenditures," in this volume, discusses this topic and includes a display of tax expenditures that particularly aid State and local governments at the end of Tables 13-1 and 13-2.

[2] Yeh, Brian T. "The Federal Government's Authority to Impose Conditions on Grant Funds." Congressional Research Service, the Library of Congress. March 23, 2017. p. 3.

[3] Ibid., p. 1-2.

[4] Ibid., p. 4.

[5] Canada, Ben. "Federal Grants to State and Local Governments: A Brief History. Congressional Research Service, the Library of Congress. February 19, 2003.

[6] Ibid.

[7] "Block Grants: Characteristics, Experience, and Lessons Learned." U.S. General Accounting Office. February 1995.

[8] Keegan, Natalie. "Federal Grants-in-Aid Administration: A Primer." Congressional Research Service, the Library of Congress. October 3, 2012. p. 2.

[9] "Federal Grants to State and Local Governments." Congressional Budget Office. March 2013, p. 8.

[10] Ibid., p. 2.

the Centers for Disease Control and Prevention through a new $500 million block grant to increase State flexibility and focus on the leading public health challenges specific to each State. The Budget provides robust funding for critical drinking and wastewater infrastructure, including $2.3 billion for the EPA's State Revolving Funds. The Administration's infrastructure initiative will begin to rebuild and modernize the Nation's physical infrastructure to help create jobs, maintain America's economic competitiveness, and connect communities and people to more opportunities. While the Administration continues to work with the Congress, States, localities, and other infrastructure stakeholders to finalize the suite of Federal programs that will support this effort, the 2018 Budget includes $200 billion in budget authority related to the infrastructure initiative, of which $5 billion in outlays are estimated to occur in 2018. Those outlays are illustratively presented as grants to State and local governments.

All Federal grants are enacted by the Congress in authorizing legislation, which establishes the purpose of the grant, how it is awarded, and how it is funded. Federal grants generally fall into one of two broad categories—block grants or categorical grants—depending on the requirements of the grant program. Block grants give States and localities more flexibility to define the use and distribution of the funding and are awarded on a formula basis specified in law. Categorical grants provide less flexibility than block grants. Categorical grants have a narrowly defined purpose and may be awarded on a formula basis or as a project grant. Project grants, a type of categorical grant, are the least flexible, are often awarded competitively, and are typified by a predetermined end product or duration. Project grants can include grants for research, training, evaluation, planning, technical assistance, survey work, and construction. In addition, grants may be characterized by how the funding is awarded, such as by formula, by project, or by matching State and local funds.

Most often Federal grants-in-aid are awarded as direct cash assistance, but Federal grants-in-aid can also include payments for grants-in-kind—non-monetary aid, such as commodities purchased for the National School Lunch Program. Federal revenues shared with State and local governments, such as funds distributed to State and local law enforcement agencies from Federal asset forfeiture programs, are also considered grants-in-aid. In State fiscal year[11] 2015, 30.7 percent of total State spending came from Federal funds.[12]

In its Fiscal Survey of States, the National Association of State Budget Officers (NASBO) looks at enacted State budgets to make projections for the coming year and at general fund[13] spending as an indication of State financial health. According to the most recent report, consistent growth in revenues across the last several years has helped States achieve relative stability in their budgets. Overall, State balances in rainy day funds continue to improve, and most States are in good shape financially. State general fund spending is expected to increase by 4.3 percent in State fiscal year 2017, according to enacted budgets, which is higher than the 2016 increase of 3.7 percent. This would be the seventh straight year of annual increases to general fund spending. Most State and local governments are required to balance their operating budgets so that if revenues are lower than expected States have to tap rainy day funds or make mid-year adjustments to reduce previously appropriated spending. In State fiscal year 2016, 19 States had budget gaps. Across all States, in State fiscal year 2015, 35.2 percent of State general fund spending was for elementary and secondary education; 19.7 was for Medicaid; 9.9 percent for higher education; 6.8 percent for corrections; 1.2 percent for public assistance; 0.8 for transportation; and 26.5 percent for all other expenditures.[14]

Table 14-1, below, shows Federal grants-in-aid spending by decade, actual spending in 2016, and estimated spending in 2017 and 2018. The Federal budget classifies grants-in-aid by general area or function. Of the total proposed grant spending in 2018, 61.5 percent is for health programs, with most of the funding going to Medicaid. Beyond health programs, 15.2 percent of Federal aid is estimated to go to income security programs; 8.7 percent to transportation; 8.5 percent to education, training, and social services; and 6.1 for all other functions.

The Federal budget also classifies grant spending by BEA category—discretionary and mandatory.[15] Funding for discretionary grant programs is determined annually through appropriations acts. Outlays for discretionary grant programs account for 27.8 percent of total grant spending. Funding for mandatory programs is provided directly in authorizing legislation that establishes eligibility criteria or benefit formulas; funding for mandatory programs usually is not limited by the annual appropriations process. Outlays for mandatory grant programs account for 72.2 percent of total grant spending. Section B of Table 14-1 shows the distribution of grants between mandatory and discretionary spending.

In 2018, grants-in-aid provided from discretionary funding are estimated to have outlays of $195 billion, a decrease of 3.8 percent from 2017. The three largest discretionary programs in 2018 are estimated to be Federal-aid Highways programs, with outlays of $41 billion; Tenant Based Rental Assistance, with outlays of

[11] According to "The Fiscal Survey of States" published by the National Association of State Budget Officers (Fall 2016), "Forty-six states begin their fiscal years in July and end them in June. The exceptions are New York, which starts its fiscal year on April 1; Texas, with a September 1 start date; and Alabama and Michigan, which start their fiscal years on October 1. Thirty states operate on an annual budget cycle, while 20 states operate on a biennial (two-year) budget cycle."

[12] "State Expenditure Report, Examining fiscal 2014-2016 state spending." National Association of State Budget Officers. p. 5.

[13] A State general fund is "the predominant fund for financing a state's operations. Revenues are received from broad-based state taxes. However, there are differences in how specific functions are financed from state to state," Ibid.

[14] Ibid., p. 7.

[15] For more information on these categories, see Chapter 8, "Budget Concepts," in this volume.

Table 14–1. TRENDS IN FEDERAL GRANTS TO STATE AND LOCAL GOVERNMENTS

(Outlays in billions of dollars)

	Actual							Estimate	
	1960	1970	1980	1990	2000	2010	2016	2017	2018
A. Distribution of grants by function:									
Natural resources and environment	0.1	0.4	5.4	3.7	4.6	9.1	7.2	7.2	5.8
Agriculture	0.2	0.6	0.6	1.3	0.7	0.8	0.8	0.8	1.0
Transportation	3.0	4.6	13.0	19.2	32.2	61.0	63.9	63.9	61.5
Community and regional development	0.1	1.8	6.5	5.0	8.7	18.8	15.3	14.1	16.5
Education, training, employment, and social services	0.5	6.4	21.9	21.8	36.7	97.6	60.9	64.2	59.5
Health	0.2	3.8	15.8	43.9	124.8	290.2	396.7	411.4	432.5
Income security	2.6	5.8	18.5	36.8	68.7	115.2	104.8	110.3	107.1
Administration of justice	....	0.0	0.5	0.6	5.3	5.1	3.5	6.3	5.6
General government	0.2	0.5	8.6	2.3	2.1	5.2	3.1	2.8	3.4
Other	0.0	0.1	0.7	0.8	2.1	5.4	4.8	5.3	10.4
Total	**7.0**	**24.1**	**91.4**	**135.3**	**285.9**	**608.4**	**660.8**	**686.3**	**703.4**
B. Distribution of grants by BEA category:									
Discretionary	N/A	10.2	53.3	63.3	116.7	207.7	198.5	203.2	195.4
Mandatory	N/A	13.9	38.1	72.0	169.2	400.7	462.3	483.2	508.0
Total	**7.0**	**24.1**	**91.4**	**135.3**	**285.9**	**608.4**	**660.8**	**686.3**	**703.4**
C. Composition:									
Current dollars:									
Payments for individuals [1]	2.5	8.7	32.6	77.3	182.6	384.5	495.7	515.7	533.5
Physical capital [1]	3.3	7.1	22.6	27.2	48.7	93.3	79.7	79.8	82.5
Other grants	1.2	8.3	36.2	30.9	54.6	130.6	85.4	90.8	87.4
Total	**7.0**	**24.1**	**91.4**	**135.3**	**285.9**	**608.4**	**660.8**	**686.3**	**703.4**
Percentage of total grants:									
Payments for individuals [1]	35.3%	36.2%	35.7%	57.1%	63.9%	63.2%	75.0%	75.1%	75.8%
Physical capital [1]	47.3%	29.3%	24.7%	20.1%	17.0%	15.3%	12.1%	11.6%	11.7%
Other grants	17.4%	34.5%	39.6%	22.8%	19.1%	21.5%	12.9%	13.2%	12.4%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Constant (FY 2009) dollars:									
Payments for individuals [1]	14.2	39.8	75.8	115.9	221.2	385.3	447.9	455.1	460.2
Physical capital [1]	23.8	38.2	54.7	45.7	68.6	93.7	71.6	70.0	70.2
Other grants	14.4	64.7	134.1	62.8	77.1	123.9	73.9	76.7	71.6
Total	**52.4**	**142.7**	**264.7**	**224.3**	**366.9**	**602.9**	**593.5**	**601.7**	**601.9**
D. Total grants as a percent of:									
Federal outlays:									
Total	7.6%	12.3%	15.5%	10.8%	16.0%	17.6%	17.2%	16.9%	17.2%
Domestic programs [2]	18.0%	23.2%	22.2%	17.1%	22.0%	23.4%	21.5%	21.2%	22.1%
State and local expenditures	14.3%	19.6%	27.3%	18.7%	21.8%	26.4%	25.5%	N/A	N/A
Gross domestic product	1.3%	2.3%	3.3%	2.3%	2.8%	4.1%	3.6%	3.6%	3.5%
E. As a share of total State and local gross investments:									
Federal capital grants	24.6%	25.4%	35.4%	21.9%	22.0%	27.5%	22.5%	N/A	N/A
State and local own-source financing	75.4%	74.6%	64.6%	78.1%	78.0%	72.5%	77.5%	N/A	N/A
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**		

N/A: Not available at publishing.

[1] Grants that are both payments for individuals and capital investment are shown under capital investment.

[2] Excludes national defense, international affairs, net interest, and undistributed offsetting receipts.

$20 billion; and Education for the Disadvantaged, with outlays of $16 billion.[16]

In 2018, outlays for mandatory grant programs are estimated to be $508 billion, a 5.1 percent increase from 2017. Medicaid is by far the largest mandatory grant program with estimated outlays of $404 billion in 2018. After Medicaid, the three largest mandatory grant programs by outlays in 2018 are estimated to be Child Nutrition programs, which include the School Breakfast Program, the National School Lunch Program and others, $24 billion; the Temporary Assistance for Needy Families program,

[16] Obligation data by State for programs in each of these budget accounts may be found in the State-by-State tables included with other budget materials on the OMB web site and Budget CD-ROM.

$15 billion; and the Children's Health Insurance program, $13 billion.[17]

The funding level for grants in every budget account may be found in Table 14-2, at the end of this chapter, organized by functional category, and by Federal agency. Federal grant spending by State for major grants may be found on the OMB web site at *www.budget.gov/budget/Analytical_Perspectives* and on the Budget CD-ROM. This supplemental material includes two tables that summarize State-by-State spending for selected grant programs, one summarizing obligations for each program by agency and bureau, and another summarizing total obligations across all programs for each State, followed by 35 individual tables showing State-by-State obligation data for each grant program. The programs shown in these State-by-State tables cover more than 88 percent of total grant spending.

[17] Obligation data by State for programs in each of these budget accounts may be found in the State-by-State tables included with other budget materials on the OMB web site and Budget CD-ROM.

OTHER SOURCES OF INFORMATION ON FEDERAL GRANTS-IN-AID

A number of other sources provide State-by-State spending data and other information on Federal grants, but may use a broader definition of grants beyond what is included in this chapter.

The website *Grants.gov* is a primary source of information for communities wishing to apply for grants and other domestic assistance. *Grants.gov* hosts all open notices of opportunities to apply for Federal grants.

The *Catalog of Federal Domestic Assistance* hosted by the General Services Administration contains detailed listings of grant and other assistance programs; discussions of eligibility criteria, application procedures, and estimated obligations; and related information. The *Catalog* is available on the Internet at *www.cfda.gov*.

Current and updated grant receipt information by State and local governments and other non-Federal entities can be found on *USASpending.gov*. This public website also contains contract and loan information and is updated twice per month.

The Federal Audit Clearinghouse maintains an on-line database *(harvester.census.gov/sac)* that provides access to summary information about audits conducted under OMB Circular A–133, "Audits to States, Local Governments, and Non-Profit Organizations." Information is available for each audited entity, including the amount of Federal money expended by program and whether there were audit findings.

The Bureau of Economic Analysis, in the Department of Commerce, produces the monthly *Survey of Current Business*, which provides data on the national income and product accounts (NIPA), a broad statistical concept encompassing the entire economy. These accounts, which are available at *bea.gov/national*, include data on Federal grants to State and local governments.

In addition, information on grants and awards can be found through individual Federal agencies' web sites:

- USDA Current Research Information System, *http://cris.csrees.usda.gov*/
- DOD Medical Research Programs, *http://cdmrp.army.mil/search.aspx*
- DOD Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs, *http://www.dodsbir.net/awards/Default.asp*
- Department of Education, Institute of Education Sciences, Funded Research Grants and Contracts, *http://ies.ed.gov/funding/grantsearch/index.asp*
- HHS Tracking Accountability in Government Grants System (TAGGS), *http://taggs.hhs.gov/AdvancedSearch.cfm*
- National Institutes of Health (NIH) Research Portfolio Online Reporting Tools RePORTER, *http://projectreporter.nih.gov/reporter.cfm*
- DOJ Office of Justice Programs (OJP), OJP Grant Awards and OJP Award Data by Location, *http://grants.ojp.usdoj.gov:85/selector/main* and *http://ojp.gov/funding/Explore/OJPAwardData.htm*
- Department of Labor Employment and Training Administration (ETA), Grants Awarded, *http://www.doleta.gov/grants/grants_awarded.cfm*
- Environmental Protection Agency (EPA), Integrated Grants Management System (IGMS), *http://www.epa.gov/enviro/facts/igms/index.html*
- National Library of Medicine (NLM), Health Services Research Projects in Progress (HSRProj), *http://wwwcf.nlm.nih.gov/hsr_project/home_proj.cfm*
- National Science Foundation (NSF) Awards, *http://www.nsf.gov/awardsearch*/
- Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Awards, *https://www.sbir.gov/sbirsearch/award/all*

Table 14–2. FEDERAL GRANTS TO STATE AND LOCAL GOVERNMENTS—BUDGET AUTHORITY AND OUTLAYS

(In millions of dollars)

Function, Category, Agency and Program	Budget Authority			Outlays		
	2016 Actual	2017 Estimate	2018 Estimate	2016 Actual	2017 Estimate	2018 Estimate
Energy						
Discretionary:						
Department of Energy:						
Energy Efficiency and Renewable Energy	263	263	....	242	241	233
Mandatory:						
Tennessee Valley Authority:						
Tennessee Valley Authority Fund	522	495	507	522	495	507
Total, Energy	**785**	**758**	**507**	**764**	**736**	**740**
Natural Resources and Environment						
Discretionary:						
Department of Agriculture:						
Farm Service Agency:						
Grassroots Source Water Protection Program	7	7	....	7	7	....
Natural Resources Conservation Service:						
Watershed Rehabilitation Program	12	6	6	55	3	5
Watershed and Flood Prevention Operations	87	284	....	2	20	....
Forest Service:						
State and Private Forestry	223	164	108	219	225	165
Department of Commerce:						
National Oceanic and Atmospheric Administration:						
Operations, Research, and Facilities	155	155	....	128	128	....
Pacific Coastal Salmon Recovery	65	65	....	71	61	53
Department of the Interior:						
Office of Surface Mining Reclamation and Enforcement:						
Regulation and Technology	68	68	61	65	69	64
Abandoned Mine Reclamation Fund	117	117	20	25	89	27
United States Geological Survey:						
Surveys, Investigations, and Research	6	6	....	6	6	....
United States Fish and Wildlife Service:						
Cooperative Endangered Species Conservation Fund	53	53	19	46	54	54
State Wildlife Grants	61	60	53	64	70	71
Landowner Incentive Program	....	....	....	2	1	1
National Park Service:						
National Recreation and Preservation	63	63	37	57	66	50
Land Acquisition and State Assistance	110	110	3	40	62	77
Historic Preservation Fund	65	65	51	66	81	83
Departmental Offices:						
Salaries and Expenses	452	451	....	452	451	....
Environmental Protection Agency:						
State and Tribal Assistance Grants	3,478	3,572	2,733	3,980	3,978	3,231
Hazardous Substance Superfund	18	18	17	206	217	228
Leaking Underground Storage Tank Trust Fund	80	80	41	84	84	69
Total, discretionary	**5,120**	**5,344**	**3,149**	**5,575**	**5,672**	**4,178**
Mandatory:						
Department of Commerce:						
National Oceanic and Atmospheric Administration:						
Gulf Coast Ecosystem Restoration Science, Observation, Monitoring, and Technology	....	....	....	....	–4	....
Department of the Interior:						

Table 14–2. FEDERAL GRANTS TO STATE AND LOCAL GOVERNMENTS—BUDGET AUTHORITY AND OUTLAYS—Continued
(In millions of dollars)

Function, Category, Agency and Program	Budget Authority			Outlays		
	2016 Actual	2017 Estimate	2018 Estimate	2016 Actual	2017 Estimate	2018 Estimate
Bureau of Land Management:						
Miscellaneous Permanent Payment Accounts	48	41	37	48	39	38
Office of Surface Mining Reclamation and Enforcement:						
Payments to States in Lieu of Coal Fee Receipts	....	....	....	27	30	30
Abandoned Mine Reclamation Fund	163	135	207	167	137	184
United States Fish and Wildlife Service:						
Federal Aid in Wildlife Restoration	725	786	830	657	700	770
Cooperative Endangered Species Conservation Fund	68	76	70	68	76	70
Coastal Impact Assistance	....	....	....	134	70	50
Sport Fish Restoration	442	435	455	454	458	467
National Park Service:						
Land Acquisition and State Assistance	....	....	90	1	1	5
Departmental Offices:						
National Forests Fund, Payment to States	4	7	8	4	7	8
Leases of Lands Acquired for Flood Control, Navigation, and Allied Purposes	12	36	43	12	36	43
States Share from Certain Gulf of Mexico Leases	....	1	....	....	1	....
Corps of Engineers--Civil Works:						
South Dakota Terrestrial Wildlife Habitat Restoration Trust Fund	3	3	3	7	4	3
Total, mandatory	**1,465**	**1,520**	**1,743**	**1,579**	**1,555**	**1,668**
Total, Natural Resources and Environment	**6,585**	**6,864**	**4,892**	**7,154**	**7,227**	**5,846**
Agriculture						
Discretionary:						
Department of Agriculture:						
National Institute of Food and Agriculture:						
Extension Activities	418	418	413	398	434	583
Research and Education Activities	336	336	326	341	341	341
Agricultural Marketing Service:						
Payments to States and Possessions	1	1	1	1	1	1
Farm Service Agency:						
State Mediation Grants	3	3	3	3	3	3
Total, discretionary	**758**	**758**	**743**	**743**	**779**	**928**
Mandatory:						
Department of Agriculture:						
Payments to States and Possessions	68	67	....	63	70	68
Total, Agriculture	**826**	**825**	**743**	**806**	**849**	**996**
Commerce and Housing Credit						
Discretionary:						
Department of Commerce:						
Fisheries Disaster Assistance	....	....	....	15	13	11
Mandatory:						
Department of Commerce:						
National Telecommunications and Information Administration:						
State and Local Implementation Fund	....	....	....	21	26	25
Department of the Treasury:						
Departmental Offices:						
State Small Business Credit Initiative	....	....	....	59	44	7
Federal Communications Commission:						
Universal Service Fund	2,041	1,489	2,118	2,077	2,361	2,569
Total, mandatory	**2,041**	**1,489**	**2,118**	**2,157**	**2,431**	**2,601**
Total, Commerce and Housing Credit	**2,041**	**1,489**	**2,118**	**2,172**	**2,444**	**2,612**

Table 14–2. FEDERAL GRANTS TO STATE AND LOCAL GOVERNMENTS—BUDGET AUTHORITY AND OUTLAYS—Continued
(In millions of dollars)

Function, Category, Agency and Program	Budget Authority			Outlays		
	2016 Actual	2017 Estimate	2018 Estimate	2016 Actual	2017 Estimate	2018 Estimate
Transportation						
Discretionary:						
Department of Transportation:						
Office of the Secretary:						
National Infrastructure Investments	480	479	....	402	587	521
Federal Aviation Administration:						
Grants-in-aid for Airports (Airport and Airway Trust Fund)	....	....	....	2,963	3,266	3,321
Grants-in-aid for Airports (Airport and Airway Trust Fund) (non-add obligation limitations) [1]	3,350	3,344	3,350	....	....	....
Federal Highway Administration:						
Emergency Relief Program	....	1,004	....	326	467	445
Highway Infrastructure Programs	....	....	....	3	4	3
Appalachian Development Highway System	....	....	....	5	5	4
Federal-aid Highways	102	105	110	42,271	40,850	41,473
Federal-aid Highways (non-add obligation limitations) [1]	42,361	40,980	42,934	....	....	....
Miscellaneous Appropriations	....	....	....	27	35	38
Miscellaneous Highway Trust Funds	....	....	....	....	20	22
Federal Motor Carrier Safety Administration:						
Motor Carrier Safety Grants	....	....	....	279	340	320
Motor Carrier Safety Grants (non-add obligation limitations) [1]	313	312	375	....	....	....
National Highway Traffic Safety Administration:						
Highway Traffic Safety Grants	....	....	....	661	692	692
Highway Traffic Safety Grants (non-add obligation limitations) [1]	573	572	598	....	....	....
Federal Railroad Administration:						
Operating Subsidy Grants to the National Railroad Passenger Corporation	289	....	....	289	....	....
Northeast Corridor Improvement Program	19	19	....	....	5	14
Capital and Debt Service Grants to the National Railroad Passenger Corporation	1,091	–5	....	1,080	292	41
Railroad Safety Grants	50	50	....	....	10	25
Grants to the National Railroad Passenger Corporation	....	....	....	42	16	16
Intercity Passenger Rail Grant Program	....	....	....	12	10	7
Rail Line Relocation and Improvement Program	–2	–2	....	6	9	9
Capital Assistance for High Speed Rail Corridors and Intercity Passenger Rail Service	....	....	....	2,076	2,719	296
Northeast Corridor Grants to the National Railroad Passenger Corporation	....	234	234	....	233	234
National Network Grants to the National Railroad Passenger Corporation	....	1,149	522	....	1,149	522
Federal-State Partnership for State of Good Repair	....	....	26	....	....	3
Consolidated Rail Infrastructure and Safety Improvements	....	....	25	....	....	2
Federal Transit Administration:						
Transit Capital Assistance, Recovery Act	....	....	....	....	3	....
Job Access and Reverse Commute Grants	–1	....	....	....	....	....
Washington Metropolitan Area Transit Authority	150	150	150	265	165	205
Formula Grants	....	....	....	33	33	33
Grants for Energy Efficiency and Greenhouse Gas Reductions	....	....	....	17	30	....
Capital Investment Grants	2,153	2,160	1,232	1,968	1,996	2,100
Public Transportation Emergency Relief Program	....	....	....	516	500	542
Discretionary Grants (Highway Trust Fund, Mass Transit Account)	....	....	....	6	....	....
Transit Formula Grants	....	....	....	9,466	9,589	9,694
Transit Formula Grants (non-add obligation limitations) [1]	10,576	10,630	11,033	....	....	....
Pipeline and Hazardous Materials Safety Administration:						
Pipeline Safety	39	41	45	52	44	45
Trust Fund Share of Pipeline Safety	8	8	8	8	8	8
Total, discretionary	**4,378**	**5,392**	**2,352**	**62,773**	**63,077**	**60,635**
Total, obligation limitations (non-add) [1]	57,173	55,838	58,290	....	....	....

Table 14–2. FEDERAL GRANTS TO STATE AND LOCAL GOVERNMENTS—BUDGET AUTHORITY AND OUTLAYS—Continued
(In millions of dollars)

Function, Category, Agency and Program	Budget Authority			Outlays		
	2016 Actual	2017 Estimate	2018 Estimate	2016 Actual	2017 Estimate	2018 Estimate
Mandatory:						
Department of Homeland Security:						
United States Coast Guard:						
Boat Safety	107	105	111	108	92	119
Department of Transportation:						
Federal Aviation Administration:						
Grants-in-aid for Airports (Airport and Airway Trust Fund) [1]	3,197	3,197	3,190	....	....	....
Federal Highway Administration:						
Federal-aid Highways [1]	41,258	42,130	43,211	764	743	750
Miscellaneous Appropriations	216	2	....	216	2	....
Federal Motor Carrier Safety Administration:						
Motor Carrier Safety Grants [1]	313	367	375	....	....	....
National Highway Traffic Safety Administration:						
Highway Traffic Safety Grants [1]	638	656	570	....	....	....
Federal Transit Administration:						
Transit Formula Grants [1]	10,576	10,630	11,033	....	....	....
Total, mandatory	**56,305**	**57,087**	**58,490**	**1,088**	**837**	**869**
Total, Transportation	**60,683**	**62,479**	**60,842**	**63,861**	**63,914**	**61,504**
Community and Regional Development						
Discretionary:						
Department of Agriculture:						
Rural Utilities Service:						
Distance Learning, Telemedicine, and Broadband Program	37	36	15	37	51	59
Rural Water and Waste Disposal Program Account	499	498	–64	530	427	556
Rural Housing Service:						
Rural Community Facilities Program Account	42	43	148	36	46	189
Rural Business_Cooperative Service:						
Rural Business Program Account	63	63	–25	78	78	31
Department of Commerce:						
Economic Development Administration:						
Economic Development Assistance Programs	202	212	–47	255	196	285
Department of Homeland Security:						
Federal Emergency Management Agency:						
Federal Assistance [2]	....	2,587	1,985	....	124	811
State and Local Programs [2]	2,590	....	....	2,683	2,404	1,925
United States Fire Administration [2]	3	....	....	3	....	....
Disaster Relief Fund	3,645	3,662	3,904	5,155	3,483	5,121
National Flood Insurance Fund	10	10	10	10	10	2
Department of Housing and Urban Development:						
Community Planning and Development:						
Community Development Fund	3,859	4,861	....	6,013	6,554	6,819
Community Development Loan Guarantees Program Account	....	....	....	3	4	3
Brownfields Redevelopment	....	....	....	3	4	3
Office of Lead Hazard Control and Healthy Homes:						
Lead Hazard Reduction	110	110	130	95	101	101
Department of the Interior:						
Bureau of Indian Affairs and Bureau of Indian Education:						
Operation of Indian Programs	162	159	159	144	146	150
Indian Guaranteed Loan Program Account	8	8	7	8	8	7
Appalachian Regional Commission	139	138	....	63	126	115
Delta Regional Authority	25	25	....	14	27	21

Table 14–2. FEDERAL GRANTS TO STATE AND LOCAL GOVERNMENTS—BUDGET AUTHORITY AND OUTLAYS—Continued
(In millions of dollars)

Function, Category, Agency and Program	Budget Authority			Outlays		
	2016 Actual	2017 Estimate	2018 Estimate	2016 Actual	2017 Estimate	2018 Estimate
Denali Commission	11	11	....	8	13	14
Total, discretionary	**11,405**	**12,423**	**6,222**	**15,138**	**13,802**	**16,212**
Mandatory:						
Department of Homeland Security:						
Federal Emergency Management Agency:						
National Flood Insurance Fund	175	175	175	100	98	92
Department of Housing and Urban Development:						
Community Planning and Development:						
Community Development Loan Guarantees Program Account	....	1	....	....	1	....
Neighborhood Stabilization Program	....	....	....	32	99	71
Department of the Interior:						
Bureau of Indian Affairs and Bureau of Indian Education:						
Indian Guaranteed Loan Program Account	14	2	....	14	2	....
Department of the Treasury:						
Fiscal Service:						
Gulf Coast Restoration Trust Fund	133	295	177	14	77	156
Total, mandatory	**322**	**473**	**352**	**160**	**277**	**319**
Total, Community and Regional Development	**11,727**	**12,896**	**6,574**	**15,298**	**14,079**	**16,531**
Education, Training, Employment, and Social Services						
Discretionary:						
Department of Education:						
Office of Elementary and Secondary Education:						
Indian Education	138	138	138	111	149	138
Impact Aid	1,300	1,298	1,231	1,248	1,352	1,371
Safe Schools and Citizenship Education	245	244	135	244	249	241
Education for the Disadvantaged	15,963	15,937	15,457	15,570	16,406	15,997
School Improvement Programs	4,302	4,298	2,310	4,224	4,234	4,282
Office of Innovation and Improvement:						
Innovation and Improvement	1,053	952	786	1,338	1,834	1,063
Office of English Language Acquisition:						
English Language Acquisition	693	692	692	696	746	696
Office of Special Education and Rehabilitative Services:						
Special Education	12,781	12,757	11,864	12,357	12,088	12,580
Rehabilitation Services	91	91	64	88	66	78
Office of Career, Technical, and Adult Education:						
Career, Technical and Adult Education	1,700	1,696	1,436	1,662	1,651	1,743
Office of Postsecondary Education:						
Higher Education	322	321	219	337	368	332
Institute of Education Sciences	35	34	34	26	37	38
Department of Health and Human Services:						
Administration for Children and Families:						
Promoting Safe and Stable Families	57	58	58	57	57	56
Children and Families Services Programs	10,626	10,606	9,846	10,026	11,277	10,509
Administration for Community Living:						
Aging and Disability Services Programs	1,908	1,909	1,851	1,944	1,930	1,955
Department of the Interior:						
Bureau of Indian Affairs and Bureau of Indian Education:						
Operation of Indian Programs	84	75	75	86	71	73
Department of Labor:						
Employment and Training Administration:						
Training and Employment Services	2,923	2,919	1,697	2,673	3,177	2,240

Table 14–2. FEDERAL GRANTS TO STATE AND LOCAL GOVERNMENTS—BUDGET AUTHORITY AND OUTLAYS—Continued

(In millions of dollars)

Function, Category, Agency and Program	Budget Authority			Outlays		
	2016 Actual	2017 Estimate	2018 Estimate	2016 Actual	2017 Estimate	2018 Estimate
State Unemployment Insurance and Employment Service Operations	–53	89	89	–177	–9	–8
Unemployment Trust Fund	912	945	685	1,437	946	895
Corporation for National and Community Service:						
Operating Expenses	515	534	31	280	563	295
Corporation for Public Broadcasting	485	485	30	485	485	30
District of Columbia:						
District of Columbia General and Special Payments:						
Federal Payment for Resident Tuition Support	40	40	30	40	40	30
Federal Payment for School Improvement	45	45	45	45	45	45
Institute of Museum and Library Services:						
Office of Museum and Library Services: Grants and Administration	214	214	....	213	216	153
National Endowment for the Arts:						
Grants and Administration	46	47	....	44	50	51
Total, discretionary	**56,425**	**56,424**	**48,803**	**55,054**	**58,028**	**54,883**
Mandatory:						
Department of Education:						
Office of Special Education and Rehabilitative Services:						
Rehabilitation Services	3,161	3,164	3,453	3,030	3,467	3,310
Department of Health and Human Services:						
Administration for Children and Families:						
Promoting Safe and Stable Families	467	454	487	415	458	446
Social Services Block Grant	1,669	1,662	85	1,780	1,699	362
Department of Labor:						
Employment and Training Administration:						
TAA Community College and Career Training Grant Fund	....	....	....	389	240	160
Federal Unemployment Benefits and Allowances	391	400	450	199	283	349
Total, mandatory	**5,688**	**5,680**	**4,475**	**5,813**	**6,147**	**4,627**
Total, Education, Training, Employment, and Social Services	**62,113**	**62,104**	**53,278**	**60,867**	**64,175**	**59,510**
Health						
Discretionary:						
Department of Agriculture:						
Food Safety and Inspection Service:						
Salaries and Expenses	51	51	51	43	51	51
Department of Health and Human Services:						
Health Resources and Services Administration:						
Health Resources and Services	2,515	2,855	2,780	4,890	4,822	4,285
Indian Health Service:						
Contract Support Costs	670	717	718	630	756	718
Centers for Disease Control and Prevention:						
CDC-wide Activities and Program Support	2,526	2,498	2,498	894	822	784
Substance Abuse and Mental Health Services Administration	3,099	3,616	3,240	2,927	3,143	3,133
Departmental Management:						
Public Health and Social Services Emergency Fund	255	255	227	265	255	227
Department of Labor:						
Occupational Safety and Health Administration:						
Salaries and Expenses	111	111	101	111	111	101
Mine Safety and Health Administration:						
Salaries and Expenses	9	9	9	9	9	9
Total, discretionary	**9,236**	**10,112**	**9,624**	**9,769**	**9,969**	**9,308**

Table 14–2. FEDERAL GRANTS TO STATE AND LOCAL GOVERNMENTS—BUDGET AUTHORITY AND OUTLAYS—Continued

(In millions of dollars)

Function, Category, Agency and Program	Budget Authority			Outlays		
	2016 Actual	2017 Estimate	2018 Estimate	2016 Actual	2017 Estimate	2018 Estimate
Mandatory:						
Department of Health and Human Services:						
Health Resources and Services Administration:						
Maternal, Infant, and Early Childhood Home Visiting Programs	400	372	400	390	394	391
Centers for Medicare and Medicaid Services:						
Rate Review Grants	....	....	....	29	28	26
Affordable Insurance Exchange Grants	20	24	17	444	287	59
Grants to States for Medicaid	366,672	379,050	406,160	368,280	378,455	403,713
Children's Health Insurance Fund	14,641	16,067	3,198	14,305	16,655	13,417
State Grants and Demonstrations	391	–386	86	547	537	534
Child Enrollment Contingency Fund	1,832	570	....	53	224	....
Departmental Management:						
Pregnancy Assistance Fund	23	23	25	25	26	24
Payment to the State Response to the Opioid Abuse Crisis Account, CURES Act	....	500	500	....	500	500
Department of the Treasury:						
Internal Revenue Service:						
Refundable Premium Tax Credit and Cost Sharing Reductions [3]	2,824	4,370	4,490	2,824	4,370	4,490
Total, mandatory	**386,803**	**400,590**	**414,876**	**386,897**	**401,476**	**423,154**
Total, Health	**396,039**	**410,702**	**424,500**	**396,666**	**411,445**	**432,462**
Income Security						
Discretionary:						
Department of Agriculture:						
Food and Nutrition Service:						
Commodity Assistance Program	298	310	294	261	303	300
Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) [4]	6,350	6,558	5,150	5,963	5,818	6,004
Department of Health and Human Services:						
Administration for Children and Families:						
Low Income Home Energy Assistance	3,371	3,384	....	3,262	3,101	1,113
Refugee and Entrant Assistance	629	700	480	939	1,280	758
Payments to States for the Child Care and Development Block Grant	2,746	2,738	2,743	2,503	2,708	2,755
Department of Homeland Security:						
Federal Emergency Management Agency:						
Federal Assistance	....	120	....	....	....	83
Emergency Food and Shelter	120	....	....	57	103	99
Department of Housing and Urban Development:						
Public and Indian Housing Programs:						
Public Housing Operating Fund	4,439	4,381	3,714	4,386	4,377	3,894
Revitalization of Severely Distressed Public Housing (HOPE VI)	....	....	....	72	101	5
Native Hawaiian Housing Block Grant	....	....	....	12	4	5
Tenant Based Rental Assistance	19,665	19,675	19,443	19,375	19,960	19,825
Public Housing Capital Fund	1,881	1,860	564	2,116	1,819	1,791
Native American Housing Block Grant	644	648	600	747	653	610
Housing Certificate Fund	....	....	....	....	94	112
Choice Neighborhoods Initiative	125	125	....	40	117	149
Family Self-Sufficiency	75	75	75	78	75	73
Community Planning and Development:						
Homeless Assistance Grants	1,200	1,159	1,200	1,000	1,126	1,201
Home Investment Partnership Program	950	948	....	1,154	969	949
Housing Opportunities for Persons with AIDS	335	334	330	348	351	331
Rural Housing and Economic Development	–4	....	....	1	2	2
Permanent Supportive Housing	....	....	....	4	3	2

Table 14–2. FEDERAL GRANTS TO STATE AND LOCAL GOVERNMENTS—BUDGET AUTHORITY AND OUTLAYS—Continued
(In millions of dollars)

Function, Category, Agency and Program	Budget Authority			Outlays		
	2016 Actual	2017 Estimate	2018 Estimate	2016 Actual	2017 Estimate	2018 Estimate
Housing Programs:						
Project-based Rental Assistance	215	221	285	265	221	285
Department of Labor:						
Employment and Training Administration:						
Unemployment Trust Fund	2,825	2,755	2,648	2,308	2,891	3,328
Total, discretionary	**45,864**	**45,991**	**37,526**	**44,891**	**46,076**	**43,674**
Mandatory:						
Department of Agriculture:						
Agricultural Marketing Service:						
Funds for Strengthening Markets, Income, and Supply (section 32)	752	1,020	1,045	750	939	930
Food and Nutrition Service:						
Supplemental Nutrition Assistance Program	6,782	7,135	7,405	6,406	7,123	7,355
Commodity Assistance Program	19	21	21	7	27	21
Child Nutrition Programs	22,313	22,818	24,419	21,952	23,738	23,946
Department of Health and Human Services:						
Administration for Children and Families:						
Payments to States for Child Support Enforcement and Family Support Programs	4,125	4,167	4,285	4,079	4,266	4,302
Contingency Fund	583	583	....	572	594	51
Payments for Foster Care and Permanency	7,665	8,256	8,746	7,700	8,025	8,457
Child Care Entitlement to States	2,917	2,917	2,917	2,788	2,968	2,946
Temporary Assistance for Needy Families	16,735	16,737	15,471	15,620	16,502	15,383
Department of Housing and Urban Development:						
Public and Indian Housing Programs:						
Native American Housing Block Grant	4	4	....	4	4	....
Total, mandatory	**61,895**	**63,658**	**64,309**	**59,878**	**64,186**	**63,391**
Total, Income Security	**107,759**	**109,649**	**101,835**	**104,769**	**110,262**	**107,065**
Social Security						
Mandatory:						
Social Security Administration:						
Federal Disability Insurance Trust Fund	9	15	18	10	15	18
Veterans Benefits and Services						
Discretionary:						
Department of Veterans Affairs:						
Veterans Health Administration:						
Medical Community Care	....	1,320	1,346	....	1,320	1,346
Medical Services	1,712	595	572	1,712	595	572
Departmental Administration:						
Grants for Construction of State Extended Care Facilities	140	90	90	77	93	109
Grants for Construction of Veterans Cemeteries	46	45	45	40	64	44
Total, discretionary	**1,898**	**2,050**	**2,053**	**1,829**	**2,072**	**2,071**
Total, Veterans Benefits and Services	**1,898**	**2,050**	**2,053**	**1,829**	**2,072**	**2,071**
Administration of Justice						
Discretionary:						
Department of Housing and Urban Development:						
Fair Housing and Equal Opportunity:						
Fair Housing Activities	65	65	65	63	66	67
Department of Justice:						
Legal Activities and U.S. Marshals:						

Table 14–2. FEDERAL GRANTS TO STATE AND LOCAL GOVERNMENTS—BUDGET AUTHORITY AND OUTLAYS—Continued
(In millions of dollars)

Function, Category, Agency and Program	Budget Authority			Outlays		
	2016 Actual	2017 Estimate	2018 Estimate	2016 Actual	2017 Estimate	2018 Estimate
Assets Forfeiture Fund	21	–438	–283	18	20	16
Office of Justice Programs:						
Research, Evaluation, and Statistics	67	40	40	120	206	46
State and Local Law Enforcement Assistance	1,015	1,126	636	803	1,410	1,157
Juvenile Justice Programs	220	223	182	222	315	237
Community Oriented Policing Services	191	191	208	196	191	195
Violence against Women Prevention and Prosecution Programs	441	440	443	397	448	479
Equal Employment Opportunity Commission:						
Salaries and Expenses	30	29	29	44	47	47
Federal Drug Control Programs:						
High Intensity Drug Trafficking Areas Program	230	250	247	217	297	212
State Justice Institute:						
Salaries and Expenses	5	5	5	5	6	5
Total, discretionary	**2,285**	**1,931**	**1,572**	**2,085**	**3,006**	**2,461**
Mandatory:						
Department of Justice:						
Legal Activities and U.S. Marshals:						
Assets Forfeiture Fund	300	400	400	445	177	290
Office of Justice Programs:						
Crime Victims Fund	2,638	2,663	2,390	919	3,065	2,821
Department of the Treasury:						
Departmental Offices:						
Treasury Forfeiture Fund	173	150	150	87	75	75
Total, mandatory	**3,111**	**3,213**	**2,940**	**1,451**	**3,317**	**3,186**
Total, Administration of Justice	**5,396**	**5,144**	**4,512**	**3,536**	**6,323**	**5,647**
General Government						
Discretionary:						
Department of the Interior:						
United States Fish and Wildlife Service:						
National Wildlife Refuge Fund	13	13	....	13	13	....
Insular Affairs:						
Assistance to Territories	59	59	53	62	73	66
Department-Wide Programs:						
Payments in Lieu of Taxes	....	....	397	....	....	397
District of Columbia:						
District of Columbia Courts:						
Federal Payment to the District of Columbia Courts	274	275	264	238	267	262
Federal Payment for Defender Services in District of Columbia Courts	50	50	50	42	42	57
District of Columbia General and Special Payments:						
Federal Support for Economic Development and Management Reforms in the District	22	22	16	22	22	16
Election Assistance Commission:						
Election Reform Programs	....	....	....	4	....	....
Total, discretionary	**418**	**419**	**780**	**381**	**417**	**798**
Mandatory:						
Department of Agriculture:						
Forest Service:						
Forest Service Permanent Appropriations	329	77	77	293	77	77
Department of Energy:						
Energy Programs:						
Payments to States under Federal Power Act	4	5	5	4	9	5

Table 14–2. FEDERAL GRANTS TO STATE AND LOCAL GOVERNMENTS—BUDGET AUTHORITY AND OUTLAYS—Continued
(In millions of dollars)

Function, Category, Agency and Program	Budget Authority			Outlays		
	2016 Actual	2017 Estimate	2018 Estimate	2016 Actual	2017 Estimate	2018 Estimate
Department of Homeland Security:						
U.S. Customs and Border Protection:						
Refunds, Transfers, and Expenses of Operation, Puerto Rico	92	93	99	152	89	97
Department of the Interior:						
Office of Surface Mining Reclamation and Enforcement:						
Payments to States in Lieu of Coal Fee Receipts	303	46	114	134	110	126
United States Fish and Wildlife Service:						
National Wildlife Refuge Fund	11	8	9	9	10	9
Departmental Offices:						
Mineral Leasing and Associated Payments	1,301	1,332	1,582	1,301	1,332	1,582
National Petroleum Reserve, Alaska	2	5	5	2	5	5
Geothermal Lease Revenues, Payment to Counties	3	3	....	3	3	....
Insular Affairs:						
Assistance to Territories	28	28	28	58	31	28
Payments to the United States Territories, Fiscal Assistance	291	288	288	291	288	288
Department-Wide Programs:						
Payments in Lieu of Taxes	34	....	....	34	....	....
Department of the Treasury:						
Alcohol and Tobacco Tax and Trade Bureau:						
Internal Revenue Collections for Puerto Rico	417	384	369	417	384	369
Corps of Engineers--Civil Works:						
Permanent Appropriations	4	4	4	....	....	....
District of Columbia:						
District of Columbia Courts:						
District of Columbia Crime Victims Compensation Fund	7	6	6	7	7	6
Total, mandatory	**2,826**	**2,279**	**2,586**	**2,705**	**2,345**	**2,592**
Total, General Government	**3,244**	**2,698**	**3,366**	**3,086**	**2,762**	**3,390**
Allowances						
Mandatory:						
Allowances:						
Infrastructure Initiative	....	....	200,000	....	....	5,000
Total, Grants	**659,105**	**677,673**	**865,238**	**660,818**	**686,303**	**703,392**
Discretionary	**138,050**	**141,107**	**112,824**	**198,495**	**203,152**	**195,392**
Transportation obligation limitations (non-add) [1]	57,173	55,838	58,290	....	....	....
Mandatory	**521,055**	**536,566**	**752,414**	**462,323**	**483,151**	**508,000**

[1] Mandatory contract authority provides budget authority for these programs, but program levels are set by discretionary obligation limitations in appropriations bills and outlays are recorded as discretionary. This table shows the obligation limitations as non-additive items to avoid double counting.
[2] The Federal Assistance budget account includes funding from legacy budget accounts State and Local Programs and United States Fire Administration.
[3] Reflects budget authority and outlays for the Basic Health Program, under which a State may offer standard health plans to eligible individuals in lieu of offering such individuals coverage through an Exchange.
[4] The budget authority for WIC in 2018 is $6,150 million, but also includes a $1,000 million cancellation of unobligated balances.

15. STRENGTHENING FEDERAL STATISTICS

Public and private decisions rely on data more than ever before. Ready and equitable access to relevant, accurate, timely, and objective information helps make *citizens* more informed, *businesses* more competitive, and *government* smarter. The Federal government's statistical agencies and programs, along with many other Federal government programs, play a vital role in generating the data that citizens, businesses, and governments need to make informed decisions.

- *Citizens.* Access to reliable information on their communities improves their ability to make the best decisions for themselves and their families about where to go to school and what to study, where to work and how to get there, where to live, and more.

- *Businesses.* Access to reliable information on current and potential markets, international trade, and changing economic conditions informs critical business decisions on new products, locations for new production facilities and retail outlets, marketing strategies, workforce characteristics and hiring strategies, and more. In addition to informing business and investment decisions, Federal data serve as a vital input for a network of firms that do not produce their own data, but rather aggregate, repackage, and analyze data to provide products and services to households, businesses, other organizations, and governments. Federal data can also multiply the value of private sector data because their high quality and reliability provide a necessary benchmark reference that lends context, validity, and increased applicability to data generated by businesses.

- *Government*. Access to reliable data helps to inform and evaluate Federal government budget, management, and policy decisions at the Federal, State, local, and tribal levels. An effective and efficient Federal government requires evidence about where needs are greatest, what works and what does not, where and how programs could be improved, and how programs of yesterday may no longer be suited for today or prepare us for tomorrow. The Federal statistical system continues to expand and strengthen the Federal evidence base to meet increasing demand while working collaboratively to minimize the cost and burden to the public by exploring the use of administrative data, sensor data, satellite data, and more in order to supplement or replace surveys that are more burdensome and interviews.

A modest share of budget resources is devoted to supporting Federal statistics—about 0.04 percent of Gross Domestic Product (GDP) in non-decennial census years and roughly double that in decennial census years. These resources are necessary to safeguard the ability of Federal principal statistical agencies to objectively design, collect, process, edit, compile, store, analyze, release, and disseminate data. The Federal statistical community continues to maximize the value of this investment by developing and applying innovative ideas and techniques to improve current measures, create new information products, and strengthen our Federal evidence base. A few recent examples include:

- *Improving current measures*. Citizens and businesses now have more accurate early reads of the Nation's economy with reduced revisions to GDP because the **Bureau of Economic Analysis** started incorporating into the initial GDP estimates the advance monthly inventory data and preliminary quarterly services data from the **Census Bureau**. Efforts to reduce response burden on high-impact farm operations by implementing customized data collection strategies are underway by the **National Agricultural Statistics Service**.

- *Creating new information products*. Energy industry businesses, investors, and traders now have access to near real-time hourly electricity operating data for the Lower 48 states, published by the **Energy Information Administration**, to make better business and investment decisions. Farmers and businesses can now review the impacts of the "shale revolution" on the farm sector through the comprehensive view of energy use and production in agriculture published by the **Economic Research Service**. Communities and their leaders, healthcare providers, and others can now identify in additional detail the circumstances of and specific drugs involved in drug overdose deaths because the **National Center for Health Statistics** developed a new method to extract additional information from the literal text on death certificates. Employers and job seekers can now better understand the physical demands, environmental conditions, mental and cognitive demands, and vocational requirements of jobs using new data published by the **Bureau of Labor Statistics** from the *Occupational Requirements Survey*.

- *Strengthening Federal evidence base*. The **National Center for Science and Engineering Statistics**, as part of an Office of Science and Technology Policy Committee, improved the accuracy and consistency of research and development spending data by establishing a mechanism for Federal agencies to identify and share best practices for the identification, classification, and reporting of these data. In an effort to create more timely and relevant economic and social measurements and reduce respondent burden by harnessing the power of big data, the **Census Bureau**, in collaboration with the **Bureau of Economic Analysis**, launched the Big Data Center. The **Census Bureau's** Center for Administrative Records Research and Applications has been evaluating the use of administrative and third party data to reduce visits to vacant households in the 2020 Census, which will improve accuracy and lessen the need for census takers to knock on doors, saving time and money.

