

2. ECONOMIC ASSUMPTIONS

When the President took office in January 2009, the economy was in the midst of an economic crisis. The recession, which began in December 2007, became more severe toward the end of 2008, and, in the three quarters ending in the first quarter of 2009, real GDP fell at an annual rate of 4.8 percent, the steepest three-quarter decline since 1947. Meanwhile, the unemployment rate surged 1.2 percentage points in the first quarter of 2009, the largest increase since 1975.¹

The first order of business for the new Administration was to arrest the rapid decline in economic activity. The President and Congress took unprecedented actions to restore demand, stabilize financial markets, and put people back to work. These steps included passage of the American Recovery and Reinvestment Act (ARRA), signed by the President just 28 days after taking office. They also included the Financial Stability Plan, announced in February, which encompassed wide-ranging measures to strengthen the banking system, increase consumer and business lending, and stem foreclosures and support the housing market. These and a host of other actions walked the economy back from the brink.

While current data suggest that production bottomed out during the summer of 2009, American businesses were still shedding jobs in the third and four quarters. The unemployment rate was 10.0 percent in December 2009 (the most recent month of data), and the number of long-term

unemployed was 6.1 million. The recovery is projected to gain momentum slowly in 2010 and to strengthen in 2011-2013. Unfortunately, even with healthy economic growth there is likely to be an extended period of higher-than-normal unemployment lasting for several years.

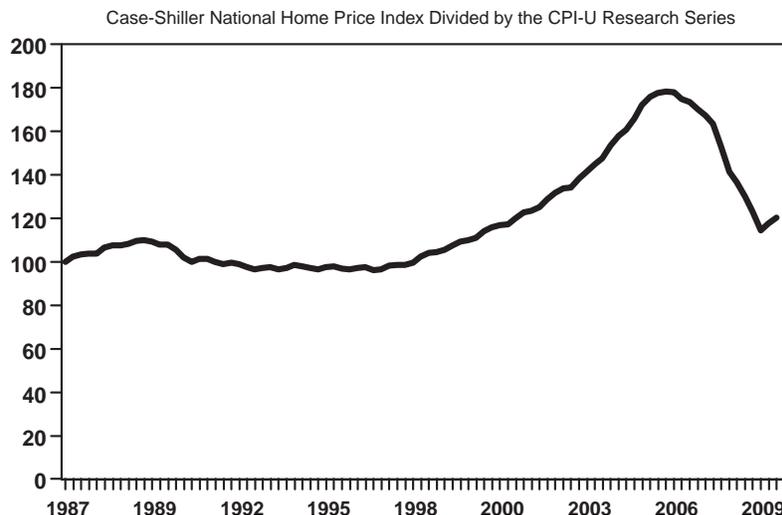
Recent Economic Performance

The accumulated stresses from a contracting housing market and strains on financial markets brought the previous expansion to an end in December 2007. In its early stages, the 2008-2009 recession was relatively mild, but financial conditions worsened sharply in the fall of 2008, and from that point forward the recession became much more severe. Production began rising in the second half of 2009, but the labor market has not yet begun to recover, although it is expected to begin to recover in 2010. The strength of the recovery is one of the key issues for the forecast.

Housing Markets.—The downturn had its origin in the housing market. In hindsight, it is clear that by the early years of this decade, housing prices had become caught up in a speculative bubble that finally burst. Housing prices fell sharply from 2006 until 2009, but in recent months the market has shown signs of stabilizing (see Chart 2-1). As prices fell, investment in housing plummeted, reducing the rate of real GDP growth by an average of 1 percentage point per quarter. With the stabilization of house prices in the second half of 2009, housing

¹ In the Budget, economic performance is discussed in terms of calendar years. Budget figures are discussed in terms of fiscal years.

Chart 2-1. Relative House Prices Stopped Falling in 2009



investment also began to recover, adding 0.4 percentage points to real GDP growth in the third quarter.

At the low point for residential building in April 2009, monthly housing starts fell to an annual rate of just 479,000 units. This was the lowest level ever recorded for this series, which dates from 1959. In normal times, at least 1.5 million starts a year are needed to accommodate the needs of an expanding population and to replace older units as they wear out. Since April, housing starts have been trending up, although they experienced a sharp drop in October as builders paused to see whether the homebuyers' tax credit would be extended. A bill extending the credit was signed by President Obama on November 6, 2009, and starts rebounded in November. A large overhang of vacant homes exists currently, however, which must be reduced before a robust housing recovery can become established. The foreclosure rate in the third quarter of 2009 was 1.4 percent, which is the highest since records have been kept going back to 1972. With foreclosures adding to the stock of vacant homes, housing prices are likely to remain subdued. Although residential building is likely to remain modest for some time, the forecast assumes a gradual recovery in housing activity, which contributes to GDP growth in 2010-2012.

The Financial Crisis.—In August 2007, the United States subprime mortgage market became the focal point for a worldwide reduction in risk tolerance. Subprime mortgages are mortgages provided to borrowers who do not meet the standard criteria for borrowing at the lowest prevailing interest rate, either because of low income, a poor credit history, lack of a down payment, or other reasons. In the spring of 2007, there was over \$1 trillion outstanding in such mortgages, and with house prices falling, many of these mortgages were on the brink of default.

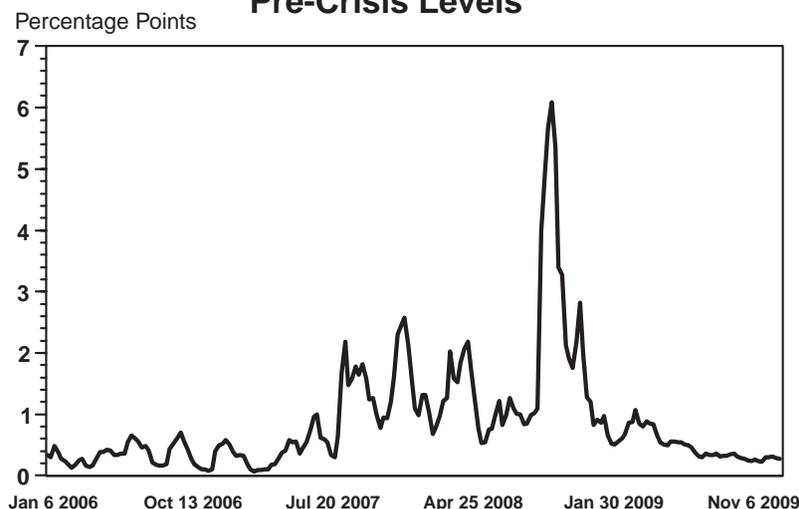
As banks and other investors lost confidence in the value of these high-risk mortgages and the securities based on them, banks became much less willing to lend to each

other. Money market participants outside the banks became unwilling to lend to one another as well. Financial market participants of all kinds were uncertain of the degree to which other participants' balance sheets had been contaminated. The heightened uncertainty was reflected in unprecedented spreads between interest rates on Treasury securities and those on various types of financial market debt.

One especially telling differential is the spread between the yield on short-term U.S. Treasury securities, and the London interbank lending rate (LIBOR) which banks trading in the London money market charge one another for short-term lending in dollars. Historically, this differential has amounted to only 30 or 40 basis points. In August 2007, it shot up to over 200 basis points, and it spiked again, most dramatically, in September 2008 following the bankruptcy of Lehman Brothers (see Chart 2-2). Gradually, over the course of this year the LIBOR spread and other measures of credit risk have declined. In recent months these spreads have regained their pre-crisis levels. This is the clearest evidence that the financial crisis has eased. Although financial institutions have easier access to funds, they remain reluctant to lend.

The policy response following the Lehman Brothers bankruptcy was crucial in restoring confidence and limiting the financial panic. Over the course of the following three months, the Federal Reserve lowered its short-term interest rate target to near zero, while creating new programs to provide credit to markets where banks were no longer lending. The Troubled Asset Relief Program (TARP) provided the Treasury with the financial resources to bolster banks' capital position and to remove troubled assets from banks' balance sheets. In the spring of 2009, the Treasury and bank regulators conducted the Supervisory Capital Assessment Program, a stress test to determine the health of the nineteen largest U.S. banks. The test provided more transparency than had existed

Chart 2-2. The One-Month LIBOR Spread over the One-Month Treasury Yield has Returned to Pre-Crisis Levels



before concerning the banks financial position, and this reassured investors. Consequently, the banks have been able to raise private capital, providing further evidence that the credit crisis has eased.

Negative Wealth Effects and Consumption.—Between the third quarter of 2007 and the first quarter of 2009, the net worth of American households declined by \$17.5 trillion, or 26.5 percent – the equivalent of more than one year’s GDP. A precipitous decline in the stock market and falling house prices over this period were the main reasons for the drop in household wealth. Since then wealth has partially recovered as the stock market has rallied, and house prices have stopped falling, but even so, household wealth remains well below its peak levels prior to the recession.

Americans have reacted to this massive loss of wealth by saving more. The household saving rate had been declining since the 1980s, and it reached a low point of 0.8 percent in April 2008. Since then it has increased sharply, rising to a temporary high point of 6.4 percent last May following a distribution of special \$250 payments to Social Security and Supplemental Security Income recipients and the implementation of other Recovery Act provisions. In November, the saving rate was still 4.7 percent (see Chart 2–3). In the long-run, increased saving is essential for raising future living standards. However, a sudden increase in the desire to save implies a corresponding reduction in consumer demand, and that fall-off in consumption had a negative effect on the economy in the second half of 2008. During that period, real consumer spending fell at an annual rate of 3.3 percent, the steepest two-quarter decline since 1980. In 2009, consumption has started to rise again, but it has not yet regained its peak reached in 2007.

The Labor Market.—The unemployment rate continued to rise in the second half of 2009 despite the turnaround in economic production. The increase in unemploy-

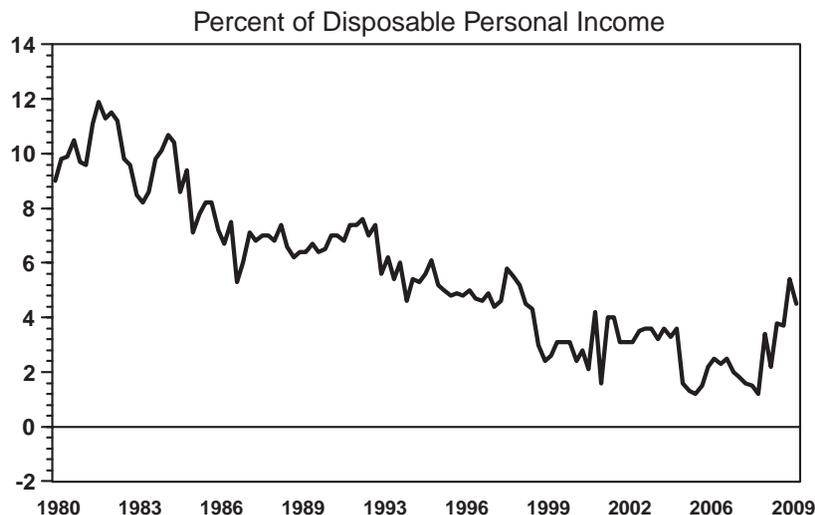
ment has had devastating effects on American families, and the recovery will not be real for most Americans until the job market also turns around. The good news is that historically, when the economy grows so does employment, although there is usually a lag of one to two quarters before unemployment declines after the resumption of real GDP growth. The normal sequence of events around a business cycle trough is for aggregate demand to revive, which pulls up sales. Initially, firms respond to the pickup in demand by increasing work hours of the existing work force and hiring temporary workers, but eventually as the higher level of demand is recognized, firms begin to hire permanent employees again, and employment revives. At that point, labor force participation is also likely to increase as discouraged workers return to the market place. Finally, the unemployment rate declines as the recovery takes hold (see Chart 2–4).

Following the recessions in 1991 and 2001, however, the lag between increased output and the decline in unemployment was much longer than one or two quarters, mainly because the recovery in production was slower and more hesitant. Unfortunately, because of the lingering effects of the credit crisis and the accompanying loss of household wealth, the recovery from the current recession is also expected to begin more slowly than in some recoveries in the past. The expected growth rate should be rapid enough to reduce the unemployment rate in 2010, but the improvement could be slow at first.

Policy Background

Over the last 12 months, the Administration and the Federal Reserve have taken a series of actions to end the recession and bolster the economy. On the fiscal side, the passage of ARRA was a crucial step. Meanwhile, the Federal Reserve has kept its target interest rate near zero

Chart 2-3. The Personal Saving Rate has Risen Sharply Since 2008



in order to stimulate growth, and it has also taken several novel measures to unfreeze the Nation's credit markets.

Fiscal Policy.—The Federal budget affects the economy through many channels. For an economy coming out of a deep recession, the most important of these is the budget's effect on total demand. In a slumping economy, the level of demand is the main determinant of how much is produced and how many workers will be employed. Government spending on goods and services can substitute for missing private spending while changes in taxes and transfers can contribute to demand by enabling people to spend more than they otherwise would. ARRA bolstered aggregate demand in several ways which have helped spark the recovery. It increased spending on goods and services at the Federal level; it provided assistance to State governments; it included large tax reductions for middle-class families; and it extended unemployment insurance and other benefits which have allowed people to maintain spending at levels higher than would otherwise have occurred.

The fiscal stimulus in ARRA was intended to provide a significant boost to demand in both 2009 and 2010. So far the stimulus has proceeded as intended. Although the economy has continued to lose jobs, the loss would have been much larger without the benefits of ARRA. In the first quarter of 2009, payroll employment was falling at an average rate of 691 thousand jobs per month. By the fourth quarter, the rate of job loss had declined to 69 thousand per month. It is not possible to judge the effectiveness of a macroeconomic policy without some idea of the alternative. Critics of ARRA have tended to argue that continued job losses are evidence of ineffectiveness. However, the only way to know that is through a macroeconomic model that can be used to project the employment outcome under an alternative policy. In fact, results from a range of models imply that employment was increased through the fourth quarter of 2009 by between 1.0 million and 2.1 million jobs thanks to ARRA.

The economic recovery efforts have, intentionally, increased the deficit. The increase in the deficit has been extraordinary, but it was the necessary response to the crisis the Administration inherited. It is also temporary. The Budget provides a path to lower medium-term deficits.

Over the long term, deficits tend to have some combination of two macroeconomic effects. First, they can raise interest rates and decrease investment, as the Federal Government goes into the credit markets and competes with private investors for limited capital. Second, deficits can increase the amount that the United States borrows from abroad, as foreigners step in to finance our consumption. Either way, deficits reduce future standards of living. If interest rates rise and investment falls, that makes American workers less productive and reduces our incomes. If we borrow more from abroad as a result of our deficits, that means that more of our future incomes will be mortgaged to pay back foreign creditors. Persistent large deficits would also limit the Government's maneuvering room to handle future crises.

Monetary Policy.—The Federal Reserve is responsible for monetary policy. Traditionally, it has relied on a relatively narrow range of instruments to achieve its policy goals, but in the recent crisis the Federal Reserve is using a broader set of approaches. The reason for departing from past practice is that the traditional tool of monetary policy—adjusting short-term interest rates—has proved insufficient. In addressing the economic crisis, the Federal Reserve has created facilities to provide credit to the commercial paper market directly and to provide backup liquidity for money market mutual funds. The Federal Reserve together with Treasury has expanded a facility to lend against AAA-rated asset-backed securities collateralized by student loans, auto loans, credit card loans, and business loans guaranteed by the Small Business Administration (SBA). The Federal Reserve has also bought longer-term securities for its portfolio.

Chart 2-4. The Lag between the Turnaround in Real GDP and the Turning Point for Payroll Employment and the Unemployment Rate

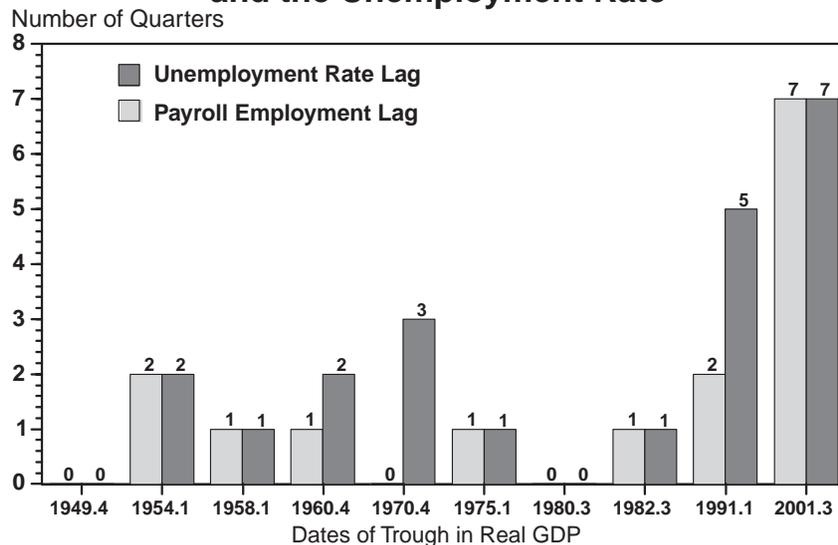


Table 2-1. ECONOMIC ASSUMPTIONS¹
(Calendar years; dollar amounts in billions)

	2008 Actual	Projections											
		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Gross Domestic Product (GDP):													
Levels, dollar amounts in billions:													
Current dollars	14,441	14,252	14,768	15,514	16,444	17,433	18,446	19,433	20,408	21,373	22,329	23,312	24,323
Real, chained (2005) dollars	13,312	12,973	13,317	13,823	14,416	15,027	15,633	16,194	16,714	17,190	17,643	18,091	18,543
Chained price index (2005 = 100), annual average	108.5	109.8	110.8	112.2	114.0	116.0	117.9	120.0	122.0	124.3	126.5	128.8	131.1
Percent change, fourth quarter over fourth quarter:													
Current dollars	0.1	0.4	4.0	5.7	6.1	6.0	5.7	5.2	5.0	4.5	4.5	4.4	4.3
Real, chained (2005) dollars	-1.9	-0.5	3.0	4.3	4.3	4.2	3.9	3.4	3.1	2.7	2.6	2.5	2.5
Chained price index (2005 = 100)	1.9	0.9	1.0	1.4	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8
Percent change, year over year:													
Current dollars	2.6	-1.3	3.6	5.1	6.0	6.0	5.8	5.3	5.0	4.7	4.5	4.4	4.3
Real, chained (2005) dollars	0.4	-2.5	2.7	3.8	4.3	4.2	4.0	3.6	3.2	2.8	2.6	2.5	2.5
Chained price index (2005 = 100)	2.1	1.2	0.9	1.2	1.6	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8
Incomes, billions of current dollars:													
Corporate profits before tax	1,463	1,418	1,816	1,933	1,918	1,915	1,924	1,998	2,031	2,058	2,076	2,087	2,150
Employee Compensation	8,037	7,762	8,040	8,499	9,041	9,626	10,247	10,855	11,447	12,024	12,612	13,197	13,792
Wages and salaries	6,546	6,259	6,468	6,825	7,293	7,776	8,288	8,783	9,263	9,733	10,198	10,667	11,134
Other taxable income ²	3,311	3,081	3,204	3,327	3,591	3,830	4,049	4,218	4,434	4,662	4,857	5,073	5,305
Consumer Price Index (all urban):³													
Level (1982-84 = 100), annual average	215.2	214.5	218.7	222.0	226.3	230.8	235.5	240.2	245.1	250.3	255.5	260.9	266.4
Percent change, fourth quarter over fourth quarter	1.5	1.4	1.3	1.7	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1
Percent change, year over year	3.8	-0.3	1.9	1.5	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
Unemployment rate, civilian, percent:													
Fourth quarter level	6.9	10.3	9.8	8.9	7.9	7.0	6.2	5.7	5.4	5.3	5.2	5.2	5.2
Annual average	5.8	9.3	10.0	9.2	8.2	7.3	6.5	5.9	5.5	5.3	5.2	5.2	5.2
Federal pay raises, January, percent:													
Military ⁴	3.5	3.9	3.4	1.4	NA	NA	NA	NA	NA	NA	NA	NA	NA
Civilian ⁵	3.5	3.9	2.0	1.4	NA	NA	NA	NA	NA	NA	NA	NA	NA
Interest rates, percent:													
91-day Treasury bills ⁶	1.4	0.2	0.4	1.6	3.0	4.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1
10-year Treasury notes	3.7	3.3	3.9	4.5	5.0	5.2	5.3	5.3	5.3	5.3	5.3	5.3	5.3

NA = Not Available

¹Based on information available as of mid-November 2009.

²Rent, interest, dividend, and proprietors' income components of personal income.

³Seasonally adjusted CPI for all urban consumers.

⁴Percentages apply to basic pay only; percentages to be proposed for years after 2011 have not yet been determined.

⁵Overall average increase, including locality pay adjustments. Percentages to be proposed for years after 2011 have not yet been determined.

⁶Average rate, secondary market (bank discount basis).

The Federal Reserve's actions helped ease the credit crisis as evidenced by a decline in the interest rate spread between U.S. Treasuries and other securities. The expanded credit facilities have also caused a large increase in the Federal Reserve's balance sheet. Federal Reserve assets have increased from under \$1 trillion to over \$2 trillion. Because much of the increase in Federal Reserve liabilities has gone into idle reserves of banks, and because of the considerable slack in the economy, current inflation

risks are low. The Federal Reserve is prepared to reduce the assets on its balance sheet promptly as the economy recovers from the current recession and the crisis in the financial sector eases. Indeed, continued improvements in financial market conditions have been accompanied by further declines in credit extended through many of the Federal Reserve's liquidity programs.

Financial Stabilization Policies.—Over the course of the last 12 months, the U.S. financial system has been pulled

back from the brink of a catastrophic collapse. The very real danger that the system would disintegrate in a cascade of failing institutions and collapsing asset prices has been averted. The Administration's Financial Stability Plan played a key role in cleaning up and strengthening the nation's banking system. This plan began with a forward-looking capital assessment exercise for the 19 U.S. banking institutions with assets in excess of \$100 billion. This was the so-called "stress test" aimed at determining whether these institutions had sufficient capital to withstand stressful deterioration in economic conditions. The resulting transparency and resolution of uncertainty regarding banks' potential losses boosted confidence and allowed banks to raise substantial funds in private markets and repay tens of billions of dollars in taxpayer investments.

The second component of the Financial Stability Plan was aimed at establishing a market for the troubled real-estate assets that were at the center of the crisis. The plan included provisions for the Federal Government to join private investors in buying mortgage-backed securities. Removing these assets from the banks' balance sheets is a key step to restoring the financial system to normal functioning.

The Financial Stability Plan also aimed to unfreeze secondary markets for loans to consumers and businesses. The Administration has undertaken the Making Home Affordable plan to help distressed homeowners, encourage access to home financing credit and avoid foreclosures and stabilize neighborhoods. The Home Affordable Modification Program has over 850 thousand mortgage modifications underway. In 2009 millions of American took advantage of low interest rates to refinance their mortgages at lower interest rates. The Administration has launched several initiatives through the SBA to increase loans from small and community banks to small businesses, and it is continuing a joint Treasury-Federal Reserve program that expands credit to small businesses

and consumers by lending against securities backed by business and consumer loans.

Economic Projections

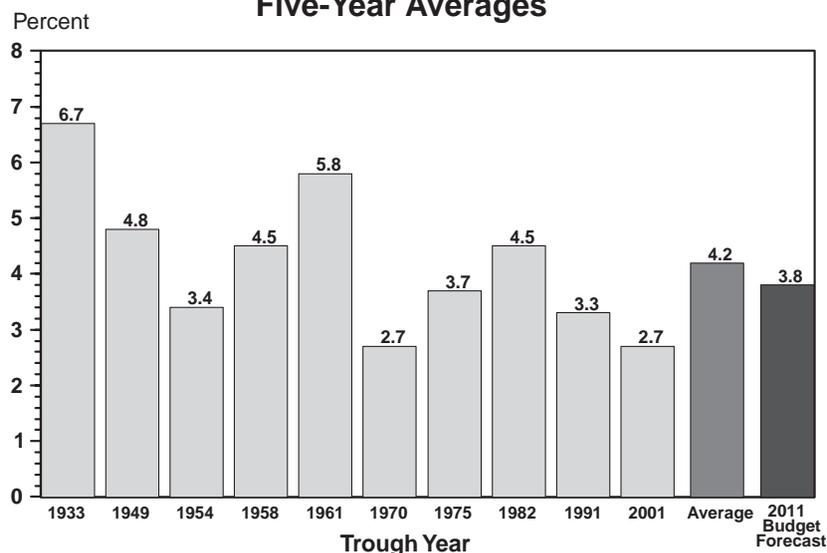
The economic projections underlying the 2011 Budget estimates are summarized in Table 2-1. The assumptions are based on information available as of mid-November 2009. This section discusses the Administration's projections and the next section compares the projections with those of the Blue Chip Consensus of outside forecasters.

Real GDP.—The Administration projects the economic recovery that began in the second half of 2009 will continue in 2010 with real GDP growing at an annual rate of 3.0 percent (fourth quarter over fourth quarter). In 2011-2013, growth is projected to increase to around 4-1/4 percent annually as underutilized economic capacity returns to productive uses.

As shown in Chart 2-5, the Administration's projections for real GDP growth over the next five years imply a recovery that is a bit below the historical average. It is true that recent recoveries have been somewhat weaker, but the last two expansions were preceded by relatively mild recessions, which left less pent-up demand when conditions improved. Because of the depth of the recent recession, there is much more room for a rebound in spending and production than was true either in 1991 or 2001. On the other hand, continued weakness in the financial sector may limit the pace of the recovery. Thus, on net, the Administration is forecasting a recovery over the next five years that is slightly below historical averages.

Longer-Term Growth.—The Administration forecast does not attempt to project cyclical developments beyond the next few years. The long-run projection for real economic growth and unemployment assumes that they will maintain trend values in the years following the return to full employment. In the nonfarm business sector, produc-

**Chart 2-5. Real GDP Growth Following a Recession:
Five-Year Averages**



tivity growth is assumed to grow at 2.3 percent per year, while nonfarm labor supply grows at a rate of around 0.7 percent per year, so nonfarm business output grows approximately 3.0 percent per year. Real GDP growth, reflecting the slower measured growth in activity outside the nonfarm business sector, proceeds at a rate of 2.5 percent. That is markedly slower than the average growth rate of real GDP since 1947—3.3 percent per year. In the 21st Century, real GDP growth in the United States is likely to be permanently slower than it was in earlier eras because of the slowdown in labor force growth that is expected beginning with the retirement of the post-World War II “baby boom” generation.

Unemployment.—Although production began to increase last summer, the unemployment rate remains highly elevated. In October, the overall unemployment rate rose above 10.0 percent for the first time since 1983, and it was at 10.0 percent in both November and December. The broadest measure of underutilized labor published by the Bureau of Labor Statistics—the U-6 measure which includes discouraged workers and those working part-time for economic reasons—reached 17.4 percent in October, and was at 17.3 percent in December. The overall unemployment rate is projected to begin to decline slightly over the course of 2010, although it may increase slightly before finally turning around. Because growth in 2010 is projected to be relatively slow for the early stages of a recovery, unemployment is projected to remain high for a prolonged period. The unemployment rate is projected to decline to 7.0 percent by the end of 2013.

Inflation.—Inflation declined in 2009. Over the four quarters ending in 2009:3, the price index for GDP rose only 0.6 percent compared with an increase of 2.5 percent over the previous four quarters. The Consumer Price Index for all urban consumers (CPI-U) has been more volatile. For the 12 months ending in July the overall CPI-U fell by 1.9 percent. Over the previous 12 months it had increased by 5.4 percent. Since July the CPI has risen at an annual rate of 3.9 percent. Most of these swings have been due to sharp movements in food and energy prices over the last two years. The so-called “core” CPI, excluding both food and energy, was up 1.6 percent through the 12 months ending in July compared with 2.5 percent during the previous 12 months. While the rate of inflation in the overall CPI has increased since July, the core inflation rate has averaged only 1.4 percent. The weak demand resulting from the recession has held down prices increases for a wide range of goods and services. Continued high unemployment is expected to preserve a low inflation rate for the next several years. Eventually, as the economy recovers and the unemployment rate declines, the rate of inflation should rise again, returning to rates around 2 percent per year—similar to the rates that existed pre-recession. With the recovery path assumed in the Administration forecast, the risk of outright deflation appears minimal. In the long-run, the Administration assumes that the rate of change in the CPI will average 2.1 percent and that the GDP price index will increase at a 1.8 percent annual rate.

Interest Rates.—Interest rates on Treasury securities fell sharply in late 2008, as both short-term and long-term rates declined to their lowest levels in decades. In 2009, short-term Treasury rates remained near zero, and the monthly average 10-year yield fluctuated within a range of 2-1/2 percent to 3-3/4 percent. Investors have sought the security of Treasury debt during the heightened financial uncertainty of the last few years, which has reduced yields. In the Administration projections, interest rates are expected to rise as financial concerns are alleviated and the economy recovers from recession. The 91-day Treasury bill rate is projected to reach 4.1 percent and the 10-year rate 5.3 percent by 2013. These forecast rates are historically low, reflecting lower inflation in the forecast than for most of the post-World War II period. After adjusting for inflation, the projected real interest rates are close to their historical averages.

Income Shares.—The share of labor compensation in GDP was extremely low by historical standards in 2009. It is expected to rise over the forecast period to more normal levels. As a share of GDP, employee compensation was 54.5 percent in 2009 and it is expected to rise over the course of the 10-year forecast. In the expansion that ended in 2007, labor compensation tended to lag behind the growth in productivity, and that has also been true for the recent surge in productivity growth.

While the overall share of labor compensation is expected to increase, the share of taxable wages is expected to remain roughly flat. Rising health insurance costs are projected to put upward pressure on the share of fringe benefits. The Administration economic projections do not account for the effects of health reform on compensation shares.

The share of corporate profits before taxes was 13.9 percent of GDP in the third quarter of 2006 prior to the recession, which was near an all-time high. Since then profits before tax have dropped sharply. They are expected to be only 9.9 percent of GDP in 2009. As the economy recovers, the profit share is projected to rebound. In the forecast, the ratio of pretax profits to GDP reaches 12.5 percent in 2011 and then falls to around 9 percent by the end of the 10-year projection period as the share of employee compensation slowly recovers to approach its long-run historical average.

Comparison with Private-Sector Forecasts

Table 2–2 compares the economic assumptions for the 2011 Budget with projections by the Blue Chip Consensus, an average of about 50 private-sector economic forecasts. These other economic projections differ in some respects from the Administration’s projections, but the forecast differences are relatively small over the next two years, especially when compared with the margin of error in all economic forecasts. Like the Administration, the private forecasters believe that real GDP growth resumed in mid-2009 and that the economy will continue to recover showing positive growth in 2010 and 2011. They also agree that inflation will be at a low rate in 2010-2011, while outright deflation is avoided, and that after peaking at

a relatively high level, the unemployment rate gradually declines and interest rates rise.

There are some conceptual differences between the Administration forecast and the private economic forecasts. The Administration forecast assumes that the President's Budget proposals will be enacted. The 50 or so private forecasters in the Blue Chip Consensus make differing policy assumptions, but none would necessarily assume that the Budget is adopted in full. In addition, the forecasts were not made at the same time. The Administration forecast was completed in mid-November. The almost three-month lag between the forecast date and Budget release occurs because the budget process requires agencies to receive the forecast's assumptions in time to use them in making the budget estimates for agency programs that are incorporated in the Budget. Forecasts made at different dates will differ if there is economic news between the two dates that alters the economic outlook. The Blue Chip consensus displayed in this table was the latest available at the time the Budget went to print—and was completed in early January, about six weeks after the Administration forecast was finalized.

Real GDP Growth.—The Administration's real GDP projections are very similar to those of the Blue Chip consensus in 2010 while exceeding the consensus view in 2011. In its August 2009 projections (the most recent

available) the Congressional Budget Office (CBO) projected long-run growth of 2.2 percent per year. Most of the difference between the Administration and CBO's long-run growth comes from a difference in the expected rate of growth of the labor force. Both forecasts assume that the labor force will grow more slowly than in the past because of population aging, but the Administration bases its population projections on the Census Bureau's projections, which tend to run higher than the CBO projections. The Administration also believes that labor force participation could be somewhat stronger in the future. The net difference in the two forecasts is only a few tenths of a percentage point.

All economic forecasts are subject to error, and the forecast errors are usually much larger than the forecast differences discussed above. As discussed in chapter 3, past forecast errors among the Administration, CBO, and the Blue Chip have been similar.

Unemployment, Inflation, and Interest Rates.—The Administration forecast has an unemployment rate of 10.0 percent in 2010 and 9.2 percent in 2011. The January Blue Chip consensus is identical to the Administration forecast in both years. Both the Administration and the Blue Chip consensus anticipate a moderate rate of inflation over the next two years. The forecasts are also similar in their projections for the path of interest rates.

Table 2-2. COMPARISON OF ECONOMIC ASSUMPTIONS

(Calendar years)

	2009	2010	2011
Nominal GDP (in billions of dollars):			
2011 Budget	14,252	14,768	15,514
Blue Chip	14,254	14,827	15,530
Real GDP (year-over-year):			
2011 Budget	-2.5	2.7	3.8
Blue Chip	-2.5	2.8	3.1
Real GDP (fourth-quarter-over-fourth-quarter):			
2011 Budget	-0.5	3.0	4.3
Blue Chip	-0.3	2.9	3.2
GDP Price Index:¹			
2011 Budget	1.2	0.9	1.2
Blue Chip	1.2	1.2	1.6
Consumer Price Index (CPI-U):¹			
2011 Budget	-0.3	1.9	1.5
Blue Chip	-0.3	2.1	2.0
Unemployment Rate:²			
2011 Budget	9.3	10.0	9.2
Blue Chip	9.2	10.0	9.2
Interest Rates:²			
91-Day Treasury Bills (discount basis):			
2011 Budget	0.2	0.4	1.6
Blue Chip	0.2	0.4	1.8
10-Year Treasury Notes:			
2011 Budget	3.3	3.9	4.5
Blue Chip	3.3	3.9	4.6

Sources: Administration, January 2010 Blue Chip Economic Indicators, Aspen Publishers, Inc.

¹ Year-over-year percent change.

² Annual averages, percent.

Short-term rates are expected to be near zero in 2009, but then to increase in 2010 and 2011. The interest rate on 10-year Treasury notes is projected to rise from 3.3 percent to about 4-1/2 percent in 2011 in both forecasts.

Changes in Economic Assumptions

Although some of the economic assumptions underlying this Budget have changed compared with those used for the 2010 Budget, most of the forecast values are similar, especially in the long run (see Table 2–3). The previous Budget did not fully anticipate the severity of

the 2008-2009 recession, especially in the labor market. Consequently, the unemployment rate projected for 2009-2010 turned out to be too low. So far the forecast of 2009 real GDP growth appears to have been closer to the mark. The economic recovery projected for 2010 has been reduced slightly in view of the relatively modest start to the recovery so far in 2009. Finally, the long-run growth trend was pegged at 2.6 percent per year in the previous Budget and that has been reduced slightly to 2.5 percent per year in the current Budget in view of continuing revisions to the historical data that suggest a slower rate of trend productivity growth.

Table 2–3. COMPARISON OF ECONOMIC ASSUMPTIONS IN THE 2010 AND 2011 BUDGETS

(Calendar years; dollar amounts in billions)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Nominal GDP:											
2010 Budget Assumptions ¹	14,374	14,989	15,820	16,828	17,842	18,695	19,528	20,397	21,304	22,252	23,242
2011 Budget Assumptions	14,252	14,768	15,514	16,444	17,433	18,446	19,433	20,408	21,373	22,329	23,312
Real GDP (2005 dollars):											
2010 Budget Assumptions ¹	13,060	13,474	14,017	14,658	15,266	15,714	16,123	16,543	16,974	17,415	17,868
2011 Budget Assumptions	12,973	13,317	13,823	14,416	15,027	15,633	16,194	16,714	17,190	17,643	18,091
Real GDP (percent change):²											
2010 Budget Assumptions ¹	-1.9	3.2	4.0	4.6	4.2	2.9	2.6	2.6	2.6	2.6	2.6
2011 Budget Assumptions	-2.5	2.7	3.8	4.3	4.2	4.0	3.6	3.2	2.8	2.6	2.5
GDP Price Index (percent change):²											
2010 Budget Assumptions ¹	1.3	1.1	1.5	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8
2011 Budget Assumptions	1.2	0.9	1.2	1.6	1.7	1.7	1.7	1.8	1.8	1.8	1.8
Consumer Price Index (all-urban; percent change):²											
2010 Budget Assumptions ¹	-0.6	1.6	1.8	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1
2011 Budget Assumptions	-0.3	1.9	1.5	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1
Civilian Unemployment Rate (percent):³											
2010 Budget Assumptions ¹	8.1	7.9	7.1	6.0	5.2	5.0	5.0	5.0	5.0	5.0	5.0
2011 Budget Assumptions	9.3	10.0	9.2	8.2	7.3	6.5	5.9	5.5	5.3	5.2	5.2
91-day Treasury bill rate (percent):³											
2010 Budget Assumptions ¹	0.2	1.6	3.4	3.9	4.0	4.0	4.0	4.0	4.0	4.0	4.0
2011 Budget Assumptions	0.2	0.4	1.6	3.0	4.0	4.1	4.1	4.1	4.1	4.1	4.1
10-year Treasury note rate (percent):³											
2010 Budget Assumptions ¹	2.8	4.0	4.8	5.1	5.2	5.2	5.2	5.2	5.2	5.2	5.2
2011 Budget Assumptions	3.3	3.9	4.5	5.0	5.2	5.3	5.3	5.3	5.3	5.3	5.3

¹ Adjusted for July 2009 comprehensive NIPA revisions.

² Year-over-year.

³ Calendar year average.

3. INTERACTIONS BETWEEN THE ECONOMY AND THE BUDGET

The economy and the budget are interrelated. Both budget outlays and the tax structure have substantial effects on national output, employment, and inflation, and economic conditions significantly affect the budget.

Because of the complex interrelationships between the budget and the economy, budget estimates depend to a very significant extent upon assumptions about the economy. This chapter attempts to quantify the relationship between macroeconomic outcomes and budget outcomes and to illustrate the challenges that uncertainty about the future path of the economy poses for making budget projections.

While this chapter highlights uncertainty with respect to budget projections in the aggregate, estimates for many programs capture uncertainty using stochastic modeling. Stochastic models measure program costs as the probability-weighted average of costs under different scenarios, with economic, financial, and other variables differing across scenarios. Stochastic modeling is essential to properly measure the cost of programs that respond asymmetrically to deviations of actual economic and other variables from forecast values. In such programs, the Federal Government is subject to “one-sided bets” where costs go up when variables move in one direction but do not go down when they move in the opposite direction. The cost estimates for the Pension Benefit Guarantee Corporation, student loan programs, the Troubled Asset Relief Program (TARP), agriculture programs with price triggers, and heating oil programs all benefit from stochastic modeling.

The first section of the chapter provides rules of thumb that describe how changes in economic variables result in changes in receipts, outlays, and the deficit. The second section presents information on GDP forecast errors in past budgets and how these forecast errors compare to those in forecasts made by the Congressional Budget Office (CBO) and the Blue Chip consensus. The third section provides specific alternatives to the current Administration forecast—both more optimistic and less optimistic—and describes the resulting effects on the deficit. The fourth section shows a probabilistic range of budget outcomes based on past errors in projecting the deficit. The last section discusses the relationship between structural and cyclical deficits, showing how much of the actual deficit is related to the economic cycle (e.g., the recent recession) and how much would persist even if the economy were at approaches full employment.

Sensitivity of the Budget to Economic Assumptions

Both receipts and outlays are affected by changes in economic conditions. Budget receipts vary with individual and corporate incomes, which respond both to real eco-

nommic growth and inflation. At the same time, outlays for many Federal programs are directly linked to developments in the economy. For example, most retirement and other social insurance benefit payments are tied by law to cost-of-living indices. Medicare and Medicaid outlays are affected directly by the price of medical services. Interest on the debt is linked to market interest rates and the size of the budget surplus or deficit, both of which in turn are influenced by economic conditions. Outlays for certain benefits such as unemployment compensation and food stamps vary with the unemployment rate and are thereby linked to the state of the economy.

This sensitivity complicates budget planning because errors in economic assumptions lead to errors in the budget projections. It is therefore useful to examine the implications of possible changes in economic assumptions. Many of the budgetary effects of such changes are fairly predictable, and a set of rules of thumb embodying these relationships can aid in estimating how changes in the economic assumptions would alter outlays, receipts, and the surplus or deficit. These rules of thumb should be understood as suggesting orders of magnitude; they ignore a long list of secondary effects that are not captured in the estimates.

The rules of thumb show how the changes in economic variables affect Administration estimates for receipts and outlays, holding other factors constant. They are not, for two reasons, a prediction of how receipts or outlays would actually turn out if the economic changes actually came to pass. First, the rules of thumb are based on a fixed budget policy that is not always a good predictor of what might actually happen to the budget should the economic outlook change substantially. For example, unexpected downturns in real economic growth, and attendant job losses, usually give rise to legislative actions to expand unemployment benefits, stimulate the economy with additional Federal investment spending, and the like. Second, economic rules of thumb do not capture certain “technical” changes that may in fact relate to economic changes, but do not have a clear relationship to specific economic variables. For example, the rules of thumb for receipts changes reflect how Treasury’s receipts estimates would shift with certain economic changes, but they do not capture the effect of large changes in taxes on capital gains realizations that often occur when the economic outlook changes. On the spending side of the budget, the rules of thumb do not capture changes in deposit insurance outlays, even though bank failures are generally associated with turmoil in the economy.

Economic variables that affect the budget do not usually change independently of one another. Output and employment tend to move together in the short run: a high rate of real GDP growth is generally associated with a

declining rate of unemployment, while slow or negative growth is usually accompanied by rising unemployment. This relationship is known as Okun's Law. In the long run, however, changes in the average rate of growth of real GDP are mainly due to changes in the rates of growth of productivity and the labor force, and are not necessarily associated with changes in the average rate of unemployment. Inflation and interest rates are also closely interrelated: a higher expected rate of inflation increases nominal interest rates, while lower expected inflation reduces nominal interest rates.

Changes in real GDP growth or inflation have a much greater cumulative effect on the budget if they are sustained for several years than if they last for only one year. However, even one-time changes can have permanent effects if they permanently raise the level of the tax base or the level of Government spending. Moreover, temporary economic changes can change the level of the debt, affecting future interest payments on the debt. Highlights of the budgetary effects of these rules of thumb are shown in Table 3-1.

For real growth and employment:

- The first block shows the effect of a temporary reduction in real GDP growth by one percentage point sustained for one year, followed by a recovery of GDP to the base-case level (the Budget assumptions) over the ensuing two years. In this case, the unemployment rate is assumed to rise by one-half percentage point relative to the Budget assumptions by the end of the first year, then return to the base case rate over the ensuing two years. After real GDP and the unemployment rate have returned to their base case levels, most budget effects vanish except for persistent out-year interest costs associated with larger near-term deficits.
- The second block shows the effect of a reduction in real GDP growth by one percentage point sustained for one year, with no subsequent "catch up," accompanying a permanent increase in the natural rate of unemployment (and of the actual unemployment rate) of one-half percentage point relative to the Budget assumptions. In this scenario, the level of GDP and taxable incomes are permanently lowered by the reduced growth rate in the first year. For that reason and because unemployment is permanently higher, the budget effects (including growing interest costs associated with larger deficits) continue to grow in each successive year.
- The budgetary effects are much larger if the growth rate of real GDP is permanently reduced by one percentage point even leaving the unemployment rate unchanged, as might result from a shock to productivity growth. These effects are shown in the third block. In this example, the cumulative increase in the budget deficit is many times larger than the effects in the first and second blocks.

For inflation and interest rates:

- The fourth block shows the effect of a one percentage point higher rate of inflation and one percentage point higher nominal interest rates maintained for the first year only. In subsequent years, the price level and nominal GDP would both be one percentage point higher than in the base case, but interest rates and future inflation rates are assumed to return to their base case levels. Receipts increase by about twice as much as outlays.
- In the fifth block, the rate of inflation and the level of nominal interest rates are higher by one percentage point in all years. As a result, the price level and nominal GDP rise by a cumulatively growing percentage above their base levels. In this case, again the effect on receipts is about double the effect on outlays. Because Congress and the President are not likely to allow inflation to erode the real value of spending permanently, these estimates assume that annual appropriations rise one percent a year faster beginning in 2012.
- The effects of a one percentage point increase in interest rates alone are shown in the sixth block. The outlay effect mainly reflects higher interest costs for Federal debt. The receipts portion of this rule-of-thumb is due to the Federal Reserve's deposit of earnings on its securities portfolio and the effect of interest rate changes on both individuals' income (and taxes) and financial corporations' profits (and taxes).
- The seventh block shows that a sustained one percentage point increase in GDP price index inflation decreases cumulative deficits substantially. The separate effects of higher inflation and higher interest rates shown in the sixth and seventh blocks do not sum to the effects for simultaneous changes in both shown in the fifth block. This is because the gains in budget receipts due to higher inflation result in higher debt service savings when interest rates are also assumed to be higher in the fifth block than when interest rates are assumed to be unchanged in the seventh block.
- The last entry in the table shows rules of thumb for the added interest cost associated with changes in the budget deficit, holding interest rates and other economic assumptions constant.