Underlying data systems that produce Federal statistical products must be credible in order to be beneficial to their wide range of users. Federal statistical programs foster this credibility by adhering to high quality standards for maintaining integrity, objectivity, transparency, and efficiency in the production and curation of data. As data stewards, Federal statistical agencies balance public information demands and decision-makers' needs for information with legal and ethical obligations to minimize reporting burden, respect respondents' privacy, and protect the confidentiality of the data provided to the Government. The Office of Management and Budget (OMB) reinforced these fundamental responsibilities through the issuance of OMB Statistical Policy Directive No. 1, *Fundamental Responsibilities of Federal Statistical Agencies and Recognized Statistical Units*.[1] OMB Statistical Policy Directive Nos. 2, 3, and 4 assure the high quality and independence of statistical methods and data.[2] The remainder of this chapter presents highlights of principal statistical agencies' 2018 program budget proposals.

Highlights of Fiscal Year 2018 Program Budget Proposals

The U.S. Federal statistical system is highly decentralized. Agencies spread across every cabinet department and several independent agencies carry out the programs that provide essential statistical information for use by governments, businesses, researchers, and the public. Excluding cyclical funding for the decennial census, approximately 39 percent of the total budget for these programs provides resources for 13 designated statistical agencies or units that have statistical activities as their principal mission (see Table 15–1). The remaining funding supports work in approximately 115 agencies or units that carry out statistical activities in conjunction with other missions such as providing services, conducting research, or implementing laws and regulations. More comprehensive budget and program information about the Federal statistical system, including its core programs, will be available in OMB's annual report, *Statistical Programs of the United States Government, Fiscal Year 2018*, when it is published later this year. The following highlights the Administration's proposals for the programs of the 13 principal Federal statistical agencies, giving particular attention to new initiatives and to other program changes.

Bureau of the Census (Census Bureau), Department of Commerce: Funding is requested to provide continued support for ongoing Census Bureau programs and to: 1) build operations and systems for a reengineered modern and cost-effective 2020 Census, including testing to validate the integration of 2020 Census operations, procedures, systems, and infrastructure in the 2018 End-to-End Census Test, which is the last opportunity to conduct this test before the 2020 Census; 2) move to 100 percent Internet response of the 2017 Economic Census to increase the efficiency, reduce the reporting burden on businesses and governments, lower costs to the Census Bureau, and provide quick data releases; 3) continue research into in-office geographic imagery to inform decisions about areas of the country where in-field address canvassing operations are required; 4) support the fourth year of the Census Enterprise Data Collection and Processing Initiative and deliver several capabilities into production in support of the 2018 End-to-End Census Test for the 2020 Census; and 5) reengineer current survey processes and make operational and methodological changes to several surveys and programs, while preserving the fundamental social and economic data that inform effective public and private decision-making.

Bureau of Economic Analysis (BEA), Department of Commerce: Funding is requested to incorporate necessary reductions while preserving the timeliness, relevance, and accuracy of some of the Nation's most critical economic statistics and to: 1) research the release and expansion of GDP detail to the lowest level of aggregation—over 3,100 U.S. counties—to provide complete coverage of all geographic areas, in particular rural areas; 2) continue the development of new data sources to improve data quality; and 3) reprioritize previous work analyzing the small business, health care, and trade in services industries to support BEA's core programs and products.

Bureau of Justice Statistics (BJS), Department of Justice: Funding is requested to maintain BJS's research portfolio of nearly fifty statistical programs and to continue exploring new ways to support analyses of a broad range of criminal justice issues. For example, BJS proposes to use funding to support the following major priorities: 1) continue to support and improve the current National Crime Victimization Survey and its supplements, as well as major redesign efforts currently underway to generate state and metropolitan area estimates and improved measurement of rape and sexual assault; 2) continue to expand the use of administrative

[1] OMB Statistical Policy Directive No. 1: Fundamental Responsibilities of Federal Statistical Agencies and Recognized Statistical Units. *http://www.gpo.gov/fdsys/pkg/FR-2014-12-02/pdf/2014-28326.pdf*.

[2] OMB Statistical Policy Directive No. 2: Standards and Guidelines for Statistical Surveys. *https://obamawhitehouse.archives.gov/sites/default/files/omb/inforeg/statpolicy/standards_stat_surveys.pdf*. OMB Statistical Policy Directive No. 3: Compilation, Release, and Evaluation of Principle Federal Economic Indicators. *https://obamawhitehouse.archives.gov/sites/default/files/omb/assets/omb/inforeg/statpolicy/dir_3_fr_09251985.pdf*. OMB Statistical Policy Directive No. 4: Release and Dissemination of Statistical Products Produced by Federal Statistical Agencies. *https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/federal_register/FR2008/030708_directive-4.pdf*.

records to support various projects; 3) provide support to Office of Justice Programs components and other federal agencies through BJS's statistical infrastructure to examine program outcomes and improve measures to better understand the U.S. justice system, for example by looking at how the flow of Bureau of Justice Assistance Byrne/Justice Assistant Grant funds impacts changes in crime rate at the jurisdiction level and assisting the Office of Victims of Crime's efforts to collect more geographically based data on victimization; and, 4) if funding and staff resources are available, reinstate core, annual and biennial BJS collections that were halted due to lack of funding, such as the National Judicial Reporting Program and State Court Processing Statistics.

Bureau of Labor Statistics (BLS), Department of Labor: Funding is requested to provide support for ongoing BLS programs, including collecting data on the domestic labor force, prices and cost of living, compensation and working conditions, productivity and technology, and also conducting widely-used surveys such as the Current Employment Statistics Survey, National Longitudinal Surveys, Job Openings and Labor Turnover Survey, and American Time Use Survey. With funding from the Department of Labor, the Current Population Survey will release data in 2018 from the May 2017 Contingent Worker Supplement (CWS). For the first time since 2005, BLS will be able to capture important information about the ever-growing "gig" economy. Specifically, the CWS identifies workers with contingent or alternative work arrangements; measures workers' satisfaction with their current arrangement; and measures earnings, health insurance coverage, and eligibility for employer-provided retirement plans.

Bureau of Transportation Statistics (BTS), Department of Transportation: Funding is requested to support ongoing BTS programs and to: 1) estimate annual levels of passenger travel; 2) improve methods and data for calculating the value of transportation infrastructure and services; 3) estimate the inventory and use of motor vehicles; 4) research the feasibility of technological advances and new data sources to develop more relevant statistics in a more timely manner; and 5) carry out the new Port Performance Freight Statistics Program authorized in the 2015 Fixing America's Surface Transportation.

Economic Research Service (ERS), Department of Agriculture: Funding is requested to provide support to continue ERS' highest priority core programs, including research, data, and market outlook on the following: 1) how investments in rural people, businesses, and communities affect the capacity of rural economies to prosper in a changing global marketplace; 2) economic issues related to developing natural resource policies and programs that respond to the need to protect the environment while enhancing agricultural competitiveness; 3) production agriculture, domestic and international markets, and Federal farm policies, to understand the U.S. food and agriculture sector's performance; and 4) the Nation's food and nutrition assistance programs, to study the relationships among factors that influence food choices and health outcomes, and to enhance methodologies for valuing societal benefits associated with reducing food safety risks. Reductions in lower priority programs, such as bioenergy, international activities, and drought resilience, combined with reductions in the consumer data information program and extramural collaborations, will serve to focus ERS' 2018 agenda towards its highest priority core programs.

Energy Information Administration (EIA), Department of Energy: Funding is requested to continue most core statistical and analysis activities and to: 1) maintain recent program enhancements and 2) follow through on planned cybersecurity initiatives. EIA would also scale back efforts to address certain emerging energy issues, including: 1) data and analysis of U.S. regional issues, 2) more timely and relevant information about energy consumption trends "behind the meter," and 3) development of new international hydrocarbon and electricity models to provide a greater understanding of U.S. energy markets within a global context.

National Agricultural Statistics Service (NASS), Department of Agriculture: Funding is requested to support the normal activity levels resulting from the cyclical nature of the 5-year Census of Agriculture (COA) program and increased workload in the peak data collection and processing year of the Census, including: 1) expenses for outgoing and return postage for the approximately 3 million potential farmers and ranchers on the Census Mail List; and 2) a streamlined and standardized edit and analysis unit, similar to the one that proved to be a critical piece to publishing the 2012 COA in a timely manner, with four NASS staff serving on detail to train, guide, and provide quality control to the temporary, intermittent employees handling the large volume of work associated with the data collection year.

National Center for Education Statistics (NCES), Department of Education: Funding is requested to provide support for NCES ongoing activities and to: 1) support U.S. participation in the 2018 Teaching and Learning International Survey of teachers and school principals of students in grades 7-9 to help countries identify policies that support effective teacher preparation, professional development, and instruction; 2) support the 2017-18 National Teacher and Principal Survey that serves as the nation's primary source of information on teacher and principal preparation, classes taught in public schools, and demographics of the teacher and principal labor force; 3) support the school year 2017-18 first year of data for the Middle Grades Longitudinal Study grade 6 cohort, including oversamples of students with disabilities, that will be followed through grade 8 to collect data on students' high school readiness, inclusion, and math and literacy learning in the middle grades; 4) support U.S. participation in the 2018 International Computer and Information Literacy Study to evaluate students' computer and information literacy, students' abilities to collect, manage, evaluate, and share digital information, as well as their understanding of issues related to the safe and responsible use of electronic information; and 5) support for the ongoing transition of the National Assessment of

Educational Progress and international assessments to a digitally-based administration that is designed to address the growing use of technology (i.e., computers) in the learning environment.

National Center for Health Statistics (NCHS), Department of Health and Human Services: Funding is requested to provide support for ongoing NCHS programs and to: 1) incorporate the collection of electronic health records and other data sources in NCHS surveys to improve efficiencies, quality, utility, and timeliness; 2) advance research on innovative methods to address priority health topics; 3) continue efforts to enhance the comparability of key indicators from NCHS data collections with other Federal surveys; 4) expand flexibility within surveys to address emerging health issues and monitor public health priorities; 5) incorporate advances in survey methodology and measurement for critical health surveys such as the National Health Interview Survey and the National Health and Nutrition Examination Survey; 6) support the NCHS data linkage program to enhance the value and utility of survey data and administrative records; and 7) continue to modernize data dissemination practices to improve access and availability of critical health information.

National Center for Science and Engineering Statistics (NCSES), National Science Foundation: Funding is requested to maintain NCSES' ongoing activities to measure research and development trends, the science and engineering workforce, U.S. competitiveness, and the condition and progress of STEM education. Efficiencies and cost savings are anticipated in the areas of: 1) the National Survey of College Graduates and the Survey of Doctorate Recipients with the accelerated implementation of advanced data collection techniques; 2) acquisition of external, open market data sets; and 3) reduced FY 2018 efforts on modernizing the functionality and usability of online data systems and tools.

Office of Research, Evaluation, and Statistics (ORES), Social Security Administration: Funding is requested to: 1) produce policy-relevant research, funding the three research centers of the Retirement Research Consortium and the two research centers of the Disability Research Consortium; 2) support surveys and link SSA administrative data to surveys (e.g., the Census Bureau's Survey of Income and Program Participation and Current Population Survey; and the University of Michigan Health and Retirement Study); 3) prepare a broad range of statistical databases, tables, and publications using our Analytics Research Center; and 4) provide statistical and analytical support for initiatives to improve Social Security.

Statistics of Income Division (SOI), Internal Revenue Service, Department of the Treasury: Funding is requested to provide support for ongoing SOI programs and to: 1) provide continued opportunities to study the impacts of tax law and economic changes on tax administration by further integrating existing administrative data with edited data to allow for improved data linkages across sectors, building on existing efforts that have reduced cost and improved timeliness by streamlining data processing, thus reducing the number of, or eliminating the need for, fields to be transcribed; 2) continue evaluation of and implement changes to sample designs for major programs to expand population coverage and improve estimation; 3) support innovative research with the potential to improve tax administration by working with experts within and outside Government; 4) improve available statistical information for high-income individuals by replacing existing high-income taxpayer information with more analytically useful statistics; and 5) continue efforts to modernize SOI's public communications efforts by developing extensive data visualizations, conducting social media outreach, and redesigning the public Tax Stats web pages.

Table 15–1. 2016-2018 BUDGET AUTHORITY FOR PRINCIPLE STATISTICAL AGENCIES[1]

(In millions of dollars)

Agency	Actual	Estimate	
	2016	2017	2018
Bureau of Economic Analysis	105	105	97
Bureau of Justice Statistics[2]	91	97	90
Bureau of Labor Statistics	609	608	608
Bureau of Transportation Statistics	26	26	26
Census Bureau[3]	1397	1394	1524
Salaries and Expenses/Current Surveys and Programs[3]	286	298	276
Periodic Censuses and Programs	1111	1096	1248
Economic Research Service	85	85	77
Energy Information Administration	122	122	118
National Agricultural Statistics Service[4]	168	168	186
National Center for Education Statistics[5]	295	293	293
Statistics[5]	125	122	122
Assessment	149	149	149
National Assessment Governing Board	8	8	8
National Center for Health Statistics	160	160	155
National Center for Science and Engineering Statistics, NSF[6]	58	59	57
Office of Research, Evaluation, and Statistics, SSA	15	14	20
Statistics of Income Division, IRS	38	34	34

[1] Reflects any rescissions and sequestration.

[2] Includes directly appropriated funds as well as funds transferred to BJS for research and statistical services; management and administrative costs; and assessments for rescissions.

[3] Salaries and Expenses/Current Surveys and Programs funds include discretionary and mandatory funds. FY15 Actuals are displayed in the prior FY15 budget structure; FY16 is the start of the new FY16 budget structure.

[4] Includes funds for the periodic Census of Agriculture of $42, $42, and $64 million in 2016, 2017, and 2018, respectively.

[5] Includes funds for salaries and expenses of $13, $14, and $14 million in 2016, 2017, and 2018, respectively, that are displayed in the Budget Appendix under the Institute of Education Sciences (IES). In addition, NCES manages the IES grant program for the State Longitudinal Data System which is funded at $35, $32, and $32 million in 2016, 2017, and 2018, respectively, and the EDFacts Initiative which is funded at $11 million in 2016, 2017, and 2018.

[6] Includes funds for salaries and expenses of $7.6, $8.6, and $8.7 million in 2016, 2017, and 2018, respectively.

16. INFORMATION TECHNOLOGY

Every day, millions of people interact with the Federal Government. Americans expect and deserve these experiences to be simple, fast, and helpful. The President proposes to spend nearly $95.7 billion for Information Technology to help make this expectation a reality. With this amount, Departments and agencies will continue ongoing work to significantly accelerate development and implementation of modern digital services and technology throughout the Federal Government.

FEDERAL INFORMATION TECHNOLOGY TODAY

Federal Spending on IT

Table 16–1. FEDERAL IT SPENDING
(In millions of dollars)

	2016	2017	2018
Department of Defense	38,061	40,844	42,521
Non-Defense	52,219	53,250	53,168
Total	90,280	94,094	95,688

Note: Defense IT spending includes estimates for IT investments for which details are classified and not reflected on the IT Dashboard. All spending estimates reflect data available as of May 8, 2017.

As shown in Table 16-1, the Federal Government Budget for IT is estimated to be $95.7 billion in FY 2018, an increase of 1.7 percent from FY 2017.[1] This figure is based on data collected on 4,087 civilian IT investments at major Federal agencies through the Capital Planning and Investment Control (CPIC) process. Excluded from this total dollar figure are small and independent agencies, national security systems, and all classified spending. The Department of Defense accounts for 44.4 percent of Federal IT spending.

There is significant variation in spending on IT among Executive branch Departments and agencies, as shown in Table 16-2, which displays IT spending by agency. The Department of Health and Human Services is the largest civilian agency by IT spending, while the bottom sixteen agencies only spend 10.7 percent.

IT Investments Overview

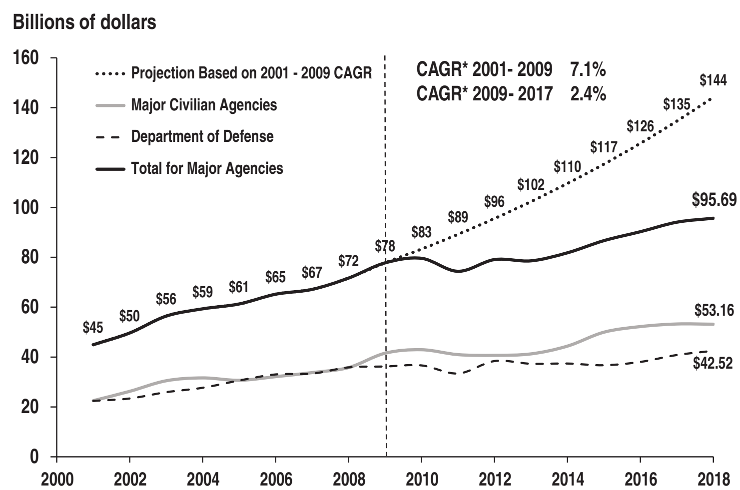
The FY 2018 President's Budget includes funding for 4,087 IT investments.[2] These investments support four main functions: mission delivery; administrative services and support systems; IT infrastructure, IT security, and IT management; and grants and other transferred funding to non-Federal organizations for IT (see Chart 16-2). As Chart 16-3 shows, IT investments can vary widely in size and scope. As a result, the largest 100 IT investments account for 57 percent of Federal IT spending.[3]

[1] Based on agencies represented on the IT Dashboard, located at http://itdashboard.gov.

[2] This figure excludes the Department of Defense.

[3] This does not include the Department of State, Nuclear Regulatory Commission, Department of Commerce, and the Department of Defense.

Chart 16-1. Trends in Federal IT Spending



*Compound Annual Growth Rate.

Source: Total IT spending for agencies reporting to the IT Dashboard. Department of Defense has provided estimates for classified IT investments not shown on the IT Dashboard. Chart reflects data available as of May 9, 2017.

Table 16–2. FY 2018 IT SPENDING BY AGENCY
(In Millions of dollars)

Agency	2018	Percent of Total
Department of Defense*	42,521	44.4%
Department of Health and Human Services	13,833	14.5%
Department of Homeland Security	6,833	7.1%
Department of the Treasury	4,259	4.5%
Department of Veterans Affairs	4,151	4.3%
Department of Transportation	3,425	3.6%
Department of Agriculture	2,958	3.1%
Department of Justice	2,852	3.0%
Department of Commerce	2,560	2.7%
Department of Energy	2,023	2.1%
Department of State	1,864	1.9%
Social Security Administration	1,651	1.7%
National Aeronautics and Space Administration	1,549	1.6%
Department of the Interior	1,185	1.2%
Department of Education	745	0.8%
Department of Labor	703	0.7%
General Services Administration	691	0.7%
U.S. Army Corps of Engineers	451	0.5%
Department of Housing and Urban Development	351	0.4%
Environmental Protection Agency	328	0.3%
Nuclear Regulatory Commission	159	0.2%
United States Agency for International Development	141	0.1%
Office of Personnel Management	141	0.1%
National Science Foundation	115	0.1%
National Archives and Records Administration	101	0.1%
Small Business Administration	100	0.1%
Total	**95,688.00**	**100.0%**

*Represents the total (unclassified and classified) topline estimates as of May 8, 2017.

Of the 4,087 IT investments within civilian agencies, 758 are major IT investments. IT investments are determined to be major if the associated investment has significant program or policy implications; has high executive visibility; has high development, operating, or maintenance costs; or requires special management attention because of its importance to the mission or function of the agency. Agencies are required to submit Business Cases for all major IT investments, which provide additional transparency into the cost, schedule, and performance data related to its spending.

OMB requires that agency Chief Information Officers (CIOs) provide risk ratings for all major IT investments on the public IT Dashboard website on a continuous basis and assess how risks for major development efforts are being addressed and mitigated. The Agency CIO rates each investment based on his or her best judgment, using a set of pre-established criteria. As a rule, the evaluation should reflect the CIO's assessment of the investment's ability to accomplish its goals. Chart 16-4 displays the latest CIO risk ratings for all major IT investments government-wide.

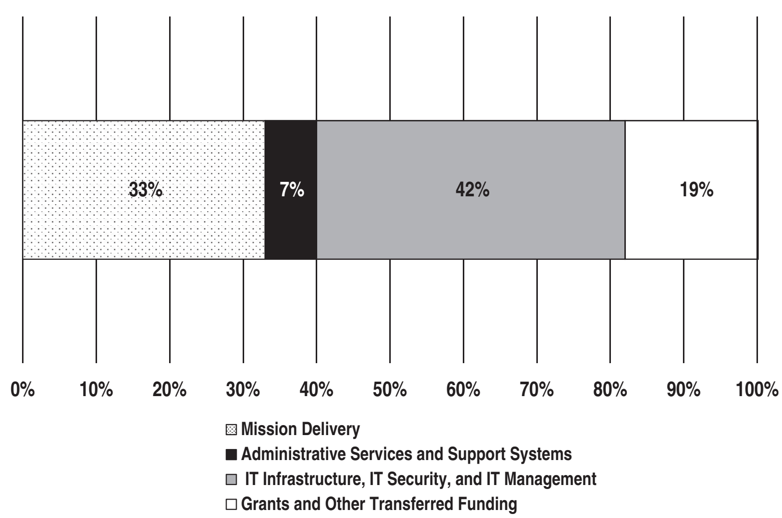
The IT Dashboard shows slight decreases in the general health of IT investments across government, as denoted by the increased proportion of CIO-rated "Green" investments on the IT Dashboard, which comprised 63 percent of all rated investments in March 2017 compared to 69 percent in 2012 (assessments based on total life cycle of investments).

Legacy IT Spending

Federal IT spending is categorized as either Operations & Maintenance (O&M) or Development, Modernization, and Enhancement (DME). Of the $48.5 billion reported to the IT Dashboard, 78.5 percent ($38.1 billion) is O&M spending.[4] Agencies are required to further break down the proportion of O&M spending not dedicated to provisioned services, such as cloud computing, as provisioned

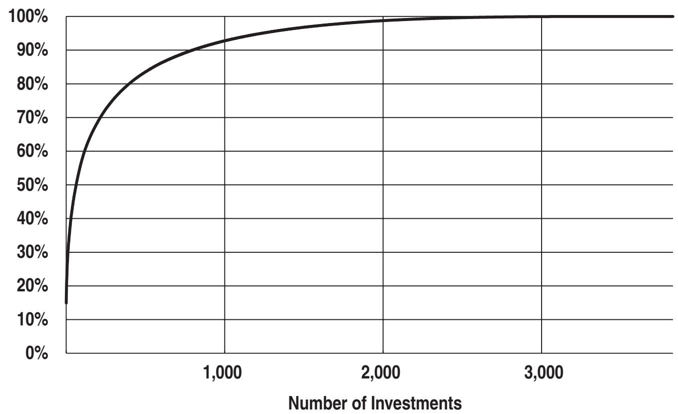
[4] This does not include the Department of State, Nuclear Regulatory Commission, Department of Commerce, and the Department of Defense.

Chart 16-2. IT Portfolio Summary



Note: The following agencies submitted only topline estimates to OMB and were excluded from this analysis: Department of Defense, Department of Commerce, Department of State, and Nuclear Regulatory Commission.

Chart 16-3. Number of Investments by Percentage of IT Spending, 2018



Note: The following agencies submitted only topline estimates to OMB and were excluded from this analysis: Department of Defense, Department of Commerce, Department of State, and Nuclear Regulatory Commission.

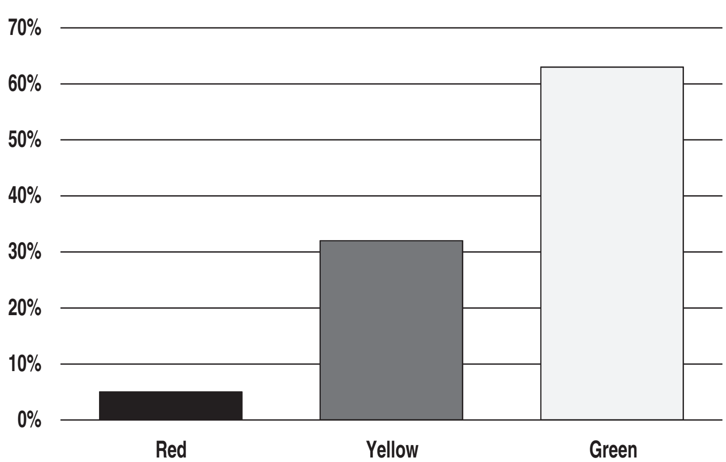
services are encouraged by OMB policies. This area of spending is often referred to as "legacy" spending, given that it is dedicated to maintaining agencies' existing physical IT investments. From FY 2015 through FY 2018, government-wide legacy spending as a percentage of total IT spending rose slightly from 68 percent to 70.3 percent. Aging legacy systems may pose efficiency and mission risk issues, such as ever-rising costs to maintain and an inability to meet current or expected mission requirements. Legacy systems may also operate with known security vulnerabilities that are either technically difficult or prohibitively expensive to address and thus may hinder agencies' ability to comply with critical statutory and policy cybersecurity requirements.

Chart 16-5 displays the percent of the government-wide IT funding going toward new capabilities (referred to as non-provisioned Development, Modernization and Enhancement or DME), O&M, and provisioned services.

MODERNIZING GOVERNMENT TECHNOLGOY

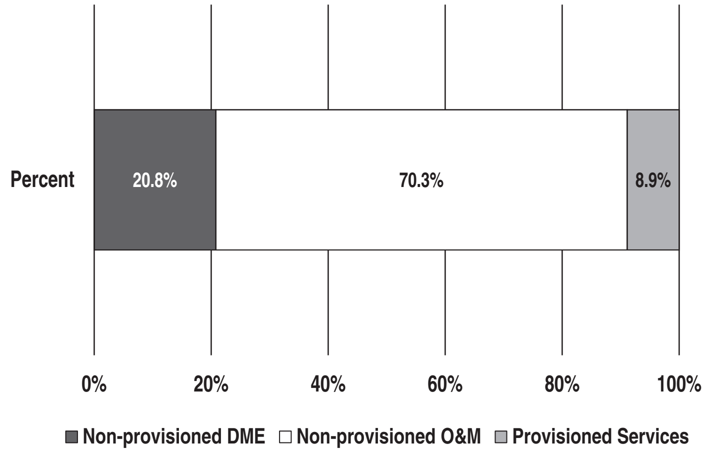
The Administration will work to modernize and improve government operations and service delivery by building modern citizen-facing digital services, buying more like a business, improving cybersecurity, investing in improved data analytics, and generating greater cost efficiencies. Modernization, in this sense, is not simply replacing individual outdated IT systems with newer ones; rather, it is a holistic approach to Federal IT that fundamentally transforms how agencies accomplish their missions. This approach entails reengineering underlying business processes and leveraging modern IT solutions,

Chart 16-4. CIO Risk Ratings for Investments



Note: Only 686 of the 719 business cases had CIO ratings associated with them as of 03/01/2017. The remaining business cases were associated with security investments and did not necessarily need to report CIO Ratings. Furthermore, DOD is not represented in this time period.

Chart 16-5. IT Spending by Category



Note: The following agencies submitted only topline estimates to OMB and were excluded from this analysis: Department of Defense, Department of Commerce, Department of State, and Nuclear Regulatory Commission.

such as cloud and shared services that drive efficiency and scale to address common business challenges across the Federal Government.

Modern Citizen-Facing Services

Americans expect and deserve their interactions with the Federal Government to be simple, fast, and helpful. The FY 2018 President's Budget provides funding for Federal civilian agencies to spend on IT focused primarily on providing services to the American public, including systems that will ensure veterans can easily access the benefits and services they have earned, students can receive financial aid, and small business owners can access affordable financing to start or expand their businesses.

The Administration will leverage the country's best private sector ideas, services, and vendors to deliver these projects efficiently and effectively. In addition, the Administration will accelerate efforts to recruit some of the country's top technical talent to modernize key services via programs such as the U.S. Digital Service (USDS).

Buying as a Business

The Federal Government is the world's largest buyer, yet does not adequately leverage its buying power or price information. Significant contract duplication means that agencies award multiple contracts for similar goods and services, and experience significant price variance for the exact same item. At the same time, acquisition processes remain slow and complicated, reflecting strategies that were designed more than a half-century ago for a paper-based world and fail to leverage modern private sector practices.

In FY 2018, the Administration will drive adoption of Category Management practices, which enable Federal agencies to buy targeted categories of products and services as a single enterprise using Best in Class solutions. Close to 70 percent of FY 2016 spending for laptop and desktop computers utilized these solutions, which reduced the number of standalone contracts by 5 percent. In addition, 47 percent of spending in this area went to small businesses, higher than the government-wide goal of 23 percent. In FY 2018, the Administration will continue to drive spending through approved vehicles, reduce the number of contracts, and meet small business goals.

Additional opportunities exist to modernize IT and human capital used in shared administrative processes. The Federal Government can modernize and share IT and services for common administrative functions by: (1) adopting government-wide standards; (2) using the standards to reduce contract duplication for IT and professional services; and (3) replacing legacy systems with modern solutions and services.

Implementation of these strategies has the potential to drive numerous benefits, including generating cost savings, increasing the Federal Government's ability to rapidly deploy best-in-class industry solutions, and enhancing cybersecurity.

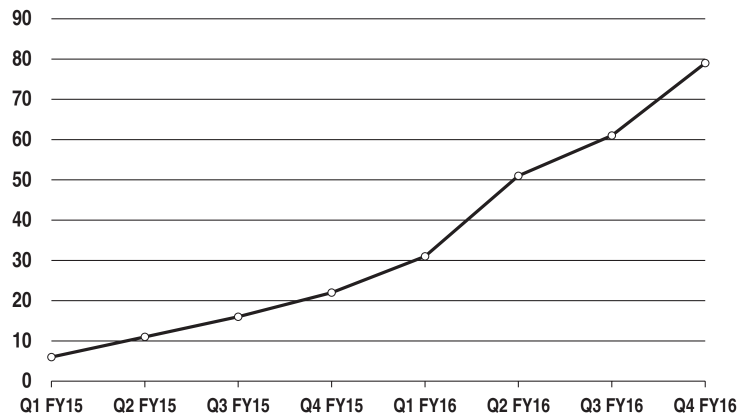
Cybersecurity

Strengthening the cybersecurity of Federal networks, systems, and data is one of the most important challenges we face as a nation. For the first time, this Budget includes discrete cyber program investments that align budget resources with the National Institute of Standards and Technology (NIST) Cybersecurity Framework. This will enable the alignment of budget, risk, and performance data in a consistent way across all Federal agencies.

Cybersecurity Risk and National Institute of Standards and Technology (NIST) Framework

The FY 2018 President's Budget recognizes the increasing interconnectedness of Federal information and information systems and provides resources for agency heads to manage the cybersecurity risk across their enterprise to ensure these risks do not impact the Federal Government as a whole. In particular, agency heads are required to manage risk commensurate with the magni-

Chart 16-6. Digital Projects in Production to Which Digital Experts have Contributed



tude of the harm that would result from unauthorized access, use, disclosure, disruption, modification, or destruction of information or information systems.

An effective enterprise risk management program promotes a common language to recognize and describe potential risks that can impact the agencies' missions and services to the public, including cybersecurity risk. The Federal Government leverages the NIST Cybersecurity Framework, which provides a standard for managing and reducing cybersecurity risks, and organizes capabilities around the five function areas: Identify, Protect, Detect, Respond, and Recover.

Accordingly, OMB and DHS continue to work with CIOs and Inspectors General (IG) across the Federal Government to align Federal Information Security Management Act (FISMA) metrics to the Framework. OMB also worked with agencies to align the FY 2018 Information Technology Capital Planning and Investment Control (CPIC) Guidance with the Framework to provide agencies with a tool to budget for cybersecurity capabilities that effectively manage risk. Comprehensive adoption of the NIST Framework will provide agencies with a common view and understanding of cybersecurity risk with other agencies, suppliers and vendors, and broader industry. This shared language around cybersecurity risk can lead to more sharing of best practices, common language for requirements and capabilities, and more joint efforts between public and private sectors to improve cybersecurity risk.

Continuous Diagnostics and Mitigation (CDM)

Additionally, the FY 2018 President's Budget continues to invest in the CDM Program. This program, managed by DHS and implemented across Federal agencies, is intended to create a common baseline of cybersecurity capability and protection across the Federal Government. The program provides Federal Departments and agencies with CDM-certified capabilities and tools that identify and prioritize cybersecurity risks on an ongoing basis and enable cybersecurity personnel to mitigate the most significant problems first. CDM tools also allow departments and agencies to better manage their IT assets, helping to reduce the risk to agencies' perimeters while providing near real-time awareness of agency networks and environments that can be aggregated into one enterprise-level dashboard.

Improving Data Analytics and IT Portfolio Management

Good decision-making requires useful data. Consistent, mission-oriented metrics create meaningful data for agencies to evaluate and enhance their performance. On the other hand, inconsistent metrics, unclear definitions, or metrics that do not align to agencies' missions create a compliance culture that ultimately inhibits performance. Currently, many reporting requirements are viewed as mere compliance exercises that are not consistently used to improve IT management and oversight. Thus, in FY 2018, the Administration will drive transformation of the Capital Planning and Investment Control (CPIC) process. This effort will increase the strategic value of IT and empower CIOs to better support agency missions through more effective IT management. The CPIC process is being redesigned as a strategic tool for agencies to implement the requirements set forth in the Federal Information Technology Acquisition Reform Act (FITARA).

To better utilize Federal IT spending data, the Federal Government must integrate data collection efforts, standardize reporting data, and find new opportunities to simplify, automate, and consolidate reporting. Such efforts can build on existing Federal initiatives such as the Digital Accountability and Transparency (DATA) Act of 2014 (Public Law 113–101), which improves government-wide financial reporting and data standards. Moreover, the Federal adoption of industry standards for tracking IT spending will improve the consistency, granularity, and quality of Federal IT spending information and thus drive more meaningful analysis, benchmarking, and planning.

Improving data quality and usability is the first step towards a more data-driven, responsive, and accountable Government.

Facilitating Modernization Efforts

Federal agencies have a poor track record of appropriately planning and budgeting for continuous modernization of their legacy IT systems. Further, transition to provisioned services, such as cloud and shared services, remains slow. The lack of proactive adoption of cloud and shared services has resulted in agencies accumulating billions of dollars in technical debt. To improve the traditional budget process, the FY 2018 President's Budget requires agencies to identify and budget for the modernization of specific high-risk legacy IT systems, with a particular focus on transitioning these systems to cloud and shared services.

Technology Modernization Fund

Beyond improvements to the traditional budget process, the FY 2018 President's Budget proposes placing a portion of the Federal Government's $95.7 billion in annual IT spending into a central Technology Modernization Fund designed to improve the management and oversight of Federal IT modernization projects. The Technology Modernization Fund will be dedicated to transitioning Federal agencies from IT infrastructure, systems, and services that are not cost-effective or secure to more efficient and secure technologies.

The Technology Modernization Fund will improve the success of the Federal Government's efforts to modernize its IT portfolio in multiple ways:

- First, an independent board of experts will evaluate agency proposals to ensure the Federal Government's most inefficient, ineffective, and highest-risk systems are targeted for modernization.
- Second, a repayment requirement will ensure the Technology Modernization Fund is self-sustaining and can continue to support modernization projects well beyond the initial infusion of capital.
- Third, experts in IT acquisition and development will provide integrated modernization expertise to agencies in implementing their modernization plans. Every project will benefit from centralized oversight and expertise, increasing the probability of success.
- Fourth, funding for all projects will be tied to real-world delivery of products. This approach ensures that agencies employ agile development techniques and prevents sunk costs.

Finally, by establishing a central fund that agencies must apply to and compete for, the Technology Modernization Fund will provide strong incentives for agencies to develop comprehensive, high quality modernization plans.

Cloud Adoption/Email Migration

Email and collaboration tools are essential to the day-to-day operations of Federal agencies; yet too few Federal agencies have basic collaboration tools such as real-time document sharing or video conferencing. In many cases, the tools being used by agencies are more than a decade old and run on legacy systems with growing maintenance costs. This situation is a hidden tax on productivity: it wastes time, creates missed opportunities, and slows coordination and creativity.

The majority of agencies who moved to cloud-based collaboration solutions experienced cost savings after just a few years of investment. These cost savings ranged from $500,000 per year for smaller agencies to $10 million per year for a larger agency such as the Department of Justice. For example, the National Oceanic and Atmospheric Administration (NOAA) was able to migrate to cloud-based email within six months and decommission its legacy servers over the next two years to achieve a total of $3.1 million dollars of cost savings per year.

Migrating the remaining Federal agencies from agency owned-and-operated email systems to cloud-based email will result in significant cost savings, improved security, and greater productivity.

17. FEDERAL INVESTMENT

Federal investment is the portion of Federal spending intended to yield long-term benefits for the economy and the country. It promotes improved efficiency within Federal agencies, as well as growth in the national economy by increasing the overall stock of capital. Investment spending can take the form of direct Federal spending or of grants to State and local governments.[1] It can be designated for physical capital, which creates a tangible asset that yields a stream of services over a period of years. It also can be for research and development, education, or training, all of which are intangible, but still increase income in the future or provide other long-term benefits.

Most presentations in this volume combine investment spending with spending intended for current use. This chapter focuses solely on Federal and federally financed investment. It provides a comprehensive picture of Federal investment spending for physical capital, research and development, and education and training, but because it disregards spending for non-investment activities, it provides only a partial picture of Federal support for specific national needs, such as defense and transportation.

[1] For more information on Federal grants to State and local governments see Chapter 14, "Aid to State and Local Governments," in this volume.

DESCRIPTION OF FEDERAL INVESTMENT

The distinction between investment spending and current outlays is a matter of judgment. The budget has historically employed a relatively broad classification of investment, encompassing physical investment, research, development, education, and training. The budget further classifies investments into those that are grants to State and local governments, such as grants for highways, and all other investments, or "direct Federal programs." This "direct Federal" category consists primarily of spending for assets owned by the Federal Government, such as weapons systems and buildings, but also includes grants to private organizations and individuals for investment, such as capital grants to Amtrak or higher education loans directly to individuals.

The definition of investment in a particular presentation can vary depending on specific considerations:

- Taking the approach of a traditional balance sheet would limit investment to only those physical assets owned by the Federal Government, excluding capital financed through grants and intangible assets such as research and education.
- Focusing on the role of investment in improving national productivity and enhancing economic growth would exclude items such as national defense assets, the direct benefits of which enhance national security rather than economic growth.
- Examining the efficiency of Federal operations would confine the coverage to investments that reduce costs or improve the effectiveness of internal Federal agency operations, such as computer systems.
- Considering a "social investment" perspective would broaden the coverage of investment beyond what is included in this chapter to include programs such as maternal health, certain nutrition programs, and substance abuse treatment, which are designed in part to prevent more costly health problems in future years.

This analysis takes the relatively broad approach of including all investment in physical assets, research and development, and education and training, regardless of ultimate ownership of the resulting asset or the purpose it serves. It does not include "social investment" items like health care or social services where it is difficult to separate out the degree to which the spending provides current versus future benefits. The definition of investment used in this section provides consistency over time (historical figures on investment outlays back to 1940 can be found in the Budget's historical tables).[2] Table 17–2 at the end of this section allows disaggregation of the data to focus on those investment outlays that best suit a particular purpose.

In addition to this basic issue of definition, there are two technical problems in the classification of investment data: the treatment of grants to State and local governments, and the classification of spending that could be shown in multiple categories.

First, for some grants to State and local governments it is the recipient jurisdiction, not the Federal Government, that ultimately determines whether the money is used to finance investment or current purposes. This analysis classifies all of the outlays into the category in which the recipient jurisdictions are expected to spend a majority of the money. General purpose fiscal assistance is classified as current spending, although some may be spent by recipient jurisdictions on investment.

Second, some spending could be classified in more than one category of investment. For example, outlays for construction of research facilities finance the acquisition of physical assets, but they also contribute to research and development. To avoid double counting, the outlays are

[2] The historical tables are available at *http://www.budget.gov/budget/Historicals* and on the Budget CD-ROM.

classified hierarchically in the category that is most commonly recognized as investment: physical assets, followed by research and development, followed by education and training. Consequently, outlays for the conduct of research and development do not include outlays for the construction of research facilities, because these outlays are included in the category for investment in physical assets.

When direct loans and loan guarantees are used to fund investment, the subsidy value is included as investment. The subsidies are classified according to their program purpose, such as construction or education and training. For more information about the treatment of Federal credit programs, refer to the section on Federal credit in Chapter 8, "Budget Concepts," in this volume.

This discussion presents spending for gross investment, without adjusting for depreciation.

Composition of Federal Investment Outlays

Major Federal Investment

The composition of major Federal investment outlays is summarized in Table 17–1. The categories include major public physical investment, the conduct of research and development, and the conduct of education and training. Total Federal investment outlays were $480.8 billion in 2016. Federal investment outlays are estimated to increase 10.5 percent to $531.3 billion in 2017, and decrease by 7.5 percent to $491.5 billion in 2018. In 2018, defense investment outlays are estimated to increase by $19.9 billion, while nondefense investment outlays are expected to decrease by $59.7 billion. The major factors contributing to these changes are described below.

Major Federal investment outlays will comprise an estimated 12.0 percent of total Federal outlays in 2018 and 2.5 percent of the Nation's gross domestic product. Greater detail on Federal investment is available in Table 17–2 at the end of this section. That table includes both budget authority and outlays.

Physical investment. Outlays for major public physical capital investment (hereafter referred to as "physical investment outlays") are estimated to increase by 12.8 percent in 2018 to $264.5 billion. Physical investment outlays are for construction and rehabilitation, the purchase of major equipment, and the purchase or sale of land and structures. Over two-thirds of these outlays are for direct physical investment by the Federal Government, with the

Table 17–1. COMPOSITION OF FEDERAL INVESTMENT OUTLAYS
(In billions of dollars)

Federal Investment	Actual 2016	Estimate 2017	Estimate 2018
Major public physical capital investment:			
Direct Federal:			
National defense	108.6	110.5	147.0
Nondefense	37.7	44.1	35.0
Subtotal, direct major public physical capital investment	146.2	154.6	182.0
Grants to State and local governments	79.7	79.8	82.5
Subtotal, major public physical capital investment	225.9	234.4	264.5
Conduct of research and development:			
National defense	72.7	73.3	56.7
Nondefense	62.4	67.3	60.8
Subtotal, conduct of research and development	135.1	140.6	117.5
Conduct of education and training:			
Grants to State and local governments	56.7	59.9	57.1
Direct Federal	63.1	96.4	52.3
Subtotal, conduct of education and training	119.8	156.3	109.5
Total, major Federal investment outlays	**480.8**	**531.3**	**491.5**
MEMORANDUM			
Major Federal investment outlays:			
National defense	181.2	183.8	203.7
Nondefense	299.6	347.5	287.8
Total, major Federal investment outlays	480.8	531.3	491.5
Miscellaneous physical investment:			
Commodity inventories	–*	–0.9	–1.8
Other physical investment (direct)	2.1	2.6	2.8
Total, miscellaneous physical investment	2.1	1.7	1.0
Total, Federal investment outlays, including miscellaneous physical investment	482.9	533.0	492.6

* $100 million or less

remainder being grants to State and local governments for physical investment.

Direct physical investment outlays by the Federal Government are primarily for national defense. Defense outlays for physical investment are estimated to be $147.0 billion in 2018, $36.5 billion higher than in 2017. Approximately 94 percent of defense physical investment outlays, or an estimated $139.2 billion, are for the procurement of weapons and other defense equipment, and the remainder is primarily for construction on military bases, family housing for military personnel, and Department of Energy defense facilities.[3]

Outlays for direct physical investment for nondefense purposes are estimated to be $35.0 billion in 2018. Outlays for 2018 include $19.5 billion for construction and rehabilitation. This amount includes funds for construction and rehabilitation of veterans' hospitals and Indian Health Service hospitals and clinics; water, power, and natural resources projects of the Corps of Engineers, and the Bureau of Reclamation within the Department of the Interior, energy projects of the Power Marketing Administrations within the Department of Energy, and the Tennessee Valley Authority; construction of office buildings by the General Services Administration; construction for the administration of justice programs (largely in Customs and Border Protection within the Department of Homeland Security); construction for embassy security; facilities for space and science programs of the National Aeronautics and Space Administration, Department of Energy, and National Science Foundation; and Postal Service facilities. Outlays for this category are estimated to decrease by $6.6 billion in 2018 primarily because outlays for 2017 include upward reestimates of the cost of past guaranteed loans for the construction and repair of apartment buildings, hospitals, and other health care facilities. Additional decreases are within energy activities, which are caused by decreases in Tennessee Valley Authority capacity expansion projects and other capital expenditures, the Budget proposal to repeal the Department of Energy's Western Area Power Administration's authority to borrow from Treasury to fund transmission projects that are best carried out by the private sector, and the expiration in 2017 of the program eligibility period for the grants for specified energy property in lieu of tax credits.

Outlays for grants to State and local governments for physical investment are estimated to be $82.5 billion in 2018, a 3.4 percent increase over the 2017 estimate of $79.8 billion. Nearly three-quarters of these outlays are for transportation programs, primarily for highways. Other major grants for physical investment fund sewage treatment plants, community and regional development, public housing, and other State and tribal assistance grants. The increase in 2018 is more than accounted for by the Administration's infrastructure initiative, which will begin to rebuild and modernize the Nation's physical infrastructure, to help create jobs, maintain America's economic competitiveness, and connect communities and people to more opportunities. While the Administration continues to work with the Congress, States, localities, and other infrastructure stakeholders to finalize the suite of Federal programs that will support this effort, the 2018 Budget includes $200 billion in budget authority related to the infrastructure initiative, from which $5 billion in outlays are estimated to occur in 2018. Those outlays are illustratively presented as grants to State and local governments.

Conduct of research and development. Outlays for the conduct of research and development are estimated to be $117.5 billion in 2018, a $23.1 billion or 16.4 percent decrease from 2017. Much of this decrease is due to the narrowing of the definition of "development" to experimental development," which was implemented for the FY 2018 President's Budget (as described in Chapter 18, "Research and Development," in this volume). Using the definition applied to the 2017 data, 2018 research and development outlays are approximately 3 percent higher than 2017. Nearly half of research and development outlays are for national defense.[4] Physical investment for research and development facilities and equipment is included in the physical investment category.

Non-defense outlays for the conduct of research and development are estimated to be $60.8 billion in 2018, a $6.5 billion or 9.7 percent decrease below 2017. Most investments in this area are funded through programs in the National Institutes of Health, the National Aeronautics and Space Administration, the Department of Energy, and the National Science Foundation.

A discussion of research and development funding can be found in Chapter 18, "Research and Development," in this volume.

Conduct of education and training. Outlays for the conduct of education and training were $119.8 billion in 2016. Outlays are estimated to increase to $156.3 billion in 2017, and decrease in 2018 to $109.5 billion. Grants to State and local governments for this category are estimated to be $57.1 billion in 2018, 40.8 percent of the total. They include education programs for the disadvantaged and individuals with disabilities, training programs in the Department of Labor, Head Start, and other education programs. Direct Federal education and training outlays in 2018 are estimated to be $52.3 billion, which is a decrease of $44.1 billion, or 45.7 percent, from 2017. Programs in this category primarily consist of aid for higher education through student financial assistance, loan subsidies, and veterans' education, training, and rehabilitation. The decrease in outlays for the conduct of education and training from 2017 to 2018 is the result of revisions in the cost of past student loan activity, and budget proposals including the elimination of federally subsidized student loans.

This category does not include outlays for education and training of Federal civilian and military employees. Outlays for education and training that are for physical

[3] The increase in outlays for defense physical investment from 2017 to 2018 is due in part to a redefinition of categories, as certain defense outlays for acquisition of major equipment were formerly classified as research and development. The amounts reclassified were $31.0 billion in budget authority and $27.4 billion in outlays.

[4] The apparent $16.6 billion decrease from 2017 to 2018 is the result of the redefinition of defense investment outlays formerly classified as research and development, as explained in the previous footnote.

investment and for research and development are in the categories for physical investment and the conduct of research and development.

Miscellaneous Physical Investment

In addition to the categories of major Federal investment, several miscellaneous categories of investment outlays are shown at the bottom of Table 17–1. These items, all for physical investment, are generally unrelated to improving Government operations or enhancing economic activity.

Outlays for commodity inventories are for the purchase or sale of agricultural products pursuant to farm price support programs and other commodities. Sales are estimated to exceed purchases by $1.8 billion in 2018.

Outlays for other miscellaneous physical investment are estimated to be $2.8 billion in 2018. This category consists entirely of direct Federal outlays and includes primarily conservation programs.

Detailed Table on Investment Spending

The following table provides data on budget authority as well as outlays for major Federal investment divided according to grants to State and local governments and direct Federal spending. Miscellaneous investment is not included because it is generally unrelated to improving Government operations or enhancing economic activity. Funding for the Administration's infrastructure initiative is illustratively presented in the table within the grants to State and local governments and specifically in the "other" line under the "other construction and rehabilitation" heading.