As noted, the rules of thumb discussed above are calculated assuming that in the long run funding levels for discretionary programs respond to changes in projected inflation. Specifically, in this Budget, discretionary funding levels for the outyears are based both on policy considerations and on the Administration's inflation forecast. Thus, while the Budget shows discretionary funding in nominal terms, it conceives of discretionary growth rates in inflation-adjusted terms. Although the Administration

Table 3-1. SENSITIVITY OF THE BUDGET TO ECONOMIC ASSUMPTIONS

(Fiscal years; in billions of dollars)

Budget Effect	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total of Effects, 2010-2020
Real Growth and Employment												
Budgetary effects of 1 percent lower real GDP growth:												
(1) For calendar year 2010 only, with real GDP recovery in 2011-12: ¹												
Receipts	-14.4	-21.8	-10.5	-1.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	-46.6
Outlays	2.8	6.1	4.8	3.0	2.7	2.8	2.8	2.9	3.0	3.1	3.2	37.0
Increase in deficit (+)	17.2	27.9	15.3	4.2	2.5	2.6	2.6	2.7	2.8	2.9	3.0	83.7
(2) For calendar year 2010 only, with no subsequent recovery: ¹												
Receipts	-14.4	-29.2	-34.4	-36.7	-38.8	-41.1	-43.2	-45.1	-47.2	-49.3	-51.7	-431.1
Outlays	2.8	7.2	9.9	13.3	16.5	19.5	22.5	25.5	28.5	31.7	35.1	212.4
Increase in deficit (+)	17.2	36.4	44.3	50.0	55.3	60.5	65.7	70.6	75.6	81.0	86.9	643.5
(3) Sustained during 2010 - 2020, with no change in unemployment:												
Receipts	-14.5	-44.6	-84.1	-128.1	-176.8	-230.7	-288.8	-349.3	-414.3	-483.3	-557.8	-2,772.4
Outlays	-0.7	-0.8	1.1	6.0	12.2	20.1	30.2	42.4	57.1	74.6	95.2	337.4
Increase in deficit (+)	13.8	43.8	85.3	134.1	189.0	250.8	319.0	391.7	471.3	557.9	653.1	3,109.8
Inflation and Interest Rates												
Budgetary effects of 1 percentage point higher rate of:												
(4) Inflation and interest rates during calendar year 2010 only:												
Receipts	21.3	41.4	39.4	36.5	38.9	41.5	43.9	46.1	48.4	50.7	53.0	461.2
Outlays	21.7	37.4	31.2	29.6	27.5	26.5	24.4	23.4	21.2	21.8	21.1	285.6
Decrease in deficit (-)	0.4	-4.0	-8.2	-6.9	-11.5	-15.0	-19.6	-22.8	-27.2	-28.9	-32.0	-175.5
(5) Inflation and interest rates, sustained during 2010-2020:												
Receipts	21.3	64.6	111.1	157.8	208.9	264.1	325.1	390.0	459.2	533.7	614.7	3,150.5
Outlays	21.1	61.3	104.3	147.7	190.0	234.2	280.8	330.6	381.1	438.9	498.6	2,688.5
Decrease in deficit (-)	-0.2	-3.3	-6.8	-10.1	-18.9	-29.9	-44.4	-59.3	-78.1	-94.8	-116.1	-461.9
(6) Interest rates only, sustained during 2010-2020:												
Receipts	6.8	20.1	28.4	32.6	36.1	37.7	40.2	43.2	45.2	47.1	48.7	385.9
Outlays	15.5	47.3	69.1	86.8	101.2	116.1	129.3	144.4	158.1	173.3	190.0	1,231.2
Increase in deficit (+)	8.7	27.3	40.7	54.2	65.2	78.4	89.1	101.3	112.9	126.2	141.3	845.3
(7) Inflation only, sustained during 2010-2020:												
Receipts	14.5	44.4	82.6	124.8	172.4	225.8	284.3	345.9	412.9	485.3	564.5	2,757.5
Outlays	5.7	14.2	36.0	62.3	91.1	121.6	156.4	193.0	231.9	277.1	323.2	1,512.6
Decrease in deficit (-)	-8.9	-30.2	-46.5	-62.5	-81.3	-104.2	-127.8	-152.9	-181.0	-208.2	-241.4	-1,244.9
Interest Cost of Higher Federal Borrowing												
(8) Outlay effect of \$100 billion increase in borrowing in 2010	0.2	1.2	2.7	4.2	4.8	5.0	5.3	5.5	5.7	6.0	6.2	46.7

* \$50 million or less.

¹ The unemployment rate is assumed to be 0.5 percentage point higher per 1.0 percent shortfall in the level of real GDP.

is confident that its current inflation assumptions are reasonable, if inflation projections change significantly, future budgets would be expected to adjust funding growth up or down accordingly.¹

¹ This statement does not apply to funding growth between 2010 and the 2011 budget year, since the appropriations process for 2011 must

The effects of changes in economic assumptions in the opposite direction are approximately symmetric to those shown in the table. The impact of a one percentage point

begin immediately and before inflation assumptions will be reassessed. It also does not apply to the outyear Budget Authority for overseas contingency operations, which is a placeholder and does not represent a policy determination.

Table 3-2. GDP FORECAST ERRORS, JANUARY 1982–PRESENT
(Percentage points)

2-Year Real GDP	Admin.	CBO	Blue Chip
Mean Error	-0.2	-0.3	-0.5
Mean Absolute Error	1.0	1.0	1.0
Root Mean Square Error	1.3	1.3	1.2
6-Year Real GDP			
Mean Error	-0.1	-0.4	-0.5
Mean Absolute Error	0.7	0.6	0.7
Root Mean Square Error	0.8	0.8	0.8

lower rate of inflation or higher real growth would have about the same magnitude as the effects shown in the table, but with the opposite sign.

GDP Forecast Errors

As can be seen in Table 3-1, one of the most important variables that affects the accuracy of the budget projections is the forecast of the growth rate of real GDP throughout the projection period. Table 3-2 shows errors in short- and long-term projections for past Administrations, and compares these errors to those of CBO and the Blue Chip Consensus of private forecasters.² Over both a two-year and six-year horizon, the average annual GDP growth rate was very slightly underestimated by all three forecasters in the annual

²Two-year errors are the average error in percentage points for year over year growth rates for the current year and budget year. Administration forecasts are from the budgets released starting in February 1982 (1983 Budget) and through February 2007 (2008 Budget). The six-year forecasts are constructed similarly, but the last forecast used is from February 2004 (2005 Budget). CBO forecasts are from 'The Budget and Economic Outlook' publications in January each year, and the Blue Chip forecasts are from their January projections.

forecasts made since 1982. The differences between the three forecasters were minor. The average absolute error in the growth rate was 1.0 percent per year for all forecasters for two-year projections, and was about one-third smaller for all three for the six-year projections. The greater accuracy in the six-year projections could reflect a tendency of real GDP to revert at least partly to trend, though the overall evidence on whether GDP is mean reverting is mixed. Another way to interpret the result is that it is hard to predict GDP around turning points in the business cycle, but somewhat easier to project the long-term growth rate based on assumptions about the labor force, productivity, and other factors that affect GDP.

Alternative Scenarios

The economic outlook is always uncertain, but it is especially uncertain at present. The rules-of-thumb described above can be used in combination to show the approximate effect on the budget of alternative economic scenarios. Modeling explicit alternative scenarios can also be useful in gauging some of the risks to the cur-

Chart 3-1. Forecast Alternatives: Real GDP

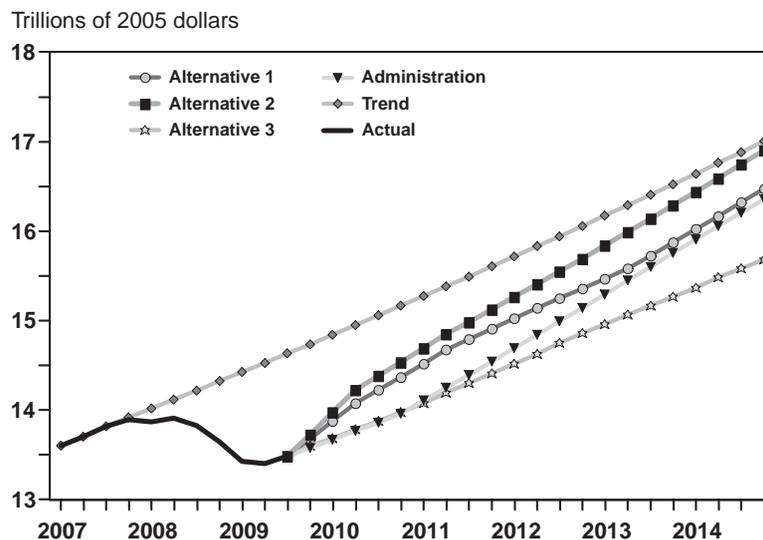


Table 3-3. BUDGET EFFECTS OF ALTERNATIVE SCENARIOS

(Fiscal years; in billions of dollars)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Alternative Budget Deficit Projections:											
Administration Economic Assumptions	1556	1267	828	727	706	752	778	778	785	908	1003
percent of GDP	10.6%	8.3%	5.1%	4.2%	3.9%	3.9%	3.9%	3.7%	3.6%	3.9%	4.2%
Alternative Scenario 1	1491	1159	727	650	652	708	732	734	739	860	951
percent of GDP	10.0%	7.4%	4.4%	3.7%	3.6%	3.7%	3.6%	3.5%	3.3%	3.7%	3.9%
Alternative Scenario 2	1474	1129	673	565	534	566	576	561	552	659	736
percent of GDP	9.8%	7.1%	4.0%	3.2%	2.8%	2.9%	2.8%	2.6%	2.4%	2.8%	3.0%
Alternative Scenario 3	1559	1288	887	840	884	975	1024	1040	1068	1213	1330
percent of GDP	10.7%	8.5%	5.6%	5.0%	5.0%	5.3%	5.3%	5.1%	5.1%	5.5%	5.8%

rent budget projections. For example, the severity of the recent recession makes the strength of the recovery over the next few years highly uncertain. That possibility is explored in the three alternative scenarios presented in this section.

In the first alternative, growth rebounds sooner than the Administration projects, in line with the average strength of most of the expansions following recoveries in previous recessions since World War II. Real growth beginning in the third quarter of 2009 is 5.9 percent over the next four quarters, followed by growth rates of 3.8 percent, 3.7 percent, 3.1 percent, and 3.8 percent, respectively. In this case, the level of GDP is substantially higher in the near term than in the Administration's projections, but the level of GDP approaches the Administration's projection in the out years. The Administration is projecting an average postwar recovery, but one that takes longer to gain traction because of the financial uncertainties in the current business climate.

Given the depth of the 2008-2009 recession, a faster than normal recovery might be expected. There is evidence that the strength of a recovery is linked to the depth of the preceding recession. In the second alternative, growth rebounds at the average rate of 4.5 percent over the next five years which corresponds to the average of the five strongest of the ten expansions since World War II. This is similar to the first alternative except some of the weaker expansions—which generally followed mild recessions—are excluded from the calculation. In this case, real GDP rebounds to nearly reach by 2015 the trend path of 3.0 percent that it had followed in the decade before the latest recession, recovering all lost ground.

The third alternative scenario assumes that real GDP growth in 2010 and 2011 is equal to the projection in the latest Blue Chip forecast (January), and that growth continues at a relatively subdued pace averaging 3.0 percent in 2012-14. In this case, the level of GDP remains lower than the Administration's forecast throughout the projection.

Table 3-3 shows the budget effects of these three alternative scenarios compared to the Administration's economic forecast. Under the first alternative, budget

deficits are modestly lower in each year compared to the Administration's forecast, with the differences narrowing in the outyears of the forecast. In the second alternative, the deficit is much lower by 2014. In the third alternative, the deficit becomes progressively larger than the Administration's projection.

Many other scenarios are possible, of course, but the point is that the most important influences on the budget projections beyond the next year or two are the rate at which output and employment recover from the recession and the extent to which potential GDP returns to its pre-recession trend.

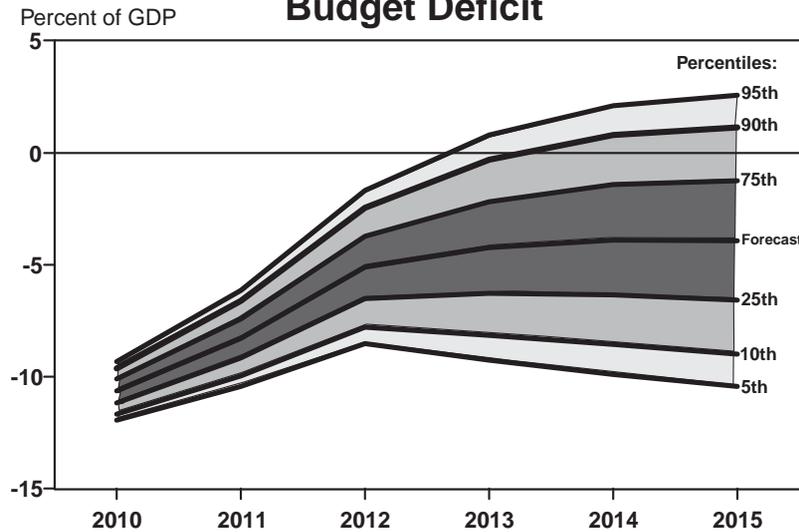
Uncertainty and the Deficit Projections

The accuracy of budget projections depends not only on the accuracy of economic projections, but also on technical factors and the differences between proposed policy and enacted legislation. Chapter 29 provides detailed information on these factors for the budget year projections (Table 29-6), and also shows how the deficit projections compared to actual outcomes, on average, over a five-year window using historic data from 1982 to 2009 (Table 29-7). The error measures can be used to show a probabilistic range of uncertainty of what the range of deficit outcomes may be over the next five years relative to the Administration's deficit projection. Chart 3-2 shows this cone of uncertainty, which is constructed under the assumption that future forecast errors would be governed by the normal distribution with a mean of zero and standard error equal to the root mean squared error, as a percent of GDP, of past forecasts. The deficit is projected to be 3.9 percent of GDP in 2015, but has a 90 percent chance of being within a range of a surplus of 2.6 percent of GDP and a deficit of 10.4 percent of GDP.

Structural and Cyclical Deficits

The budget deficit is highly sensitive to the business cycle. When the economy is operating below its potential and the unemployment rate exceeds the level consistent with price stability, receipts are lower, outlays for pro-

Chart 3-2. Range of Uncertainty for the Budget Deficit



grams such as unemployment compensation are higher, and the deficit is larger than it would be otherwise. These features serve as “automatic stabilizers” for the economy by restraining output when the economy threatens to overheat and cushioning economic downturns. They also make it hard to judge the overall stance of fiscal policy from looking at the unadjusted budget deficit.

An alternative measure of the budget deficit is called the structural deficit. This measure provides a more useful perspective on the stance of fiscal policy than does the unadjusted unified budget deficit. The portion of the deficit traceable to the automatic effects of the business cycle is called the cyclical component. The remaining portion of the deficit is called the structural deficit. The structural deficit is a better gauge of the underlying stance of fiscal policy than the unadjusted unified deficit because it removes most of the effects of the business cycle.

Estimates of the structural deficit, shown in Table 3-4, are based on the historical relationship between changes in the unemployment rate and real GDP growth, known as Okun’s Law, as well as relationships of unemployment and real GDP growth with receipts and outlays. These estimated relationships take account of the major cyclical changes in the economy and their effects on the budget, but they do not reflect all the possible cyclical effects on the budget, because economists have not been able to identify the cyclical factor in some of these other effects. For example, the recent decline in the stock market will pull down capital gains-related receipts and increase the deficit. Some of this decline is cyclical in nature, but economists have not pinned down the cyclical component of the stock market with any exactitude, and for that reason, all of the stock market’s contribution to receipts is counted in the structural deficit.

Another factor that can affect the deficit and is related to the business cycle is labor force participation. Since the official unemployment rate does not include workers who have left the labor force, the conventional measures

of potential GDP, incomes, and Government receipts understate the extent to which potential work hours are under-utilized because of a decline in labor force participation. The key unresolved question here is to what extent changes in labor force participation are cyclical and to what extent they are structural. By convention, in estimating the structural budget deficit, all changes in labor force participation are treated as structural.

There are also lags in the collection of tax revenue that can delay the impact of cyclical effects beyond the year in which they occur. The result is that even after the unemployment rate has fallen, receipts may remain cyclically depressed for some time until these lagged effects have dissipated. The current recession has added substantially to the estimated cyclical component of the deficit, but for all the reasons stated above, the cyclical component is probably an understatement. As the economy recovers, the cyclical deficit is projected to decline and after unemployment reaches 5.2 percent, the level assumed to be consistent with stable inflation, the estimated cyclical component vanishes, leaving only the structural deficit, although some lagged cyclical effects would arguably still be present.

Despite these limitations, the distinction between cyclical and structural deficits is helpful in understanding the path of fiscal policy. The large increase in the deficit in 2009 and 2010 is due to a combination of all three components of the deficit. There is a large increase in the cyclical component because of the rise in unemployment. That is what would be expected considering the severity of the current recession. Finally, there is a large increase in the structural deficit because of the policy measures taken to combat the recession. This reflects the Government’s decision to make an active use of fiscal policy to lessen the severity of the recession and to hasten economic recovery. In 2011–2017, the cyclical component declines sharply as the economy recovers. The structural deficit shrinks during 2011–2013 as the temporary spending and tax measures in the Recovery Act end.

Table 3-4. THE STRUCTURAL BALANCE

(Fiscal years; in billions of dollars)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Unadjusted surplus (-) or deficit ..	160.7	458.6	1412.7	1555.6	1266.7	828.5	727.3	705.8	751.9	777.7	778.0	785.1
Cyclical component ..	-54.5	6.5	337.8	467.7	452.6	380.3	287.0	187.8	102.0	44.6	10.0	0.0
Structural surplus (-) or deficit ..	216.7	433.3	815.6	1116.7	767.2	478.2	462.5	538.4	678.4	760.9	797.6	817.2

(Fiscal years; percent of GDP)

Unadjusted surplus (-) or deficit ..	1.2%	3.2%	9.9%	10.5%	8.1%	5.3%	4.3%	3.9%	3.9%	3.9%	3.7%	3.6%
Cyclical component ..	-0.4%	0.0%	2.4%	3.2%	3.0%	2.3%	1.7%	1.0%	0.5%	0.2%	0.0%	0.0%
Structural surplus (-) or deficit ..	1.5%	3.1%	7.6%	7.3%	5.1%	3.0%	2.6%	2.9%	3.4%	3.6%	3.6%	3.6%

Note: The NAIRU is assumed to be 5.0% through calendar year 2007, 5.2% after 2008.

4. FINANCIAL STABILIZATION EFFORTS AND THEIR BUDGETARY EFFECTS

The U.S. Government has taken unprecedented action to stem the negative effects of the current financial crisis.¹ The Department of the Treasury, the Federal Reserve, the Federal Deposit Insurance Corporation, the National Credit Union Administration, the Securities and Exchange Commission, and the Commodity Futures Trading Commission have acted independently and in concert to scale up existing programs and make them more effective, and to launch new programs that are designed to:

- expand access to credit;
- strengthen financial institutions;
- restore confidence in the financial market; and
- stabilize the housing sector.

This chapter provides a summary of key government programs, followed by a report analyzing the cost and budgetary effects of the 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. This report analyzes transactions as of December 31, 2009, and expected transactions as reflected in the Budget. The TARP costs discussed in the report and included in the Budget are the estimated present value of the TARP investments, netting and discounting the expected dividends, interest, and principal redemptions the Government receives against its investments; this credit reform treatment of TARP transactions is provided for in Section 123 of EESA.

The estimated impact of TARP on the deficit has been cut by more than 60 percent (or over \$220 billion) from the Mid-Session Review (MSR) of the 2010 Budget, due to lower overall TARP investments and higher investment returns. The MSR estimated a \$341 billion programmatic cost of purchases and guarantees of \$777 billion in troubled assets. OMB's new report estimates TARP's deficit cost to be \$117 billion—a reduction in cost of \$224 billion from MSR (see Tables 4–1 and 4–7).

The Treasury has received higher-than-expected repayments and redemptions from TARP recipients, and now predicts that banks alone will return \$185 billion in TARP investments over 2009 and 2010. As of December 31, 2009, the Treasury had received actual repayments of \$165 billion, mostly from large banks that received capital infusions in the first weeks of the TARP program. Those redemptions are a sign of the greater stability in the financial sector, which led the Administration to reduce estimates of future TARP purchases by 30 percent

compared to MSR, to \$546 billion, and to remove the \$750 billion placeholder for a Financial Stabilization Reserve as no longer warranted.

Federal Reserve Programs

The Federal Reserve responded to the crisis by extending its existing credit programs, creating new credit programs, directly purchasing assets for its System Open Market Account (SOMA) portfolio, and providing direct financial support to a large number of financial institutions. Beginning in early August 2007, the Federal Reserve began pumping liquidity into the system to offset the precipitous decline in interbank lending. However, interbank liquidity concerns continued to persist, which led to the creation of the Term Auction Facility (TAF) in December 2007. This facility allowed banks to access Federal Reserve funds through an auction process, wherein depository institutions bid for TAF funds at an interest rate that is determined by the auction. As of November 30, 2009, cumulative TAF borrowing exceeded \$3.7 trillion. However, since October 2008 every TAF auction has been undersubscribed, meaning that propositions for the TAF loans have been below auction limits. In late September 2009, the Federal Reserve announced that the TAF would be scaled back in 2010 as a result of improved financial market conditions.

Throughout the economic crisis, the Federal Reserve created programs designed to improve credit market conditions. The Term Securities Lending Facility (TSLF), introduced in March 2008, has allowed institutions to pledge an array of collateral (all investment grade debt and securities) in return for risk-free Treasury securities. The Federal Reserve also created the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility, the Primary Dealer Credit Facility, and the Commercial Paper Funding Facility. Each of these programs has increased liquidity for different participants in the money markets, which has had the effect of stabilizing broader financial markets. Similar to TAF, utilization of these programs has waned as market conditions have improved. In mid-December the Federal Reserve confirmed that these four programs will expire on February 1, 2010, consistent with the Federal Reserve's June 2009 announcement.

Addressing the frozen consumer and business credit markets, the Federal Reserve announced on November 25, 2008 that in conjunction with the Treasury Department it would lend up to \$200 billion to holders of newly issued AAA-rated asset-backed securities through the Term Asset-Backed Securities Loan Facility (TALF). The program was expanded as part of the Administration's Financial Stability Plan and launched in March 2009. Qualifying assets include student loans, auto loans, credit

¹ Chapter 2 of this volume, Economic Assumptions, contains a discussion of the economic crisis and recent economic performance, among other topics.

cards, and Small Business Administration guaranteed loans. As of June 1, 2009, the Federal Reserve extended the list of qualifying assets to include commercial real estate mortgages. November 2009 marked the first deal involving new issuance of commercial mortgage-backed securities since June 2008, equal to \$323 million of AAA-rated debt, of which TALF financing supported \$72 million. As part of the program, the Treasury provides protection to the Federal Reserve by covering the first \$20 billion in losses on all TALF loans.

To support mortgage lending and housing markets, the Federal Reserve began purchasing up to \$175 billion of Government-Sponsored Enterprise (GSE) debt and up to \$1.25 trillion of GSE mortgage-backed securities (MBS) beginning in December 2008. As of the end of December, 2009 the Federal Reserve has purchased or committed to purchase \$160 billion in GSE debt and \$1.1 trillion in GSE MBS. Purchasing GSE debt and MBS is intended to provide liquidity to the mortgage industry and facilitate the issuance of new mortgage loans to homebuyers at affordable interest rates. The Federal Reserve also purchased \$300 billion in longer-term Treasury securities in 2009 to improve interest rate conditions in mortgage and other private credit markets.

Earnings resulting from the expansion of the Federal Reserve's balance sheet through the purchase of GSE debt, GSE mortgage-backed securities, and long-term Treasury securities are expected to increase the Federal Reserve's deposit of excess earnings with the Treasury. It is estimated that the Treasury will receive \$77.0 billion from the Federal Reserve in 2010, and \$79.3 billion in 2011, which represents an average 125 percent increase over 2009 deposits of \$34.3 billion. Federal Reserve deposits of earnings with the Treasury will peak in 2011 and start to fall in the out-years as the Federal Reserve plans to wind down its portfolio.

Federal Deposit Insurance Corporation (FDIC) Programs

On October 14, 2008, using its existing authority, the FDIC created the Temporary Liquidity Guarantee Program (TLGP), aimed at restoring confidence in banks and preventing large scale deposit flight. The program has been designed to promote liquidity by allowing banks to rollover existing debt. For the first time ever, the FDIC guaranteed bank and bank holding company debt. Under the debt guarantee program (DGP), if there is default on the debt, the FDIC will make required principal and interest payments to unsecured senior debt holders. The FDIC charges additional premiums for any banks that voluntarily opt into this program. The guarantee was originally limited to unsecured debt issued on or before June 30, 2009, expiring June 30, 2012. On March 17, 2009, the FDIC extended the eligible period through October 31, 2009, to issue debt, and levied a surcharge on debt issued between April 1, 2009 and October 31, 2009, which will be transferred to Deposit Insurance Fund. On October 20, 2009, the FDIC adopted a final rule that reaffirmed the expiration of the debt guarantee program (DGP) on

October 31, 2009. However, the rule also established a limited, six-month guarantee facility upon expiration. This emergency guarantee facility is available on a case-by-case basis to entities participating in the DGP, upon application to the FDIC and with the approval of the Chairman after consultation with the Board. The Budget shows the book value of the DGP investment portfolio was \$7 billion as of September 30, 2009.

Another component of the TLGP, the Transaction Account Guarantee (TAG), allows the FDIC to cover without limit any losses that uninsured depositors incur within non-interest bearing deposits. The FDIC charges additional premiums for any banks that voluntarily opt into this program. This guarantee is designed to protect small business payrolls held at small and medium sized banks. On August 26, 2009, the FDIC extended this guarantee for six months, through June 30, 2010, and insured depository institutions that are participating in the TAG program may continue through the extension period. Those institutions will be assessed between 15 to 25 basis points depending upon the risk category assigned to the institution under the FDIC's risk-based premium system. The FDIC had collected \$450 million in fees related to the TAG as of September 30, 2009.

In September 2009, the FDIC also piloted the Legacy Loan Program (LLP), which is part of the Public-Private Investment Program (PPIP) announced in March by the Secretary of the Treasury, the Federal Reserve, and the FDIC. The FDIC will provide oversight for the formation, funding, and operation of new public-private investment funds (PPIFs), which will purchase loans and other assets from depository institutions. The LLP will attract private capital through an FDIC debt guarantee. This program will ultimately help banks remove troubled loans and other assets from their balance sheets so that banks can raise new capital and be better positioned to emerge from the financial crisis.

The FDIC has further collaborated with the Treasury Department and the Federal Reserve to provide exceptional assistance to institutions such as Citigroup. Alongside the Treasury and the Federal Reserve, the FDIC guaranteed up to \$10 billion of a \$301 billion portfolio of residential and commercial mortgage-backed securities at Citigroup. The guarantee was later terminated, as part of a larger Citigroup initiative to repay Federal support.

In addition to the liquidity programs, the Emergency Economic Stabilization Act of 2008 temporarily increased the deposit and share insurance level from \$100,000 per account to \$250,000 through December 31, 2009. This increase applies to insured accounts of both the FDIC and the National Credit Union Administration (NCUA). On May 20, 2009, the President signed the Helping Families Save Their Homes Act, which extended the temporary increase of \$250,000 through December 31, 2013. For a more detailed analysis of these programs, see the section titled, "Deposit Insurance" in Chapter 22, "Credit and Insurance", in this volume.

National Credit Union Administration (NCUA) Programs

NCUA took aggressive actions in response to dislocations in financial markets in order to maintain confidence, limit losses, and promote recovery in the credit union system. These actions included raising the deposit insurance coverage to \$250,000 (details provided above), providing liquidity loans totaling \$23 billion, and stabilizing two of the largest corporate credit unions through conservatorship. NCUA also initiated multiple programs amidst the economic crises to stabilize liquidity and ultimately ensure the continued safety and soundness of the credit union system, including the Temporary Corporate Credit Union Stabilization Fund, the Credit Union Homeowners Affordability Relief Program, and the System Investment Program.

On October 16, 2008, the NCUA announced the Temporary Corporate Credit Union Liquidity Guarantee Program. Under this program, the NCUA guaranteed certain unsecured debt of participating corporate credit unions issued from October 16, 2008 through June 30, 2010. The program ensured parity with depositories covered by a similar FDIC guarantee program, and maintained market-place confidence in corporate credit union unsecured debt offerings.

NCUA utilized the powers of its Central Liquidity Facility (CLF) to provide liquidity to the credit union system. The CLF granted liquidity advances of \$14.4 billion, with \$10 billion originating in March 2009 to the National Credit Union Share Insurance Fund in order to provide funding stabilization to the conservatorships of two corporate credit unions. The CLF also established the Credit Union Homeowners Affordability Relief Program (HARP) and the System Investment Program (SIP) to add liquidity to the credit union system; a total of \$8.4 billion has been advanced with these two programs. As of September 30, 2009, \$18.4 billion of advances remain outstanding.

Under the HARP, the CLF made one-year secured advances of credit to qualifying credit unions that in turn were required to invest in a special corporate credit union note used by the corporate credit union to pay down external secured borrowings. The qualifying credit union can earn an extra coupon payment on the HARP note for demonstrated mortgage relief to eligible members. To date, advances of approximately \$164 million have been made, with complete repayment estimated by January 2011.

Under the SIP, the CLF made one-year secured credit advances to credit unions, who will in turn invest those funds in guaranteed corporate credit union notes, providing a stable and affordable source of liquidity for corporate credit unions. To date, advances of \$8.2 billion have been made, and complete repayment is expected at the end of March 2010.

NCUA's systemic support via guarantees of unsecured debt and share deposits and liquidity advances has stabilized the corporate credit union system, which is vital for the day-to-day operations and function of the nearly 7,640 credit unions nationwide. In addition to stabilizing liquidity and confidence in the system, NCUA is promulgating a

stronger regulatory and supervisory framework to govern credit unions, address identified weaknesses, and ensure such distress is not repeated in the future. NCUA is currently in the process of comprehensively revising Part 704 of its Rules and Regulations to address capital standards, investment authorities and limitations, and corporate governance.

Securities and Exchange Commission (SEC) and Commodity Futures Trading Commission (CFTC) Programs

As part of the Government's continuing response to the financial crisis, the SEC and CFTC worked throughout 2009 to issue regulations targeted at many of the root causes of the crisis, to adapt their organizations to more effectively monitor regulated industries and activities, and to implement enforcement strategies designed to both punish noncompliant actors and deter noncompliance system-wide. Following a review of its enforcement protocol, the SEC has committed to significant organizational reforms within the Division of Enforcement. The SEC will now better manage tips, referrals, and complaints by centralizing and organizing leads for use throughout the agency. Specialized units dedicated to high-risk and emerging fields like structured products and asset management businesses will enable SEC staff to develop the expertise necessary to keep pace with the innovation occurring in the marketplace, and to take swift and skilled action when necessary. Finally, the SEC has committed to streamlining its management structure to ensure that the agency is able to act on the improved enforcement recommendations provided by its staff. Beyond enforcement, the SEC has taken action to prevent future abuses of short-selling, particularly "naked" short selling (selling shares that are not owned or borrowed), by introducing rules covering short sale price tests, circuit breakers, and failures to deliver securities. Other major regulatory efforts in 2009 focused on limits on flash trading (trading on information received milliseconds before the public), dark pool disclosures (disclosure of anonymous trading in alternative markets), money market fund regulation, and credit rating agency reform.

In 2009, the SEC also focused significant attention on improving investor protection. This work has occurred on two fronts: increasing accountability of boards of directors of publicly-traded companies and introducing standards for investment advisors. The SEC established an Investor Advisory Committee to guide the agency's agenda on investor education, investor protection, shareholder voting, and corporate governance.

The CFTC has focused significant resources on monitoring the futures markets for potential manipulation throughout the financial crisis. In many cases, that monitoring has led to enforcement actions. In 2009, the CFTC filed 50 enforcement actions and opened 251 investigations, collecting more than \$183 million in restitution and disgorgement penalties (i.e., the collection of ill-gotten gains), and \$97 million in civil money penalties. The CFTC has also undertaken additional efforts to monitor

futures commission merchants (FCMs) to ensure that the funds investors entrust to FCMs are appropriately safeguarded by the FCMs. In 2009, the CFTC's investor protection efforts included reviewing monthly financial reports from FCMs with an eye toward indicators of potential undercapitalization and systemic risk. As a result of the CFTC's market oversight and risk surveillance activities, in 2009 there were no losses of regulated consumer funds as a result of FCM instability or failure.

To better align their rulemakings and oversight, the SEC and CFTC have committed to harmonization efforts targeted at eliminating regulatory disparities between similar activities regulated by each agency. After holding joint meetings to discuss possible approaches to harmonization and to solicit public views on the strengths and weaknesses of the current system, in October 2009 the SEC and CFTC jointly issued a report recommending specific areas where aligning the agencies' regulatory approaches would yield benefits.

The President's Budget provides significant increases for the SEC and CFTC in 2011 above 2010. For SEC, \$1,258 million is provided, an increase of \$147 million or 13 percent over 2010, of which \$24 million is contingent upon enactment of financial reform legislation. For CFTC, \$261 million is provided, an increase of \$93 million or 55 percent over 2010, of which \$45 million is contingent upon enactment of financial reform legislation.

Housing Market Programs

To preserve the safety and soundness of the housing market, the Federal Housing Finance Authority (FHFA) placed the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac) into conservatorship on September 6, 2008. On the following day, the U.S. Treasury launched three new programs to provide temporary financial support to the GSEs and to stabilize the housing market under the broad authority provided in the Housing and Economic Recovery Act (HERA) of 2008 (P.L. 110-289). First, the Treasury announced Senior Preferred Stock Purchase Agreements to ensure that the GSEs maintain a positive net position (i.e., assets are greater than or equal to liabilities). On December 24, 2009, the Treasury announced that the funding commitments in the purchase agreements would be modified to allow for additional funding in the event that cumulative losses at either enterprise exceed the existing caps of \$200 billion before December 31, 2012. Second, the Treasury established a line of credit for Fannie Mae, Freddie Mac, and the Federal Home Loan Banks to ensure they have adequate funding on a short-term, as-needed basis. This line of credit was never used. Last, the Treasury initiated purchases of GSE guaranteed mortgage-backed securities (MBS) in the open market (separate from the Federal Reserve's MBS purchase program above), with the goal of increasing liquidity in the mortgage market. In December 2009, the Treasury initiated two additional purchase programs under HERA authority to support new and existing State and local Housing Financing Agencies

(HFAs) revenue bonds. The GSE credit, MBS purchase, and HFA support programs all expired on December 31, 2009. A more detailed analysis of these programs is provided in Chapter 22, "Credit and Insurance."

In addition, significant assistance has been provided to the mortgage market through the Federal Housing Administration (see discussion in Chapter 22), and through the Department of the Treasury, as described below.

Treasury Programs

Temporary Guarantee Program for Money Market Mutual Funds. On September 18, 2009, the Treasury ended its Money Market Fund Guarantee Program, which guaranteed at its peak over \$3 trillion of assets. The President approved Treasury's request in September 2008 to use the Exchange Stabilization Fund to guarantee money market mutual funds. The program guaranteed that individual investors receive a stable share price for each share held in a participating money market fund (typically \$1 per share) in the event that the fund "breaks the buck," i.e., liquidates investor holdings at less than \$1 per share. Participating funds had no covered losses while the program was in effect, so the program provided insurance to the markets at no ultimate cost to the public. The Treasury earned \$1.2 billion in fees from participating funds.

Troubled Asset Relief Program (TARP). EESA authorized the Treasury to purchase or guarantee troubled assets and other financial instruments, provided that the total purchase price paid for assets held by the Secretary not exceed \$700 billion at any one time.² The Treasury implemented the TARP under this authority to provide capital to and restore confidence in the strength of U.S. financial institutions, restart markets critical to financing American households and businesses, and address housing market problems and the foreclosure crisis.

On December 9, 2009, and as authorized by EESA, the Secretary of the Treasury certified to Congress that an extension of TARP purchase authority until October 3, 2010, was necessary "to assist American families and stabilize financial markets because it will, among other things, enable us to continue to implement programs that address housing markets and the needs of small businesses, and to maintain the capacity to respond to unforeseen threats." Under the terms of TARP, the Treasury can enter into new commitments to purchase troubled assets through October 3, though funding to liquidate them may occur thereafter.

The Secretary outlined the Government's four elements of its strategy to wind-down the TARP and related programs: first, the Treasury will wind down those programs that are no longer necessary, such as the Capital Purchase Program; funding for the CPP ended on December 31st. Second, (CPP) new planned programs in 2010 under the

²TARP authority is defined as the purchase price paid for assets held by the Secretary of the Treasury and amounts guaranteed outstanding at any one time. The Helping Family Save Their Homes Act of 2009 (P.L. 111-22) reduced the total purchase authority by \$1.3 billion.

extension of the purchase authority will be limited to three areas: (1) continued foreclosure mitigation for responsible American homeowners and stabilization of the housing market; (2) initiatives to provide capital to small and community banks; and (3) potentially increased commitment to the Term Asset-Backed Securities Loan Facility (TALF) to improve securitization markets that facilitate consumer and small business loans, as well as commercial mortgage loans. Third, the Government will maintain the capacity to respond to unforeseen threats. The Government will not use remaining TARP funds unless necessary to respond to an immediate and substantial threat to the economy stemming from financial instability. Fourth, the Government will manage equity investments acquired through TARP while protecting taxpayer interests. It will continue to manage those investments in a commercial manner and seek to dispose of them as soon as practicable.

As a result of improved overall financial conditions and careful stewardship of the program, the 2011 Budget reflects an impact of TARP on the deficit that is approximately \$224 billion less than previously estimated in the August Mid-Session Review of the 2010 Budget. Furthermore, the Budget estimates total purchases under TARP authority to be approximately \$550 billion, significantly less than the full \$700 billion in authority granted under EESA. A more detailed analysis of specific TARP programs is provided below.

Description of Assets Purchased Through the Troubled Asset Relief Program (TARP), by Program

Capital Purchase Program (CPP). Pursuant to EESA, the Treasury created the CPP in October 2008 to restore confidence throughout the financial system so that the Nation's banking institutions have a sufficient capital cushion against larger-than-expected future losses, should such losses occur due to a more severe economic environment, and to support lending to creditworthy borrowers. Under the CPP, the Treasury purchases senior preferred stock from qualifying U.S.-controlled banks, savings associations, and holding companies that meet established criteria and are recommended for this program by their regulator. For Subchapter S corporations and certain mutual institutions, the CPP program purchases subordinated debentures. Passage of the American Recovery and Reinvestment Act of 2009 amended the original terms of CPP preferred stock agreements, removing previous restrictions on participating institutions from redeeming preferred stock within the first three years. Further, in spring 2009, the CPP program included a conversion of \$25 billion of Citigroup preferred stock to common stock. The 2011 Budget reflects \$204.6 billion in purchases in 2009 and estimates of \$3.4 billion in purchases completed in 2010, for a total of \$208 billion.³

³ As of December 31, 2009, the funding deadline for CPP ended. Actual CPP disbursements were \$205 billion. This will be reflected in the Mid-Session Review of the 2011 Budget.

All CPP recipients have completed funding by December 31, 2009. The Budget reflects that financial institutions redeemed \$70.7 billion in principal repayments and \$9.7 billion in dividends, interest, warrants and fees as of September 30, 2009. Furthermore, the Budget reflects that financial institutions will redeem an additional \$59.7 billion in principal repayments and the Treasury expects to receive over \$20.1 billion in dividends, interest, warrants and fees in 2010.

American International Group (AIG) Investments.

As of September 30, 2009, the Treasury purchased \$40 billion in preferred shares from AIG. It also created an equity capital facility, in which AIG may draw up to \$29.8 billion as needed in exchange for additional preferred stock. As of September 30, 2009, AIG had drawn \$3.2 billion from the facility. The Budget assumes a total of \$69.8 billion in preferred stock will be purchased or exchanged from AIG in 2009 and 2010.

Targeted Investment Program (TIP). Investments made through the TIP seek to avoid significant market disruptions resulting from the deterioration of one financial institution that could threaten other financial institutions and impair broader financial markets, and thereby pose a threat to the overall economy. Under the TIP, the Treasury purchased \$20 billion in preferred stock from Citigroup and \$20 billion in preferred stock from Bank of America. The Treasury also received warrants from each company. Both preferred stock agreements pay a dividend of 8 percent per annum. The Budget reflects that both Citigroup and Bank of America fully redeemed the Government's TIP investments in 2010. Furthermore, the Budget reflects that Citigroup and Bank of America paid \$1.8 billion in dividends in 2009 and an estimated \$791 million in additional dividend payments in 2010.

Asset Guarantee Program (AGP). Also pursuant to EESA, the Treasury created AGP, to provide government assurances for assets held by financial institutions that are critical to the functioning of the nation's financial system, which faced a risk of losing the critical confidence that was needed for them to continue to lend to other banks. The set of insured assets was selected by the Treasury and its agents in consultation with the financial institutions receiving the guarantee. In exchange for each guarantee, the Treasury received a combination of preferred stock and warrants as compensation.

In January 2009, the Treasury, the Federal Reserve and the FDIC negotiated a potential loss sharing arrangement under the AGP on a \$118 billion pool of financial instruments owned by Bank of America. The negotiations were never completed, and the parties did not enter into a final agreement. In May 2009, Bank of America announced its intention to terminate negotiations with respect to the loss-sharing arrangement, and in September 2009, the Treasury, the Federal Reserve, the FDIC, and Bank of America entered into a termination agreement pursuant to which 1) the parties terminated the related term sheet; and 2) Bank of America agreed to pay a termination fee of

\$425 million to the government parties. Of this amount, \$276 million was paid to the Treasury in 2009.

The Treasury, the Federal Reserve and the FDIC entered into a final agreement for a similar loss-sharing arrangement with Citigroup on January 15, 2009. Under the agreement, the Treasury guaranteed up to \$5 billion of potential losses incurred on a \$301 billion portfolio of loans, mortgage-backed securities, and other financial assets held by Citigroup. The Budget reflects termination of that agreement, effective December 23, 2009. The U.S. Government parties did not pay any losses under the agreement and will keep \$5.2 billion of the \$7 billion in trust preferred securities as well as warrants for common shares that were issued by Citigroup as consideration for the guarantee. With this termination, the AGP will result in net positive returns to the taxpayer.

Automotive Industry Financing Program (AIFP).

In December 2008, the Treasury established the AIFP to prevent a disruption of the domestic automotive industry which posed a systemic risk to the nation's economy.

As of September 30, 2009, the Treasury extended structured and direct loans and equity investments to participating domestic automotive manufacturers, finance companies, and suppliers. The total includes debtor-in-possession financing to General Motors Company (GM) and Chrysler Holdings, as well as exit financing to Chrysler Holdings, that the Treasury supplied while these companies worked through their respective restructuring plans in bankruptcy proceedings. On December 30, 2009, GMAC received additional funding from the Treasury of \$3.8 billion to complete GMAC's stress-test capital needs. This transaction increased the Treasury's ownership of GMAC from a 35 percent to a 56 percent equity stake in the company. The \$3.8 billion in funding is \$1.8 billion lower than originally estimated, due to better than expected outcomes in the GM and Chrysler bankruptcies and improved market conditions. The transaction also included contractual changes to earlier GMAC transactions. The Budget reflects a total of \$85 billion in assistance through the AIFP.

Upon successful emergence from bankruptcy, the Treasury received a \$7.1 billion debt security and held 9.9 percent of the equity in the newly formed Chrysler. The original loans to Chrysler remain outstanding, but have been reduced by \$500 million of debt that was assumed by New Chrysler.

When the sale to New GM was completed on July 10, the Treasury converted most of its loans to 60.8 percent of the common equity in the New GM and \$2.1 billion in preferred stock. The Treasury continues to hold loans in the amount of \$6.7 billion. In November, GM agreed, subject to certain conditions, to begin \$1 billion quarterly repayments on its loan, beginning with a repayment in December 2009. GM has stated publicly that it expects to repay the entire loan by June 2010, assuming no downturn in the economy or business.

Home Affordable Modification Program (HAMP).

The HAMP is a \$75 billion program, which includes up to \$50 billion of TARP funds, intended to offer relief to up

to three to four million at-risk homeowners struggling to make their mortgage payments, while preventing neighborhoods and communities from suffering the negative spillover effects of foreclosures. Under this program, the Treasury signs contracts with servicers to make incentive payments to the borrowers, servicers, investors, and lenders of first and second lien mortgages for successful modifications of the existing mortgages. In early October 2009, HAMP achieved its previously announced target of extending 850,000 trial modification offers and initiating 500,000 trial modifications – a month ahead of schedule. As of December 31, 2009, 102 mortgage servicers had signed up to participate in the HAMP, over one million trial modification offers had been extended to borrowers, and over 850,000 trial modifications were underway. Roughly 112,000 permanent modifications had been approved, including 66,000 that borrowers had accepted and 46,000 awaiting only the borrower's signature.

The Treasury also provides payments to protect against declining home prices, encouraging mortgage modifications in communities that have experienced continued price depreciation. When a mortgage modification is not possible, the Treasury offers incentive payments to encourage short sales (sales for less than the value of the mortgage) or deeds in lieu of foreclosures in order to provide a means for borrowers to avoid foreclosure.

As of November 30, 2009, more than \$27 billion has been committed to implement the HAMP. The 2011 Budget reflects a total of \$48.8 billion in TARP program activity expected through the HAMP.⁴

Consumer and Business Lending Initiative

(CBLI). The CBLI is an effort to jumpstart the credit markets that support lending to families and small businesses, through the Term Asset-Backed Securities Loan Facility (TALF) and dedicated small-business programs. The CBLI broadens and expands the resources of the TALF, a joint initiative with the Federal Reserve that provides financing to private investors to help unfreeze markets for various types of credit, such as commercial real estate, auto, student, small business, and credit card loans. As of June 1, 2009, the Federal Reserve extended the TALF program to investors of commercial real estate mortgages in order to boost the commercial mortgage-backed securities market. As part of the program, the Treasury provides protection to the Federal Reserve by covering the first \$20 billion in losses on all TALF loans. The Treasury has provided \$0.1 billion of this amount to the TALF Special Purpose Vehicle (SPV) used to implement the coverage, which represents a notional amount to establish the SPV. The Treasury's total TALF purchases will depend on actual TALF loan defaults; \$97 billion in total TALF loans are currently expected.

⁴ Section 123 of the EESA provides the Administration the authority to record TARP equity transactions pursuant to the Federal Credit Reform Act (FCRA), with adjustments to the discount rate for market risks. The Home Affordable Modification Program involves the purchase of financial instruments which have no provision for repayment or other return on investment, and therefore these purchases are recorded on a cash basis.

The securitization market for asset-backed securities (ABS), which is an important source of credit for consumers and businesses, nearly came to a standstill at the height of the financial crisis. However, the market has rebounded since the first TALF subscription took place on March 19, 2009. There have been nine monthly ABS subscriptions as of November 30, 2009, and a total of \$96 billion of TALF-eligible new ABS issuance has been brought to market. Of that amount, approximately 50 percent of total new issuance, or \$48 billion, was financed using TALF loans; the rest required no TALF assistance.

In an effort to reduce unemployment and stimulate growth, additional TARP funding has been notionally allocated to initiatives to facilitate small business lending in 2010. The President announced that the Administration is designing initiatives to provide capital to small and community banks, which are important sources of credit for small businesses. On November 19, 2009, the Administration hosted a two-day Small Business Financing Forum with small business owners, lenders, and trade associations to discuss new ideas to increase lending to small businesses. Ideas generated from the forum will be incorporated into the Treasury's TARP small business lending initiatives.

Public Private Investment Program (PPIP). The Treasury, in conjunction with the Federal Deposit Insurance Corporation (FDIC) and the Federal Reserve, introduced the PPIP on March 23, 2009, to address the volatile market cycle affecting troubled legacy assets clogging the balance sheets of private-sector financial institutions. The PPIP is designed to improve the financial position of financial institutions by facilitating the removal of legacy assets from their balance sheets. Legacy assets include both real estate loans held on banks' balance sheets (legacy loans) as well as securities backed by residential and commercial real estate loans (legacy securities). The Treasury initially announced that it would provide up to \$100 billion for the PPIP. Because of improvements in the market, this amount was reduced to \$30 billion, which has been committed to the legacy securities program. The Budget reflects \$6.7 billion in investments obligated in 2009, and \$23.3 billion estimated in 2010.

Capital Assistance Program and Other Programs (CAP). The Treasury launched the CAP in March 2009 as the next phase of its effort to ensure that institutions have enough capital to lend, even under a more severe recession than is currently projected. The CAP was announced in conjunction with the commencement of a supervisory capital assessment process, commonly referred to as the "stress tests". The CAP was available to institutions that participated in the "stress tests" as well as others. Of the ten bank holding companies that were identified as needing to raise more capital, nine have met or exceeded the capital raising requirements through private efforts. The Treasury provided an additional \$3.8 billion in capital to GMAC under the Auto Industry Financing Program (described above) to assist its fundraising efforts to meet the requirements of the stress test results. Due to the success of the stress tests, efforts to

raise private capital, and CPP, as well as other Government efforts, the Treasury did not receive any applications for the CAP, which terminated on November 9, 2009.

Method for Estimating the Cost of TARP Transactions

Exercising its authority under EESA, the Treasury has purchased financial instruments with varying terms and conditions. Consistent with the provisions of Section 123 of EESA, the costs of equity purchases, loans, and guarantees, under the TARP are reflected on a net present value basis, as determined under the Federal Credit Reform Act of 1990 (2 USC 661 et seq.), with an adjustment to the discount rate for market risks. The budgetary cost of these transactions is reflected as the net present value of estimated cash flows to and from the Government, excluding administrative costs. Costs for the incentive payments under HAMP involve financial instruments without any provision for income or other returns, and are recorded on a cash basis.⁵

The costs of each transaction reflect the underlying structure of the instruments, consistent with the Federal Credit Reform Act (FCRA), and may include direct loans, structured loans, equity, loan guarantees, or direct incentive payments. For each of these instruments, analytical cash flow models generate expected cash flows to and from the Government over the life of a program or facility. Further, each cash flow model reflects the specific terms and conditions of the program, technical assumptions regarding the underlying assets, risk of default or other losses, and other factors as appropriate. Models are used to generate cash flows for original subsidy rate estimates for new TARP facilities. Cost estimate cash flows are also generated to calculate changes in cost due to changes in contract terms or other Government actions (modification cost estimates), as well as annual reestimates of subsidy cost that account for changes in economic or performance assumptions as well as actual cash flows to date. The risk adjustments to the discount rates for TARP equity, loan, and guarantee transactions were made using available data and methods to capture additional potential costs related to uncertainty around the expected cash flows to and from the public. The basic methods for each of these models are outlined below.

Direct Loans. Direct loan subsidy cost estimates are derived using analytical models that estimate the cash flows to and from the Government over the life of the loan. These cash flows include the scheduled principal, interest, and other payments to the Government, including estimated income from warrants or additional notes. These

⁵ Section 123 of the EESA provides the Administration the authority to record TARP equity purchases pursuant to the FCRA, with required adjustments to the discount rate for market risks. The Home Affordable Modification Program involves the purchase of financial instruments which have no provision for repayment or other return on investment, and therefore these purchases are recorded on a cash basis. Administrative expenses are recorded for all of TARP under the Office of Financial Stability and the Special Inspector General for TARP on a cash basis, consistent with other Federal administrative costs.

models also include estimates of delinquencies, default and recoveries, based on loan-specific factors including the value of any collateral provided by the contract. The probability and timing of default and recoveries are estimated by using applicable historical data and econometric projections when available, or publicly available proxy data including aggregated credit rating agency historical performance data.

Structured Loans. Structured loans such as the TALF and loans to GM suppliers are modeled according to the program structure, where an intermediary special purpose vehicle (SPV) is established to purchase or commit to purchase assets from beneficiaries. In general, structured loans are a hybrid of guarantees and direct loans. The Treasury makes a direct loan to a SPV; the SPV in turn enters into a contract with a beneficiary that resembles a guaranteed loan. Estimated cash flow assumptions reflect the anticipated behavior of the beneficiaries and the cash flows to and from the SPV and the Treasury.

In the case of the TALF, the New York Federal Reserve created an SPV to purchase and manage assets received in connection with any TALF loans. The Federal Reserve acquires assets either when a TALF participant defaults on the Federal Reserve financing or chooses to turn over the securing assets in lieu of the scheduled repayment at the end of the term. The SPV has committed, for a fee, to purchase all assets securing a TALF loan that are received by the New York Federal Reserve at a price equal to the TALF loan amount at the time of acquisition, plus accrued but unpaid interest. The Treasury made an initial allotment to the SPV of \$0.1 billion to fund the SPV, and the Treasury will purchase subordinated debt issued by the SPV to finance up to \$20 billion of asset purchases. The Treasury receives fees and interest income on the entire outstanding TALF facility, and amounts collected in the SPV. The Treasury projects cash flows to and from the Government based on estimated SPV performance, the estimated mix of assets funded through the TALF, the terms of the contracts, and other factors.

Guarantees. Cost estimates for guarantees reflect the net present value of estimated claim payments by the Government, net of income from fees, recoveries on defaults, or other sources. Under EESA, guarantees provided through TARP must have at most a zero-cost basis (i.e., fees and other income will completely offset estimated claim payments) at the time of commitment. In TARP guarantee transactions to date, guarantee fees were paid in the form of preferred stock and termination fees. The value of preferred stock is modeled using the same methodology discussed for other equity purchase programs below. Claim payments were modeled consistent with the terms of the guarantee contract. For the Citigroup guarantee, Citigroup would have covered the first loss, and the Treasury would have borne the second loss. Projected claim payments on the guaranteed portfolio of assets reflected historical performance data on similar assets and estimates of future economic conditions such as

unemployment rates, gross domestic product, and home price appreciation. However, the guarantee was terminated with no claim payments made by the Treasury. The Budget reflects actual collections, and estimated savings from preferred stock proceeds.

Equity Purchases. Preferred stock cash flow projections reflect the risk of losses associated with adverse events, like failure of the institution or increases in market interest rates. The model estimates how cash flows vary depending on: 1) current interest rates, which affect the institution's decision whether to repay the preferred stock; and 2) the strength of a financial institution's assets. The model also estimates the values and projects the cash flows of warrants using an option-pricing approach based on the current stock price and its volatility. Common equity is valued at market prices. For the purposes of this calculation, common equity is assumed to be sold to the public as soon as is practicable and advisable.

Incentive Payments. Foreclosure mitigation incentive payments (e.g., HAMP) occur when the Government makes payments to servicers, borrowers, investors, or lenders. Incentive payments are made for successful modifications of first and second liens, on-schedule borrower payments on those modified loans, protection against further declines in home prices, completing a short sale, or receiving a deed in lieu of foreclosure. The method for estimating these cash flows includes forecasting the total eligible loans, the timing of the loans becoming eligible and entering into the program, loan characteristics, the overall participation rate in the program, the re-default rate, and home price appreciation.

TARP Program Costs and Current Value of Assets

This section provides the special analysis described under Sections 202 and 203 of EESA, including estimates of the cost to taxpayers and the current value and budgetary effects of TARP transactions as reflected in the Budget.⁶ The analysis includes explanations of the effects from subsidy cost reestimates and prior-year activity. It also includes what the budgetary effects would have been had all transactions been reflected on a cash basis. The information below reflects the estimates of actual and anticipated use of TARP authority as of December 31, 2009.

Through TARP, the Secretary of the Treasury has purchased equity under a number of programs, including the Capital Purchase Program, the AIG Investments Program, the Targeted Investment Program, the Public-Private Legacy Securities Investment Program (PPIP), and the Automotive Industry Financing Program (AIFP). The Secretary has also made direct loans through the AIFP, the TALF, and the PPIP. Below is a table (4-1) summarizing the current and anticipated activity under TARP, and the estimated lifetime budgetary costs, comparing these

⁶ The analysis does not assume the effects of a recoupment proposal under Section 134 of the EESA.

Table 4–1. COSTS OF TROUBLED ASSET RELIEF PROGRAM ACTIONS (EXCLUDING DEBT SERVICE)¹

(In billions of dollars)

TARP Actions	2010 MSR		2011 Budget		Change from 2010 MSR to 2011 Budget	
	TARP Obligations	Subsidy Cost	TARP Obligations	Subsidy Cost	TARP Obligations	Subsidy Cost
Equity purchases	383.7	158.1	344.1	55.9	-39.6	-102.2
Structured & direct loans and asset-backed security purchases	330.5	133.6	148.6	25.0	-181.9	-108.6
Guarantees of troubled asset purchases ²	12.5	-0.8	5.0	-3.0	-7.5	-2.2
Home Affordable Modification Program (HAMP)	50.0	50.0	48.8	48.8	-1.2	-1.2
Total	776.7	340.9	546.4	126.7	-230.3	-214.2
Memorandum:						
Deficit impact before administrative costs and interest effects³		340.9		116.8		-224.1

¹ Total reflects estimated lifetime TARP obligations and costs through 2020.² The 2010 MSR reflected total face value of guarantees of \$419 billion. The 2011 Budget reflects the actual face value of \$301 billion.³ The 2011 Budget total deficit impact includes downward interest on reestimates of \$9.9 billion.

amounts to estimates published in the MSR.⁷ The impact of TARP on the deficit is now projected to be \$116.8 billion, down from \$340.9 billion projected in the Mid-Session Review. The subsidy cost, which represents the lifetime net present value cost of TARP obligations from the date TARP obligations originate, is now estimated to be \$126.7 billion. Estimated gross obligations as of the MSR totaled \$776.7 billion, which assumed some additional obligations enabled by repayments, while adhering to the statutory cap of \$700 billion in outstanding obligations at any one time.

Current Value of Assets. The value of future cash flows related to TARP transactions can be measured by the balances in the program's non-budgetary credit financing accounts, because equity purchases, direct loans, and loan guarantee transactions follow the FCRA budgetary accounting structure. A direct loan financing account, for example, receives the subsidy cost from the program account (reflecting the net present value cost of the loan), and borrows the difference between the face value of the loan and the subsidy cost from the Treasury to disburse a loan to a borrower. Future collections from the public – such as proceeds from stock sales, or payments of

⁷ Anticipated future activity under TARP is assumed to be direct loan transactions, though future activity could take the form of equity purchases, direct loans, asset guarantees, or other financial instrument purchases.

principal and interest – are financial assets. As inflows from the public are received, the value is realized. These amounts are used to repay borrowing, and reduce the debt balance in the financing account. Therefore, the net debt balance in the financing account as of the end of each fiscal year represents the present value of future anticipated cash flows to and from the public related to outstanding loans or guarantees. The larger the subsidy cost for a given loan disbursed or equity purchased, the lower the estimated value of the cash flows from the public and asset value to the Government.⁸

Table 4–2 shows the projected balances of TARP financing accounts as of the end of 2009, and for the end of each year through 2020.⁹ Actual net balances in financing accounts at the end of 2009 totaled \$129.9 billion. Estimates in 2010 and beyond reflect reestimated activity for TARP outstanding as of September 30, 2009, and all other anticipated transactions. TARP financing accounts are estimated to have balances of \$189.7 billion as of the end of 2010,

⁸ As an extreme example, a loan program with 100 percent subsidy cost would require budget authority for the full amount of the loan. The financing account would receive the entire amount of a loan disbursement from the budgetary program account, and would not have to borrow from the Treasury. In this case, the loan would be estimated to have a zero asset value.

⁹ Reestimates for TARP are calculated using actual data through September 30, 2009, and updated projections of future activity. Thus, the full impacts of TARP reestimates are reflected in the 2010 financing account balances.

Table 4–2. TROUBLED ASSET RELIEF PROGRAM CURRENT VALUE AS REFLECTED IN THE BUDGET¹

(In billions of dollars)

	Actual	Estimate										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Financing Account Balances:												
Troubled Asset Relief Program Equity Purchase Financing Account	105.4	106.0	90.8	90.8	88.9	84.1	79.6	74.8	65.5	54.9	29.0	13.1
Troubled Asset Relief Program Direct Loan Financing Account	23.9	81.4	87.6	90.8	88.5	83.1	72.5	38.1	25.6	10.3	8.4	0.2
Troubled Assets Insurance Financing Fund Guaranteed Loan Financing Account	0.6	2.3	2.1	2.1	1.8	1.7	1.6	1.5	1.4	1.4	1.3	1.3
Total Financing Account Balances	129.9	189.7	180.5	183.7	179.2	168.9	153.6	114.4	92.6	66.5	38.7	14.6

¹ Table does not include financial instrument purchases under the HAMP. These instruments have no future value, and are reflected on a cash basis.

Table 4-3. TROUBLED ASSET RELIEF PROGRAM FACE VALUE OF TARP OUTSTANDING¹
(In billions of dollars)

	Actual 2009	Estimate	
		2010	2011
Troubled Asset Relief Program Equity Purchases	229.6	171.0	161.1
Troubled Asset Relief Program Direct Loans	60.5	101.0	73.1
Troubled Assets Insurance Financing Fund Guaranteed Assets	251.4	.....	.....
Total Face Value of TARP Outstanding	541.5	272.0	234.2

¹ Table reflects face value of TARP outstanding direct loans, equity purchases, and assets supported by TARP guarantees as of September 30, 2009. Financial instrument purchases under the HAMP are not included. These instruments have no future value, and are reflected on a cash basis.

indicating that—as of the end of 2010 – the Government is expected to hold TARP-related assets with an expected present value of \$189.7 billion in future cash flows, based on risk-adjusted discount rates. The increase in value is due in large part to the TARP downward reestimate. It reflects the fact that actual performance exceeded expectations, market conditions improved, and the market risk adjustment to the discount rate was removed for actual transactions through the end of 2009. The overall balance of the financing accounts is estimated to fall in 2011, and increase in 2012 with anticipated future disbursements of TARP assistance obligated before October 3, 2010. The aggregate financing account balance is then estimated to fall in the subsequent years, as the assets and loans acquired under the TARP program are repaid or sold.

TARP equity purchases are expected to reach a total value of \$106.0 billion in 2010, declining thereafter as participants repurchase stock and assets are sold. The value of direct loans is expected to increase to \$90.8 billion in 2012 as disbursements increase, predominantly due to the PPIP and TALF programs, then decline to \$0.2 billion by 2020 as facilities are repaid and warrants and other assets are sold. The \$2.3 billion value under the Asset Guarantee Program in 2010 reflects the preferred stock and warrants held by the Treasury as of the end of 2010 following termination of the guarantee on Citigroup assets. The value is expected to decline gradually, as preferred stock and warrants are sold.

Table 4-3 shows the estimated face value of outstanding TARP investments at the end of each year through 2011. The decrease from 2009 through 2011 is primarily due two factors: (1) actual and expected repayments, and (2) the termination of the Citibank guarantee. The termination of the Citibank guarantee reduced the face value of overall outstanding TARP investments and guarantees by \$251.4 billion.

Estimate of the Deficit, Debt Held by the Public, and Gross Federal Debt, Based on the FCRA/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 debt service costs on Treasury borrowing to finance the program. The TARP is expected to reduce the 2010 deficit by \$95.5 billion, capturing direct program costs, downward reestimates of \$114.5 billion (including interest on reestimates), administrative costs, Special Inspector General for TARP activities, and other effects.

The estimates of debt due to TARP include borrowing to finance both the deficit impact of TARP activity, and the requirements of non-budgetary financing accounts. These estimates are shown in Table 4-4. Debt due to TARP is \$243.1 billion as of the end of 2010, and declines in later years as TARP loans are repaid and TARP equity purchases are sold or redeemed.

Debt held by the public net of financial assets reflects 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, private-sector securities, or equities held by the Government. While debt held by the public is a key measure for examining the impact of TARP, it provides incomplete information on the program's effect on the Government's financial condition. The U.S. Government holds financial assets as a result of TARP assistance, which must 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 specific effects of TARP on these estimates are displayed in Table 4-4. Accounting for the financial assets acquired through TARP, the impact of the program on debt net of financial assets is \$53.4 billion as of the end of 2010.

Under the Federal Credit Reform Act (FCRA), the financing account earns and pays interest at the same rate used to discount cash flows for the credit subsidy cost. Section 123 of EESA requires an adjustment to the discount rate for market risks. This results in subsidy costs for TARP equity purchases, direct loans, and guarantees that are higher than the net present value cost using Treasury discount rates under FCRA. Actual cash flows as of September 30, 2009 already reflect the effect of any market risks to that point, and therefore actual credit transactions with financing accounts reflect Treasury interest rates under FCRA, with no adjustment.¹⁰ Future

¹⁰ 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

Table 4-4. TROUBLED ASSET RELIEF PROGRAM EFFECTS ON THE DEFICIT AND DEBT AS REFLECTED IN THE BUDGET ¹
(In billions of dollars)

	Actual 2009	Estimate										
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Deficit Effect:												
Programmatic and administrative expenses:												
Programmatic expenses:												
Equity purchases	115.3	31.1	0.1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Direct loans and purchases of asset-backed securities	36.9	0.6	0.4	0.5	-*	0.1	*	*	.....	.....	.....	.....
Guarantees of troubled asset purchases	-1.0	-1.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Home Affordable Modification Program	*	11.1	10.3	9.3	7.4	6.0	2.9	1.4	0.4	*	.....	.....
Reestimates of credit subsidy costs .....	.....	-114.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Subtotal, programmatic expenses	151.2	-73.1	10.7	9.8	7.3	6.1	2.9	1.4	0.4	*	.....	.....
Administrative expenses	0.1	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	*	*
Special Inspector General for TARP	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Subtotal, programmatic & administrative expenses	151.3	-72.6	11.1	10.2	7.6	6.4	3.2	1.6	0.6	0.1	0.1	0.1
Interest effects:												
Interest transactions with credit financing accounts ²	-2.8	-23.8	-20.6	-20.7	-20.7	-20.1	-18.9	-16.4	-13.3	-9.8	-6.0	-2.4
Debt service ³	0.5	0.9	3.6	6.6	9.2	9.2	8.3	6.8	5.2	3.9	2.5	1.3
Subtotal, interest effects	-2.3	-22.9	-17.0	-14.1	-11.6	-10.9	-10.5	-9.6	-8.1	-5.9	-3.5	-1.2
Total deficit impact	149.0	-95.5	-5.9	-3.9	-3.9	-4.6	-7.3	-8.0	-7.5	-5.8	-3.4	-1.1
Other TARP transactions affecting borrowing from the public — net disbursements of credit financing accounts:												
Troubled Asset Relief Program Equity Purchase Financing Account	105.4	0.6	-15.2	-*	-1.9	-4.9	-4.5	-4.8	-9.2	-10.7	-25.9	-15.8
Troubled Asset Relief Program Direct Loan Financing Account	23.9	57.5	6.2	3.2	-2.3	-5.4	-10.7	-34.4	-12.5	-15.3	-1.9	-8.2
Troubled Assets Insurance Financing Fund Guaranteed Loan Financing Account	0.6	1.7	-0.1	-*	-0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-*
Total, other transactions affecting borrowing from the public	129.9	59.8	-9.2	3.2	-4.4	-10.3	-15.3	-39.3	-21.8	-26.0	-27.8	-24.1
Change in debt held by the public	278.9	-35.7	-15.1	-0.7	-8.4	-14.9	-22.6	-47.2	-29.3	-31.9	-31.2	-25.2
Debt held by the public	278.9	243.1	228.1	227.4	219.0	204.1	181.5	134.2	104.93	73.1	41.8	16.6
As a percent of GDP	2.0%	1.7%	1.5%	1.4%	1.3%	1.1%	0.9%	0.7%	0.5%	0.3%	0.2%	0.1%
Debt held by the public net of financial assets:												
Debt held by the public	278.9	243.1	228.1	227.4	219.0	204.1	181.5	134.2	104.9	73.1	41.8	16.6
Less financial assets net of liabilities:												
Troubled Assets Relief Program Equity Purchase Financing Account	105.4	106.0	90.8	90.8	88.9	84.1	79.6	74.8	65.5	54.9	29.0	13.1
Troubled Asset Relief Program Direct Loan Financing Account	23.9	81.4	87.6	90.8	88.5	83.1	72.5	38.1	25.6	10.3	8.4	0.2
Troubled Assets Insurance Financing Fund Guaranteed Loan Financing Account	0.6	2.3	2.1	2.1	1.8	1.7	1.6	1.5	1.4	1.4	1.3	1.3
Total, financial assets net of liabilities	129.9	189.7	180.5	183.7	179.2	168.9	153.6	114.4	92.6	66.5	38.7	14.6
Debt held by the public net of financial assets	149.0	53.4	47.6	43.7	39.8	35.2	27.9	19.9	12.4	6.5	3.2	2.1
As a percent of GDP	1.0%	0.4%	0.3%	0.3%	0.2%	0.2%	0.1%	0.1%	0.1%	*	*	*

* \$50 million or less (or 0.05 percent of GDP or less).

¹ Table reflects the deficit effect of budgetary costs, including 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, per FCRA.

³ Includes debt service effects of all TARP transactions affecting borrowing from the public.

cash flows reflect a risk-adjusted discount rate, consistent with the FCRA requirement that financing account interest be earned or paid at the same rate used to discount the cash flows. This aligns the financing account balances with the current subsidy cost reflected in the Budget. Over time, if actual transactions with the public are consistent with projections, the TARP subsidy costs

will reflect downward reestimates to return the premium charged under the market risk-adjusted discount rate, while actual Treasury interest transactions with credit financing accounts would be lower than projections at the risk-adjusted rates.

Estimate of the Current Value on a Cash Basis

The value of the assets acquired through TARP does not depend on whether the costs of acquiring or purchas-

for TARP transactions will equal the cost per FCRA, where the net present value reflects discounting with Treasury rates.

Table 4–5. TROUBLED ASSET RELIEF PROGRAM EFFECTS ON THE DEFICIT AND DEBT CALCULATED ON A CASH BASIS¹

(In billions of dollars)

	Actual 2009	Estimate										
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Deficit Effect:												
Programmatic and administrative expenses:												
Programmatic expenses:												
Equity purchases	217.6	-81.8	-26.9	-11.3	-13.2	-16.0	-15.2	-14.8	-18.3	-18.3	-31.0	-17.9
Direct loans and purchases of asset-backed securities	61.1	34.1	-2.0	-5.4	-11.5	-14.1	-18.7	-40.6	-16.5	-17.4	-2.6	-8.5
Guarantees of troubled asset purchases	-0.5	-0.5	-0.4	-0.2	-0.5	-0.3	-0.3	-0.2	-0.2	-0.2	-0.2	-0.2
Home Affordable Modification Program	*	11.1	10.3	9.3	7.4	6.0	2.9	1.4	0.4	*	.....	.....
Subtotal, programmatic expenses	278.3	-37.1	-19.0	-7.6	-17.8	-24.3	-31.3	-54.3	-34.6	-35.8	-33.8	-26.5
Administrative expenses	0.1	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	*	*
Special Inspector General for TARP	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Subtotal, programmatic & administrative expenses	278.4	-36.6	-18.7	-7.3	-17.5	-24.1	-31.0	-54.1	-34.5	-35.7	-33.7	-26.4
Debt service ²	0.5	0.9	3.6	6.6	9.2	9.2	8.3	6.8	5.2	3.9	2.5	1.3
Total deficit impact	278.9	-35.7	-15.1	-0.7	-8.4	-14.9	-22.6	-47.2	-29.3	-31.9	-31.2	-25.2
Change in debt held by the public	278.9	-35.7	-15.1	-0.7	-8.4	-14.9	-22.6	-47.2	-29.3	-31.9	-31.2	-25.2
Debt held by the public	278.9	243.1	228.1	227.4	219.0	204.1	181.5	134.2	104.9	73.0	41.8	16.6
As a percent of GDP	2.0%	1.7%	1.5%	1.4%	1.3%	1.1%	0.9%	0.7%	0.5%	0.3%	0.2%	0.1%
Debt Held by the Public Net of Financial Assets:												
Debt held by the public	278.9	243.1	228.1	227.4	219.0	204.1	181.5	134.2	104.9	73.0	41.8	16.6
Less financial assets net of liabilities — credit financing account balances:												
Troubled Asset Relief Program Equity Purchase Financing Account	105.4	106.0	90.8	90.8	88.9	84.1	79.6	74.8	65.5	54.9	29.0	13.1
Troubled Asset Relief Program Direct Loan Financing Account	23.9	81.4	87.6	90.8	88.5	83.1	72.5	38.1	25.6	10.3	8.4	0.2
Troubled Assets Insurance Financing Fund Guaranteed Loan Financing Account	0.6	2.3	2.1	2.1	1.8	1.7	1.6	1.5	1.4	1.4	1.3	1.3
Total, financial assets net of liabilities	129.9	189.7	180.5	183.7	179.2	168.9	153.6	114.4	92.6	66.5	38.7	14.6
Debt held by the public net of financial assets	149.0	53.4	47.6	43.7	39.8	35.2	27.9	19.9	12.4	6.5	3.2	2.1
As a percent of GDP	1.0%	0.4%	0.3%	0.3%	0.2%	0.2%	0.1%	0.1%	0.1%	*	*	*

* \$50 million or less (or 0.05 percent of GDP 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 debt service effects of all TARP transactions affecting borrowing from the public.

ing the assets are recorded in the Budget on a cash basis, or a credit basis; their value would be the same either way. 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 the 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 the budgetary side, and the value of the assets is reflected in the financing accounts for equity purchases, direct loans and loan guarantees.¹¹ If these purchases were instead presented in the budget on a cash basis, the value of assets purchased would not be reflected in the budget. Rather, 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.

Revised Estimate of the Deficit, Debt Held by the Public, and Gross Federal Debt Based on the Cash-basis Valuation

Estimates of the deficit and debt with TARP transactions calculated on a cash basis are reflected in Table 4–5, for comparison to those estimates in Table 4–4 reported above, in which TARP transactions are calculated consistently with FCRA and Section 123 of EESA.

If TARP transactions were reported on a cash basis, the deficit 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 guarantee as they occurred. Differences between actual

¹¹ For the Home Affordable Modification Program, while Treasury does purchase financial instruments, these financial instruments do not result in the acquisition of an asset with potential for future returns.

and estimated performance, and updated estimates of future performance, would impact the deficit in the year that they occur, and there would be no credit reestimates.

Table 4–5 shows that if TARP transactions were reported on a cash basis, TARP would reduce the deficit in 2010 by an estimated \$35.7 billion, so the 2010 deficit would be \$59.8 billion higher than estimated in the Budget if TARP were reflected on a cash basis. The deficit would be higher because outlays would be reported for TARP disbursements that are now included in non-budgetary financing accounts for TARP, and the portion of TARP downward reestimates attributable to better-than-expected future inflows from the public would not be recognized up front, rather, as offsetting receipts when they occur. Under this alternative approach, the impact of TARP on the debt, and on debt held net of financial assets, is the same as under FCRA with adjustments to the discount rate for market risks.

Portion of the Deficit Attributable to Any Action Taken by the Secretary, and the Extent to Which the Deficit Impact is Due to a Reestimate

Table 4–4 above shows the portion of the deficit attributable to actions taken by the Treasury Secretary under the authorities of TARP. The largest effects are for reestimates of TARP activity outstanding as of September 30, 2009, and reductions in the total anticipated size of TARP from \$776.7 billion in TARP obligations at MSR to \$546.4 billion in the 2011 Budget. The specific effects are as follows:

- TARP reestimates and interest on reestimates will reduce the deficit by \$114.5 billion in 2010, including \$104.7 billion in reduced subsidy costs for TARP disbursements as of September 30, 2009, and \$9.9 billion in interest on reestimates. Reestimate effects

and changes to anticipated activity together are estimated to reduce total TARP program costs (excluding administrative expenses) by \$214.2 billion from MSR.

- Program costs for purchases of troubled assets including costs associated with AIG disbursements, HAMP incentive payments, and modifications of existing TARP activity (excluding reestimates) are estimated to increase the deficit by \$41.4 billion in 2010.
- TARP equity purchases in 2010 are expected to increase outlays by \$31.1 billion due to AIG's expected use of the capital facility, and AIFP and PPIP purchases.
- New disbursements of direct loans under TARP, including the Term Asset-Backed Securities Loan Facility and future actions, are estimated to result in \$1.7 billion in net outlays in 2010 through 2016, based on estimated loan disbursements.
- Loan guarantees under TARP are estimated to reduce outlays on net by \$1.4 billion in 2010, reflecting the termination of the guarantee and retained preferred stock. No further loan guarantee commitments are anticipated under the Asset Guarantee Program.
- Outlays for the Home Affordable Modification Program are estimated at \$11.1 billion in 2010. Outlays for this program are estimated to decline gradually through 2018.
- Administrative expenses for the TARP program are estimated at \$0.4 billion in 2010, and expected to fall as the TARP program winds down through 2020.

Table 4–6. TROUBLED ASSET RELIEF PROGRAM REESTIMATES

(In billions of dollars)

	Original Subsidy Rate	Current Reestimated Rate	Current reestimate amount	Net lifetime reestimate amount, excluding interest	TARP Disbursements as of 9/30/2009
Equity Programs:					
Capital Purchase Program	26.99%	-0.62%	-61.3	-56.2	204.6
AIG Investments	82.78%	62.04%	-9.8	-8.0	43.2
Targeted Investment Program	48.85%	-9.74%	-23.6	-23.3	40.0
Automotive Industry Financing Program (Equity)	54.52%	27.58%	-3.6	-3.1	12.5
Subtotal equity program reestimates			-98.2	-90.6	300.3
Structured and Direct Loan Programs:					
Automotive Industry Financing Program (AIFP)	58.75%	35.82%	-15.5	-13.4	63.4
Term-Asset Backed Securities Loan Facility ²	-104.23%	-295.89%	-0.2	-0.2	0.1
Subtotal program reestimates			-15.8	-13.6	63.5
Guarantee Programs:					
Asset Guarantee Program ¹	-0.25%	-0.85%	-0.6	-0.5	301.0
Total TARP Reestimates			-114.5	-104.7	664.8

¹ Disbursement amount reflects the face value of guarantees of assets supported by the guarantee. The TARP obligation for this program was \$5 billion, the maximum contingent liability while the guarantee was in force.

² The Term-Asset Backed Securities Loan Facility 2009 subsidy rate reflects the anticipated collections for Treasury's \$20 billion commitment, as a percent of estimated lifetime disbursements of roughly \$0.3 billion.

- Costs for the Special Inspector General for TARP are estimated at \$0.1 billion in 2010, and to remain relatively stable through 2020.
- 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 payment and receipt of interest 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 \$23.8 billion in 2010 and declines over time as the financing accounts repay borrowing from Treasury through proceeds and repayments on TARP equity purchases and direct loans.¹²

The full impact of TARP on the deficit includes the cost of Treasury borrowing from the public—debt service—for the higher outlays listed above. Debt service reaches \$9.2

¹² Actual TARP financing account interest for 2010 will reflect Treasury rates with no risk adjustment, as the effects of market risks would already be realized on actual cash flows.

billion in 2013 and 2014, and then falls to \$1.3 billion in 2020.

Detailed Analysis of TARP Reestimates. The costs of outstanding TARP assistance are reestimated annually by updating cash flows for actual experience and new assumptions, and adjusting for any changes by either recording additional subsidy costs (an upward reestimate) or by reducing subsidy costs (a downward reestimate). The reestimated dollar amounts reflect TARP disbursements through September 30, 2009, while subsidy rates reflect anticipated future disbursements. As noted above, the total decrease in the deficit attributable to TARP reestimates in 2010 is \$114.5 billion, reflecting \$104.7 billion downward reestimate of the subsidy cost, plus \$9.9 billion in interest on the reestimates. Detailed information on downward reestimates is reflected in Table 4–6.

The subsidy cost for outstanding TARP equity is estimated to be \$98.2 billion lower than originally estimated. The majority of reduced subsidy costs reflects significant repayments of CPP and TIP by financial institutions in 2009 and early 2010, resulting in a positive return and a lower subsidy rate, where the original subsidy rate assumed there would be slower payments and higher risks. Reduced subsidy costs for AIG investments and AIFP Equity are due to improved market conditions and future

Table 4–7. DETAILED TARP PROGRAM LEVELS AND COSTS

(In billions of dollars)

Program	MSR		2011 President's Budget	
	Estimated TARP Cumulative Obligations	Subsidy Costs	Estimated TARP Cumulative Obligations	Subsidy Costs
Equity Purchases				
Capital Purchase Program	218.0	60.6	208.0	1.4
AIG Investments	69.8	57.8	69.8	49.9
Targeted Investment Program	40.0	19.5	40.0	-3.7
Automotive Industry Financing Program (AIFP)	5.0	3.2	16.3	6.3
Other Equity Programs	50.9	17.0	N/A	N/A
Public-Private Investment Program - Equity	N/A	N/A	10.0	2.0
Sub-Total Equity Purchases	383.7	158.1	344.1	55.9
Structured & direct loans and asset-backed security purchases				
Automotive Industry Financing Program (AIFP)	70.1	54.5	68.6	24.5
Term Asset-Backed Securities Loan Facility (TALF) ¹	20.0	-1.4	20.0	-0.5
Other Loans	240.4	80.5	N/A	N/A
Public-Private Investment Program - Debt	N/A	N/A	20.0	-1.7
Other Section 101	N/A	N/A	40.0	2.7
Sub-Total Structured & Direct Loans and ABS purchases	330.5	133.6	148.6	25.0
Guarantees of troubled asset purchases				
Asset Guarantee Program	12.5	-0.8	5.0	-3.0
Non-Add Asset Guarantee Program Face Value	419.0		301.0	
Sub-Total Asset Guarantee Program	12.5	-0.8	5.0	-3.0
Non-Credit Programs				
Home Affordable Modification Program (HAMP)	50.0	50.0	48.8	48.8
Totals	776.7	340.9	546.4	126.7
Memorandum:				
Deficit impact before administrative costs and interest effects ²		340.9		116.8

¹ Formerly called the Consumer Business Lending Initiative (CBLI), which included the Small Business 7(a) program for the 2010 MSR.

² The 2011 Budget total deficit impact includes downward interest on reestimates of \$9.9 billion.

performance expectations. The initial \$20 billion TALF facility is estimated to generate a return of \$0.5 billion to the Treasury, due to both lower anticipated loans from the Treasury to the SPV to purchase troubled assets, and improved performance and fees on the facility as a whole. Fees are collected on the total TALF program and not just Treasury purchases. The subsidy rate for TALF is based on disbursements, and the Treasury only expects to purchase a small amount of the total \$20 billion commitment but collects fees on the full TALF facility. The reestimated rate declined dramatically, as TALF anticipates fewer default purchases, and income is anticipated to remain strong. The Asset Guarantee program downward reestimate reflects the termination of the guarantee of up to \$5 billion in losses on Citigroup assets, which had an initial face value of \$301 billion in total guaranteed assets. No losses were paid through the program, and the transactions resulted in fees in the form of preferred stock.

Differences Between Current and Previous OMB Estimates

Table 4–7 above shows a total TARP deficit impact of \$116.8 billion as reflected in the Budget, a reduction of \$224.1 billion from the MSR projection of \$340.9 billion. The deficit impact differs from the subsidy cost of \$126.7 billion because the deficit impact reflects a \$9.9 billion downward interest adjustment, accounting for the time between when the subsidy cost was originally estimated and the time when the reestimate is booked. The subsidy cost of \$126.7 billion reflects the estimated present value cost of the program from the date TARP obligations originate.

The significant reduction in total TARP cost is primarily being driven by two factors: 1) a reduction in TARP obligations resulting from fewer anticipated TARP purchases, and 2) lower subsidy costs on TARP obligations

due to better than expected actual performance in some programs, and improved market conditions.

As part of the December 9, 2009, announcement to extend TARP to October 3, 2010, the Treasury Secretary indicated that in light of the financial market recovery he does not expect to deploy more than \$560 billion in total TARP related activity. The Budget reflects \$546.4 billion in total TARP obligations, a reduction of \$230.3 billion from MSR (\$776.7 billion). \$181.9 billion of the reduction is reflected in the structured and direct loans and asset-backed security purchases portfolio, primarily from the “Other Loans” placeholder amounts assumed for MSR. Estimated obligations in the equity purchases portfolio also decreased by \$39.6 billion from MSR projections.

The financial and credit markets have rebounded since the height of the economic crises, and as a result the Government’s outlook of TARP cost has improved. The Budget includes reestimated subsidy rates for each program based on actual market data since TARP’s inception. Higher than expected bank prepayments were incorporated into the subsidy reestimates. As of December 31, 2009, banks have repaid \$162 billion in TARP funds provided to them, and the Treasury expects total bank repayments to exceed \$185 billion by the end of 2010. As noted above, the cost of outstanding TARP programs disbursed as of September 30, 2009 is \$104.7 billion lower than estimated in the MSR. Separately, the subsidy rate for several programs changed from a placeholder rate of 100 percent in the MSR to an actual rate used for program execution.

Differences Between OMB and CBO Estimates

Table 4–8 shows a comparison of the subsidy rates reflected in the Budget for TARP and the rates estimated by CBO in June 2009.¹³

¹³ United States. Cong. Budget Office. *The Troubled Asset Relief Program: Report on Transactions through June 17, 2009*. Washington: CBO, 2009. <http://www.cbo.gov/doc.cfm?index=10056>

Table 4–8. COMPARISON OF OMB AND CBO TARP COSTS

	Risk-Adjusted Subsidy Rates		
	CBO Rate ¹	OMB Rate ²	
		2010 MSR	2011 Budget
Capital Purchase Program	18%	28%	–1%
Targeted Investment Program	10%	49%	–10%
AIG Assistance	50%	83%	62%
Automotive Industry Financing Program	73%	77%	31%
Term Asset-Backed Securities Loan Facility ³	10%	–7%	–1%
Asset Guarantee Program	64%	–0%	–1%
Other Programs (unidentified programs, PPIP, Small Business) ⁴	N/A	33%	3%
Home Affordable Modification Program ⁵	100%	100%	100%
Weighted average rate	36%	44%	21%

¹ Rates from the Congressional Budget Office as published in “The Troubled Asset Relief Program: Report on Transactions Through June 17, 2009”, available here: <http://www.cbo.gov/ftpdocs/100xx/doc10056/06–29-TARP.pdf>

² OMB subsidy rates reflect weighted average subsidy rates for several categories. OMB subsidy rates for the 2011 Budget in this table reflect the impact of reestimates.

³ The subsidy rate for the Term Asset-Backed Securities Loan Facility is expressed above as the percent of total expected obligations, for comparability. Please see Table 4–6 above for the subsidy rate.

⁴ The rate for “Other Programs” reflects a weighted average subsidy rate for unidentified programs, PPIP (Debt and Equity Purchases) and Small Business programs. CBO did not estimate a subsidy rate for these programs in its June report.

⁵ The HAMP transactions do not involve assets with value, and therefore are reflected on a cash basis. Cost is reflected above as a 100 percent subsidy rate.

The main differences between OMB and CBO estimates are due to the different times at which the estimates were made. The rates estimated by CBO were released on June 17, 2009; the rates estimated for the MSR were developed at various times through June 30, 2009; and the rates estimated for the Budget were developed at various times through December 31, 2009. As discussed above in the section on differences between current and previous OMB estimates, subsidy costs have been reduced as market conditions have continued to improve. For the CPP, for example, the lower subsidy rate estimated in the Budget reflects both lower-than-expected losses on these investments and faster repayments than initially predicted. Several TARP investments have now yielded or are estimated to yield a positive return.

CBO released an update to its Budget and Economic Outlook in August 2009¹⁴ showing a total projected cost of \$241 billion, based on an estimated lifetime TARP activity level of roughly \$600 billion. OMB MSR estimates reflected total TARP activity level of \$777 billion, and programmatic costs of \$341 billion. The Budget reflects current estimates of roughly \$550 billion in program level, and \$127 billion in programmatic costs, including reestimates.