Table 17–2. FEDERAL INVESTMENT BUDGET AUTHORITY AND OUTLAYS: GRANT AND DIRECT FEDERAL PROGRAMS
(In millions of dollars)

Description	Budget Authority			Outlays		
	2016 Actual	2017 Estimate	2018 Estimate	2016 Actual	2017 Estimate	2018 Estimate
GRANTS TO STATE AND LOCAL GOVERNMENTS						
Major public physical investment:						
Construction and rehabilitation:						
Transportation:						
Highways	41,327	42,986	43,057	43,416	41,924	42,527
Mass transportation	12,878	12,940	12,415	12,271	12,316	12,574
Rail transportation	1,447	1,445	807	3,505	4,443	1,169
Air and other transportation	3,677	3,676	3,190	3,365	3,853	3,842
Subtotal, transportation	59,329	61,047	59,469	62,557	62,536	60,112
Other construction and rehabilitation:						
Pollution control and abatement	2,880	2,976	2,511	3,490	3,473	3,227
Community and regional development	4,812	5,859	142	7,067	7,579	8,117
Housing assistance	3,600	3,585	1,164	4,150	3,672	3,513
Other	729	867	200,348	632	622	5,578
Subtotal, other construction and rehabilitation	12,021	13,287	204,165	15,339	15,346	20,435
Subtotal, construction and rehabilitation	71,350	74,334	263,634	77,896	77,882	80,547
Other physical assets	2,023	1,993	1,879	1,802	1,947	1,959
Subtotal, major public physical investment	73,373	76,327	265,513	79,698	79,829	82,506
Conduct of research and development:						
Agriculture	336	336	326	341	341	341
Other	181	190	177	141	149	134
Subtotal, conduct of research and development	517	526	503	482	490	475
Conduct of education and training:						
Elementary, secondary, and vocational education	38,287	38,115	34,152	37,552	38,810	38,224
Higher education	362	361	249	377	408	362
Research and general education aids	780	780	64	768	788	272
Training and employment	3,314	3,319	2,147	3,261	3,700	2,749
Social services	12,674	12,561	11,908	12,042	13,140	12,147
Agriculture	418	418	413	398	434	583
Other	2,347	1,752	2,347	2,326	2,612	2,812
Subtotal, conduct of education and training	58,182	57,306	51,280	56,724	59,892	57,149
Subtotal, grants for investment	**132,072**	**134,159**	**317,296**	**136,904**	**140,211**	**140,130**

Table 17–2. FEDERAL INVESTMENT BUDGET AUTHORITY AND OUTLAYS: GRANT AND DIRECT FEDERAL PROGRAMS—Continued

(In millions of dollars)

Description	Budget Authority			Outlays		
	2016 Actual	2017 Estimate	2018 Estimate	2016 Actual	2017 Estimate	2018 Estimate
DIRECT FEDERAL PROGRAMS						
Major public physical investment:						
Construction and rehabilitation:						
National defense:						
Military construction and family housing	6,679	6,549	8,970	6,253	6,353	7,658
Atomic energy defense activities and other	145	183	280	109	162	222
Subtotal, national defense	6,824	6,732	9,250	6,362	6,515	7,880
Nondefense:						
International affairs	1,602	2,267	499	1,006	1,413	1,450
General science, space, and technology	1,290	1,274	1,197	1,233	1,220	1,258
Water resources projects	2,998	3,266	2,114	2,933	3,498	3,237
Other natural resources and environment	1,176	1,178	923	1,092	1,195	1,052
Energy	3,190	4,669	–2,186	3,158	4,377	2,511
Postal service	402	519	527	402	627	559
Transportation	262	286	127	12	267	242
Veterans hospitals and other health facilities	3,827	2,947	3,649	3,521	3,319	3,582
Administration of justice	1,904	1,954	2,646	1,406	1,859	1,548
GSA real property activities	2,399	2,341	2,250	949	1,667	2,197
Other construction	5,150	6,554	1,203	4,920	6,673	1,890
Subtotal, nondefense	24,200	27,255	12,949	20,632	26,115	19,526
Subtotal, construction and rehabilitation	31,024	33,987	22,199	26,994	32,630	27,406
Acquisition of major equipment:						
National defense:						
Department of Defense	115,968	116,908	153,075	101,893	103,596	138,728
Atomic energy defense activities	483	416	420	329	429	438
Subtotal, national defense	116,451	117,324	153,495	102,222	104,025	139,166
Nondefense:						
General science and basic research	398	426	322	337	419	324
Postal service	1,388	1,413	1,095	1,392	1,260	1,088
Air transportation	3,506	3,859	2,902	3,364	3,999	3,235
Water transportation (Coast Guard)	1,735	1,689	1,109	1,099	1,094	1,531
Hospital and medical care for veterans	1,430	1,593	1,368	1,398	1,274	1,328
Federal law enforcement activities	1,698	929	989	1,648	1,296	970
Department of the Treasury (fiscal operations)	290	327	110	263	353	216
National Oceanic and Atmospheric Administration	2,229	2,308	1,717	2,001	1,908	1,816
Other	4,892	4,685	4,395	5,205	5,813	4,622
Subtotal, nondefense	17,566	17,229	14,007	16,707	17,416	15,130
Subtotal, acquisition of major equipment	134,017	134,553	167,502	118,929	121,441	154,296
Purchase or sale of land and structures:						
National defense	–26	–38	–38	–26	–32	–32
Natural resources and environment	351	307	117	217	279	217
General government	....	....	15	....	....	4
Other	155	159	159	130	278	149
Subtotal, purchase or sale of land and structures	480	428	253	321	525	338
Subtotal, major public physical investment	165,521	168,968	189,954	146,244	154,596	182,040
Conduct of research and development:						
National defense:						
Defense military	71,312	71,181	53,382	66,609	67,118	49,840
Atomic energy and other	6,301	6,175	7,104	6,045	6,186	6,867
Subtotal, national defense	77,613	77,356	60,486	72,654	73,304	56,707
Nondefense:						
International affairs	288	263	114	288	289	263
General science, space, and technology:						

Table 17–2. FEDERAL INVESTMENT BUDGET AUTHORITY AND OUTLAYS: GRANT AND DIRECT FEDERAL PROGRAMS—Continued

(In millions of dollars)

Description	Budget Authority			Outlays		
	2016 Actual	2017 Estimate	2018 Estimate	2016 Actual	2017 Estimate	2018 Estimate
NASA	12,737	12,801	9,697	11,416	11,655	9,198
National Science Foundation	5,601	5,650	4,951	5,120	5,225	5,037
Department of Energy	4,526	4,514	3,830	4,344	4,751	4,316
Subtotal, general science, space, and technology	22,864	22,965	18,478	20,880	21,631	18,551
Energy	3,331	3,328	1,600	2,776	2,892	2,734
Transportation:						
Department of Transportation	745	729	737	729	747	743
NASA	494	476	502	581	450	480
Other transportation	18	23	38	21	20	28
Subtotal, transportation	1,257	1,228	1,277	1,331	1,217	1,251
Health:						
National Institutes of Health	30,698	30,761	24,984	28,358	31,092	29,046
Other health	1,802	1,781	1,498	1,508	2,341	1,466
Subtotal, health	32,500	32,542	26,482	29,866	33,433	30,512
Agriculture	1,694	1,690	1,515	1,621	1,654	1,683
Natural resources and environment	2,277	2,297	1,774	2,216	2,339	1,917
National Institute of Standards and Technology	616	616	520	431	619	569
Hospital and medical care for veterans	1,222	1,346	1,357	1,166	1,304	1,340
All other research and development	1,541	1,686	1,509	1,339	1,445	1,514
Subtotal, nondefense	67,590	67,961	54,626	61,914	66,823	60,334
Subtotal, conduct of research and development	145,203	145,317	115,112	134,568	140,127	117,041
Conduct of education and training:						
Elementary, secondary, and vocational education	1,357	1,447	1,580	1,370	1,343	1,339
Higher education	37,829	75,569	26,362	38,899	71,809	27,326
Research and general education aids	2,272	2,271	2,216	2,278	2,247	2,237
Training and employment	2,294	2,270	1,997	2,111	2,211	2,655
Health	1,744	1,729	1,333	1,669	1,728	1,687
Veterans education, training, and rehabilitation	14,648	16,667	13,991	14,579	14,758	14,852
General science and basic research	924	861	768	822	797	836
International affairs	618	607	302	625	647	554
Other	825	874	786	736	855	850
Subtotal, conduct of education and training	62,511	102,295	49,335	63,089	96,395	52,336
Subtotal, direct Federal investment	**373,235**	**416,580**	**354,401**	**343,901**	**391,118**	**351,417**
Total, Federal investment	**505,307**	**550,739**	**671,697**	**480,805**	**531,329**	**491,547**

18. RESEARCH AND DEVELOPMENT

The President's 2018 Budget provides $117.7 billion for Federal research and development (R&D), including the conduct of R&D and investments in R&D facilities and equipment (see Table 18-2). This figure applies the new change to the R&D definitions starting with the FY 2018 Budget per OMB Circular A-11, which was released in July 2016 under the previous Administration. Under the former R&D definitions, the President's 2018 Budget provides $151.2 billion for R&D. This is a $2.8 billion (or 2%) increase over the FY 2017 annualized Continuing Resolution level. Detailed R&D definitions and a discussion of the definition change are available in Section II.

I. FEDERAL RESEARCH AND DEVELOPMENT FUNDING

Since the founding of this nation, innovation in science and technology has been a cornerstone of America's economic progress. The private sector funds and performs the majority of U.S. R&D, but the Federal government has an important role in funding R&D in areas that industry does not have a strong incentive to invest in and in areas of special concern. Prior federally-funded R&D has greatly advanced human knowledge, and applications of that knowledge permeate our lives—from the phones we carry, to the cars we drive, to the medicines that return us to health. Recognizing the critical importance of fostering innovation to promote America's interests, including competitiveness, economic growth, and national security, the 2018 Budget supports investments in basic research, early-stage applied research, and technology transfer efforts that will lead to the breakthroughs of the future.

Table 18–1. TOTAL FEDERAL R&D FUNDING BY AGENCY AT THE BUREAU OR ACCOUNT LEVEL

(Mandatory and discretionary budget authority [1], dollar amounts in millions)

	2016 Actual	2017 Annualized CR	2018 Proposed [2]	Dollar Change: 2017 to 2018	Percent Change: 2017 to 2018
By Agency					
Agriculture	2,657	2,614	1,991	–623	–24%
Agriculture Research Service	1,380	1,378	805	–573	–42%
Animal and Plant Health Inspection Service	39	40	40	0	0%
Economic Research Service	85	85	77	–8	–9%
Foreign Agricultural Service	1	1	1	0	0%
Forest Service	304	264	253	–11	–4%
National Agricultural Statistics Service	9	9	9	0	0%
National Institute of Food and Agriculture	839	837	806	–31	–4%
Commerce	1,681	1,811	1,567	–244	–13%
Bureau of the Census	227	224	228	4	2%
National Institute of Standards and Technology	762	762	651	–111	–15%
National Oceanic and Atmospheric Administration	681	812	675	–137	–17%
National Telecommunications and Information Administration	11	13	13	0	0%
Defense [3]	71,421	71,196	53,396	–17,800	–25%
Military Construction	90	11	0	–11	–100%
Military Personnel	432	408	442	34	8%
Defense Health Program	1,359	296	335	39	13%
Research, Development, Test, and Evaluation	69,540	70,481	52,619	–17,862	–25%
Education	254	257	246	–11	–4%
Institute of Education Sciences	230	233	222	–11	–5%
Office of Postsecondary Education	2	3	3	0	0%
Office of Special Education and Rehabilitative Services	22	21	21	0	0%
Energy	15,217	15,007	13,408	–1,599	–11%
Fossil Energy Research and Development	608	622	270	–352	–57%
Science	5,377	5,295	4,433	–862	–16%
Electricity Delivery and Energy Reliability	141	135	114	–21	–16%

Table 18–1. TOTAL FEDERAL R&D FUNDING BY AGENCY AT THE BUREAU OR ACCOUNT LEVEL—Continued
(Mandatory and discretionary budget authority [1], dollar amounts in millions)

	2016 Actual	2017 Annualized CR	2018 Proposed [2]	Dollar Change: 2017 to 2018	Percent Change: 2017 to 2018
Nuclear Energy	889	887	701	–186	–21%
Energy Efficiency and Renewable Energy	1,434	1,434	572	–862	–60%
Advanced Research Projects Agency—Energy	291	290	0	–290	–100%
Defense Environmental Cleanup	22	23	28	5	22%
National Nuclear Security Administration	6,440	6,306	7,275	969	15%
Power Marketing Administration	15	15	15	0	0%
Environmental Protection Agency	516	510	277	–233	–46%
Science and Technology	496	494	264	–230	–47%
Hazardous Substance Superfund	19	15	12	–3	–20%
Inland Oil Spill Programs	1	1	1	0	0%
Health and Human Services	32,243	32,322	26,144	–6,178	–19%
Administration for Children and Families	4	16	17	1	6%
Centers for Disease Control and Prevention	398	477	479	2	0%
Centers for Medicare and Medicaid Services	21	21	18	–3	–14%
Departmental Management	89	102	109	7	7%
Food and Drug Administration	502	410	410	0	0%
Health Resources and Services Administration	31	31	18	–13	–42%
National Institutes of Health [4]	31,198	31,265	25,093	–6,172	–20%
Homeland Security	582	707	564	–143	–20%
Domestic Nuclear Detection Office	78	78	73	–5	–6%
National Protection and Programs Directorate	0	6	11	5	83%
Science and Technology	484	595	437	–158	–27%
Transportation Security Administration	0	5	20	15	300%
United States Coast Guard	20	20	20	0	0%
Office of the Undersecretary for Management	0	3	3	0	0%
Interior	973	989	818	–171	–17%
Bureau of Indian Affairs and Bureau of Indian Education	5	5	5	0	0%
Bureau of Land Management	22	23	24	1	4%
Bureau of Reclamation	96	120	81	–39	–33%
Bureau of Safety and Environmental Enforcement	27	27	25	–2	–7%
Department-Wide Programs	10	6	3	–3	–50%
National Park Service	27	27	26	–1	–4%
Office of Surface Mining Reclamation and Enforcement	4	1	0	–1	–100%
United States Fish and Wildlife Service	32	32	15	–17	–53%
United States Geological Survey	677	675	561	–114	–17%
Bureau of Ocean Energy Management	73	73	78	5	7%
National Aeronautics and Space Administration [5]	13,253	13,329	10,327	–3,002	–23%
Space Operations	2,700	2,722	2,139	–583	–21%
Science	5,532	5,522	5,652	130	2%
Exploration	3,601	3,603	963	–2,640	–73%
Aeronautics	494	476	502	26	5%
Space Technology	632	683	674	–9	–1%
Safety, Security and Mission Services	272	271	269	–2	–1%
Construction & Environmental Compliance Restoration	22	52	128	76	146%
National Science Foundation	6,010	6,106	5,371	–735	–12%
Research and Related Activities	5,387	5,476	4,840	–636	–12%
Education and Human Resources	405	430	348	–82	–19%
Major Research Equipment and Facilities Construction	218	200	183	–17	–9%
Patient-Centered Outcomes Research Trust Fund	469	463	533	70	15%
Transportation	927	914	923	9	1%
Federal Aviation Administration	425	423	410	–13	–3%
Federal Highway Administration	323	313	334	21	7%
Federal Motor Carrier Safety Administration	9	9	9	0	0%
Federal Railroad Administration	43	43	43	0	0%

Table 18–1. TOTAL FEDERAL R&D FUNDING BY AGENCY AT THE BUREAU OR ACCOUNT LEVEL—Continued

(Mandatory and discretionary budget authority [1], dollar amounts in millions)

	2016 Actual	2017 Annualized CR	2018 Proposed [2]	Dollar Change: 2017 to 2018	Percent Change: 2017 to 2018
National Highway Traffic Safety Administration	92	92	92	0	0%
Office of the Secretary	15	13	14	1	8%
Pipeline and Hazardous Materials Safety Administration	20	21	21	0	0%
Smithsonian Institution	251	255	304	49	19%
Veterans Affairs	1,222	1,346	1,357	11	1%
Medical Care Support	611	673	717	44	7%
Medical and Prosthetic Research	611	673	640	–33	–5%

[1] This table shows funding levels for Departments or Independent agencies with more than $200 million in R&D activities in 2018.

[2] The application of the new Experimental Development definition is shown starting in FY 2018. FY 2016 & 2017 numbers reflect use of the former Development definition.

[3] Unlike previous years, totals for development spending in FY 2018 do not include the DOD Budget Activity 07 (Operational System Development) due to changes in the definition of development. These funds are requested in the FY 2018 budget request and support the development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

[4] NIH includes AHRQ funding as the FY 2018 Budget proposes that AHRQ be consolidated within NIH.

[5] The decrease in NASA's FY 2018 development funding (compared to prior years) can be attributed to the application of the new experimental development definition starting in FY 2018 as well as the transition of several large Human Exploration and Space Operations programs from the development phase to operations in FY 2018.

II. FEDERAL R&D DATA

R&D is the collection of efforts directed toward gaining greater knowledge or understanding and applying knowledge toward the production of useful materials, devices, and methods. R&D investments can be characterized as basic research, applied research, development, R&D equipment, or R&D facilities. The Office of Management and Budget (OMB) has used those or similar categories in its collection of R&D data since 1949. Starting with the FY 2018 Budget, OMB implemented a refinement to the categories by more narrowly defining "development" as "experimental development" to better align with the data collected by the National Science Foundation on its multiple R&D surveys, and to be consistent with international standards. An explanation of this change is included below. Note that R&D cross-cuts in specific topical areas as mandated by law will be reported separately in forthcoming Supplements to the President's 2018 Budget.

Background on Federal R&D Funding

More than 20 Federal agencies fund R&D in the United States. The character of the R&D that these agencies fund depends on the mission of each agency and on the role of R&D in accomplishing it. Table 18–2 shows agency-by-agency spending on basic research, applied research, experimental development, and R&D equipment and facilities.

Basic research is systematic study directed toward a fuller knowledge or understanding of the fundamental aspects of phenomena and of observable facts without specific applications towards processes or products in mind. Basic research, however, may include activities with broad applications in mind.

Applied research is systematic study to gain knowledge or understanding necessary to determine the means by which a recognized and specific need may be met.

Experimental development is creative and systematic work, drawing on knowledge gained from research and practical experience, which is directed at producing new products or processes or improving existing products or processes. Like research, experimental development will result in gaining additional knowledge.

Research and development equipment includes acquisition or design and production of movable equipment, such as spectrometers, research satellites, detectors, and other instruments. At a minimum, this category includes programs devoted to the purchase or construction of R&D equipment.

Research and development facilities include the acquisition, design, and construction of, or major repairs or alterations to, all physical facilities for use in R&D activities. Facilities include land, buildings, and fixed capital equipment, regardless of whether the facilities are to be used by the Government or by a private organization, and regardless of where title to the property may rest. This category includes such fixed facilities as reactors, wind tunnels, and particle accelerators.

Comprehensive Government-wide efforts are currently underway to increase the accuracy and consistency of the R&D budget via a collaborative community of practice of Federal agencies which have been working to identify best practices and standards for the most accurate classification and reporting of R&D activities. For example, to better align with National Science Foundation R&D surveys and international standards, OMB has this year narrowed the definition of development to "experimental development." This definition, unlike the previous definition of development, excludes user demonstrations of a system for a specific use case and pre-production development (i.e., non-experimental work on a product or system before it goes into full production). Because of this recent change, the Development amounts reported are significantly lower than in previous years. In particular, the change in definition of experimental development reduces R&D spending by approximately $33.5 billion in FY 2018.[1]

[1] The new "experimental development" definition is only being applied in FY 2018 and not to prior year data (FY 2016 and 2017).

Table 18–2. FEDERAL RESEARCH AND DEVELOPMENT SPENDING

(Mandatory and discretionary budget authority[1], dollar amounts in millions)

	2016 Actual	2017 Annualized CR	2018 Proposed[2]	Dollar Change: 2017 to 2018	Percent Change: 2017 to 2018
By Agency					
Defense[3]	71,421	71,196	53,396	–17,800	–25%
Health and Human Services	32,243	32,322	26,144	–6,178	–19%
Energy	15,217	15,007	13,408	–1,599	–11%
NASA4	13,253	13,329	10,327	–3,002	–23%
National Science Foundation	6,010	6,106	5,371	–735	–12%
Agriculture	2,657	2,614	1,991	–623	–24%
Commerce	1,681	1,811	1,567	–244	–13%
Veterans Affairs	1,222	1,346	1,357	11	1%
Transportation	927	914	923	9	1%
Interior	973	989	818	–171	–17%
Homeland Security	582	707	564	–143	–20%
Patient-Centered Outcomes Research Trust Fund	469	463	533	70	15%
Smithsonian Institution	251	255	304	49	19%
Environmental Protection Agency	516	510	277	–233	–46%
Education	254	257	246	–11	–4%
Other	626	617	471	–146	–24%
TOTAL	148,302	148,443	117,697	–30,746	–21%
Total (using the former definition of Development)	***148,302***	***148,443***	***151,244***	***2,801***	***2%***
Basic Research					
Defense	2,243	2,121	2,238	117	6%
Health and Human Services	15,630	15,881	12,816	–3,065	–19%
Energy	4,609	4,668	3,978	–690	–15%
NASA	3,580	3,617	3,717	100	3%
National Science Foundation	4,841	4,900	4,280	–620	–13%
Agriculture	1,031	1,073	952	–121	–11%
Commerce	235	234	200	–34	–15%
Veterans Affairs	386	390	394	4	1%
Transportation	....	....	....	....	....
Interior	54	54	44	–10	–19%
Homeland Security	41	50	42	–8	–16%
Patient-Centered Outcomes Research Trust Fund	....	....	....	....	....
Smithsonian Institution	220	218	226	8	4%
Environmental Protection Agency	....	....	....	....	....
Education	24	33	31	–2	–6%
Other	19	18	18	0	0%
SUBTOTAL	32,913	33,257	28,936	–4,321	–13%
Applied Research					
Defense	5,058	4,947	5,097	150	3%
Health and Human Services	16,422	16,235	13,158	–3,077	–19%
Energy	6,469	6,377	6,749	372	6%
NASA	2,457	2,403	2,527	124	5%
National Science Foundation	760	750	671	–79	–11%
Agriculture	1,119	1,036	973	–63	–6%
Commerce	868	920	755	–165	–18%
Veterans Affairs	804	924	936	12	1%
Transportation	615	619	623	4	1%
Interior	780	778	632	–146	–19%

Table 18–2. FEDERAL RESEARCH AND DEVELOPMENT SPENDING—Continued

(Mandatory and discretionary budget authority [1], dollar amounts in millions)

	2016 Actual	2017 Annualized CR	2018 Proposed [2]	Dollar Change: 2017 to 2018	Percent Change: 2017 to 2018
Homeland Security	179	177	152	–25	–14%
Patient-Centered Outcomes Research Trust Fund	469	463	533	70	15%
Smithsonian Institution	....	....	....	....	....
Environmental Protection Agency	433	429	234	–195	–45%
Education	132	132	130	–2	–2%
Other	482	439	315	–124	–28%
SUBTOTAL	37,047	36,629	33,485	–3,144	–9%
Development [2]					
Defense [3]	64,011	64,113	46,047	–18,066	–28%
Health and Human Services	30	26	26	0	0%
Energy	2,981	2,868	1,705	–1,163	–41%
NASA [4]	7,194	7,257	3,955	–3,302	–46%
National Science Foundation	....	....	....	....	....
Agriculture	177	175	160	–15	–9%
Commerce	264	261	236	–25	–10%
Veterans Affairs	32	32	27	–5	–16%
Transportation	277	260	268	8	3%
Interior	137	155	140	–15	–10%
Homeland Security	354	480	370	–110	–23%
Patient-Centered Outcomes Research Trust Fund	....	....	....	....	....
Smithsonian Institution	....	....	....	....	....
Environmental Protection Agency	78	76	42	–34	–45%
Education	98	92	85	–7	–8%
Other	127	162	133	–29	–18%
SUBTOTAL	75,760	75,957	53,194	–22,763	–30%
Subtotal (using the former definition of Development)	***75,760***	***75,957***	***86,741***	***10,784***	***14%***
Facilities and Equipment					
Defense	109	15	14	–1	–7%
Health and Human Services	161	180	144	–36	–20%
Energy	1,158	1,094	976	–118	–11%
NASA	22	52	128	76	146%
National Science Foundation	409	456	420	–36	–8%
Agriculture	330	330	–94	–424	–128%
Commerce	314	396	376	–20	–5%
Veterans Affairs	....	....	....	....	....
Transportation	35	35	32	–3	–9%
Interior	2	2	2	0	0%
Homeland Security	8	0	0	0	0%
Patient-Centered Outcomes Research Trust Fund	....	....	....	....	....
Smithsonian Institution	31	37	78	41	111%
Environmental Protection Agency	5	5	1	–4	–80%
Education	....	....	....	....	....
Other	–2	–2	5	7	–350%
SUBTOTAL	2,582	2,600	2,082	–518	–20%

[1] This table shows funding levels for Departments or Independent agencies with more than $200 million in R&D activities in 2018.

[2] The application of the new Experimental Development definition is shown starting in FY 2018. FY 2016 & 2017 numbers reflect use of the former Development definition.

[3] Unlike previous years, totals for development spending in FY 2018 do not include the DOD Budget Activity 07 (Operational System Development) due to changes in the definition of Development. These funds are requested in the FY 2018 budget request and support the development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

[4] The decrease in NASA's FY 2018 development funding (compared to prior years) can be attributed to the application of the new Experimental Development definition starting in FY 2018 as well as the transition of several large Human Exploration and Space Operations programs from the development phase to operations in FY 2018.

III. OTHER SOURCES OF FEDERAL SUPPORT FOR R&D

The Federal Government also stimulates private investment in R&D through tax preferences and technology transfer. Historically, dating back to the 1950s, the private sector has performed the majority of U.S. R&D. As of 2014, businesses performed 71% of total U.S. R&D expenditures.[2] The research and experimentation (R&E) tax credit, which was permanently extended through the Protecting Americans from Tax Hikes Act of 2015 (P.L. 114-113), essentially provides a credit to qualified research expenses. R&E tax credit claims have at least doubled over the past two decades, growing from an estimated $4.4 billion in 1997 to $11.3 billion in 2013.[3] The manufacturing and the professional, scientific and technical services sectors account for about 70% of total claims in 2013.

The President's 2018 Budget seeks to build on strong private sector R&D investment by prioritizing federal resources on areas that industry is not likely to support over later-stage applied research and development that the private sector is better equipped to pursue. Another key means of stimulating private sector investment and bridging Federal government research with industry development is through the transfer of technology. Federal technology transfer seeks to help enable domestic companies to develop and commercialize products derived from government-funded R&D, which can lead to greater productivity from U.S. R&D investments and ultimately promote the nation's economic growth. Recognizing the benefits of this mechanism, the 2018 Budget sustains funding for technology transfer efforts where appropriate.

[2] NSF National Center for Science and Engineering Statistics (Sept. 2016). InfoBrief - NSF 16-316.

[3] IRS Statistics of Income Division (Sept. 2016). 1990-2013 Corporate Returns Data.

19. CREDIT AND INSURANCE

The Federal Government offers direct loans and loan guarantees to support a wide range of activities including home ownership, education, small business, farming, energy efficiency, infrastructure investment, and exports. Also, Government-sponsored enterprises (GSEs) operate under Federal charters for the purpose of enhancing credit availability for targeted sectors. Through its insurance programs, the Federal Government insures deposits at depository institutions, guarantees private-sector defined-benefit pensions, and insures against some other risks such as flood and terrorism.

This chapter discusses the roles of these diverse programs:

- The first section discusses individual credit programs and the GSEs. Credit programs are broadly classified into five categories: housing, education, small business and farming, energy and infrastructure, and international lending.
- The second section reviews Federal deposit insurance, pension guarantees, disaster insurance, and insurance against terrorism and other security-related risks.

I. CREDIT IN VARIOUS SECTORS

Housing Credit Programs and GSEs

Through housing credit programs, the Federal Government promotes homeownership among various target groups, including low- and moderate-income people, veterans, and rural residents. In times of crisis, the Federal Government's role and target market can expand dramatically.

Federal Housing Administration

The Federal Housing Administration (FHA) guarantees mortgage loans to provide access to homeownership for people who may have difficulty obtaining a conventional mortgage. FHA has been a primary facilitator of mortgage credit for first-time and minority buyers, a pioneer of products such as the 30-year self-amortizing mortgage, and a vehicle to enhance credit for many moderate and low-income households.

FHA also insures loans for the construction, rehabilitation, and refinancing of multifamily housing, hospitals and other health care facilities. The credit enhancement provided by FHA enables borrowers to obtain long-term, fixed-rate financing, which mitigates interest rate risk and facilitates lower monthly mortgage payments. This can improve the financial sustainability of multifamily housing and healthcare facilities and may also translate into more affordable rents/lower healthcare costs for consumers.

FHA and the Single-Family Mortgage Market

In the early 2000s, FHA's market presence diminished greatly as low interest rates increased the affordability of mortgage financing and more borrowers used emerging non-prime mortgage products, including subprime and Alt-A mortgages. Many of these products had risky and hard-to-understand features such as low "teaser rates" offered for periods as short as the first two years of the mortgage, high loan-to-value ratios (with some mortgages exceeding the value of the house), and interest-only loans with balloon payments that require full payoff at a set future date. The Alt-A mortgage made credit easily available by waiving documentation of income or assets. This competition eroded the market share of FHA's single-family purchase and re-finance loans, reducing it from 9 percent in 2000 to less than 2 percent in 2005.

Starting at the end of 2007, the availability of FHA and Government National Mortgage Association (which supports the secondary market for federally-insured housing loans by guaranteeing securities backed by mortgages guaranteed by FHA, VA, and USDA) credit guarantees has been an important factor countering the tightening of private-sector credit. The annual volume of FHA's single-family mortgages soared from $52 billion in 2006 to a high of $330 billion in 2009.

Although loan volume declined since its 2009 peak, FHA experienced strong demand in 2016 as mortgage rates remained low and the improving economy brought new home buyers into the market. FHA's single-family origination loan volume in 2016 was $245 billion, and FHA's market share of home financing by dollar volume was 13 percent. For 2018, the Budget projects FHA volume will be $214 billion.

FHA's Budget Costs

FHA's budget estimates exhibit volatility and are prone to forecast error, and default claim rates are sensitive to a variety of dynamics. FHA insurance premium revenues are spread thinly but universally over pools of policyholders. Mortgage insurance costs for FHA, however, are concentrated in only those borrowers who default and whose lender files a claim, with the average per claim cost being much larger than the average premium income. Therefore, if claims change by even a small fraction of borrowers (e.g., one percentage point), net FHA insurance costs will move by a multiple of that change. The history of FHA has been spotted with rapid, unanticipated changes in claim costs and recoveries. FHA is vulnerable to outlier events that are difficult to predict and have deep effect. For FHA, these include the collapse of house prices after market bubbles burst and the effects of lending practices with very high claim rates, such as the now illegal seller-financed down-payment mortgage.

One of the major benefits of an FHA-insured mortgage is that it provides a homeownership option for borrowers who can make only a modest down-payment, but show that they are creditworthy and have sufficient income to afford the house they want to buy. In 2016 over 72 percent of new FHA loans were financed with less than five percent down. The disadvantage to low down-payment mortgages is that they have little in the way of an equity cushion should house prices decline or events such as income loss or unexpected medical expenses make it difficult for households to remain current on their mortgage payment. When these occur, the net sales proceeds from home sales may not be sufficient to support exit strategies that allow borrowers to completely pay off the debt and relocate to more affordable housing.

According to its annual actuarial analysis, in 2016 FHA maintained its statutory minimum capital reserve ratio of 2 percent for a second consecutive year after six straight years of failing to meet the target. As the housing market has recovered and FHA has improved its risk management, the actuarial review found that FHA's capital reserve increased by almost $44 billion over the last four years.

In 2009, the FHA Mutual Mortgage Insurance (MMI) Fund capital reserve was broadened to include Home Equity Conversion Mortgages (HECMs), as well as amortizing loans for single-family purchases and refinancing (forward mortgages). This change has increased the volatility of FHA's capital reserves. The financial performance of HECMs is highly sensitive to changes in house prices and interest rates. While the trend in capital reserves of forward mortgages has been consistently upward over the last four years, the actuarial review found that the HECM portfolio has a negative capital valuation of almost $8 billion, acting as a drag on the positive performance of the forward mortgage portfolio. For 2016, the capital reserve ratio was 3.3 percent for forward mortgages and -6.9 percent for HECMs. Total mortgages outstanding in the FHA MMI Fund were $1,152 billion at the end of 2016.

Although the dollar volume of outstanding HECMs is about one tenth of the FHA forward mortgage volume, the scale of absolute dollar changes in the HECM capital reserve has been similar to that of forward mortgages. The 2016 actuarial review found that HECMs suffered a $14.5 billion loss in capital resources between 2015 and 2016. This offset much of the improvement in the forward capital resources, which was $18.2 billion.

A HECM may also be called a "reverse mortgage" because the change in home equity over time of a HECM is generally the opposite of a forward mortgage. While a forward mortgage starts with a small amount of equity and builds equity with amortization of the loan, a HECM starts with a large equity cushion that declines over time as the loan accrues interest. (There are no repayments on a HECM until the owner leaves the home or refinances). The risk of HECMs therefore is weighted toward the end of the mortgage, while forward mortgage risk is concentrated in the first 10 years. This weighting means that small deviations in house valuations from initial forecasts will compound for the entire life of a HECM. The 2016 actuarial review also concluded that homes with HECMs in general do not hold their value as well as homes do in the broader market. This loss of value is often borne by FHA when it disposes of a defaulted HECM home. To address the capital adequacy of the HECM portfolio, FHA has taken steps, including lowering the share of home equity a homeowner can borrow against (the "principal limit factors"). These reductions create more of an equity cushion in the event of a default.

In addition to the single-family mortgage insurance provided through the MMI program, FHA's General Insurance and Special Risk Insurance (GISRI) loan programs continue to facilitate the construction, rehabilitation, and refinancing of multifamily housing, hospitals and other health care facilities. GISRI's new origination loan volume in 2016 was $16.1 billion and the Budget projects $17.6 billion for 2018. Total mortgages outstanding in the FHA GISRI Fund were $140 billion at the end of 2016.

VA Housing Program

The Department of Veterans Affairs (VA) assists veterans, members of the Selected Reserve, and active duty personnel in purchasing homes in recognition of their service to the Nation. The housing program effectively substitutes the Federal guarantee for the borrower's down payment, making the lending terms more favorable than loans without a VA guarantee. VA does not guarantee the entire mortgage loan to veterans, but provides a 100 percent guarantee on the first 25 percent of losses upon default. The number of loans that VA guaranteed reached a new record level in 2016, as the tightened credit markets continued to make the VA housing program more attractive to eligible homebuyers. VA provided 231,678 zero down payment loans. The continued historically low interest rate environment of 2016 allowed 352,472 Veteran borrowers to lower interest rates on their home mortgages through refinancing. VA provided over $45 billion in guarantees to assist 705,474 borrowers in 2016, of which 251,431 were fee-exempt loans to Veterans with service-connected disabilities. This followed $38 billion and 631,142 borrowers in 2015.

VA, in cooperation with VA-guaranteed loan servicers, also assists borrowers through home retention options and alternatives to foreclosure. VA intervenes when needed to help veterans and service members avoid foreclosure through loan modifications, special forbearances, repayment plans, and acquired loans; as well as assistance to complete compromise sales or deeds-in-lieu of foreclosure. These joint efforts helped resolve over 83 percent of defaulted VA-guaranteed loans in 2016.

Rural Housing Service

The Rural Housing Service (RHS) at the U.S. Department of Agriculture (USDA) offers direct and guaranteed loans to help very-low- to moderate-income rural residents buy and maintain adequate, affordable housing. RHS housing loans and loan guarantees differ from other Federal housing loan programs in that they are means-tested, making them more accessible to low-income, rural residents. The single family housing guaranteed loan program is designed to provide home loan guarantees for moderate-income rural residents whose incomes are between 80 percent and 115 percent (maximum for the program) of area median income.

Historically, RHS has offered both direct and guaranteed homeownership loans. Beginning in 2018, the Budget proposes that RHS will only offer guaranteed loans. The Budget provides no funding for the direct single family housing loan program. The single family housing guaranteed loan program was newly authorized in 1990 at $100 million and has grown into a $24 billion loan program annually. Moreover, the private sector mortgage banking industry is offering historically low mortgage rates, resulting in instances where the average 30 year fixed commercial mortgage rate has been at or below the average borrower rate for the RHS single family direct loan. Given that graduating to private credit is a goal of the direct program, pointing borrowers to commercial credit with a Federal guarantee is a preferred way to achieve the RHS policy goal of providing homeownership opportunities to low-income rural residents.

Furthermore, financial markets have become more efficient and have increased the reach of mortgage credit to lower credit qualities and incomes. Rural areas that were once isolated from broad credit availability have shrunk as access to high speed broadband has increased and correspondent lending has grown. Therefore, utilizing the private banking industry to provide this service, with a guarantee from the Federal government, is a more efficient way to deliver that assistance.

For USDA's multifamily housing portfolio, the 2018 Budget also plans to offer only loan guarantees for multifamily housing, funding the multifamily housing loan guarantees at $250 million, an increase by $100 million. Rental assistance grants, which supplement tenant rental payments to the property owners and are vital to the proper underwriting of the multifamily housing direct loan portfolio, are fully funded at $1.345 billion, which is sufficient to renew outstanding agreements.

Government-Sponsored Enterprises in the Housing Market

The Federal National Mortgage Association, or Fannie Mae, created in 1938, and the Federal Home Loan Mortgage Corporation, or Freddie Mac, created in 1970, were established to support the stability and liquidity of a secondary market for residential mortgage loans. Fannie Mae's and Freddie Mac's public missions were later broadened to promote affordable housing.

Growing stress and losses in the mortgage markets in 2007 and 2008 seriously eroded the capital of Fannie Mae and Freddie Mac. Legislation enacted in July 2008 strengthened regulation of the housing GSEs and provided the Treasury Department with authorities to purchase GSE securities. In September 2008, reacting to growing GSE losses and uncertainty that threatened to paralyze the mortgage markets, the GSEs' independent regulator, the Federal Housing Finance Agency (FHFA), placed Fannie Mae and Freddie Mac under Federal conservatorship, and Treasury began to exercise its purchase authorities to provide support to the GSEs. The Budget continues to reflect the GSEs as non-budgetary entities in keeping with their temporary status in conservatorship. However, all of the current Federal assistance being provided to Fannie Mae and Freddie Mac, including capital provided by Treasury through the Senior Preferred Stock Purchase Agreements (PSPA), is shown on-budget, and discussed below.

The Federal Home Loan Bank (FHLB) System, created in 1932, is comprised of eleven individual banks with shared liabilities. Together they lend money to financial institutions—mainly banks and thrifts—that are involved in mortgage financing to varying degrees, and they also finance some mortgages using their own funds.

Mission

The mission of the housing GSEs is to support certain aspects of the U.S. mortgage market. Fannie Mae and Freddie Mac's mission is to provide liquidity and stability to the secondary mortgage market and to promote affordable housing. Currently, they engage in two major lines of business.

1. Credit Guarantee Business—Fannie Mae and Freddie Mac guarantee the timely payment of principal and interest on mortgage-backed securities (MBS). They create MBS by pooling mortgages acquired through either purchase from or swap arrangements with mortgage originators. Over time these MBS held by the public have averaged about 40 percent of the U.S. mortgage market, and as of February 28, 2017, they totaled $4.6 trillion.

2. Mortgage Investment Business—Fannie Mae and Freddie Mac manage retained mortgage portfolios composed of their own MBS, MBS issued by others, and individual mortgages. The GSEs finance the purchase of these portfolio assets through debt issued in the credit markets. As of February 28, 2017, these retained mortgages, financed largely by GSE debt, totaled $564 billion. As a term of their PSPA contracts with Treasury, the combined investment portfolios of Fannie Mae and Freddie Mac were limited to no more than $1.8 trillion as of December 31, 2009, and this limitation was directed to decline by 10 percent each year. To accelerate the wind-down of the GSEs' retained mortgage portfolios, Treasury revised the PSPA terms in August 2012, setting the effective portfolio limitation at $1.1 trillion as

of December 31, 2013, and accelerating the reduction in this limitation to 15 percent each year until December 31, 2018, when the combined limitation will be fixed at $500 billion ($250 billion for each company).

As of February 28, 2017, the combined debt and guaranteed MBS of Fannie Mae and Freddie Mac totaled $5.3 trillion.

The mission of the FHLB System is broadly defined as promoting housing finance, and the System also has specific requirements to support affordable housing. Its principal business remains lending (secured by mortgages and financed by System debt issuances) to regulated depository institutions and insurance companies engaged in residential mortgage finance. Historically, investors in GSE debt have included thousands of banks, institutional investors such as insurance companies, pension funds, foreign governments and millions of individuals through mutual funds and 401k investments.

Together these three GSEs currently are involved, in one form or another, with approximately half of the $11 trillion residential mortgages outstanding in the U.S. today.

Regulatory Reform

The 2008 Housing and Economic Recovery Act (HERA) reformed and strengthened the GSEs' safety and soundness regulator by creating the Federal Housing Finance Agency (FHFA), a new independent regulator for Fannie Mae, Freddie Mac, and the Federal Home Loan Banks. The FHFA authorities consolidate and expand upon the regulatory and supervisory roles of what were previously three distinct regulatory bodies: the Federal Housing Finance Board as the FHLB's overseer; the Office of Federal Housing Enterprise Oversight as the safety and soundness regulator of the other GSEs; and HUD as their public mission overseer. FHFA was given substantial authority and discretion to influence the size and composition of Fannie Mae and Freddie Mac investment portfolios through the establishment of housing goals, monitoring GSE compliance with those goals, and capital requirements.

FHFA is required to issue housing goals, such as for purchases of single-family mortgages provided to low-income families, for each of the regulated enterprises, including the FHLBs, with respect to single family and multi-family mortgages and has the authority to require a corrective "housing plan" if an enterprise does not meet its goals and statutory reporting requirements, and in some instances impose civil money penalties.

The expanded authorities of FHFA also include the ability to place any of the regulated enterprises into conservatorship or receivership based on a finding of under-capitalization or a number of other factors.

Conservatorship

On September 6, 2008, FHFA placed Fannie Mae and Freddie Mac under Federal conservatorship. This action was taken in response to the GSEs' declining capital adequacy and to support the safety and soundness of the GSEs, given the role they played in the secondary mortgage market and the potential impact of their failure on broader financial markets. HERA provides that as conservator FHFA may take any action that is necessary to put Fannie Mae and Freddie Mac in a sound and solvent condition and to preserve and conserve the assets of each firm. As conservator, FHFA has assumed by operation of law the powers of the Board and shareholders at Fannie Mae and Freddie Mac. FHFA has appointed Directors and CEOs who are responsible for the day-to-day operations of the two firms. In its Strategic Plan for the Conservatorships of Fannie Mae and Freddie Mac, released in 2014, FHFA outlined three key goals for conservatorship: 1) maintain, in a safe and sound manner, foreclosure prevention activities and credit availability for new and refinanced mortgages to foster liquid, efficient, competitive and resilient national housing finance markets; 2) reduce taxpayer risk through increasing the role of private capital in the mortgage market; and 3) build a new single-family securitization infrastructure for use by the GSEs and adaptable for use by other participants in the secondary market in the future.

Department of the Treasury GSE Support Programs under HERA

On September 7, 2008, the U.S. Treasury launched three programs to provide temporary financial support to the GSEs under the temporary authority provided in HERA to purchase GSE securities. These purchase authorities expired on December 31, 2009.

1. *PSPAs with Fannie Mae and Freddie Mac*

Treasury entered into agreements with Fannie Mae and Freddie Mac to make investments in senior preferred stock in each GSE in order to ensure that each company maintains a positive net worth. In exchange for the substantial funding commitment, the Treasury received $1 billion in senior preferred stock for each GSE and warrants to purchase up to a 79.9 percent share of common stock at a nominal price. The initial agreements established funding commitments for up to $100 billion in each of these GSEs. On February 18, 2009, Treasury announced that the funding commitments for these agreements would be increased to $200 billion for each GSE. On December 24, 2009, Treasury announced that the funding commitments in the purchase agreements would be modified to the greater of $200 billion or $200 billion plus cumulative net worth deficits experienced during 2010-2012, less any positive net worth remaining as of December 31, 2012. Based on the financial results reported by each company as of December 31, 2012, the cumulative funding commitment for Fannie Mae and Freddie Mac was set at $445.5 billion. In total, as of March 31, 2017, $187.5 billion has been invested in the GSEs, and the liquidation preference of the senior preferred stock held by Treasury has increased accordingly. The PSPAs also require that Fannie Mae and Freddie Mac pay quarterly dividends to Treasury. Prior to calendar year 2013, the quarterly dividend amount was based on an annual rate of 10 percent of the liquidation preference of Treasury's senior preferred stock. Amendments to the PSPAs effected on August 17th, 2012, replaced the 10 percent dividend with an amount equivalent to the GSE's positive net worth above a capital reserve amount. The capital reserve amount for each company was set at $3.0 billion for calendar year 2013, and declines by $600 million at the beginning of each calendar year thereafter until it reaches zero. Through March 31, 2017, the GSEs have paid a total of $265.8 billion in dividend payments to Treasury on the senior preferred stock. The Budget estimates additional dividend receipts of $142.4 billion from April 1, 2017, through 2027. The cumulative budgetary impact of the PSPAs from the establishment of the PSPAs through 2027 is estimated to be a net deficit reduction of $220.7 billion.

2. *GSE MBS Purchase Programs*

Treasury initiated a temporary program during the financial crisis to purchase MBS issued by Fannie Mae and Freddie Mac, which carry the GSEs' standard guarantee against default. The purpose of the program was to promote liquidity in the mortgage market and, thereby, affordable homeownership by stabilizing the interest rate spreads between mortgage rates and corresponding rates on Treasury securities. Treasury purchased $226 billion in MBS from September 2008 to December 31, 2009, when the statutory purchase authority that Treasury used for this program expired, and sold the last of its MBS holdings in March 2012. The MBS purchase program generated $11.9 billion in net budgetary savings, calculated on a net present value basis as required by the Federal Credit Reform Act.

3. *GSE Credit Facility*

Treasury promulgated the terms of a temporary secured credit facility available to Fannie Mae, Freddie Mac, and the Federal Home Loan Banks. The facility was intended to serve as an ultimate liquidity backstop to the GSEs if necessary. No loans were needed or issued through December 31, 2009, when Treasury's HERA purchase authority expired.

Other GSE Activities in the Budget

The Temporary Payroll Tax Cut Continuation Act of 2011 (Public Law 112-78) required that the GSEs increase their credit guarantee fees on mortgage acquisitions between 2012 and 2021 by an average of at least 0.10 percentage points. Revenues generated by this fee increase are remitted directly to the Treasury for deficit reduction and are not included in the PSPA amounts. The Budget estimates resulting deficit reductions from this fee of $43.1 billion from 2012 through 2027.

In addition, in 2014 FHFA directed the GSEs to set aside 4.2 basis points for each dollar of the unpaid principal balance of new business purchases (including but not limited to mortgages purchased for securitization) in each year to fund several federal affordable housing programs created by HERA, including the Housing Trust Fund and the Capital Magnet Fund. These set-asides were suspended by FHFA in November 2008 and were reinstated effective January 1, 2015. The 2018 Budget proposes to eliminate the 4.2 basis point set-aside and discontinue funding for these Funds, resulting in an increase to the estimated PSPA dividends.

Future of the GSEs

The Administration has publicly expressed its desire to work with members of Congress to facilitate a more sustainable housing finance system. Any reform of the housing system likely will impact the cash flows attributable to the GSEs in the 2018 Budget projections in ways that cannot be estimated at this time.

Education Credit Programs

Historically, the Department of Education financed student loans through two programs: the Federal Family Education Loan (FFEL) program and the William D. Ford Federal Direct Student Loan (Direct Loan) program. However, the Student Aid and Fiscal Responsibility Act (SAFRA) of 2010 (Public Law 111-152) ended the FFEL program. On July 1, 2010, ED became the sole originator of Federal student loans through the Direct Loan program.

The Direct Loan program was authorized by the Student Loan Reform Act of 1993 (Public Law 103-66). Under the program, the Federal Government provides loan capital directly to over 6,000 domestic and foreign schools, which then disburse loan funds to students. Loans are available to students and parents of students regardless of income, but the terms of the loans differ. There are three types of Direct Loans: Federal Direct Subsidized Stafford Loans, Federal Direct Unsubsidized Stafford Loans, and Federal Direct PLUS Loans. For Direct Subsidized Stafford loans, which are available to undergraduate borrowers from low and moderate income families, the Federal Government provides more benefits, including not charging interest while the borrowers are in school and during certain deferment periods.