TARP Oversight and Accountability

Ensuring effective internal controls and monitoring of TARP programs and funds to protect taxpayer investments remains a top priority of TARP program staff and those offices charged with TARP oversight and accountability. The Treasury has implemented a comprehensive set of assessments geared toward identifying risks, evaluating their potential impact, and prioritizing resource assignments to manage risks based on a combined top-down and bottom-up assessment of risk. The Internal Control Department within the Office of Financial Stability (OFS) utilizes the assessments to ensure appropriate coverage of high-impact areas. A Senior Assessment Team and the Internal Control Program Office guide OFS efforts to meet all applicable requirements for a sound system of internal controls, and to review and respond to all recommendations made by the three TARP oversight bodies—the Special Inspector General for TARP (SIGTARP), the Government Accountability Office (GAO), and the Congressional Oversight Panel. The soundness of Treasury's TARP compliance monitoring, internal control, and risk management policies and processes are reflected in the clean opinion issued by GAO after its audit of TARP financial statements for 2009.

The Treasury has issued regulations governing executive compensation and conflicts of interest related to TARP program administration and participation. Compliance with these rules is monitored on an ongoing basis, and reviews of participant conduct and program administration are conducted as appropriate. In executing its responsibility for monitoring compliance with executive com-

ensation requirements, the Treasury has also created an Office of the Special Master for TARP to review TARP participant compliance with applicable legal and regulatory authority, and to recommend action to the Secretary when compensation is found to be awarded in a manner or amount deemed contrary to the public interest.

Special Inspector General for TARP (SIGTARP). In 2009, SIGTARP issued four comprehensive reports explaining and evaluating each TARP program implemented and announced, and recommending changes to increase transparency and to decrease the potential for fraud, waste, and abuse. SIGTARP has worked extensively with the Treasury, OFS, and the Federal Reserve concerning TARP program design and has made 41 recommendations to improve internal controls and fraud prevention in TARP programs before they launch; 75 percent of those recommendations have been implemented. Evaluating programs in progress, SIGTARP has initiated 18 audits, and has issued reports on seven topics, including CPP participant selection and use of funds and executive compensation. In an effort to root out misuse of TARP funds and noncompliance with program terms, SIGTARP has received and analyzed over 9,500 hotline contacts, has organized a task force to identify vulnerabilities in the TALF and PPIP programs, and has opened over 75 civil and criminal investigations. SIGTARP will continue to work with the Administration, the Congressional Oversight Panel and GAO to oversee TARP program administration and participation until the last outstanding TARP investments have been completely resolved.

Financial Reform

In June 2009, the Administration submitted a comprehensive financial reform proposal to Congress designed to help prevent future financial crises by filling gaps in the U.S. regulatory regime and redistributing responsibilities among regulators in order to better focus on key issues that contributed to the present crisis.

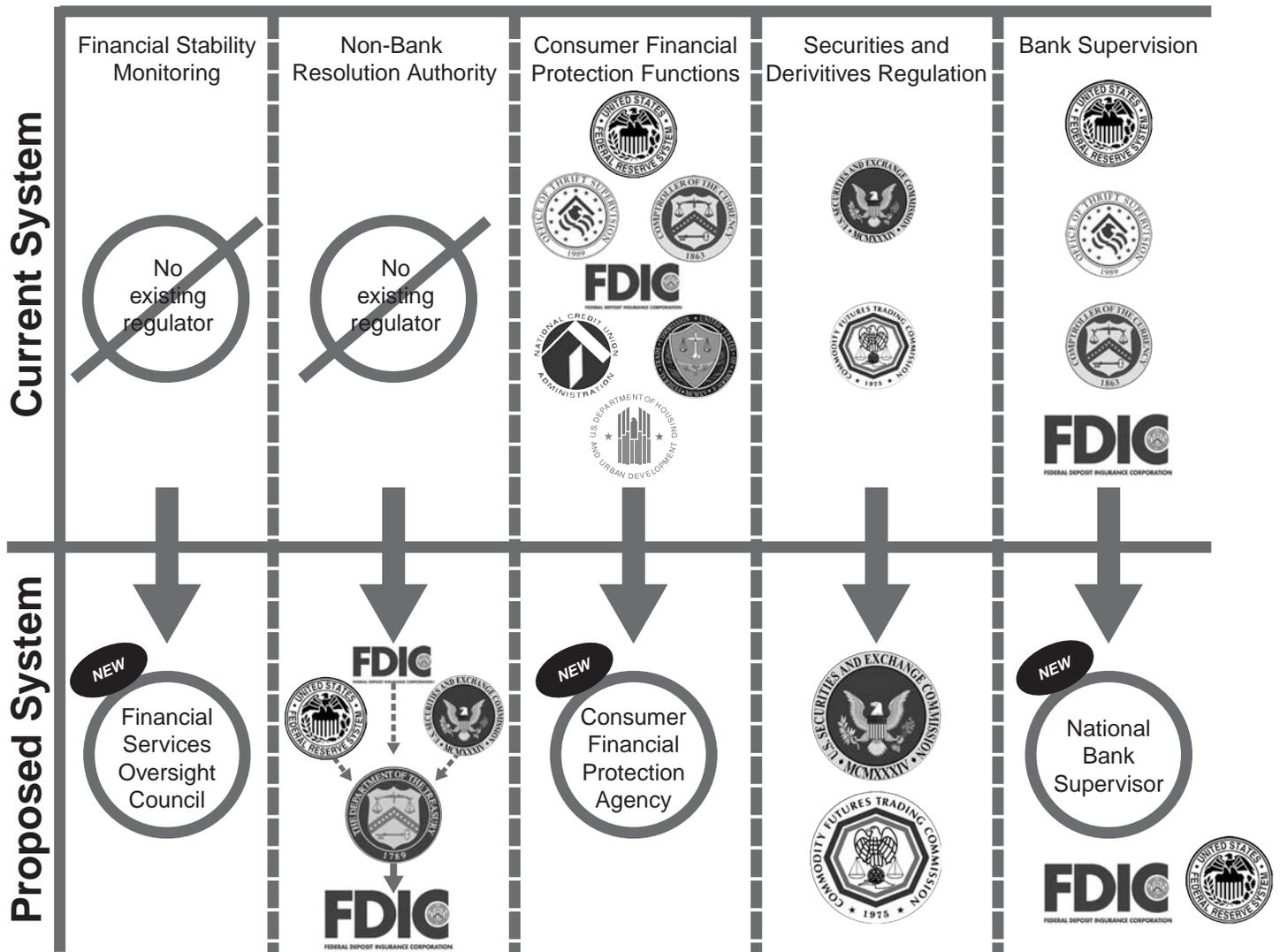
The Administration's proposal employs lessons learned from the present crisis to reform and repair financial regulation on a number of fronts:

First, the proposal prevents future bailout scenarios for "Too Big to Fail" firms by creating a new Financial Services Oversight Council to monitor for threats to financial stability and by authorizing the Federal Reserve to regulate large, interconnected firms if their failure during a downturn would severely impact the functioning of financial markets. In addition, the Government would have the ability to unwind such firms in an orderly manner when they fail to protect the financial system.

Second, the proposal closes the gaps in and strengthens regulation of consumer financial products in the bank and non-bank sectors by consolidating existing consumer protection authorities to better protect consumers from unscrupulous practices—authorities that are currently spread out over seven regulators. The proposal creates a single, new regulator, the Consumer Financial Protection Agency, whose sole mission is to look out for consum-

¹⁴ United States. Cong. Budget Office. *The Budget and Economic Outlook: An Update*. Washington: CBO, 2009. <http://cbo.gov/ftpdocs/105xx/doc10521/08-25-BudgetUpdate.pdf>

Chart 4-1. Proposed Federal Financial Reforms



ers in the increasingly complex financial marketplace. Consolidation of authorities in an agency with mission focus on consumer protection will create clear accountability for providing and consistently enforcing clear rules of the road for firms offering consumer financial services.

Third, the proposal shines a light on dark pools of capital and derivatives markets, by expanding the authority of the Securities and Exchange Commission (SEC) and the Commodity Futures Trading Commission (CFTC), respectively, to register and regulate hedge funds and to require central clearing for over-the-counter derivatives.

Fourth, the proposal creates a new Office of National Insurance within the Treasury Department to gather information, develop expertise, negotiate international agreements, and coordinate policy in the insurance sector. Better monitoring will help prevent the kind of intervention that AIG's failure required to preserve financial stability.

Fifth, to prevent depository institutions from selecting a corporate structure based on their preference for a particular regulator, the proposal consolidates the Office of the Comptroller of the Currency and the Office of Thrift Supervision into a single, unified National Bank Supervisor, applying the same standards of supervision to lending institutions that perform the same functions, regardless of how they choose to organize themselves.

Finally, in an effort to further strengthen and provide consistent regulation while promoting growth and innovation in the marketplace, the Administration's proposal includes numerous other reform measures. These measures include, but are not limited to, strengthening important payment, clearing, and settlement systems, enhancing credit rating agency regulation, and increasing investor protections.

The House of Representatives passed a comprehensive financial reform package in December 2009, and

the Senate is expected to consider legislation in 2010. Because Congress has not yet completed its work on these historic and urgent reforms, this Budget reflects the Administration's proposal. Specifically, some of the functions performed by staff for the Financial Services Oversight Council and the Office of National Insurance are authorized under current authorities, and the costs are reflected directly in the Budget. In other areas where specific new resources are not needed, such as in the case of the Federal Reserve's actions on executive compensation, mortgage lending, and credit card regulation, administrative reform is underway but not specifically reflected in the Budget. The remaining reforms, which are subject to enactment of a financial reform bill, are currently included as a single amount in the *Appendix*, reflecting the net impact of proposed efficiency savings, transfers, and new spending. The amounts include a budgetary placeholder for new spending and receipts from the non-bank resolution authority. Specific programmatic impacts on SEC and CFTC are discussed in each regulator's *Appendix* narrative.

Chart 4-1 illustrates the Administration's proposed changes to the U.S. financial regulatory structure.

In the areas of financial stability oversight and the resolution of non-banks, the Administration has proposed new authorities that do not exist under the current regulatory structure. In consumer financial

protection and bank supervision, portions of the current authorities of multiple regulators is consolidated into fewer or a single regulator, in order to better focus Federal oversight in those areas. For securities and derivatives regulation, existing authorities have been enhanced. The overall result is a comprehensive system that addresses identified gaps in the system of U.S. financial regulation.

International Financial Reform. The current financial crisis from which the Nation is emerging was an international event not limited to U.S. markets, corporations, and consumers. In addition to its demonstrated commitment to achieving meaningful financial reform at home, the Treasury Department continues to ensure coordination of financial reform principles across the globe. At the G-20 summit in October 2009, Secretary Geithner worked with other world leaders to establish a framework of core reform principles applicable to all member nations. The G-20 also produced a timeline for implementing the global reform agenda, which will be reviewed when the group reconvenes in spring 2010. The Treasury Department's coordination with its international counterparts will help ensure that standards are raised across the globe and not just in the United States, so that dangerous and irresponsible practices by foreign firms do not threaten domestic financial markets.

5. LONG TERM BUDGET OUTLOOK

The horizon for most numbers in this budget is 10 years. In particular, the account-level estimates in the 2011 Budget extend to 2020. This 10-year horizon reflects a balance between the importance of considering both the current and future implications of budget decisions made today and a practical limit on the construction of detailed budget projections for years in the future.

Nonetheless, many decisions made today will have important repercussions beyond the 10-year horizon, and it is important to anticipate what future budgetary requirements beyond the 10-year horizon might flow from current laws and policies despite the uncertainty surrounding the assumptions needed for such estimates. Long-run budget projections can be useful in drawing attention to potential problems. Imbalances that may be manageable in the 10-year time frame can become unmanageable if allowed to grow.

To this end, the budget projections in this chapter extend the policies proposed in the 2011 Budget for 75 years. Because of the uncertainties involved in making long-run projections, results are presented for a base case and for several alternative scenarios.

Although the Budget offers major initiatives in many areas, the Administration recognizes that not all of the policy initiatives needed to stabilize the country's long-run fiscal situation have been formulated. The projections in this chapter reflect the fact that until these reforms are enacted, simply extending current laws and policies leaves the budget in an unsustainable position. Reforms are needed to make sure that programs like Medicare Part A and Social Security, which are expected to be financed from dedicated revenue sources, remain self-sustaining, and that overall budgetary resources are large enough to support future spending. One of the reasons why the Administration made health care reform a first-year priority is that there is no way to achieve long-run fiscal sustainability without slowing the growth rate of health expenditures. The Administration intends to work with Congress to develop additional policies that will prevent the outcomes shown in many of the charts below from occurring.

The key drivers of the long-range deficit are the Government's major health and retirement programs: Medicare, Medicaid and Social Security.

- Medicare finances health insurance for most of the Nation's seniors and many individuals with disabilities. Medicare's growth has exceeded that of other Federal spending for decades tracking the rapid growth in overall health care costs.
- Medicaid provides medical assistance, including acute and long-term care, to low-income persons including families with dependent children as well

as aged, blind or disabled individuals. It has grown more rapidly than the economy for several decades.

- Social Security provides retirement benefits, disability benefits, and survivors' insurance for the Nation's workers. Outlays for Social Security benefits will begin to exceed its dedicated revenue stream over the next quarter century putting pressure on the overall budget.

Long-range projections for Social Security and Medicare have been prepared for decades, and the actuaries at the Centers for Medicare and Medicaid Services plan to produce such projections for Medicaid in the near future. Budget projections for individual programs, however, even important ones such as Medicare and Social Security, cannot reveal the Government's overall budgetary position, which is why the projections in this chapter offer a useful complement to the long-run projections for the individual programs.

Future budget outcomes depend on a host of unknowns—changing economic conditions, unforeseen international developments, unexpected demographic shifts, the unpredictable forces of technological advance, and evolving political preferences to name a few. These uncertainties make even short-run budget forecasting quite difficult, and the uncertainties increase the further into the future projections are extended. While uncertainty makes forecast accuracy difficult to achieve, it does not detract from the importance of long-run budget projections, because future problems are often best addressed in the present. A full treatment of all the relevant risks is beyond the scope of this chapter, but the chapter does show how long-run budget projections respond to changes in some of key economic and demographic assumptions.

An Unsustainable Path

The deficit is projected to fall from its recent peak levels as the economy recovers from the recession and the worldwide financial crisis eases. By the end of the 10-year budget window, the deficit has returned to a lower level, and the debt held by the public is no longer rising rapidly relative to GDP. However, the fiscal position is not sustainable in the long run without further policy changes.

Beyond the 10-year budget window, increasing health costs and population aging will place the budget on an unsustainable course unless policy changes are made to address these challenges. Medicare and Medicaid have grown faster than the economy for decades, and if they continue to do so their growth will exert tremendous pressures on the budget. Additionally, the first members of the huge generation born after World War II, the so-called baby boomers, reached age 62 in 2008 and became eligible

for Social Security retirement benefits. In 2011, they will turn 65 and become eligible for Medicare. In the years that follow, the elderly population will steadily increase, putting serious strains on the budget.

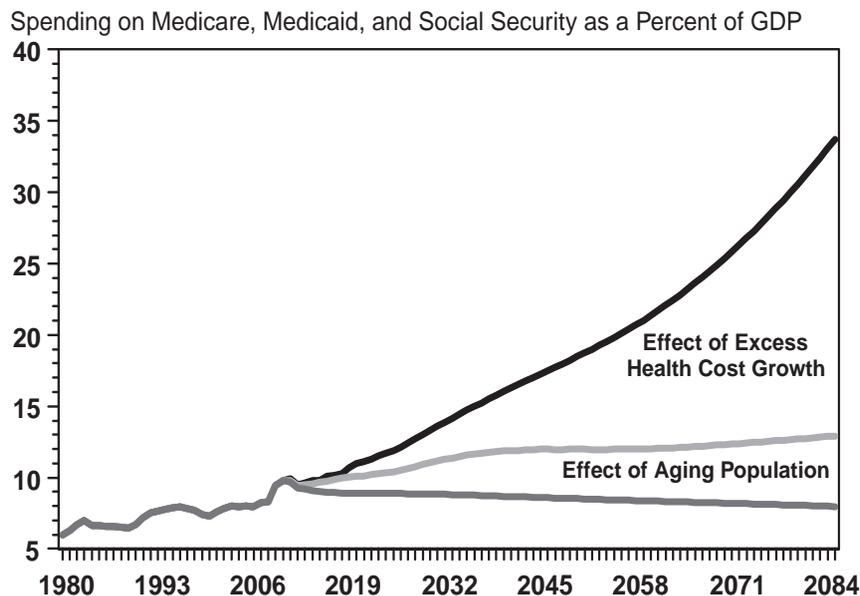
Sources of Increased Spending for Medicare, Medicaid, and Social Security.—The most important single factor driving the long-run budget outlook is the growth of health care expenditures. For decades, health care spending has outpaced the growth in total output (detailed national health expenditure data extend back to 1960). This excess cost growth must eventually be addressed if the budget is to reach a sustainable long-run position. The Administration's approach to health care reform has focused on bringing these costs under control. In the long-run projections in this chapter, different assumptions about the growth rate of health care costs are made. In the base case, a continuation of the historical trend would see the per beneficiary cost of health care spending for Medicare, Medicaid, and private health care rising 2 percent per year faster than GDP per capita.

The alternatives assume that the historical trend of rising costs is reduced. The health care legislation being considered in Congress is designed to be deficit neutral (or better) over the next 10 years based on hard, scoreable savings and to slow the growth rate of health care spending over the longer term. There are three broad reforms in the legislation under consideration in Congress that experts believe will produce significant savings relative to the historical trend: an excise tax on the highest-cost insurance plans will encourage substitution of more efficient plans with lower costs, while raising take-home pay; an independent payment advisory board will be empowered to suggest changes in Medicare and the health care system to improve the quality and value of its services; and an array of other delivery system reforms will gradu-

ally reduce costs. With 10-year deficit neutrality and the other three components in place, it is reasonable to expect a break in the trend of future health care costs, but the baseline does not include these savings because the final form of the legislation was not resolved in time for the Administration to produce detailed estimates of its long-run effects.

Of the many possible alternative projections, two are chosen here for examination. The first alternative is consistent with the projections made by the Medicare actuaries in the 2009 Trustees' Report, which assumes that health care costs will gradually stabilize as a share of GDP over the next 75 years. The actuaries base this conclusion on a stylized model that makes assumptions about (i) continuing improvements in medical technology, (ii) the extent to which new technology raises or lowers health care costs, and (iii) society's preferences for health care compared with other goods and services. It is more likely this stabilization will occur with the passage of health reform. In the actuaries' projections, health care costs grow rapidly over the next 25 years, as excess cost growth is assumed to be 1.4 percent per year in 2033. By 2083, it has slowed to less than 0.2 percent per year. The average excess cost growth over the entire 75-year projection period is 1 percent per year. The second alternative assumes more savings will be generated by health reform. More effective cost discipline over the long run could lower excess cost growth on average to 0.5 percent per year, a reduction of 1-1/2 percentage points compared with the historical trend. This still allows for some increase in medical costs relative to GDP, which seems likely given the value people place on good health and increased lifespans, but with such a large reduction in the trend, the problems connected with rising costs would become much more manageable.

Chart 5-1. Sources of Projected Growth in Medicare, Medicaid, and Social Security



Population aging also poses a serious long-run budgetary challenge. Because of lower expected fertility and improved longevity, the Social Security actuaries project that the ratio of workers to Social Security beneficiaries will fall from around 3.3 currently to a little over 2 by the time most of the baby boomers have retired. From that point forward, the ratio of workers to beneficiaries is expected to continue to decline slowly. With fewer workers to pay the taxes needed to support the retired population, budgetary pressures will steadily mount without reforms.

Chart 5-1 decomposes the projected growth in Medicare, Medicaid, and Social Security into the portion due to health costs per beneficiary growing faster than GDP per capita and the portion due to population aging. The projections are based on the Budget for the first 10 years and then the historical rate of excess health cost growth for years after 2020. For the next 20 years both increasing numbers of beneficiaries and rapid health cost growth contribute to the increase in the share of GDP devoted to these programs, but after 2030 health cost growth is the primary driver of spending growth.

Long-Run Budget Projections.—In 2009, the three major entitlement programs—Medicare, Medicaid, and Social Security—accounted for 41 percent of non-interest Federal spending, up from 30 percent in 1980. By 2030, when the surviving baby boomers will all be 65 or older, these three programs could account for 60 percent of non-interest Federal spending unless there is a break in the trend of health care costs or other major reforms to the programs. At the end of the projection period, in 2085, the figure could rise to nearly 80 percent of non-interest spending, again assuming current trends were to continue. In other words without reforms, most of the budget, aside from interest, would go to these three programs alone. That would severely reduce the flexibility of the budget, and the Government's ability to respond to new challenges.

The overall budget cannot sustain the projected increase in these major programs indefinitely. The bud-

get projections shown in Table 5–1 illustrate that point. Without further adjustments to spending and revenue in the current decade and changes in entitlement programs in the longer term, the deficit will rise steadily relative to the overall economy during coming decades. These rising deficits would drive publicly held Federal debt as a ratio to GDP to levels well above its previous peak level reached at the end of World War II. Timely reforms, especially those that would lower the trend of health care costs, are needed to avoid such a development. The policies included in current health care legislation are important steps in this direction, though achieving fiscal sustainability will require both effective implementation of these policies and additional policy changes in the future. The Administration aims to work with Congress so that the ratio of debt-to-GDP stabilizes at an acceptable level once the economy has recovered.

Revenues.—Projected revenues in these long-run budget projections start with the estimated receipts under the Administration's proposals in the 2011 Budget. In the absence of further policy changes, the ratio of taxes to GDP is projected to remain roughly constant over most of the period from 2020 to 2085. The tax code is indexed for inflation, but not for increases in real income, so there is a tendency for individual income taxes to increase relative to incomes when real incomes are rising. With rising real incomes, a larger percentage of taxpayers will be in higher tax brackets and this will raise the ratio of taxes to GDP. Offsetting this trend is the decline in taxable wages as a share of overall compensation. Fringe benefits, especially private health insurance, have grown faster than overall compensation for decades, and, unless there are major cost saving reforms to private health insurance, that trend is projected to continue. The result is that the higher average marginal tax rates that result from rising real incomes apply to a declining share of total income.

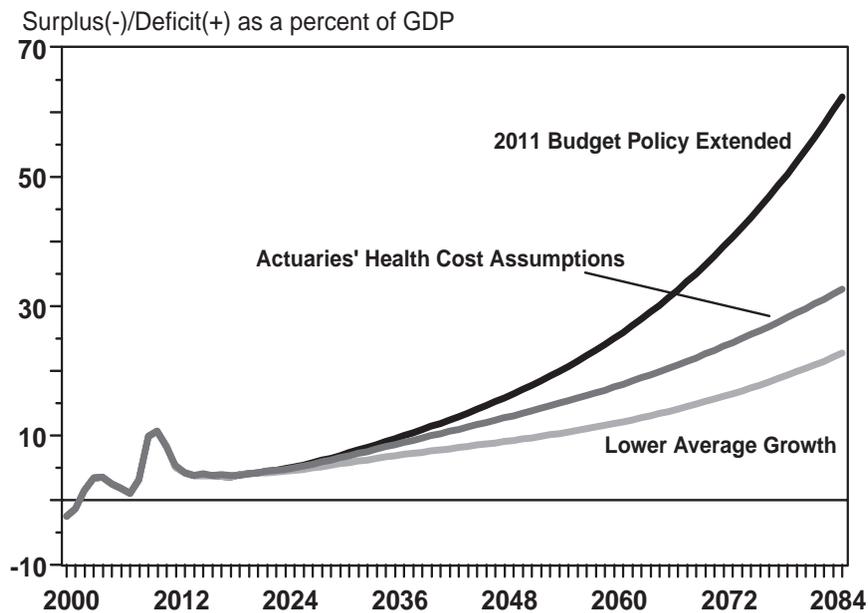
The projections assume that the Alternative Minimum Tax (AMT) will be effectively indexed, so the AMT does not raise the ratio of receipts to GDP. Some Federal tax-

Table 5–1. LONG-RUN BUDGET PROJECTIONS
(Receipts, Outlays, Surplus or Deficit, and Debt as a Percent of GDP)

	1980	1990	2000	2010	2020	2030	2050	2060	2085
Receipts	19.0	18.0	20.6	14.8	19.6	19.8	20.0	19.9	18.7
Outlays:									
Discretionary	10.1	8.7	6.3	9.6	6.2	6.1	6.1	6.1	6.1
Mandatory:									
Social Security	4.3	4.3	4.1	4.9	5.0	5.6	5.4	5.3	5.1
Medicare	1.1	1.7	2.0	3.1	4.0	5.3	9.6	11.9	22.0
Medicaid	0.5	0.7	1.2	1.9	2.0	2.4	3.5	4.1	6.6
Other	3.7	3.2	2.4	4.7	3.1	2.8	2.6	2.6	3.1
Subtotal, mandatory	9.6	9.9	9.7	14.5	14.1	16.1	21.1	24.0	36.9
Net Interest	1.9	3.2	2.3	1.3	3.5	4.5	10.0	14.8	38.0
Total outlays	21.7	21.9	18.2	25.4	23.7	26.8	37.2	44.9	81.0
Surplus or Deficit (–)	–2.7	–3.9	2.4	–10.6	–4.2	–6.9	–17.1	–25.0	–62.3
Primary Surplus or Deficit (–)	–0.8	–0.6	4.7	–9.4	–0.7	–2.4	–7.2	–10.2	–24.3
Federal Debt Held by the Public	26.1	42.1	34.7	63.6	77.2	98.8	218.1	323.7	829.7

Note: The figures shown in this table for 2030 and beyond are the product of a long-range forecasting model maintained by the Office of Management and Budget. This model is separate from the models and capabilities that produce detailed programmatic estimates in the Budget. It was designed to produce long-range forecasts based on additional assumptions regarding growth of the economy, the long-range evolution of specific programs, and the demographic and economic forces affecting those programs. The model, its assumptions, and sensitivity testing of those assumptions are presented in this chapter.

Chart 5-2. Health Care Cost Alternatives



es tend to decline in real terms in the absence of policy changes. For example, many excise taxes are set in nominal terms, so collections decline as a share of GDP when there is inflation. But such taxes are a relatively small fraction of total revenue. Income taxes and payroll taxes account for most of Federal revenue.

Discretionary Outlays.— Because discretionary spending is determined annually through the legislative process, there is no simple natural assumption for projecting its future path. The budget provides a specific path for discretionary spending over the next 10 years. Beyond that time frame, there are several different plausible assumptions for the path of future discretionary spending. One possibility would be to assume that discretionary spending will be held constant in inflation adjusted terms. That would allow discretionary programs to increase with wage costs and other prices, but would not allow the programs to expand with population or real growth in the economy. Extending this assumption over many decades is not realistic. When the population and economy grow, as assumed in these projections, the demand for public services is likely to expand as well. The current base projection, therefore, assumes that discretionary spending keeps pace with the growth in GDP in the long run, so that spending increases in inflation-adjusted terms whenever there is real economic growth. This chapter also shows outcomes under alternative assumptions.

Table 5-1 shows how the budget would evolve without further changes in policy under the base assumptions described above. The key assumption is the continued excess health care cost growth of around 2 percent per year, which dramatically increases the share of the budget devoted to Medicare and Medicaid. Other parts of the budget show much less growth. Social Security benefits

rise relative to the economy over the next 25 years, but beyond that point decline slightly as slower wage growth, the result of rapid health care cost growth, reduces future benefit payments. Other mandatory programs do not increase relative to the size of the economy, and discretionary programs are held to a constant share of GDP by assumption. On the revenue side, once tax revenues recover from the economic downturn, there is little change in revenues relative to GDP through 2060, as the forces pushing up taxes are roughly balanced by those limiting their growth. After 2060, the continuing rise in health costs lowers taxable incomes sufficiently to reduce total revenues relative to GDP. With total outlays increasing much more rapidly than taxes, the deficit rises, and publicly held debt greatly exceeds historical levels.

Alternative Policy, Economic, and Technical Assumptions

The quantitative results discussed above are sensitive to changes in underlying policy, economic, and technical assumptions. Some of the most important of these assumptions and their effects on the budget outlook are discussed below. Increasing deficits result for most plausible projections of the long run trends.

Health Spending.—The base projections for Medicare and Medicaid over the next 75 years assume an extension of historical trends in health care spending. On average, Medicare and Medicaid costs per beneficiary have risen about 2 percent faster than GDP per capita since the programs were established in the 1960s. Continuing this trend would push costs steadily higher and is one of the main reasons the long-run projections show an unsustainable fiscal path.

Chart 5-3. Alternative Discretionary Projections

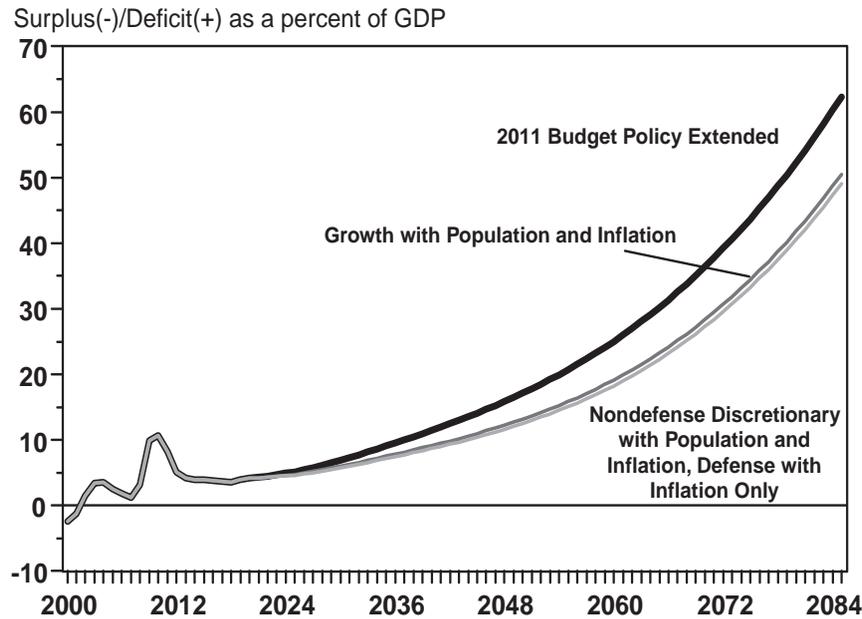


Chart 5-2 shows budget outcomes under the base assumptions and under two other scenarios. In the first, per capita health care costs grow at the rates assumed in the 2009 Medicare Trustees' Report. Specifically, this alternative assumes that the excess growth of health care costs above growth in GDP per capita growth averages about 1 percent per year for the next 75 years, falling from the historical value of over 2.0 percent to 1.4 percent in 2033 and to about 0.2 percent per year in 2083. In the second

scenario, excess cost growth is reduced to 0.5 percent per year on average over the next 75 years.

Discretionary Spending.— The current base projection for discretionary spending assumes that after 2020, discretionary spending keeps pace with the growth in GDP (see Chart 5-3). An alternative assumption would be to allow discretionary spending to increase for inflation and population growth only. In this case, discretionary spending would remain constant in inflation adjusted per

Chart 5-4. Alternative Revenue Projections

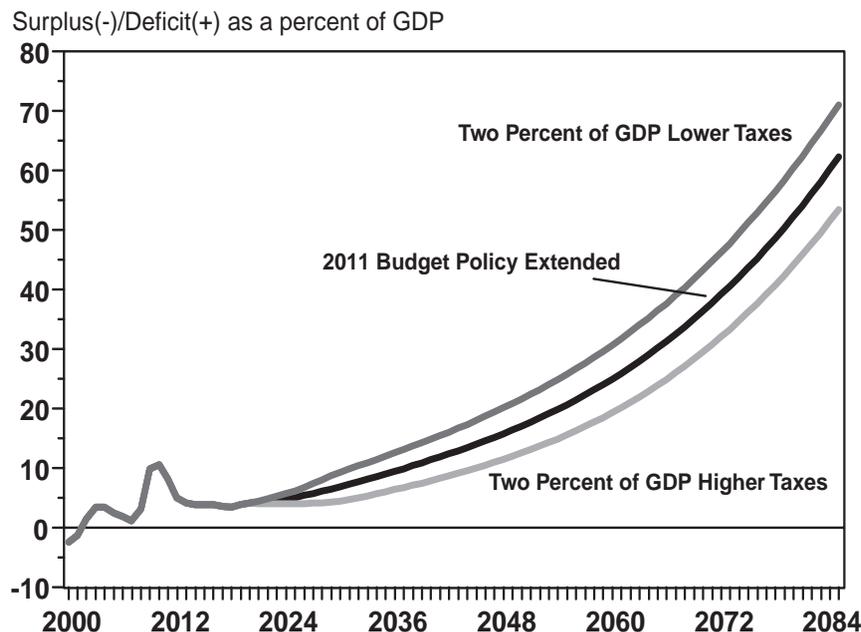
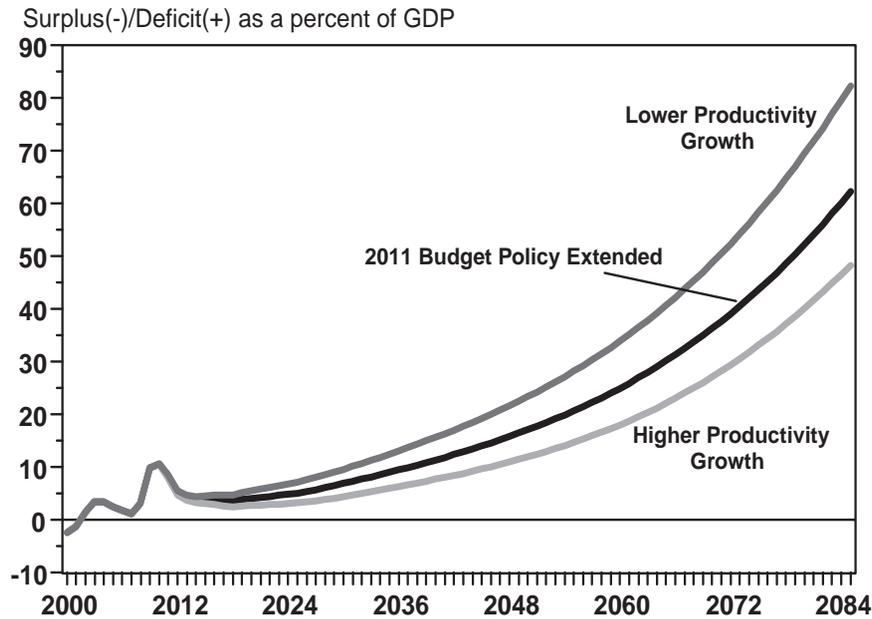


Chart 5-5. Alternative Productivity Assumptions



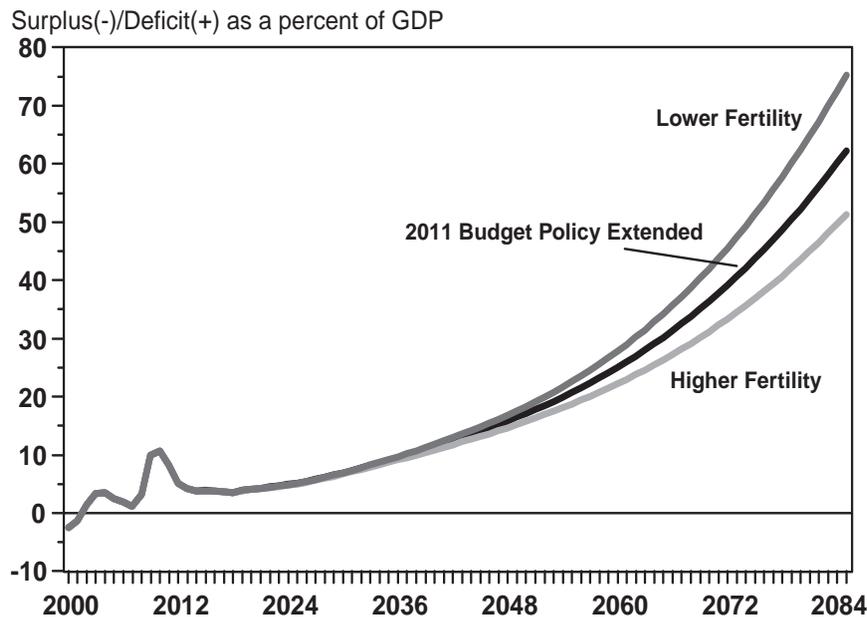
capita terms. Yet another possible assumption is to allow nondefense discretionary spending to grow with inflation plus population, but to increase defense spending only for inflation.

Alternative Revenue Projections.— In the base projection, tax receipts are roughly stable relative to GDP from 2020 through 2060, before declining thereafter. Chart 5-4 shows alternative receipts assumptions. Allowing receipts to rise over time by 2 percentage points

of GDP more than in the base case would lower the long-run budget deficit, but not by enough to establish a sustainable path for future policy. Reducing taxes by 2 percentage points of GDP would bring the projected rise in the deficit and the publicly held debt forward in time.

Productivity.—The rate of future productivity growth has a major effect on the long-run budget outlook (see Chart 5-5). It is also highly uncertain. Over the next few decades, an increase in productivity growth

Chart 5-6. Alternative Fertility Assumptions



would reduce projected budget deficits. Higher productivity growth adds directly to the growth of the major tax bases, while it has a smaller immediate effect on outlay growth even assuming that discretionary spending rises with GDP. For much of the last century, output per hour in nonfarm business grew at an average rate of around 2-1/4 percent per year. Growth was not always steady. In the 25 years following 1948, productivity grew at an average rate of 2.7 percent per year, but this was followed by a period of much slower growth. From 1973 to 1995, output per hour in nonfarm business grew at an average annual rate of just 1.4 percent per year. In the latter half of the 1990s, however, the rate of productivity growth increased again and it has remained higher albeit with some fluctuations since then. Indeed, the average growth rate of productivity in nonfarm business has averaged 2.7 percent per year since the fourth quarter of 1995, the same as the average growth rate in the earlier postwar period.

The base projections assume that output per hour in nonfarm business will increase at an average annual rate of around 2.3 percent per year, close to its long-run average and slightly below its average growth since 1995. This implies that real GDP per hour worked will grow at an average annual rate of 2.0 percent per year. The difference is accounted for by the fact that the sectors of the economy that are counted in GDP outside of the nonfarm business sector tend to have lower productivity growth than nonfarm business does. The alternatives highlight the effect of raising and lowering the projected productivity growth rate by 1/2 percentage point.

Population.—The key assumptions for projecting long-run demographic developments are fertility, immigration, and mortality.

- The demographic projections assume that fertility will average about 2.0 total lifetime births per woman in the future, just slightly below the replacement rate needed to maintain a constant population in the absence of immigration—2.1 births per woman (see Chart 5-6). The alternatives are those in the latest Social Security trustees' report (1.7 and 2.3 births per woman).
- The rate of immigration is assumed to average around 1 million immigrants per year in these projections (see Chart 5-7). Higher immigration relieves some of the downward pressure on population growth from low fertility and allows total population to expand throughout the projection period, although at a much slower rate than has prevailed historically. The alternatives are taken from the Social Security Trustees' Report (1.3 million total immigrants per year in the high alternative and 0.8 million in the low alternative).
- Mortality is projected to decline as people live longer in the future (see Chart 5-8). These assumptions parallel those in the latest Social Security Trustees' Report. The average period life expectancy for women is projected to rise from 80.0 years in 2008 to 86.3 years in 2085, and the average period life expectancy for men is expected to increase from 75.4 years in 2007 to 83.1 years in 2085. A technical panel advising the Social Security trustees has reported that the improvement in longevity might be even greater than assumed here. The variations show the high and low alternatives from the latest Trustees' report (average female and male life expectancy reaching 82.7 and 79.1 in the low cost alternative and 89.9 and 87.2 in the high cost alternative).

Chart 5-7. Alternative Immigration Assumptions

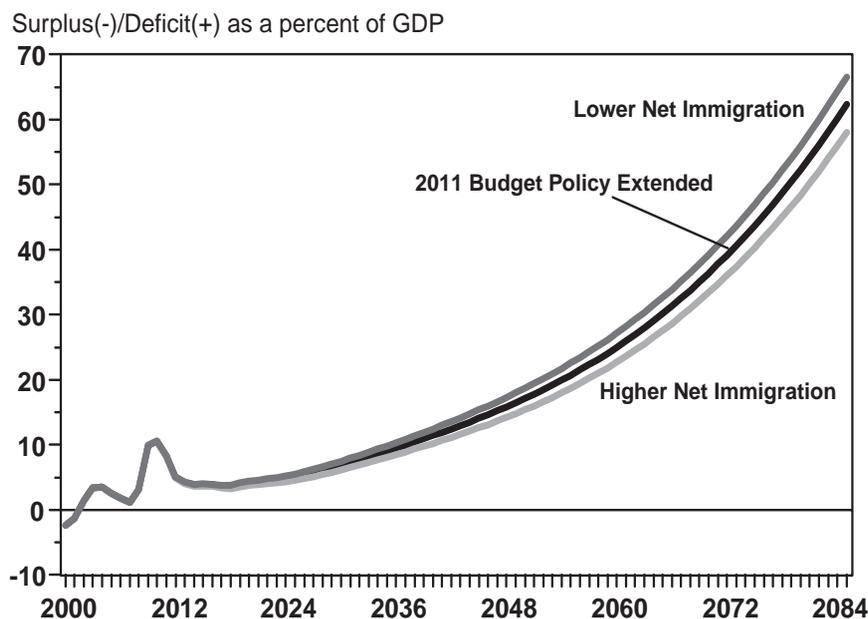
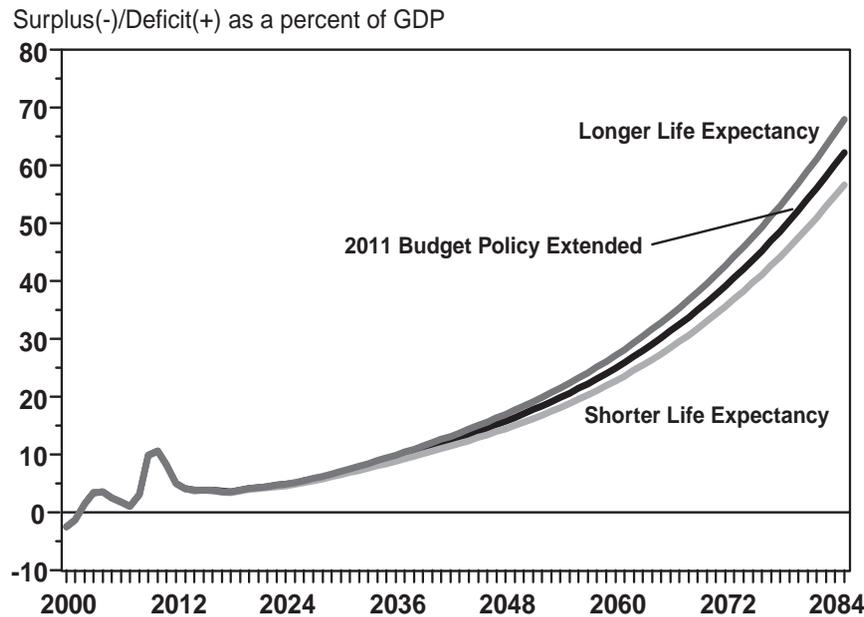


Chart 5-8. Alternative Mortality Assumptions



The long-run budget outlook is highly uncertain. With pessimistic assumptions, the fiscal picture deteriorates even sooner than in the base projection. More optimistic assumptions imply a longer period before the pressures of rising spending overwhelm the budget. But despite the uncertainty, these projections show under a wide range of forecasting assumptions that overall budgetary resources will not be sufficient to support all future projected commitments. These projections highlight the commitments for future policy action to address the main drivers of future budgetary costs, especially health costs.

The Fiscal Gap

The fiscal gap is one measure of the size of the adjustment needed to preserve fiscal sustainability in the long run.¹ It is defined as the increase in taxes or reduction in non-interest expenditures required to keep the long-run ratio of government debt to GDP at its current level if implemented immediately. The gap is usually measured as a percentage of GDP. The fiscal gap is calculated over a finite time period, and therefore it may understate the adjustment needed to achieve longer-run sustainability.

Table 5-2 shows fiscal gap calculations for the base case calculated over a 75-year horizon and for the various alternative scenarios described above. The fiscal gap in the base case is 8.0 percent of GDP, and it ranges in the alternative scenarios from 2.8 percent of GDP to 9.6 percent of GDP. In all cases, significant fiscal adjustments would be needed to achieve long-run sustainability.

¹ Alan J. Auerbach, "The U.S. Fiscal Problem: Where We Are, How We Got Here, and Where We're Going," *NBER: Macroeconomics Annual 1994*, pp 141 – 175.