The Bipartisan Student Loan Certainty Act of 2013 (Public Law 113-28) established interest rates for all types of new Direct Loans made on or after July 1, 2013. Interest rates on Direct Loans are set annually based on Treasury rates but once the rate is set, the rate is fixed for the life of the loan. Interest rates are set by: (1) indexing the interest rate to the rate of ten-year Treasury notes; and (2) adding the indexed rate to a specific base percent for each loan type with specific caps for each loan type. For Federal Direct Subsidized Stafford Loans and Federal Direct Unsubsidized Stafford Loans issued to undergraduate students, the rate is 2.05 percentage points above the Treasury 10-year note rate and capped at 8.25 percent. For Federal Direct Unsubsidized Stafford Loans issued to graduate and professional students, the rate is 3.6 percentage points above the Treasury rate and capped at 9.5 percent. For Federal Direct PLUS Loans issued to parents and graduate and professional students, the rate is 4.6 percentage points above the Treasury rate and capped at 10.5 percent. The Direct Loan program offers a variety of repayment plans including income-driven ones for all student borrowers, regardless of the type of loan. Depending on the plan, monthly payments are capped at no more than between 10 and 15 percent of borrower discretionary income and balances remaining after 20 to 25 years are forgiven. In addition, under current law, borrowers who work in public service professions while making 10 years of qualifying payments are eligible for Public Service Loan Forgiveness (PSLF).

The multitude of income-driven repayment plan choices are complicated to administer and confusing to borrowers. The 2018 Budget proposes to simplify the repayment process by creating a single income-driven plan. The new plan would cap borrower monthly payments at 12.5 percent of discretionary income. For borrowers with undergraduate student debt only, any balance remaining after 15 years of repayment would be forgiven. For borrowers with any graduate debt, any balance remaining after 30 years of repayment would be forgiven. To support this simplified repayment pathway to debt relief, and to generate savings that help put the Nation on a more sustainable fiscal path, the 2018 Budget proposes to eliminate PSLF, establish reforms to guarantee that all borrowers in IDR pay an equitable share of their income, and eliminate subsidized loans. All student loan proposals will apply to loans originated on or after July 1, 2018, with an exception for students who borrowed their first loans prior to July 1, 2018 and who are borrowing to complete their current course of study.

Small Business and Farm Credit Programs and GSEs

The Government offers direct loans and loan guarantees to small businesses and farmers, who may have difficulty obtaining credit elsewhere. It also provides guarantees of debt issued by certain investment funds that invest in small businesses. Two GSEs, the Farm Credit System and the Federal Agricultural Mortgage Corporation, increase liquidity in the agricultural lending market.

Loans to Small Businesses

The Small Business Administration (SBA) ensures that America's small businesses have the tools and resources needed to start and develop their operations, drive U.S. competitiveness, and help grow the economy. Whether offering financial assistance to veteran entrepreneurs, providing microloans to startups, or financing construction for a small business's expansion, SBA complements credit markets by guaranteeing access to affordable credit provided by private lenders for those that cannot attain it elsewhere. SBA also provides reassurance to American communities that have been hard-hit by disasters by providing inexpensive, accessible, and immediate disaster relief to businesses, homeowners, renters, and property owners. At year-end 2016, SBA's outstanding balance of guaranteed and direct loans totaled over $124 billion. For the 2018 Budget, SBA recorded a net downward reestimate of approximately $550 million in the expected costs of its outstanding loan portfolio, reflecting an improved forecast of future loan performance.

The 2018 Budget provides $29 billion in loan guarantees with no subsidy costs to assist small business owners with access to affordable capital through the 7(a) General Business Loan Guarantee program. This program provides access to financing for general business operations, such as operating and capital expenses. The 2018 Budget also includes a provision that would provide the SBA Administrator with flexibility to further increase the loan guarantee level by 15 percent under certain circumstances. Such flexibility could better equip SBA to meet peaks in demand uninterrupted while continuing to operate at zero subsidy. In 2018, SBA will provide fee waivers on 7(a) loans less than $125,000 and partial waivers on 7(a) loans less than $350,000 to veteran-owned businesses.

In 2018, SBA's 504 Certified Development Company (CDC) program will support $7.5 billion in guaranteed loans for fixed-asset financing, and $7.5 billion in 504 guarantees to allow small businesses to refinance to take advantage of current low interest rates and free up resources for expansion. These programs enable small businesses to secure financing for assets such as machinery and equipment, construction, and commercial real estate. The 2018 Budget enhances SBA's 504 CDC program by introducing a 25-year debenture to complement the existing 10-year and 20-year debentures. This new policy initiative will foster small business development by helping owners lower their operating expenses in a manner that is protective of taxpayer resources. The 25-year debenture will also be introduced for the 504 Refinance program beginning in 2018.

The Budget supports innovative financial instruments such as SBA's Small Business Investment Companies (SBICs) by providing up to $4 billion in long-term, guaranteed loans at zero subsidy to support venture capital investments in small businesses. The Budget also focuses on serving the smallest of small businesses and startups through the 7(m) Direct Microloan program, which supports low-interest financing for non-profit intermediaries who in turn provide loans of up to $50,000 to rising entrepreneurs. In addition to the $25 million in technical assistance grant funds requested for the Microloan program, the Budget requests $3.44 million in subsidy resources to support up to $36 million in direct lending.

SBA will continue to be a valuable source for Americans who need access to low-interest loans in the wake of disaster. The 2018 Budget estimates direct lending provided by SBA's Disaster Loan program at its 10-year average volume of $1.1 billion in lending. While the 2018 Budget does not request additional disaster subsidy as SBA continues to draw down its carryover balances, it does request $186 million to administer these funds as efficiently and effectively as possible. Additionally, the 2018 Budget cancels SBA's Immediate Disaster Loan Guarantee and Expedited Disaster Assistance programs by proposing to cancel $2.6 million in appropriated subsidy and administrative resources. The programs have not received any applications nor witnessed demand for the services since enactment in 2010.

Community Development

Since its creation in 1994, the Department of the Treasury's Community Development Financial Institutions (CDFI) Fund has, through different grant, loan, and tax credit programs, worked to expand the availability of credit, investment capital, and financial services for underserved people and communities by supporting the growth and capacity of a national network of CDFIs, investors, and financial service providers. Today, there are over 1,080 Certified CDFIs nationwide, including a variety of loan funds, community development banks, credit unions, and venture capital funds. The Budget proposes to eliminate funding for the CDFI Fund's grant and loan programs targeted at the now mature CDFI industry.

Unlike other CDFI Fund programs, the CDFI Bond Guarantee Program (BGP) — enacted through the Small Business Jobs Act of 2010 — does not offer grants, but is instead a zero-subsidy Federal credit program, designed to function at no cost to taxpayers. Under the BGP, the Secretary of the Treasury provides a 100 percent guarantee of long-term bonds issued to CDFIs, with a maximum maturity of 30 years. The BGP does not require discretionary budget authority for its credit subsidy, but the annual loan guarantee limitations are appropriated. Through September 30, 2016, Treasury had issued $1.1 billion in bond guarantee commitments to 17 CDFIs that have supported investments in low-income and underserved communities, including for the development of multi-family rental properties, charter schools, and healthcare facilities. The Budget proposes to extend and reform the BGP through 2018 with an annual commitment limitation of $500 million and a minimum individual bond size of $50 million, while maintaining strong protections against credit risk.

Loans to Farmers

The Farm Service Agency (FSA) assists low-income family farmers in starting and maintaining viable farming operations. Emphasis is placed on aiding beginning and socially disadvantaged farmers. FSA offers operating loans and ownership loans, both of which may be either direct or guaranteed loans. Operating loans provide credit to farmers and ranchers for annual production expenses and purchases of livestock, machinery, and equipment, while farm ownership loans assist producers in acquiring and developing their farming or ranching operations. As a condition of eligibility for direct loans, borrowers must be unable to obtain private credit at reasonable rates and terms. As FSA is the "lender of last resort," default rates on FSA direct loans are generally higher than those on private-sector loans. FSA-guaranteed farm loans are made to more creditworthy borrowers who have access to private credit markets. Because the private loan originators must retain 10 percent of the risk, they exercise care in examining the repayment ability of borrowers. The subsidy rates for the direct programs fluctuate largely because of changes in the interest component of the subsidy rate.

The number of loans provided by these programs has varied over the past several years. In 2016, FSA provided loans and loan guarantees to more than 39,000 family farmers totaling $6.4 billion. Direct and guaranteed loan programs provided assistance totaling $2.7 billion to beginning farmers during 2016. Loans for socially disadvantaged farmers totaled $842 million, of which $451 million was in the farm ownership program and $391 million in the farm operating program. The average size of farm ownership loans was consistent over the past two years, with new customers receiving the bulk of the direct loans. The majority of assistance provided in the operating loan program during 2016 was to beginning farmers as well. Overall, demand for FSA loans—both direct and guaranteed—continues to be high. More conservative credit standards in the private sector continue to drive applicants from commercial credit to FSA direct programs. Low grain prices and uncertainty over interest rates continue to cause lenders to force their marginal borrowers to FSA for credit. In the 2018 Budget, FSA proposes to make $7.0 billion in direct and guaranteed loans through discretionary programs, including guaranteed conservation loans. The overall loan level for conservation loans is unchanged from the 2017 requested level of $150 million.

Lending to beginning farmers was strong during 2016. FSA provided direct or guaranteed loans to more than 21,200 beginning farmers. Loans provided under the Beginning Farmer Down Payment Loan Program represented 19 percent of total direct ownership loans made during the year, comparable to the previous year. Sixty-two percent of direct operating loans were made to beginning farmers, an increase of 4 percent in dollar volume over 2015. Overall, as a percentage of funds available, lending to beginning farmers was 5 percentage points above the 2015 level, propelled by a 4 percent increase in ownership loans and 6 percent increase in operating loans made to beginning farmers. Lending to minority and women farmers was a significant portion of overall assistance provided, with $842 million in loans and loan guarantees provided to more than 9,000 farmers. This represents an increase of 2 percent in the overall number of direct loans to minority and women borrowers. Outreach efforts by FSA field offices to reach out to beginning and minority farmers and promote FSA funding have resulted in increased lending to these groups.

FSA continues to evaluate the farm loan programs in order to improve their effectiveness. FSA recently released a new Microloan program to increase lending to small niche producers and minorities. This program has been expanded to include guaranteed as well as direct loans. This program dramatically simplifies application procedures for small loans, and implements more flexible eligibility and experience requirements. The demand for the micro-loan program continues to grow while delinquencies and defaults remain at or below those of the regular FSA operating loan program. FSA has also developed a nationwide continuing education program for its loan officers to ensure that they remain experts in agricultural lending, and it has transitioned information technology applications for direct loan servicing into a single, web-based application that expands on existing capabilities including special servicing options. Its implementation allows FSA to better service its delinquent and financially distressed borrowers.

The Farm Credit System (Banks and Associations)

The Farm Credit System (FCS or System) is a Government-sponsored enterprise (GSE) composed of a nationwide network of borrower-owned cooperative lending institutions originally authorized by Congress in 1916. The FCS's mission continues to be providing sound and dependable credit to American farmers, ranchers, producers or harvesters of aquatic products, their cooperatives, and farm-related businesses. In addition, they serve rural America by providing financing for rural residential real estate, rural communication, energy and water infrastructure, and agricultural exports.

The financial condition of the System's banks and associations remains fundamentally sound. The ratio of capital to assets has remained stable at 16.7 percent on September 30, 2016, compared with 16.8 percent on September 30, 2015. Capital consisted of $48.0 billion in unrestricted capital and $4.3 billion in restricted capital in the Farm Credit Insurance Fund, which is held by the Farm Credit System Insurance Corporation (FCSIC). For the first nine months of calendar year 2016, net income equaled $3.6 billion compared with $3.5 billion for the same period of the previous year.

Over the 12-month period ending September 30, 2016, nonperforming loans as a percentage of total loans outstanding increased from 0.76 percent to 0.82 percent, which was still less than one third of the most recent peak of 2.65 percent in September 2009. System assets grew 7.9 percent during the year ending September 30, 2016, primarily due to increases in real estate mortgage loans and agribusiness loans. Real estate mortgage loans increased due to continued demand for financing cropland. The increase in agribusiness loans was due to growth in processing and marketing loans.

Over the 12-month period ending September 30, 2016, the System's loans outstanding grew by $15.3 billion, or 6.7 percent, while over the past three years they grew by $47.9 billion, or 24.7 percent. As required by law, borrowers are also stockholder-owners of System banks and associations. As of September 30, 2016, System institutions had 509,659 of these stockholders-borrowers.

The number of FCS institutions continues to decrease because of consolidation. As of September 30, 2016, the System consisted of four banks and 74 associations, compared with seven banks and 104 associations in September 2002. Of the 78 FCS banks and associations, 75 of them had one of the top two examination ratings (1 or 2 on a 1 to 5 scale) and accounted for 99 percent of gross Systems assets. Three FCS institutions had a rating of 3.

In 2015, the latest year with available data, new lending to young, beginning, and small farmers kept pace or exceeded the pace in overall farm lending by System institutions. The number of loans made in 2015 to young, beginning and small farmers increased by 5.1 percent, 7.5 percent and 6.7 percent respectively from 2014, while overall the number of farm loans made by the System grew by 3.7 percent. Loans to young, beginning, and small farmers and ranchers represented 17.2 percent, 22.0 percent, and 41.4 percent, respectively, of the total new farm loans made in 2015.

The dollar volume of new loans made to young, beginning and small categories rose in 2015 from 2014 by 8.0 percent, 12.2 percent, and 10.0 percent, respectively. The System's overall volume of new farm loans grew by 8.8 percent. As a result, the share of total System farm loan volume made to all three categories rose from that of 2014. Loans to young, beginning, and small farmers and ranchers represented 11.3 percent, 15.2 percent, and 14.1 percent, respectively, of the total dollar volume of all new farm loans made in 2015. Young, beginning, and small farmers are not mutually exclusive groups and, thus, cannot be added across categories. Maintaining special policies and programs for the extension of credit to young, beginning, and small farmers and ranchers is a legislative mandate for the System.

The System, while continuing to record strong earnings and capital growth, remains exposed to a variety of risks associated with its portfolio concentration in agriculture and rural America. In 2016, downward pressure on grain prices stemmed from large supplies relative to demand following bumper crops in recent years for the major grains. Low grain and oilseed prices have helped control feed costs for livestock, poultry, and dairy farmers, but margins for these subsectors have been squeezed by weaker output prices. The housing sector continues to improve, which should translate into improved credit conditions for the housing-related sectors such as timber and nurseries. Overall, the agricultural sector remains subject to risks such as a farmland price decline, which has been underway since 2015 in the Midwest and other parts of the country, a potential rise in interest rates, continued volatility in commodity prices, weather-related catastrophes, and long-term environmental risks related to climate change.

The FCSIC, an independent Government-controlled corporation, ensures the timely payment of principal and interest on FCS obligations on which the System banks are jointly and severally liable. On September 30, 2016, the assets in the Insurance Fund totaled $4.4 billion. As of September 30, 2016, the Insurance Fund as a percentage of adjusted insured debt was 1.97 percent. This was slightly below the statutory secure base amount of 2 percent. During the first nine months of calendar year 2016, outstanding insured System obligations grew by 3.6 percent.

Federal Agricultural Mortgage Corporation (Farmer Mac)

Farmer Mac was established in 1988 as a federally chartered instrumentality of the United States and an institution of the FCS to facilitate a secondary market for farm real estate and rural housing loans. Farmer Mac is not liable for any debt or obligation of the other System institutions, and no other System institutions are liable for any debt or obligation of Farmer Mac. The Farm Credit System Reform Act of 1996 expanded Farmer Mac's role from a guarantor of securities backed by loan pools to a direct purchaser of mortgages, enabling it to form pools to securitize. In May 2008, the Food, Conservation and Energy Act of 2008 (2008 Farm Bill) expanded Farmer Mac's program authorities by allowing it to purchase and guarantee securities backed by rural utility loans made by cooperatives.

Farmer Mac continues to meet core capital and regulatory risk-based capital requirements. As of September 30, 2016, Farmer Mac's total outstanding program volume (loans purchased and guaranteed, standby loan purchase commitments, and AgVantage bonds purchased and guaranteed) amounted to $17.2 billion, which represents an increase of 10.4 percent from the level a year ago. Of total program activity, $12.4 billion were on-balance sheet loans and guaranteed securities, and $4.9 billion were off-balance-sheet obligations. Total assets were $16.0 billion, with non-program investments (including cash and cash equivalents) accounting for $3.3 billion of those assets. Farmer Mac's net income attributable to common stockholders ("net income") for the first three quarters of calendar year 2016 increased to $38.7 million from $32.3 million in the same period of 2015.

Farmer Mac's earnings can be influenced by unrealized fair-value gains and losses. For example, fair-value changes on financial derivatives resulted in an unrealized loss of $13.1 million for the first three quarters of 2016, compared with unrealized gain of $0.9 million for the same period in 2015 (both pre-tax). Although unrealized fair-value changes experienced on financial derivatives temporarily impact earnings and capital, those changes are not expected to have any permanent effect if the financial derivatives are held to maturity, as is expected.

Energy and Infrastructure Credit Programs

The Department of Energy (DOE) administers two credit programs: Title XVII (a loan guarantee program to support innovative energy technologies) and the Advanced Technology Vehicle Manufacturing loan program (a direct loan program to support advanced automotive technologies). The President's 2018 Budget proposes to eliminate both programs because the private sector is better positioned to finance innovative technologies.

Title XVII of the Energy Policy Act of 2005 (Public Law 109-58) authorizes DOE to issue loan guarantees for projects that employ innovative technologies to reduce air pollutants or man-made greenhouse gases. Congress provided DOE $4 billion in loan volume authority in 2007, and the 2009 Consolidated Appropriations Act provided an additional $47 billion in loan volume authority, allocated as follows: $18.5 billion for nuclear power facilities, $2 billion for "front-end" nuclear enrichment activities, $8 billion for advanced fossil energy technologies, and $18.5 billion for energy efficiency, renewable energy, and transmission and distribution projects. The 2011 appropriations reduced the available loan volume authority for energy efficiency, renewable energy, and transmission and distribution projects by $17 billion and provided $170 million in credit subsidy to support renewable energy or energy efficient end-use energy technologies. From 2014-2015, DOE closed on three loan guarantees totaling approximately $8 billion to support the construction of two new commercial nuclear power reactors.

The American Reinvestment and Recovery Act of 2009 (Public Law 111-5) amended the program's authorizing statute and provided $2.5 billion in credit subsidy to support loan guarantees on a temporary basis for commercial or advanced renewable energy systems, electric power transmission systems, and leading edge biofuel projects. Authority for the temporary program to extend new loans expired September 30, 2011. Prior to expiration, DOE provided loan guarantees to 28 projects totaling over $16 billion in loan volume. Four projects withdrew prior to any disbursement of funds.

Section 136 of the Energy Independence and Security Act of 2007 (Public Law 110-140) authorizes DOE to issue loans to support the development of advanced technology vehicles and qualifying components. In 2009, Congress appropriated $7.5 billion in credit subsidy to support a maximum of $25 billion in loans under ATVM.

Electric and Telecommunications Loans

Rural Utilities Service (RUS) programs of the United States Department of Agriculture (USDA) provide grants and loans to support the distribution of rural electrification, telecommunications, distance learning, and broadband infrastructure systems.

The Budget includes $5.5 billion in direct electrification loans, $690 million in direct telecommunications loans and $27 million in direct broadband loans.

USDA Rural Infrastructure and Business Development Programs

USDA, through a variety of Rural Development (RD) programs, provides grants, direct loans, and loan guarantees to communities for constructing facilities such as healthcare clinics, police stations, and water systems, as well as to assist rural businesses and cooperatives in creating new community infrastructure (e.g., educational and healthcare networks) and to diversify the rural economy and employment opportunities. The 2018 Budget reflects a realignment of RD's core operations and program delivery mechanisms to ensure that this type of Federal funding is optimized to create greater efficiency and eliminate potentially duplicative spending while still supporting investments in infrastructure.

The 2018 Budget provides a $3 billion loan level for Community Facility (CF) direct loans, which are for communities of 20,000 or less. The CF programs have the flexibility to finance more than 100 separate types of essential community infrastructure that ultimately improve access to healthcare, education, public safety and other critical facilities and services. These loans are enhanced by a new Rural Economic Infrastructure Grant Account that combines four RD grant programs into one account: the Distance Learning and Telemedicine grant program, designed to meet the educational and health care needs of rural America through the use of advanced telecommunications technologies; the Community Connect grant program, which provides community-oriented broadband service; Rural Housing Repair Grants, which funds home repairs for very low-income, elderly, rural homeowners; and the CF grant program, which offers competitive grants to help rural communities build or improve community infrastructure and essential community facilities for public use in rural communities of 20,000 or less. This proposal would also provide the Administration with the flexibility to target up to half of the requested $80 million in funding specifically to communities located in Appalachia.

Transportation Infrastructure

Federal credit programs offered through the Department of Transportation (DOT) fund critical transportation infrastructure projects, often using innovative financing methods. The two predominant programs are the program authorized by the Transportation Infrastructure Finance and Innovation Act (TIFIA) and the Railroad Rehabilitation and Improvement Financing (RRIF) program, both managed in DOT's Build America Bureau. The Bureau combines the TIFIA and RRIF loan programs, Private Activity Bonds (PABs), and the new Fostering Advancements in Shipping and Transportation for the Long-Term Achievement of National Efficiencies (FASTLANE) grant program all under one roof. The Bureau serves as the single point of contact and coordination for States, municipalities, and project sponsors looking to utilize federal transportation expertise, apply for Federal transportation credit and grant programs, and explore ways to access private capital in public private partnerships.

Established by the Transportation Equity Act of the 21st century (TEA-21) (Public Law 105-178) in 1998, the TIFIA program is designed to fill market gaps and leverage substantial private co-investment by providing supplemental and subordinate capital to projects of national or regional significance. Through TIFIA, DOT provides three types of Federal credit assistance to highway, transit, rail, and intermodal projects: direct loans, loan guarantees, and lines of credit. The 70 TIFIA loans account for over $95 billion of infrastructure investment in the United States. Government commitments in these partnerships constitute over $26 billion in Federal assistance with a budgetary cost of approximately $1.7 billion.

TIFIA can help advance qualified, large-scale projects that otherwise might be delayed or deferred because of size, complexity, or uncertainty over the timing of revenues at a relatively low budgetary cost. Each dollar of subsidy provided for TIFIA can provide approximately $14 in credit assistance, and leverage an additional $20 to $30 in non-Federal transportation infrastructure investment. The Fixing America's Surface Transportation (FAST) Act of 2015 (Public Law 114-94) authorizes TIFIA at $275 million in fiscal year 2016, escalating to $300 million by fiscal year 2020.

DOT has also provided direct loans and loan guarantees to railroads since 1976 for facilities maintenance, rehabilitation, acquisitions, and refinancing. Federal assistance was created to provide financial assistance to the financially-challenged portions of the rail industry. However, following railroad deregulation in 1980, the industry's financial condition began to improve, larger railroads were able to access private credit markets, and interest in Federal credit support began to decrease.

Also established by TEA-21 in 1998, the RRIF program may provide loans or loan guarantees with an interest rate equal to the Treasury rate for similar-term securities. TEA-21 also stipulates that non-Federal sources pay the subsidy cost of the loan, thereby allowing the program to operate without Federal subsidy appropriations. The RRIF program assists projects that improve rail safety, enhance the environment, promote economic development, or enhance the capacity of the national rail network. While refinancing existing debt is an eligible use of RRIF proceeds, capital investment projects that would not occur without a RRIF loan are prioritized. Since its inception, over $5.1 billion in direct loans have been made under the RRIF program.

The FAST Act included programmatic changes to enhance the RRIF program to mirror the qualities of TIFIA, including broader eligibility, a loan term that can be as long as 35 years from project completion, and a fully subordinated loan under certain conditions. Additionally, in 2016 Congress reprogrammed $1.96 million in unobligated balances to assist Class II and Class III Railroads in preparing and applying for direct loans and loan guarantees.

International Credit Programs

Currently, seven Federal agencies—the Department of Agriculture (USDA), the Department of Defense, the Department of State, the Department of the Treasury, the Agency for International Development (USAID), the Export-Import Bank (ExIm), and the Overseas Private Investment Corporation (OPIC)—provide direct loans, loan guarantees, and insurance to a variety of private and sovereign borrowers. These programs are intended to level the playing field for U.S. exporters, deliver robust support for U.S. goods and services, stabilize international financial markets, enhance security, and promote sustainable development. The 2018 President's Budget proposes the elimination of OPIC as part of a broader effort to streamline Government and reduce activities where Federal intervention may be unnecessary or distort the market.

Leveling the Playing Field

Federal export credit programs counter official financing that foreign governments around the world, largely in Europe and Japan, but also increasingly in emerging markets such as China and Brazil, provide their exporters, usually through export credit agencies (ECAs). The U.S. Government has worked since the 1970's to constrain official credit support through a multilateral agreement in the Organization for Economic Cooperation and

Development (OECD). This agreement has established standards for Government-backed financing of exports. In addition to ongoing work in keeping these OECD standards up-to-date, the U.S. Government established the International Working Group (IWG) on Export Credits to set up a new framework that will include China and other non-OECD countries, which until now have not been subject to export credit standards. The process of establishing these new standards, which is not yet complete, advances a Congressional mandate to reduce subsidized export financing programs.

When the private sector is unable or unwilling to provide financing, the Export-Import Bank, the U.S. ECA, fills the gap for American businesses by equipping them with the financing support necessary to level the playing field against foreign competitors. ExIm support includes direct loans and loan guarantees for creditworthy foreign buyers to help secure export sales from U.S. exporters, as well as working capital guarantees and export credit insurance to help U.S. exporters secure financing for overseas sales. USDA's Export Credit Guarantee Programs (also known as GSM programs) similarly help to level the playing field. Like programs of other agricultural exporting nations, GSM programs guarantee payment from countries and entities that want to import U.S. agricultural products but cannot easily obtain credit.

Stabilizing International Financial Markets

Consistent with U.S. obligations in the International Monetary Fund regarding global financial stability, the Exchange Stabilization Fund managed by the Department of the Treasury may provide loans or credits to a foreign entity or government of a foreign country. A loan or credit may not be made for more than six months in any 12-month period unless the President gives the Congress a written statement that unique or emergency circumstances require that the loan or credit be for more than six months.

Supporting the Nation's International Partners

The U.S. Government, through USAID, can extend short-to-medium-term loan guarantees that cover potential losses that might be incurred by lenders if a country defaults on its borrowings; for example, the U.S. may guarantee another country's sovereign bond issuance. The purpose of this tool is to provide the Nation's sovereign international partners access to necessary, urgent, and relatively affordable financing during temporary periods of strain when they cannot access such financing in international financial markets, and to support critical reforms that will enhance long term fiscal sustainability, often in concert with support from international financial institutions such as the International Monetary Fund. The long term goal of sovereign loan guarantees is to help lay the economic groundwork for the Nation's international partners to graduate to an unenhanced bond issuance in the international capital markets. For example, as part of the U.S. response to fiscal crises, the U.S. Government has extended sovereign loan guarantees to Tunisia, Jordan, Ukraine, and Iraq to enhance their access to capital markets, while promoting economic policy adjustment. In addition, the Budget proposes to expand the use of Department of State Foreign Military Financing (FMF) loans to potentially allow FMF recipients to purchase more U.S. defense articles and services, but on a repayable basis.

Using Credit to Promote Sustainable Development

Credit is an important tool in U.S. bilateral assistance to promote sustainable development. USAID's Development Credit Authority (DCA) allows USAID to use a variety of credit tools to support its development activities abroad. DCA provides non-sovereign loan guarantees in targeted cases where credit serves more effectively than traditional grant mechanisms to achieve sustainable development. DCA is intended to mobilize host country private capital to finance sustainable development in line with USAID's strategic objectives. Through the use of partial loan guarantees and risk sharing with the private sector, DCA stimulates private-sector lending for financially viable development projects, thereby leveraging host-country capital and strengthening sub-national capital markets in the developing world.

Ongoing Coordination

International credit programs are coordinated through two groups to ensure consistency in policy design and credit implementation. The Trade Promotion Coordinating Committee (TPCC) works within the Administration to develop a National Export Strategy to make the delivery of trade promotion support more effective and convenient for U.S. exporters.

The Interagency Country Risk Assessment System (ICRAS) standardizes the way in which agencies that lack sufficient historical experience budget for the cost associated with the risk of international lending. The cost of lending by these agencies is governed by proprietary U.S. Government ratings, which correspond to a set of default estimates over a given maturity. The methodology establishes assumptions about default risks in international lending using averages of international sovereign bond market data. The strength of this method is its link to observed defaults in the market and an annual update that adjusts the default estimates to reflect the most recent risks observed in the market.

II. INSURANCE PROGRAMS

Deposit Insurance

Federal deposit insurance promotes stability in the U.S. financial system. Prior to the establishment of Federal deposit insurance, depository institution failures often caused depositors to lose confidence in the banking system and rush to withdraw deposits. Such sudden withdrawals caused serious disruption to the economy. In 1933, in the midst of the Great Depression, a system of Federal deposit insurance was established to protect depositors and to prevent bank failures from causing widespread disruption in financial markets.

Today, the Federal Deposit Insurance Corporation (FDIC) insures deposits in banks and savings associations (thrifts) using the resources available in its Deposit Insurance Fund (DIF). The National Credit Union Administration (NCUA) insures deposits (shares) in most credit unions through the National Credit Union Share Insurance Fund (SIF). (Some credit unions are privately insured.) As of September 30, 2016, the FDIC insured $6.8 trillion of deposits at 5,989 commercial banks and thrifts, and the NCUA insured $1 trillion of shares at 5,844 credit unions.

Recent Reforms

Since its creation, the Federal deposit insurance system has undergone many reforms. As a result of the 2008 financial crisis, several reforms were enacted to protect both the immediate and longer-term integrity of the Federal deposit insurance system. The Helping Families Save Their Homes Act of 2009 (P.L. 111–22) provided NCUA with tools to protect the Share Insurance Fund and the financial stability of the credit union system. Notably, the Helping Families Save Their Homes Act:

- Established the Temporary Corporate Credit Union Stabilization Fund (TCCUSF), allowing NCUA to segregate the losses of corporate credit unions and providing a mechanism for assessing those losses to federally-insured credit unions over an extended period of time;
- Provided flexibility to the NCUA Board by permitting use of a restoration plan to spread insurance premium assessments over a period of up to eight years, or longer in extraordinary circumstances, if the SIF equity ratio fell below 1.2 percent; and
- Permanently increased the Share Insurance Fund's borrowing authority to $6 billion.

The Dodd-Frank Wall Street Reform and Consumer Protection (Dodd-Frank) Act of 2010 (Public Law 111-203) established new DIF reserve ratio requirements. The Act requires the FDIC to achieve a minimum DIF reserve ratio (ratio of the deposit insurance fund balance to total estimated insured deposits) of 1.35 percent by 2020, up from 1.15 percent in 2016. In addition to raising the minimum reserve ratio, the Dodd-Frank Act also:

- Eliminated the FDIC's requirement to rebate premiums when the DIF reserve ratio is between 1.35 and 1.5 percent;
- Gave the FDIC discretion to suspend or limit rebates when the DIF reserve ratio is 1.5 percent or higher, effectively removing the 1.5 percent cap on the DIF; and
- Required the FDIC to offset the effect on small insured depository institutions (defined as banks with assets less than $10 billion) when setting assessments to raise the reserve ratio from 1.15 to 1.35 percent.

In implementing the Dodd-Frank Act, the FDIC issued a final rule setting a long-term (i.e., beyond 2027) reserve ratio target of 2 percent, a goal that FDIC considers necessary to maintain a positive fund balance during economic crises while permitting steady long-term assessment rates that provide transparency and predictability to the banking sector.

The Dodd-Frank Act also permanently increased the insured deposit level to $250,000 per account at banks or credit unions insured by the FDIC or NCUA.

Recent Fund Performance

As of September 30, 2016, the FDIC DIF balance stood at $80.7 billion, a one-year increase of $10.6 billion. The growth in the DIF balance is a result of fewer bank failures and higher assessment revenue. The reserve ratio on September 30, 2016, was 1.18 percent.

As of September 30, 2016, the number of insured institutions on the FDIC's "problem list" (institutions with the highest risk ratings) totaled 132, which represented a decrease of more than 85 percent from December 2010, the peak year for bank failures during the financial crisis. Furthermore, the assets held by problem institutions decreased by nearly 93 percent.

The NCUA SIF ended September 2016 with assets of $13.3 billion and an equity ratio of 1.27 percent. If the equity ratio increases above the normal operating level of 1.30 percent, a distribution is normally paid to member credit unions to reduce the equity ratio to the normal operating level.

The health of the credit union industry has markedly improved since the financial crisis. Although the ratio of insured shares in problem institutions to total insured shares increased slightly from 0.81 percent in September 2015 to 0.86 percent in September 2016, this is still a significant reduction from a high of 5.7 percent in December 2009. As of September 30, 2016, the SIF had set aside $183 million in reserves to cover potential losses, a reduction of 25 percent from the $244 million set-aside as of September 30, 2013.

Restoring the Deposit Insurance Funds

Pursuant to the Dodd-Frank Act, the restoration period for the FDIC's DIF reserve ratio to reach 1.35 percent was extended to 2020. (Prior to the Act, the DIF reserve ratio was required to reach the minimum target of 1.15 percent by the end of 2016.) On March 25, 2016, the FDIC published a final rule to implement this requirement. The Act also placed the responsibility for the cost of increasing the reserve ratio to 1.35 percent on large banks (generally, those with $10 billion or more in assets). The final rule would lower overall regular assessment rates for all banks but also impose a 4.5 basis point surcharge on the assessment base (with certain adjustments) of large banks. The reduction in regular rates and large bank surcharges would begin the quarter after the DIF reserve ratio reaches 1.15 percent. The reserve ratio surpassed 1.15 percent on June 30, 2016, with lower regular assessment rates and large bank surcharges commencing in the July-September quarter. Surcharges on large banks will continue until the reserve ratio reaches 1.35 percent. The Budget estimates reflect these assessment rates.

Since 2009, NCUA has successfully restored the reserve ratio of the SIF to the normal operating level. Additionally, NCUA continues to seek compensation from the parties that created and sold troubled assets to the failed corporate credit unions. As of September 30, 2016, NCUA's gross recoveries from securities underwriters totaled more than $1.9 billion, helping to minimize losses and future assessments on federally-insured credit unions.

Budget Outlook

The Budget estimates DIF net outlays of -$77.4 billion over the current 10-year budget window (2018-2027). This $77.4 billion in net inflows to the DIF is $13.8 billion higher than estimated over the previous 10-year window (2016-2027) for the 2017 Mid-Session Review (MSR). The latest public data on the banking industry led to a reduction in projections of failed assets, reducing receivership proceeds, resolution outlays, and premiums necessary to reach the minimum Dodd-Frank Act DIF reserve ratio of 1.35 percent relative to MSR. The Budget estimates reflects a DIF reserve ratio of at least 1.35 percent in 2020. Although the FDIC has authority to borrow up to $100 billion from Treasury to maintain sufficient DIF balances, the Budget does not anticipate FDIC utilizing its borrowing authority because the DIF is projected to maintain positive operating cash flows over the entire 10-year budget horizon.

Pension Guarantees

The Pension Benefit Guaranty Corporation (PBGC) insures the pension benefits of workers and retirees in covered defined-benefit pension plans. PBGC operates two legally distinct insurance programs: single-employer plans and multiemployer plans.

Single-Employer Program. Under the single-employer program, PBGC pays benefits, up to a guaranteed level, when a company's plan closes without enough assets to pay future benefits. PBGC's claims exposure is the amount by which qualified benefits exceed assets in insured plans. In the near term, the risk of loss stems from financially distressed firms with underfunded plans. In the longer term, loss exposure results from the possibility that well-funded plans become underfunded due to inadequate contributions, poor investment results, or increased liabilities, and that the healthy firms sponsoring those plans become distressed.

PBGC monitors companies with underfunded plans and acts to protect the interests of the pension insurance program's stakeholders where possible. Under its Early Warning Program, PBGC works with companies to strengthen plan funding or otherwise protect the insurance program from avoidable losses. However, PBGC's authority to manage risks to the insurance program is limited. Most private insurers can diversify or reinsure their catastrophic risks as well as flexibly price these risks. Unlike private insurers, federal law does not allow PBGC to deny insurance coverage to a defined-benefit plan or adjust premiums according to risk. Both types of PBGC premiums—the flat rate (a per person charge paid by all plans) and the variable rate (paid by some underfunded plans) are set in statute.

Claims against PBGC's insurance programs are highly variable. One large pension plan termination may result in a larger claim against PBGC than the termination of many smaller plans. The future financial health of the PBGC will continue to depend largely on the termination of a limited number of very large plans.

Single employer plans generally provide benefits to the employees of one employer. When an underfunded single employer plan terminates, usually through the bankruptcy process, PBGC becomes trustee of the plan, applies legal limits on payouts, and pays benefits. The amount of benefit paid is determined after taking into account (a) the benefit that a beneficiary had accrued in the terminated plan, (b) the availability of assets from the terminated plan to cover benefits, and (c) the legal maximum benefit level set in statute. In 2017, the maximum annual payment guaranteed under the single-employer program was $64,432 for a retiree aged 65. This limit is indexed for inflation.

Since 2000, PBGC's single-employer program has incurred substantial losses from underfunded plan terminations. Nine of the ten largest plan termination losses were concentrated between 2001 and 2009. The other occurred in the early 1990s.

Multiemployer Plans. Multiemployer plans are collectively bargained pension plans maintained by one or more labor unions and more than one unrelated employer, usually within the same or related industries. PBGC's role in the multiemployer program is more like that of a re-insurer; if a company sponsoring a multiemployer plan fails, its liabilities are assumed by the other employers in the collective bargaining agreement, not by PBGC, although employers can withdraw from a plan for an exit fee. PBGC becomes responsible for insurance coverage when the plan runs out of money to pay benefits at the statutorily guaranteed level, which usually occurs after all contributing employers have withdrawn from the plan, leaving the plan without a source of income. PBGC provides insolvent multiemployer plans with financial assistance in the form of loans sufficient to pay guaranteed benefits and administrative expenses. Since multiemployer plans do not receive PBGC assistance until their assets are fully depleted, financial assistance is almost never repaid. Benefits under the multiemployer program are calculated based on the benefit that a participant would have received under the insolvent plan, subject to the legal multiemployer maximum set in statute. The maximum guaranteed amount depends on the participant's years of service and the rate at which benefits are accrued. For example, for a participant with 30 years of service, PBGC guarantees 100 percent of the pension benefit up to a yearly amount of $3,960. If the pension exceeds that amount, PBGC guarantees 75 percent of the rest of the pension benefit up to a total maximum guarantee of $12,870 per year. This limit has been in place since 2011 and is not adjusted for inflation or cost-of-living increases.

In recent years, many multiemployer pension plans have become severely underfunded as a result of unfavorable investment outcomes, employers withdrawing from plans, and demographic challenges. In 2001, only 15 plans covering about 80,000 participants were under 40 percent funded using estimated market rates. By 2011, this had grown to almost 200 plans covering almost 1.5 million participants. While many plans have benefited from an improving economy and will recover, a small number of plans are severely underfunded and, absent any changes, projected to become insolvent within ten years.

As of November 15, 2016, the single-employer and multiemployer programs reported deficits of $20.6 billion and $58.8 billion, respectively. While both programs have significant deficits, the challenges facing the multiemployer program are more immediate. In its 2016 Annual Report, PBGC reported that it had just $2 billion in accumulated assets from premium payments made by multiemployer plans, which it projected would be depleted by 2025. If the program runs out of cash, the only funds available to support benefits would be the premiums that continue to be paid by remaining plans; this could result in benefits being cut much more deeply, to a small fraction of current guarantee levels.

To address the problems facing the multiemployer program and the millions of Americans who rely on those plans for their retirement security, the Congress passed The Multiemployer Pension Reform Act, which was included in the Consolidated and Further Continuing Appropriations Act signed on December 16, 2014. The law includes significant reforms to the multiemployer pension plan system, including provisions that allow trustees of multiemployer plans facing insolvency to apply to the Department of Treasury to reduce benefits by temporarily or permanently suspending benefits. The law does not allow suspensions for individuals over age 80 or for those receiving a disability retirement benefit. A participant or beneficiary's monthly benefit cannot be reduced below 110 percent of the PBGC guarantee. It also increases PBGC premiums from the $12 per person to $26 beginning in 2015 and indexes premiums to inflation thereafter. While the legislation is an important first step, it will not be enough to improve PBGC's solvency for more than a very short period of time. PBGC projects that it is likely to become insolvent by 2025, extending its projected insolvency date by three years compared to the 2013 projection.

In addition, Congress enacted premium increases in the single-employer program as part of the Bipartisan Budget Act of 2015 (BBA). By increasing both the flat-rate and variable-rate premiums, the Act will raise as estimated $4 billion over the 10-year budget window. This additional revenue will improve the financial outlook for the single-employer program, which was already projected to see a large reduction in its deficit over the next 10 years.

Premiums. Both programs are underfunded, with combined liabilities exceeding assets by $79 billion at the end of 2016. While the single-employer program's financial position is projected to improve over the next 10 years, in part because Congress has raised premiums in that program several times in recent years, the multiemployer program is projected to run out of funds in 2025. Particularly in the multiemployer program, premium rates remain much lower than what a private financial institution would charge for insuring the same risk and well below what is needed to ensure PBGC's solvency.

To address these concerns, the 2018 Budget proposes changes to PBGC premiums that would raise $21 billion. The Budget proposes to create a new variable rate premium (VRP) and an exit premium in the multiemployer program, estimated to raise an additional $16 billion in premium revenue over the budget window. A multiemployer VRP would require plans to pay additional premiums based on their level of underfunding—as is done in the single-employer program. An exit premium assessed on employers that withdraw from a plan would compensate PBGC for the additional risk imposed on it when healthy employers exit. This level of additional multiemployer premium revenue would significantly reduce the risk of the multiemployer program becoming insolvent within 10 years.

Disaster Insurance

Flood Insurance

The Federal Government provides flood insurance through the National Flood Insurance Program (NFIP), which is administered by the Federal Emergency Management Agency (FEMA) of the Department of Homeland Security (DHS). Flood insurance is available to homeowners and businesses in communities that have adopted and enforce appropriate floodplain management measures. Coverage is limited to buildings and their contents. At the end of fiscal year 2016, the program had over 5.1 million policies worth $1.25 trillion in force in 22,216 communities.

The NFIP was established in 1968 to make flood insurance coverage widely available, to combine a program of insurance with flood mitigation measures to reduce the nation's risk of loss from floods, and to reduce Federal disaster-assistance expenditures on flood losses. The NFIP requires participating communities to adopt certain building standards and take other mitigation efforts to reduce flood-related losses, and operates a flood hazard-mapping program to quantify geographic variation in the risk of flooding. These efforts have resulted in substantial reductions in the risk of flood-related losses nationwide. However, structures built prior to flood mapping and NFIP floodplain management requirements, which make up 20 percent of the total policies in force, currently pay less than fully actuarial rates while continuing to be at relatively high risk of flooding.

To complement flood insurance, FEMA has a multi-pronged strategy for reducing future flood damage. The NFIP offers flood mitigation assistance grants to assist flood disaster survivors to rebuild to current building codes, including higher base flood elevations, thereby reducing the likelihood of future flood damage. In particular, flood mitigation assistance grants targeted toward repetitive and severe repetitive loss properties not only help owners of high-risk property, but also reduce the disproportionate drain these properties cause on the National Flood Insurance Fund, through acquisition, relocation, or elevation of select structures. FEMA is working to ensure that the flood mitigation grant program is integrated closely with other FEMA mitigation grant programs, resulting in better coordination and communication with State and local governments. Further, through the Community Rating System, FEMA adjusts premium rates to encourage community and State mitigation activities beyond those required by the NFIP. These efforts, in addition to the minimum NFIP requirements for floodplain management, save over $1.9 billion annually in avoided flood damage claims.

A major goal of the NFIP is to expand flood insurance coverage in the United States in order to reduce risk for more homeowners. The agency's strategy aims to increase the number of Americans insured against flood losses and improve retention of policies among existing customers. The strategy includes:

1. Providing financial incentives to private insurers that sell and service flood policies for the Federal Government to expand the flood insurance business.

2. Conducting a national campaign, FloodSmart, which uses TV, radio, print and online advertising, direct mailings, and public relations activities, to inform the public about the NFIP and attract new policyholders.

3. Fostering lender compliance with flood insurance requirements through training, guidance materials, and regular communication with lending regulators and the lending community.

4. Conducting NFIP training for insurance agents via instructor-led seminars, online training modules, and other vehicles.

5. Seeking opportunities to simplify and clarify NFIP processes and products to make it easier for agents to sell and for consumers to buy flood insurance.

These strategies resulted in steady policy growth for many years, peaking in 2010 at 5.61 million policies. Subsequently, however, policy growth was hampered by the lingering effects of the Great Recession and by premium increases.

Due to the catastrophic nature of flooding, with hurricanes Katrina and Sandy as notable examples, insured flood damages can far exceed premium revenue and deplete the program's reserves. On those occasions, the NFIP exercises its borrowing authority through the Treasury to meet flood insurance claim obligations. While the program needed appropriations in the early 1980s to repay the funds borrowed during the 1970's, it was able to repay all borrowed funds with interest using only premium dollars between 1986 and 2004. In 2005, however, Hurricanes Katrina, Rita, and Wilma generated more flood insurance claims than the cumulative number of claims paid from 1968 to 2004. Hurricane Sandy in 2012 generated $8.5 billion in flood insurance claims. As a result, in 2013 Congress increased the borrowing authority for the fund to $30.425 billion. After the estimated $2.4 billion and $670 million in flood insurance claims generated by the Louisiana flooding of August 2016 and Hurricane Matthew in October 2016, respectively, the NFIP used its borrowing authority again, bringing the total outstanding debt to Treasury to $24.6 billion.

In July 2012, resulting largely from experiences during Hurricanes Katrina, Rita, and Wilma in 2005, the Biggert Waters Flood Insurance Reform Act of 2012 (Public Law 112-141; BW-12) was signed into law. In addition to reauthorizing the NFIP for five years, the bill required the NFIP generally to move to full risk-based premium rates and strengthened the NFIP financially and operationally. In 2013, the NFIP began phasing in risk-based premiums for certain properties, as required by the law. In fiscal year 2014, when policy premiums were increased in compliance with the Biggert-Waters legislation, policy counts dropped 4.3 percent to 5.3 million.

In March 2014, largely in reaction to premium increases initiated by BW-12, the Homeowner Flood Insurance Affordability Act of 2014 (HFIAA) was signed into law, further reforming the NFIP and revising many sections of BW-12. Notably, HFIAA repealed many of the major premium increases introduced by BW-12 and required retroactive refunds of collected BW-12 premium increases, introduced a phase-in to higher full-risk premiums for structures newly mapped into the Special Flood Hazard Area, and created an Office of the Flood Insurance Advocate. In fiscal year 2015, when a surcharge on all policyholders was introduced in compliance with HFIAA, policy counts dropped an additional 3.8 percent to 5.1

million. At the end of fiscal year 2016, policies in force totaled 5.1 million.

The Budget seeks to put the National Flood Insurance Program (NFIP) on a more sustainable financial footing moving forward, expand flood insurance coverage by encouraging private competition in the flood insurance market, and incentivize mitigation measures by signaling to homeowners the true cost associated with the risk of living in a floodplain. This would be accomplished through a combination of targeted premium increases for policyholders paying premiums that are less than full risk and surcharges levied across the entire NFIP policy base. The proposed changes are expected to result in savings of approximately $8.9 billion from 2018 through 2027. The estimates reflect the Administration's desire to work with Congress to make the program fiscally sustainable over time and begin paying down the NFIP's debt.

The current NFIP authorization expires on September 30, 2017.

Crop Insurance

Subsidized Federal crop insurance, administered by USDA's Risk Management Agency (RMA) on behalf of the Federal Crop Insurance Corporation (FCIC), assists farmers in managing yield and revenue shortfalls due to bad weather or other natural disasters, and is commonly known as "multi-peril crop insurance" (MPCI). The program is a cooperative partnership between the Federal Government and the private insurance industry. Private insurance companies sell and service crop insurance policies. The Federal Government, in turn, pays private companies an administrative and operating (A&O) expense subsidy to cover expenses associated with selling and servicing these policies. The Federal Government also provides reinsurance on MPCI policies through the Standard Reinsurance Agreement (SRA) and pays companies an "underwriting gain" if they have a profitable year. For the 2018 Budget, the payments to the companies are projected to be $3.9 billion in combined subsidies. The Federal Government also subsidizes premiums for farmers as a way to encourage farmers to participate in the program and purchase higher levels of coverage.

The 2018 Budget includes two proposals that are designed to optimize the current crop insurance program so that it will continue to provide a quality safety net at a lower cost, as well as introduce a measure of means testing to the beneficiaries of the crop insurance subsidies:

1. Limit Premium Subsidies for Crop Insurance: The 2018 Budget proposes to establish a limit of $40,000 for the premium subsidies an individual or entity may receive. It would reduce the generous subsidies that are arguably no longer necessary to encourage participation, as crop insurance is now an established part of the farm industry's business plans. The $40,000 limit in premium subsidy would apply to all levels of coverage, including catastrophic coverage.