Table 5-2. FISCAL GAP UNDER ALTERNATIVE BUDGET SCENARIOS
(Percent of GDP)

Baseline	8.0
Health:	
Excess cost growth averages 1 percent	4.5
Excess cost growth averages 1/2 percent	2.8
Discretionary Outlays:	
Grow with inflation plus population	6.2
Defense grows with inflation; nondefense grows with inflation plus population	5.9
Revenues:	
Revenues exceed baseline by 2 percent of GDP	6.4
Revenues fall short of baseline by 2 percent of GDP	9.6
Productivity:	
Productivity grows by 0.5 percent per year faster than the baseline	6.6
Productivity grows by 0.5 percent per year slower than the baseline	9.6
Population:	
Fertility:	
2.3 births per woman	7.1
1.7 births per woman	8.8
Immigration:	
1.3 million immigrants per year	7.5
0.7 million immigrants per year	8.4
Mortality:	
Female life expectancy 82.7 years; male life expectancy 79.1 years in 2085	7.2
Female life expectancy 89.9 years; male life expectancy 87.2 years in 2085	8.8

Table 5-3. INTERMEDIATE ACTUARIAL PROJECTIONS FOR OASDI AND HI

	2010	2020	2030	2050	2085
	(Percent of Payroll)				
Medicare Hospital Insurance (HI)					
Income Rate	3.2	3.3	3.4	3.4	3.5
Cost Rate	3.6	4.4	6.0	8.7	12.2
Annual Balance	-0.4	-1.1	-2.6	-5.3	-8.7
Projection Interval:			25 years	50 years	75 years
Actuarial Deficiency 2008 - 2083			-1.4	-2.8	-3.9
	(Percent of Payroll)				
Old Age Survivors and Disability Insurance (OASDI)					
Income Rate	12.9	13.0	13.2	13.3	13.4
Cost Rate	12.5	14.5	16.8	16.6	17.8
Annual Balance	0.4	-1.5	-3.6	-3.4	-4.4
Projection Interval:			25 years	50 years	75 years
Actuarial Balance			-0.2	-1.5	-2.0

Actuarial Projections for Social Security and Medicare

The Trustees for the Hospital Insurance and Social Security trust funds issue annual reports that include projections of income and outgo for these funds over a 75-year period. These projections are based on different methods and assumptions than the long-run budget projections presented above. Even with these differences, the message is similar: the growth in per capita health care costs and the retirement of the baby-boom generation will exhaust the trust funds unless further remedial action is taken.

The 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 period. The estimates cover periods ranging in length from 10 to 75 years. These balance calculations show what it would take to achieve a positive trust fund balance at the end of a specified period of time, not what it would take to maintain a positive balance indefinitely. To maintain a positive balance forever requires a larger adjustment than is needed to maintain a positive balance over 75 years when the annual balance in the program is negative at the end of the 75-year projection period as it is expected to be for Social Security and Medicare without future programmatic reforms.

Table 5-3 shows the projected income rate, cost rate, and annual balance for the Medicare Part A and OASDI Trust Funds at selected dates under the Trustees' intermediate assumptions.

For the Medicare HI trust fund, costs as a percentage of Medicare covered payroll are projected to rise from 3.6 percent today to 6.0 percent of projected payroll in 2030

and 12.2 percent of payroll in 2085. Income excluding interest rises only slightly from 3.2 percent of payroll today to 3.5 percent of payroll in 2085. Thus the annual balance moves from a relatively small 0.4 percent of payroll deficit today to 2.6 percent deficit in 2030 and 8.7 percent in 2085. On a 75-year basis, the HI actuarial deficit is 3.9 percent of payroll, roughly twice that of Social Security.

As a result of reforms legislated in 1983, Social Security is currently running a small surplus with income exceeding costs. Over time, as the ratio of workers to retirees falls, costs are projected to rise from 12.5 percent of Social Security covered payroll today to 14.5 percent of payroll in 2020, 16.8 percent of payroll in 2030 and 17.8 percent of payroll in 2085. Revenues excluding interest are projected to rise only slightly from 12.9 percent of payroll today to 13.4 percent in 2085. Thus the annual balance is projected to switch from surplus to deficit, with the deficit rising to 1.5 percent of payroll in 2020, 3.6 percent of payroll in 2030, and 4.4 percent of payroll in 2085. On a 75-year basis, the actuarial deficit is projected to be 2.0 percent of payroll.

TECHNICAL NOTE: SOURCES OF DATA AND METHODS OF ESTIMATING

The long-range budget projections are based on 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 2010–2020, the assumptions are drawn from the Administration's economic projections used for the 2011 Budget. These budget assumptions reflect the President's policy proposals. 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 2009 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 over the next 10 years in the Budget's economic assumptions.

CPI inflation holds stable at 2.1 percent per year; the unemployment rate is constant at 5.2 percent; and the yield on 10-year Treasury notes is steady at 5.3 percent.

Real GDP per hour, grows at the same average rate as in the Administration's 10-year projections—2.0 percent per year.

Consistent with the demographic assumptions in the Trustees' reports, U.S. population growth slows from around 1 percent per year to about two-thirds that rate by 2030, and slower rates of growth beyond that point. By the end of the projection period it is as low as 0.4 percent per year.

Real GDP growth is less than its historical average of around 3.2 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, average real GDP growth declines to around 2.5 percent per year.

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 is unrealistic, but it simplifies comparisons of alternative policies.

Budget Projections: For the period through 2020, receipts follow the 2011 Budget's policy projections. After 2020, income tax receipts are assumed to rise relative to wages and salaries as real income growth pushes more people into higher tax brackets. However, this tendency is largely offset by the projected rise in nontaxed fringe benefits, mainly because health insurance costs are rising faster than wages. Other taxes generally hold close to the averages reached by 2020 in the Budget projections. Discretionary spending follows the policies in the Budget over the next 10 years and grows at the rate of growth in nominal GDP afterwards. Other spending also aligns with the Budget through the budget horizon. Long-run Social Security spending is projected by the Social Security actuaries using this chapter's long-range assumptions. Medicare benefits are projected based on a projection of excess health care cost growth of 2 percent per year, the assumptions for the growth in the beneficiary population from the 2009 Medicare Trustees' report, and the general inflation assumptions described above. Medicaid outlays are based on the economic and demographic projections in the model. 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.

6. FEDERAL BORROWING AND DEBT

Debt is the largest legally binding obligation of the Federal Government. At the end of 2009, the Government owed \$7,545 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 \$202 billion of interest on this debt. In addition to the Government's debt obligation, at the end of 2009, the

Government held financial assets, net of other liabilities, of \$898 billion. Therefore, the Government's debt net of financial assets was \$6,647 billion, or 46.7 percent of GDP.

The deficit was \$1,413 billion in 2009. This \$1,413 billion deficit and other financing transactions totaling \$329 billion required the Government to increase its borrowing from the public by \$1,742 billion last year. Meanwhile, as-

Table 6-1. TRENDS IN FEDERAL 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 as a percent of: ³	
	Current dollars	FY 2009 dollars ¹	GDP	Credit market debt ²	Total outlays	GDP
1946	241.9	2,261.5	108.7	N/A	7.4	1.8
1950	219.0	1,666.3	80.2	53.3	11.4	1.8
1955	226.6	1,514.9	57.2	43.2	7.6	1.3
1960	236.8	1,405.6	45.6	33.7	8.5	1.5
1965	260.8	1,447.3	37.9	26.9	8.1	1.4
1970	283.2	1,306.9	28.0	20.8	7.9	1.5
1975	394.7	1,340.3	25.3	18.4	7.5	1.6
1980	711.9	1,671.9	26.1	18.5	10.6	2.3
1985	1,507.3	2,698.3	36.4	22.3	16.2	3.7
1990	2,411.6	3,697.3	42.1	22.6	16.2	3.5
1995	3,604.4	4,868.5	49.1	26.7	15.8	3.3
2000	3,409.8	4,240.1	34.7	19.1	13.0	2.4
2001	3,319.6	4,032.7	32.5	17.5	11.6	2.1
2002	3,540.4	4,231.3	33.6	17.5	8.9	1.7
2003	3,913.4	4,581.6	35.6	17.8	7.5	1.5
2004	4,295.5	4,903.1	36.8	18.0	7.3	1.4
2005	4,592.2	5,076.1	36.9	17.6	7.7	1.5
2006	4,829.0	5,161.2	36.5	16.9	8.9	1.8
2007	5,035.1	5,229.5	36.2	16.2	9.2	1.8
2008	5,803.1	5,890.4	40.2	17.6	8.7	1.8
2009	7,544.7	7,544.7	53.0	21.9	5.7	1.4
2010 estimate	9,297.7	9,215.1	63.6	N/A	6.3	1.6
2011 estimate	10,498.3	10,291.4	68.6	N/A	8.0	2.0
2012 estimate	11,472.1	11,073.1	70.8	N/A	10.9	2.5
2013 estimate	12,325.7	11,697.4	71.7	N/A	13.0	3.0
2014 estimate	13,139.3	12,260.2	72.2	N/A	14.2	3.2
2015 estimate	13,988.4	12,833.6	72.9	N/A	14.9	3.4

N/A = Not available.

¹ Debt in current dollars deflated by the GDP chain-type price index with fiscal year 2009 equal to 100.

² Total credit market debt owed by domestic nonfinancial sectors, modified in some years to be consistent with budget concepts for the measurement of Federal debt. 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).

sets net of liabilities rose by \$382 billion in 2009. Debt held by the public net of financial assets increased from 36.6 percent of Gross Domestic Product (GDP) at the end of 2008 to 46.7 percent of GDP at the end of 2009. The deficit is estimated to increase to \$1,556 billion in 2010, largely as a result of the Government's continued actions to restore economic growth, and then begin to fall. Declining deficits are estimated to significantly reduce growth in debt as a percentage of GDP; debt net of financial assets is projected to reach 61.6 percent of GDP at the end of 2011 and then to grow much more gradually in subsequent years.

Trends in Debt Since World War II

Table 6–1 depicts trends in Federal debt held by the public from World War II to the present and estimates from the present through 2015. (It is supplemented for earlier years by Tables 7.1–7.3 in *Historical Tables*, which is published as a separate volume of the Budget.) Federal debt peaked at 108.7 percent of GDP in 1946, just after the end of the war. From then until the 1970s, Federal debt as a percentage of GDP decreased almost every year because of relatively small deficits, an expanding economy, and 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 80.2 percent of GDP to 25.3 percent, and from 53.3 percent of credit market debt to 18.4 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 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 after the middle of the decade. The growth of Federal debt accelerated at the beginning of the 1980s, due in large part to a deep recession, and the ratio of Federal debt to GDP grew sharply. It continued to grow throughout the 1980s as large tax cuts, enacted in 1981, and substantial increases in defense spending were only partially offset by reductions in domestic spending. The resulting deficits increased the debt to almost 50 percent of GDP by 1993. The ratio of Federal debt to credit market debt also rose, 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, however, as a growing economy and two major budget agreements enacting spending cuts and revenue increases reduced deficits significantly. The debt declined markedly relative to both GDP and total credit market debt, from 1997 to 2001, as surpluses emerged. Debt fell from 49.3 percent of the GDP in 1993

to 32.5 percent in 2001. 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 impressive progress in reducing the debt burden stopped and then reversed course beginning in 2002. A decline in the stock market, a recession, and the initially slow recovery from that recession all reduced tax receipts. The tax cuts of 2001 and 2003 had a similarly large and longer-lasting effect, as did the growing costs of the wars in Iraq and Afghanistan. Deficits ensued and debt began to rise, both in nominal terms and as a percentage of GDP. There was a small temporary improvement in 2006 and 2007 as economic growth led to a revival of receipt growth.

As a result of the most recent recession, which began in December 2007, and the massive financial and economic challenges it imposed on the Nation, the deficit began increasing rapidly in 2008. The deficit increased more substantially in 2009 as the Government continued to take aggressive steps to restore the health of the Nation's economy and financial markets. This Budget begins the difficult work of restoring fiscal discipline and returning the country to a more sustainable fiscal path. Deficits are projected to continue at an unusually high level in 2010 but then recede thereafter as the improving economy begins to translate into lower outlays and higher receipts. Debt net of financial assets as a percent of GDP is estimated to grow to 55.8 percent at the end of 2010 and 61.6 percent at the end of 2011 and then to grow much more slowly in subsequent years.

Debt Held by the Public and Gross Federal Debt

The Federal Government issues debt securities for two principal purposes. First, it borrows from the public to finance the Federal deficit.¹ Second, it issues debt to Federal Government accounts, primarily trust funds, which 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."²

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

¹ 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.

² 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 6–4, but also the debt of the Government-Sponsored Enterprises listed in Table 22–9 at the end of Chapter 22 of this volume and certain Government-guaranteed securities.

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 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.³ 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, with the Federal Government's recent extraordinary efforts to stabilize credit markets, the Government has used the borrowed funds to acquire financial assets that would otherwise have required 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.)

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 charges 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 fund that holds the securities, and are a mechanism for crediting interest to that fund on its 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 taxation or 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

³ The Federal subsector of the national income and product accounts provides a measure of "net government saving" (based on current expenditures and current receipts) that can be used to analyze the effect of Federal fiscal policy on national saving within the framework of an integrated set of measures of aggregate U.S. economic activity. The Federal subsector and its differences from the budget are discussed in Chapter 28 of this volume, "National Income and Product 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 93 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. Chapter 5 of this volume, "Long-Term Budget Outlook," projects Social Security and Medicare outlays to the year 2085 relative to GDP. The excess of future Social Security and Medicare benefits relative 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 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 6–2 summarizes Federal borrowing and debt from 2009 through 2020. In 2009 the Government borrowed \$1,742 billion, increasing the debt held by the public from \$5,803 billion at the end of 2008 to \$7,545 billion at the end of 2009. The debt held by Government accounts increased \$148 billion, and gross Federal debt increased by \$1,890 billion to \$11,876 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.⁵ Table 6–2 shows the relationship between the

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 Treasury Department in coordination with the Office of Management and Budget.

⁵ 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.

Table 6-2. FEDERAL GOVERNMENT FINANCING AND DEBT
(In billions of dollars)

	Actual 2009	Estimate										
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Financing:												
Unified budget deficit	1,412.7	1,555.6	1,266.7	828.5	727.3	705.8	751.9	777.7	778.0	785.1	908.4	1,002.9
Other transactions affecting borrowing from the public:												
Changes in financial assets and liabilities: ¹												
Change in Treasury operating cash balance ²	-96.3	-5.3	-200.0	.....	.....	.....	.....	.....	.....	.....	.....	.....
Net disbursements of credit financing accounts:												
Direct loan accounts	293.5	210.4	142.6	135.1	117.9	108.5	99.2	70.4	84.9	78.8	90.8	91.3
Guaranteed loan accounts	7.5	-6.8	8.1	11.8	11.8	6.0	4.2	3.2	1.2	-2.2	-4.0	-5.6
Troubled Asset Relief Program												
equity purchase accounts	105.4	0.6	-15.2	-*	-1.9	-4.9	-4.5	-4.8	-9.2	-10.7	-25.9	-15.8
Subtotal, net disbursements	406.4	204.1	135.5	147.0	127.9	109.6	98.9	68.9	76.8	65.9	60.9	69.8
Net purchases of non-Federal securities by the National Railroad Retirement Investment Trust	-2.9	-1.3	-1.0	-0.9	-1.0	-1.0	-1.0	-1.4	-1.1	-1.3	-1.3	-1.2
Net change in other financial assets and liabilities ³	22.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Subtotal, changes in financial assets and liabilities	329.4	197.6	-65.5	146.1	126.9	108.6	97.9	67.4	75.7	64.6	59.6	68.7
Seigniorage on coins	-0.4	-0.2	-0.5	-0.8	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
Total, other transactions affecting borrowing from the public	329.0	197.4	-66.0	145.3	126.2	107.9	97.2	66.7	75.0	63.9	59.0	68.0
Total, requirement to borrow from the public (equals change in debt held by the public)	1,741.7	1,752.9	1,200.7	973.8	853.5	813.7	849.0	844.5	853.0	849.0	967.4	1,070.9
Changes in Debt Subject to Statutory Limitation:												
Change in debt held by the public	1,741.7	1,752.9	1,200.7	973.8	853.5	813.7	849.0	844.5	853.0	849.0	967.4	1,070.9
Change in debt held by Government accounts	148.1	157.8	156.7	217.8	264.3	265.1	302.0	309.2	321.3	337.2	285.3	256.4
Less: change in debt not subject to limit and other adjustments	3.5	-1.7	-0.5	1.3	1.3	0.6	0.9	1.2	1.2	1.0	0.7	-0.5
Total, change in debt subject to statutory limitation	1,893.3	1,909.1	1,356.9	1,192.9	1,119.1	1,079.4	1,151.8	1,154.9	1,175.6	1,187.2	1,253.4	1,326.8
Debt Subject to Statutory Limitation, End of Year:												
Debt issued by Treasury	11,850.3	13,760.1	15,116.8	16,308.4	17,426.3	18,504.5	19,655.6	20,809.4	21,984.4	23,171.3	24,424.2	25,751.2
Less: Treasury debt not subject to limitation (-) ⁴	-12.9	-13.6	-13.4	-12.1	-10.9	-9.7	-8.9	-7.9	-7.3	-7.0	-6.5	-6.8
Agency debt subject to limitation	*	*	*	*	*	*	*	*	*	*	*	*
Adjustment for discount and premium ⁵	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7	15.7
Total, debt subject to statutory limitation ⁶	11,853.1	13,762.2	15,119.1	16,312.0	17,431.1	18,510.5	19,662.4	20,817.2	21,992.8	23,180.0	24,433.4	25,760.1
Debt Outstanding, End of Year:												
Gross Federal debt: ⁷												
Debt issued by Treasury	11,850.3	13,760.1	15,116.8	16,308.4	17,426.3	18,504.5	19,655.6	20,809.4	21,984.4	23,171.3	24,424.2	25,751.2
Debt issued by other agencies	25.5	26.5	27.3	27.2	27.2	27.8	27.7	27.6	26.9	26.2	26.0	26.2
Total, gross Federal debt	11,875.9	13,786.6	15,144.0	16,335.7	17,453.5	18,532.3	19,683.3	20,836.9	22,011.3	23,197.5	24,450.1	25,777.4
Held by:												
Debt held by Government accounts	4,331.1	4,489.0	4,645.7	4,863.6	5,127.8	5,393.0	5,694.9	6,004.1	6,325.5	6,662.7	6,948.0	7,204.3
Debt held by the public ⁸	7,544.7	9,297.7	10,498.3	11,472.1	12,325.7	13,139.3	13,988.4	14,832.8	15,685.8	16,534.8	17,502.2	18,573.1

*\$50 million or less.

¹A 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.

²Includes assumed Supplementary Financing Program balance of \$200 billion on September 30, 2010, and zero on September 30, 2011, and beyond.

³Besides checks outstanding, includes 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.

⁴Consists primarily of debt issued by or held by the Federal Financing Bank.

⁵Consists 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.

⁶The statutory debt limit is \$12,394 billion, as enacted on December 28, 2009.

⁷Treasury 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).

⁸At the end of 2009, the Federal Reserve Banks held \$769.2 billion of Federal securities and the rest of the public held \$6,775.5 billion. Debt held by the Federal Reserve Banks is not estimated for future years.

Federal deficit or surplus and the change in debt held by the public. The borrowing or debt repayment depends on the Federal 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 3 of this volume, "Interactions Between the Economy and the Budget."

The total or unified budget surplus consists of two parts: the on-budget surplus or deficit; and the surplus of the off-budget Federal entities, which have been excluded from the budget by law. Under present law, the off-budget Federal entities are the Social Security trust funds (Old-Age and Survivors Insurance and Disability Insurance) and the Postal Service fund.⁶ 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. As a result of the Government's recent extraordinary efforts to stabilize the Nation's credit markets, these other factors have significantly increased borrowing from the public. The other transactions affecting borrowing from the public are presented in Table 6-2 (an increase in the need to borrow is represented by a positive sign, like the deficit).

In 2009 the deficit was \$1,413 billion while these other factors—primarily the net disbursements of credit financing accounts—increased the need to borrow by \$329 billion. As a result, the Government borrowed \$1,742 billion from the public. The other factors are estimated to increase borrowing by \$197 billion in 2010 and reduce borrowing by \$66 billion in 2011. In 2012–2020, these other factors are expected to increase borrowing by annual amounts ranging from \$59 billion to \$145 billion.

Prior to 2008, the effect of these other transactions had been much smaller. In the 20 years between 1988 and 2007, the cumulative deficit was \$2,956 billion, the increase in debt held by the public was \$3,145 billion, and other factors added a total of \$190 billion of borrowing, 6 percent of total borrowing over this period. By contrast, the other factors resulted in more than 40 percent of the total increase in borrowing from the public for 2008 and nearly 20 percent of the increase for 2009.

Three specific factors presented in Table 6-2 are especially important.

Change in Treasury operating cash balance.—The cash balance increased by a record \$296 billion in 2008, primarily as a result of Treasury's creation of the Supplementary Financing Program (SFP). Under this temporary program, Treasury issues short-term debt and deposits the

cash proceeds with the Federal Reserve for use by the Federal Reserve in its actions to stabilize the financial markets. In 2009, the cash balance decreased by \$96 billion, due to a \$135 billion reduction in the SFP balance offset by a \$38 billion increase in the non-SFP cash balance. In the preceding 10 years, changes in the cash balance had been much smaller, ranging from a decrease of \$26 billion in 2003 to an increase of \$23 billion in 2007. The operating cash balance is projected to decrease by \$5 billion in 2010, to \$270 billion, including an assumed SFP balance of \$200 billion and a non-SFP balance of \$70 billion. In 2011, the operating cash balance is projected to decrease by \$200 billion due to an assumed end-of-year SFP balance of zero. Changes in the operating cash balance, while occasionally large, are inherently limited over time. 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), budget outlays for direct loans and loan guarantees consist of the estimated subsidy cost of the loans or guarantees at the time when the direct loans are disbursed or the guaranteed loans are made. The cash flows to and from the public resulting from these loans and guarantees—the disbursement and repayment of loans, the default payments on loan guarantees, the collections of interest and fees, and so forth—are not costs (or offsets to costs) to the Government except for their subsidy costs (the present value of the estimated net losses), which are already included in budget outlays. Therefore, they are non-budgetary in nature and are recorded as transactions of the non-budgetary financing account for each credit program.⁷

The financing accounts also include several types of intragovernmental transactions. In particular, they receive payment from the credit program accounts for the costs of new direct loans and loan guarantees; they also receive payment for any upward reestimate of the costs of direct loans and loan guarantees outstanding. These collections are offset against the gross disbursements of the financing accounts in determining the accounts' total net cash flows. The gross disbursements include outflows to the public—such as of loan funds or default payments—as well as the payment of any downward reestimate of costs to budgetary receipt accounts. The total net cash flows 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 af-

⁶ For further explanation of the off-budget Federal entities, see Chapter 12 of this volume, "Coverage of the Budget."

⁷ The Federal Credit Reform Act of 1990 (sec. 505(b)) requires that the financing accounts be non-budgetary. As explained in Chapter 12 of this volume, "Coverage of the Budget," they are non-budgetary in concept because they do not measure cost. For additional discussion of credit programs, see Chapter 22 of this volume, "Credit and Insurance," and Chapter 11, "Budget Concepts."

fect the requirement for borrowing from the public in the same way as the deficit.

The intragovernmental transactions of the financing accounts do not affect Federal borrowing from the public. Although the deficit changes because of the budget'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, financing account receipts from the public 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 budget receipts.

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 2009, the downward reestimates in some accounts largely cancelled out the upward reestimates in other accounts, for a net upward reestimate of \$0.4 billion. In 2010, due primarily to the Troubled Asset Relief Program (TARP), downward reestimates are significantly larger than upward reestimates, resulting in a net downward reestimate of \$115 billion.

The impact of the net financing disbursements on borrowing grew significantly in 2009, largely as a result of Government actions to address the Nation's financial and economic challenges including through TARP, purchases of mortgage-backed securities issued or guaranteed by the Government-Sponsored Enterprises (GSEs), and the Temporary Student Loan Purchase Program. Net financing disbursements increased from \$33 billion in 2008 to a record \$406 billion in 2009. Borrowing due to financing accounts is estimated to fall by nearly half, to \$204 billion in 2010, primarily due to large repayments of TARP assistance. After 2010, the credit financing accounts are expected to increase borrowing by amounts ranging from \$61 billion to \$147 billion over the next 10 years.

Net purchases of non-Federal securities by the National Railroad Retirement Investment Trust (NRRIT).—This trust fund was established by the Railroad Retirement and Survivors' Improvement Act of 2001. In 2003, most of the assets in the Railroad Retirement Board trust funds were transferred to the NRRIT trust fund, which invests its assets primarily in private stocks and bonds. The Act required special treatment of the purchase or sale of non-Federal assets by this trust fund, treating such purchases as a means of financing rather than an outlay. Therefore, the increased need to borrow from the public to finance the purchase 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 factors and, with the opposite sign, in NRRIT's net outlays in the deficit, for no net impact on borrowing from the public. The increased borrowing associated with the initial transfer expanded publicly held debt by

\$20 billion in 2003. Net transactions in subsequent years have been much smaller. In 2009, net reductions, including losses, were \$3 billion. Net reductions are expected to be roughly \$1 billion annually for 2010 through 2020.⁸

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 93 percent of the total Federal debt held by Government accounts at the end of 2009. In 2009, the total trust fund surplus was \$127 billion, and trust funds invested \$131 billion in Federal securities. Investment may differ somewhat from the surplus due to changes in the amount of cash assets not currently invested. 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 6-5.

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 must 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 U.S. and international credit markets.

One transaction that can increase both borrowing and assets is an increase to the Treasury operating cash balance. For example, in 2008, under the Supplementary Financing Program (discussed above), the Government borrowed nearly \$300 billion to increase the Treasury operating cash balance held with the Federal Reserve; the cash balance created by the program 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 loans. Similarly, when the National Railroad Retirement Investment Trust increases its holdings of non-Federal securities, the borrowing to purchase those securities is offset by the value of the asset holdings.

⁸ The budget treatment of this fund is further discussed in Chapter 11 of this volume, "Budget Concepts."

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 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 net of financial assets than they do the debt held by the public.

The magnitude and the significance of the Government's financial assets has increased greatly since the later part of 2008, as a result of Government actions, such as implementation of TARP, to address the challenges facing the Nation's financial markets and economy.⁹

Table 6-3 presents debt held by the public net of the Government's financial assets and liabilities, or "net debt." 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. NRRIT's holdings of non-Federal securities are marked to market on a monthly basis. GSE preferred stock is measured at market value.

At the end of 2009, debt held by the public was \$7,545 billion, or 53.0 percent of GDP. The Government held \$898 billion in net financial assets, including a cash balance of \$275 billion, net credit financing account balances of \$560

⁹ For more information on the specific actions that the Government is taking, see Chapter 4 of this volume, "Financial Stabilization Efforts and Their Budgetary Effects."

billion,¹⁰ and other assets and liabilities that aggregated to a net asset of \$63 billion. Therefore, debt net of financial assets was \$6,647 billion, or 46.7 percent of GDP. As shown in Table 6-3, the value of the Government's net financial assets is projected to increase to \$1,133 billion in 2010, due largely to increases in the net balances of credit financing accounts. While debt held by the public is expected to increase from 53.0 percent to 63.6 percent during 2010, net debt is expected to increase from 46.7 percent to 55.8 percent.

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. A unique and important asset is the Government's sovereign power to tax. Federal assets and liabilities are analyzed within the broader conceptual framework of Federal resources and responsibilities in the "Budget and Financial Reporting" chapter of this volume. The different types of assets and

¹⁰ Consistent with the presentation in the *Monthly Treasury Statement of Receipts and Outlays of the United States Government (Monthly Treasury Statement)*, Table 6-3 presents the net financial assets associated with direct and guaranteed loans in the financing accounts created under the Federal Credit Reform Act of 1990. Therefore, the figures differ by relatively small amounts from the figures in the "Budget and Financial Reporting" chapter of this volume, which reflect all loans made or guaranteed by the Federal Government, including loans originated prior to implementation of the FCRA.

Table 6-3. DEBT HELD BY THE PUBLIC NET OF FINANCIAL ASSETS AND LIABILITIES

(Dollar amounts in billions)

	Actual 2009	Estimate										
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Debt Held by the Public:												
Debt held by the public	7,544.7	9,297.7	10,498.3	11,472.1	12,325.7	13,139.3	13,988.4	14,832.8	15,685.8	16,534.8	17,502.2	18,573.1
As a percent of GDP	53.0%	63.6%	68.6%	70.8%	71.7%	72.2%	72.9%	73.6%	74.2%	74.9%	75.9%	77.2%
Financial Assets Net of Liabilities:												
Treasury operating cash balance	275.3	270.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
Credit financing account balances:												
Direct loan accounts	489.3	699.6	842.2	977.4	1,095.3	1,203.8	1,303.0	1,373.4	1,458.3	1,537.1	1,628.0	1,719.2
Guaranteed loan accounts	-34.9	-41.8	-33.7	-21.9	-10.1	-4.1	0.1	3.4	4.5	2.3	-1.7	-7.3
TARP equity purchase accounts	105.4	106.0	90.8	90.8	88.9	84.1	79.6	74.8	65.5	54.9	29.0	13.1
Subtotal, credit financing account balances ..	559.8	763.9	899.3	1,046.3	1,174.2	1,283.8	1,382.7	1,451.5	1,528.4	1,594.3	1,655.2	1,725.0
Government-sponsored enterprise preferred stock	64.7	102.4	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0
Non-Federal securities held by NRRIT	22.0	20.7	19.7	18.8	17.9	16.9	15.8	14.4	13.3	12.0	10.7	9.5
Other assets net of liabilities	-23.6	-23.6	-23.6	-23.6	-23.6	-23.6	-23.6	-23.6	-23.6	-23.6	-23.6	-23.6
Total, financial assets net of liabilities	898.1	1,133.4	1,080.4	1,226.5	1,353.5	1,462.1	1,559.9	1,627.4	1,703.1	1,767.6	1,827.3	1,895.9
Debt Held by the Public Net of Financial Assets and Liabilities:												
Debt held by the public net of financial assets	6,646.6	8,164.2	9,417.9	10,245.6	10,972.2	11,677.3	12,428.4	13,205.4	13,982.7	14,767.2	15,674.9	16,677.1
As a percent of GDP	46.7%	55.8%	61.6%	63.2%	63.9%	64.2%	64.8%	65.5%	66.2%	66.9%	68.0%	69.3%

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 can be bought and sold on the secondary market. Treasury also sells to the public a relatively small amount of nonmarketable securities, such as savings bonds and State and Local Government Series securities (SLUGs).¹¹ Treasury nonmarketable debt cannot be bought or sold on the secondary market.

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. In addition, under the temporary Supplementary Financing Program, discussed above, Treasury issues cash management bills and deposits the proceeds with the Federal Reserve, for the Federal Reserve to use in its efforts to address the financial and economic challenges facing the Nation.

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 every six months to reflect inflation as measured by changes in the CPI-U (with a two-month lag). Although the principal value may be adjusted downward if inflation is negative, the principal value will not be reduced below the original par value.

Historically, the average maturity of outstanding debt issued by Treasury has been around 60 months, or about five years. As a result of the large volume of bills issued during 2009 to finance the Government's activities to stabilize the financial markets, the average maturity fell to 53 months at the end of 2009. Treasury intends to gradually

¹¹ Under the State and Local Government Series 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.

increase the average maturity of its debt, returning the portfolio closer to its historical average of about five years.

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. 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 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. The liquidity of 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 “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. Traditionally, outstanding balances of nonmarketable debt have increased from year to year, somewhat reducing the need for marketable borrowing. In 2008 and 2009, there was net disinvestment in nonmarketables, necessitating additional marketable borrowing to finance the redemption of nonmarketable debt.

Agency Debt

Some Federal agencies, shown in Table 6–4, sell or have sold debt securities to the public and, at times, to other Government accounts. At one time, several other agencies issued debt securities, but this activity has declined significantly over time. Currently, new debt is issued only by the Tennessee Valley Authority (TVA) and the Federal Housing Administration (FHA); the remaining agencies are repaying existing borrowing. At the end of 2009, total agency debt remained nearly unchanged at the end-of-2008 level of \$25.5 billion. Agency debt is less than one-half of one percent of Federal debt held by the public. As a result of new borrowing by TVA, agency debt is estimated to increase by \$1.0 billion in 2010 and by \$0.8 billion in 2011.

The predominant agency borrower is the TVA, which had borrowed \$25.2 billion from the public as of the end

Table 6–4. AGENCY DEBT
(In millions of dollars)

	Borrowing or repayment (–) of debt			Debt end of 2011 estimate
	2009 actual	2010 estimate	2011 estimate	
Borrowing from the public:				
Housing and Urban Development:				
Federal Housing Administration	–37	*	.....	33
Architect of the Capitol	–7	–5	–6	133
National Archives	–12	–13	–14	166
Tennessee Valley Authority:				
Bonds and notes	158	1,143	938	24,914
Lease/leaseback obligations	49	–48	–55	1,302
Prepayment obligations	–106	–105	–105	717
Total, borrowing from the public	46	973	759	27,265
Borrowing from other funds:				
Tennessee Valley Authority	–4	.....	.....	2
Total, borrowing from other funds	–4	.....	.....	2
Total, agency borrowing	42	973	759	27,266

* \$500,000 or less.

of 2009, or 99 percent of the total debt of all agencies. TVA sells debt primarily to finance capital expenditures.

The 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/leaseback obligations and prepayment obligations. Under the lease/leaseback obligations method, TVA signs contracts to lease some facilities and equipment to private investors and simultaneously leases them back. It receives a lump sum for leasing out its assets, and then leases them back at fixed annual payments for a set number of years. TVA retains substantially all of the economic benefits and risks related to ownership of the assets.¹² 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.

The Office of Management and Budget 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 up-front cash proceeds from these methods as borrowing from the public, not offsetting collections.¹³ The budget presenta-

¹² 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.

¹³ This budgetary treatment differs from the treatment in the *Monthly Treasury Statement* Table 6 Schedule C, and the *Combined Statement of Receipts, Outlays, and Balances of the United States Government*

tion is consistent with the reporting of these obligations as liabilities on TVA's balance sheet under generally accepted accounting principles. Table 6–4 presents these alternative financing methods separately from TVA bonds and notes to distinguish between the types of borrowing. At the end of 2009, obligations were \$1.4 billion for lease/leasebacks and \$0.9 billion for prepayments. Obligations for these two types of alternative financing are estimated to continue to decline as TVA fulfills the terms of the contracts.

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.

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 factor is adjustments for the timing of the reporting of Federal debt held by the National Railroad Retirement Investment Trust.

The amount of agency securities sold to the public has been reduced over time by borrowing from the Federal Financing Bank (FFB). The FFB is an entity within the Treasury Department, one of whose purposes is to substitute Treasury borrowing for agency borrowing from the public. It has the authority to purchase agency debt and finance these purchases by borrowing from the Treasury. Agency borrowing from the FFB is not included in gross Federal debt. It would be double counting to add together (a) the agency borrowing from the FFB and (b) the Treasury borrowing from the public that is needed to provide the 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 current needs in order to meet future obligations. These cash surpluses are generally invested in Treasury debt.

New investment by trust funds and other Government accounts fell from \$267 billion in 2008 to \$148 billion in 2009, its lowest level since the mid-1990s. The decline was due in large part to the effects of current economic and financial conditions on the collections and expenditures of Government accounts that invest in Treasury securities. Investment by Government accounts is estimated to be \$158 billion in 2010 and \$157 billion in 2011, as

shown in Table 6–5. The holdings of Federal securities by Government accounts are estimated to grow to \$4,646 billion by the end of 2011, or 31 percent of the gross Federal debt. The percentage is estimated to decline by very small amounts over the next 10 years.

The large investment by Government accounts is concentrated among a few funds: the Social Security Old-Age and Survivors Insurance (OASI) and Disability Insurance (DI) trust funds; the Medicare Hospital Insurance and Supplementary Medical Insurance trust funds; and four Federal employee retirement funds. These Federal employee retirement funds include the military retirement trust fund, the special fund for uniformed services Medicare-eligible retiree health care, the Civil Service Retirement and Disability Fund (CSRDF), and a separate special fund for Postal Service retiree health benefits. At the end of 2011, these Social Security, Medicare, and Federal employee retirement funds are estimated to own 94 percent of the total debt held by Government accounts. During 2009–2011, the Social Security OASI fund has a large surplus and is estimated to invest a total of \$374 billion, 81 percent of total net investment by Government accounts. Over this period, the military retirement trust fund is projected to invest \$145 billion, another 31 percent of the total. As a result of economic and programmatic factors, some Government accounts reduce their investments in Federal securities during 2009–2011. During

Table 6–5. DEBT HELD BY GOVERNMENT ACCOUNTS¹

(In millions of dollars)

Description	Investment or Disinvestment (–)			Holdings end of 2011 estimate
	2009 actual	2010 estimate	2011 estimate	
Investment in Treasury debt:				
Legislative Branch: Payments to copyright owners	–11	–266	–8	906
Energy:				
Nuclear waste disposal fund ¹	1,662	–410	2,341	24,200
Uranium enrichment decontamination fund	51	109	308	5,178
Health and Human Services:				
Federal hospital insurance trust fund	–9,039	–29,044	–32,121	248,537
Federal supplementary medical insurance trust fund	2,674	–1,050	–5,273	55,441
Vaccine injury compensation fund	216	48	58	2,990
Child enrollment contingency fund	2,114	–128	–118	1,868
Homeland Security:				
Aquatic resources trust fund	36	67	20	2,070
Oil spill liability trust fund	271	355	319	2,070
Housing and Urban Development:				
Federal Housing Administration mutual mortgage fund	–8,420	–7,828	5,856	8,692
Guarantees of mortgage-backed securities	–13	–108	–48	9,101
Interior:				
Abandoned mine reclamation fund	102	98	194	2,824
Bureau of Land Management permanent operating funds	–281	–156	–171	1,334
Environmental improvement and restoration fund	47	3	15	1,185
Justice: Assets forfeiture fund	406	–14	.....	2,000
Labor:				
Unemployment trust fund	–52,804	–9,628	–500	9,500
Pension Benefit Guaranty Corporation ¹	–132	1,455	–75	14,398
State: Foreign service retirement and disability trust fund	478	464	421	16,219

Table 6-5. DEBT HELD BY GOVERNMENT ACCOUNTS¹—Continued
(In millions of dollars)

Description	Investment or Disinvestment (-)			Holdings end of 2011 estimate
	2009 actual	2010 estimate	2011 estimate	
Transportation:				
Airport and airway trust fund	156	1,420	8	9,257
Highway trust fund	-1,327	-11,484	.....	.....
Aviation insurance revolving fund	193	226	140	1,637
Treasury:				
Exchange stabilization fund	2,969	1,109	1,775	22,700
Federal Financing Bank	463	2,367	1,570	4,429
Comptroller of the Currency assessment fund	68	60	67	1,092
Veterans Affairs:				
National service life insurance trust fund	-538	-629	-658	7,448
Veterans special life insurance fund	2	-25	-35	1,941
Corps of Engineers: Harbor maintenance trust fund	470	373	373	5,713
Other Defense-Civil:				
Military retirement trust fund	24,859	71,964	47,734	360,505
Medicare-eligible retiree health care fund	14,096	13,118	15,304	155,243
Education benefits fund	184	150	19	2,067
Environmental Protection Agency:				
Leaking underground storage tank trust fund	165	181	211	3,722
Hazardous substance trust fund	428	400	213	3,925
International Assistance Programs:				
Overseas Private Investment Corporation	124	208	216	5,239
Office of Personnel Management:				
Civil service retirement and disability trust fund	25,393	31,741	29,077	815,062
Postal Service retiree health benefits fund	2,822	7,040	7,232	49,387
Employees life insurance fund	1,748	1,684	1,881	39,711
Employees health benefits fund	-196	-635	690	15,424
Social Security Administration:				
Federal old-age and survivors insurance trust fund ²	145,665	105,443	122,513	2,524,272
Federal disability insurance trust fund ²	-8,555	-21,327	-22,728	163,877
District of Columbia: Federal pension fund	-7	146	113	3,891
Farm Credit System Insurance Corporation:				
Farm Credit System Insurance fund	269	410	198	3,490
Federal Communications Commission:				
Universal service fund	266	-2	.....	6,006
Federal Deposit Insurance Corporation:				
Federal deposit insurance fund	-13,860	1,886	-13,262	4,700
Senior unsecured debt guarantee fund	7,010	590	-7,440	160
FSLIC resolution fund	-6	18	8	3,339
National Credit Union Administration:				
Share insurance fund	409	728	169	8,551
Central liquidity facility	1,834	92	96	2,022
Postal Service funds ²	2,643	-3,549	-700	.....
Railroad Retirement Board trust funds	707	45	-55	2,526
Securities Investor Protection Corporation ³	1,092	-33	266	1,325
United States Enrichment Corporation fund	27	62	70	1,701
Other Federal funds	337	-86	205	4,326
Other trust funds	350	158	254	3,829
Unrealized discount ¹	502	.....	.....	-1,328
Total, investment in Treasury debt¹	148,116	157,818	156,742	4,645,702
Investment in agency debt:				
Railroad Retirement Board:				
National Railroad Retirement Investment Trust	-4	.....	.....	2
Total, investment in agency debt¹	-4	.....	.....	2

Table 6-5. DEBT HELD BY GOVERNMENT ACCOUNTS¹—Continued
(In millions of dollars)

Description	Investment or Disinvestment (–)			Holdings end of 2011 estimate
	2009 actual	2010 estimate	2011 estimate	
Total, investment in Federal debt¹	148,112	157,818	156,742	4,645,704
MEMORANDUM				
Investment by Federal funds (on-budget)	13,560	20,634	14,954	349,832
Investment by Federal funds (off-budget)	2,643	–3,549	–700	.....
Investment by trust funds (on-budget)	–5,704	56,616	42,703	1,609,051
Investment by trust funds (off-budget)	137,110	84,116	99,785	2,688,149
Unrealized discount ¹	502	.....	.....	–1,328

¹Debt 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 2009 the debt figures would be \$22.4 billion higher for the Nuclear Waste Disposal Fund and \$1.8 billion higher for PBGC than recorded in this table.

²Off-budget Federal entity.

³The Securities Investor Protection Corporation (SIPC) was not previously included in the Federal budget. The investment represents the reclassification of SIPC's entire end-of-2009 holdings from debt held by the public to debt held by Government accounts. In 2009, SIPC disinvested \$511 million of its holdings of Federal securities.

these years, the Medicare Hospital Insurance trust fund disinvests \$70 billion, or 15 percent of the total net investment, and the Unemployment Trust Fund disinvests \$63 billion, or 14 percent of the total.

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 were 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 6–5 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 \$24.1 billion at the end of 2009.

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 6–5 it is shown as a separate item at the end of the table and not distributed by account. The amount was \$1.3 billion at the end of 2009.

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 United States Government.

The third part of Table 6–2 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. It issued \$14 billion of securities to the Civil Service Retirement and Disability Fund on November 15, 2004, in exchange for an equal amount of regular Treasury securities. The FFB securities have the same interest rates and maturities as the regular Treasury securities for which they were exchanged. The securities mature on dates from June 30, 2009, through June 30, 2019. At the end of 2009, \$12 billion of these securities remained outstanding.

The Housing and Economic Recovery Act of 2008 created a new type of debt not subject to limit. This debt, termed “Hope Bonds,” is issued by Treasury to the Federal Financing Bank for the HOPE for homeowners program. Treasury issued \$30 million in Hope Bonds in 2008 and \$463 million in 2009. Outstanding Hope Bonds are projected to be \$2.9 billion at the end of 2010 and \$4.4 billion at the end of 2011, and then to increase by smaller amounts in subsequent years.

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 \$489 million at the end of 2009 and is projected to gradually decline over time.

The sole agency debt currently subject to the general limit, \$14 million at the end of 2009, is certain debentures issued by the Federal Housing Administration.¹⁴

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 is relatively small: \$15.7 billion at the end of 2009 compared with the total unamortized discount (less premium) of \$59.5 billion on all Treasury securities.

Changes in the debt limit.—The statutory debt limit has been changed many times. Since 1960, Congress has passed 77 separate acts to raise the limit, extend the duration of a temporary increase, or revise the definition.¹⁵

The most recent debt limit increase, which raised the debt limit by \$290 billion to \$12,394 billion, was enacted on December 28, 2009. The legislation was enacted shortly before the anticipated reaching of the previous limit of \$12,104 billion.

Between July 2008 and February 2009, the debt limit was increased three times, in each case before the Government approached the limit. In these three instances, the increase was included in a larger piece of legislation aimed at stabilizing the financial markets and restoring economic growth. The increases provided room under the statutory debt ceiling for the activities authorized by each piece of legislation. On July 30, 2008, the debt limit was increased by \$800 billion, to \$10,615 billion, as part of the Housing and Economic Recovery Act of 2008. On October 3, 2008, the Emergency Economic Stabilization Act of 2008 increased the debt limit by \$700 billion, to \$11,315 billion. On February 17, 2009, the American Recovery and Reinvestment Act of 2009 increased the statutory limit by \$789 billion, to \$12,104 billion. At the dates of enactment, the debt subject to limit was at least a few hundred billion dollars below the previous ceiling.

The debt reached or neared the ceiling prior to each of the five increases enacted between 2002 and 2007. The debt limit was increased to \$6,400 billion on June 28, 2002, to \$7,384 billion on May 27, 2003, to \$8,184 billion on November 19, 2004, to \$8,965 billion on March 20, 2006, and to \$9,815 billion on September 29, 2007.

At many times in the past several decades, including 2002, 2003, 2004, and 2006, the Government has reached

¹⁴ At the end of 2009, there were also \$18 million of FHA debentures not subject to limit.

¹⁵ The Acts and the statutory limits since 1940 are listed in *Historical Tables, Budget of the United States Government, Fiscal Year 2011*, Table 7.3.

the statutory debt limit before an increase has been enacted. When this has occurred, it has been necessary for the Treasury Department to take administrative actions to meet the Government's obligation to pay its bills and invest its trust funds while remaining below the statutory limit. One such measure is the partial or full disinvestment of the Government Securities Investment Fund (G-fund). This fund is one component of the Thrift Savings Plan (TSP), a defined contribution pension plan for Federal employees. The 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. The Treasury Secretary is also authorized to declare a debt issuance suspension period, which allows him or her to redeem a limited amount of securities held by the Civil Service Retirement and Disability Fund and stop investing its receipts. The law requires that when any such actions are taken with the TSP G-fund or the CSRDF, 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. As the debt nears the limit, Treasury has also suspended acceptance of subscriptions to the State and Local Government Series to reduce unanticipated fluctuations in the level of the debt.

In addition to these steps, Treasury has previously replaced regular Treasury securities with borrowing by the FFB, which, as explained above, is not subject to the debt limit. This measure was most recently taken in November 2004, and the outstanding FFB securities began to mature in June 2009.

In contrast to recent debt limit increases, which have been in amounts sufficient to last for less than two years, the debt limit was increased three times during the 1990s by amounts large enough to last for two years or more. All three of these increases were enacted as part of a deficit reduction package or a plan to balance the budget and were intended to last a relatively long time: the Omnibus Budget Reconciliation Act of 1990; the Omnibus Budget Reconciliation Act of 1993; and the Balanced Budget Act of 1997. The 1997 increase lasted until 2002.

Methods of changing the debt limit.—The statutory limit is usually changed by normal legislative procedures. Under the rules adopted by the House of Representatives, it can also be changed as a consequence of the annual Congressional budget resolution, which is not itself a law. The budget resolution includes a provision specifying the appropriate level of the debt subject to limit at the end of each fiscal year. The rule provides that, when the budget resolution is adopted by both Houses of the Congress, the vote in the House of Representatives is deemed to have been a vote in favor of a Joint Resolution setting the statutory limit at the level specified in the budget resolution. The Joint Resolution is transmitted to the Senate for further action, where it may be amended to change the debt limit provision or in any other way. If it passes both

Houses of the Congress, it is sent to the President for signature. The House of Representatives first adopted this rule for 1980, although it was not included in the rules for several years before 2003. The rule was last used for the 2007 debt limit increase.

Federal funds financing and the change in debt subject to limit.—The change in debt held by the public, as shown in Table 6–2, and the change in debt 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 6–2. The change in debt held by Government accounts results in 21 percent of the estimated total increase in debt subject to limit from 2010 through 2020.

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.¹⁶

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 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 6–6 derives the change in debt subject to limit. In 2009 the Federal funds deficit was \$1,540 billion, and

¹⁶ For further discussion of the trust funds and Federal funds groups, see Chapter 27 of this volume, “Trust Funds and Federal Funds.”

Table 6–6. FEDERAL FUNDS FINANCING AND CHANGE IN DEBT SUBJECT TO STATUTORY LIMIT
(In billions of dollars)

Description	Actual 2009	Estimate										
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Change in Gross Federal Debt:												
Federal funds deficit (+)	1,540.0	1,613.9	1,372.4	1,010.9	942.2	915.4	993.7	1,023.5	1,032.9	1,051.9	1,139.5	1,202.2
Other transactions affecting borrowing from the public— Federal funds ¹	331.8	198.6	–65.0	146.2	127.2	108.9	98.2	68.1	76.1	65.3	60.3	69.2
Increase (+) or decrease (–) in Federal debt held by Federal funds	16.2	17.1	14.3	35.4	49.4	55.5	60.1	63.5	66.4	70.4	54.2	57.1
Adjustments for trust fund surplus/deficit not invested/ disinvested in Federal securities ²	1.2	81.2	35.8	–0.9	–1.0	–1.0	–1.0	–1.4	–1.1	–1.3	–1.3	–1.2
Change in unrealized discount on Federal debt held by Government accounts	0.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total financing requirements	1,889.8	1,910.8	1,357.4	1,191.6	1,117.8	1,078.8	1,151.0	1,153.7	1,174.3	1,186.2	1,252.7	1,327.3
Change in Debt Subject to Limit:												
Change in gross Federal debt	1,889.8	1,910.8	1,357.4	1,191.6	1,117.8	1,078.8	1,151.0	1,153.7	1,174.3	1,186.2	1,252.7	1,327.3
Less: increase (+) or decrease (–) in Federal debt not subject to limit	–1.5	1.7	0.5	–1.3	–1.3	–0.6	–0.9	–1.2	–1.2	–1.0	–0.7	0.5
Less: change in adjustment for discount and premium ³	–2.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total, change in debt subject to limit	1,893.3	1,909.1	1,356.9	1,192.9	1,119.1	1,079.4	1,151.8	1,154.9	1,175.6	1,187.2	1,253.4	1,326.8
ADDENDUM												
Debt subject to statutory limit ⁴	11,853.1	13,762.2	15,119.1	16,312.0	17,431.1	18,510.5	19,662.4	20,817.2	21,992.8	23,180.0	24,433.4	25,760.1

¹ Includes Federal fund transactions that correspond to those presented in Table 6–2, 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 \$12,394 billion.

other factors increased financing requirements by \$332 billion. The net financing disbursements of credit financing accounts increased financing requirements by \$406 billion, partly offset by a decrease in the Treasury operating cash balance, which reduced financing requirements by \$96 billion. Other factors increased financing requirements by \$22 billion. In addition, special funds and revolving funds, which are part of the Federal funds group, invested a net of \$16 billion in Treasury securities. An 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 the National Railroad Retirement Investment Trust's investments in non-Federal securities). As a net result of all these factors, \$1,890 billion in financing was required, increasing gross Federal debt by that amount. Since Federal debt not subject to limit decreased by \$1.5 billion and the adjustment for discount and premium changed by \$2.0 billion, the debt subject to limit increased by \$1,893 billion, while debt held by the public increased by \$1,742 billion.

The debt subject to limit is estimated to increase to \$13,762 billion by the end of 2010, above the current limit of \$12,394 billion. The estimated increases in the debt subject to limit are caused by the continued Federal funds

deficit, supplemented by the other factors shown in Table 6–6. While debt held by the public increases by \$6,444 billion from the end of 2009 through 2015, debt subject to limit increases by \$7,809 billion.

Debt Held by Foreign Residents

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 1970. 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 residents.

Foreign holdings of Federal debt are presented in Table 6–7. At the end of 2009, foreign holdings of Treasury debt were \$3,497 billion, which was 46 percent of the total debt held by the public.¹⁷ Foreign central banks owned 76 percent of the Federal debt held by foreign residents; private

¹⁷ The debt calculated by the Bureau of Economic Analysis, Department of Commerce, is different, though similar in size, because of a different method of valuing securities.

Table 6–7. FOREIGN HOLDINGS OF FEDERAL DEBT

(Dollar amounts in billions)

Fiscal Year	Debt held by the public			Change in debt held by the public	
	Total	Foreign ¹	Percentage foreign	Total ²	Foreign ¹
1965	260.8	12.3	4.7	3.9	0.3
1970	283.2	14.0	5.0	5.1	3.8
1975	394.7	66.0	16.7	51.0	9.2
1980	711.9	121.7	17.1	71.6	1.4
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	1,057.9	31.0	-222.6	-223.5
2001	3,319.6	1,005.5	30.3	-90.2	-52.3
2002	3,540.4	1,200.8	33.9	220.8	195.3
2003	3,913.4	1,454.2	37.2	373.0	253.4
2004	4,295.5	1,798.7	41.9	382.1	344.5
2005	4,592.2	1,930.6	42.0	296.7	131.9
2006	4,829.0	2,027.3	42.0	236.8	96.7
2007	5,035.1	2,237.2	44.4	206.2	209.9
2008	5,803.1	2,799.5	48.2	767.9	562.3
2009	7,544.7	3,497.0	46.4	1,741.7	697.5

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, and annual June benchmark revisions for 2002–2009.

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.

investors owned nearly all the rest. This 76 percent represents a significant increase from the 67 percent held by foreign central banks at the end of 2008. All the Federal debt held by foreign residents is denominated in dollars.

Although the amount of Federal debt held by foreign residents has grown greatly over this period, the proportion that foreign residents 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. Federal debt held by foreign residents resumed growth in the current decade, increasing from 34 percent at the end of 2002 to 42 percent at the end of 2004 and to 48 percent at the end of 2008. In 2009, foreign holdings fell to 46 percent. The increase in foreign holdings was about 40 percent of total Federal borrowing from the public in 2009 and 52 percent over the last five years. At the end of 2009, the nations holding the largest shares of U.S. Federal debt were China, which held 23 percent of all foreign holdings, Japan, which held 21 percent, and the United Kingdom, which held 7 percent.

Foreign holdings of Federal debt are around 20 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, including the substantial Government efforts to support the credit markets during the recent financial turmoil, are discussed in Chapter 22 of this volume, "Credit and Insurance." Detailed data are presented in tables at the end of that chapter.

2. ECONOMIC ASSUMPTIONS

This chapter presents the economic forecast on which the 2012 Budget projections are based. Because of the long lead times required to produce the Budget estimates, the forecast was completed in mid-November. Usually, the economic outlook does not change significantly between the time the forecast is developed and the release of the Budget, but there are times when important developments occur after the forecast is completed but before the Budget is released. This year is one of those times. In December, the President reached an agreement with the Congress lowering taxes and extending unemployment insurance benefits that improved the outlook for 2011.¹ The incoming data since November have also been stronger than anticipated. Together these factors have caused most private forecasters to increase their near-term projections for real economic growth substantially and to reduce their unemployment projections compared with their expectations in November. The Administration would probably make similar changes were it possible to reopen the forecast. Nevertheless, the impact on the 10-year projections discussed in detail below would not be great, and would mainly affect the speed with which the economy is expected to return to its long-run potential. The estimates for receipts and outlays would not be greatly affected beyond the current year.

When the President took office in January 2009, the economy was in the midst of an economic crisis. The first order of business for the new Administration was to arrest the rapid decline in economic activity. The President and Congress took unprecedented actions to restore demand, stabilize financial markets, and put people back to work. These steps included passage of the American Recovery and Reinvestment Act (ARRA), signed by the President just 28 days after taking office. They also included the Financial Stability Plan, announced in February 2009, which encompassed wide-ranging measures to strengthen the banking system, increase consumer and business lending, and stem foreclosures and support the housing market. These and a host of other actions walked the economy back from the brink.

Production bottomed out during the spring of 2009, and the National Bureau of Economic Research has dated the end of the recession as June 2009. American businesses were still shedding jobs, however, through the end of 2009. The unemployment rate reached 10.1 percent in October 2009, and payroll employment continued to fall until December. The year just past has seen the economy gradually begin to recover. Over the past six quarters, through the fourth quarter of 2010, real Gross Domestic Product (GDP) has grown at an average rate of 3.0 percent. Employment also began to increase in 2010, but slowly.

¹ In the Budget, economic performance is discussed in terms of calendar years. Budget figures are discussed in terms of fiscal years.

Since December 2009, 1.3 million payroll jobs have been added in the private sector, and the unemployment rate has fallen to 9.4 percent (as of December 2010).

The recovery that began in 2009 and continued in 2010 is projected to gain momentum in 2011 and to strengthen further in 2012. Unfortunately, even with healthy economic growth, unemployment is expected to be higher than normal for several more years. The Administration is projecting a normal recovery from the recession of 2008-2009, but one that is somewhat drawn out because of the lingering effects of the financial crisis. A similar pattern of robust growth is expected by the Federal Reserve (see the discussion below on forecast comparisons).

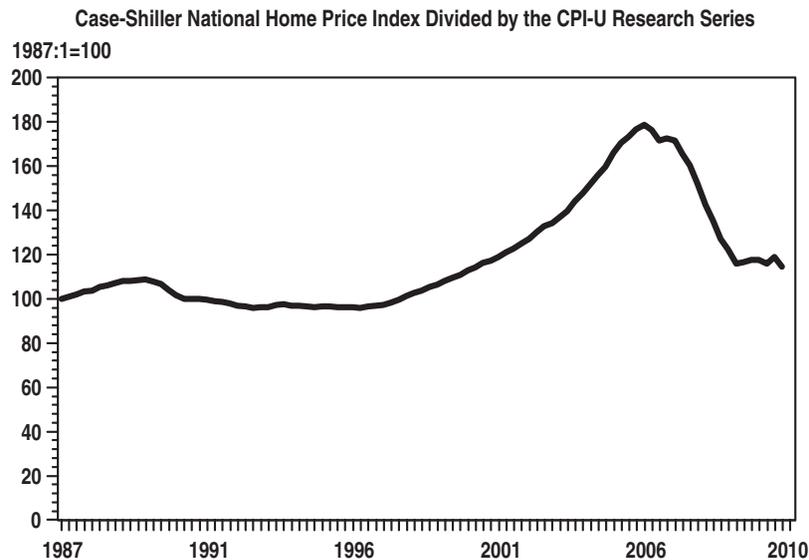
Recent Economic Performance

The accumulated stresses from a contracting housing market and the resulting strains on financial markets brought the 2001-2007 expansion to an end in December 2007. In its early stages, the 2008-2009 recession was relatively mild, but financial conditions worsened sharply in the fall of 2008, and from that point forward the recession became much more severe. Before it ended, real GDP had fallen further and the downturn had lasted longer than during any previous post World War II recession. Looking ahead, the likely strength of the recovery is one of the key issues for the forecast, and the aftermath of the housing and financial crises has an important bearing on the expected strength of the recovery.

Housing Markets.—The economy's contraction had its origin in the housing market. In hindsight, it is clear that by the early years of the previous decade housing prices had become caught up in a speculative bubble that finally burst. In 2006-2007, housing prices peaked, and from 2007 through 2008, housing prices fell sharply according to most measures.² Since 2009 the housing market has shown signs of stabilizing. The relative price of housing has been relatively flat since early 2009 (see chart below), as house prices have kept up with the slow rise in consumer prices nationally, but so far relative housing prices have not increased, which has limited the recovery in household wealth. During the downturn, as prices fell, investment in housing plummeted, reducing the rate of real GDP growth by an average of 1 percentage point per quarter. With the stabilization of house prices in 2009, housing investment has also begun to stabilize, neither adding nor subtracting from real GDP growth on average since 2009:Q2. However, housing investment has

² There are several measures of national housing prices. Two respected measures that attempt to correct for variations in housing quality are the S&P/Case-Shiller Home Price Index and the Federal Housing Finance Agency (FHFA) Purchase-Only House Price Index. The Case-Shiller index peaked in 2006, while the FHFA index peaked in 2007.

Chart 2-1. Relative House Prices



not yet begun to make a positive contribution to growth on a sustained basis as it has done in past expansions.

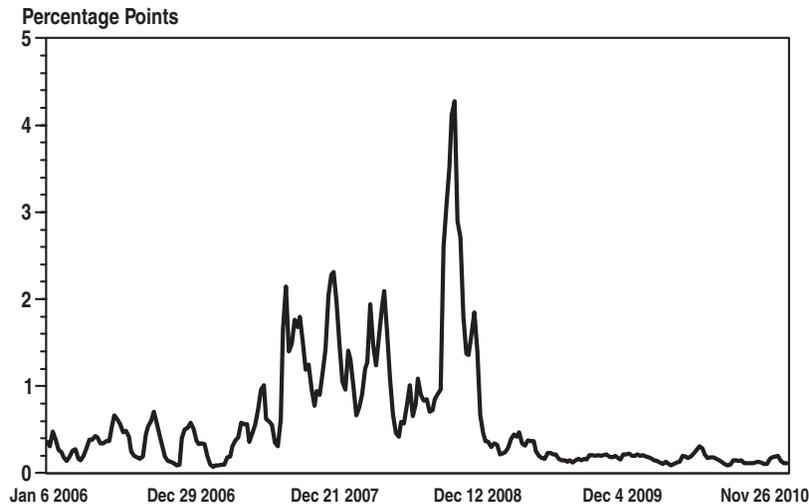
In April 2009, monthly housing starts fell to an annual rate of just 477,000 units, the lowest level ever recorded for this series, which dates from 1959. Housing starts have fluctuated since then, responding to new tax incentives for home purchase and their expiration. The monthly data show housing starts of 529,000 in December 2010. In normal times, at least 1.5 million starts a year are needed to accommodate the needs of an expanding population and to replace older units indicating that there is potential for a substantial housing rebound. A large overhang of vacant homes must be reduced before a robust housing recovery can become established. The foreclosure rate in the third quarter of 2010 was 1.3 percent, which is one of the highest since records have been kept. With new foreclosures continuing to add to the stock of vacant homes, housing prices and new investment are likely to remain subdued for some time. The Administration forecast assumes a gradual recovery in housing activity that adds moderately to real GDP growth beginning this year.

The Financial Crisis.—In August 2007, the United States subprime mortgage market became the focal point for a worldwide financial crisis. Subprime mortgages are provided to borrowers who do not meet the standard criteria for borrowing at the lowest prevailing interest rate, because of low income, a poor credit history, lack of a down payment, or other reasons. In the spring of 2007, there were over \$1 trillion outstanding in such mortgages, and because of falling house prices, many of these mortgages were on the brink of default. As banks and other investors lost confidence in the value of these high-risk mortgages and the mortgage-backed securities based on them, lending between banks froze. Non-bank lenders also became unwilling to lend. Financial market participants of all kinds were uncertain of the degree

to which other participants' balance sheets had been contaminated. The heightened uncertainty was reflected in unprecedented spreads between interest rates on Treasury securities and those on various types of financial market debt.

One especially telling differential is the spread between the yield on short-term U.S. Treasury securities, and the London interbank lending rate (LIBOR) which banks trading in the London money market charge one another for short-term lending in dollars. Historically, this differential has been 30 or 40 basis points. In August 2007, it shot up to over 200 basis points, and it spiked again, most dramatically, in September 2008 following the bankruptcy of Lehman Brothers (see chart). The policy response following the Lehman Brothers bankruptcy was crucial in restoring confidence and limiting the financial panic. Over the course of the following three months, the Federal Reserve lowered its short-term interest rate target to near zero, while creating new programs to provide credit to markets where banks were no longer lending. The Troubled Asset Relief Program (TARP) provided the Treasury with the financial resources to bolster banks' capital position and to remove troubled assets from banks' balance sheets. In the spring of 2009, the Treasury and bank regulators conducted the Supervisory Capital Assessment Program, a stress test to determine the health of the nineteen largest U.S. banks. The test provided more transparency for banks' financial positions, which reassured investors. Consequently, the banks have been able to raise private capital, providing further evidence that the credit crisis has eased. As these actions were taken, the LIBOR spread narrowed sharply, and other measures of credit risk also declined. During 2009, the spreads between Treasury yields and other interest rates generally regained pre-crisis levels, and they held these levels through 2010. This is the clearest evidence that the financial crisis has abated. Although

Chart 2-2. The One-Month LIBOR Spread over the One-Month Treasury Yield



financial institutions have easier access to funds, many still remain reluctant to lend.

Negative Wealth Effects and Consumption.— Between the third quarter of 2007 and the first quarter of 2009, the real net worth of American households declined by 28 percent – the equivalent of one year’s GDP. A precipitous decline in the stock market, along with falling house prices over this period, were the main reasons for the drop in household wealth. Since then, real wealth has risen, but the increase through the third quarter of 2010 was only 9 percent. House prices nationally have shown signs of stabilizing, and the stock market has partially recovered, but real net worth remains 21 percent below its 2007 peak level.³

³ Real wealth is computed by deflating household net worth from the Flow-of-Funds Accounts by the CPI-U. Data are available through

Americans have reacted to this massive loss of wealth by saving more. The personal saving rate had been declining since the 1980s, and it reached a low point of 1.2 percent in the second quarter of 2005. It remained low, averaging only 2 percent through the end of 2007, but since then, as wealth has declined, the saving rate has increased sharply. It rose to a temporary high point of 7.2 percent in the second quarter of 2009, following a distribution of special \$250 payments to Social Security recipients and the implementation of other Recovery Act provisions. Since then, the saving rate has averaged 5.7 percent. In the long-run, increased saving is essential for raising future living standards. However, a sudden increase in the desire to save implies a corresponding reduction in consumer demand, and that fall-off in consumption had

2010:Q3.

Chart 2-3. Personal Saving Rate

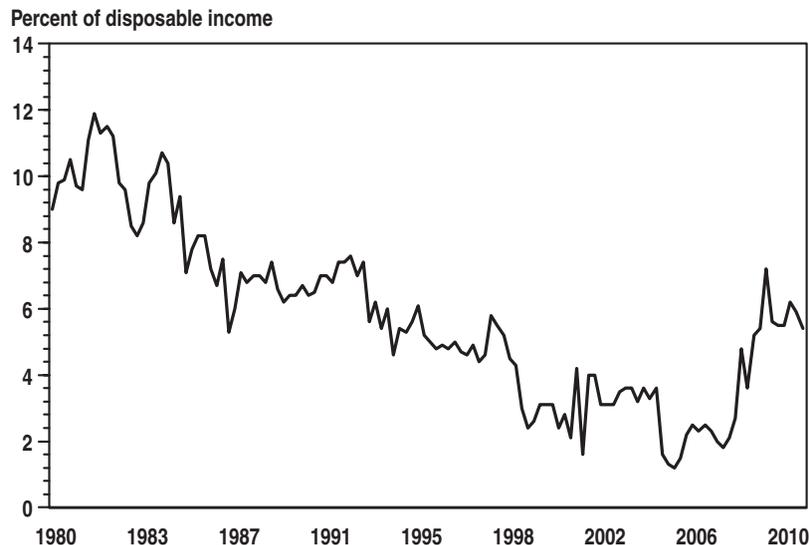
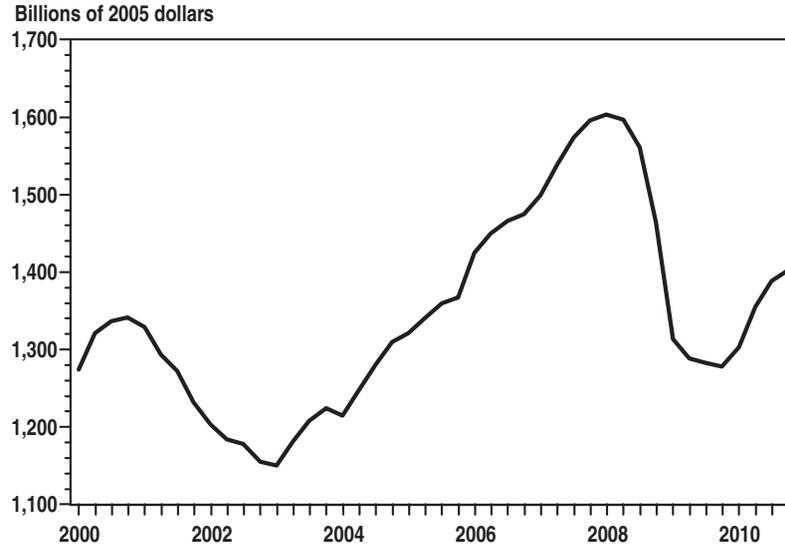


Chart 2-4. Real Business Fixed Investment



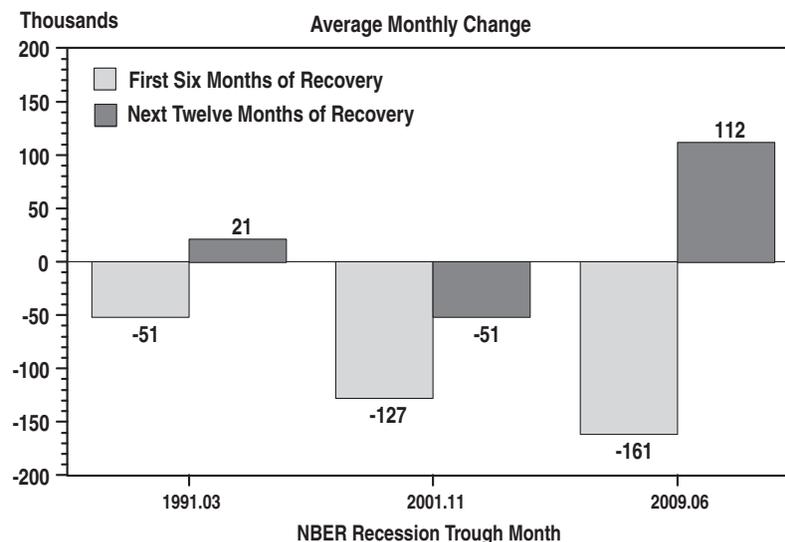
a negative effect on the economy in the second half of 2008 and early 2009. During that period, real consumer spending fell at an annual rate of 1.6 percent, but since then, real consumer spending has recovered, exceeding its peak level at the end of 2007 by the last quarter of 2010. Continued growth in consumption is essential to a healthy recovery, and, if income grows, increased consumption is compatible with a higher but stable saving rate.

Investment.—Business fixed investment fell sharply during the 2008-2009 contraction. It rose rapidly in 2010, but even after the substantial increases in business equipment spending over the past three quarters, real investment remains well below its pre-recession levels implying room for further growth (see chart above). The cost of capital is low and American corporations at the

end of 2010 held substantial levels of cash reserves, which could provide funding for future investments as the economy continues to recover. The main constraint on business investment is poor sales expectations, which have been dampened by the slow pace of recovery. However, if consumption continues to expand, as it did last year, businesses are in a good position to expand investment. Strengthened by recently enacted tax incentives, the outlook for investment is encouraging. Nevertheless, the pace of future growth could prove to be uneven, as investment tends to be volatile.

Net Exports.— Over the last decade, the U.S. trade deficit expanded as foreign investors increased investment in the United States. The inflow of foreign capital helped fuel the housing bubble. The financial crisis and the

Chart 2-5. Job Gains and Losses During Recent Recoveries



resulting economic downturn sharply curtailed the flow of trade and foreign investment. In the third quarter of 2008, before the worst of the financial crisis, net exports, as measured in the National Income Accounts, were -\$764 billion, measured at an annual rate. Over the next three quarters, the deficit in net exports was more than cut in half, falling to -\$335 billion in the second quarter of 2009. Since then, as the U.S. economy has recovered, U.S. imports have grown and at a faster pace than U.S. exports. Consequently, the net export balance has declined to -\$492 billion. It is unhealthy for the world economy to be too dependent on U.S. consumption spending, so further reductions in the U.S. trade deficit would be desirable. The Administration's National Export Initiative is intended to increase U.S. exports sufficiently to reduce worldwide trade imbalances.

The Labor Market.—The unemployment rate peaked in the second half of 2009, and has declined only slightly in 2010. The high rate of unemployment has had devastating effects on American families, and the recovery will not be real for most Americans until the job market also turns around. Historically, when the economy grows so does employment, and there are signs that this pattern is repeating itself in the current recovery, albeit slowly. In the last 20 years, there have been three recessions in the United States. The most recent was the deepest and longest, but the other two also produced weak labor markets, where labor market weakness continued for several months after the economy began to grow. Many have feared that the current recovery would repeat that pattern, and in the first six months following the end of the recession in June 2009, it appeared to be doing so. But 2010 has shown a different pattern. Private employment has grown for 12 straight months, albeit at a relatively modest rate. The positive job growth has exceeded the job gains following the previous two recessions.

Policy Background

Over the last 24 months, the Administration and the Federal Reserve have taken a series of fiscal and monetary policy actions to bring the recession to an end and expedite the recovery. On the fiscal policy side, the passage of ARRA was a crucial step early in the Administration. Meanwhile, the Federal Reserve has kept its target interest rate near zero, and it has pursued other novel measures to unfreeze the Nation's credit markets and bolster economic growth. Several policy actions have been taken to help stabilize the Nation's financial and housing markets.

Fiscal Policy.—The Federal budget affects the economy through many channels. For an economy coming out of a deep recession, the most important of these is the budget's effect on total demand. In a slumping economy, the level of demand is the main determinant of how much is produced and how many workers will be employed. Government spending on goods and services can substitute for missing private spending while changes in taxes and transfers can contribute to demand by enabling people to spend more than they otherwise would. ARRA bolstered

aggregate demand in several ways which helped spark the recovery. It increased spending on goods and services at the Federal level; it provided assistance to State Governments; it included large tax reductions for middle-class families; and it extended unemployment insurance and other benefits which have allowed people to maintain spending at levels higher than would otherwise have been possible.

ARRA was intended to provide a significant boost to demand in both 2009 and 2010. So far the stimulus has proceeded as intended. Job losses would have been much greater without ARRA. In the first three months of 2009, private payroll employment was falling at an average rate of 752,000 jobs per month. By the last three months, the rate of job loss had declined to 90,000 per month. The private sector added jobs every month of 2010, and by the fourth quarter the economy was adding an average of 128,000 jobs per month. It is not possible to judge the effectiveness of a macroeconomic policy without some idea of the alternative. Critics of ARRA have tended to argue that the poor job market is evidence of its ineffectiveness. However, the only way to know that is through a macroeconomic model that can be used to project the employment outcome under an alternative policy. In fact, results from a range of models imply that employment was increased by ARRA. The Council of Economic Advisers' (CEA) latest assessment estimates that ARRA increased employment by between 2.7 million and 3.7 million jobs through the third quarter of 2010, an estimate that is in line with private forecasters.⁴

In 2010, the Administration continued to pursue policies to reduce unemployment and create jobs. The President launched the National Export Initiative, to support new jobs in American export industries. In March 2010, the President signed the Hiring Incentives to Restore Employment (HIRE) Act, which provided subsidies for firms that hired unemployed workers and provided other incentives. In September, the President signed the Small Business Jobs Act, which provided tax relief and better access to credit to small businesses. In December, the President reached agreement with Congress to extend several expiring tax provisions and avoid a large tax increase in 2011. The agreement also included expanded tax incentives for business investment, a temporary reduction in payroll taxes, and extended long-term unemployment insurance benefits. These measures will help support an increase in economic growth over the course of 2011.

The economic recovery efforts have increased the Federal budget deficit. The increase in the deficit was the necessary response to the crisis the Administration inherited, and it is expected to be temporary. The 2012 Budget provides a path to lower medium-term deficits. Over the long term, deficits tend to have some combination of two macroeconomic effects. First, they

⁴ The CEA "multipliers" used for these estimates are similar to those used by the Congressional Budget Office (CBO) and private forecasters such as Macroeconomic Advisers LLC. See Council of Economic Advisers, "The Economic Impact of the American Recovery and Reinvestment Act of 2009: Fifth Quarterly Report," November 2010.

can raise interest rates and decrease investment, as the Federal Government competes with private investors for limited capital in the credit markets. Second, deficits can increase the amount that the United States borrows from abroad, as foreigners step in to finance U.S. consumption. Either way, persistently large deficits reduce future standards of living. Rising interest rates and falling investment result in less productive American workers and reduced incomes. If the United States borrows more from abroad as a result of budget deficits, more of future incomes will be mortgaged to pay back foreign creditors. Persistent large deficits would also limit the Government's maneuvering room to handle future crises. For these reasons, it is important to control the budget deficit and maintain fiscal discipline in the long run.

Monetary Policy.—The Federal Reserve is responsible for monetary policy. Traditionally, it has relied on a relatively narrow range of instruments to achieve its policy goals, but in the recent crisis the Fed has been forced to consider a broader approach. The short-term interest rate, the traditional tool of monetary policy, has been close to zero since the end of 2008. Further cuts in short-term rates are not possible, yet with unemployment high and inflation trending down the Federal Reserve has needed to act in novel ways to achieve its dual mandate of stable prices and healthy economic growth. Consequently, the Federal Reserve has created new facilities to provide credit directly to the financial markets and has also bought longer-term securities for its portfolio. The Federal Reserve's actions helped ease the credit crisis as evidenced by a decline in the interest rate spread between U.S. Treasuries and other securities (see Chart 2-2).

The combination of aggressive monetary and fiscal policies helped reverse the economic downturn in 2009 and set the stage for an economic recovery in the summer of 2009. However, following an initial burst of growth in late 2009, the economy slowed down somewhat in 2010. To help counter the slowdown, the Federal Reserve has

announced its plans to expand its balance sheet even further in another round of purchases of long-term Treasury securities. Because much of the increase in Federal Reserve liabilities has gone into idle reserves of banks, and because of the considerable slack in the economy, current inflation risks remain low. However, the Federal Reserve is prepared to reduce the assets on its balance sheet promptly when the recovery gains strength and the unemployment rate falls as expected in these projections.

Financial Stabilization Policies.—Over the course of the last twenty-four months, the U.S. financial system has been pulled back from the brink of a catastrophic collapse. The very real danger that the system would disintegrate in a cascade of failing institutions and collapsing asset prices has been averted. The Administration's Financial Stability Plan played a key role in cleaning up and strengthening the nation's banking system. This plan began with a forward-looking capital assessment exercise for the 19 U.S. banking institutions with assets in excess of \$100 billion. This was the so-called "stress test" aimed at determining whether these institutions had sufficient capital to withstand stressful deterioration in economic conditions. The resulting transparency and resolution of uncertainty about banks' potential losses boosted confidence and allowed banks to raise substantial funds in private markets and repay tens of billions of dollars in taxpayer investments. The second component of the Financial Stability Plan was aimed at establishing a market for the troubled real-estate assets that were at the center of the crisis. The plan included provisions for the Federal Government to join private investors in buying mortgage-backed securities. Removing these assets from the banks' balance sheets is a key step to restoring the financial system to normal functioning.

The Financial Stability Plan also aimed to unfreeze secondary markets for loans to consumers and businesses. The Administration has undertaken the Making Home

**Chart 2-6. Real GDP Growth Following a Recession:
Five-Year Averages**

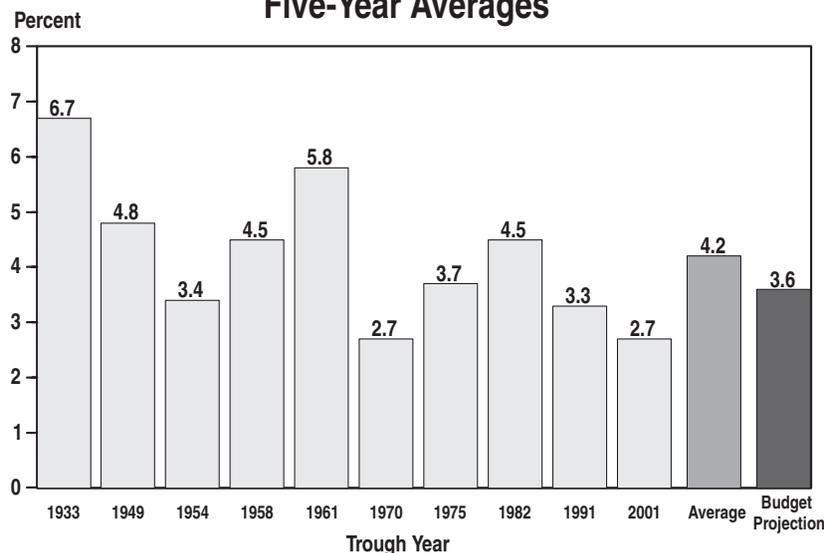


Table 2-1. ECONOMIC ASSUMPTIONS¹
(Calendar years; dollar amounts in billions)

	2009 Actual	Projections											
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Gross Domestic Product (GDP):													
Levels, dollar amounts in billions:													
Current dollars	14,119	14,651	15,240	16,032	17,006	18,043	19,052	20,037	20,986	21,910	22,866	23,860	24,896
Real, chained (2005) dollars	12,881	13,234	13,595	14,090	14,707	15,346	15,927	16,461	16,930	17,366	17,800	18,245	18,701
Chained price index (2005 = 100), annual average	109.6	110.7	112.1	113.8	115.6	117.6	119.6	121.7	123.9	126.1	128.4	130.8	133.1
Percent change, fourth quarter over fourth quarter:													
Current dollars	0.6	4.0	4.3	5.7	6.2	6.0	5.4	5.1	4.5	4.3	4.4	4.3	4.3
Real, chained (2005) dollars	0.2	2.5	3.1	4.0	4.5	4.2	3.6	3.2	2.7	2.5	2.5	2.5	2.5
Chained price index (2005 = 100)	0.5	1.5	1.2	1.6	1.6	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8
Percent change, year over year:													
Current dollars	-1.7	3.8	4.0	5.2	6.1	6.1	5.6	5.2	4.7	4.4	4.4	4.3	4.3
Real, chained (2005) dollars	-2.6	2.7	2.7	3.6	4.4	4.3	3.8	3.3	2.9	2.6	2.5	2.5	2.5
Chained price index (2005 = 100)	0.9	1.0	1.3	1.5	1.6	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8
Incomes, billions of current dollars:													
Domestic Corporate Profits	906	1,249	1,355	1,396	1,477	1,532	1,558	1,565	1,535	1,424	1,365	1,370	1,393
Employee Compensation	7,812	7,950	8,275	8,743	9,290	9,886	10,489	11,095	11,687	12,278	12,896	13,477	14,063
Wages and salaries	6,274	6,366	6,630	7,014	7,474	7,965	8,457	8,955	9,456	9,948	10,459	10,932	11,400
Other taxable income ²	3,206	3,263	3,370	3,519	3,699	3,911	4,110	4,326	4,535	4,714	4,924	5,161	5,392
Consumer Price Index (all urban):³													
Level (1982-84 = 100), annual average	214.5	218.0	220.8	224.8	229.1	233.6	238.4	243.3	248.5	253.7	259.0	264.5	270.0
Percent change, fourth quarter over fourth quarter	1.5	1.0	1.4	1.9	1.9	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1
Percent change, year over year	-0.3	1.6	1.3	1.8	1.9	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1
Unemployment rate, civilian, percent:													
Fourth quarter level	10.0	9.6	9.1	8.2	7.2	6.3	5.7	5.4	5.3	5.3	5.3	5.3	5.3
Annual average	9.3	9.6	9.3	8.6	7.5	6.6	5.9	5.5	5.3	5.3	5.3	5.3	5.3
Federal pay raises, January, percent:													
Military ⁴	3.9	3.4	1.4	1.6	NA	NA	NA	NA	NA	NA	NA	NA	NA
Civilian ⁵	3.9	2.0	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA
Interest rates, percent:													
91-day Treasury bills ⁶	0.2	0.1	0.2	1.0	2.6	3.7	4.0	4.1	4.1	4.1	4.1	4.1	4.1
10-year Treasury notes	3.3	3.2	3.0	3.6	4.2	4.6	5.0	5.2	5.3	5.3	5.3	5.3	5.3

NA = Not Available

¹ Based on information available as of mid-November 2010.

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 2012 have not yet been determined.

⁵ Overall average increase, including locality pay adjustments. Percentages to be proposed for years after 2012 have not yet been determined.

⁶ Average rate, secondary market (bank discount basis).

Affordable plan to help distressed homeowners avoid foreclosure and stabilize the housing market. Today, thanks in large part to this and related programs, more than seven million homeowners have refinanced their mortgages to more affordable levels, and more than one million homeowners have participated in the Administration's mortgage modification program.

Another crucial response to the financial crisis was the implementation of the Troubled Assets Relief Program (TARP), which was established in the fall of 2008. TARP provided the Treasury with the financial resources to bolster banks' capital positions and to remove troubled

assets from banks' balance sheets. Under the Obama Administration, the focus of TARP was shifted from large financial institutions to households, small banks, and small businesses. Since the Administration took office, the projected cost of TARP has decreased dramatically and programs are being successfully wound down. On October 3, 2010, authority to make new investments under TARP expired. Today, the Federal Government maintains TARP programs only where it has existing contracts and commitments. TARP is now projected to be only a fraction of its original projected cost. In the summer of 2009 it was estimated to cost \$341 billion. Last summer, in the Mid-

Session Review of the 2011 Budget, TARP was projected to cost \$114 billion. Now, the cost of the program is estimated to be only \$48 billion.

Economic Projections

The economic projections underlying the 2012 Budget estimates are summarized in Table 2–1. The assumptions are based on information available as of mid-November 2010. This section discusses the Administration’s projections and the next section compares these projections with those of the Congressional Budget Office (CBO) and the Blue Chip Consensus of outside forecasters.

Real GDP.—The Administration projects the economic recovery will continue in 2011 with real GDP growing at an annual rate of 3.1 percent (fourth quarter over fourth quarter). In 2012-2014, growth is projected to increase to around 4-¼ percent annually as the job market improves and residential investment recovers. Real GDP is projected to return to its long-run “potential” level by the end of 2017, and to grow at a steady 2.5 percent rate for the remaining years of the forecast.

As shown in Chart 2-6, the Administration’s projections for real GDP growth over the first five years of the expected recovery imply an average growth rate below the historical average. Recent recoveries have been somewhat weaker, but the last two expansions were preceded by mild recessions with relatively little pent-up demand when conditions improved. Because of the depth of the recent recession, there is much more room for a rebound in spending and production than was true either in 1991 or 2001. On the other hand, lingering effects from the credit crisis may limit the pace of the recovery. Thus, the Administration is forecasting a recovery that is slightly below the historical average. Some international economic organizations have argued that a financial recession permanently scars an economy, and this view is also shared by some American forecasters. The statistical evidence for permanent scarring comes mostly from the experiences of developing countries and its relevance to the current situation in the United States is debatable. So far in this recovery, the forecasts based on this view have proven to be too pessimistic.

The U.S. economy has enormous room for growth in 2011, although there are factors that could limit that growth. On the positive side, real GDP grew 3.2 percent in the fourth quarter, and 2011 should get off to a solid start. Net exports subtracted from growth in 2010, but they are expected to contribute to growth in 2011. The emerging world and many key trading partners are growing at a solid rate, though much of the advanced world is growing more slowly, and Europe has been troubled by concerns about the sustainability of fiscal policy in some countries. The Federal Reserve’s \$600 billion program for purchasing Treasury notes announced in November is likely to have a favorable impact on GDP growth this year. Stock-market wealth, which slowed growth in mid-2010, moved to at least neutral in the fall. The budget agreement struck in December 2010 prevented a potentially damaging tax increase while creating new incentives for business

investment. It also included a temporary reduction in payroll taxes and an extension of long-term unemployment insurance benefits, which should help foster growth in 2011. These positive factors should counterbalance the phasing out of the Recovery Act.

Longer-Term Growth.—The Administration forecast does not attempt to project cyclical developments beyond the next few years. The long-run projection for real economic growth and unemployment assumes that they will maintain trend values in the years following the return to full employment. In the nonfarm business sector, productivity is assumed to grow at 2.3 percent per year in the long run, while nonfarm labor supply grows at a rate of 0.7 percent per year, so nonfarm business output grows approximately 3.0 percent per year. Real GDP growth, reflecting the slower measured growth in activity outside the nonfarm business sector, proceeds at a rate of 2.5 percent. That is markedly slower than the average growth rate of real GDP since 1947—3.2 percent per year. In the 21st century, real GDP growth in the United States is likely to be permanently slower than it was in earlier eras because of the slowdown in labor force growth that has begun with the retirement of the post-World War II “baby boom” generation.

Unemployment.—In December 2010, the overall unemployment rate was 9.4 percent. It has shown little movement since the middle of 2010. The broadest measure of underutilized labor published by the Bureau of Labor Statistics is the U-6 measure, which includes discouraged workers and those working part-time for economic reasons. It was 16.7 percent in December 2010, down only slightly from its peak of 17.4 percent in October 2009. The overall unemployment rate is projected to decline over the course of 2011-2014, as the growth rate accelerates, but unemployment is not projected to drop below 6 percent until 2015.