2. Eliminate Subsidized Harvest Price Revenue Coverage: The 2018 Budget also proposes to eliminate the ability for producers to insure their crops at the higher of the price projected at planting or the harvest price. Crop insurance was not designed to reduce risk in forward selling, and the Government should not bear the risk of such losses. Harvest price coverage is far more generous than a mere safety net. Producers that want to hedge their risk can do so using futures and options on commodity exchanges as they did before this type of insurance coverage was available. Private sector insurance companies could offer harvest price protection as an addendum to the Federal crop insurance policy; however, the premium for such an addendum would not receive a premium subsidy nor would the premium be included in the A&O or underwriting gain/loss calculations for payments to the companies. This proposal maintains the crop insurance program as a tool for farmers to use as protection in times of low yields and low prices.

In addition to these proposals, the 2018 Budget proposes to target crop insurance subsidies to those producers that have an Adjusted Gross Income (AGI) of $500,000 or less. It is hard to justify providing assistance to farmers with incomes over half a million dollars. Doing so undermines the credibility and the purpose of farm programs. The current AGI limitation of $900,000 is overly generous and does not apply to crop insurance subsidies. Strengthening the income test for crop insurance will improve their integrity. Collectively, the changes are expected to save $29 billion over 10 years.

The most basic type of crop insurance is catastrophic coverage (CAT), which compensates the farmer for losses in excess of 50 percent of the individual's average yield at 55 percent of the expected market price. The CAT premium is entirely subsidized, and farmers pay only an administrative fee. Higher levels of coverage, called "buy-up," are also available. A portion of the premium for buy-up coverage is paid by FCIC on behalf of producers and varies by coverage level – generally, the higher the coverage level, the lower the percent of premium subsidized. The remaining (unsubsidized) premium amount is owed by the producer and represents an out-of-pocket expense.

For 2016, the 10 principal crops, (barley, corn, cotton, grain sorghum, peanuts, potatoes, rice, soybeans, tobacco, and wheat) accounted for over 77 percent of total liability, and approximately 86 percent of the total U.S. planted acres of the 10 crops were covered by crop insurance. Producers can purchase both yield and revenue-based insurance products which are underwritten on the basis of a producer's actual production history (APH). Revenue insurance programs protect against loss of revenue resulting from low prices, low yields, or a combination of both. Revenue insurance has enhanced traditional yield insurance by adding price as an insurable component. For the 2018 Budget, revenue insurance is assumed to protect only against a price decline based on the projected price at the time of planting.

In addition to price and revenue insurance, FCIC has made available other plans of insurance to provide protection for a variety of crops grown across the United States. For example, "area plans" of insurance offer protection based on a geographic area (most commonly, a county), and do not directly insure an individual farm. Often, the loss trigger is based on an index, such as a rainfall or vegetative index, which is established by a Government entity (for example, NOAA or USGS). One such plan is the pilot Rainfall and Vegetation Index plan, which insures against a decline in an index value covering Pasture, Rangeland, and Forage. These pilot programs meet the needs of livestock producers who purchase insurance for protection from losses of forage produced for grazing or harvested for hay. In 2016, there were 21,700 Rainfall and Vegetation Index policies earning premium, covering about 52 million acres of pasture, rangeland and forage. In 2016, there was about $1.4 billion in liability, with $183 million in indemnities paid to livestock producers who purchased coverage.

A crop insurance policy also contains coverage compensating farmers when they are prevented from planting their crops due to weather and other perils. When an insured farmer can't plant the planned crop within the planting time period because of excessive drought or moisture, the farmer may file a prevented planting claim, which pays the farmer a portion of the full coverage level. It is optional for the farmer to plant a second crop on the acreage. If the farmer does, the prevented planting claim on the first crop is reduced and the farmer's APH is recorded for that year. If the farmer does not plant a second crop, the farmer gets the full prevented planting claim, and the farmer's APH is held harmless for premium calculation purposes the following year. In November 2016, RMA published a final rule amending existing regulations pertaining to prevented planting coverage. Among the changes made by the final rule was to move the "payment factors" used to calculate a prevented planting payment from the regulatory text to the actuarial documents associated with the policy. This change provides USDA the ability to more quickly update the payment factors to reflect actual pre-plant costs incurred by producers ensuring that producers are not over- or under-compensated for their losses when confronted by a prevented plant situation. Subsequently, the actuarial documents were updated to decrease the payment factor for corn and increase the payment factor for rice. Going forward, crops having prevented plant coverage will be assessed on a regular basis to determine if additional changes to the payment factors are required.

RMA is continuously working to develop new products and to expand or improve existing products in order to cover more agricultural commodities. Under section 508(h) of the Federal Crop Insurance Act, RMA may advance payment of up to 50 percent of expected reasonable research and development costs for FCIC Board approved Concept Proposals prior to the complete submission of the policy or plan of insurance. Numerous private products have been approved through the 508(h) authority, including Downed Rice Endorsement, Machine Harvested Cucumbers, ARPI Popcorn, Clary Sage, Hybrid Seed Rice, Specialty Trait Soybean, and Malting Barley.

For more information and additional crop insurance program details, please reference RMA's web site (*www.rma.usda.gov*).

Insurance against Security-Related Risks

Terrorism Risk Insurance

The Terrorism Risk Insurance Program (TRIP) was authorized under P.L. 107-297 to help ensure the continued availability of property and casualty insurance following the terrorist attacks of September 11, 2001. TRIP's initial three-year authorization enabled the Federal Government to establish a system of shared public and private compensation for insured property and casualty losses arising from certified acts of foreign terrorism. In 2005, Congress passed a two-year extension (P.L. 109-144), which narrowed the Government's role by increasing the private sector's share of losses, reducing lines of insurance covered by the program, and adding a threshold event amount triggering Federal payments.

In 2007, Congress enacted a further seven-year extension of TRIP and expanded the program to include losses from domestic as well as foreign acts of terrorism (P.L. 110-318). For all seven extension years, TRIP maintained a private insurer deductible of 20 percent of the prior year's direct earned premiums, an insurer co-payment of 15 percent of insured losses of up to $100 billion above the deductible, and a $100 million minimum event cost triggering Federal coverage. The 2007 extension also required Treasury to recoup 133 percent of all Federal payments made under the program up to $27.5 billion, and accelerated deadlines for recoupment of any Federal payments made before September 30, 2017.

In January 2015, Congress passed the Terrorism Risk Insurance Extension Act of 2015 (P.L. 114–1), which extended TRIP for six more years, through December 31, 2020, and made several program changes to further reduce Federal liability. Over the first five extension years, the loss threshold that triggers Federal assistance is increased by $20 million each year to $200 million in 2019, and the Government's share of losses above the deductible decreases from 85 to 80 percent over the same period. The 2015 extension also requires Treasury to recoup 140 percent of all Federal payments made under the program up to a mandatory recoupment amount, which increases by $2 billion each year until 2019 when the threshold is set at $37.5 billion. Effective January 1, 2020, the mandatory recoupment amount will be indexed to a running three-year average of the aggregate insurer deductible of 20 percent of direct-earned premiums. These programmatic reforms will facilitate, over the longer term, full transition of the program to the private sector. The Budget baseline includes the estimated Federal cost of providing terrorism risk insurance, reflecting the 2015 extension. Using market data synthesized through a proprietary model, the Budget projects annual outlays and recoupment for TRIP. While the Budget does not forecast any specific triggering events, the Budget includes estimates representing the weighted average of TRIP payments over a full range of possible scenarios, most of which include no notional terrorist attacks (and therefore no TRIP payments), and some of which include notional terrorist attacks of varying magnitudes. On this basis, the Budget projects net spending of $446 million over the 2018–2022 period and $519 million over the 2018–2027 period.

Aviation War Risk Insurance

In December 2014, Congress sunset the premium aviation war risk insurance program, thereby sending U.S. air carriers back to the commercial aviation insurance market for all of their war risk insurance coverage. The non-premium program is authorized through December 31, 2018. It provides aviation insurance coverage for aircraft used in connection with certain Government contract operations by a Department or Agency that agrees to indemnify the Secretary of Transportation for any losses covered by the insurance.

Chart 19-1. Face Value of Federal Credit Outstanding

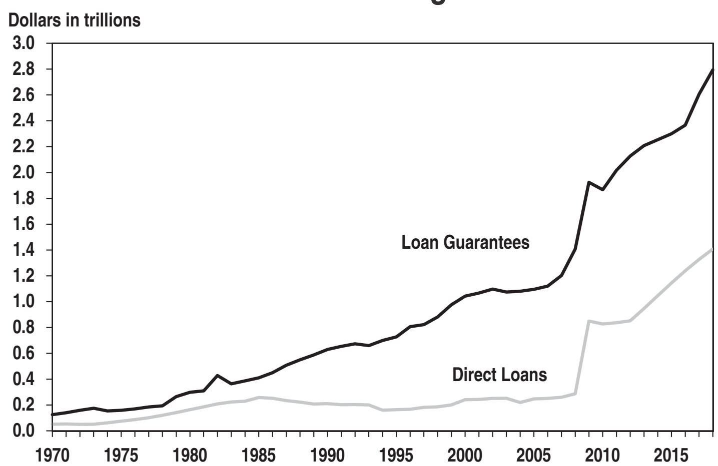


Table 19–1. ESTIMATED FUTURE COST OF OUTSTANDING DIRECT LOANS AND LOAN GUARANTEES

(In billions of dollars)

Program	Outstanding 2015	Estimated Future Costs of 2015 Outstanding[1]	Outstanding 2016	Estimated Future Costs of 2016 Outstanding
Direct Loans:[2]				
Federal Student Loans	839	–26	943	15
Education Temporary Student Loan Purchase Authority	77	–12	70	–7
Farm Service Agency, Rural Development, Rural Housing	55	6	55	4
Rural Utilities Service and Rural Telephone Bank	52	2	52	2
Export-Import Bank	23	2	24	1
Housing and Urban Development	19	11	24	12
Advance Technology Vehicle Manufacturing, Title 17 Loans	16	2	16	2
Transportation Infrastructure Finance and Innovation Act Loans	11	*	13	*
State Housing Finance Authority Direct Loans	8	1	7	1
Disaster Assistance	6	1	6	1
Public Law 480	3	2	3	1
International Assistance	2	*	3	1
Small Business Lending Fund (SBLF)[3]	2	*	*	*
Troubled Asset Relief Program (TARP)[3]	1	*	1	*
Other direct loan programs[3]	27	8	20	7
Total direct loans	1,145	–2	1,239	41
Guaranteed Loans:[2]				
FHA Mutual Mortgage Insurance Fund	1,123	10	1,153	–4
Department of Veterans Affairs (VA) Mortgages	462	10	525	10
Federal Student Loan Guarantees	220	*	197	1
FHA General and Special Risk Insurance Fund	149	6	140	3
Farm Service Agency, Rural Development, Rural Housing	134	6	140	2
Small Business Administration (SBA) Business Loan Guarantees[4]	106	2	113	2
Export-Import Bank	62	2	56	1
International Assistance	24	2	24	2
Title 17 Loan Guarantees	3	*	3	*
Commodity Credit Corporation Export Loan Guarantees	3	*	2	*
Government National Mortgage Association (GNMA)[4]	......	*	......	*
Other guaranteed loan programs[3]	13	2	14	2
Total guaranteed loans	2,300	39	2,366	20
Total Federal credit	**3,445**	**37**	**3,606**	**61**

* $500 million or less.

[1] Future costs represent balance sheet estimates of allowance for subsidy cost, liabilities for loan guarantees, and estimated uncollectible principal and interest.

[2] Excludes loans and guarantees by deposit insurance agencies and programs not included under credit reform, such as Tennessee Valley Authority loan guarantees. Defaulted guaranteed loans that result in loans receivable are included in direct loan amounts.

[3] As authorized by the statute, table includes TARP and SBLF equity purchases, and International Monetary Fund (IMF) transactions resulting from the 2009 Supplemental Appropriations Act. Future costs for TARP and IMF transactions are calculated using the discount rate required by the Federal Credit Reform Act adjusted for market risks, as directed in legislation.

[4] To avoid double-counting, outstandings for GNMA and SBA secondary market guarantees, and TARP FHA Letter of Credit program are excluded from the totals.

Table 19–2. DIRECT LOAN SUBSIDY RATES, BUDGET AUTHORITY, AND LOAN LEVELS, 2016-2018

(Dollar amounts in millions)

Agency and Program Account	2016 Actual			2017 Estimated			2018 Proposed		
	Subsidy rate [1]	Subsidy budget authority	Loan levels	Subsidy rate [1]	Subsidy budget authority	Loan levels	Subsidy rate [1]	Subsidy budget authority	Loan levels
Agriculture:									
Agricultural Credit Insurance Fund Program Account	1.29	32	2,409	1.09	33	2,871	–0.25	–6	2,937
Farm Storage Facility Loans Program Account	–1.64	–2	159	–1.33	–4	309	–1.30	–5	309
Rural Electrification and Telecommunications Loans Program Account	–3.89	–160	4,110	–4.31	–220	5,101	–4.85	–166	3,417
Distance Learning, Telemedicine, and Broadband Program	22.80	1	4	16.64	5	31	16.75	7	41
Rural Water and Waste Disposal Program Account	2.61	31	1,204	4.34	32	732	....	....	....
Rural Community Facilities Program Account	–6.90	–152	2,210	–2.56	–56	2,200	–8.10	–146	1,798
Multifamily Housing Revitalization Program Account	53.22	37	70	53.44	17	32	....	....	....
Rural Housing Insurance Fund Program Account	8.10	85	1,044	8.24	80	979	–5.45	–*	2
Rural Microenterprise Investment Program Account	11.33	1	8	12.40	1	8	9.98	1	8
Intermediary Relending Program Fund Account	27.62	5	19	28.99	5	18	....	....	....
Rural Economic Development Loans Program Account	13.39	6	43	14.23	5	37	....	....	....
Commerce:									
Fisheries Finance Program Account	–3.10	–*	12	–0.33	–*	124	–10.37	–13	124
Education:									
College Housing and Academic Facilities Loans Program Account	6.67	9	128	7.14	20	282	6.42	20	314
TEACH Grant Program Account	13.05	14	105	14.97	15	100	22.60	25	109
Federal Direct Student Loan Program Account	–5.89	–9,164	155,640	–1.25	–1,960	156,536	–6.43	–10,662	166,020
Energy:									
Title 17 Innovative Technology Loan Guarantee Program	....	....	....	....	....	1,842	....	....	....
Homeland Security:									
Disaster Assistance Direct Loan Program Account	91.05	1	1	91.03	46	50	90.33	72	80
Housing and Urban Development:									
FHA-Mutual Mortgage Insurance Program Account	....	....	....	....	....	5	....	....	5
FHA-General and Special Risk Program Account	–10.94	–73	667	–11.19	–82	734	–8.18	–66	807
State:									
Repatriation Loans Program Account	53.18	1	2	53.42	1	2	53.26	1	2
Transportation:									
Federal-Aid Highways	4.98	109	2,180	[2] 6.85	273	3,982	[2] 6.64	248	3,736
Railroad Rehabilitation and Improvement Program	....	....	2,469	....	....	600	....	....	600
Treasury:									
Community Development Financial Institutions Fund Program Account	–2.39	–7	267	[2] 0.63	3	457	[2]	....	500
Veterans Housing Benefit Program Fund	1.71	*	8	–22.92	–89	388	–25.58	–116	454
Native American Veteran Housing Loan Program Account	–8.51	–1	4	–13.61	–2	12	–14.85	–2	12
Environmental Protection Agency:									
Water Infrastructure Finance And Innovation Program Account	....	....	....	....	....	....	[2] 1.55	29	1,871
International Assistance Programs:									
Foreign Military Financing Loan Program Account	8.99	243	2,700	5.23	141	2,700	18.08	150	830
Overseas Private Investment Corporation Program Account	–16.55	–236	1,416	–5.64	–34	600	....	....	....
Small Business Administration:									
Disaster Loans Program Account	12.10	143	1,181	14.42	231	1,600	12.54	138	1,100
Business Loans Program Account	8.87	3	35	9.08	3	34	8.91	3	36
Total	**N/A**	**–9,074**	**178,095**	**N/A**	**–1,536**	**182,366**	**N/A**	**–10,488**	**185,112**

N/A = Not applicable

* $500,000 or less

[1] Additional information on credit subsidy rates is contained in the Federal Credit Supplement.

[2] Rate reflects notional estimate. Estimates will be determined at the time of execution and will reflect the terms of the contracts and other characteristics.

Table 19–3. LOAN GUARANTEE SUBSIDY RATES, BUDGET AUTHORITY, AND LOAN LEVELS, 2016-2018

(Dollar amounts in millions)

Agency and Program Account	2016 Actual			2017 Estimated			2018 Proposed		
	Subsidy rate [1]	Subsidy budget authority	Loan levels	Subsidy rate [1]	Subsidy budget authority	Loan levels	Subsidy rate [1]	Subsidy budget authority	Loan levels
Agriculture:									
Agricultural Credit Insurance Fund Program Account	0.30	12	3,965	0.36	13	3,489	0.26	11	4,043
Commodity Credit Corporation Export Loans Program Account	–0.46	–10	2,150	–0.58	–32	5,500	–0.43	–23	5,500
Rural Water and Waste Disposal Program Account	0.55	*	7	0.48	*	16	....	....	....
Rural Community Facilities Program Account	2.36	6	237	2.24	4	157	....	....	....
Rural Housing Insurance Fund Program Account	–0.18	–31	16,544	–0.78	–168	21,388	–0.74	–123	16,544
Rural Business Program Account	3.88	50	1,293	3.84	42	1,099	....	....	....
Rural Energy for America Program	6.60	17	258	4.64	19	409	....	....	....
Biorefinery Assistance Program Account	....	....	....	[2] 20.81	19	90	....	....	....
Health and Human Services:									
Health Resources and Services	2.67	*	9	2.65	*	3	2.69	*	3
Housing and Urban Development:									
Indian Housing Loan Guarantee Fund Program Account	0.63	5	710	0.54	4	800	0.37	3	880
Native Hawaiian Housing Loan Guarantee Fund Program Account	0.51	*	16	–0.27	–*	23	–0.28	–*	23
Native American Housing Block Grant	11.46	2	15	11.20	2	22	11.50	2	17
Community Development Loan Guarantees Program Account	....	....	85	....	....	150	....	....	....
FHA-Mutual Mortgage Insurance Program Account	–3.53	–9,184	260,300	–4.14	–11,191	270,277	–3.11	–7,111	228,700
FHA-General and Special Risk Program Account	–3.22	–496	15,406	–3.42	–541	15,794	–3.54	–593	16,801
Interior:									
Indian Guaranteed Loan Program Account	5.88	7	114	6.32	7	106	6.50	7	106
Transportation:									
Minority Business Resource Center Program	....	....	....	2.36	*	14	....	....	....
Maritime Guaranteed Loan (Title XI) Program Account	....	....	....	[2] 9.90	42	424	....	....	....
Treasury:									
Troubled Asset Relief Program, Housing Programs [3]	....	....	....	0.80	2	200	....	....	....
Veterans Affairs:									
Veterans Housing Benefit Program Fund	0.25	454	181,786	0.51	802	157,226	0.27	383	141,929
International Assistance Programs:									
Loan Guarantees to Israel Program Account	....	....	....	....	....	1,000	....	....	1,000
Ukraine Loan Guarantees Program Account	29.00	290	1,000	....	....	....	....	....	....
MENA Loan Guarantee Program Account	5.81	29	500	25.53	255	1,000	....	....	....
Development Credit Authority Program Account	3.21	29	898	4.95	18	364	4.19	60	1,425
Overseas Private Investment Corporation Program Account	–10.42	–255	2,444	–4.97	–135	2,700	....	....	....
Small Business Administration:									
Business Loans Program Account	....	....	37,372	....	....	57,500	....	....	60,000
Export-Import Bank of the United States:									
Export-Import Bank Loans Program Account	–0.06	–3	5,036	–4.97	–744	14,979	–3.02	–604	20,024
Total	**N/A**	**–9,078**	**530,145**	**N/A**	**–11,582**	**554,730**	**N/A**	**–7,988**	**496,995**
ADDENDUM: SECONDARY GUARANTEED LOAN COMMITMENT LIMITATIONS									
Government National Mortgage Association:									
Guarantees of Mortgage-backed securities Loan Guarantee Program Account	–0.29	–1,415	487,872	–0.37	–1,328	359,000	–0.40	–1,623	405,700
Small Business Administration:									
Secondary Market Guarantee Program	....	....	7,410	....	....	12,000	....	....	12,000
Total, secondary guarantee loan commitments	**N/A**	**–1,415**	**495,282**	**N/A**	**–1,328**	**371,000**	**N/A**	**–1,623**	**417,700**

N/A = Not applicable.

* $500,000 or less

[1] Additional information on credit subsidy rates is contained in the Federal Credit Supplement.

[2] Rate reflects notional estimate. Estimates will be determined at the time of execution and will reflect the terms of the contracts and other characteristics.

[3] Amounts reflect the Troubled Asset Relief Program, FHA Refinance Letter of Credit. Subsidy costs for the program are calculated using the discount rate under the Federal Credit Reform Act adjusted for market risks, consistent with the Emergency Economic Stabilization Act of 2008.

Table 19–4. SUMMARY OF FEDERAL DIRECT LOANS AND LOAN GUARANTEES[1]
(In billions of dollars)

	Actual								Estimate	
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Direct Loans:										
Obligations	812.9	246.0	296.3	191.1	174.4	174.0	181.3	175.6	182.4	185.1
Disbursements	669.4	218.9	186.7	170.0	157.5	155.4	161.4	158.5	173.2	172.5
Budget authority:										
New subsidy budget authority[2]	140.1	–9.2	–15.7	–27.2	–29.8	–22.4	4.9	–9.0	–1.2	–10.5
Reestimated subsidy budget authority[2,3]	–0.1	–125.1	–66.8	16.8	–19.7	–0.8	10.1	8.0	32.5	....
Total subsidy budget authority	**140.0**	**–134.3**	**–82.5**	**–10.4**	**–49.4**	**–23.2**	**15.1**	**–1.1**	**31.4**	**–10.5**
Loan guarantees:										
Commitments[4]	879.2	507.3	446.7	479.7	536.6	350.8	478.3	537.6	566.9	509.0
Lender disbursements[4]	841.5	494.8	384.1	444.3	491.3	335.6	461.6	517.6	526.3	464.0
Budget authority:										
New subsidy budget authority[2]	–7.8	–4.9	–7.4	–6.9	–17.9	–13.7	–11.9	–7.5	–10.3	–6.4
Reestimated subsidy budget authority[2,3]	0.5	7.6	–4.0	–4.9	20.8	1.2	–1.1	–13.6	16.8	....
Total subsidy budget authority	**–7.3**	**2.7**	**–11.4**	**–11.8**	**2.8**	**–12.5**	**–13.1**	**–21.1**	**6.5**	**–6.4**

[1] As authorized by statute, table includes TARP and SBLF equity purchases, and International Monetary Fund (IMF) transactions resulting from the 2009 Supplemental Appropriations Act.

[2] Credit subsidy costs for TARP and IMF transactions are calculated using the discount rate required by the Federal Credit Reform Act adjusted for market risks, as directed in legislation.

[3] Includes interest on reestimate.

[4] To avoid double-counting, the face value of GNMA and SBA secondary market guarantees and the TARP FHA Letter of Credit program are excluded from the totals.

20. BUDGETARY EFFECTS OF THE TROUBLED ASSET RELIEF PROGRAM

This chapter reports on the cost and budgetary effects of Treasury's Troubled Asset Relief Program (TARP), consistent with Sections 202 and 203 of the Emergency Economic Stabilization Act (EESA) of 2008 (P.L. 110–343), as amended. The cost estimates in this report reflect transactions as of September 30, 2016, and expected future transactions as reflected in the Budget and required under EESA. Where noted, a descriptive analysis of additional transactions that occurred after September 30, 2016, is provided. For information on subsequent TARP program developments, please consult the Treasury Department's TARP Monthly Reports to Congress. EESA authorized Treasury to purchase or guarantee troubled assets and other financial instruments to restore liquidity and stability to the financial system of the United States while protecting taxpayers. On October 3, 2010, Treasury's general authority to make new TARP commitments expired. Treasury continues to manage existing investments and is authorized to expend previously-committed TARP funds pursuant to obligations entered into prior to October 3, 2010. Subsequently, in December 2015, the Consolidated Appropriations Act, 2016 (P.L. 114-113) granted Treasury limited authority to make an additional $2.0 billion in commitments through the TARP Hardest Hit Fund (HHF).

Treasury's current estimate of TARP's lifetime deficit cost for its $454.5 billion in cumulative obligations is $32.4 billion (see Tables 20–1 and 20–6). Section 123 of EESA requires TARP costs to be estimated on a net present value basis, adjusted to reflect a premium for market risk. As investments are liquidated, their actual costs (including any market risk effects) become known and are reflected in reestimates. It is likely that the total cost of TARP to taxpayers will eventually be lower than current estimates as the forecast market risk premiums are replaced by actual costs, but the total cost will not be fully known until all TARP investments have been extinguished.

A description of the market impact of TARP programs, followed by a detailed analysis of the assets purchased through TARP, is provided at the end of this report.

Method for Estimating the Cost of TARP Transactions

Under EESA, Treasury has purchased different types of financial instruments with varying terms and conditions. The Budget reflects the costs of these instruments using the methodology as provided by Section 123 of EESA.

The estimated costs of each transaction reflect the underlying structure of the instrument. TARP financial instruments have included direct loans, structured loans, equity, loan guarantees, and direct incentive payments. The costs of equity purchases, loans, guarantees, and loss sharing are the net present value of cash flows to and from the Government over the life of the instrument, per the Federal Credit Reform Act (FCRA) of 1990; as amended (2 U.S.C. 661 et seq.), with an EESA-required adjustment to the discount rate for market risks. Costs for the incentive payments under TARP housing programs, other than loss sharing under the Federal Housing Administration (FHA) Refinance program, involve financial instruments

Table 20–1. CHANGE IN PROGRAMMATIC COSTS OF TROUBLED ASSET RELIEF PROGRAM

(In billions of dollars)

TARP Programs	2017 Budget		2018 Budget		Change from 2017 Budget to 2018 Budget	
	TARP Obligations [1]	Estimated Cost (+) / Savings (–)	TARP Obligations [1]	Estimated Cost (+) / Savings (–)	TARP Obligations [1]	Estimated Cost (+) / Savings (–)
Equity Programs	335.8	5.8	335.8	5.8	....	–*
Structured and Direct Loan Programs	76.2	16.7	76.2	16.7	....	*
Guarantee Programs [2]	5.0	–3.9	5.0	–3.9	....	....
TARP Housing Programs [3]	37.5	34.7	37.4	32.6	–0.1	–2.0
Total programmatic costs [4]	**454.6**	**53.2**	**454.5**	**51.2**	**–0.1**	**–2.1**
Memorandum:						
Deficit impact with interest on reestimates [5]		***34.5***		***32.4***		***–2.1***

*$50 million or less.

[1] TARP obligations are net of cancellations.

[2] The total assets supported by the Asset Guarantee Program were $301 billion.

[3] TARP obligations include FHA Refinance Letter of Credit first loss coverage of eligible FHA insured mortgages.

[4] Total programmatic costs of TARP exclude interest on reestimates.

[5] The total deficit impact of TARP as of November 30, 2016 includes $17.43 billion in subsidy cost for TARP investments in AIG. Additional proceeds of $17.55 billion resulting from Treasury holdings of non-TARP shares in AIG are not included.

Table 20–2. TROUBLED ASSET RELIEF PROGRAM CURRENT VALUE[1]
(In billions of dollars)

	Actual								Estimate										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Financing Account Balances:																			
Troubled Asset Relief Program Equity Purchase Financing Account	105.4	76.9	74.9	13.6	6.6	0.9	0.4	0.4	0.2	0.1	0.1	0.1	*	*	*	*	*	*	*
Troubled Asset Relief Program Direct Loan Financing Account	23.9	42.7	28.5	17.9	3.1	–0.2	–0.1	0.01	–*	–*	–*	–*	–*	–*	–*	–*	–*	–*	–*
Troubled Assets Insurance Financing Fund Guaranteed Loan Financing Account	0.6	2.4	0.8	0.8	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Troubled Assets Relief Program FHA Refinance Letter of Credit Financing Account	....	....	–*	–*	–*	–*	–*	–*	–*	–*	....	*	*	*	*	*	*	*	*
Total Financing Account Balances	**129.9**	**122.0**	**104.1**	**32.2**	**9.7**	**0.7**	**0.3**	**0.4**	**0.1**	**0.1**	**0.1**	**0.1**	*	*	*	*	*	*	*

* $50 million or less.
[1] Current value as reflected in the 2018 Budget. Amounts exclude housing activity under the Making Home Affordable program and the Hardest Hit Fund as these programs are reflected on a cash basis.

without any provision for future returns and are recorded on a cash basis.[1]

For each of these instruments, cash flow models[2] are used to estimate future cash flows to and from the Government over the life of a program or facility. Consistent with the requirement under FCRA to reflect the lifetime present value cost, subsidy cost estimates are reestimated every year an instrument is outstanding, with a final closing reestimate once an instrument is fully liquidated. Reestimates update the cost for actual transactions, and updated future expectations. When all investments in a given cohort are liquidated, their actual costs (including any market risk effects) become known and are reflected in final closing reestimates.

TARP Program Costs and Current Value of Assets

This section provides the special analysis required under Sections 202 and 203 of EESA, including estimates of the cost to taxpayers and the budgetary effects of TARP transactions as reflected in the Budget.[3] This section also explains the changes in TARP costs, and includes alternative estimates as prescribed under EESA. Additionally, this section includes a comparison of the current cost estimates with previous estimates provided by OMB and by the Congressional Budget Office (CBO).

Table 20–1, above, summarizes the cumulative and anticipated activity under TARP, and the estimated lifetime budgetary cost reflected in the Budget, compared to estimates from the 2017 Budget. The direct impact of TARP on the deficit is projected to be $32.4 billion, down $2.1 billion from the $34.5 billion estimate in the 2017 Budget. The total programmatic cost represents the lifetime net present value cost of TARP obligations from the date of disbursement, which is now estimated to be $51.2 billion, a figure that excludes interest on reestimates.[4] The final subsidy cost of TARP is likely to be lower than the current estimate because projected cash flows are discounted using a risk adjustment to the discount rate as required by EESA. This requirement adds a premium to current estimates of TARP costs on top of market and other risks already reflected in the estimated cash flows with the public. Over time, the added risk premium for uncertainty on future estimated TARP cash flows is returned to the General Fund through subsidy reestimates as actual cash flows become known. TARP's overall cost to taxpayers will not be fully known until all TARP investments are extinguished.

Current Value of Assets

The current value of future cash flows related to TARP transactions can also be measured by the balances in the program's non-budgetary credit financing accounts. Under the FCRA budgetary accounting structure, the net debt or cash balances in non-budgetary credit financing accounts at the end of each fiscal year reflect the present value of anticipated cash flows to and from the public.[5] Therefore, the net debt or cash balances reflect the expected present value of the asset

[1] Section 123 of EESA provides Treasury the authority to record TARP equity purchases pursuant to FCRA, with required adjustments to the discount rate for market risks. The HHF and Making Home Affordable (MHA) program involve the purchase of financial instruments that have no provision for repayment or other return on investment, and do not constitute direct loans or guarantees under FCRA. Therefore these purchases are recorded on a cash basis. Administrative expenses for TARP are recorded under the Office of Financial Stability and the Special Inspector General for TARP on a cash basis, consistent with other Federal administrative costs, but are recorded separately from TARP program costs.

[2] The basic methods for each of these models are outlined in chapter 21 of the Analytical Perspectives volume of the 2015 Budget, "Financial Stabilization Efforts and Their Budgetary Effects."

[3] The analysis does not assume the effects on net TARP costs of a recoupment proposal required by Section 134 of EESA.

[4] With the exception of MHA and HHF, all the other TARP investments are reflected on a present value basis pursuant to FCRA and EESA.

[5] For example, to finance a loan disbursement to a borrower, a direct loan financing account receives the subsidy cost from the program account, and borrows from the Treasury the difference between the face value of the loan and the subsidy cost. As loan and interest payments from the public are received, the value is realized and these amounts are used to repay the financing account's debt to Treasury.

or liability. Future collections from the public—such as proceeds from stock sales, or payments of principal and interest—are financial assets, just as future payments to the public are financial liabilities. The current year reestimates true-up assets and liabilities, setting the net debt or cash balance in the financing account equal to the present value of future cash flows.[6]

Table 20–2 shows the actual balances of TARP financing accounts as of the end of each fiscal year through 2016, and projected balances for each subsequent year through 2027.[7] Based on actual net balances in financing accounts at the end of 2009, the value of TARP assets totaled $129.9 billion. As of September 30, 2016, total TARP net asset value has decreased to $0.4 billion as repayments, repurchases, and other liquidations have reduced the inventory of TARP assets. Estimates in 2017 and beyond reflect estimated TARP net asset values over time, and future anticipated transactions. The overall balance of the financing accounts is estimated to continue falling over the next few years, as TARP investments continue to wind down.

The value of TARP equity purchases reached a high of $105.4 billion in 2009, and has since declined significantly with the wind down of American International Group (AIG) funding and repayments from large financial institutions. Remaining equity investments are concentrated in only two programs, the Capital Purchase Program (CPP) and the Community Development Capital Initiative (CDCI). The value of the TARP equity portfolio is anticipated to continue declining as participants repurchase stock and assets are sold. TARP direct loans were fully liquidated in January 2014. The FHA Refinance Letter of Credit financing account reflects net cash balances, showing the reserves set aside to cover TARP's share of default claims for FHA Refinance mortgages over the life of the letter of credit facility which expires in December 2022. These reserves are projected to fall as claims are paid and as TARP coverage expires.

Estimate of the Deficit, Debt Held by the Public, and Gross Federal Debt, Based on the EESA Methodology

The estimates of the deficit and debt in the Budget reflect the impact of TARP as estimated under FCRA and Section 123 of EESA. The deficit estimates include the budgetary costs for each program under TARP, administrative expenses, certain indirect interest effects of credit programs, and the debt service cost to finance the program. As shown in Table 20-3, direct activity under TARP is expected to increase the 2017 deficit by $4.3 billion. This reflects estimated TARP programmatic and administrative outlays of $4.1 billion, and reestimates on TARP investments, including interest on reestimates, and $0.2 billion in interest effects. The estimates of U.S. Treasury debt attributable to TARP include borrowing to finance both the deficit impacts of TARP activity and the cash flows to and from the Government reflected as a means of financing in the TARP financing accounts. Estimated debt due to TARP at the end of 2017 is $28.6 billion.

Debt held by the public net of financial assets reflects the cumulative amount of money the Government has borrowed from the public for the program and not repaid, minus the current value of financial assets acquired with the proceeds of this debt, such as loan assets, or equity held by the Government. While debt held by the public is one useful measure for examining the impact of TARP, it provides incomplete information on the program's effect on the Government's financial condition. Debt held by the public net of financial assets provides a more complete picture of the Government's financial position because it reflects the net change in the Government's balance sheet due to the program.

Debt net of financial assets due to TARP is estimated to be $28.5 billion as of the end of 2017. This is $1.7 billion lower than the projected debt held net of financial assets for 2017 that was reflected in the 2017 Budget. However, debt net of financial assets is anticipated to continue increasing annually, as debt is incurred to finance TARP housing program costs and debt service.

Under FCRA, the financing account earns and pays interest on its Treasury borrowings at the same interest rate used to discount cash flows for the credit subsidy cost. Section 123 of EESA requires an adjustment to the discount rate used to value TARP subsidy costs to account for market risks. However, actual cash flows as of September 30, 2016, already reflect the effect of any incurred market risks to that point, and therefore actual financing account interest transactions reflect the FCRA Treasury interest rates, with no additional risk adjustment.[8] Future cash flows reflect a risk adjusted discount rate and the corresponding financing account interest rate, consistent with the EESA requirement. For ongoing TARP credit programs, the risk adjusted discount rates on future cash flows result in subsidy costs that are higher than subsidy costs estimated under FCRA.

Estimates on a Cash Basis

The value to the Federal Government of the assets acquired through TARP is the same whether the costs of acquiring the assets are recorded in the Budget on a cash basis, or a credit basis. As noted above, the Budget records the cost of equity purchases, direct loans, and guarantees as the net present value cost to the Government, discounted at the rate required under FCRA and adjusted for market risks as required under Section 123 of EESA. Therefore, the net present value cost of the assets is reflected on-budget, and the gross value of these assets is

---

[6] For a full explanation of FCRA budgetary accounting, please see chapter 19, "Credit and Insurance," in this volume.

[7] Reestimates for TARP are calculated using actual data through September 30, 2016, and updated projections of future activity. Thus, the full impacts of TARP reestimates are reflected in the 2017 financing account balances.

[8] As TARP transactions wind down, the final lifetime cost estimates under the requirements of Section 123 of EESA will reflect no adjustment to the discount rate for market risks, as these risks have already been realized in the actual cash flows. Therefore, the final subsidy cost for TARP transactions will equal the cost per FCRA, where the net present value costs are estimated by discounting cash flows using Treasury rates.

Table 20–3. TROUBLED ASSET RELIEF PROGRAM EFFECTS ON THE DEFICIT AND DEBT[1]
(Dollars in billions)

	Actual								Estimate										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Deficit Effect:																			
Programmatic and administrative expenses	151.3	–109.6	–37.3	24.6	–8.5	–3.6	2.9	4.3	4.1	2.8	1.9	1.1	0.7	0.5	0.4	0.1	*	*	*
Interest effects [2, 3]	*	*	*	*	*	*	*	0.1	0.2	0.4	0.6	0.9	1.0	1.2	1.2	1.3	1.3	1.4	1.4
Total deficit impact	**151.3**	**–109.6**	**–37.3**	**24.7**	**–8.5**	**–3.6**	**2.9**	**4.3**	**4.3**	**3.2**	**2.5**	**2.0**	**1.7**	**1.7**	**1.6**	**1.4**	**1.4**	**1.5**	**1.5**
Debt held by the public:																			
Deficit impact	151.3	–109.6	–37.3	24.7	–8.5	–3.6	2.9	4.3	4.3	3.2	2.5	2.0	1.7	1.7	1.6	1.4	1.4	1.5	1.5
Net disbursements of credit financing accounts	129.9	–7.9	–17.8	–71.9	–22.5	–9.0	–0.4	0.1	–0.3	–*	–*	–*	–*	–*	–*	....	....	....	....
Total change in debt held by the public	281.2	–117.5	–55.1	–47.2	–31.0	–12.6	2.5	4.5	4.0	3.1	2.4	1.9	1.7	1.7	1.6	1.4	1.4	1.5	1.5
Debt held by the public	**281.2**	**163.6**	**108.5**	**61.3**	**30.3**	**17.6**	**20.2**	**24.6**	**28.6**	**31.8**	**34.2**	**36.2**	**37.8**	**39.5**	**41.1**	**42.5**	**43.8**	**45.3**	**46.8**
Debt held by the public net of financial assets:																			
Debt held by the public	281.2	163.6	108.5	61.3	30.3	17.6	20.2	24.6	28.6	31.8	34.2	36.2	37.8	39.5	41.1	42.5	43.8	45.3	46.8
Less financial assets net of liabilities	129.9	122.0	104.1	32.2	9.7	0.7	0.3	0.4	0.1	0.1	0.1	0.1	*	*	*	*	*	....	....
Debt held by the public net of financial assets	**151.3**	**41.6**	**4.4**	**29.0**	**20.5**	**17.0**	**19.9**	**24.2**	**28.5**	**31.7**	**34.1**	**36.1**	**37.8**	**39.5**	**41.0**	**42.4**	**43.8**	**45.3**	**46.8**

* $50 million or less.
[1] Table reflects the deficit effects of the TARP program, including administrative costs and interest effects.
[2] Projected Treasury interest transactions with credit financing accounts are based on the market-risk adjusted rates. Actual credit financing account interest transactions reflect the appropriate Treasury rates under the FCRA.
[3] Includes estimated debt service effects of all TARP transactions that affect borrowing from the public.

reflected in the financing accounts.[9] If these purchases were instead presented in the Budget on a cash basis, the Budget would reflect outlays for each disbursement (whether a purchase, a loan disbursement, or a default claim payment), and offsetting collections as cash is received from the public, with no obvious indication of whether the outflows and inflows leave the Government in a better or worse financial position, or what the net value of the transaction is.

Revised Estimate of the Deficit, Debt Held by the Public, and Gross Federal Debt Based on the Cash-basis Valuation

The estimated effects of TARP transactions on the deficit and debt, as calculated on a cash basis, are reflected in Table 20–4. For comparison, the estimates in Table 20–3 (above) reflect TARP transactions' effects as calculated consistent with FCRA and Section 123 of EESA.

If TARP transactions were reported on a cash basis, the annual budgetary effects would include the full amount of Government disbursements for activities such as equity purchases and direct loans, offset by cash inflows from dividend payments, redemptions, and loan repayments occurring in each year. For loan guarantees, the deficit would show fees, claim payouts, or other cash transactions associated with the guarantees as they occurred. Updates to estimates of future performance would affect the deficit in the year that they occur, and there would not be credit reestimates.

Under cash basis reporting, TARP would increase the deficit in 2017 by an estimated $4.0 billion, so if this basis was used the 2017 deficit would be $0.3 billion lower than the $4.3 billion estimate now reflected in the Budget. Under FCRA, the marginal change in the present value attributable to better-than-expected future inflows from the public would be recognized up front in a downward

[9] For MHA programs and HHF, Treasury's purchases of financial instruments do not result in the acquisition of assets with potential for future cash flows, and therefore are recorded on a cash basis.

Table 20–4. TROUBLED ASSET RELIEF PROGRAM EFFECTS ON THE DEFICIT AND DEBT CALCULATED ON A CASH BASIS[1]
(Dollars in billions)

	Actual								Estimate										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Deficit Effect:																			
Programmatic and administrative expenses	278.4	–122.3	–58.1	–48.9	–31.6	–12.8	2.5	4.4	3.8	2.7	1.8	1.0	0.6	0.5	0.3	*	–*	*	–0.1
Debt service [2]	2.8	4.7	3.0	1.7	0.6	0.2	*	0.1	0.2	0.4	0.7	0.9	1.1	1.2	1.3	1.3	1.4	1.4	1.5
Total deficit impact	**281.2**	**–117.5**	**–55.1**	**–47.2**	**–31.0**	**–12.6**	**2.5**	**4.5**	**4.0**	**3.1**	**2.4**	**1.9**	**1.7**	**1.7**	**1.6**	**1.4**	**1.4**	**1.5**	**1.4**

* $50 million or less.
[1] Table reflects deficit effect of budgetary costs, substituting estimates calculated on a cash basis for estimates calculated under FCRA and Sec. 123 of EESA.
[2] Includes estimated debt service effects of all TARP transactions affecting borrowing from the public.

Table 20–5. TROUBLED ASSET RELIEF PROGRAM REESTIMATES
(In billions of dollars)

TARP Program and Cohort Year	Original subsidy rate	Current reestimate rate	Current reestimate amount	Net lifetime reestimate amount, excluding interest	TARP disbursements as of 09/30/2016
Equity Programs:					
Automotive Industry Financing Program (AIFP) - Equity:					
2009	54.52%	2.39%	*	–6.5	12.5
2010	30.25%	–16.81%	....	–1.6	3.8
Capital Purchase Program (CPP):				....	
2009	26.99%	–6.83%	–*	–65.8	204.6
2010	5.77%	2.04%	*	–*	0.3
AIG Investment Program (AIG):				....	
2009	82.78%	21.88%	....	–38.5	67.8
Public-Private Investment Program (PPIP) - Equity:				....	
2009	34.62%	–20.41%	....	–0.3	0.7
2010	22.97%	–51.02%	....	–3.7	5.5
Targeted Investment Program (TIP):				....	
2009	48.85%	–8.47%	....	–23.2	40.0
Community Development Capital Initiative (CDCI):				....	
2010	48.06%	15.29%	–*	–0.2	0.6
Subtotal Equity Programs			**–0.1**	**–139.8**	**335.8**
Structured and Direct Loan Programs:					
Automotive Industry Financing Program (AIFP) - Debt:					
2009	58.75%	21.70%	....	–19.9	63.4
Public Private Investment Program (PPIP) - Debt:				....	
2009	–2.52%	–0.29%	....	*	1.4
2010	–10.85%	1.84%	....	1.3	11.0
Small Business 7(a) program (SBA 7(a)):				....	
2010	0.48%	–1.35%	....	–*	0.4
Term-Asset Backed Securities Loan Facility (TALF)[1]:				....	
2009	–104.23%	–605.59%	....	–0.4	0.1
Subtotal Structured and Direct Loan Programs			**.........**	**–18.9**	**76.2**
Guarantee Programs [2]:					
Asset Guarantee Program (AGP) [3]:					
2009	–0.25%	–1.20%	....	–1.4	301.0
FHA Refinance Letter of Credit [4]:				....	
2011	1.26%	0.21%	–*	–*	0.1
2012	4.00%	0.96%	–*	–*	0.2
2013	2.48%	0.88%	–*	–*	0.2
2015	1.64%	0.89%	–*	–*	0.1
2017 [5]	0.80%	....	....	....	0.2
Subtotal Guarantee Program			–*	–1.4	301.5
Total TARP			**–0.1**	**–160.1**	**713.6**

* $50 million or less.

[1] The Term-Asset Backed Securities Loan Facility original subsidy rate reflects the anticipated collections for Treasury's $20 billion commitment, as a percent of estimated lifetime disbursements of roughly $0.1 billion.

[2] Disbursement amounts for Guarantee Programs reflect the face value of the assets supported by the guarantees.

[3] The TARP obligation for this program was $5 billion, the maximum contingent liability while the guarantee was in force.

[4] The FHA Refinance Letter of Credit, which is considered a TARP Housing Program, is also a guarantee program subject to FCRA.

[5] The FHA Refinance Letter of Credit 2017 cohort was only open from September 30, 2016 to December 31, 2016, it guaranteed loans totalling $200,000,000, and there is no current reestimate.

reestimate, in contrast to a cash-based treatment that would show the annual marginal changes in cash flows. However, the impact of TARP on the Federal debt, and on debt held net of financial assets, is the same on a cash basis as under FCRA. Because debt held by the public, and debt net of financial assets are the same on a cash and present value basis, these data are not repeated in Table 20–4.

Portion of the Deficit Attributable to TARP, and the Extent to Which the Deficit Impact is Due to a Reestimate

Table 20–3 shows the portion of the deficit attributable to TARP transactions. The major components of TARP's $4.3 billion deficit effects in 2017 are as follows:

- TARP reestimates and interest on reestimates will decrease the deficit by $0.1 billion in 2017.
- Outlays for TARP housing programs are estimated at $3.7 billion in 2017, which includes outlays under MHA and HHF. Outlays for TARP housing programs are estimated to decline gradually through 2024.
- Administrative expense outlays for TARP are estimated at $162 million in 2017, and are expected to decrease annually thereafter as TARP winds down. Outlays for the Special Inspector General for TARP are estimated at $45 million in 2017.
- Interest transactions with credit financing accounts include interest paid to Treasury on borrowing by the financing accounts, offset by interest paid by Treasury on the financing accounts' uninvested balances. Although the financing accounts are non-budgetary, Treasury payments to these accounts and receipt of interest from them are budgetary transactions and therefore affect net outlays and the deficit. For TARP financing accounts, projected interest transactions are based on the market risk adjusted rates used to discount the cash flows. The projected net financing account interest paid to Treasury at market risk adjusted rates is $27 million in 2017 and declines over time as the financing accounts repay borrowing from Treasury through investment sale proceeds and repayments on TARP equity purchases and direct loans.

The full impact of TARP on the deficit includes the estimated cost of Treasury borrowing from the public—debt service—for the outlays listed above. Debt service is

Table 20–6. DETAILED TARP PROGRAM LEVELS AND COSTS

(In billions of dollars)

Program	2017 Budget		2018 Budget	
	TARP Obligations	Subsidy Costs	TARP Obligations	Subsidy Costs
Equity Purchases:				
Capital Purchase Program (CPP)	204.9	–8.4	204.9	–8.4
AIG Investment Program (AIG)	67.8	17.4	67.8	17.4
Targeted Investment Program (TIP)	40.0	–3.6	40.0	–3.6
Automotive Industry Financing Program (AIFP) - Equity	16.3	2.8	16.3	2.8
Public-Private Investment Program (PPIP) - Equity	6.2	–2.5	6.2	–2.5
Community Development Capital Initiative (CDCI).	0.6	0.1	0.6	0.1
Subtotal equity purchases	335.8	5.8	335.8	5.8
Structured and Direct Loan Programs:				
Automotive Industry Financing Program (AIFP) - Debt	63.4	17.1	63.4	17.1
Term Asset-Backed Securities Loan Facility (TALF)	0.1	–0.6	0.1	–0.6
Public-Private Investment Program (PPIP) - Debt	12.4	0.1	12.4	0.1
Small Business 7(a) Program (SBA 7(a))	0.4	*	0.4	*
Subtotal direct loan programs	76.2	16.7	76.2	16.7
Guarantee Programs:				
Asset Guarantee Program (AGP)1	5.0	–3.9	5.0	–3.9
Subtotal asset guarantees	5.0	–3.9	5.0	–3.9
TARP Housing Programs:				
Making Home Affordable (MHA) Programs	27.8	25.1	27.8	23.0
Hardest Hit Fund (HHF)	9.6	9.6	9.6	9.6
Subtotal non-credit programs	37.4	34.7	37.4	32.6
FHA Refinance Letter of Credit	0.1	*	*	*
Subtotal TARP housing programs	37.5	34.7	37.4	32.6
Totals	**454.6**	**53.2**	**454.5**	**51.2**
Memorandum:				
Interest on reestimates		–18.7		–18.8
Deficit impact with interest on reestimates [2]		***34.5***		***32.4***

* $50 million or less.