Inflation.—Over the four quarters ending in 2010:4, the price index for Gross Domestic Product rose only 1.3 percent, significantly higher than the 0.5 percent increase over the previous four quarters, but well below the 2.5 percent average inflation rate over the preceding decade. The Consumer Price Index for all urban consumers (CPI-U) has been more volatile. For the twelve months ending in December 2010, the overall CPI-U rose by 1.4 percent. Over the previous twelve months it had risen by 2.8 percent, but over the 12 months before that, it was unchanged. The exaggerated movements in the CPI have been mainly due to sharp movements in food and energy prices. The so-called “core” CPI, excluding both food and energy, was up only 0.6 percent through the twelve months ending in December compared with 1.8 percent during the previous twelve months.

Weak demand has held down prices for many goods and services. Continued high unemployment is expected to preserve a low inflation rate. As the economy recovers and the unemployment rate declines, the rate of inflation should return to near the Federal Reserve’s implicit target of around 2 percent per year. With the recovery path assumed in the Administration forecast, the risk of outright deflation appears minimal. The Administration

assumes that the rate of change in the CPI will average 2.1 percent and that the GDP price index will increase at a 1.8 percent annual rate in the long run.

Interest Rates.—Interest rates on Treasury securities fell sharply in late 2008, as both short-term and long-term rates declined to their lowest levels in decades. Investors sought the security of Treasury debt during the heightened financial uncertainty of the last few years, which has reduced yields. Treasury interest rates remained low in 2010. In the Administration projections, interest rates are expected to rise, but only gradually as financial concerns are alleviated and the economy recovers from recession. The 91-day Treasury bill rate is projected to reach 4.1 percent and the 10-year rate 5.3 percent by 2017. These forecast rates are historically low, reflecting lower inflation in the forecast than for most of the post World War II period. After adjusting for inflation, the projected real interest rates are close to their historical averages.

Income Shares.—The share of labor compensation in GDP was extremely low by historical standards in 2010. It is expected to rise over the forecast period from 54.3 percent in 2010 to 56.5 percent in 2020. In the expansion that ended in 2007, labor compensation tended to lag behind the growth in productivity, and that has also been true for the recent surge in productivity growth. The share of taxable wages is also expected to rise from 43.4 percent of GDP in 2010 to 45.8 percent in 2020. Health reform should eventually limit the rise in employer-sponsored health insurance costs and allow for an increase in take-home pay. The share of domestic corporate profits was 10.1 percent of GDP in 2006, which was near an all-time high. Profits dropped sharply in 2008-2009, but have recovered somewhat in 2010 reflecting the success of Administration efforts to spark a recovery. In the forecast, the ratio of domestic corporate profits to GDP falls to about 6 percent by the end of the 10-year projection period as the share of employee compensation slowly recovers.

Comparison with Other Forecasts

Table 2–2 compares the economic assumptions for the 2012 Budget with projections by CBO, the Blue Chip Consensus -- an average of about 50 private-sector economic forecasts -- and, for some variables, the Federal Reserve Open Market Committee. These other forecasts differ from the Administration's projections, but the forecast differences are relatively small when compared with the margin of error in all economic forecasts. Like the Administration, the other forecasts project that real GDP will continue to grow as the economy recovers. The forecasts also agree that inflation will be low while outright deflation is avoided, and that the unemployment rate will decline while interest rates rise

There are some conceptual differences between the Administration forecast and the other economic forecasts. The Administration forecast assumes that the President's Budget proposals will be enacted. The 50 or so private forecasters make differing policy assumptions, but none

would necessarily assume that the Budget is adopted in full. CBO is required to assume that current law will continue in making its projections. This implies, for example, that for CBO's current forecast, the 2001 and 2003 tax cuts are assumed to expire at the end of 2012, reflecting current law.

In addition, the forecasts in the table were made at different times. The Administration projections were completed in mid-November. The three-month lag between that date and the Budget release date occurs because the budget process requires a lengthy lead time to complete the estimates for agency programs that are incorporated in the Budget. Forecasts made at different dates will differ if there is economic news between the two dates that alters the economic outlook, as has occurred this year. The CBO forecast is more up to date since it was published in January 2011. The Blue Chip consensus for 2011-2012 displayed in this table was the latest available at the time the Budget went to print—and was completed in early January, about six weeks after the Administration forecast was finalized; the Blue Chip projections for 2013 to 2021, however, date to last October, as the Blue Chip extends its forecast beyond a two-year horizon only twice a year. The Federal Reserve forecast shown in Table 2-3 is from early November 2010.

Real GDP Growth.— For 2011, the Administration's real GDP projections are lower than those of the Blue Chip consensus but identical with CBO's current forecast. The Administration forecast for 2011 is at the lower end of the range of growth rates reflecting the central tendency of the Federal Reserve forecast.

The most important difference among these forecasts is the expected rate of real GDP growth in the medium term. The Administration projects that real GDP will recover much of the loss from the 2008-2009 recession. This implies a few years of higher than normal growth as real GDP makes up the lost ground. The Blue Chip average shows only a very limited recovery in this sense. In the Blue Chip projections, real GDP growth exceeds its long-run average only briefly throughout the 11-year forecast period, and much of the loss of real GDP experienced during the recession is permanent. Although somewhat greater than Blue Chip, CBO, anticipates only a partial recovery that would not return real GDP to the same level as in the Administration forecast. The Federal Reserve projections for real GDP growth bracket the Administration forecast, while exceeding the Blue Chip and CBO averages in 2012-2013.

In the long run, the real growth rates projected by the forecasters are similar. CBO projects a long-run growth rate of 2.4 percent per year, while the Blue Chip consensus anticipates the same long-run growth rate as the Administration – 2.5 percent per year. Most of the difference between the Administration and CBO's long-run growth projection comes from a difference in the expected rate of growth of the labor force. Both forecasts assume that the labor force will grow more slowly than in the past because of population aging, but the Administration

Table 2-2. COMPARISON OF ECONOMIC ASSUMPTIONS
(Calendar years)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Nominal GDP:												
2012 Budget	14,651	15,240	16,032	17,006	18,043	19,052	20,037	20,986	21,910	22,866	23,860	24,896
CBO	14,649	15,184	15,858	16,609	17,483	18,441	19,362	20,258	21,162	22,093	23,062	24,064
Blue Chip	14,669	15,353	16,108	16,909	17,747	18,628	19,533	20,462	21,435	22,454	23,522	24,652
Real GDP (year-over-year):												
2012 Budget	2.7	2.7	3.6	4.4	4.3	3.8	3.3	2.9	2.6	2.5	2.5	2.5
CBO	2.8	2.7	3.1	3.1	3.5	3.8	3.0	2.5	2.4	2.4	2.4	2.3
Blue Chip	2.9	3.1	3.3	3.0	2.8	2.7	2.6	2.5	2.5	2.5	2.5	2.4
Real GDP (fourth-quarter-over-fourth-quarter):												
2012 Budget	2.5	3.1	4.0	4.5	4.2	3.6	3.2	2.7	2.5	2.5	2.5	2.5
CBO	2.5	3.1	2.8	3.5	NA	NA	NA	NA	NA	NA	NA	NA
Blue Chip	2.8	3.3	3.2	NA	NA	NA	NA	NA	NA	NA	NA	NA
Federal Reserve Central Tendency	2.4 - 2.5	3.0 - 3.6	3.6 - 4.5	3.5 - 4.6	NA	NA	NA	NA	NA	NA	NA	NA
GDP Price Index:¹												
2012 Budget	1.0	1.3	1.5	1.6	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8
CBO	0.9	0.9	1.3	1.6	1.7	1.7	1.9	2.1	2.0	2.0	2.0	2
Blue Chip	1.0	1.5	1.6	1.9	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1
Consumer Price Index (CPI-U):¹												
2012 Budget	1.6	1.3	1.8	1.9	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1
CBO	1.7	1.6	1.3	1.6	1.8	2.0	2.2	2.4	2.3	2.3	2.3	2.3
Blue Chip	1.6	1.7	1.9	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3
Unemployment Rate:²												
2012 Budget	9.6	9.3	8.6	7.5	6.6	5.9	5.5	5.3	5.3	5.3	5.3	5.3
CBO	9.6	9.4	8.4	7.6	6.8	5.9	5.3	5.3	5.2	5.2	5.2	5.2
Blue Chip	9.6	9.4	8.4	7.7	7.1	6.6	6.2		-- average 5.9 --			
Federal Reserve Central Tendency ³	9.6 - 9.7	9.2 - 9.4	8.3 - 8.7	7.3 - 7.8	NA	NA	NA	NA	NA	NA	NA	NA
Interest Rates:²												
91-Day Treasury Bills (discount basis):												
2012 Budget	0.1	0.2	1.0	2.6	3.7	4.0	4.1	4.1	4.1	4.1	4.1	4.1
CBO	0.1	0.3	1.1	2.5	3.5	4.0	4.3	4.4	4.4	4.4	4.4	4.4
Blue Chip	0.1	0.3	1.2	3.2	3.6	3.7	3.8	3.9	3.9	3.9	3.9	3.9
10-Year Treasury Notes:												
2012 Budget	3.2	3.0	3.6	4.2	4.6	5.0	5.2	5.3	5.3	5.3	5.3	5.3
CBO	3.2	3.4	3.8	4.2	4.6	5.0	5.3	5.4	5.4	5.4	5.4	5.4
Blue Chip	3.1	3.5	4.2	4.7	4.9	5.0	5.1	5.2	5.2	5.2	5.2	5.2

Sources: Administration; CBO, The Budget and Economic Outlook: January 2011; October 2010 and January 2011 Blue Chip Economic Indicators, Aspen Publishers, Inc; Federal Reserve Open Market Committee Minutes, November 2-3, 2010.

¹ Year-over-year percent change.

² Annual averages, percent.

³ Average of 4th quarter values.

bases its population projections on the Census Bureau's projections, which tend to run about 0.1 percentage point higher than the CBO projections.

All economic forecasts are subject to error, and the forecast errors are usually much larger than the forecast differences discussed above. As discussed in chapter 3, past forecast errors among the Administration, CBO, and the Blue Chip have been roughly similar.

Unemployment, Inflation, and Interest Rates.— The Administration forecasts an unemployment rate of 9.3 percent in 2011 and 8.6 percent in 2012. The Blue

Chip consensus and CBO projections are close to the Administration forecast in both years. The Federal Reserve forecast range for unemployment brackets the Administration, CBO, and Blue Chip projections in 2011-2013. In the long run, perhaps reflecting the slower average growth projections, the Blue Chip unemployment projection remains above the Administration and CBO projections. The Administration projects a return over time to the average unemployment rate that prevailed in the 1990s and 2000s.

Table 2-3. COMPARISON OF ECONOMIC ASSUMPTIONS IN THE 2011 AND 2012 BUDGETS

(Calendar years; dollar amounts in billions)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Nominal GDP:											
2011 Budget Assumptions ¹	14,605	15,343	16,262	17,241	18,243	19,219	20,183	21,137	22,083	23,055	24,055
2012 Budget Assumptions	14,651	15,240	16,032	17,006	18,043	19,052	20,037	20,986	21,910	22,866	23,860
Real GDP (2005 dollars):											
2011 Budget Assumptions ¹	13,188	13,689	14,275	14,881	15,481	16,036	16,551	17,023	17,472	17,915	18,363
2012 Budget Assumptions	13,234	13,595	14,090	14,707	15,346	15,927	16,461	16,930	17,366	17,800	18,245
Real GDP (percent change):²											
2011 Budget Assumptions ¹	2.5	3.8	4.3	4.2	4.0	3.6	3.2	2.8	2.6	2.5	2.5
2012 Budget Assumptions	2.7	2.7	3.6	4.4	4.3	3.8	3.3	2.9	2.6	2.5	2.5
GDP Price Index (percent change):²											
2011 Budget Assumptions ¹	0.9	1.2	1.6	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8
2012 Budget Assumptions	1.0	1.3	1.5	1.6	1.7	1.7	1.8	1.8	1.8	1.8	1.8
Consumer Price Index (all-urban; percent change):²											
2011 Budget Assumptions ¹	1.9	1.5	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1
2012 Budget Assumptions	1.6	1.3	1.8	1.9	2.0	2.0	2.1	2.1	2.1	2.1	2.1
Civilian Unemployment Rate (percent):³											
2011 Budget Assumptions ¹	10.0	9.2	8.2	7.3	6.5	5.9	5.5	5.3	5.2	5.2	5.2
2012 Budget Assumptions	9.6	9.3	8.6	7.5	6.6	5.9	5.5	5.3	5.3	5.3	5.3
91-day Treasury bill rate (percent):³											
2011 Budget Assumptions ¹	0.4	1.6	3.0	4.0	4.1	4.1	4.1	4.1	4.1	4.1	4.1
2012 Budget Assumptions	0.1	0.2	1.0	2.6	3.7	4.0	4.1	4.1	4.1	4.1	4.1
10-year Treasury note rate (percent):³											
2011 Budget Assumptions ¹	3.9	4.5	5.0	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
2012 Budget Assumptions	3.2	3.0	3.6	4.2	4.6	5.0	5.2	5.3	5.3	5.3	5.3

¹ Adjusted for July 2010 NIPA revisions.² Year-over-year.³ Calendar year average.

The Administration, CBO, and the Blue Chip consensus anticipate a subdued rate of inflation over the next two years. In the medium term, inflation is projected to return to a rate of around 2 percent per year, which is consistent with the Federal Reserve's long-run policy goal for inflation.

The forecasts are also similar in their projections for the path of interest rates. Short-term rates are expected to be near zero in 2011, but then to increase in 2012 and 2013. The Administration projects a somewhat slower rise in short-term rates than the Blue Chip or CBO. The Administration projections are closer to market expectations as of late 2010. The interest rate on 10-year Treasury notes is projected to rise to 5.3 percent in the Administration projections. This is close to the CBO and Blue Chip projections.

Changes in Economic Assumptions

Some of the economic assumptions underlying this Budget have changed compared with those used for the 2011 Budget, but many of the forecast values are similar, especially in the long run (see Table 2-3). The previous Budget anticipated more rapid growth in 2011-2012 than the current Budget. The recovery began as anticipated in 2009, but the pace of growth through mid-2010 was somewhat slower than expected. The Administration continues to believe that the economy will regain most of the ground lost in 2008-2009 and that this will imply rapid growth beginning in 2011 and continuing for the next few years. That growth will help return unemployment to its long-run average. As in last year's projections, inflation is also projected to return to its long-run averages, while interest rates, measured in real terms, also return to their historical averages.

3. INTERACTIONS BETWEEN THE ECONOMY AND THE BUDGET

The economy and the budget are interrelated. Both budget outlays and the tax structure have substantial effects on national output, employment, and inflation; and economic conditions significantly affect the budget in various ways.

Because of the complex interrelationships between the budget and the economy, budget estimates depend to a very significant extent upon assumptions about the economy. This chapter attempts to quantify the relationship between macroeconomic outcomes and budget outcomes and to illustrate the challenges that uncertainty about the future path of the economy poses for making budget projections.¹

The first section of the chapter provides rules of thumb that describe how changes in economic variables result in changes in receipts, outlays, and the deficit. The second section presents information on gross domestic product (GDP) forecast errors in past budgets and how these forecast errors compare to those in forecasts made by the Congressional Budget Office (CBO) and the Blue Chip consensus. The third section provides specific alternatives to the current Administration forecast—both more optimistic and less optimistic—and describes the resulting effects on the deficit. The fourth section shows a probabilistic range of budget outcomes based on past errors in projecting the deficit. The last section discusses the relationship between structural and cyclical deficits, showing how much of the actual deficit is related to the economic cycle (e.g., the recent recession) and how much would persist even if the economy were at full employment.

Sensitivity of the Budget to Economic Assumptions

Both receipts and outlays are affected by changes in economic conditions. Budget receipts vary with individual and corporate incomes, which respond both to real economic growth and inflation. At the same time, outlays for many Federal programs are directly linked to developments in the economy. For example, most retirement and other social insurance benefit payments are tied by law to cost-of-living indices. Medicare and Medicaid out-

lays are affected directly by the price of medical services. Interest on the debt is linked to market interest rates and the size of the budget surplus or deficit, both of which in turn are influenced by economic conditions. Outlays for certain benefits such as unemployment compensation and food stamps vary with the unemployment rate and are thereby linked to the state of the economy.

This sensitivity complicates budget planning because errors in economic assumptions lead to errors in the budget projections. It is therefore useful to examine the implications of possible changes in economic assumptions. Many of the budgetary effects of such changes are fairly predictable, and a set of rules of thumb embodying these relationships can aid in estimating how changes in the economic assumptions would alter outlays, receipts, and the surplus or deficit. These rules of thumb should be understood as suggesting orders of magnitude; they ignore a long list of secondary effects that are not captured in the estimates.

The rules of thumb show how the changes in economic variables affect Administration estimates for receipts and outlays, holding other factors constant. They are not, for two reasons, a prediction of how receipts or outlays would actually turn out if the economic changes actually came to pass. First, the rules of thumb are based on a fixed budget policy that is not always a good predictor of what might actually happen to the budget should the economic outlook change substantially. For example, unexpected downturns in real economic growth, and attendant job losses, usually give rise to legislative actions to expand unemployment benefits, stimulate the economy with additional Federal investment spending, and the like. Second, economic rules of thumb do not capture certain “technical” changes that may in fact relate to economic changes, but do not have a clear relationship to specific economic variables. For example, the rules of thumb for receipts changes reflect how Treasury’s receipts estimates would shift with certain economic changes, but they do not capture the effect of large changes in taxes on capital gains realizations that often occur when the economic outlook changes. On the spending side of the budget, the rules of thumb do not capture changes in deposit insurance outlays, even though bank failures are generally associated with turmoil in the economy.

Economic variables that affect the budget do not usually change independently of one another. Output and employment tend to move together in the short run: a high rate of real GDP growth is generally associated with a declining rate of unemployment, while slow or negative growth is usually accompanied by rising unemployment, a relationship known as Okun’s Law. In the long run, however, changes in the average rate of growth of real GDP are mainly due to changes in the rates of growth of

¹ While this chapter highlights uncertainty with respect to budget projections in the aggregate, estimates for many programs capture uncertainty using stochastic modeling. Stochastic models measure program costs as the probability-weighted average of costs under different scenarios, with economic, financial, and other variables differing across scenarios. Stochastic modeling is essential to properly measure the cost of programs that respond asymmetrically to deviations of actual economic and other variables from forecast values. In such programs, the Federal Government is subject to “one-sided bets” where costs go up when variables move in one direction but do not go down when they move in the opposite direction. The cost estimates for the Pension Benefit Guarantee Corporation, student loan programs, the Troubled Asset Relief Program (TARP), and agriculture programs with price triggers all benefit from stochastic modeling.

productivity and the labor force, and are not necessarily associated with changes in the average rate of unemployment. Inflation and interest rates are also closely interrelated: a higher expected rate of inflation increases nominal interest rates, while lower expected inflation reduces nominal interest rates.

Changes in real GDP growth or inflation have a much greater cumulative effect on the budget if they are sustained for several years than if they last for only one year. However, even one-time changes can have permanent effects if they permanently raise the level of the tax base or the level of Government spending. Moreover, temporary economic changes can change the level of the debt, affecting future interest payments on the debt. Highlights of the budgetary effects of these rules of thumb are shown in Table 3-1.

For real growth and employment:

- The first block shows the effect of a temporary reduction in real GDP growth by one percentage point sustained for one year, followed by a recovery of GDP to the base-case level (the Budget assumptions) over the ensuing two years. In this case, the unemployment rate is assumed to rise by one-half percentage point relative to the Budget assumptions by the end of the first year, then return to the base case rate over the ensuing two years. After real GDP and the unemployment rate have returned to their base case levels, most budget effects vanish except for persistent out-year interest costs associated with larger near-term deficits.
- The second block shows the effect of a reduction in real GDP growth by one percentage point sustained for one year, with no subsequent “catch up,” accompanying a permanent increase in the natural rate of unemployment (and of the actual unemployment rate) of one-half percentage point relative to the Budget assumptions. In this scenario, the level of GDP and taxable incomes are permanently lowered by the reduced growth rate in the first year. For that reason and because unemployment is permanently higher, the budget effects (including growing interest costs associated with larger deficits) continue to grow in each successive year.
- The budgetary effects are much larger if the growth rate of real GDP is permanently reduced by one percentage point even leaving the unemployment rate unchanged, as might result from a shock to productivity growth. These effects are shown in the third block. In this example, the cumulative increase in the budget deficit is many times larger than the effects in the first and second blocks.

For inflation and interest rates:

- The fourth block shows the effect of a one percentage point higher rate of inflation and one percentage point higher nominal interest rates maintained for

the first year only. In subsequent years, the price level and nominal GDP would both be one percentage point higher than in the base case, but interest rates and future inflation rates are assumed to return to their base case levels. Receipts increase by somewhat more than outlays. This is partly due to the fact that outlays for annually appropriated spending are assumed to remain constant when projected inflation changes. Despite the apparent implication of these estimates, inflation cannot be relied upon to lower the budget deficit, mainly because Congress is not likely to allow inflation to erode the real value of spending permanently.

- In the fifth block, the rate of inflation and the level of nominal interest rates are higher by one percentage point in all years. As a result, the price level and nominal GDP rise by a cumulatively growing percentage above their base levels. In this case, again the effect on receipts is more than the effect on outlays.
- The effects of a one percentage point increase in interest rates alone are shown in the sixth block. The outlay effect mainly reflects higher interest costs for Federal debt. The receipts portion of this rule-of-thumb is due to the Federal Reserve’s deposit of earnings on its securities portfolio and the effect of interest rate changes on both individuals’ income (and taxes) and financial corporations’ profits (and taxes).
- The seventh block shows that a sustained one percentage point increase in CPI and GDP price index inflation decreases cumulative deficits substantially. The separate effects of higher inflation and higher interest rates shown in the sixth and seventh blocks do not sum to the effects for simultaneous changes in both shown in the fifth block. This is because the gains in budget receipts due to higher inflation result in higher debt service savings when interest rates are also assumed to be higher in the fifth block than when interest rates are assumed to be unchanged in the seventh block.
- The last entry in the table shows rules of thumb for the added interest cost associated with changes in the budget deficit, holding interest rates and other economic assumptions constant.

The effects of changes in economic assumptions in the opposite direction are approximately symmetric to those shown in the table. The impact of a one percentage point lower rate of inflation or higher real growth would have about the same magnitude as the effects shown in the table, but with the opposite sign.

GDP Forecast Errors

As can be seen in Table 3-1, one of the most important variables that affects the accuracy of the budget projections is the forecast of the growth rate of real GDP through-

Table 3-1. SENSITIVITY OF THE BUDGET TO ECONOMIC ASSUMPTIONS

(Fiscal years; in billions of dollars)

Budget effect	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Total of Effects, 2011-2021
Real Growth and Employment												
Budgetary effects of 1 percent lower real GDP growth:												
(1) For calendar year 2011 only, with real GDP recovery in 2012-13: ¹												
Receipts	-14.9	-24.0	-10.1	-1.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	-48.6
Outlays	3.7	8.7	5.9	3.0	2.9	3.1	3.3	3.4	3.5	3.7	3.8	44.9
Increase in deficit (+)	18.5	32.8	16.0	4.1	2.6	2.9	3.1	3.2	3.3	3.4	3.6	93.5
(2) For calendar year 2011 only, with no subsequent recovery: ¹												
Receipts	-14.9	-32.2	-33.6	-37.4	-40.1	-42.2	-44.2	-46.2	-48.5	-50.9	-53.6	-443.8
Outlays	3.7	10.5	14.0	19.3	24.0	28.9	33.3	37.5	42.0	46.8	51.8	311.7
Increase in deficit (+)	18.5	42.7	47.6	56.6	64.1	71.1	77.5	83.8	90.5	97.7	105.3	755.5
(3) Sustained during 2011 - 2021, with no change in unemployment:												
Receipts	-15.0	-49.5	-83.2	-131.9	-184.1	-239.4	-298.0	-360.9	-428.6	-500.8	-578.9	-2,870.3
Outlays	-0.5	-0.9	1.0	5.9	12.8	21.2	31.2	43.7	59.3	77.2	97.9	348.9
Increase in deficit (+)	14.5	48.6	84.1	137.8	197.0	260.6	329.2	404.6	487.9	578.0	676.7	3,219.1
Inflation and Interest Rates												
Budgetary effects of 1 percentage point higher rate of:												
(4) Inflation and interest rates during calendar year 2011 only:												
Receipts	20.5	42.3	37.0	36.8	39.9	42.5	44.6	46.9	49.3	51.7	54.2	465.6
Outlays	25.6	42.3	32.2	32.5	32.8	32.4	30.6	30.3	29.1	29.9	30.1	347.7
Decrease in deficit (-)	5.1	-*	-4.8	-4.3	-7.1	-10.0	-14.1	-16.7	-20.2	-21.7	-24.1	-117.9
(5) Inflation and interest rates, sustained during 2011 - 2021:												
Receipts	20.6	66.2	103.5	154.0	209.1	266.5	327.3	392.7	464.0	541.8	626.3	3,172.0
Outlays	23.4	71.4	111.9	153.6	194.0	234.7	274.8	315.9	361.3	410.4	461.8	2,613.2
Decrease in deficit (-)	2.9	5.1	8.4	-0.4	-15.1	-31.8	-52.5	-76.9	-102.7	-131.4	-164.5	-558.8
(6) Interest rates only, sustained during 2011 - 2021:												
Receipts	5.6	17.1	22.6	26.4	30.8	33.7	36.2	38.4	40.7	43.5	45.7	340.6
Outlays	16.1	48.2	70.2	90.2	108.4	124.9	140.9	156.2	170.4	186.5	202.4	1,314.4
Increase in deficit (+)	10.6	31.1	47.6	63.8	77.6	91.2	104.7	117.8	129.7	143.0	156.7	973.8
(7) Inflation only, sustained during 2011 - 2021:												
Receipts	15.0	49.1	80.7	127.2	177.8	232.1	290.2	353.3	422.1	496.8	579.0	2,823.3
Outlays	7.3	23.4	42.3	64.7	87.9	113.3	139.0	167.0	200.9	237.0	276.3	1,359.0
Decrease in deficit (-)	-7.6	-25.7	-38.4	-62.5	-90.0	-118.9	-151.2	-186.3	-221.2	-259.9	-302.7	-1,464.2
Interest Cost of Higher Federal Borrowing												
(8) Outlay effect of \$100 billion increase in borrowing in 2011	0.1	0.5	2.1	3.7	4.4	4.8	5.1	5.4	5.6	5.9	6.1	43.8

* \$50 million or less.

¹ The unemployment rate is assumed to be 0.5 percentage point higher per 1.0 percent shortfall in the level of real GDP.

out the projection period. Table 3-2 shows errors in short- and long-term projections for past Administrations, and compares these errors to those of CBO and the Blue Chip Consensus of private forecasters.² Over both a two-year and six-year horizon, the average annual GDP growth rate was very slightly underestimated by all three fore-

² Two-year errors are the average error in percentage points for year-over-year growth rates for the current year and budget year. Administration forecasts are from the budgets released starting in February 1982 (1983 Budget) and through February 2008 (2009 Budget), so that the last year included in the projections is 2009. The six-year forecasts are constructed similarly, but the last forecast used is from February 2004 (2005 Budget). CBO forecasts are from 'The Budget and Economic Outlook' publications in January each year, and the Blue Chip forecasts are from their January projections.

casters in the annual forecasts made since 1982. The differences between the three forecasters were minor. The mean absolute error in the growth rate was 1.1 percent per year for all forecasters for two-year projections, and was about one-third smaller for all three for the six-year projections. The greater accuracy in the six-year projections could reflect a tendency of real GDP to revert at least partly to trend, though the overall evidence on whether GDP is mean reverting is mixed. Another way to interpret the result is that it is hard to predict GDP around turning points in the business cycle, but somewhat easier to project the long-term growth rate based on assumptions about the labor force, productivity, and other factors that affect GDP.

Table 3-2. GDP FORECAST ERRORS, JANUARY 1982-PRESENT

2-Year Real GDP	Admin.	CBO	Blue Chip
Mean Error	-0.0	-0.2	-0.3
Mean Absolute Error	1.1	1.1	1.1
Root Mean Square Error	1.5	1.4	1.4
6-Year Real GDP			
Mean Error	-0.0	-0.3	-0.3
Mean Absolute Error	0.8	0.7	0.7
Root Mean Square Error	0.9	0.9	0.9

Alternative Scenarios

The rules-of-thumb described above can be used in combination to show the approximate effect on the budget of alternative economic scenarios. Modeling explicit alternative scenarios can also be useful in gauging some of the risks to the current budget projections. For example, the severity of the recent recession along with the associated financial crisis makes the strength of the recovery over the next few years highly uncertain. Those possibilities are explored in the two alternative scenarios presented in this section.

In the first alternative, the projected growth rate follows the average strength of the expansions that followed previous recessions in the period since World War II. Real growth beginning in the third quarter of 2009, the start of the current recovery, averages 5.9 percent over the next four quarters, followed by growth rates of 3.8 percent, 3.7 percent, 3.1 percent, and 3.8 percent, respectively, over succeeding four-quarter intervals. In this case, the level of real GDP is substantially higher, especially in the near term, than in the Administration's projections, because the current recovery got off to a relatively slow start in 2009-2010. However, real GDP growth in the Administration's projections is similar to this alternative in the out years. The Administration is projecting an average postwar re-

covery, but one that takes longer to gain traction because of the depth of the recession and its unique nature due to the financial crisis.

The second alternative scenario assumes that real GDP growth beginning in 2010:Q4 follows the projections in the January Blue Chip forecast through the end of 2011 and that growth in 2012-2021 follows the path laid out in the October 2010 extension of the Blue Chip forecast. In this case, after 2011, the level of GDP remains lower than the Administration's forecast throughout the projection. This alternative does not allow for a real recovery from the loss of output during the 2008-2009 downturn. Growth returns to normal, but without a catchup to make up for previous losses. In effect, this alternative assumes there was a permanent loss of output resulting from the shocks experienced during the downturn.

Table 3-3 shows the budget effects of these alternative scenarios compared to the Administration's economic forecast. Under the first alternative, budget deficits are modestly lower in each year compared to the Administration's forecast. In the second alternative, the deficit becomes progressively larger than the Administration's projection through 2018.

Many other scenarios are possible, of course, but the point is that the most important influences on the budget

Chart 3-1. Forecast Alternatives: Real GDP

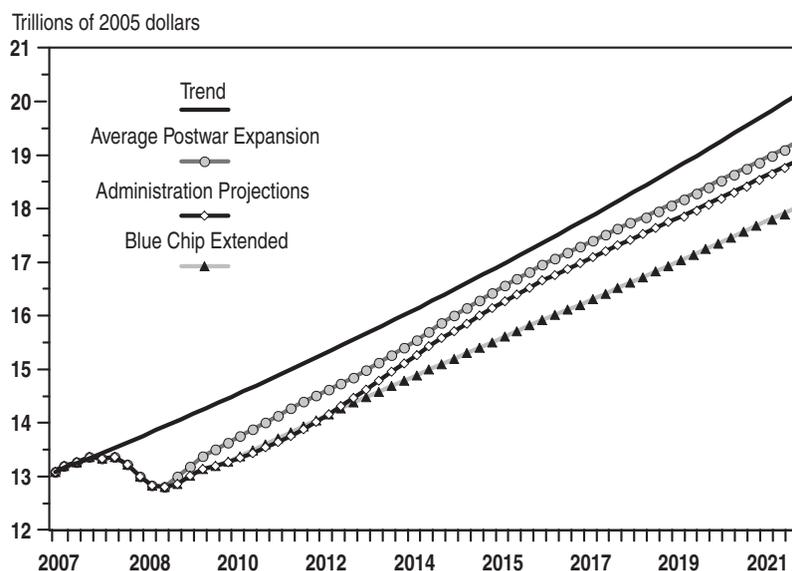


Table 3-3. BUDGET EFFECTS OF ALTERNATIVE SCENARIOS

(Fiscal years; in billions of dollars)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Alternative Budget Deficit Projections:											
Administration Economic Assumptions	1,645	1,101	768	645	607	649	627	619	681	735	774
percent of GDP	10.9%	7.0%	4.6%	3.6%	3.2%	3.3%	3.0%	2.9%	3.0%	3.1%	3.1%
Alternative Scenario 1	1,478	922	625	512	468	491	448	419	457	486	497
percent of GDP	9.4%	5.6%	3.6%	2.8%	2.4%	2.4%	2.1%	1.9%	2.0%	2.0%	2.0%
Alternative Scenario 2	1,634	1,107	827	763	776	855	854	858	920	974	1,022
percent of GDP	10.8%	7.0%	5.0%	4.4%	4.2%	4.4%	4.2%	4.0%	4.1%	4.2%	4.2%

projections beyond the next year or two are the rate at which output and employment recover from the recession and the extent to which potential GDP returns to its pre-recession trend.

Uncertainty and the Deficit Projections

The accuracy of budget projections depends not only on the accuracy of economic projections, but also on technical factors and the differences between proposed policy and enacted legislation. Chapter 30 provides detailed information on these factors for the budget year projections (Table 30-6), and also shows how the deficit projections compared to actual outcomes, on average, over a five-year window using historical data from 1982 to 2010 (Table 30-7). The error measures can be used to show a probabilistic range of uncertainty of what the range of deficit outcomes may be over the next five years relative to the Administration's deficit projection. Chart 3-2 shows this cone of uncertainty, which is constructed under the assumption that future forecast errors would be governed by the normal distribution with a mean of zero and standard error equal to the root mean squared error, as a percent of GDP, of past forecasts. The deficit is projected to be 3.3 percent of GDP in 2016, but has a 90 percent chance of being within a range of a surplus of 3.2 percent of GDP and a deficit of 9.8 percent of GDP.

Structural and Cyclical Deficits

The budget deficit is highly sensitive to the business cycle. When the economy is operating below its potential and the unemployment rate exceeds the level consistent with price stability, receipts are lower, outlays for programs such as unemployment compensation are higher, and the deficit is larger than it would be otherwise. These features serve as "automatic stabilizers" for the economy by restraining output when the economy threatens to overheat and cushioning economic downturns. They also make it hard to judge the overall stance of fiscal policy from looking at the unadjusted budget deficit.

An alternative measure of the budget deficit is called the structural deficit. This measure provides a more useful perspective on the stance of fiscal policy than does the unadjusted unified budget deficit. The portion of the deficit traceable to the automatic effects of the business cycle is called the cyclical component. The remaining portion of

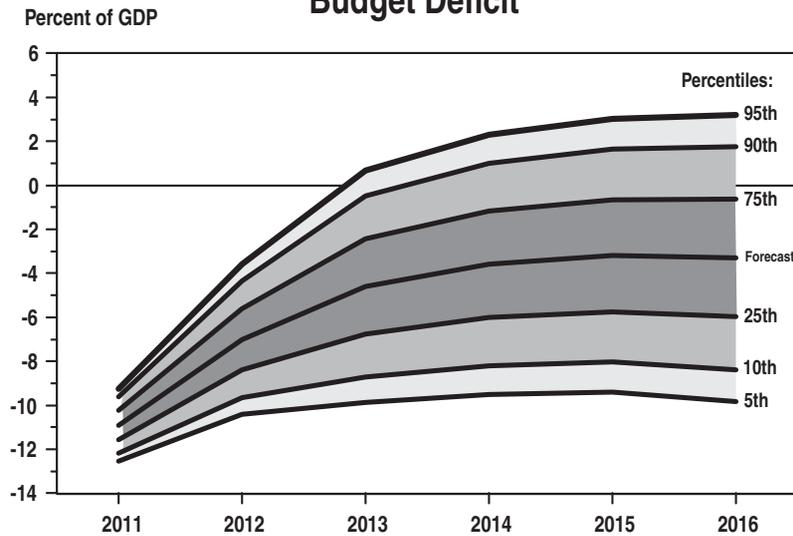
the deficit is called the structural deficit. The structural deficit is a better gauge of the underlying stance of fiscal policy than the unadjusted unified deficit because it removes most of the effects of the business cycle.

Estimates of the structural deficit, shown in Table 3-4, are based on the historical relationship between changes in the unemployment rate and real GDP growth, known as Okun's Law, as well as relationships of unemployment and real GDP growth with receipts and outlays. These estimated relationships take account of the major cyclical changes in the economy and their effects on the budget, but they do not reflect all the possible cyclical effects on the budget, because economists have not been able to identify the cyclical factor in some of these other effects. For example, the recent decline in the stock market pulled down capital gains-related receipts and increased the deficit. Some of this decline is cyclical in nature, but economists have not pinned down the cyclical component of the stock market with any exactitude, and for that reason, all of the stock market's contribution to receipts is counted in the structural deficit.

Another factor that can affect the deficit and is related to the business cycle is labor force participation. Since the official unemployment rate does not include workers who have left the labor force, the conventional measures of potential GDP, incomes, and Government receipts understate the extent to which potential work hours are under-utilized because of a decline in labor force participation. The key unresolved question here is to what extent changes in labor force participation are cyclical and to what extent they are structural. By convention, in estimating the structural budget deficit, all changes in labor force participation are treated as structural.

There are also lags in the collection of tax revenue that can delay the impact of cyclical effects beyond the year in which they occur. The result is that even after the unemployment rate has fallen, receipts may remain cyclically depressed for some time until these lagged effects have dissipated. The recent recession has added substantially to the estimated cyclical component of the deficit, but for all the reasons stated above, the cyclical component is probably an understatement. As the economy recovers, the cyclical deficit is projected to decline and after unemployment reaches 5.3 percent, the level assumed to be consistent with stable inflation, the estimated cyclical component vanishes, leaving only the structural deficit, although some lagged cyclical effects would arguably still be present.

Chart 3-2. Range of Uncertainty for the Budget Deficit



Despite these limitations, the distinction between cyclical and structural deficits is helpful in understanding the path of fiscal policy. The large increase in the deficit in 2009 and 2010 is due to a combination of both components of the deficit. There is a large increase in the cyclical component because of the rise in unemployment. That is what would be expected considering the severity of the recent recession. Finally, there is a large increase in the

structural deficit because of the policy measures taken to combat the recession. This reflects the Government's decision to make an active use of fiscal policy to lessen the severity of the recession and to hasten economic recovery. In 2011–2017, the cyclical component declines sharply as the economy recovers. The structural deficit shrinks during 2011–2013 as the temporary spending and tax measures in the Recovery Act end.

Table 3-4. THE STRUCTURAL BALANCE
(Fiscal years; in billions of dollars)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Unadjusted surplus (-) or deficit	160.7	458.6	1,412.7	1,293.5	1,645.1	1,101.2	767.5	644.6	606.7	648.7	626.7	618.9	681.5
Cyclical component	-94.3	-12.9	353.6	477.0	505.7	527.2	422.6	280.3	153.3	64.5	15.6	0.4	0.0
Structural surplus (-) or deficit	255.0	471.4	1,059.1	816.5	1,139.4	574.0	345.0	364.2	453.5	584.2	611.2	618.5	681.5
	(Fiscal years; percent of Gross Domestic Product)												
Unadjusted surplus (-) or deficit	1.2%	3.2%	10.0%	8.9%	10.9%	7.0%	4.6%	3.6%	3.2%	3.3%	3.0%	2.9%	3.0%
Cyclical component	-0.7%	-0.1%	2.5%	3.3%	3.4%	3.3%	2.5%	1.6%	0.8%	0.3%	0.1%	0.0%	0.0%
Structural surplus (-) or deficit	1.8%	3.3%	7.5%	5.6%	7.6%	3.6%	2.1%	2.0%	2.4%	3.0%	2.9%	2.9%	3.0%

NOTE: The NAIRU is assumed to be 5.3%.

4. FINANCIAL STABILIZATION EFFORTS AND THEIR BUDGETARY EFFECTS

Over the past three years, the U.S. Government has taken unprecedented action to mitigate the damage to the U.S. economy from the largest financial crisis in a generation. The Department of the Treasury, the Board of Governors of the Federal Reserve System (Federal Reserve), the Federal Deposit Insurance Corporation, the National Credit Union Administration, the Securities and Exchange Commission, and the Commodity Futures Trading Commission have acted independently and in concert to scale up existing programs and make them more effective, and to launch new programs that are designed to: expand access to credit; strengthen financial institutions; restore confidence in the financial market; and stabilize the housing sector. In 2010, the Administration also achieved the objective of enacting comprehensive reform of U.S. financial regulation to ensure that the Government has the tools and authority to prevent another crisis of this magnitude before it hits and to resolve significant financial failures more effectively.

This chapter provides a summary of key Government programs, followed by a report analyzing the cost and budgetary effects of the 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. This report analyzes transactions as of November 30, 2010, unless otherwise noted, and expected transactions as reflected in the Budget. The TARP costs discussed in the report and included in the Budget are the estimated present value of the TARP investments, netting and discounting the expected dividends, interest, and principal redemptions the Government receives against its investments; this credit reform treatment of TARP transactions is authorized by Section 123 of EESA.

The Treasury's authority to make new TARP commitments expired on October 3, 2010. However, Treasury continues to manage existing TARP investments, and is authorized to expend additional TARP funds pursuant to obligations entered into prior to October 3, 2010. In July 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act reduced total TARP purchase authority to \$475 billion.

The Administration's current estimate of TARP's deficit cost for \$474.8 billion in obligations is \$48.3 billion (see Tables 4-1 and 4-7). This estimated direct impact of TARP on the deficit has been cut by 58 percent (or over \$66 billion) from the Mid-Session Review of the 2011 Budget (2011 MSR), due to lower overall TARP obligations and higher returns on TARP investments. The Treasury has received higher-than-expected repayments and redemptions from TARP recipients. As of December 31, 2010, the Treasury had received actual repayments of \$235 billion. One hundred banks alone returned over \$208 billion in

TARP investments over 2009 and 2010. The 2011 MSR estimated a \$114.5 billion deficit cost of purchases and guarantees associated with an estimated \$494.4 billion in obligations. Section 123 of EESA requires TARP cost 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 at the market-risk adjusted discount rate, but that cost will not be fully known until all TARP investments have been extinguished. (See Table 4-9 for an estimate of TARP subsidy costs stripped of the market-risk adjustment.)

Enactment of Comprehensive Financial Reform Legislation

On July 21, 2010, thirteen months after the Administration delivered its financial reform proposal to Congress, the President signed into law the Dodd-Frank Wall Street Reform and Consumer Protection Act¹ (the "Dodd-Frank Act" or the "Act"). The Act met the critical objectives of the Administration's proposal: to help prevent future financial crises in part by filling gaps in the U.S. regulatory regime; to better protect consumers; to prevent financial firms from taking risks that threaten the economy; and to provide the Government more effective tools to manage financial crises. The Dodd-Frank Act changes to the U.S. financial regulatory regime are numerous and comprehensive, including:

Ends "Too-Big-to-Fail" : The Dodd-Frank Act makes clear that no financial firm will be considered "too big to fail" in the future. Instead, the Federal Deposit Insurance Corporation (FDIC) now has the ability to unwind failing systemically-significant non-bank financial institutions in an orderly manner to prevent widespread disruptions to U.S. financial stability. The Budget includes a probabilistically estimated cost to the Government of this enhanced orderly liquidation authority of \$19.5 billion over 2011-2021. While total costs of any liquidation are, by law, to be recovered in full, there is a net cost from this authority over the budget period due to the fact that cost recovery occurs in the years following liquidation. The Act also helps monitor and constrain risks in the financial system by creating a new Financial Services Oversight Council (FSOC) chaired by the Secretary of the Treasury that brings together the expertise of the Federal financial regulators, an insurance expert appointed by the President, and state regulators. The Act authorizes the FSOC to designate non-bank financial firms for heightened supervision if material financial distress at such a firm, or the nature, scope, size, scale, concentration, interconnectedness,

¹ P.L. 111-203.

or mix of the activities of the firm, could pose a threat to the financial stability of the United States. The FSOC is supported by a new Office of Financial Research (OFR) within the Treasury Department established to improve the quality of financial data available to policymakers and to facilitate more robust and sophisticated analysis of the financial system. As specified in the Act, the Budget reflects funding for the FSOC and OFR through transfers from the Federal Reserve for 2011 and 2012. Thereafter, both entities will be fee-funded; there will be no net taxpayer cost for these activities.