[1] The total assets supported by the Asset Guarantee Program were $301 billion.

[2] Total programmatic costs of TARP exclude interest on reestimates of $18.7 billion in the 2017 Budget and $18.8 billion in the 2018 Budget. Interest on reestimates is an adjustment that accounts for the time between the original subsidy costs and current estimates; such adjustments impact the deficit but are not direct programmatic costs.

Table 20–7. COMPARISON OF CBO AND OMB TARP COSTS
(In billions of dollars)

Program	Estimates of Deficit Impact [1]	
	CBO Cost Estimate [2]	OMB Cost Estimate
Capital Purchase Program		
Targeted Investment Program & Asset Guarantee Program	–8	–8
AIG assistance	15	15
Automotive Industry Financing Program	12	12
Term Asset-Backed Securities Loan Facility	–1	–1
Public-Private Investment Programs [3].	–3	–3
Other programs [4]	*	0
TARP housing programs	30	33
Total	**30**	**32**

* Amounts round to less than $1 billion.
[1] Totals include interest on reestimates.
[2] CBO estimates from March 2016, available at www.cbo.gov/sites/default/files/114th-congress-2015-2016/reports/51378-TARP.pdf
[3] Includes both debt and equity purchases.
[4] "Other programs" reflects an aggregate cost for CDCI and small business programs.

estimated at $197 million for 2017 and then expected to increase to $1.5 billion by 2027, largely due to outlays for TARP housing programs. Total debt service will continue over time after TARP winds down, due to the financing of past TARP costs.

Analysis of TARP Reestimates

The costs of outstanding TARP assistance are re-estimated annually by updating cash flows for actual experience and new assumptions, and adjusting for any changes by either recording additional subsidy costs (an upward technical and economic reestimate) or by reducing subsidy costs (a downward reestimate). The re-estimated dollar amounts to be recorded in 2017 reflect TARP disbursements through September 30, 2016, while reestimated subsidy rates reflect the full lifetime costs, including anticipated future disbursements. Detailed information on upward and downward reestimates to program costs is reflected in Table 20–5.

The current reestimate of -$0.1 billion reflects a decrease in estimated TARP costs from the 2017 Budget. This decrease was due in large part to improved market conditions and continued progress winding down TARP investments over the past year.

Differences Between Current and Previous OMB Estimates

As shown in Table 20–6, the 2018 Budget reflects a total TARP deficit impact of $32.4 billion. This is a decrease of $2.1 billion from the 2017 Budget projection of $34.5 billion. This decrease is predominantly due to reduced estimated outlays within TARP housing programs.

The estimated 2018 TARP deficit impact reflected in Table 20–6 differs from the programmatic cost of $51.2 billion in the Budget because the deficit impact includes $18.8 billion in cumulative downward adjustments for interest on subsidy reestimates. See footnote 2 in Table 20–6.

Differences Between OMB and CBO Estimates

Table 20–7 compares the OMB estimate for TARP's deficit impact to the deficit impact estimated by CBO in its "Report on the Troubled Asset Relief Program—March 2016."[10]

CBO estimates the total cost of TARP at $30 billion, based on estimated lifetime TARP disbursements of $442 billion. The Budget reflects the total deficit cost at $32 billion, based on current estimates of $455 billion in program obligations. The main difference between OMB and CBO cost estimates is the difference in the estimated cost of TARP housing programs, which stems from divergent demand and participation rate assumptions. CBO projects $30 billion in total TARP housing expenditures, while the Budget reflects a $32.6 billion estimate. Other differences between CBO and OMB cost estimates for TARP have diminished over time as TARP equity programs have wound down and differences in assumptions for the future performance of equity investments in the program have been eliminated.

TARP Market Impact

TARP provided support to the financial sector through the Capital Purchase Program, Targeted Investment Program, Asset Guarantee Program, and the Community Development Capital Initiative which strengthened the financial position of the Nation's financial institutions. TARP's intervention in the auto industry through the Automotive Industry Financing Program was effectively wound down as of December 2014, however, Treasury retains the right to receive proceeds from Chrysler and General Motors (GM) liquidation trusts. TARP housing programs provided assistance to millions of homeowners including more than 1.7 million borrowers who received permanent mortgage modifications through the Home Affordable Modification Program (HAMP) as of March 31, 2017.

[10] Available at: *www.cbo.gov/sites/default/files/114th-congress-2015-2016/reports/51378-TARP.pdf*

Description of Assets Purchased Through TARP, by Program

Capital Purchase Program (CPP): Pursuant to EESA, Treasury created the CPP in October 2008 to restore confidence throughout the financial system by ensuring that the Nation's financial institutions had a sufficient capital cushion against potential future losses and to support lending to creditworthy borrowers. All eligible CPP recipients completed funding applications by December 31, 2009, and Treasury purchased $204.9 billion in preferred stock in 707 financial institutions under CPP. As of March 31, 2017, Treasury had received approximately $199.6 billion in principal repayments and $27.1 billion in revenues from dividends, interest, warrants, gains/other interest and fees. CPP cash proceeds of $226.7 billion now exceed Treasury's initial investment by $21.8 billion. As of March 31, 2017, $0.2 billion remained outstanding under the program among 10 remaining CPP institutions.

Community Development Capital Initiative (CDCI): The CDCI program provided lower-cost capital to Community Development Financial Institutions (CDFIs), which operate in markets underserved by traditional financial institutions. In February 2010, Treasury released program terms for the CDCI program, under which participating institutions received capital investments of up to 5 percent of risk-weighted assets and pay dividends to Treasury of as low as 2 percent per annum. The dividend rate increases to 9 percent after eight years. CDFI credit unions were able to apply to TARP for subordinated debt at rates equivalent to those offered to CDFI banks and thrifts. TARP capital of $570 million has been committed to this program. In August 2016, Treasury offered participating CDCI institutions the opportunity to repurchase their outstanding securities at fair value. As of March 31, 2017 and with the early repurchase window now closed, 27 full and partial repurchases at fair value had been completed. As of March 31, 2017, Treasury has received $508 million in cash back on its CDCI investments and $98 million remains outstanding.

Capital Assistance Program (CAP): In 2009, Treasury worked with Federal banking regulators to develop a comprehensive "stress test" known as the Supervisory Capital Assessment Program (SCAP) to assess the health of the nation's 19 largest bank holding companies. In conjunction with SCAP, Treasury also announced it would provide capital under TARP through the Capital Assistance Program (CAP) to institutions that participated in the stress tests as well as others. Only one TARP institution (Ally Financial) required additional funds under the stress tests, but it received them through AIFP, not CAP. CAP closed on November 9, 2009, without making any investments and did not incur any losses to taxpayers. Following the release of the stress test results, banks were able to raise hundreds of billions of dollars in private capital.

American International Group (AIG) Investments: During the financial crisis, the Federal Reserve Bank of New York (FRBNY) and Treasury provided financial support to AIG in order to mitigate broader systemic risks that would have resulted from the disorderly failure of the company. In September 2008, prior to the enactment of TARP, the FRBNY provided an $85 billion line of credit to AIG and received preferred shares that entitled it to 79.8 percent of the voting rights of AIG's common stock. After TARP was enacted, FRBNY and Treasury continued to work to facilitate AIG's execution of its plan to sell certain of its businesses in an orderly manner, promote market stability, and protect the interests of the U.S. Government and taxpayers. As of December 31, 2008, when purchases ended, Treasury had purchased $40 billion in preferred shares from AIG through TARP and later extended a $29.8 billion line of credit, of which AIG drew down $27.8 billion, in exchange for additional preferred stock. The remaining $2 billion obligation was canceled.

AIG executed a recapitalization plan with FRBNY, Treasury, and the AIG Credit Facility Trust in January 2011 that allowed for the acceleration of the Government's exit from its 92 percent ownership stake in AIG.[11] Following the restructuring, Treasury executed a multiyear process of liquidating its position, and as of March 2013, has fully exited its investment in AIG.[12] In total, TARP's AIG commitments totaled $67.8 billion and, with the program closed, yielded $55.3 billion in total cash back. Treasury collected net proceeds of $17.6 billion for its non-TARP shares in AIG. Total AIG-related proceeds exceeded disbursements by $5.0 billion for Treasury as a whole.

Targeted Investment Program (TIP): The goal of TIP was to stabilize the financial system by making investments in institutions that are critical to the functioning of the financial system. Under TIP, Treasury purchased $20 billion in preferred stock from Citigroup and $20 billion in preferred stock from Bank of America. Treasury also received stock warrants from each company. Both Citigroup and Bank of America repaid their TIP investments in full in December 2009. In total, TARP's TIP commitments totaled $40 billion and, with the program closed, yielded $44.4 billion in total cash back.

Asset Guarantee Program (AGP): The AGP was created to provide Government assurances for assets held by financial institutions that were critical to the functioning of the Nation's financial system. Under the AGP, Treasury and FDIC committed to provide support to two institutions – Bank of America and Citigroup. Bank of America, however, ultimately decided not to participate, and paid TARP a termination fee of $276 million. TARP, in conjunction with the Federal Reserve, and the FDIC agreed to share potential losses on a $301.0 billion pool of Citigroup's covered assets. As a premium for the guarantee to Citigroup, TARP received $4.0 billion of Citigroup preferred stock, which was reduced by $1.8 billion upon early termination of the agreement. TARP completed the wind-down of the AGP in February 2013, and received

[11] Treasury's investment in AIG common shares consisted of shares acquired in exchange for preferred stock purchased with TARP funds (TARP shares) and shares received from the trust created by FRBNY for the benefit of Treasury as a result of its loan to AIG (non-TARP shares).

[12] A summary of the deal terms and transactions can be found in the Analytical Perspectives volume of the 2014 Budget.

more than $4.1 billion in proceeds from the AGP without disbursing any claim payments.

Automotive Industry Support Programs: In December 2008, Treasury established several programs to prevent the collapse of the domestic automotive industry. Through the Automotive Industry Financing Program (AIFP), TARP made emergency loans to Chrysler, Chrysler Financial, and GM. Additionally, TARP bought equity in Ally Financial, formerly GMAC, and assisted Chrysler and GM during their bankruptcy proceedings.

Treasury has liquidated its AIFP holdings and AIFP is now closed. In total, of the $12.4 billion committed to Chrysler, TARP was repaid $11.1 billion in total cash back.[13] On December 9, 2013, TARP sold its last remaining shares in GM, recouping a total of $39.0 billion from TARP's $49.5 billion investment in GM.[14] In total, Treasury recovered $19.6 billion on its investment in Ally Financial, roughly $2.4 billion more than the original investment of $17.2 billion. Through the Auto Supplier Support Program (Supplier Program) and the Auto Warranty Commitment Program (Warranty Program), Treasury disbursed $1.1 billion in direct loans to GM and Chrysler to support auto parts manufacturers and suppliers. Both the Supplier and Warranty Programs have closed and, in aggregate, these investments yielded $1.2 billion in total cash back. TARP's AIFP disbursements—including the GM, Chrysler, Ally (GMAC), Supplier, and Warranty Programs—totaled $79.7 billion and, with all programs effectively wound down, AIFP yielded $70.5 billion in total cash back.

TARP maintains an interest in the ongoing bankruptcy proceedings of the automotive entities it invested in. In 2016, TARP received a payment of $5.0 million from the GM bankruptcy proceedings. Additional future payments are possible, but not anticipated.

Term Asset-Backed Securities Loan Facility (TALF): The TALF was a joint initiative with the Federal Reserve that provided financing loans to private investors to facilitate the restoration of secondary credit markets. Treasury provided protection to the Federal Reserve through a loan to TALF's special purpose vehicle (SPV), which was originally available to purchase up to $20 billion in assets that would be acquired in the event of default on Federal Reserve financing. In March 2009 Treasury disbursed $0.1 billion of this amount to the TALF SPV to implement the program and the loss-coverage was subsequently reduced. In January 2013, Treasury and the Federal Reserve announced that Treasury's commitment of TARP funds to provide credit protection was no longer necessary because the accumulated fees collected through TALF exceeded the total principal amount of TALF loans outstanding. In total, Treasury had accumulated income of $685 million from TALF and the program is now closed.

Small Business 7(a) Program (SBA 7(a)): In March 2009, Treasury and the Small Business Administration (SBA) announced a Treasury program to purchase SBA-guaranteed securities (pooled certificates) to re-start the secondary market in these loans. Through a pilot program, Treasury purchased 31 SBA-guaranteed securities with an aggregate face value of approximately $368 million. Treasury reduced its commitment to the SBA 7(a) Program from $1 billion to $370 million, due to a significantly improved secondary market for these securities. In January 2012, Treasury completed the final disposition of its SBA 7(a) securities portfolio. The SBA 7(a) Program received total proceeds of $376 million, representing a gain of approximately $8 million to taxpayers.

Public Private Investment Program (PPIP): Treasury announced the Legacy Securities Public-Private Investment Partnership (PPIP) on March 23, 2009, to help restart the market for legacy mortgage-backed securities. Under the Program, Public-Private Investment Funds (PPIFs) were established by private sector fund managers for the purchase of eligible legacy securities from banks, insurance companies, mutual funds, pension funds, and other eligible sellers as defined under EESA. As of September 30, 2015, all PPIFs have been terminated. In total, after obligating $18.6 billion, PPIP investments yielded $22.5 billion in total cash back.

TARP Housing Programs: In February 2009 the Treasury announced a comprehensive housing program utilizing up to $50 billion in TARP funding. The Government-Sponsored Enterprises: Fannie Mae and Freddie Mac participated in the housing programs both as Treasury's financial agents, and by implementing similar policies for their own mortgage portfolios. Following the enactment of the 2010 Dodd-Frank Wall Street Reform Act, Treasury reduced its commitments to TARP housing programs to $45.6 billion. These programs fall into three initiatives:

- Making Home Affordable (MHA);
- Housing Finance Agency (HFA) Hardest-Hit Fund (HHF); and
- Federal Housing Administration (FHA) Refinance Program.[15]

Making Home Affordable (MHA): Programs under MHA included the Home Affordable Modification Program (HAMP), FHA-HAMP,[16] the Second Lien Modification Program, and Rural Development-HAMP.[17] MHA also included the Home Affordable Foreclosure Alternatives Program, which provided short sale and deed-in-lieu of foreclosure opportunities to borrowers, as well as assistance to borrowers who are unemployed or underwater

[13] Chrysler repayments of $11.1 billion include $560 million in proceeds from the sale of Treasury's 6 percent fully diluted equity interest in Chrysler to Fiat and Treasury's interest in an agreement with the United Automobile Worker's retiree trust that were executed on July 21, 2011.

[14] This excludes the $884 million loan to GM that was converted to GMAC common stock.

[15] The FHA Refinance Program is run by the Department of Housing and Urban Development (HUD), but is supported by Treasury through TARP with letter of credit to cover a share of any losses on these particular FHA Refinance loans. This program has also been referred to as the FHA Short Refinance Program or Option in other reporting.

[16] FHA-HAMP is administered by HUD; Treasury provides incentives for servicers and borrowers who qualify for Treasury FHA-HAMP

[17] For additional information on MHA programs, visit: http://www.makinghomeaffordable.gov/.

(owe more than their home is worth). On December 31, 2016 the application window for MHA closed. As of March 31, 2017, TARP has paid $16.8 billion in MHA related incentive payments and an additional $7.0 billion in TARP funds have been obligated but not yet disbursed.

HFA Hardest-Hit Fund (HHF): The $9.6 billion HHF provides the eligible entities of HFAs from 18 states and the District of Columbia with flexible funding to implement programs to prevent foreclosures and bring stability to local housing markets. In December 2015, P.L. 114-113 extended Treasury's authority to incur certain obligations for HHF funds through December 31, 2017; Treasury allocated $2 billion in additional HHF funds to eighteen currently participating jurisdictions in 2016. Participating jurisdictions now have until 2020 to utilize HHF funds.

FHA Refinance Program: FHA administers this program with TARP's support. The Program was initiated in September 2010 to allow eligible borrowers who are current on their mortgages but owe more than their home is worth, to refinance into an FHA-guaranteed loan if the lender writes off at least 10 percent of the existing loan. $8.1 billion was originally committed through a letter of credit agreement to cover a share of any losses on the loans and administrative expenses. This has subsequently been reduced to $100 million. The Program eligibility window closed on December 31, 2016, and the letter of credit expires in December 2022.

21. FEDERAL DRUG CONTROL FUNDING

The FY 2018 Budget supports $27.8 billion for National Drug Control Program agencies to implement the Administration's drug control policies. The funding requested by each Department and agency in the National Drug Control Program is included in the table below.

Table 21–1. DRUG CONTROL FUNDING FY 2016—FY 2018
(Budget authority, in millions of dollars)

Department/Agency	FY 2016 Actual	FY 2017 Annualized CR	FY 2018 President's Budget
Department of Agriculture:			
U.S. Forest Service	**12.30**	**12.90**	**15.60**
Court Services and Offender Supervision Agency for D.C.:	**55.38**	**55.28**	**56.08**
Department of Defense:			
Drug Interdiction and Counterdrug Activities (incl. OPTEMPO, DSCA, and OCO)[1]	1,302.79	1,299.359	1,127.83
Defense Health Program	76.74	75.79	76.74
Total DOD	**1,379.53**	**1,375.149**	**1,204.58**
Department of Education:			
Office of Elementary and Secondary Education	**50.34**	**49.09**	**48.88**
Federal Judiciary:	**1,147.79**	**1,166.73**	**1,210.89**
Department of Health and Human Services:			
Administration for Children and Families	18.54	18.62	20.00
Centers for Disease Control and Prevention	75.58	75.44	75.44
Centers for Medicare and Medicaid Services [2]	5,390.00	5,550.00	5,840.00
Health Resources and Services Administration	119.00	121.00	171.00
Indian Health Service	104.71	104.94	105.10
National Institute on Alcohol Abuse and Alcoholism	55.18	55.18	42.71
National Institute on Drug Abuse	1,048.97	1,075.44	865.00
Substance Abuse and Mental Health Services Administration [3]	2,533.72	3,052.12	2,943.23
Total HHS	**9,345.70**	**10,052.73**	**10,062.48**
Department of Homeland Security:			
Customs and Border Protection	2,687.23	2,663.67	3,118.73
Federal Emergency Management Agency	8.25	8.25	6.19
Federal Law Enforcement Training Center	44.10	43.90	49.31
Immigration and Customs Enforcement	508.88	514.65	524.61
U.S. Coast Guard	1,597.14	1,455.97	1,452.66
Total DHS	**4,845.60**	**4,686.44**	**5,151.50**
Department of Housing and Urban Development:			
Office of Community Planning and Development	**490.49**	**489.49**	**494.22**
Department of the Interior:			
Bureau of Indian Affairs	9.72	9.72	9.33
Bureau of Land Management	5.10	5.10	5.10
National Park Service	3.46	3.30	3.30
Total DOI	**18.28**	**18.12**	**17.73**
Department of Justice:			
Assets Forfeiture Fund	258.36	230.13	227.46
Bureau of Prisons[4]	3,532.63	3,526.03	3,403.85
Criminal Division	39.02	37.97	37.66
Drug Enforcement Administration	2,425.53	2,433.36	2,583.63
Organized Crime Drug Enforcement Task Force	512.00	511.03	526.00

Table 21–1. DRUG CONTROL FUNDING FY 2016—FY 2018—Continued
(Budget authority, in millions of dollars)

Department/Agency	FY 2016 Actual	FY 2017 Annualized CR	FY 2018 President's Budget
Office of Justice Programs	278.22	297.69	240.15
U.S. Attorneys	72.64	72.64	78.10
Unites States Marshals Service	771.29	792.80	812.83
Total DOJ	**7,889.69**	**7,901.65**	**7,909.67**
Department of Labor:			
Employment and Training Administration	**5.70**	**6.00**	**6.00**
Office of National Drug Control Policy:			
Operations	20.05	20.01	18.40
High Intensity Drug Trafficking Area Program	250.00	249.53	246.53
Other Federal Drug Control Programs	109.81	109.60	103.66
Total ONDCP	**379.86**	**379.14**	**368.59**
Department of State [5]:			
Bureau of International Narcotics and Law Enforcement Affairs	405.30	404.53	290.28
United States Agency for International Development	70.517	70.383	83.62
Total DOS	**475.814**	**474.910**	**373.90**
Department of the Transportation:			
Federal Aviation Administration	30.38	31.60	31.66
National Highway Traffic Safety Administration	3.45	2.69	2.72
Total DOT	**33.83**	**34.29**	**34.38**
Department of the Treasury:			
Internal Revenue Service	**60.26**	**60.26**	**60.26**
Department of Veterans Affairs:			
Veterans Health Administration	**683.45**	**714.64**	**741.73**
Total Federal Drug Budget [6]	**$26,873.992**	**$27,476.802**	**$27,756.47**

[1] Due to statutory changes included in the FY 2017 National Defense Authorization Act that consolidated the Department of Defense's (DOD) security sector assistance authorities, funding for building foreign partner counter-drug enforcement capacities is now included in DOD's Defense Security Cooperation Agency's budget request.

[2] The estimates for the Centers for Medicare & Medicaid Services reflect Medicaid and Medicare benefit outlays (excluding spending under Medicare Part D) for substance abuse treatment; they do not reflect budget authority. The estimates were developed by the CMS Office of the Actuary.

[3] Includes budget authority and funding through evaluation set-aside authorized by Section 241 of the Public Health Service (PHS) Act.

[4] Funding for the 2018 column excludes a proposed rescission of unobligated balances.

[5] Funding for the 2017 column is a mechanical calculation that does not reflect decisions on funding priorities.

[6] Detail may not add due to rounding.

TECHNICAL BUDGET ANALYSES

22. CURRENT SERVICES ESTIMATES

Current services, or “baseline,” estimates are designed to provide a benchmark against which budget proposals can be measured. A baseline is not a prediction of the final outcome of the annual budget process, nor is it a proposed budget. It can be a useful tool in budgeting, however. It can be used as a benchmark against which to measure the magnitude of the policy changes in the President’s Budget or other budget proposals, and it can also be used to warn of future problems if policy is not changed, either for the Government’s overall fiscal health or for individual tax and spending programs.

Ideally, a current services baseline would provide a projection of estimated receipts, outlays, deficits or surpluses, and budget authority reflecting this year’s enacted policies and programs for each year in the future. Defining this baseline is challenging because funding for many programs in operation today expires within the 10-year budget window. Most significantly, funding for discretionary programs is provided one year at a time in annual appropriations acts. Mandatory programs are not generally subject to annual appropriations, but many operate under multi-year authorizations that expire within the budget window. The framework used to construct the baseline must address whether and how to project forward the funding for these programs beyond their scheduled expiration dates.

Since the early 1970s, when the first requirements for the calculation of a “current services” baseline were enacted, the baseline has been constructed using a variety of concepts and measures. Throughout the 1990s, the baseline was calculated using a detailed set of rules enacted through amendments to the Balanced Budget and Emergency Deficit Control Act of 1985 (BBEDCA) made by the Budget Enforcement Act of 1990 (BEA). The BBEDCA baseline rules lapsed after the enforcement provisions of the BEA expired in 2002, but even after the lapse they were largely adhered to in practice until they were officially reinstated through amendments to BBEDCA enacted in the Budget Control Act of 2011 (BCA).

Table 22–1 shows estimates of receipts, outlays, and deficits under the Administration’s baseline for 2016 through 2027.[1] The table also shows the Administration’s estimates by major component of the budget. The estimates are based on the economic assumptions underlying the Budget, which, as discussed later in this chapter, were developed on the assumption that the Administration’s budget proposals will be enacted.[2]

[1] The estimates are shown on a unified budget basis; i.e., the off-budget receipts and outlays of the Social Security trust funds and the Postal Service Fund are added to the on-budget receipts and outlays to calculate the unified budget totals.

[2] The table shows, as a memorandum item, illustrative estimates of total receipts, total outlays, and the deficit based on an economic forecast that assumes that the 2018 Budget proposals are not enacted.

Table 22–1. CATEGORY TOTALS FOR THE BASELINE

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Receipts	3,268	3,460	3,707	3,869	4,059	4,264	4,495	4,730	4,984	5,251	5,538	5,844
Outlays:												
Discretionary:												
Defense	585	592	600	623	640	653	665	676	695	713	732	750
Non-defense	600	624	618	629	637	650	659	672	688	705	722	739
Subtotal, discretionary	1,185	1,215	1,219	1,251	1,277	1,303	1,323	1,348	1,384	1,418	1,453	1,488
Mandatory:												
Social Security	910	946	1,005	1,070	1,138	1,207	1,281	1,362	1,448	1,537	1,630	1,728
Medicare	588	593	582	646	701	757	854	885	913	1,012	1,106	1,195
Medicaid and CHIP	383	395	420	437	459	486	513	543	575	610	654	694
Other mandatory	546	639	577	620	637	665	711	713	720	753	815	841
Subtotal, mandatory	2,427	2,573	2,583	2,774	2,936	3,114	3,359	3,503	3,656	3,912	4,205	4,457
Net interest	240	276	316	372	431	487	542	592	634	670	706	741
Total, outlays	3,853	4,065	4,118	4,398	4,643	4,905	5,224	5,443	5,673	6,000	6,364	6,687
Unified deficit(+)/surplus(–)	585	605	411	529	584	641	728	713	689	749	826	842
(On-budget)	(620)	(647)	(436)	(533)	(564)	(612)	(682)	(640)	(593)	(627)	(681)	(668)
(Off-budget)	(–36)	(–42)	(–25)	(–4)	(20)	(29)	(47)	(72)	(97)	(122)	(145)	(174)
MEMORANDUM:												
Totals with pre-policy economic assumptions:												
Receipts	3,268	3,467	3,707	3,838	3,991	4,151	4,330	4,505	4,703	4,902	5,116	5,339
Outlays	3,853	4,072	4,120	4,392	4,638	4,894	5,211	5,431	5,659	5,984	6,350	6,678
Unified deficit	585	605	413	553	647	743	881	925	956	1,082	1,234	1,338

Conceptual Basis for Estimates

Receipts and outlays are divided into two categories that are important for calculating the baseline: those controlled by authorizing legislation (receipts and direct or mandatory spending) and those controlled through the annual appropriations process (discretionary spending). Different estimating rules apply to each category.

Direct spending and receipts.—Direct spending includes the major entitlement programs, such as Social Security, Medicare, Medicaid, Federal employee retirement, unemployment compensation, and the Supplemental Nutrition Assistance Program (SNAP). It also includes such programs as deposit insurance and farm price and income supports, where the Government is legally obligated to make payments under certain conditions. Taxes and other receipts are like direct spending in that they involve ongoing activities that generally operate under permanent or long-standing authority, and the underlying statutes generally specify the tax rates or benefit levels that must be collected or paid, and who must pay or who is eligible to receive benefits.

The baseline generally—but not always—assumes that receipts and direct spending programs continue in the future as specified by current law. The budgetary effects of anticipated regulatory and administrative actions that are permissible under current law are also reflected in the estimates. Two important exceptions specified in BBEDCA are described below:

- First, expiring excise taxes dedicated to a trust fund are assumed to be extended at the rates in effect at the time of expiration. During the projection period of 2017 through 2027, the taxes affected by this exception are:
  - taxes deposited in the Airport and Airway Trust Fund, which expire on September 30, 2017;
  - taxes deposited in the Oil Spill Liability Trust Fund, which expire on December 31, 2017;
  - taxes deposited in the Patient-Centered Outcomes Research Trust Fund, which expire on September 30, 2019;
  - taxes deposited in the Sport Fish Restoration and Boating Resources Trust Fund, which expire on September 30, 2020; and
  - taxes deposited in the Highway Trust Fund and the Leaking Underground Storage Tank Trust Fund, which expire on September 30, 2022.
- Second, expiring authorizations for direct spending programs that were enacted before the Balanced Budget Act of 1997 are assumed to be extended if their current year outlays exceed $50 million. For example, even though the National Flood Insurance program, which was authorized before the Balanced Budget Act of 1997, is scheduled to expire at the end of 2017, the baseline estimates assume continuation of this program through the projection period, because the program's current year outlays exceed the $50 million threshold.[3]

Discretionary spending.—Discretionary programs differ in one important aspect from direct spending programs: the Congress provides spending authority for almost all discretionary programs one year at a time. The spending authority is normally provided in the form of annual appropriations. Absent appropriations of additional funds in the future, discretionary programs would cease to operate after existing balances were spent. If the baseline were intended strictly to reflect current law, then a baseline would reflect only the expenditure of remaining balances from appropriations laws already enacted. Instead, the BBEDCA baseline provides a mechanical definition to reflect the continuing costs of discretionary programs. Under BBEDCA, the baseline estimates for discretionary programs in the current year are based on that year's enacted appropriations, or on the annualized levels provided by a continuing resolution if final full-year appropriations have not been enacted.[4] For the budget year and beyond, the spending authority in the current year is adjusted for inflation, using specified inflation rates.[5] The definition attempts to keep discretionary spending for each program roughly level in real terms.

BBEDCA also imposes caps through 2021 on budget authority for the defense function and for the aggregate of the non-defense functions. These caps were initially established by the BCA, and subsequent legislation later amended the caps through 2017. The baseline includes allowances that bring the inflated baseline calculated for individual discretionary accounts down to the level of the defense and non-defense caps. After 2021, these allowances assume that discretionary spending grows with inflation from the 2021 cap levels.

BBEDCA allows for adjustments to the discretionary caps for disaster relief spending, emergency requirements, Overseas Contingency Operations (OCO), and certain program integrity activities. The adjustments are permitted provided that such funding is designated

[3] For programs enacted since the Balanced Budget Act of 1997, programs that are explicitly temporary in nature expire in the baseline as provided by current law even if their current year outlays exceed the $50 million threshold. In contrast, for example, if commodity price support programs typically funded in the Farm Bill expire at the time the baseline is prepared, they are assumed to continue to operate in the same way they operated immediately before the expiration, because these programs were enacted prior to the Balanced Budget Act of 1997 and their current year outlays exceed the $50 million threshold.

[4] As of the preparation of the baseline for the 2018 Budget, most discretionary appropriations were operating under the Continuing Appropriations Act, 2017 (Division C of P.L. 114-223, as amended by Division A of P.L. 114-254) which provided continuing appropriations through April 28, 2017.

[5] The Administration's baseline uses the same inflation rates for discretionary spending as required by BBEDCA, despite the fact that this allows for an overcompensation for Federal pay inherent in the BBEDCA definition. At the time the BEA was enacted, it failed to account for the nearly contemporaneous enactment of the Federal Employees Compensation Act of 1991 that shifted the effective date of Federal employee pay raises from October to January. This oversight was not corrected when the baseline definition was reinstated by the BCA amendments to BBEDCA. Correcting for this error would have only a small effect on the discretionary baseline.

in legislation by the Congress and, where appropriate, subsequently so by the President. Current adjustments include the following:

- Disaster relief and emergency requirements.—The BBEDCA baseline projects forward the $8.1 billion of enacted full-year or continuing disaster relief funding for the Departments of Homeland Security and Housing and Urban Development in 2017, which is increased thereafter by the BBEDCA inflation rates but held at the projected funding ceiling for such appropriations determined by a formula included in BBEDCA. The baseline also inflates the $2.7 billion of enacted emergency funding provided to the Departments of Agriculture, Housing and Urban Development, and Transportation as well as the Corps of Engineers for emergency response and recovery efforts to natural disasters, including Hurricane Matthew.
- OCO.—The BBEDCA baseline reflects the annualized level of OCO appropriations included in the 2017 continuing resolution and full-year OCO appropriations provided in the Security Assistance Appropriations Act, 2017 (Division B of Public Law 114-254) inflated at the BBEDCA inflation rates.
- Program integrity activities.—The baseline assumes annualized levels provided in the 2017 continuing resolution and full funding for the program integrity cap adjustments authorized in BBEDCA through 2021, and inflates those amounts after the cap adjustments expire in 2021. Additionally, the baseline assumes savings from enacting the program integrity cap adjustments at their full levels after 2017.

Joint Committee Enforcement.—The Joint Select Committee process under the BCA stipulated that, absent intervening legislation, enforcement procedures would be invoked annually to reduce the levels of discretionary and mandatory spending to accomplish certain deficit reduction. The BBEDCA baseline includes the effects of the across-the-board reductions ("sequestration") already invoked by Joint Committee sequestration orders for 2013 through 2017, as well as the discretionary cap reductions and mandatory sequestration order for 2018 issued with the transmittal of the 2018 Budget.[6] Further Joint Committee enforcement—consisting of mandatory sequestration and discretionary cap reductions for 2019 through 2021—is reflected in the BBEDCA baseline in the form of allowances in the amount of the required reductions. As with the allowances to reach the unreduced BBEDCA caps, after 2021, the allowances for the Joint Committee cap reductions assume that the reduced level of discretionary spending grows with inflation from the 2021 levels. Pursuant to subsequent legislation, the BBEDCA baseline also includes the extension of mandatory sequestration through 2025 at the rate required for 2021 by the BCA.[7]

Economic Assumptions

As discussed above, an important purpose of the baseline is to serve as a benchmark against which policy proposals are measured. By convention, President's Budgets construct baseline and policy estimates under the same set of economic and technical assumptions. These assumptions are developed on the basis that the President's Budget proposals will be enacted.

While this estimating approach has the virtue of simplicity, it offers an incomplete view of the effects of proposals, because it fails to capture the fact that the economy and the budget interact. Government tax and spending policies can influence prices, economic growth, consumption, savings, and investment. In turn, changes in economic conditions due to the enactment of proposals affect tax receipts and spending, including for unemployment benefits, entitlement payments that receive automatic cost-of-living adjustments (COLAs), income support programs for low-income individuals, and interest on the Federal debt.

Because of these interactions, it would be reasonable, from an economic perspective, to assume different economic paths for the baseline projection and the President's Budget. However, this would greatly complicate the process of producing the Budget, which normally includes a large number of proposals that could have potential economic feedback effects. Agencies would have to produce two sets of estimates for programs sensitive to economic assumptions even if those programs were not directly affected by any proposal in the Budget. Using different economic assumptions for baseline and policy estimates would also diminish the value of the baseline estimates as a benchmark for measuring proposed policy changes, because it would be difficult to separate the effects of proposed policy changes from the effects of different economic assumptions. Using the same economic assumptions for the baseline and the President's Budget eliminates this potential source of confusion.

The economic assumptions underlying the Budget and the Administration's baseline are summarized in Table 22–2. The economic outlook underlying these assumptions is discussed in greater detail in Chapter 2 of this volume.

---

[6] The effects of past sequestration reductions are reflected in the detailed schedules for the affected budget accounts, while the 2018 reductions are reflected in allowance accounts due to the timing of the preparation of the detailed budget estimates and the issuance of the 2018 sequestration order. See Chapter 10, "Budget Process," of this volume for a more thorough discussion of the Joint Committee sequestration procedures.

[7] The Bipartisan Budget Act of 2013 (P.L. 113-67) extended mandatory sequestration through 2023, at the rate required for 2021 by the BCA. This Act also specified for 2023 that, notwithstanding the 2 percent limit on Medicare sequestration in the BCA, the Medicare reduction should be 2.90 percent for the first half of the sequestration period and 1.11 percent for the second half of the period. The Military Retired Pay Restoration Act (P.L. 113-82) extended mandatory sequestration through 2024. The Protecting Access to Medicare Act of 2014 (P.L. 113-93) specified for 2024 that the Medicare reduction should be 4.0 percent for the first half of the sequestration period and zero for the second half of the period. The Bipartisan Budget Act of 2015 (P.L. 114-74) further extended mandatory sequestration through 2025. This Act also reset the Medicare reduction to a constant 2 percent through 2024 and specified for 2025 that the Medicare program should be reduced by 4.0 percent for the first half of the sequestration period and zero for the second half of the period.

Table 22–2. SUMMARY OF ECONOMIC ASSUMPTIONS
(Fiscal years; in billions of dollars)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Gross Domestic Product (GDP):												
Levels, in billions of dollars:												
Current dollars	18,407.4	19,161.9	20,013.7	20,947.3	21,980.6	23,092.7	24,261.3	25,489.1	26,778.9	28,133.9	29,557.4	31,053.0
Real, chained (2009) dollars	16,581.4	16,948.2	17,350.9	17,804.2	18,316.1	18,865.6	19,431.5	20,014.5	20,614.9	21,233.4	21,870.4	22,526.6
Percent change, year over year:												
Current dollars	2.8	4.1	4.4	4.7	4.9	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Real, chained (2009) dollars	1.6	2.2	2.4	2.6	2.9	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Inflation measures (percent change, year over year):												
GDP chained price index	1.2	1.8	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Consumer price index (all urban)	0.9	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Unemployment rate, civilian (percent)	4.9	4.7	4.5	4.5	4.7	4.7	4.8	4.8	4.8	4.8	4.8	4.8
Interest rates (percent):												
91-day Treasury bills	0.2	0.7	1.4	1.9	2.5	2.8	3.0	3.0	3.1	3.1	3.1	3.1
10-year Treasury notes	1.9	2.5	3.2	3.4	3.7	3.8	3.8	3.8	3.8	3.8	3.8	3.8
MEMORANDUM:												
Related program assumptions:												
Automatic benefit increases (percent):												
Social security and veterans pensions	....	0.3	2.8	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Federal employee retirement	....	0.3	2.8	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Supplemental Nutrition Assistance Program	....	....	....	1.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Insured unemployment rate	1.6	1.6	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.6

Major Programmatic Assumptions

A number of programmatic assumptions must be made to calculate the baseline estimates. These include assumptions about annual cost-of-living adjustments in the indexed programs and the number of beneficiaries who will receive payments from the major benefit programs. Assumptions about various automatic cost-of-living-adjustments are shown in Table 22–2, and assumptions about baseline caseload projections for the major benefit programs are shown in Table 22–3. These assumptions affect baseline estimates of direct spending for each of these programs, and they also affect estimates of the discretionary baseline for a limited number of programs. For the administrative expenses for Medicare, Railroad Retirement, and unemployment insurance, the discretionary baseline is increased (or decreased) for changes in the number of beneficiaries in addition to the adjustments for inflation described earlier. Although these adjustments are applied at the account level, they have no effect in the aggregate because discretionary baseline levels are constrained to the BBEDCA caps, as reduced for Joint Committee enforcement.

It is also necessary to make assumptions about the continuation of expiring programs and provisions. As explained above, in the baseline estimates provided here, expiring excise taxes dedicated to a trust fund are extended at current rates. In general, mandatory programs with spending of at least $50 million in the current year are also assumed to continue, unless the programs are explicitly temporary in nature. Table 22–4, available on the Internet at *www.budget.gov/budget/Analytical_Perspectives* and on the Budget CD-ROM, provides a listing of mandatory programs and taxes assumed to continue in the baseline after their expiration.[8] Many other important assumptions must be made in order to calculate the baseline estimates. These include assumptions about the timing and substance of regulations that will be issued over the projection period, the use of administrative discretion provided under current law, and other assumptions about the way programs operate. Table 22–4 lists many of these assumptions and their effects on the baseline estimates. It is not intended to be an exhaustive listing; the variety and complexity of Government programs are too great to provide a complete list. Instead, some of the more important assumptions are shown.

Current Services Receipts, Outlays, and Budget Authority

Receipts.—Table 22–5 shows the Administration's baseline receipts by major source. Table 22–6 shows the scheduled increases in the Social Security taxable earnings base, which affect both payroll tax receipts for the program and the initial benefit levels for certain retirees.

Outlays.—Table 22–7 shows the growth from 2017 to 2018 and average annual growth over the five-year and ten-year periods for certain discretionary and major mandatory programs. Tables 22–8 and 22–9 show the Administration's baseline outlays by function and by agency, respectively. A more detailed presentation of

[8] All discretionary programs with continuing or enacted appropriations in the current year, including costs for overseas contingency operations in Iraq and Afghanistan and other recurring international activities, are assumed to continue, and are therefore not presented in Table 22-4.

Table 22–3. BASELINE BENEFICIARY PROJECTIONS FOR MAJOR BENEFIT PROGRAMS
(Annual average, in thousands)

	Actual 2016	Estimate 2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Farmers receiving Federal payments	884	880	875	871	866	862	858	853	849	845	841	837
Federal direct student loans	10,090	10,182	10,528	10,710	10,911	11,103	11,294	11,536	11,761	12,004	12,228	12,443
Federal Pell Grants	7,213	7,143	7,281	7,477	7,602	7,748	7,878	8,029	8,189	8,345	8,457	8,581
Medicaid/Children's Health Insurance Program [1]	77,128	79,303	79,904	80,214	81,777	82,870	83,842	84,707	85,505	86,241	86,909	87,588
Medicare-eligible military retiree health benefits	2,340	2,372	2,400	2,427	2,453	2,482	2,513	2,543	2,574	2,606	2,636	2,665
Medicare [2]:												
Hospital insurance	56,149	57,831	59,571	61,379	63,250	65,126	67,015	68,875	70,685	72,500	74,281	75,991
Supplementary medical insurance:												
Part B	51,744	53,166	54,653	56,235	57,909	59,574	61,256	62,936	64,543	66,162	67,774	69,303
Part D	42,844	44,144	45,670	47,373	48,869	50,300	51,747	53,173	54,560	55,950	57,316	58,628
Prescription Drug Plans and Medicare:												
Advantage Prescription Drug Plans	40,832	42,443	44,262	46,217	47,919	49,378	50,799	52,199	53,562	54,926	56,268	57,555
Retiree Drug Subsidy	2,012	1,700	1,409	1,156	951	922	948	973	999	1,024	1,048	1,072
Managed Care Enrollment [3]	18,171	19,412	20,554	21,467	22,219	22,963	23,797	24,634	25,430	26,200	26,949	27,659
Railroad retirement	523	520	517	513	508	502	496	489	481	473	465	457
Federal civil service retirement	2,652	2,664	2,679	2,696	2,715	2,735	2,755	2,776	2,792	2,809	2,827	2,844
Military retirement	2,277	2,291	2,302	2,312	2,322	2,332	2,342	2,352	2,381	2,386	2,389	2,391
Unemployment insurance	6,282	6,357	6,470	6,643	6,833	6,963	7,043	7,102	7,159	7,210	7,251	7,287
Supplemental Nutrition Assistance Program (formerly Food Stamps)	44,219	42,815	42,164	41,310	40,961	40,453	39,986	39,559	38,989	38,557	38,120	37,701
Child nutrition	35,679	36,469	37,034	37,438	37,785	38,137	38,495	38,859	39,229	39,606	39,989	40,379
Foster care, Adoption Assistance and Guardianship Assistance	650	680	708	740	770	799	830	863	896	930	964	1,006
Supplemental security income (SSI):												
Aged	1,108	1,112	1,120	1,129	1,143	1,157	1,172	1,189	1,208	1,230	1,252	1,274
Blind/disabled	7,048	6,974	6,935	6,916	6,940	6,965	6,993	7,028	7,071	7,116	7,151	7,186
Total, SSI	8,157	8,086	8,054	8,046	8,083	8,121	8,164	8,217	8,278	8,346	8,403	8,460
Child care and development fund [4]	2,017	2,019	1,964	1,908	1,852	1,796	1,743	1,692	1,642	1,594	1,548	1,503
Social security (OASDI):												
Old age and survivors insurance	49,455	50,989	52,612	54,301	56,021	57,554	59,183	60,872	62,576	64,201	65,791	67,296
Disability insurance	10,762	10,636	10,648	10,702	10,773	10,874	10,943	11,019	11,083	11,167	11,247	11,331
Total, OASDI	60,216	61,625	63,260	65,003	66,794	68,428	70,126	71,891	73,659	75,368	77,038	78,627
Veterans compensation:												
Veterans	4,270	4,446	4,617	4,779	4,930	5,076	5,218	5,356	5,491	5,621	5,748	5,872
Survivors (non-veterans)	395	408	420	432	445	460	475	492	509	527	545	564
Total, Veterans compensation	4,664	4,854	5,037	5,211	5,375	5,536	5,694	5,848	6,000	6,148	6,294	6,436
Veterans pensions:												
Veterans	292	289	289	290	291	292	293	294	296	297	298	299
Survivors (non-veterans)	204	203	204	205	206	208	210	212	214	216	218	220
Total, Veterans pensions	496	492	493	495	498	500	503	506	509	513	516	519

[1] Medicaid enrollment excludes territories.
[2] Medicare figures (Hospital Insurance, Part B, and Part D) do not sum to total Medicare enrollment due to enrollment in multiple programs.
[3] Enrollment figures include only beneficiaries who receive both Part A and Part B services through managed care.
[4] These levels include children served through CCDF (including Temporary Assistance for Needy Families (TANF) transfers) and through funds spent directly on child care in the Social Services Block Grant and TANF programs.

these outlays (by function, category, subfunction, and program) is available on the Internet as part of Table 22–12 at *www.budget.gov/budget/Analytical_Perspectives* and on the Budget CD-ROM.

Budget authority.—Tables 22–10 and 22–11 show estimates of budget authority in the Administration's baseline by function and by agency, respectively. A more detailed presentation of this budget authority with program-level estimates is also available on the Internet as part of Table 22–12 at *www.budget.gov/ budget/Analytical_ Perspectives* and on the Budget CD-ROM.

Table 22–5. RECEIPTS BY SOURCE IN THE PROJECTION OF ADJUSTED BASELINE
(In billions of dollars)

	2016 Actual	Estimate										
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Individual income taxes	1,546.1	1,659.9	1,835.8	1,933.7	2,042.2	2,165.0	2,291.0	2,425.5	2,568.3	2,719.3	2,879.7	3,057.7
Corporation income taxes	299.6	323.6	354.9	374.7	401.1	400.3	414.3	424.9	438.8	454.6	475.0	496.5
Social insurance and retirement receipts	1,115.1	1,174.7	1,222.6	1,273.8	1,328.8	1,402.8	1,476.1	1,545.6	1,624.5	1,704.8	1,793.3	1,879.2
(On-budget)	(304.9)	(317.3)	(330.4)	(342.5)	(357.0)	(376.0)	(394.9)	(412.7)	(433.1)	(454.2)	(477.4)	(500.7)
(Off-budget)	(810.2)	(857.4)	(892.2)	(931.3)	(971.8)	(1,026.8)	(1,081.3)	(1,132.9)	(1,191.4)	(1,250.6)	(1,315.8)	(1,378.5)
Excise taxes	95.0	87.0	106.2	107.3	109.8	113.8	116.4	119.3	122.6	126.6	130.9	136.0
Estate and gift taxes	21.4	23.1	24.3	26.1	27.8	29.3	31.2	33.0	35.6	38.0	40.4	42.7
Customs duties	34.8	33.9	39.7	41.6	43.0	43.5	46.0	50.4	52.8	56.4	60.3	65.5
Miscellaneous receipts	156.0	157.4	123.6	111.4	106.4	108.7	120.2	131.5	141.2	151.2	158.3	166.7
Total, receipts	**3,268.0**	**3,459.7**	**3,707.1**	**3,868.5**	**4,059.2**	**4,263.5**	**4,495.3**	**4,730.3**	**4,983.9**	**5,250.9**	**5,537.9**	**5,844.3**
(On-budget)	2,457.8	2,602.3	2,814.9	2,937.2	3,087.4	3,236.7	3,414.1	3,597.4	3,792.4	4,000.3	4,222.0	4,465.7
(Off-budget)	810.2	857.4	892.2	931.3	971.8	1,026.8	1,081.3	1,132.9	1,191.4	1,250.6	1,315.8	1,378.5

Table 22–6. EFFECT ON RECEIPTS OF CHANGES IN THE SOCIAL SECURITY TAXABLE EARNINGS BASE
(In billions of dollars)

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Social security (OASDI) taxable earnings base increases:										
$127,200 to $130,200 on Jan. 1, 2018	1.6	4.0	4.4	4.9	5.4	5.9	6.6	7.2	7.9	8.7
$130,200 to $135,000 on Jan. 1, 2019	....	2.7	6.7	7.4	8.1	9.0	9.9	10.9	12.0	13.2
$135,000 to $139,800 on Jan. 1, 2020	....	....	2.7	6.9	7.6	8.3	9.2	10.1	11.1	12.2
$139,800 to $145,800 on Jan. 1, 2021	....	....	....	3.4	8.7	9.6	10.6	11.6	12.9	14.2
$145,800 to $152,400 on Jan. 1, 2022	....	....	....	....	3.8	9.6	10.6	11.7	12.9	14.3
$152,400 to $159,000 on Jan. 1, 2023	....	....	....	....	....	3.9	9.7	10.7	11.8	13.0
$159,000 to $166,200 on Jan. 1, 2024	....	....	....	....	....	....	4.3	10.7	11.8	13.0
$166,200 to $173,400 on Jan. 1, 2025	....	....	....	....	....	....	....	4.3	10.8	11.9
$173,400 to $181,200 on Jan. 1, 2026	....	....	....	....	....	....	....	....	4.7	11.7
$181,200 to $189,600 on Jan. 1, 2027	....	....	....	....	....	....	....	....	....	5.1

Table 22–7. CHANGE IN OUTLAY ESTIMATES BY CATEGORY IN THE BASELINE

(In billions of dollars)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	Change 2017 to 2018		Change 2017 to 2022		Change 2017 to 2027	
													Amount	Percent	Amount	Average annual rate	Amount	Average annual rate
Outlays:																		
Discretionary:																		
Defense	585	592	600	623	640	653	665	676	695	713	732	750	9	1.5%	73	2.4%	158	2.4%
Non-defense	600	624	618	629	637	650	659	672	688	705	722	739	–6	–0.9%	35	1.1%	115	1.7%
Subtotal, discretionary	1,185	1,215	1,219	1,251	1,277	1,303	1,323	1,348	1,384	1,418	1,453	1,488	3	0.3%	108	1.7%	273	2.0%
Mandatory:																		
Farm programs	12	15	21	17	15	18	17	17	17	16	15	16	6	42.7%	2	2.7%	1	0.7%
GSE support	–14	–27	–20	–18	–18	–17	–16	–16	–15	–15	–14	–14	6	–23.9%	10	–9.4%	13	–6.5%
Medicaid	368	378	408	432	454	480	507	537	570	604	648	688	29	7.7%	129	6.0%	310	6.2%
Other health care	87	103	98	95	99	103	108	113	118	124	131	138	–5	–4.7%	5	1.0%	35	3.0%
Medicare	588	593	582	646	701	757	854	885	913	1,012	1,106	1,195	–11	–1.8%	262	7.6%	602	7.3%
Federal employee retirement and disability	145	141	140	150	155	160	171	170	169	181	186	192	-*	–0.2%	30	3.9%	51	3.2%
Unemployment compensation	32	33	33	34	36	38	40	42	44	46	48	50	*	0.2%	7	4.1%	17	4.3%
Other income security programs	271	273	265	275	279	287	299	301	304	313	328	330	–7	–2.6%	26	1.9%	58	1.9%
Social Security	910	946	1,005	1,070	1,138	1,207	1,281	1,362	1,448	1,537	1,630	1,728	59	6.2%	335	6.2%	781	6.2%
Veterans programs	106	102	103	115	121	128	145	144	142	163	171	180	1	0.8%	43	7.3%	78	5.9%
Other mandatory programs	17	110	53	57	57	54	56	53	53	54	68	70	–57	–52.0%	–55	–12.8%	–40	–4.5%
Undistributed offsetting receipts	–95	–93	–104	–99	–100	–101	–102	–105	–107	–122	–113	–116	–11	11.8%	–9	1.8%	–23	2.2%
Subtotal, mandatory	2,427	2,573	2,583	2,774	2,936	3,114	3,359	3,503	3,656	3,912	4,205	4,457	10	0.4%	786	5.5%	1,884	5.6%
Net interest	240	276	316	372	431	487	542	592	634	670	706	741	40	14.5%	265	14.4%	465	10.4%
Total, outlays	3,853	4,065	4,118	4,398	4,643	4,905	5,224	5,443	5,673	6,000	6,364	6,687	53	1.3%	1,159	5.1%	2,622	5.1%

*Less than $500 million

Table 22–8. OUTLAYS BY FUNCTION IN THE BASELINE

(In billions of dollars)

Function	2016 Actual	Estimate 2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
National Defense:												
Department of Defense—Military	565.4	571.0	580.6	602.7	620.2	633.7	644.6	655.0	673.8	691.0	708.4	726.2
Other	28.0	29.5	29.4	30.0	30.0	29.9	30.6	31.2	31.9	32.5	33.3	34.0
Total, National Defense	593.4	600.5	610.1	632.6	650.2	663.7	675.2	686.2	705.6	723.6	741.7	760.2
International Affairs	45.3	56.4	62.8	65.0	65.3	65.6	65.5	66.1	67.1	68.2	69.8	71.6
General Science, Space, and Technology	30.2	31.1	31.7	32.9	33.7	34.3	34.9	35.3	36.2	37.0	37.8	38.6
Energy	3.7	6.0	5.0	4.9	5.7	5.6	5.9	3.8	3.2	3.5	6.3	6.2
Natural Resources and Environment	39.5	40.6	43.0	44.3	46.7	47.4	48.0	49.2	50.3	51.2	52.1	52.4
Agriculture	18.3	21.1	27.4	23.9	21.9	25.2	23.9	24.3	24.6	23.8	23.5	23.9
Commerce and Housing Credit	–34.1	–17.7	–20.9	–14.1	–14.6	–13.9	–9.0	–8.3	–6.9	–5.6	–4.0	–2.7
(On-Budget)	(–32.7)	(–22.9)	(–21.6)	(–14.3)	(–14.8)	(–14.1)	(–9.3)	(–8.5)	(–7.2)	(–5.8)	(–4.2)	(–3.0)
(Off-Budget)	(–1.4)	(5.2)	(0.7)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)
Transportation	92.6	93.8	93.7	95.1	96.2	99.0	100.4	102.2	104.8	107.3	111.6	114.0
Community and Regional Development	20.1	22.1	23.7	26.9	25.3	25.3	22.8	22.3	22.7	23.2	23.7	24.1
Education, Training, Employment, and Social Services	109.7	147.0	104.5	113.4	117.0	121.8	124.1	126.4	128.9	131.3	134.8	139.3
Health	511.3	545.7	565.5	589.2	615.9	648.5	681.7	717.9	757.2	798.9	851.7	900.5
Medicare	594.5	599.7	588.7	653.3	708.1	764.9	861.8	892.4	920.7	1,020.1	1,114.1	1,203.7
Income Security	514.1	513.9	509.6	530.8	543.1	558.9	584.9	590.5	595.7	620.4	644.4	655.7
Social Security	916.1	951.9	1,010.6	1,076.0	1,143.9	1,212.4	1,287.0	1,368.2	1,454.2	1,543.4	1,637.0	1,734.6
(On-Budget)	(32.5)	(37.6)	(41.1)	(45.0)	(49.2)	(53.8)	(58.4)	(63.4)	(68.7)	(74.5)	(80.8)	(87.7)
(Off-Budget)	(883.5)	(914.3)	(969.6)	(1,031.0)	(1,094.7)	(1,158.6)	(1,228.6)	(1,304.8)	(1,385.5)	(1,468.9)	(1,556.1)	(1,646.9)
Veterans Benefits and Services	174.5	175.0	185.7	201.2	210.0	219.5	239.0	240.7	241.7	264.7	276.4	288.5
Administration of Justice	55.8	66.5	68.3	65.8	66.5	66.8	66.5	67.6	69.3	71.1	77.5	79.4
General Government	22.7	26.3	27.0	27.1	27.8	27.0	27.6	28.6	29.7	30.4	30.9	31.6
Net Interest	240.0	276.2	316.3	371.9	430.5	486.9	541.7	592.0	633.6	669.5	705.5	740.9
(On-Budget)	(330.6)	(362.7)	(401.1)	(456.7)	(514.1)	(569.6)	(621.5)	(670.3)	(709.4)	(743.5)	(777.3)	(811.2)
(Off-Budget)	(–90.6)	(–86.5)	(–84.8)	(–84.7)	(–83.6)	(–82.6)	(–79.9)	(–78.3)	(–75.8)	(–74.0)	(–71.7)	(–70.4)
Allowances	....	2.4	–30.1	–43.6	–49.9	–53.8	–55.8	–57.3	–58.6	–60.0	–58.3	–59.7
Undistributed Offsetting Receipts:												
Employer share, employee retirement (on-budget)	–67.1	–70.0	–73.0	–73.7	–74.3	–75.2	–76.3	–78.4	–79.9	–82.0	–84.0	–86.4
Employer share, employee retirement (off-budget)	–16.9	–17.5	–18.1	–18.8	–19.4	–20.0	–20.8	–21.4	–22.0	–22.9	–23.6	–24.4
Rents and royalties on the Outer Continental Shelf	–2.8	–4.2	–4.6	–4.8	–5.0	–5.1	–5.2	–5.2	–5.2	–5.2	–5.3	–5.3
Sale of major assets	....	....	....	....	....	....	....	....	....	....	....	....
Other undistributed offsetting receipts	–8.4	–1.8	–8.7	–1.7	–1.8	–0.1	....	–0.1	–0.1	–12.3	....	....
Total, Undistributed Offsetting Receipts	–95.3	–93.4	–104.4	–98.9	–100.4	–100.5	–102.3	–105.1	–107.1	–122.3	–112.9	–116.1
(On-Budget)	(–78.3)	(–75.9)	(–86.3)	(–80.1)	(–81.0)	(–80.5)	(–81.5)	(–83.7)	(–85.1)	(–99.5)	(–89.3)	(–91.7)
(Off-Budget)	(–16.9)	(–17.5)	(–18.1)	(–18.8)	(–19.4)	(–20.0)	(–20.8)	(–21.4)	(–22.0)	(–22.9)	(–23.6)	(–24.4)
Total	**3,852.6**	**4,065.0**	**4,118.2**	**4,397.7**	**4,643.1**	**4,904.7**	**5,223.8**	**5,442.9**	**5,672.9**	**5,999.9**	**6,363.6**	**6,686.6**
(On-Budget)	(3,077.9)	(3,249.5)	(3,250.7)	(3,470.0)	(3,651.2)	(3,848.5)	(4,095.6)	(4,237.6)	(4,385.0)	(4,627.6)	(4,902.5)	(5,134.2)
(Off-Budget)	(774.7)	(815.5)	(867.4)	(927.7)	(991.9)	(1,056.2)	(1,128.2)	(1,205.4)	(1,288.0)	(1,372.3)	(1,461.1)	(1,552.4)

Table 22–9. OUTLAYS BY AGENCY IN THE BASELINE
(In billions of dollars)

Agency	2016 Actual	Estimate										
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Legislative Branch	4.3	5.2	4.8	4.9	5.0	5.1	5.3	5.4	5.6	5.7	5.9	6.0
Judicial Branch	7.5	8.1	7.8	8.0	8.2	8.5	8.8	9.0	9.3	9.6	9.9	10.2
Agriculture	138.2	133.0	147.6	147.9	148.3	154.5	156.3	159.4	162.6	164.8	167.7	169.6
Commerce	9.2	10.7	10.9	11.3	11.7	11.8	11.7	11.1	11.3	11.6	11.9	12.3
Defense—Military Programs	565.4	569.3	588.0	614.9	635.2	650.3	662.2	673.4	693.2	711.4	729.6	748.4
Education	77.0	111.8	70.3	78.7	81.9	86.3	88.1	89.7	91.7	93.5	96.4	100.2
Energy	25.9	27.0	29.3	30.4	31.0	30.5	31.0	30.0	29.7	30.3	33.2	33.9
Health and Human Services	1,103.0	1,130.7	1,141.3	1,233.7	1,313.6	1,400.6	1,528.1	1,592.3	1,656.1	1,802.2	1,919.7	2,046.8
Homeland Security	45.2	50.1	48.7	53.2	53.4	54.7	52.8	54.1	55.6	57.1	64.8	66.2
Housing and Urban Development	26.4	56.8	41.9	42.3	41.7	42.8	43.9	44.0	45.0	46.1	47.3	48.2
Interior	12.6	13.5	14.7	14.7	15.6	15.6	15.8	16.2	16.4	16.6	16.9	17.3
Justice	29.5	38.2	41.1	38.9	38.8	38.6	37.6	37.9	38.8	39.9	40.8	41.9
Labor	41.4	45.1	43.8	44.6	47.1	50.2	53.0	56.0	59.4	59.0	68.9	67.9
State	29.4	30.1	32.2	34.3	34.6	35.0	34.9	35.5	36.1	36.8	37.6	38.4
Transportation	78.4	79.4	78.2	79.5	80.2	82.5	83.5	84.8	86.8	88.8	90.8	92.7
Treasury	526.1	567.0	606.3	670.7	736.2	801.7	865.2	923.1	974.1	1,016.8	1,054.3	1,115.7
Veterans Affairs	174.0	174.4	185.3	200.8	209.6	219.2	238.6	240.3	241.4	264.3	276.0	288.1
Corps of Engineers—Civil Works	6.4	6.9	7.9	8.6	8.9	8.9	8.9	9.0	9.2	9.3	9.3	8.8
Other Defense Civil Programs	64.5	58.0	56.5	63.5	64.9	66.8	75.0	71.6	67.7	77.3	82.2	82.2
Environmental Protection Agency	8.7	8.6	7.9	7.5	8.0	8.4	8.8	9.2	9.5	9.8	10.0	10.3
Executive Office of the President	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.6
General Services Administration	–0.7	–0.2	1.2	1.3	1.2	0.0	–0.0	0.1	0.2	0.2	0.2	0.2
International Assistance Programs	16.2	26.3	29.8	29.8	29.5	29.1	29.0	29.0	29.4	29.7	30.5	31.4
National Aeronautics and Space Administration	18.8	19.1	19.8	20.0	20.6	21.1	21.5	21.9	22.4	22.9	23.5	24.0
National Science Foundation	6.9	7.0	7.1	7.9	8.1	8.2	8.2	8.1	8.6	8.8	8.9	9.1
Office of Personnel Management	91.3	93.6	100.1	104.5	108.6	112.4	116.2	120.5	125.1	129.6	134.9	140.3
Small Business Administration	–0.4	0.4	1.0	0.9	0.9	1.0	1.0	1.0	1.0	1.1	1.1	1.1
Social Security Administration	976.8	1,008.9	1,064.9	1,136.0	1,205.6	1,275.9	1,357.3	1,435.7	1,518.6	1,615.0	1,710.8	1,810.5
(On-Budget)	(93.2)	(94.6)	(95.3)	(105.1)	(110.9)	(117.2)	(128.7)	(130.9)	(133.1)	(146.2)	(154.7)	(163.6)
(Off-Budget)	(883.5)	(914.3)	(969.6)	(1,031.0)	(1,094.7)	(1,158.6)	(1,228.6)	(1,304.8)	(1,385.5)	(1,468.9)	(1,556.1)	(1,646.9)
Other Independent Agencies	11.7	24.7	20.0	24.8	24.4	24.9	29.7	30.7	31.8	33.2	35.0	35.8
(On-Budget)	(13.0)	(19.5)	(19.3)	(24.6)	(24.1)	(24.6)	(29.4)	(30.5)	(31.6)	(33.0)	(34.7)	(35.5)
(Off-Budget)	(–1.4)	(5.2)	(0.7)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)
Allowances	....	4.2	–42.7	–69.8	–80.2	–86.8	–91.4	–95.2	–98.5	–110.5	–85.9	–82.7
Undistributed Offsetting Receipts	–241.4	–243.3	–248.0	–246.5	–250.3	–253.4	–257.5	–261.6	–265.9	–281.9	–269.2	–289.0
(On-Budget)	(–133.9)	(–139.3)	(–145.1)	(–143.0)	(–147.3)	(–150.7)	(–156.9)	(–161.9)	(–168.1)	(–185.1)	(–173.9)	(–194.2)
(Off-Budget)	(–107.5)	(–104.0)	(–102.9)	(–103.5)	(–103.0)	(–102.7)	(–100.7)	(–99.7)	(–97.8)	(–96.8)	(–95.3)	(–94.7)
Total	**3,852.6**	**4,065.0**	**4,118.2**	**4,397.7**	**4,643.1**	**4,904.7**	**5,223.8**	**5,442.9**	**5,672.9**	**5,999.9**	**6,363.6**	**6,686.6**
(On-Budget)	(3,077.9)	(3,249.5)	(3,250.7)	(3,470.0)	(3,651.2)	(3,848.5)	(4,095.6)	(4,237.6)	(4,385.0)	(4,627.6)	(4,902.5)	(5,134.2)
(Off-Budget)	(774.7)	(815.5)	(867.4)	(927.7)	(991.9)	(1,056.2)	(1,128.2)	(1,205.4)	(1,288.0)	(1,372.3)	(1,461.1)	(1,552.4)

Table 22–10. BUDGET AUTHORITY BY FUNCTION IN THE BASELINE

(In billions of dollars)

Function	2016 Actual	Estimate										
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
National Defense:												
Department of Defense—Military	595.7	597.0	596.7	610.6	625.7	640.8	656.3	672.4	688.8	705.9	723.5	741.7
Other	28.4	28.4	28.5	29.0	29.6	30.3	30.9	31.5	32.2	32.9	33.6	34.3
Total, National Defense	624.1	625.5	625.2	639.7	655.4	671.0	687.2	703.9	721.0	738.8	757.1	776.0
International Affairs	50.5	54.8	61.9	53.1	56.9	60.3	63.5	66.4	68.6	70.5	72.5	74.4
General Science, Space, and Technology	31.6	31.5	32.2	32.9	33.6	34.4	35.1	35.9	36.7	37.5	38.3	39.1
Energy	5.3	7.3	5.8	5.3	5.9	6.0	5.8	4.1	3.7	4.0	6.7	6.7
Natural Resources and Environment	42.0	42.3	44.2	44.9	46.3	47.2	48.2	49.3	50.5	51.7	52.8	54.1
Agriculture	37.5	19.7	21.4	21.7	25.0	24.0	24.3	24.7	24.0	23.7	24.1	24.5
Commerce and Housing Credit	7.0	–15.1	–0.9	2.3	3.7	5.9	8.3	9.7	10.9	12.1	13.4	14.6
(On-Budget)	(6.7)	(–15.4)	(–1.1)	(2.1)	(3.5)	(5.7)	(8.1)	(9.5)	(10.7)	(11.9)	(13.2)	(14.4)
(Off-Budget)	(0.3)	(0.3)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)
Transportation	90.2	92.1	94.9	97.2	92.0	100.7	101.8	103.0	104.2	105.4	108.2	109.5
Community and Regional Development	18.0	21.2	20.2	20.9	21.8	22.2	22.8	23.3	23.8	24.4	24.9	25.3
Education, Training, Employment, and Social Services	110.6	148.4	109.6	115.6	119.0	123.8	126.4	128.7	131.3	133.7	137.1	141.6
Health	516.0	538.5	559.9	588.2	625.5	648.6	683.4	719.2	759.5	801.3	853.6	902.7
Medicare	604.5	602.6	586.9	653.3	708.1	764.9	861.7	892.6	920.8	1,017.3	1,119.9	1,203.9
Income Security	524.5	518.1	517.5	538.2	553.3	568.5	588.3	599.4	610.3	631.7	648.4	663.1
Social Security	920.1	955.2	1,016.2	1,081.5	1,149.7	1,218.2	1,293.4	1,375.1	1,461.6	1,551.0	1,645.0	1,743.0
(On-Budget)	(32.5)	(37.6)	(41.1)	(45.0)	(49.2)	(53.8)	(58.4)	(63.4)	(68.7)	(74.5)	(80.8)	(87.7)
(Off-Budget)	(887.6)	(917.7)	(975.1)	(1,036.5)	(1,100.5)	(1,164.4)	(1,235.0)	(1,311.8)	(1,392.8)	(1,476.5)	(1,564.1)	(1,655.3)
Veterans Benefits and Services	163.9	177.1	190.5	196.8	212.0	222.4	233.0	243.8	255.0	268.2	280.1	292.4
Administration of Justice	56.6	64.9	73.4	61.4	63.0	64.6	66.3	68.0	69.8	71.6	77.7	79.9
General Government	25.9	25.3	26.8	27.2	27.8	28.6	29.3	30.0	30.6	31.3	32.1	32.9
Net Interest	240.0	276.2	316.3	371.9	430.5	486.9	541.7	592.0	633.6	669.5	705.5	740.9
(On-Budget)	(330.6)	(362.7)	(401.1)	(456.7)	(514.1)	(569.6)	(621.5)	(670.3)	(709.4)	(743.5)	(777.3)	(811.2)
(Off-Budget)	(–90.6)	(–86.5)	(–84.8)	(–84.7)	(–83.6)	(–82.6)	(–79.9)	(–78.3)	(–75.8)	(–74.0)	(–71.7)	(–70.4)
Allowances	....	3.9	–52.9	–51.3	–53.9	–56.0	–57.3	–58.5	–59.8	–61.0	–57.8	–60.4
Undistributed Offsetting Receipts:												
Employer share, employee retirement (on-budget)	–67.1	–70.0	–73.0	–73.7	–74.3	–75.2	–76.3	–78.4	–79.9	–82.0	–84.0	–86.4
Employer share, employee retirement (off-budget)	–16.9	–17.5	–18.1	–18.8	–19.4	–20.0	–20.8	–21.4	–22.0	–22.9	–23.6	–24.4
Rents and royalties on the Outer Continental Shelf	–2.8	–4.2	–4.6	–4.8	–5.0	–5.1	–5.2	–5.2	–5.2	–5.2	–5.3	–5.3
Sale of major assets	....	....	....	....	....	....	....	....	....	....	....	....
Other undistributed offsetting receipts	–8.4	–1.8	–8.7	–1.7	–1.8	–0.1	....	–0.1	–0.1	–12.3	....	....
Total, Undistributed Offsetting Receipts	–95.3	–93.4	–104.4	–98.9	–100.4	–100.5	–102.3	–105.1	–107.1	–122.3	–112.9	–116.1
(On-Budget)	(–78.3)	(–75.9)	(–86.3)	(–80.1)	(–81.0)	(–80.5)	(–81.5)	(–83.7)	(–85.1)	(–99.5)	(–89.3)	(–91.7)
(Off-Budget)	(–16.9)	(–17.5)	(–18.1)	(–18.8)	(–19.4)	(–20.0)	(–20.8)	(–21.4)	(–22.0)	(–22.9)	(–23.6)	(–24.4)
Total	**3,972.9**	**4,096.1**	**4,144.7**	**4,401.9**	**4,675.2**	**4,941.7**	**5,261.0**	**5,505.6**	**5,748.8**	**6,060.4**	**6,426.9**	**6,748.2**
(On-Budget)	(3,192.5)	(3,282.1)	(3,272.2)	(3,468.7)	(3,677.5)	(3,879.7)	(4,126.4)	(4,293.2)	(4,453.5)	(4,680.5)	(4,957.9)	(5,187.4)
(Off-Budget)	(780.4)	(813.9)	(872.5)	(933.2)	(997.7)	(1,062.0)	(1,134.6)	(1,212.3)	(1,295.3)	(1,379.9)	(1,469.1)	(1,560.8)
MEMORANDUM												
Discretionary Budget Authority:												
National Defense	606.8	616.2	615.6	630.0	645.4	660.8	677.1	693.9	711.0	728.7	746.9	765.3
International Affairs	55.0	59.0	60.4	61.6	63.0	64.3	65.7	67.1	68.5	69.9	71.4	73.0
Domestic	504.8	492.0	487.8	500.3	512.5	524.9	538.2	552.0	566.0	580.5	595.4	610.5
Total, Discretionary	1,166.7	1,167.2	1,163.8	1,191.9	1,220.8	1,250.0	1,281.0	1,312.9	1,345.5	1,379.2	1,413.7	1,448.8

Table 22–11. BUDGET AUTHORITY BY AGENCY IN THE BASELINE

(In billions of dollars)

Agency	2016 Actual	Estimate										
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Legislative Branch	4.6	4.6	4.7	4.9	5.0	5.2	5.3	5.5	5.6	5.8	6.0	6.1
Judicial Branch	7.6	7.6	7.9	8.1	8.3	8.6	8.9	9.1	9.4	9.7	10.0	10.3
Agriculture	168.8	139.3	145.7	148.0	154.9	156.9	160.5	163.7	165.7	168.7	172.5	174.3
Commerce	10.4	9.5	9.9	10.1	10.4	10.7	10.9	11.2	11.5	11.8	12.1	12.4
Defense—Military Programs	595.7	594.2	611.4	626.5	642.2	658.5	674.7	691.5	708.8	726.7	745.1	764.4
Education	77.0	114.8	75.4	80.8	83.6	87.9	89.9	91.6	93.6	95.3	98.2	101.9
Energy	27.3	28.0	28.8	29.6	30.6	30.9	31.0	30.4	30.5	31.1	34.0	34.7
Health and Human Services	1,119.0	1,126.7	1,135.2	1,232.9	1,323.1	1,400.2	1,529.1	1,592.8	1,657.7	1,803.7	1,920.9	2,048.2
Homeland Security	46.0	48.0	48.0	49.4	51.0	52.3	53.8	55.2	56.7	58.2	65.6	67.3
Housing and Urban Development	48.8	51.5	48.3	50.0	51.2	52.4	53.5	54.7	55.8	57.0	58.2	59.2
Interior	14.0	13.7	14.7	14.8	15.3	15.5	15.8	16.2	16.3	16.7	17.1	17.5
Justice	32.1	39.1	45.9	34.4	35.3	36.2	37.2	38.1	39.1	40.1	41.0	42.1
Labor	47.0	47.3	47.8	49.4	52.0	54.0	56.1	58.3	60.5	63.0	65.4	68.0
State	29.8	31.4	32.2	32.9	33.6	34.4	35.1	35.9	36.7	37.5	38.3	39.2
Transportation	75.7	77.5	79.7	81.6	75.9	84.1	84.7	85.3	86.0	86.6	87.3	88.0
Treasury	519.9	563.0	605.1	670.5	736.6	803.0	866.6	924.7	975.5	1,018.2	1,055.9	1,117.5
Veterans Affairs	163.3	176.6	190.1	196.4	211.6	222.0	232.6	243.5	254.7	267.9	279.7	292.0
Corps of Engineers—Civil Works	6.0	6.9	7.1	7.2	7.4	7.6	7.8	8.0	8.2	8.4	8.6	8.8
Other Defense Civil Programs	60.1	57.6	61.2	63.7	65.2	67.0	69.5	71.6	74.0	77.6	82.5	82.5
Environmental Protection Agency	8.2	8.2	8.5	8.6	8.8	9.0	9.3	9.5	9.7	10.0	10.3	10.5
Executive Office of the President	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.6
General Services Administration	0.6	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3
International Assistance Programs	20.8	23.0	28.3	18.8	21.8	24.4	26.7	28.8	30.1	31.2	32.3	33.4
National Aeronautics and Space Administration	19.3	19.3	19.8	20.2	20.7	21.2	21.7	22.1	22.7	23.2	23.7	24.3
National Science Foundation	7.6	7.5	7.7	7.9	8.0	8.2	8.3	8.5	8.7	8.9	9.0	9.2
Office of Personnel Management	93.7	95.7	102.4	106.6	110.9	115.2	119.7	124.4	129.1	133.9	139.0	144.6
Small Business Administration	–0.5	0.3	0.9	0.9	0.9	1.0	1.0	1.0	1.1	1.1	1.1	1.1
Social Security Administration	983.0	1,010.7	1,067.3	1,141.6	1,211.5	1,281.7	1,363.5	1,442.7	1,526.2	1,622.7	1,718.8	1,819.0
(On-Budget)	(95.3)	(93.0)	(92.2)	(105.1)	(111.0)	(117.3)	(128.4)	(130.9)	(133.4)	(146.2)	(154.7)	(163.7)
(Off-Budget)	(887.6)	(917.7)	(975.1)	(1,036.5)	(1,100.5)	(1,164.4)	(1,235.0)	(1,311.8)	(1,392.8)	(1,476.5)	(1,564.1)	(1,655.3)
Other Independent Agencies	28.1	29.8	32.5	33.2	34.6	36.5	38.5	39.3	40.3	41.5	42.9	43.6
(On-Budget)	(27.8)	(29.5)	(32.3)	(33.0)	(34.4)	(36.3)	(38.3)	(39.1)	(40.0)	(41.3)	(42.6)	(43.4)
(Off-Budget)	(0.3)	(0.3)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)
Allowances	....	6.8	–74.5	–81.2	–85.8	–90.2	–93.9	–97.2	–100.2	–115.0	–80.3	–84.0
Undistributed Offsetting Receipts	–241.4	–243.3	–248.0	–246.5	–250.3	–253.4	–257.5	–261.6	–265.9	–281.9	–269.2	–289.0
(On-Budget)	(–133.9)	(–139.3)	(–145.1)	(–143.0)	(–147.3)	(–150.7)	(–156.9)	(–161.9)	(–168.1)	(–185.1)	(–173.9)	(–194.2)
(Off-Budget)	(–107.5)	(–104.0)	(–102.9)	(–103.5)	(–103.0)	(–102.7)	(–100.7)	(–99.7)	(–97.8)	(–96.8)	(–95.3)	(–94.7)
Total	**3,972.9**	**4,096.1**	**4,144.7**	**4,401.9**	**4,675.2**	**4,941.7**	**5,261.0**	**5,505.6**	**5,748.8**	**6,060.4**	**6,426.9**	**6,748.2**
(On-Budget)	(3,192.5)	(3,282.1)	(3,272.2)	(3,468.7)	(3,677.5)	(3,879.7)	(4,126.4)	(4,293.2)	(4,453.5)	(4,680.5)	(4,957.9)	(5,187.4)
(Off-Budget)	(780.4)	(813.9)	(872.5)	(933.2)	(997.7)	(1,062.0)	(1,134.6)	(1,212.3)	(1,295.3)	(1,379.9)	(1,469.1)	(1,560.8)

23. TRUST FUNDS AND FEDERAL FUNDS

As is common for State and local government budgets, the budget for the Federal Government contains information about collections and expenditures for different types of funds. This chapter presents summary information about the transactions of the two major fund groups used by the Federal Government, trust funds and Federal funds. It also presents information about the income and outgo of the major trust funds and certain Federal funds that are financed by dedicated collections in a manner similar to trust funds.

The Federal Funds Group

The Federal funds group includes all financial transactions of the Government that are not required by law to be recorded in trust funds. It accounts for a larger share of the budget than the trust funds group.

The Federal funds group includes the "general fund," which is used for the general purposes of Government rather than being restricted by law to a specific program. The general fund is the largest fund in the Government and it receives all collections not dedicated for some other fund, including virtually all income taxes and many excise taxes. The general fund is used for all programs that are not supported by trust, special, or revolving funds.

The Federal funds group also includes special funds and revolving funds, both of which receive collections that are dedicated by law for specific purposes. Where the law requires that Federal fund collections be dedicated to a particular program, the collections and associated disbursements are recorded in special fund receipt and expenditure accounts.[1] An example is the portion of the Outer Continental Shelf mineral leasing receipts deposited into the Land and Water Conservation Fund. Money in special fund receipt accounts must be appropriated before it can be obligated and spent. The majority of special fund collections are derived from the Government's power to impose taxes or fines, or otherwise compel payment, as in the case of the Crime Victims Fund. In addition, a significant amount of collections credited to special funds is derived from certain types of business-like activity, such as the sale of Government land or other assets or the use of Government property. These collections include receipts from timber sales and royalties from oil and gas extraction.

Revolving funds are used to conduct continuing cycles of business-like activity. Revolving funds receive proceeds from the sale of products or services, and these proceeds finance ongoing activities that continue to provide products or services. Instead of being deposited in receipt accounts, the proceeds are recorded in revolving fund expenditure accounts. The proceeds are generally available for obligation and expenditure without further legislative action. Outlays for programs with revolving funds are reported both gross and net of these proceeds; gross outlays include the expenditures from the proceeds and net program outlays are derived by subtracting the proceeds from gross outlays. Because the proceeds of these sales are recorded as offsets to outlays within expenditure accounts rather than receipt accounts, the proceeds are known as "offsetting collections."[2] There are two classes of revolving funds in the Federal funds group. Public enterprise funds, such as the Postal Service Fund, conduct business-like operations mainly with the public. Intragovernmental funds, such as the Federal Buildings Fund, conduct business-like operations mainly within and between Government agencies.

The Trust Funds Group

The trust funds group consists of funds that are designated by law as trust funds. Like special funds and revolving funds, trust funds receive collections that are dedicated by law for specific purposes. Many of the larger trust funds are used to budget for social insurance programs, such as Social Security, Medicare, and unemployment compensation. Other large trust funds are used to budget for military and Federal civilian employees' retirement benefits, highway and transit construction and maintenance, and airport and airway development and maintenance. There are a few trust revolving funds that are credited with collections earmarked by law to carry out a cycle of business-type operations. There are also a few small trust funds that have been established to carry out the terms of a conditional gift or bequest.

There is no substantive difference between special funds in the Federal funds group and trust funds, or between revolving funds in the Federal funds group and trust revolving funds. Whether a particular fund is designated in law as a trust fund is, in many cases, arbitrary. For example, the National Service Life Insurance Fund is a trust fund, but the Servicemen's Group Life Insurance Fund is a Federal fund, even though both receive dedicated collections from veterans and both provide life insurance payments to veterans' beneficiaries.

The Federal Government uses the term "trust fund" differently than the way in which it is commonly used. In common usage, the term is used to refer to a private fund that has a beneficiary who owns the trust's income and may also own the trust's assets. A custodian or trustee

[1] There are two types of budget accounts: expenditure (or appropriation) accounts and receipt accounts. Expenditure accounts are used to record outlays and receipt accounts are used to record governmental receipts and offsetting receipts. For further detail on expenditure and receipt accounts, see Chapter 8, "Budget Concepts," in this volume.

[2] See Chapter 12 in this volume for more information on offsetting collections and offsetting receipts.

manages the assets on behalf of the beneficiary according to the terms of the trust agreement, as established by a trustor. Neither the trustee nor the beneficiary can change the terms of the trust agreement; only the trustor can change the terms of the agreement. In contrast, the Federal Government owns and manages the assets and the earnings of most Federal trust funds and can unilaterally change the law to raise or lower future trust fund collections and payments or change the purpose for which the collections are used. Only a few small Federal trust funds are managed pursuant to a trust agreement whereby the Government acts as the trustee; even then the Government generally owns the funds and has some ability to alter the amount deposited into or paid out of the funds.

Deposit funds, which are funds held by the Government as a custodian on behalf of individuals or a non-Federal entity, are similar to private-sector trust funds. The Government makes no decisions about the amount of money placed in deposit funds or about how the proceeds are spent. For this reason, these funds are not classified as Federal trust funds, but are instead considered to be non-budgetary and excluded from the Federal budget.[3]

The income of a Federal Government trust fund must be used for the purposes specified in law. The income of some trust funds, such as the Federal Employees Health Benefits fund, is spent almost as quickly as it is collected. In other cases, such as the Social Security and Federal civilian employees' retirement trust funds, the trust fund income is not spent as quickly as it is collected. Currently, these funds do not use all of their annual income (which includes intragovernmental interest income). This surplus of income over outgo adds to the trust fund's balance, which is available for future expenditures. The balances

[3] Deposit funds are discussed briefly in Chapter 9 of this volume, "Coverage of the Budget."

Table 23–1. RECEIPTS, OUTLAYS AND SURPLUS OR DEFICIT BY FUND GROUP

(In billions of dollars)

	2016 Actual	Estimate					
		2017	2018	2019	2020	2021	2022
Receipts:							
Federal funds cash income:							
From the public	2,418.9	2,558.5	2,696.1	2,812.8	2,920.9	3,041.6	3,198.4
From trust funds	1.1	1.1	1.0	1.0	1.0	1.1	1.1
Total, Federal funds cash income	2,420.0	2,559.7	2,697.2	2,813.8	2,921.9	3,042.7	3,199.4
Trust funds cash income:							
From the public	1,348.1	1,414.1	1,486.3	1,539.7	1,605.4	1,678.3	1,764.6
From Federal funds:							
Interest	146.1	149.9	143.5	147.6	149.9	153.0	155.2
Other	618.8	573.3	597.4	620.0	656.9	697.2	739.9
Total, Trust funds cash income	2,113.0	2,137.3	2,227.2	2,307.3	2,412.2	2,528.5	2,659.8
Offsetting collections from the public and offsetting receipts:							
Federal funds	–331.3	–341.3	–334.6	–344.7	–343.0	–349.9	–353.3
Trust funds	–933.8	–896.0	–935.5	–962.8	–1,008.9	–1,060.4	–1,115.8
Total, offsetting collections from the public and offsetting receipts	–1,265.1	–1,237.2	–1,270.1	–1,307.4	–1,351.9	–1,410.3	–1,469.1
Unified budget receipts:							
Federal funds	2,088.8	2,218.4	2,362.5	2,469.1	2,578.9	2,692.8	2,846.1
Trust funds	1,179.2	1,241.3	1,291.8	1,344.5	1,403.2	1,468.1	1,544.0
Total, unified budget receipts	3,268.0	3,459.7	3,654.3	3,813.7	3,982.1	4,160.9	4,390.1
Outlays:							
Federal funds cash outgo	3,189.4	3,312.6	3,312.7	3,440.5	3,479.7	3,554.2	3,641.3
Trust funds cash outgo	1,928.3	1,986.9	2,051.9	2,206.5	2,342.3	2,472.8	2,659.5
Offsetting collections from the public and offsetting receipts:							
Federal funds	–331.3	–341.3	–334.6	–344.7	–343.0	–349.9	–353.3
Trust funds	–933.8	–896.0	–935.5	–962.8	–1,008.9	–1,060.4	–1,115.8
Total, offsetting collections from the public and receipts	–1,265.1	–1,237.2	–1,270.1	–1,307.4	–1,351.9	–1,410.3	–1,469.1
Unified budget outlays:							
Federal funds	2,858.2	2,971.3	2,978.1	3,095.9	3,136.7	3,204.3	3,288.0
Trust funds	994.5	1,090.9	1,116.4	1,243.7	1,333.4	1,412.4	1,543.8
Total, unified budget outlays	3,852.6	4,062.2	4,094.4	4,339.6	4,470.1	4,616.7	4,831.7
Surplus or deficit(–):							
Federal funds	–769.4	–752.9	–615.5	–626.7	–557.8	–511.5	–441.9
Trust funds	184.7	150.4	175.4	100.8	69.9	55.7	0.2
Total, unified surplus/deficit(–)	–584.7	–602.5	–440.2	–525.9	–488.0	–455.8	–441.7

Note: Receipts include governmental, interfund, and proprietary, and exclude intrafund receipts (which are offset against intrafund payments so that cash income and cash outgo are not overstated).

are generally required by law to be invested in Federal securities issued by the Department of the Treasury.[4] The National Railroad Retirement Investment Trust is a rare example of a Government trust fund authorized to invest balances in equity markets.

A trust fund normally consists of one or more receipt accounts (to record income) and an expenditure account (to record outgo). However, a few trust funds, such as the Veterans Special Life Insurance fund, are established by law as trust revolving funds. Such a fund is similar to a revolving fund in the Federal funds group in that it may consist of a single account to record both income and outgo. Trust revolving funds are used to conduct a cycle of business-type operations; offsetting collections are credited to the funds (which are also expenditure accounts) and the funds' outlays are displayed net of the offsetting collections.

Income and Outgo by Fund Group

Table 23–1 shows income, outgo, and the surplus or deficit by fund group and in the aggregate (netted to avoid double-counting) from which the total unified budget receipts, outlays, and surplus or deficit are derived. Income consists mostly of governmental receipts (derived from governmental activity, primarily income, payroll, and excise taxes). Income also includes offsetting receipts, which include proprietary receipts (derived from business-like transactions with the public), interfund collections (derived from payments from a fund in one fund group to a fund in the other fund group), and gifts. Outgo consists of payments made to the public or to a fund in the other fund group.

Two types of transactions are treated specially in the table. First, income and outgo for each fund group exclude all transactions that occur between funds within the same fund group.[5] These intrafund transactions constitute outgo and income for the individual funds that make and collect the payments, but they are offsetting within the fund group as a whole. The totals for each fund group measure only the group's transactions with the public and the other fund group. Second, outgo is calculated net of the collections from Federal sources that are credited to expenditure accounts (which, as noted above, are referred to as offsetting collections); the spending that is financed by those collections is included in outgo and the collections from Federal sources are subsequently subtracted from outgo.[6] Although it would be conceptually correct to add interfund offsetting collections from Federal sources to income for a particular fund, this cannot be done at the present time because the budget data do not provide this type of detail. As a result, both interfund and intrafund offsetting collections from Federal sources are offset against outgo in Table 23–1 and are not shown separately.

The vast majority of the interfund transactions in the table are payments by the Federal funds to the trust funds. These payments include interest payments from the general fund to the trust funds for interest earned on trust fund balances invested in interest-bearing Treasury securities. The payments also include payments by Federal agencies to Federal employee benefits trust funds and Social Security trust funds on behalf of current employees and general fund transfers to employee retirement trust funds to amortize the unfunded liabilities of these funds. In addition, the payments include general fund transfers to the Supplementary Medical Insurance trust fund for the cost of Medicare Parts B (outpatient and physician benefits) and D (prescription drug benefits) that is not covered by premiums (or, for Part D, transfers from States).

In addition to investing their balances with the Treasury, some funds in the Federal funds group and most trust funds are authorized to borrow from the general fund of the Treasury.[7] Similar to the treatment of funds invested with the Treasury, borrowed funds are not recorded as receipts of the fund or included in the income of the fund. Rather, the borrowed funds finance outlays by the fund in excess of available receipts. Subsequently, any excess fund receipts are transferred from the fund to the general fund in repayment of the borrowing. The repayment is not recorded as an outlay of the fund or included in fund outgo. This treatment is consistent with the broad principle that borrowing and debt redemption are not budgetary transactions but rather a means of financing deficits or disposing of surpluses.[8]

Some income in both Federal funds and trust funds consists of offsetting receipts.[9] Offsetting receipts are not considered governmental receipts (such as taxes), but they are instead recorded on the outlay side of the budget. Expenditures resulting from offsetting receipts are recorded as gross outlays and the collections of offsetting receipts are then subtracted from gross outlays to derive net outlays. Net outlays reflect the government's net transactions with the public.

[4] Securities held by trust funds (and by other Government accounts), debt held by the public, and gross Federal debt are discussed in Chapter 4 of this volume, "Federal Borrowing and Debt."

[5] For example, the railroad retirement trust funds pay the equivalent of Social Security benefits to railroad retirees in addition to the regular railroad pension. These benefits are financed by a payment from the Federal Old-Age and Survivors Insurance trust fund to the railroad retirement trust funds. The payment and collection are not included in Table 23–1 so that the total trust fund income and outgo shown in the table reflect transactions with the public and with Federal funds.

[6] Collections from non-Federal sources are shown as income and spending that is financed by those collections is shown as outgo. For example, postage stamp fees are deposited as offsetting collections in the Postal Service Fund. As a result, the Fund's income reported in Table 23–1 includes Postage stamp fees and the Fund's outgo is gross disbursements, including disbursements financed by those fees.

[7] For example, the Unemployment trust fund is authorized to borrow from the general fund for unemployment benefits; the Bonneville Power Administration Fund, a revolving fund in the Department of Energy, is authorized to borrow from the general fund; and the Black Lung Disability Trust Fund, a trust fund in the Department of Labor, is authorized to receive appropriations of repayable advances from the general fund, which constitutes a form of borrowing.

[8] Borrowing and debt repayment are discussed in Chapter 4 of this volume, "Federal Borrowing and Debt," and Chapter 8 of this volume, "Budget Concepts."

[9] Interest on borrowed funds is an example of an intragovernmental offsetting receipt and Medicare Part B's premiums are an example of offsetting receipts from the public.

Table 23–2. COMPARISON OF TOTAL FEDERAL FUND AND TRUST FUND RECEIPTS TO UNIFIED BUDGET RECEIPTS, FISCAL YEAR 2016
(In billions of dollars)

Gross Federal fund and Trust fund cash income:	
Federal funds	2,738.8
Trust funds	2,169.3
Total, gross Federal fund and Trust fund cash income	4,908.1
Deduct: intrabudgetary offsetting collections (from funds within same fund group):	
Federal funds	–293.0
Trust funds	–50.0
Subtotal, intrabudgetary offsetting collections	–343.0
Deduct: intrafund receipts (from funds within same fund group):	
Federal funds	–25.7
Trust funds	–6.3
Subtotal, intrafund receipts	–32.0
Federal fund and Trust fund cash income net of intrabudgetary offsetting collections and intrafund receipts:	
Federal funds	2,420.0
Trust funds	2,113.0
Total, Federal fund and Trust fund cash income net of intrafund receipts	4,533.1
Deduct: offsetting collections from the public:	
Federal funds	–218.5
Trust funds	–20.0
Subtotal, offsetting collections from the public	–238.5
Deduct other offsetting receipts:	
Federal fund receipts from Trust funds	–1.1
Trust fund receipts from Federal funds:	
Interest in receipt accounts	–146.1
General fund payments to Medicare Parts B and D	–296.2
Employing agencies' payments for pensions, Social Security, and Medicare	–77.2
General fund payments for unfunded liabilities of Federal employees' retirement funds	–116.3
Transfer of taxation of Social Security and RRB benefits to OASDI, HI, and RRB	–56.1
Other receipts from Federal funds	–73.0
Subtotal, Trust fund receipts from Federal funds	–765.0
Proprietary receipts:	
Federal funds	–100.2
Trust funds	–140.4
Subtotal, proprietary receipts	–240.6
Offsetting governmental receipts:	
Federal funds	–11.4
Trust funds	–8.4
Subtotal, offsetting governmental receipts	–19.9
Subtotal, other offsetting receipts	–1,026.6
Unified budget receipts:	
Federal funds	2,088.8
Trust funds	1,179.2
Total, unified budget receipts	3,268.0
Memoradum:	
Gross receipts: [1]	
Federal funds	2,227.2
Trust funds	2,099.3
Total, gross receipts	4,326.5

[1] Gross income excluding offsetting collections.

As shown in Table 23-1, 36 percent of all governmental receipts were deposited in trust funds in 2016 and the remaining 64 percent of governmental receipts were deposited in Federal funds, which, as noted above, include the general fund. As noted above, most outlays between the trust fund and Federal fund groups (interfund outlays) flow from Federal funds to trust funds, rather than from trust funds to Federal funds. As a result, while trust funds account for 26 percent of total 2016 outlays, they account for 32 percent of 2016 outlays net of interfund transactions.

Because the income for Federal funds and trust funds recorded in Table 23–1 includes offsetting receipts and offsetting collections from the public, offsetting receipts and offsetting collections from the public must be deducted from the two fund groups' combined gross income in order to reconcile to total governmental receipts in the unified budget. Similarly, because the outgo for Federal funds and trust funds in Table 23–1 consists of outlays gross of offsetting receipts and offsetting collections from the public, the amount of the offsetting receipts and offsetting collections from the public must be deducted from the sum of the Federal funds' and the trust funds' gross outgo in order to reconcile to total (net) unified budget outlays. Table 23–2 reconciles, for fiscal year 2016, the gross total of all trust fund and Federal fund receipts with the receipt total of the unified budget.

Income, Outgo, and Balances of Trust Funds

Table 23–3 shows, for the trust funds group as a whole, the funds' balance at the start of each year, income and outgo during the year, and the end-of-year balance. Income and outgo are divided between transactions with the public and transactions with Federal funds. Receipts from Federal funds are divided between interest and other interfund receipts.

The definitions of income and outgo in this table differ from those in Table 23–1 in one important way. Trust fund collections that are offset against outgo (offsetting collections from Federal sources) within expenditure accounts instead of being deposited in separate receipt accounts are classified as income in this table, but not in Table 23–1. This classification is consistent with the definitions of income and outgo for trust funds used elsewhere in the budget. It has the effect of increasing both income and outgo by the amount of the offsetting collections from Federal sources. The difference was approximately $50 billion in 2016. Table 23–3, therefore, provides a more complete summary of trust fund income and outgo.

The trust funds group ran a surplus of $185 billion in 2016, and is expected to continue to run surpluses over the next several years. The resulting growth in trust fund balances continues a trend that has persisted over the past several decades. The size of these balances is largely the consequence of changes in the way some trust funds (primarily Social Security and the Federal retirement funds) are financed.

Because of these changes and economic growth (both real and nominal), trust fund balances increased from

$205 billion in 1982 to $4.9 trillion in 2016. Based on the estimates in the 2018 Budget, which include the effect of the Budget's proposals, the balances are estimated to increase by approximately 11 percent by the year 2022, rising to $5.4 trillion. Almost all of these balances are invested in Treasury securities and earn interest. The balances represent the value, in current dollars, of the unspent portion of (1) taxes and fees received by the Government and dedicated to trust funds and (2) intragovernmental payments (from the general fund and from agency appropriations) to the trust funds.

Until the 1980s, most trust funds operated on a pay-as-you-go basis as distinct from a pre-funded basis. Taxes and fees were set at levels sufficient to finance current program expenditures and administrative expenses, and to maintain balances generally equal to one year's worth of expenditures (to provide for unexpected events). As a result, trust fund balances tended to grow at about the same rate as the fund's annual expenditures.

For some of the larger trust funds, pay-as-you-go financing was replaced in the 1980s by full or partial advance funding. The Social Security Amendments of 1983 raised payroll taxes above the levels necessary to finance then-current expenditures. Similarly, in 1985, a new system took effect that funded military retirement benefits on a full accrual basis and, in 1986, full accrual funding of retirement benefits was mandated for Federal civilian employees hired after December 31, 1983. The two retirement programs now require Federal agencies and employees together to pay the trust funds that disburse Federal civilian and military retirement benefits an amount equal to those accruing retirement benefits. Since many years will pass between the time when benefits are earned (or accrued) and when they are paid, the trust funds will accumulate substantial balances over time.

From the perspective of the trust fund, these balances represent the value, in today's dollars, of past taxes, fees, and other income that the trust fund has received in excess of past spending. Trust fund assets held in Treasury securities are legal claims on the Treasury, similar to Treasury securities issued to the public. Like all other fund assets, these are available to the fund for future benefit payments and other expenditures. From the perspective of the Government as a whole, however, the trust fund balances do not represent net additions to the Government's balance sheet. The trust fund balances are assets of the agencies responsible for administering the trust fund programs and liabilities of the Department of the Treasury. These assets and liabilities cancel each other out in the Government-wide balance sheet. The effects of Treasury debt held by trust funds and other Government accounts are discussed further in Chapter 4 of this volume, "Federal Borrowing and Debt."

Although total trust fund balances are growing, the balances of some major individual funds are declining. Social Security and Medicare face particular challenges due to the decline in the ratio of active workers paying payroll taxes relative to retired workers receiving Social Security and Medicare benefits. Within the 2016-2022 window presented in Table 23-3, the Social Security and Medicare Hospital Insurance (HI) trust funds will begin to run deficits and their balances will consequently begin to fall. In the longer run, absent changes in the laws governing these programs, the funds will become unable to meet their obligations in full. For further discussion of the longer-term outlook of Social Security and Medicare, and the Federal Budget as a whole, see Chapter 3 of this volume, "Long Term Budget Outlook."

Table 23–4 shows estimates of income, outgo, surplus or deficit, and balances for 2016 through 2022 for the major trust funds. With the exception of transactions between trust funds, the data for the individual trust funds are conceptually the same as the data in Table 23–3 for the trust funds group. As explained previously, transactions between trust funds are shown as outgo of the fund that makes the payment and as income of the fund that collects it in the data for an individual trust fund, but the collections are offset against outgo in the data for the trust fund group as a whole.

As noted above, trust funds are funded by a combination of payments from the public and payments from Federal funds, including payments directly from the general fund and payments from agency appropriations. Similarly, the fund outgo amounts in Table 23-4 represent both outflows to the public—such as for the provision of benefit payments or the purchase of goods or services—and outflows to other Government accounts—such as for reimbursement for services provided by other agencies or payment of interest on borrowing from Treasury.

Because trust funds and Federal special and revolving funds conduct transactions both with the public and with other Government accounts, the surplus or deficit of an individual fund may differ from the fund's impact on the surplus or deficit of the Federal Government. Transactions with the public affect both the surplus or deficit of an individual fund and the Federal Government surplus or deficit. Transactions with other government accounts affect the surplus or deficit of the particular fund. However, because that same transaction is offset in another government account, there is no net impact on the total Federal Government surplus or deficit.

A brief description of the major trust funds is given below; additional information for these and other trust funds can be found in the Status of Funds tables in the *Budget Appendix*.

- Social Security Trust Funds: The Social Security trust funds consist of the Old Age and Survivors Insurance (OASI) trust fund and the Disability Insurance (DI) trust fund. The trust funds are funded by payroll taxes from employers and employees, interest earnings on trust fund balances, Federal agency payments as employers, and a portion of the income taxes paid on Social Security benefits.

- Medicare Trust Funds: Like the Social Security trust funds, the Medicare Hospital Insurance trust fund is funded by payroll taxes from employers and employees, Federal agency payments as employers, and a portion of the income taxes paid on Social Security benefits. The HI trust fund also receives

Table 23–3. INCOME, OUTGO, AND BALANCES OF TRUST FUNDS GROUP
(In billions of dollars)

	2016 Actual	Estimate 2017	2018	2019	2020	2021	2022
Balance, start of year	4,702.4	4,879.3	5,029.8	5,205.1	5,305.9	5,375.7	5,431.4
Adjustments to balances	*	....	....	....	....	....	....
Total balance, start of year	4,702.4	4,879.3	5,029.8	5,205.1	5,305.9	5,375.7	5,431.4
Income:							
Governmental receipts	1,179.2	1,241.3	1,291.8	1,344.5	1,403.2	1,468.1	1,544.0
Offsetting governmental	8.5	*	8.8	1.7	1.7	*	*
Proprietary	158.3	171.5	185.0	192.8	199.7	209.4	219.9
From Federal funds:							
Interest	149.6	152.0	145.4	149.6	152.1	155.5	158.2
Other	667.5	624.2	650.8	675.4	714.2	757.0	802.5
Total income during the year	2,163.0	2,189.1	2,281.8	2,364.1	2,471.0	2,590.0	2,724.6
Outgo (–)	–1,978.3	–2,038.7	–2,106.4	–2,263.2	–2,401.1	–2,534.3	–2,724.3
Change in fund balance:							
Surplus or deficit(–):							
Excluding interest	35.2	–1.6	30.0	–48.8	–82.3	–99.8	–158.0
Interest	149.6	152.0	145.4	149.6	152.1	155.5	158.2
Subtotal, surplus or deficit (–)	184.7	150.4	175.4	100.8	69.9	55.7	0.2
Borrowing, transfers, lapses, & other adjustments	–7.8	*	–0.1	....	....	....	....
Total change in fund balance	176.9	150.5	175.3	100.8	69.9	55.7	0.2
Balance, end of year	4,879.3	5,029.8	5,205.1	5,305.9	5,375.7	5,431.4	5,431.7

* $50 million or less.
NOTE: In contrast to table 23-1, income also includes income that is offset within expenditure accounts as offsetting collections from Federal sources, instead of being deposited in receipt accounts.

transfers from the general fund of the Treasury for certain HI benefits and premiums from certain voluntary participants. The other Medicare trust fund, Supplementary Medical Insurance (SMI), finances Part B (outpatient and physician benefits) and Part D (prescription drug benefits). SMI receives premium payments from covered individuals, transfers from States toward Part D benefits, excise taxes on manufacturers and importers of brand-name prescription drugs, and transfers from the general fund of the Treasury for the portion of Part B and Part D costs not covered by premiums or transfers from States. In addition, like other trust funds, these two trust funds receive interest earnings on their trust fund balances.

- Highway Trust Fund: The fund finances Federal highway and transit infrastructure projects, as well as highway and vehicle safety activities. The Highway Trust Fund is financed by Federal motor fuel taxes and associated fees, and, in recent years, by general fund transfers, as those taxes and fees have been inadequate to support current levels of investment.
- Unemployment Trust Fund: The Unemployment Trust Fund is funded by Federal and State taxes on employers, payments from Federal agencies, taxes on certain employees, and interest earnings on trust fund balances. Unemployment insurance is administered largely by the States, following Federal guidelines. The Federal Unemployment Trust Fund is composed of individual accounts for each State and several Federal accounts, including accounts related to the separate unemployment insurance program for railroad employees.
- Civilian and military retirement trust funds: The Civil Service Retirement and Disability Fund is funded by employee and agency payments, general fund transfers for the unfunded portion of retirement costs, and interest earnings on trust fund balances. The Military Retirement Fund likewise is funded by payments from the Department of Defense, general fund transfers for unfunded retirement costs, and interest earnings on trust fund balances.

Table 23–5 shows income, outgo, and balances of two Federal funds that are designated as special funds. These funds are similar to trust funds in that they are financed by dedicated receipts, the excess of income over outgo is invested in Treasury securities, the interest earnings add to fund balances, and the balances remain available to cover future expenditures. The table is illustrative of the Federal funds group, which includes many revolving funds and special funds.

Table 23–4. INCOME, OUTGO, AND BALANCE OF MAJOR TRUST FUNDS
(In billions of dollars)

	2016 Actual	Estimate					
		2017	2018	2019	2020	2021	2022
Airport and Airway Trust Fund							
Balance, start of year	14.1	14.8	15.4	16.5	18.4	21.1	19.7
Adjustments to balances	....	....	....	....	....	....	....
Total balance, start of year	14.1	14.8	15.4	16.5	18.4	21.1	19.7
Income:							
Governmental receipts	14.4	14.9	15.5	16.2	16.9	3.4	3.5
Offsetting governmental	....	....	....	....	....	....	....
Proprietary	*	0.1	0.1	0.1	0.1	0.1	0.1
Intrabudgetary:							
Intrafund	....	....	....	....	....	....	....
Interest	0.3	0.3	0.3	0.4	0.5	0.6	0.6
Other intrabudgetary	*	0.1	0.1	0.1	0.1	0.1	0.1
Total income during the year	14.8	15.3	15.8	16.6	17.4	4.0	4.2
Outgo (–)	–14.0	–14.6	–14.8	–14.7	–14.8	–5.4	–4.2
Change in fund balance:							
Surplus or deficit(–)							
Excluding interest	0.4	0.4	0.8	1.5	2.2	–2.0	–0.6
Interest	0.3	0.3	0.3	0.4	0.5	0.6	0.6
Subtotal, surplus or deficit (–)	0.7	0.7	1.1	1.9	2.7	–1.4	–*
Borrowing, transfers, lapses, & other adjustments	*	....	....	....	....	....	....
Total change in fund balance	0.7	0.7	1.1	1.9	2.7	–1.4	–*
Balance, end of year	14.8	15.4	16.5	18.4	21.1	19.7	19.7
Civil Service Retirement and Disability Fund							
Balance, start of year	871.9	887.2	902.4	916.9	920.1	922.7	924.1
Adjustments to balances	....	....	....	....	....	....	....
Total balance, start of year	871.9	887.2	902.4	916.9	920.1	922.7	924.1
Income:							
Governmental receipts	3.9	4.1	6.1	7.9	9.8	11.7	13.7
Offsetting governmental	....	....	....	....	....	....	....
Proprietary	....	....	....	....	....	....	....
Intrabudgetary:							
Intrafund	....	....	....	....	....	....	....
Interest	28.2	25.9	25.4	25.6	25.6	25.4	25.4
Other intrabudgetary	66.2	68.2	68.3	57.1	56.5	55.7	55.1
Total income during the year	98.2	98.2	99.8	90.6	92.0	92.9	94.2
Outgo (–)	–83.0	–83.0	–85.2	–87.4	–89.4	–91.4	–93.4
Change in fund balance:							
Surplus or deficit(–):							
Excluding interest	–12.9	–10.7	–10.8	–22.4	–23.1	–23.9	–24.7
Interest	28.2	25.9	25.4	25.6	25.6	25.4	25.4
Subtotal, surplus or deficit (–)	15.3	15.2	14.6	3.2	2.5	1.5	0.8
Borrowing, transfers, lapses, & other adjustments	....	....	....	....	....	....	....
Total change in fund balance	15.3	15.2	14.6	3.2	2.5	1.5	0.8
Balance, end of year	887.2	902.4	916.9	920.1	922.7	924.1	924.9
Employees and Retired Employees Health Benefits Funds							
Balance, start of year	23.0	23.7	24.6	25.2	25.6	26.0	26.7
Adjustments to balances	....	....	....	....	....	....	....
Total balance, start of year	23.0	23.7	24.6	25.2	25.6	26.0	26.7
Income:							
Governmental receipts	....	....	....	....	....	....	....
Offsetting governmental	....	....	....	....	....	....	....
Proprietary	14.8	15.9	17.0	18.0	18.8	19.8	21.0

Table 23–4. INCOME, OUTGO, AND BALANCE OF MAJOR TRUST FUNDS—Continued
(In billions of dollars)

	2016 Actual	Estimate 2017	2018	2019	2020	2021	2022
Intrabudgetary:							
Intrafund	....	....	....	....	....	....	....
Interest	0.4	0.2	0.2	0.3	0.4	0.5	0.6
Other intrabudgetary	35.5	37.4	39.4	41.8	43.7	46.1	48.9
Total income during the year	50.7	53.5	56.6	60.0	62.8	66.4	70.5
Outgo (–)	–50.1	–52.6	–55.9	–59.6	–62.5	–65.6	–69.4
Change in fund balance:							
Surplus or deficit(–):							
Excluding interest	0.2	0.7	0.4	0.1	*	0.3	0.6
Interest	0.4	0.2	0.2	0.3	0.4	0.5	0.6
Subtotal, surplus or deficit (–)	0.7	0.9	0.7	0.4	0.4	0.8	1.2
Borrowing, transfers, lapses, & other adjustments	....	....	....	....	....	....	....
Total change in fund balance	0.7	0.9	0.7	0.4	0.4	0.8	1.2
Balance, end of year	23.7	24.6	25.2	25.6	26.0	26.7	27.9
Foreign Military Sales Trust Fund							
Balance, start of year	25.7	29.6	27.4	24.7	22.5	21.0	20.4
Adjustments to balances	....	....	....	....	....	....	....
Total balance, start of year	25.7	29.6	27.4	24.7	22.5	21.0	20.4
Income:							
Governmental receipts	....	....	....	....	....	....	....
Offsetting governmental	....	....	....	....	....	....	....
Proprietary	32.1	37.4	36.0	34.1	31.7	29.7	28.1
Intrabudgetary:							
Intrafund	....	....	....	....	....	....	....
Interest	....	....	....	....	....	....	....
Other intrabudgetary	....	....	....	....	....	....	....
Total income during the year	32.1	37.4	36.0	34.1	31.7	29.7	28.1
Outgo (–)	–28.2	–39.6	–38.7	–36.3	–33.2	–30.4	–28.1
Change in fund balance:							
Surplus or deficit(–):							
Excluding interest	3.8	–2.1	–2.7	–2.2	–1.5	–0.6	–*
Interest	....	....	....	....	....	....	....
Subtotal, surplus or deficit (–)	3.8	–2.1	–2.7	–2.2	–1.5	–0.6	–*
Borrowing, transfers, lapses, & other adjustments	....	....	....	....	....	....	....
Total change in fund balance	3.8	–2.1	–2.7	–2.2	–1.5	–0.6	–*
Balance, end of year	29.6	27.4	24.7	22.5	21.0	20.4	20.4
Highway Trust Fund							
Balance, start of year	11.9	69.2	58.1	46.5	34.3	22.1	9.3
Adjustments to balances	....	....	....	....	....	....	....
Total balance, start of year	11.9	69.2	58.1	46.5	34.3	22.1	9.3
Income:							
Governmental receipts	41.3	41.6	42.0	42.4	42.6	42.7	42.7
Offsetting governmental	*	*	*	*	*	*	*
Proprietary	0.1	....	....	....	....	....	....
Intrabudgetary:							
Intrafund	0.1	0.1	0.1	....	....	....	....
Interest	0.1	0.2	0.2	0.1	*	....	....
Other intrabudgetary	70.1	0.4	0.4	0.4	0.4	0.4	0.4
Total income during the year	111.8	42.3	42.6	42.9	43.0	43.1	43.1
Outgo (–)	–54.5	–53.4	–54.2	–55.1	–55.3	–55.9	–52.1
Change in fund balance:							
Surplus or deficit(–):							

Table 23–4. INCOME, OUTGO, AND BALANCE OF MAJOR TRUST FUNDS—Continued

(In billions of dollars)

	2016 Actual	Estimate					
		2017	2018	2019	2020	2021	2022
Excluding interest	57.2	–11.3	–11.7	–12.3	–12.3	–12.8	–9.0
Interest	0.1	0.2	0.2	0.1	*	....	....
Subtotal, surplus or deficit (–)	57.3	–11.1	–11.6	–12.2	–12.2	–12.8	–9.0
Borrowing, transfers, lapses, & other adjustments	....	....	....	....	....	....	....
Total change in fund balance	57.3	–11.1	–11.6	–12.2	–12.2	–12.8	–9.0
Balance, end of year	69.2	58.1	46.5	34.3	22.1	9.3	0.3
Medicare: Hospital Insurance (HI) Trust Fund							
Balance, start of year	196.1	192.5	199.2	218.2	225.7	227.3	224.4
Adjustments to balances	....	....	....	....	....	....	....
Total balance, start of year	196.1	192.5	199.2	218.2	225.7	227.3	224.4
Income:							
Governmental receipts	247.6	259.0	271.1	284.2	297.7	315.5	332.8
Offsetting governmental	....	....	....	....	....	....	....
Proprietary	11.9	10.2	10.5	10.8	11.0	11.4	11.7
Intrabudgetary:							
Intrafund	....	....	....	....	....	....	....
Interest	8.0	7.4	7.8	8.1	7.9	7.7	7.0
Other intrabudgetary	27.9	30.6	34.1	37.1	40.3	43.7	47.3
Total income during the year	295.4	307.2	323.5	340.2	356.9	378.2	398.8
Outgo (–)	–298.9	–300.5	–304.5	–332.6	–355.3	–381.1	–420.7
Change in fund balance:							
Surplus or deficit(–):							
Excluding interest	–11.6	–0.8	11.2	–0.5	–6.3	–10.6	–28.9
Interest	8.0	7.4	7.8	8.1	7.9	7.7	7.0
Subtotal, surplus or deficit (–)	–3.5	6.6	19.0	7.5	1.6	–2.9	–21.9
Borrowing, transfers, lapses, & other adjustments	*	–*	....	....	....	....	....
Total change in fund balance	–3.5	6.6	19.0	7.5	1.6	–2.9	–21.9
Balance, end of year	192.5	199.2	218.2	225.7	227.3	224.4	202.5
Medicare: Supplementary Insurance (SMI) Trust Fund							
Balance, start of year	69.1	62.8	67.9	96.0	102.6	103.0	101.7
Adjustments to balances	....	....	....	....	....	....	....
Total balance, start of year	69.1	62.8	67.9	96.0	102.6	103.0	101.7
Income:							
Governmental receipts	2.9	4.1	4.1	2.8	2.8	2.8	2.8
Offsetting governmental	....	....	....	....	....	....	....
Proprietary	92.3	100.6	114.4	122.6	130.8	141.0	151.5
Intrabudgetary:							
Intrafund	....	....	....	....	....	....	....
Interest	2.0	1.5	1.0	1.2	1.6	2.3	3.9
Other intrabudgetary	296.2	308.9	322.1	346.4	372.7	401.8	432.7
Total income during the year	393.4	415.1	441.7	473.0	507.9	548.0	590.9
Outgo (–)	–399.7	–410.0	–413.6	–466.4	–507.5	–549.3	–617.8
Change in fund balance:							
Surplus or deficit(–):							
Excluding interest	–8.4	3.6	27.0	5.4	–1.2	–3.6	–30.7
Interest	2.0	1.5	1.0	1.2	1.6	2.3	3.9
Subtotal, surplus or deficit (–)	–6.3	5.2	28.1	6.6	0.4	–1.3	–26.8
Borrowing, transfers, lapses, & other adjustments	....	–*	....	....	....	....	....
Total change in fund balance	–6.3	5.2	28.1	6.6	0.4	–1.3	–26.8
Balance, end of year	62.8	67.9	96.0	102.6	103.0	101.7	74.9
Military Retirement Fund							
Balance, start of year	525.9	584.5	658.7	735.7	811.2	890.8	974.9

Table 23–4. INCOME, OUTGO, AND BALANCE OF MAJOR TRUST FUNDS—Continued
(In billions of dollars)

	2016 Actual	Estimate 2017	2018	2019	2020	2021	2022
Adjustments to balances	....	....	....	....	....	....	....
Total balance, start of year	525.9	584.5	658.7	735.7	811.2	890.8	974.9
Income:							
Governmental receipts	....	....	....	....	....	....	....
Offsetting governmental	....	....	....	....	....	....	....
Proprietary	....	....	....	....	....	....	....
Intrabudgetary:							
Intrafund	....	....	....	....	....	....	....
Interest	14.7	25.6	21.4	24.5	27.3	30.4	34.0
Other intrabudgetary	105.4	106.2	110.0	111.8	115.0	118.2	121.6
Total income during the year	120.1	131.8	131.4	136.4	142.3	148.6	155.6
Outgo (–)	–61.6	–57.6	–54.4	–60.8	–62.7	–64.5	–72.3
Change in fund balance:							
Surplus or deficit(–):							
Excluding interest	43.8	48.6	55.6	51.0	52.4	53.7	49.3
Interest	14.7	25.6	21.4	24.5	27.3	30.4	34.0
Subtotal, surplus or deficit (–)	58.5	74.2	77.0	75.5	79.6	84.1	83.3
Borrowing, transfers, lapses, & other adjustments	....	....	....	....	....	....	....
Total change in fund balance	58.5	74.2	77.0	75.5	79.6	84.1	83.3
Balance, end of year	584.5	658.7	735.7	811.2	890.8	974.9	1,058.2
Railroad Retirement Trust Funds							
Balance, start of year	21.9	22.0	20.3	19.2	18.0	17.0	15.9
Adjustments to balances	....	....	....	....	....	....	....
Total balance, start of year	21.9	22.0	20.3	19.2	18.0	17.0	15.9
Income:							
Governmental receipts	5.3	5.5	5.7	5.9	6.1	6.3	6.5
Offsetting governmental	....	....	....	....	....	....	....
Proprietary	....	....	....	....	....	....	....
Intrabudgetary:							
Intrafund	4.7	4.6	4.9	4.9	5.1	5.1	5.3
Interest	2.0	1.1	0.7	0.8	0.8	0.8	0.7
Other intrabudgetary	0.9	0.9	0.9	0.9	1.0	1.0	1.0
Total income during the year	12.9	12.2	12.2	12.5	12.9	13.1	13.5
Outgo (–)	–12.7	–13.9	–13.4	–13.7	–14.0	–14.2	–14.4
Change in fund balance:							
Surplus or deficit(–):							
Excluding interest	–1.8	–2.9	–1.9	–1.9	–1.8	–1.9	–1.7
Interest	2.0	1.1	0.7	0.8	0.8	0.8	0.7
Subtotal, surplus or deficit (–)	0.1	–1.7	–1.2	–1.2	–1.0	–1.1	–0.9
Borrowing, transfers, lapses, & other adjustments	–*	–*	*	....	....	....	....
Total change in fund balance	0.1	–1.7	–1.1	–1.2	–1.0	–1.1	–0.9
Balance, end of year	22.0	20.3	19.2	18.0	17.0	15.9	14.9
Social Security: Disability Insurance (DI) Trust Fund							
Balance, start of year	41.7	45.7	69.4	96.1	94.4	82.0	71.9
Adjustments to balances	....	....	....	....	....	....	....
Total balance, start of year	41.7	45.7	69.4	96.1	94.4	82.0	71.9
Income:							
Governmental receipts	144.5	163.9	170.5	146.5	141.1	149.1	157.0
Offsetting governmental	....	....	....	....	....	....	....
Proprietary	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Intrabudgetary:							
Intrafund	....	....	....	....	....	....	....

Table 23–4. INCOME, OUTGO, AND BALANCE OF MAJOR TRUST FUNDS—Continued
(In billions of dollars)

	2016 Actual	Estimate 2017	2018	2019	2020	2021	2022
Interest	1.5	1.6	2.3	3.1	2.9	2.4	1.9
Other intrabudgetary	4.3	5.3	5.6	5.2	5.3	5.6	5.9
Total income during the year	150.4	170.9	178.5	154.9	149.4	157.2	164.8
Outgo (–)	–146.3	–147.2	–151.8	–156.7	–161.7	–167.2	–172.9
Change in fund balance:							
Surplus or deficit(–):							
Excluding interest	2.6	22.1	24.3	–4.8	–15.3	–12.5	–10.0
Interest	1.5	1.6	2.3	3.1	2.9	2.4	1.9
Subtotal, surplus or deficit (–)	4.1	23.7	26.7	–1.7	–12.3	–10.1	–8.1
Borrowing, transfers, lapses, & other adjustments	....	....	....	....	....	....	....
Total change in fund balance	4.1	23.7	26.7	–1.7	–12.3	–10.1	–8.1
Balance, end of year	45.7	69.4	96.1	94.4	82.0	71.9	63.8
Social Security: Old Age and Survivors Insurance (OASI) Trust Fund							
Balance, start of year	2,766.6	2,796.6	2,820.1	2,819.2	2,825.7	2,819.7	2,802.5
Adjustments to balances	....	....	....	....	....	....	....
Total balance, start of year	2,766.6	2,796.6	2,820.1	2,819.2	2,825.7	2,819.7	2,802.5
Income:							
Governmental receipts	665.7	693.5	721.6	784.7	830.7	877.8	924.3
Offsetting governmental	....	....	....	....	....	....	....
Proprietary	*	*	*	*	*	*	*
Intrabudgetary:							
Intrafund	....	....	....	....	....	....	....
Interest	89.1	84.9	82.4	81.6	80.7	80.2	78.0
Other intrabudgetary	45.2	49.8	53.6	58.6	63.3	68.2	73.3
Total income during the year	799.9	828.2	857.6	925.0	974.8	1,026.2	1,075.6
Outgo (–)	–769.8	–804.7	–858.6	–918.5	–980.8	–1,043.3	–1,111.5
Change in fund balance:							
Surplus or deficit(–):							
Excluding interest	–59.0	–61.4	–83.4	–75.1	–86.7	–97.3	–113.9
Interest	89.1	84.9	82.4	81.6	80.7	80.2	78.0
Subtotal, surplus or deficit (–)	30.1	23.5	–1.0	6.5	–6.0	–17.1	–35.9
Borrowing, transfers, lapses, & other adjustments	....	*	*	....	....	....	....
Total change in fund balance	30.1	23.5	–1.0	6.5	–6.0	–17.1	–35.9
Balance, end of year	2,796.6	2,820.1	2,819.2	2,825.7	2,819.7	2,802.5	2,766.6
Unemployment Trust Fund							
Balance, start of year	31.6	45.7	59.9	73.8	85.8	96.3	108.9
Adjustments to balances	....	....	....	....	....	....	....
Total balance, start of year	31.6	45.7	59.9	73.8	85.8	96.3	108.9
Income:							
Governmental receipts	48.9	49.3	49.9	48.5	50.0	53.2	55.1
Offsetting governmental	....	....	....	....	....	....	....
Proprietary	*	*	*	*	*	*	*
Intrabudgetary:							
Intrafund	....	....	....	....	....	....	....
Interest	1.2	1.4	1.5	1.8	2.1	2.6	3.1
Other intrabudgetary	0.6	0.7	0.7	0.7	0.8	0.9	0.9
Total income during the year	50.6	51.4	52.2	51.0	52.9	56.8	59.1
Outgo (–)	–36.6	–37.2	–38.3	–39.1	–42.3	–44.2	–45.9
Change in fund balance:							
Surplus or deficit(–):							
Excluding interest	12.9	12.8	12.4	10.2	8.4	10.0	10.1
Interest	1.2	1.4	1.5	1.8	2.1	2.6	3.1

Table 23–4. INCOME, OUTGO, AND BALANCE OF MAJOR TRUST FUNDS—Continued
(In billions of dollars)

	2016 Actual	Estimate 2017	2018	2019	2020	2021	2022
Subtotal, surplus or deficit (–)	14.1	14.2	13.9	11.9	10.6	12.5	13.2
Borrowing, transfers, lapses, & other adjustments	*	....	....	....	....	....	....
Total change in fund balance	14.1	14.2	13.9	11.9	10.6	12.5	13.2
Balance, end of year	45.7	59.9	73.8	85.8	96.3	108.9	122.1
Veterans Life Insurance Funds							
Balance, start of year	6.7	6.0	5.2	4.5	4.0	3.6	3.2
Adjustments to balances	....	....	....	....	....	....	....
Total balance, start of year	6.7	6.0	5.2	4.5	4.0	3.6	3.2
Income:							
Governmental receipts	....	....	....	....	....	....	....
Offsetting governmental	....	....	....	....	....	....	....
Proprietary	0.1	0.2	0.1	0.1	0.1	0.1	0.1
Intrabudgetary:							
Intrafund	....	....	....	....	....	....	....
Interest	0.3	0.2	0.2	0.2	0.1	0.1	0.1
Other intrabudgetary	....	....	....	....	....	....	....
Total income during the year	0.4	0.4	0.3	0.3	0.2	0.2	0.2
Outgo (–)	–1.2	–1.2	–1.1	–0.7	–0.7	–0.6	–0.5
Change in fund balance:							
Surplus or deficit(–):							
Excluding interest	–1.0	–1.0	–0.9	–0.6	–0.6	–0.5	–0.5
Interest	0.3	0.2	0.2	0.2	0.1	0.1	0.1
Subtotal, surplus or deficit (–)	–0.7	–0.8	–0.7	–0.4	–0.4	–0.4	–0.4
Borrowing, transfers, lapses, & other adjustments	....	....	....	....	....	....	....
Total change in fund balance	–0.7	–0.8	–0.7	–0.4	–0.4	–0.4	–0.4
Balance, end of year	6.0	5.2	4.5	4.0	3.6	3.2	2.8
All Other Trust Funds							
Balance, start of year	96.2	99.1	101.1	112.6	117.6	123.2	127.8
Adjustments to balances	*	....	....	....	....	....	....
Total balance, start of year	96.2	99.1	101.1	112.6	117.6	123.2	127.8
Income:							
Governmental receipts	4.8	5.4	5.2	5.4	5.6	5.8	5.8
Offsetting governmental	8.4	*	8.8	1.7	1.7	*	*
Proprietary	6.9	7.0	6.9	7.0	7.1	7.2	7.3
Intrabudgetary:							
Intrafund	0.1	0.1	0.1	0.2	*	*	*
Interest	1.8	1.7	1.9	2.0	2.2	2.4	2.8
Other intrabudgetary	15.2	15.8	15.7	15.5	15.2	15.3	15.3
Total income during the year	37.3	30.1	38.6	31.7	31.7	30.7	31.3
Outgo (–)	–26.6	–28.1	–27.0	–26.7	–26.1	–26.2	–26.3
Change in fund balance:							
Surplus or deficit(–):							
Excluding interest	9.0	0.3	9.7	3.0	3.4	2.1	2.1
Interest	1.8	1.7	1.9	2.0	2.2	2.4	2.8
Subtotal, surplus or deficit (–)	10.7	2.0	11.6	5.0	5.6	4.5	5.0
Borrowing, transfers, lapses, & other adjustments	–7.8	0.1	–0.2	....	....	....	....
Total change in fund balance	2.9	2.0	11.5	5.0	5.6	4.5	5.0
Balance, end of year	99.1	101.1	112.6	117.6	123.2	127.8	132.7

* $50 million or less.

Table 23–5. INCOME, OUTGO, AND BALANCE OF SELECTED SPECIAL FUNDS
(In billions of dollars)

	2016 Actual	Estimate					
		2017	2018	2019	2020	2021	2022
Abandoned Mine Reclamation Fund							
Balance, start of year	2.8	2.9	2.9	2.8	2.8	2.7	2.7
Adjustments to balances	....	....	....	....	....	....	....
Total balance, start of year	2.8	2.9	2.9	2.8	2.8	2.7	2.7
Income:							
Governmental receipts	0.2	0.2	0.2	0.2	0.2	0.2	....
Offsetting governmental	....	....	....	....	....	....	....
Proprietary	....	....	....	....	....	....	....
Intrabudgetary:							
Intrafund	....	....	....	....	....	....	....
Interest	*	*	*	0.1	0.1	0.1	0.1
Other intrabudgetary	....	....	....	....	....	....	....
Total income during the year	0.2	0.2	0.2	0.2	0.2	0.2	0.1
Outgo (–)	–0.2	–0.3	–0.3	–0.3	–0.3	–0.3	–0.3
Change in fund balance:							
Surplus or deficit(–):							
Excluding interest	–0.1	–0.1	–0.1	–0.2	–0.1	–0.1	–0.3
Interest	*	*	*	0.1	0.1	0.1	0.1
Subtotal, surplus or deficit (–)	–*	–0.1	–*	–0.1	–0.1	–*	–0.2
Borrowing, transfers, lapses, & other adjustments	0.1	0.1	....	....	....	....	....
Total change in fund balance	0.1	*	–*	–0.1	–0.1	–*	–0.2
Balance, end of year	2.9	2.9	2.8	2.8	2.7	2.7	2.5
Department of Defense Medicare-Eligible Retiree Health Care Fund							
Balance, start of year	204.3	212.0	225.0	236.6	248.2	261.0	274.5
Adjustments to balances	....	....	....	....	....	....	....
Total balance, start of year	204.3	212.0	225.0	236.6	248.2	261.0	274.5
Income:							
Governmental receipts	....	....	....	....	....	....	....
Offsetting governmental	....	....	....	....	....	....	....
Proprietary	....	....	....	....	....	....	....
Intrabudgetary:							
Intrafund	10.2	12.8	13.1	13.8	14.5	15.1	15.8
Interest	7.3	11.2	9.7	9.6	10.8	11.4	11.7
Other intrabudgetary	....	....	....	....	....	....	....
Total income during the year	17.5	24.0	22.8	23.4	25.3	26.6	27.6
Outgo (–)	–9.8	–11.1	–11.2	–11.8	–12.4	–13.1	–13.9
Change in fund balance:							
Surplus or deficit(–):							
Excluding interest	0.4	1.8	1.9	2.0	2.0	2.0	2.0
Interest	7.3	11.2	9.7	9.6	10.8	11.4	11.7
Subtotal, surplus or deficit (–)	7.7	13.0	11.6	11.6	12.8	13.4	13.7
Borrowing, transfers, lapses, & other adjustments	....	....	....	....	....	....	....
Total change in fund balance	7.7	13.0	11.6	11.6	12.8	13.4	13.7
Balance, end of year	212.0	225.0	236.6	248.2	261.0	274.5	288.2

* $50 million or less.

24. COMPARISON OF ACTUAL TO ESTIMATED TOTALS

The Budget is required by statute to compare budget year estimates of receipts and outlays with the subsequent actual receipts and outlays for that year. This chapter meets that requirement by comparing the actual receipts, outlays, and deficit for 2016 with the current services estimates shown in the 2016 Budget, published in February 2015.[1] It also presents a more detailed comparison for mandatory and related programs, and reconciles the actual receipts, outlays, and deficit totals shown here with the figures for 2016 previously published by the Department of the Treasury.

Receipts

Actual receipts for 2016 were $3,268 billion, $162 billion less than the $3,430 billion current services estimate in the 2016 Budget, which was published in February 2015. As shown in Table 24–1, this decrease was the net effect of legislated tax changes and economic conditions that differed from what was expected, along with mostly offsetting technical factors that resulted in different tax liabilities and collection patterns than had been assumed.

Policy differences. Legislated tax changes enacted after February 2015 reduced 2016 receipts by a net $135 billion relative to the 2016 Budget current services estimate. The Fixing America's Surface Transportation (FAST) Act (Public Law 114-94), which extended certain highway-related taxes and modified the Federal Reserve surplus account and dividend payments, was signed into law by President Obama on December 4, 2015, and increased 2016 receipts by an estimated $21 billion. The Protecting Americans from Tax Hikes (PATH) Act (division Q of Public Law 114-113), which extended certain expiring tax provisions and made other modifications to the Internal Revenue Code, was signed into law by President Obama on December 18, 2015, and reduced 2016 receipts by an estimated $157 billion.

Economic differences. Differences between the economic assumptions upon which the current services estimates were based and actual economic performance reduced 2016 receipts by a net $25 billion below the February 2015 current services estimate. Corporations were less profitable than initially projected, which reduced receipts $36 billion below the February 2015 estimate and accounted for most of the net reduction in receipts attributable to economic differences. Different economic factors than those assumed in February 2015 had a smaller effect on other sources of receipts, increasing collections by a net $12 billion.

Technical factors. Technical factors decreased receipts by a net $1 billion relative to the February 2015 current services estimate. These factors had the greatest effect on social insurance and retirement receipts, increasing collections by $14 billion. Decreases in individual income taxes of $8 billion, corporation income taxes of $3 billion, and miscellaneous receipts of $3 billion accounted for most of the remaining changes in 2016 receipts attributable to technical factors. The models used to prepare the February 2015 estimates of individual and corporation income taxes were based on historical economic data and then-current tax and collections data that were all subsequently revised and account for the net decrease in these two sources of receipts attributable to technical factors. The $14 billion increase in social

[1] The current services concept is discussed in Chapter 22, "Current Services Estimates." For mandatory programs and receipts, the February 2015 current services estimate was based on laws then in place, with specified adjustments for current policy -- for example relief from scheduled reductions under the Medicare Sustainable Growth Rate mechanism and extension of certain expiring tax provisions. For discretionary programs, the current services estimate was based on the discretionary spending limits enacted in the Budget Control Act of 2011 (BCA). Spending for Overseas Contingency Operations, was estimated based on annualizing the amounts provided in the 2015 appropriations and increasing for inflation. The current services estimates also reflected the effects of discretionary and mandatory sequestration as required by the BCA following failure of the Joint Select Committee on Deficit Reduction to meet its deficit reduction target. For a detailed explanation of the 2016 estimate, see "Current Services Estimates," Chapter 25 in *Analytical Perspectives, Budget of the United States Government, Fiscal Year 2016*.

Table 24–1. COMPARISON OF ACTUAL 2016 RECEIPTS WITH THE INITIAL CURRENT SERVICES ESTIMATES

(In billions of dollars)

	Estimate (February 2015)	Changes			Total Changes	Actual
		Policy	Economic	Technical		
Individual income taxes	1,610	–58	2	–8	–64	1,546
Corporation income taxes	433	–94	–36	–3	–134	300
Social insurance and retirement receipts	1,106	*	–4	14	9	1,115
Excise taxes	100	–4	–1	-*	–5	95
Estate and gift taxes	21	*	-*	-*	*	21
Customs duties	39	–1	–2	–1	–4	35
Miscellaneous receipts	120	21	17	–3	36	156
Total receipts	3,430	–135	–25	–1	–162	3,268

* $500 million or less

insurance and retirement receipts attributable to technical factors reflected a $20 billion increase in Social Security and Medicare payroll taxes that was partially offset by a $6 billion reduction in unemployment insurance receipts. The $20 billion increase in Social Security and Medicare payroll taxes was attributable in large part to models based on historical economic data and then-current data from employer returns that underestimated the percentage of wages and salaries and self-employment earnings subject to payroll taxes.

Outlays

Outlays for 2016 were $3,853 billion, $112 billion less than the $3,964 billion current services estimate in the 2016 Budget. Table 24–2 distributes the $112 billion net decrease in outlays among discretionary and mandatory programs and net interest.[2] The table also shows rough estimates according to three reasons for the changes: policy; economic conditions; and technical estimating differences, a residual.

Policy differences. Policy changes are the result of legislative actions that change spending levels, primarily through higher or lower appropriations or changes in authorizing legislation, which may themselves be in response to changed economic conditions. For 2016, policy changes increased outlays by $38 billion relative to the initial current services estimates, which included the impacts of sequestration and discretionary cap reductions as part of the Joint Committee enforcement provisions of the Budget Control Act of 2011 (Public Law 112-25). The final enacted 2016 appropriations allowed for lower discretionary outlays than the rates included in the February 2015 estimate. The combined policy changes from final 2015 and 2016 appropriations, including Overseas Contingency Operations, increased discretionary outlays by $31 billion. Policy changes increased mandatory outlays by a net $7 billion above current law. Much of this increase was the result of changes in the Medicare program enacted primarily in 2015 that increased 2016 outlays by $5 billion. Debt service costs associated with all policy changes increased outlays by less than $1 billion.

Economic and technical factors. Economic and technical estimating factors resulted in a net decrease in outlays of $150 billion. Technical changes result from changes in such factors as the number of beneficiaries for entitlement programs, crop conditions, or other factors not associated with policy changes or economic conditions. Increases in discretionary outlays due to legislation, as discussed above, were offset by a $44 billion decrease in net outlays resulting from technical changes. Outlays for mandatory programs decreased $57 billion due to economic and technical factors. There was a net decrease in outlays of $28 billion as a result of differences between actual economic conditions versus those forecast in February 2015. Outlays for Social Security were $28 billion lower than anticipated in the 2016 Budget largely due to lower-than-estimated number of beneficiaries and cost-of-living adjustments. Income security program outlays were a combined $17 billion lower, while the remaining changes were in veterans benefits and services, deposit insurance, and other programs. Outlays for net interest were approximately $43 billion lower due to economic and technical factors, primarily lower interest rates than originally assumed.

Deficit

The preceding two sections discussed the differences between the initial current services estimates and the actual amounts of Federal government receipts and outlays for 2016. This section combines these effects to show the net deficit impact of these differences.

[2] Discretionary programs are controlled by annual appropriations, while mandatory programs are generally controlled by authorizing legislation. Mandatory programs are primarily formula benefit or entitlement programs with permanent spending authority that depends on eligibility criteria, benefit levels, and other factors. The current services estimates published in the 2016 Budget re-classified a large number of surface transportation programs as mandatory. The published estimates for nondefense discretionary outlays and mandatory outlays were $541 billion and $2,537 billion, respectively. This proposal was not subsequently enacted, so the applicable costs are shown as discretionary in this chapter for comparability.

Table 24–2. COMPARISON OF ACTUAL 2016 OUTLAYS WITH THE INITIAL CURRENT SERVICES ESTIMATES

(In billions of dollars)

	Estimate (February 2015)	Changes			Total Changes	Actual
		Policy	Economic	Technical		
Discretionary:						
Defense	598	1	....	–14	–13	585
Nondefense	600	30	....	–30	*	600
Subtotal, discretionary	1,198	31	....	–44	–13	1,185
Mandatory:						
Social Security	938	....	–9	–19	–28	910
Other programs	1,539	7	–20	–9	–22	1,517
Subtotal, mandatory	2,477	7	–28	–28	–50	2,427
Allowance for disaster costs [1]	6	....	....	–6	–6	....
Net interest	283	*	–49	6	–43	240
Total outlays	3,964	38	–78	–72	–112	3,853

* $500 million or less

[1] These amounts were included in the 2016 Budget to represent the statistical probability of a major disaster requiring federal assistance for relief and reconstruction. Such assistance might be provided in the form of discretionary, or mandatory outlays or tax relief. These amounts were included as outlays for convenience.

Table 24–3. COMPARISON OF THE ACTUAL 2016 DEFICIT WITH THE INITIAL CURRENT SERVICES ESTIMATE
(In billions of dollars)

	Estimate (February 2015)	Changes			Total Changes	Actual
		Policy	Economic	Technical		
Receipts	3,430	–135	–25	–1	–162	3,268
Outlays	3,964	38	–78	–72	–112	3,853
Deficit	535	174	–53	–71	50	585

Note: Deficit changes are outlays minus receipts. For these changes, a positive number indicates an increase in the deficit.

As shown in Table 24–3, the 2016 current services deficit was initially estimated to be $535 billion. The actual deficit was $585 billion, which was a $50 billion increase from the initial estimate. Receipts were $162 billion lower and outlays were $112 billion less than the initial estimate. The table shows the distribution of the changes according to the categories in the preceding two sections. The net effect of policy changes for receipts and outlays increased the deficit by $174 billion. Economic conditions that differed from the initial assumptions in February 2015 decreased the deficit by $53 billion. Technical factors decreased the deficit by an estimated $71 billion.

Comparison of the Actual and Estimated Outlays for Mandatory and Related Programs for 2016

This section compares the original 2016 outlay estimates for mandatory and related programs in the current services estimates of the 2016 Budget with the actual outlays. Major examples of these programs include Social Security and Medicare benefits, Medicaid and unemployment compensation payments, and deposit insurance for banks and thrift institutions. This category also includes net interest outlays and undistributed offsetting receipts.

A number of factors may cause differences between the amounts estimated in the Budget and the actual mandatory outlays. For example, legislation may change benefit rates or coverage, the actual number of beneficiaries may differ from the number estimated, or economic conditions (such as inflation or interest rates) may differ from what was assumed in making the original estimates.

Table 24–4 shows the differences between the actual outlays for these programs in 2016 and the current services estimates included in the 2016 Budget.[3] Actual outlays for mandatory spending and net interest in 2016 were $2,667 billion, which was $93 billion less than the current services estimate of $2,761 billion in February 2015.

As Table 24–4 shows, actual outlays for mandatory human resources programs were $2,526 billion, $29 billion less than originally estimated. This decrease was the net effect of legislative action, differences between actual and assumed economic conditions, differences between the anticipated and actual number of beneficiaries, and other technical differences. Most significantly, outlays for Social Security, income security, and veterans benefits and services decreased by $51 billion due to economic, legislative and technical factors. Mandatory outlays for programs in functions outside human resources were $26 billion less than originally estimated.

Outlays for net interest were $240 billion, or $43 billion less than the original estimate. As shown on Table 24–4, interest payments on Treasury debt securities decreased by $56 billion. Interest earnings of trust funds fell by $1 billion, increasing net outlays, while net outlays for other interest increased by $12 billion.

Reconciliation of Differences with Amounts Published by the Treasury for 2016

Table 24-5 provides a reconciliation of the receipts, outlays, and deficit totals for 2016 published by the Department of the Treasury in the September 2016 Monthly Treasury Statement (MTS) and those published in this Budget. The Department of the Treasury made adjustments to the estimates for the Combined Statement of Receipts, Outlays, and Balances, which increased receipts by $86 million. Additional adjustments for the 2018 Budget increased receipts by $1,187 million and decreased outlays by $1,488 million. Most of these adjustments were for financial transactions that are not reported to the Department of the Treasury but are included in the Budget, including those for the Affordable Housing Program, the Electric Reliability Organization, the Federal Financial Institutions Examination Council Appraisal Subcommittee, the Federal Retirement Thrift Investment Board Program Expenses, the Public Company Accounting Oversight Board, the Securities Investor Protection Corporation, the payment to the Standard Setting Body, and the United Mine Workers of America benefit funds. There was also an adjustment for the National Railroad Retirement Investment Trust (NRRIT), which relates to a conceptual difference in reporting. NRRIT reports to the Department of the Treasury with a one-month lag so that the fiscal year total provided in the Treasury Combined Statement covers September 2015 through August 2016. The Budget has been adjusted to reflect transactions that occurred during the actual fiscal year, which begins October 1. In addition, the Budget also reflects agency adjustments to 2016 outlays reported to Treasury after preparation of the Treasury Combined Statement. Most notably, the U.S. Postal Service adjusted its reporting to reflect higher offsetting collections for November 2015 after the Department of Treasury prepared its Treasury Combined Statement.

[3] See footnote 1 for an explanation of the current services concept.

Table 24–4. COMPARISON OF ACTUAL AND ESTIMATED OUTLAYS FOR MANDATORY AND RELATED PROGRAMS UNDER CURRENT LAW

(In billions of dollars)

	2016		
	Estimate	Actual	Change
Mandatory outlays:			
Human resources programs:			
Education, training, employment, and social services:			
Higher Education	1	11	10
Other	7	7	–*
Total, education, training, employment, and social services	8	18	10
Health:			
Medicaid	344	350	5
Other	102	105	3
Total, health	446	455	9
Medicare	585	588	4
Income security:			
Retirement and disability	152	148	–4
Unemployment compensation	35	32	–3
Food and nutrition assistance	101	96	–6
Other	177	172	–5
Total, income security	465	448	–17
Social security	938	910	–28
Veterans benefits and services:			
Income security for veterans	90	87	–3
Other	22	19	–3
Total, veterans benefits and services	112	106	–6
Total, mandatory human resources programs	2,555	2,526	–29
Other functions:			
Agriculture	17	12	–5
International	–*	–6	–6
Mortgage credit	–24	–24	–*
Deposit insurance	–8	–13	–5
Other advancement of commerce	14	11	–3
Other functions	25	18	–8
Total, other functions	23	–3	–26
Undistributed offsetting receipts:			
Employer share, employee retirement	–84	–84	–*
Rents and royalties on the outer continental shelf	–7	–3	5
Other undistributed offsetting receipts	–9	–8	1
Total, undistributed offsetting receipts	–101	–95	5
Total, mandatory	2,477	2,427	–50
Net interest:			
Interest on Treasury debt securities (gross)	486	430	–56
Interest received by trust funds	–147	–146	1
Other interest	–56	–44	12
Total, net interest	283	240	–43
Total, outlays for mandatory and net interest	2,761	2,667	–93

* $500 million or less

Table 24–5. RECONCILIATION OF FINAL AMOUNTS FOR 2016
(In millions of dollars)

	Receipts	Outlays	Deficit
Totals published by Treasury (September MTS)	3,266,688	3,854,100	587,412
Miscellaneous Treasury adjustments	86	....	–86
Totals published by Treasury in Combined Statement	3,266,774	3,854,100	587,326
Affordable Housing Program	360	360	....
Electric Reliability Organization	100	100	....
Federal Financial Institutions Examination Council Appraisal Subcommittee	19	19	....
Federal Retirement Thrift Investment Board Program Expenses	....	–27	–27
Public Company Accounting Oversight Board	255	254	–1
Securities Investor Protection Corporation	419	113	–306
Standard Setting Body	25	25	....
United Mine Workers of America benefit funds	24	25	1
National Railroad Retirement Investment Trust	....	–679	–679
United States Postal Service	....	–1,680	–1,680
Other	–15	2	17
Total adjustments, net	1,187	–1,488	–2,675
Totals in the Budget	3,267,961	3,852,612	584,651
MEMORANDUM:			
Total change since year-end statement	1,273	–1,488	–2,761

Executive Office of the President