Enhances Consumer Protection: The Act creates a single independent regulator—the Consumer Financial Protection Bureau (CFPB)—whose sole mission is to look out for consumers in the increasingly complex financial marketplace. Consolidation of authorities in an agency with a mission focused on consumer protection will increase accountability for providing and consistently enforcing clear rules of the road for firms offering consumer financial services. The Act provides for a transition period during which the Treasury Department is responsible for standing up the new CFPB. The Secretary of the Treasury designated July 21, 2011 as the date upon which the consumer financial protection functions of certain existing Federal regulators will transfer to the CFPB and the stand-up period ends. The Budget reflects funding for the CFPB through authorized transfers from the Federal Reserve, estimated at \$329 million in 2012.

Permanently Increases Deposit and Share Insurance and their Protection: The Act permanently increases the standard maximum deposit and share insurance amounts from \$100,000 to \$250,000, which applies to both the FDIC and the National Credit Union Administration, and requires the FDIC to base deposit insurance premiums on an insured depository institution's total liabilities instead of total insured deposits. To improve the security of the FDIC fund backing this insurance, the Act requires the FDIC to increase the reserve ratio of the Deposit Insurance Fund (DIF) to at least 1.35 percent of total insured deposits by September 30, 2020, resulting in an increase in assessments on deposit institutions. These changes are reflected in the Budget and their effects are discussed in greater detail in the Credit and Insurance chapter in this volume.

Increases Transparency in Financial Markets: The Act creates for the first time comprehensive oversight of swaps markets. It requires central clearing and transparent trading of standardized swaps and reporting of all derivatives transactions, as well as capital, margin, and business conduct requirements for swaps dealers and major swaps participants. The Act also expands the authority of the Securities and Exchange Commission (SEC) and the Commodity Futures Trading Commission (CFTC) to register and regulate hedge funds and private equity funds. These changes are critical to ensuring that investors and regulators can more accurately assess the financial strength and risks of market participants.

The Budget reflects changes made by the Act to the SEC's fee structure. Beginning in 2012, a portion of the fees the SEC currently collects will be classified as man-

datory offsetting receipts and deposited directly into the General Fund of the Treasury; the remainder of the fees will continue to be classified as discretionary offsetting collections and available to offset the cost of SEC operations once the annual limit on these costs has been set through appropriations acts. Additionally, the Act has created a Reserve Fund into which the SEC may deposit up to the first \$50 million in mandatory fee collections per year, to be kept in reserve if needed for agency operations.

The Dodd-Frank Act includes numerous other reform measures, including strengthening important payment, clearing, and settlement systems, enhancing disclosure and accountability of credit rating agencies, increasing investor rights and protections, and creating a new office in the Treasury Department to monitor the insurance industry.

International Financial Reform. The financial crisis was an international event not limited to U.S. markets, corporations, and consumers. In addition to its demonstrated commitment to achieving meaningful financial reform at home, the Administration continues to ensure coordination of financial reform principles across the globe. At the G-20 Summit in Pittsburgh in September 2009, President Obama and other G-20 leaders established the G-20 as the premier forum for international economic cooperation. Over the course of Summits held in London (April 2009), Pittsburgh (September 2009), Toronto (June 2010), and Seoul (November 2010), the Administration and G-20 leaders have committed to an ambitious agenda for financial regulatory reform. Their reform commitments have extended the scope of regulation, will improve transparency and disclosure, and will strengthen banks through increased and higher quality capital and introduction of a leverage ratio that will limit the amount banks may lend relative to their capital reserves. Together, the U.S. and its global allies are building effective resolution regimes, including cross-border resolution frameworks, and are developing higher prudential standards for systemically important financial institutions to reflect the greater risk those institutions pose to financial system stability. Treasury Secretary Geithner and others in the Administration have worked actively to make sure that these commitments are fully consistent with our domestic financial reform agenda.

The Administration has worked cooperatively with its G-20 partners to close regulatory gaps. These efforts reflect the parties' recognition of the interconnectedness of financial markets and the need to preclude opportunities for regulatory arbitrage, in which firms seek jurisdictions and financial instruments that are less regulated and, in doing so, allow risk to build up covertly, posing a threat to financial stability. In developing regulatory reforms that strengthen the resilience of the financial system to withstand the level of stress seen in the crisis, the Administration and its G-20 partners have remained mindful of the need to undertake reform in ways consistent with cultivating vibrant, innovative, and healthy markets that can do what financial markets do best: allocate scarce resources efficiently.

Federal Reserve Programs

Beginning in August 2007, the Federal Reserve responded to the crisis by implementing a number of programs designed to support the liquidity positions of financial institutions and foster improved conditions in financial markets. The Federal Reserve actions can be divided into three groups. The first set of tools involved the provision of short-term liquidity to banks and other financial institutions through the traditional discount window to stem the precipitous decline in interbank lending. The Term Auction Facility (TAF), which was created in December 2007, allowed depository institutions to access Federal Reserve funds through an auction process, wherein depository institutions bid for TAF funds at an interest rate that is determined by the auction. The final TAF auction was held in March 2010 and, in total, the Federal Reserve disbursed over \$3.8 trillion in TAF loans. All TAF loans were repaid in full, with interest. The Federal Reserve also initiated the Term Securities Lending Facility (TSLF) and the Primary Dealer Credit Facility (PDCF), both of which provided additional liquidity to the system and helped stabilize the broader financial markets. The PDCF and TSLF expired on February 1, 2010, consistent with the Federal Reserve's June 2009 announcement.

The second set of tools involved the provision of liquidity directly to borrowers and investors in key credit markets. The Commercial Paper Funding Facility (CPFF), Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility (AMLF), Money Market Investor Funding Facility (MMIFF), and the Term Asset-Backed Securities Loan Facility (TALF) fall into this category. As a third set of instruments, the Federal Reserve expanded its traditional tool of open market operations to support the functioning of credit markets through the purchase of longer-term securities for the Federal Reserve's System Open Market Account portfolio. In light of improved functioning of financial markets, many of the new programs have expired or been closed including the MMIFF (October 30, 2009), AMLF (February 1, 2010), and CPFF (February 1, 2010).

To address the frozen consumer and commercial credit markets, the Federal Reserve announced on November 25, 2008 that in conjunction with the Treasury Department it would lend up to \$200 billion to holders of newly issued AAA-rated asset-backed securities through the TALF. The program was expanded as part of the Administration's Financial Stability Plan and launched in March 2009. The program supported the issuance of asset-backed securities collateralized by student loans, auto loans, credit card loans, Small Business Administration guaranteed loans, commercial mortgage loans, and certain other loans. As part of the program, Treasury provided through TARP authorities protection to the Federal Reserve by originally covering the first \$20 billion in losses on all TALF loans. However, in July 2010, Treasury, in consultation with the Federal Reserve, reduced its loss-coverage to \$4.3 billion, which represented approximately 10 percent of the total \$43 billion outstanding in the facility when the program was closed to new lending on June 30, 2010.

To support mortgage lending and housing markets, the Federal Reserve began purchasing up to \$175 billion of Government-Sponsored Enterprise (GSE) debt and up to \$1.25 trillion of GSE mortgage-backed securities (MBS) beginning in December 2008. The Federal Reserve completed its purchase of \$1.25 trillion in GSE MBS in March 2010, and has purchased \$172 billion of GSE debt as of December 2010. Purchasing GSE debt and MBS has provided liquidity to the mortgage market, which facilitated the issuance of new mortgage loans to homebuyers at affordable interest rates. The Federal Reserve also purchased \$300 billion in longer-term Treasury securities in 2009 to improve interest rate conditions in mortgage and other private credit markets.

To support a stronger paced economic recovery, in November 2010 the Federal Reserve announced plans to purchase up to \$600 billion of additional long-term Treasury securities as part of its "quantitative easing" program. The purchases will extend over an eight-month period; however, the Federal Open Market Committee stipulated that it will continually monitor economic conditions and alter the timing and amount of purchases of Treasury securities, as necessary, to maximize employment and maintain price stability, consistent with its statutory mandate.

Earnings resulting from the expansion of the Federal Reserve's balance sheet through the purchase of GSE debt, GSE MBS, and long-term Treasury securities have increased the profits the Federal Reserve remits to the Treasury, reducing the budget deficit. In 2010, Treasury received \$75.8 billion from the Federal Reserve, which represents a 120 percent increase over 2009 deposits. The Budget projects Treasury will receive \$79.5 billion and \$65.8 billion from the Federal Reserve in 2011 and 2012, respectively.

Federal Deposit Insurance Corporation (FDIC) Programs

Using its existing authority, the FDIC created the Temporary Liquidity Guarantee Program (TLGP) in October 2008, to help restore confidence in the banking sector and prevent large scale deposit flight. There are two components to the TLGP: the Debt Guarantee Program and the Transaction Account Guarantee. For the first time ever, the Debt Guarantee Program (DGP) allowed participating institutions (banks and their holding companies and affiliates) to issue FDIC-guaranteed senior secured debt. Therefore, if a participating institution defaulted on its debt, the FDIC would make required principal and interest payments to unsecured senior debt holders. The FDIC charged additional fees and surcharges for any participating institutions that voluntarily opted into this program. Originally, the guarantee was limited to unsecured debt issued between October 14, 2008, and June 30, 2009, and the FDIC guarantee coverage extended through June 30, 2012. On March 17, 2009, the FDIC extended coverage to debt issued through October 31, 2009, and extended the guarantee through December 31, 2012. The FDIC also levied a surcharge on debt issued between April 1, 2009, and October 31, 2009, which was transferred to the Deposit

Insurance Fund. On October 20, 2009, the FDIC adopted a final rule reaffirming that the FDIC will not guarantee any debt issued after October 31, 2009. The rule also established a limited, six-month emergency guarantee facility upon expiration of the program; however, this facility was never utilized. As of September 30, 2010, there was \$268.8 billion of debt outstanding in the senior unsecured debt guarantee program.

The Transaction Account Guarantee (TAG), the second component of the TLGP, extended an unlimited FDIC guarantee to participating insured depository institutions for non-interest bearing transaction account deposits, which included low-interest negotiable order of withdrawal (NOW) accounts and Interest on Lawyers Trust Accounts (IOLTAs). The FDIC charged additional premiums for any banks that voluntarily opted into this program. This guarantee was designed to protect small business payrolls held at small and medium sized banks.

The Dodd-Frank Act modified authorities for these programs and authorized the FDIC to provide two years of unlimited insurance coverage, through the Deposit Insurance Fund, for non-interest bearing transaction account deposits starting on December 31, 2010 (excluding NOW accounts and IOLTAs). However, the Permanent Federal Deposit Insurance Coverage for Interest on Lawyers Trust Accounts Act (P.L. 111-343) enacted on December 29, 2010 extended the two years of unlimited coverage to IOLTAs as well, though not the NOW accounts. The coverage extended through the Dodd-Frank Act is provided to all insured institutions and there are no separate fees associated with this coverage. Due to the passage of the Dodd-Frank Act, the FDIC Board adopted a final rule in October 2010, stating that the TAG would not be extended beyond its December 31, 2010 expiration date. The Budget reflects TAG account transactions for the first quarter of fiscal year 2011, after which losses on non-interest bearing transaction accounts are reflected in the FDIC's Deposit Insurance Fund.

The FDIC has further collaborated with the Treasury Department and the Federal Reserve to provide exceptional assistance to institutions such as Citigroup. Alongside the Treasury and the Federal Reserve, the FDIC guaranteed up to \$10 billion of a \$301 billion portfolio of residential and commercial mortgage-backed securities at Citigroup. The guarantee was terminated in December 2009 as part of a larger Citigroup initiative to repay Federal support.

For a more detailed analysis of active FDIC programs, see the section titled, "Deposit Insurance" in the Credit and Insurance chapter in this volume.

National Credit Union Administration (NCUA) Programs

The NCUA has continued to take aggressive actions in response to dislocations in financial markets in order to maintain member and investor confidence, limit losses, and promote recovery in the credit union system. These actions have included raising the deposit insurance coverage to \$250,000 in 2009, providing liquidity loans to member credit unions totaling \$24 billion, and stabilizing

an additional three corporate credit unions (for a total of five) through conservatorship. NCUA has also executed multiple programs amidst the economic crises to ensure liquidity and ultimately the continued safety and soundness of the credit union system, including the Temporary Corporate Credit Union Stabilization Fund, the Credit Union Homeowners Affordability Relief Program, and the System Investment Program.

On October 16, 2008, the NCUA announced the Temporary Corporate Credit Union Liquidity Guarantee Program. Under this program, the NCUA guaranteed certain unsecured debt of participating corporate credit unions issued from October 16, 2008, through June 30, 2009. In May 2009, NCUA revised and extended the program to cover certain newly-issued unsecured debt obligations issued through June 30, 2010. In September 2010, the program was revised and extended again, to apply to certain newly-issued unsecured debt issued through September 30, 2011. The program ensured parity with deposit institutions covered by a similar FDIC guarantee program, and maintained market confidence in corporate credit union unsecured debt offerings.

The NCUA has utilized the authorities of its Central Liquidity Facility (CLF) to provide liquidity to the credit union system. In 2009 and 2010, the CLF granted liquidity advances of \$20 billion, including \$10 billion originating in March 2009 to the National Credit Union Share Insurance Fund, in order to provide funding stabilization to the first two corporate credit unions placed in conservatorship. All of the advances were repaid by December 31, 2010. Late in 2008, the CLF also established the Credit Union Homeowners Affordability Relief Program (HARP) and the System Investment Program (SIP) to add liquidity to the credit union system; a total of \$8.4 billion was advanced with these two programs. The HARP program provided incentives for credit unions to assist member homeowners in danger of defaulting on their mortgages. The CLF made one-year secured credit advances to qualifying credit unions that in turn were required to invest in a special corporate credit union note used by the corporate credit union to pay down external secured borrowings. The qualifying credit union can earn an extra coupon payment on the HARP note for demonstrated mortgage relief to eligible members. Total HARP advances of \$164 million were made and the program was terminated when the last outstanding advance was repaid on December 31, 2010.

Under the SIP, the CLF made one-year secured credit advances to credit unions, that in turn were required to invest those funds in guaranteed corporate credit union notes, to provide a stable and affordable source of liquidity for corporate credit unions. Total SIP advances of \$8.2 billion were made and the program was terminated when the last outstanding advance was fully repaid on March 2010.

NCUA's systemic support via guarantees of unsecured debt and share deposits and liquidity advances has stabilized the corporate credit union system, which is vital for the day-to-day operations and function of the approximately 7,400 credit unions nationwide. In addition to sta-

bilizing liquidity and confidence in the system, NCUA adopted a stronger regulatory and supervisory framework to govern credit unions, address identified weaknesses, and ensure such distress is not repeated in the future. NCUA also comprehensively revised Part 704 of its Rules and Regulations to enhance capital standards, investment authorities and limitations, and corporate governance.

The Helping Families Save Their Home Act of 2009 (P.L. 111-22) created the Temporary Corporate Credit Union Stabilization Fund (TCCUSF) to cover expenses associated with stabilizing the corporate credit union system. The TCCUSF accrues the losses of the corporate credit union system and issues assessments on all corporate credit unions to recover the losses. With the Share Insurance Fund, the TCCUSF has \$6 billion in borrowing authority. In September 2010, the TCCUSF was extended until June 30, 2021, coinciding with NCUA's adoption of the Corporate Resolution Plan aimed at removing long-term threats to the corporate system. Through 2010, TCCUSF has borrowed \$1.8 billion, including \$810 million for liquidity loans into the corporate credit union system that have been fully repaid. Additionally, TCCUSF assessed credit unions \$1.3 billion since inception and has used these funds to repay all outstanding borrowings required to fund resolutions.

Securities and Exchange Commission (SEC) and Commodity Futures Trading Commission (CFTC) Programs

To advance the Administration's efforts to prevent future financial crises, the SEC and CFTC worked throughout 2010 to address many of the root causes of the crisis, to adapt their organizations to more effectively monitor regulated industries and activities, and to implement enforcement strategies designed to both punish non-compliant actors and deter noncompliance system-wide. Following a review of its enforcement protocol in 2009, the SEC has restructured its Division of Enforcement and has reorganized its inspection unit. These changes will allow the SEC to more aggressively root out securities law violations, and to more effectively prosecute those who commit them. In 2010, the SEC returned approximately \$2.2 billion to harmed investors as a result of its enforcement efforts in the field of mortgage-backed securities and related financial products, and larger such returns are expected over the coming year.

The SEC began implementation of a long-term information technology improvement plan in 2010. The first effort under that plan was design and delivery of a system capable of tracking, compiling, and comparing tips, complaints, and referrals received by the agency. Offices throughout the SEC now have access to this centralized repository, which will increase the agency's ability to match, route, and track tips, complaints, and referrals about a single market participant that might not have been flagged or traced by earlier systems.

The CFTC experienced a significant expansion of its regulatory authorities in 2010 with enactment of the Dodd-Frank Act. In addition to its longstanding responsibility to ensure fair, open, and efficient future markets,

the CFTC is now authorized to regulate the swaps marketplace through oversight of derivatives dealers and open trading and clearing of standardized derivatives on regulated platforms. To adapt its mission to include these new responsibilities, the CFTC established 30 teams in 2010 to formulate and draft the numerous rules required to implement the Dodd-Frank Act. The CFTC has actively consulted with other Federal financial regulators, as well as international counterparts, to ensure harmonization of proposed rules. Additionally, the CFTC has demonstrated a commitment to public transparency in its adoption of Dodd-Frank Act implementing regulations, requesting and incorporating input from the public during the earliest stages of rule development, publishing a wide variety of materials and disclosures on its website, and conducting all Commission reviews of proposed rules in open forums.

While devoting significant resources to timely and thorough implementation of new Dodd-Frank Act authorities, the CFTC has continued its market surveillance and enforcement activities. In 2010, the CFTC filed 57 enforcement actions, 7 more than in 2009. Additionally, the number of enforcement investigations opened by the CFTC increased dramatically in 2010 to 419, up from 251 in 2009. One-hundred percent of enforcement actions closed in 2010 resulted in monetary penalties, up from 98 percent in 2009. This translates to collections of \$174 thousand in restitution and disgorgement penalties (i.e., collections of ill-gotten gains), and \$75 million in civil money penalties in 2010, up from \$154 thousand and \$18 million respectively in 2009.

The President's Budget provides significant increases for the SEC and CFTC in 2012 in support of base regulatory work as well as Dodd-Frank Act implementation. For SEC, a program level of \$1,427 million is proposed, an increase of \$316 million or 28 percent over 2010. For CFTC, \$308 million is provided, an increase of \$139 million or 82 percent over 2010. The rapid expansion in CFTC's authorities and oversight has required unprecedented growth in the agency's resources. In order to ensure that the agency can effectively absorb the increased resources necessary to fund operations at post-Dodd-Frank Act levels, the Budget proposes phasing in total resource growth over 2012 and 2013, with funding in 2012 available for a period of two years. Additionally, the Budget proposes funding CFTC's non-enforcement activities through fees assessed on the regulated community, consistent with every other Federal financial regulator. In 2012, the Budget estimates CFTC user fee collections at \$117 million.

Housing Market Programs under the Housing and Economic Recovery Act

To avoid a possible collapse of the housing finance market and further risks to the broader financial market, the Federal Housing Finance Authority (FHFA) placed the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac) into conservatorship on September 6, 2008. On the following day, the U.S. Treasury launched three new programs to provide temporary financial support to these

housing Government-Sponsored Entities (GSEs) and to stabilize the housing market under the broad authority provided in the Housing and Economic Recovery Act (HERA) of 2008 (P.L. 110–289). First, the Treasury Department provided capital to the GSEs through Senior Preferred Stock Purchase Agreements (PSPAs) to ensure that the GSEs maintain a positive net position (i.e., assets are greater than or equal to liabilities). 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 surplus remaining as of December 31, 2012. Second, the Treasury established a line of credit for Fannie Mae, Freddie Mac, and the Federal Home Loan Banks to ensure they have adequate funding on a short-term, as-needed basis. This line of credit was never used. The Treasury also initiated purchases of GSE guaranteed mortgage-backed securities (MBS) in the open market (separate from the Federal Reserve’s MBS purchase program discussed above), with the goal of increasing liquidity in the secondary mortgage market. In December 2009, the Treasury initiated two additional purchase programs under HERA authority to support housing assistance provided through new and existing State and local Housing Financing Agencies (HFAs) revenue bonds. Treasury’s authority to enter new obligations under the GSE PSPA agreement, MBS purchase, and HFA support programs expired on December 31, 2009. However, Treasury’s existing commitments continue to support any needed capital infusions through PSPAs, new and existing HFA housing bond issuances, and Treasury will continue to collect principal and interest payments on the securities that it owns.

The Budget assumes that Treasury will make cumulative investments in Fannie Mae and Freddie Mac of \$224 billion from 2009 through 2012, and receive dividends of \$55 billion over the same period. These estimates are consistent with the “baseline” case in the range of potential draws announced by FHFA in October 2010. Starting in 2013, the Budget forecasts that Fannie Mae and Freddie Mac will have sufficient earnings to pay part but not all of the scheduled dividend payments. The Budget assumes additional net dividend receipts of \$97 billion from 2013-2021, for total net PSPA outlays of \$73 billion from 2009 through 2021.

In addition, significant assistance has been provided to the mortgage market through the Federal Housing Administration (as described in the Credit and Insurance chapter), through Federal Reserve Bank purchases of GSE MBS (as described above), and through the Department of the Treasury, as described below.

A more detailed analysis of these housing assistance programs is provided the Credit and Insurance chapter in this volume.

Treasury Programs

Small Business Lending Programs. To increase the availability and affordability of credit to help small businesses drive economic recovery and create jobs, the Small Business Jobs Act of 2010 (P.L. 111-240) created two

new programs proposed by the Administration that are being administered by the Department of the Treasury: the State Small Business Credit Initiative (SSBCI), which provides capital through grants to state programs that support lending to small businesses, and the Small Business Lending Fund (SBLF), which can provide up to \$30 billion in capital to qualified community banks and other targeted lenders with assets of less than \$10 billion to encourage their lending to small businesses.

The SSBCI offers States (and in certain circumstances, municipalities) the opportunity to apply for Federal funds for programs that partner with private lenders to extend credit to small businesses to create jobs. All 50 States, the District of Columbia, and the five U.S. Territories are eligible to participate in the SSBCI. The Jobs Act provides \$1.5 billion for SSBCI, including administrative expenses, which is estimated to create at least \$15 billion in new lending to small businesses based on statutory requirements for State participants to demonstrate leveraging capacity. These funds must be obligated within two years and are allocated to States based on a statutory formula that takes into account each jurisdiction’s unemployment rate and decline in employment relative to other jurisdictions.

Because institutions leverage their capital, the SBLF could help increase lending to small businesses in an amount significantly greater than the total capital provided to participating banks. In addition to expanding the lending capacity of banks, the SBLF creates a strong incentive for lenders to increase small business loans by tying the cost of SBLF funding to the volume growth of each lender’s portfolio of small business loans.

For more information on SSBCI and SBLF, please see the Credit and Insurance chapter in this volume.

Troubled Asset Relief Program (TARP). EESA authorized the 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. Treasury has used its authority under EESA to provide capital to and restore confidence in the strength of U.S. financial institutions, to restart markets critical to financing American households and businesses, and to address housing market problems and the foreclosure crisis. Under EESA, the Secretary’s authority was originally limited to \$700 billion in obligations at any one time, as measured by the total purchase price paid for assets and guaranteed amounts outstanding. The Helping Families Save Their Homes Act of 2009 (P.L. 111-22) reduced total TARP purchase authority by \$1.3 billion, and in July 2010, the Dodd-Frank Act further reduced total TARP purchase authority to a maximum of \$475 billion in cumulative obligations.

On December 9, 2009, and as authorized by EESA, the Secretary of the Treasury certified to Congress that an extension of TARP purchase authority until October 3, 2010, was necessary “to assist American families and stabilize financial markets because it will, among other things, enable us to continue to implement programs that address housing markets and needs of small businesses, and to

maintain the capacity to respond to unforeseen threats.” On October 3, 2010, the Treasury’s authority to make new TARP commitments expired. The 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.

In extending TARP authority through October 3, 2010, the Secretary outlined the Government’s four elements of its strategy to wind-down TARP and related programs: First, the Treasury would wind down those programs that are no longer necessary, such as the Capital Purchase Program (CPP); funding for the CPP ended on December 31, 2009. Second, new planned programs in 2010 under the extension of the purchase authority would be limited to three areas: (1) continued foreclosure mitigation for responsible American homeowners and stabilization of the housing market; (2) initiatives to provide capital to small and community banks; and (3) potentially increased commitment to the Term Asset-Backed Securities Loan Facility (TALF) to improve securitization markets that facilitate consumer and small business loans, as well as commercial mortgage loans. Third, the Government would maintain the capacity to respond to unforeseen threats. The Government would not use remaining TARP funds unless necessary to respond to an immediate and substantial threat to the economy stemming from financial instability. Fourth, the Government would manage equity investments acquired through TARP while protecting taxpayer interests. It would continue to manage those investments in a commercial manner and seek to dispose of them as soon as practicable.

As a result of improved overall financial conditions and careful stewardship of the program, the 2012 Budget reflects an impact of TARP on the deficit that is approximately \$66 billion less than previously estimated in the Mid-Session Review of the 2011 Budget. Furthermore, the Budget estimates total purchases under TARP authority to be approximately \$475 billion, which is consistent with the statutory requirement prescribed in the Dodd-Frank Act. A more detailed analysis of specific TARP programs is provided below.

Description of Assets Purchased Through the Troubled Asset Relief Program (TARP), by Program

Capital Purchase Program (CPP). Pursuant to EESA, the Treasury created the CPP in October 2008 to restore confidence throughout the financial system by ensuring that the Nation’s banking institutions have a sufficient capital cushion against potential future losses and to support lending to creditworthy borrowers. All eligible CPP recipients completed funding by December 31, 2009, and the program will not make new investments. The Budget reflects total TARP purchases of \$204.9 billion in preferred stock under the program. As of December 31, 2010, Treasury received approximately \$168 billion in redemptions of preferred stock (i.e., principal repayments) and over \$25 billion in revenues from dividends, interest, warrants, and fees.

In December 2010, the Treasury Department sold its remaining shares of Citigroup common stock acquired as part of Citigroup’s participation in the CPP. In aggregate, Treasury received approximately \$32 billion from the sale of 7.7 billion shares of Citigroup common stock, which represents a positive return of nearly \$7 billion on the Citigroup CPP investment. As a result of the Citigroup sale, and higher-than-expected repayments, the CPP investment is estimated to yield a net positive return of \$5.9 billion to taxpayers, before administrative costs.

American International Group (AIG) Investments. The Federal Reserve Bank of New York (FRBNY) and the Treasury provided financial support to the American International Group in order to mitigate broader systemic risks that would have resulted from the disorderly failure of the company. To prevent the company from entering bankruptcy and to resolve the liquidity issues it faced, the FRBNY provided an \$85 billion credit facility to AIG in September 2008 and received preferred shares that entitled it to 79.9% of the voting rights of AIG’s common stock. After TARP was enacted, the Treasury and FRBNY 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, the Treasury had purchased \$40 billion in preferred shares from AIG. In April 2009, Treasury also extended a \$29.8 billion capital facility, of which AIG has drawn \$27.8 billion as of January 2011, in exchange for additional preferred stock.

After consulting with the FRBNY, Treasury, and the AIG Credit Facility Trust, AIG executed a recapitalization deal in mid-January 2011 that will significantly accelerate the Government’s exit from AIG. As a result of the recapitalization, the Treasury has a 92 percent ownership stake in AIG, approximately 61 percent of which will be held within TARP. A summary of the deal terms is provided below:

- AIG retired the remaining \$20 billion credit facility, which included accrued interest and fees, held by the FRBNY with \$27.2 billion in cash proceeds raised from the initial public offering of the AIA Group Limited (AIA) and the sale of American Life Insurance Company (ALICO) to MetLife.
- AIG drew \$20.3 billion from the remaining \$22.3 billion TARP capital facility to buy-out the FRBNY’s preferred interests in special purposes vehicles (SPV) holding AIA and ALICO. In exchange, Treasury received the preferred interests in the two SPV’s, which are supported by interests in a number of AIG subsidiaries that are currently valued well over \$22.3 billion, as well as Series F preferred stock. The recapitalization agreement allows AIG to draw \$2.0 billion from the TARP capital facility for general corporate purposes. Although AIG has not utilized this borrowing authority, the Budget’s cost estimates assume that AIG will draw the available \$2.0 billion in 2011.
- Treasury exchanged its Series E and F preferred in-

terest holdings for 1.09 billion shares in AIG common stock.

- As part of the aid package extended to AIG, the FRBNY received AIG Series C convertible preferred shares worth 79.8 percent of AIG common stock in January 2009, and transferred ownership to an independent Trust for the benefit of the Treasury. As part of the recapitalization plan, the Series C preferred interest held by the Trust was exchanged for 562.9 million shares of AIG common stock. Immediately after the exchange, the Trust distributed all of its AIG common stock to the Treasury, and was subsequently dissolved (note, the transfer of AIG common stock from the Trust to the Treasury is not a TARP purchase, and thus is not included in the TARP cost estimates).

The Budget reflects a total AIG cost estimate of \$11.7 billion, which is approximately \$38.2 billion lower than the 2011 MSR projection. The shares Treasury received from the independent Trust, which is separate from TARP, were valued at \$20 billion at the end of November 2010. Therefore, when aggregating the AIG TARP investments with the transfer from the Trust, Treasury is projected to yield a positive return of nearly \$8.5 billion on the total \$69.8 billion in aid extended to AIG by the Treasury, based on the November 30, 2010 AIG share price of \$41.29².

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. Investments made through the TIP sought to avoid significant market disruptions resulting from the deterioration of one financial institution that could threaten other financial institutions and impair broader financial markets, and thereby pose a threat to the overall economy. Under the TIP, the Treasury purchased \$20 billion in preferred stock from Citigroup and \$20 billion in preferred stock from Bank of America. The Treasury also received stock warrants from each company. Both Citigroup and Bank of America repaid their TIP investments in full in December 2009, including dividend payments of approximately \$3.0 billion. In March 2010, Treasury sold Bank of America warrants for \$1.2 billion. As of December 31, 2010, the Treasury still holds Citigroup warrants acquired through the TIP. The Budget reflects a positive return of \$3.6 billion on TIP investments.

Asset Guarantee Program (AGP). Treasury created the AGP to provide Government assurances for assets held by financial institutions that are critical to the functioning of the nation's financial system. In January 2009, the Treasury, the Federal Reserve, and the FDIC negotiated a potential loss-sharing arrangement under the AGP on up to \$118 billion of financial instruments owned by Bank of America. In May 2009, Bank of America announced its intention to terminate negotiations with

² In order to calculate the value of Treasury's AIG common stock, the November 30, 2010 share price of \$41.29 was adjusted downward to \$35.84 to reflect the value of 75 million warrants that AIG issued to existing shareholders as part of the recapitalization deal that closed in January 2011.

respect to the loss-sharing arrangement. In September 2009, the Treasury, the Federal Reserve, the FDIC, and Bank of America entered into a termination agreement pursuant to which Bank of America agreed to pay a termination fee of \$425 million to the Government parties. Of this amount, \$276 million was paid to the Treasury in 2009 for the value Bank of America received from the announcement of the government's willingness to guarantee and share losses on the pool of assets from and after the date of the term sheet.

The Treasury, the Federal Reserve and the FDIC entered into a final agreement for a loss-sharing arrangement with Citigroup on January 15, 2009. Under the agreement, the Treasury guaranteed up to \$5 billion of potential losses incurred on a \$301 billion portfolio of financial assets held by Citigroup. The agreement was terminated, effective December 23, 2009. The U.S. Government parties did not pay any losses under the agreement, and have kept \$5.2 billion of the \$7 billion in trust preferred securities.³ Treasury retained \$2.2 billion of the trust preferred securities, as well as warrants for common shares that were issued by Citigroup as consideration for the guarantee. As of December 31, 2010, Treasury still holds these Citigroup warrants. Treasury is also entitled to receive up to \$800 million in additional Citigroup trust preferred securities held by the FDIC (net of any losses suffered by the FDIC) under Citigroup's use of the Temporary Loan Guarantee Program.

Automotive Industry Financing Program (AIFP). In December 2008, the Treasury established the AIFP to prevent a disruption of the domestic automotive industry, in order to mitigate a systemic threat to the Nation's economy and a potential loss of thousands of jobs. Through TARP, the Treasury originally committed \$84.8 billion through loans and equity investments to participating domestic automotive manufacturers, finance companies, and suppliers. In exchange for the assistance provided to automotive manufacturers, Treasury received:

- 60.8 percent of the common equity and \$2.1 billion in preferred stock in "New GM" when the sale of valuable assets from the old GM to the new GM took place on July 10, 2009.⁴ In April 2010, GM fully repaid its \$7 billion loan, ahead of its publicly stated goal to repay the entire loan by June 2010. As part of GM's initial public offering (IPO) in November 2010, Treasury sold nearly 359 million shares of GM common stock at \$33.00 per share and, subsequently, sold an additional 53.7 million shares in December 2010.⁵ In total, Treasury raised \$13.5 billion in net proceeds from the GM IPO and reduced its owner-

³ Trust Preferred Securities (TruPS) are financial instruments that have the following features: they are taxed like debt; counted as equity by regulators; are generally longer term; have early redemption features; make quarterly fixed interest payments; and mature at face value.

⁴ Pursuant to the sale of its major assets, intellectual property, and trademarks on July 10, 2009, General Motors was renamed Motors Liquidation Company (referred to as "Old GM" in the text). The purchasing company subsequently changed its name to General Motors Company LLC (referred to as "New GM" in the text).

⁵ Pursuant to the underwriters' exercise of an option as part of the GM IPO, Treasury sold 53.7 million additional shares in GM in December 2010.

ship stake by nearly half to approximately 33 percent. GM also repurchased \$2.1 billion in preferred stock from Treasury in December 2010. As of December 31, 2010, Treasury has recouped \$23.1 billion of the \$49.5 billion in aid extended to GM.

- Treasury also received a \$7.1 billion debt security and a 9.9 percent share of the equity in the newly formed, post-bankruptcy Chrysler Group LLC (new Chrysler). As part of the bankruptcy proceedings, new Chrysler also assumed \$500 million of debt from Treasury's original \$4 billion loan to Chrysler Holding (old Chrysler). Therefore, Treasury held a \$3.5 billion loan with old Chrysler in addition to investments in new Chrysler. In April 2010, Treasury received a \$1.9 billion repayment of its investments in old Chrysler. This repayment, while less than the amount Treasury invested, was significantly more than the Administration had previously estimated to recover. As part of the repayment agreement, Treasury agreed to write off the \$1.6 billion balance remaining under the \$3.5 billion loan to old Chrysler.
- The Treasury has also purchased equity investments totaling \$17.2 billion in Ally Financial (formerly GMAC). On December 30, 2010, Treasury converted \$5.5 billion of its \$11.4 mandatorily convertible preferred stock in Ally Financial into common stock, which will facilitate Treasury's ability to exit the company. As of December 31, 2010, Treasury holds \$5.9 billion of mandatory convertible preferred shares and \$2.7 billion of trust preferred securities in Ally Financial, as well as 74 percent of the common shares outstanding.

Since the publication of the 2011 President's Budget, both the Auto Supplier Support Program (ASSP) and the Auto Warranty Commitment Program (AWCP) have closed and, in aggregate, these investments did not result in losses. The Government originally committed \$5 billion in loans to ASSP, ensuring the auto suppliers received compensation for products and services purchased by automakers. Through the AWCP, the Government extended support to protect consumer warranties on purchased GM and Chrysler vehicles while the companies worked through their restructuring plans.

The net cost of TARP auto company assistance through the AIFP is estimated to be \$20.3 billion.

TARP Housing Programs. To mitigate foreclosures and preserve homeownership, the Administration in February 2009 established a comprehensive housing program utilizing up to \$50 billion in funding through the TARP. The Government-Sponsored Entities (GSEs) Fannie Mae and Freddie Mac participate in the Administration's program both as the Treasury Department's financial agents for Treasury's contracts with servicers, and by implementing similar policies for their own mortgage portfolios.⁶ These housing programs

focus on creating sustainably affordable mortgages for responsible homeowners who are making a good faith effort to make their mortgage payments, while mitigating the spillover effects of foreclosures on neighborhoods, communities, the financial system and the economy. These programs fall into three initiatives:

- 1) Making Home Affordable (MHA);
- 2) Housing Finance Agency (HFA) Hardest-Hit Fund (HHF); and
- 3) Federal Housing Administration (FHA) Refinance Program⁷.

The MHA initiative includes among its components the Home Affordable Modification Program (HAMP), FHA-HAMP, the Second Lien Program (2MP), and the second lien extinguishment portion of the FHA-Refinance Program.⁸ Under MHA programs, the Treasury contracts with servicers to modify loans in accordance with the program's guidelines, and to make incentive payments to the borrowers, servicers, and investors for those modification or other foreclosure alternatives. As of December 31, 2010, 143 non-GSE mortgage servicers had signed up to participate in the HAMP, over 1.7 million trial modification offers had been extended to borrowers, and over 1.4 million trial modifications were initiated. Over one-half million permanent modifications were active at the end of December 2010. In addition to providing responsible homeowners with sustainable mortgages, the MHA initiative has also, for the first time, standardized the mortgage modification process across the servicing industry.

Treasury offers other forms of incentives to encourage modifications, or prevent foreclosure under the HAMP, as part of its MHA program. For example, Treasury provides payments to protect against declining home prices as part of encouraging mortgage modifications in communities that have experienced continued home price depreciation. When a mortgage modification is not possible, Treasury contracts with servicers to provide incentives that encourage borrower short sales (sales for less than the value of the mortgage in satisfaction of the mortgage) or deeds-in-lieu (when the homeowner voluntarily transfers ownership of the property to the servicer in full satisfaction of the total amount due on the mortgage) via the Home Affordable Foreclosure Alternatives Program, in order to provide a means for borrowers to avoid foreclosure.

As part of its ongoing effort to continuously refine targeting of mortgage assistance, the Administration announced several programs in addition to the original first lien HAMP program that will give a greater number of responsible borrowers an opportunity to remain in their homes and reduce costly foreclosures. Major programs announced since December 31, 2009, include:

Unemployment Program (part of HAMP): Unemployed borrowers that meet eligibility criteria will have an opportunity to receive temporary mortgage payment assistance for a minimum of three months, while they look for a new job.

⁷ This program has also been referred to as the FHA Short Refinance Program or Option in other reporting.

⁸ For more information on MHA programs please visit: www.makinghomeaffordable.gov.

⁶ For additional information on the program, visit: <http://www.makinghomeaffordable.gov/>.

Principal Reduction Alternative (part of HAMP): Servicers who have signed up for this program are required to consider an alternative mortgage modification that emphasizes principal relief for borrowers who owe more than their home is worth. Under the alternative approach, if the servicer makes the modification using this program, investors will receive incentive payments based on a percentage of each dollar of loan principal written off. Borrowers and investors will receive principal reduction and the incentives, respectively, through a pay-for-success structure.

HFA Hardest-Hit Fund: The \$7.6 billion HHF provides the eligible entities of Housing Finance Agencies from 18 states and the District of Columbia with funding to design and implement innovative programs to prevent foreclosures and bring stability to local housing markets. The Administration targeted areas hardest hit by unemployment and home price declines through the program.

FHA Refinance Program: This program, which was initiated in September 2010, allows eligible borrowers who are current on their mortgage but owe more than their home is worth, to re-finance into a FHA-guaranteed loan if the lender writes off at least 10 percent of the existing loan. Nearly \$3.0 billion in TARP funds will be available to provide incentive payments to extinguish second lien mortgages to facilitate refinancing, and an additional \$8.1 billion is committed to cover a share of any losses on the loans and administrative expenses.

The Administration originally allocated \$50 billion to the TARP Housing programs; however, following the enactment of the Dodd-Frank Act, Treasury reduced its commitments to the TARP Housing programs to \$45.6 billion. For additional discussion of TARP Housing programs, see the Credit and Insurance chapter in this volume.

Consumer and Business Lending Initiative (CBLI). The CBLI is designed to facilitate lending that supports consumers and small businesses, through the Term Asset-Backed Securities Loan Facility (TALF), the Community Development Capital Initiative, and the Small Business Administration's guaranteed loan programs.

TALF: The TALF is a joint initiative with the Federal Reserve that provides financing (TALF loans) to private investors to help unfreeze secondary markets for various types of credit. The Treasury provides protection to the Federal Reserve through a loan to the TALF special purpose vehicle (SPV), which was originally available to purchase up to \$20 billion in assets acquired through TALF loans in the event of default. The Treasury has disbursed \$0.1 billion of this amount to the TALF SPV to implement the program, representing a notional amount used to establish the SPV. The Treasury's total TALF purchases will depend on actual TALF loan defaults. In July 2010, Treasury, in consultation with the Federal Reserve, reduced the maximum amount of assets Treasury will acquire to \$4.3 billion, or 10 percent of the total \$43 billion outstanding in the facility when the program was closed to new lending on June 30, 2010. The Budget reflects this change, as shown in Table 4–7.

Community Development Capital Initiative (CDCI): The CDCI program invests lower-cost capital in Community Development Financial Institutions (CDFIs), which operate in markets underserved by traditional financial institutions. In February 2010, Treasury released program terms for the new CDCI program, under which institutions received capital investments of up to 5 percent of risk-weighted assets and pay dividends to Treasury as low as 2 percent per annum. The dividend rate increases to 9 percent after eight years. CDFI credit unions were able to apply for subordinated debt at rates equivalent to those offered to CDFI banks and thrifts. These institutions could apply for capital investments of up to 3.5 percent of total assets - an amount approximately equivalent to the 5 percent of risk-weighted assets available to banks and thrifts. The Budget reflects \$0.6 billion in TARP capital committed to this program.

SBA 7(a): In March 2009, Treasury and the Small Business Administration announced a Treasury program to purchase SBA-guaranteed securities ("pooled certificates") to re-start the secondary market in these loans. Treasury subsequently developed a pilot program to purchase SBA-guaranteed securities, and as of December 31, 2010, purchased securities with an aggregate face value of approximately \$368 million. Treasury reduced its commitment to the Small Business 7(a) program from \$1 billion to \$0.4 billion, as demand for the program waned due to significantly improved secondary market conditions for these securities since the original announcement of the program. The Budget reflects this change, as shown in Table 4–7.

Public Private Investment Program (PPIP). The Treasury, in conjunction with the Federal Deposit Insurance Corporation (FDIC) and the Federal Reserve, introduced the PPIP on March 23, 2009, to address the volatile market cycle affecting troubled legacy assets clogging the balance sheets of private-sector financial institutions. The PPIP is designed to improve the financial position of financial institutions by facilitating the removal of legacy assets from their balance sheets. Legacy assets include both real estate loans held on banks' balance sheets (legacy loans) as well as securities backed by residential and commercial real estate loans (legacy securities). The Treasury implemented the legacy securities PPIP and initially announced that it would provide up to \$100 billion. However, Treasury has subsequently reduced the PPIP commitment twice since the need for Government intervention in the legacy securities market has waned as market conditions have improved and investment of private capital have increased. PPIP closed for new funding on June 30, 2010. The Budget reflects \$22.4 billion in PPIP commitments.

Capital Assistance Program and Other Programs (CAP). The Treasury launched the CAP in March 2009 as the next phase of its effort to ensure that institutions have enough capital to lend, even under more distressed economic scenarios. The CAP was announced in conjunction with the commencement of a supervisory capital assessment process, commonly referred to as the "stress tests". The CAP was available to institutions that par-

anticipated in the “stress tests” as well as others. Of the ten bank holding companies that were identified by the test as needing to raise more capital, nine have met or exceeded the capital raising requirements through private efforts. The Treasury provided an additional \$3.8 billion in capital to GMAC, now Ally Financial, under the Auto Industry Financing Program (described above) to assist its fundraising efforts to meet the requirements of the stress test results. Due to the success of the stress tests, efforts to raise private capital, and CPP, as well as other Government efforts, the Treasury did not receive any applications for the CAP, which terminated on November 9, 2009.

Method for Estimating the Cost of TARP Transactions

Exercising its authority under EESA, the Treasury has purchased financial instruments with varying terms and conditions. Consistent with the provisions of Section 123 of EESA, the costs of equity purchases, loans, guarantees, and loss sharing under the FHA Refinance program through the TARP are reflected on a net present value basis, as determined under the Federal Credit Reform Act (FCRA) of 1990 (2 U.S.C. 661 et seq.), with an adjustment to the discount rate for market risks. The budgetary cost of these transactions is reflected as the net present value of estimated cash flows to and from the Government, excluding administrative costs. Costs for the incentive payments under TARP Housing programs, other than loss sharing under the FHA Refinance program, involve financial instruments without any provision for income or other returns, and are recorded on a cash basis.⁹

The costs of each transaction reflect the underlying structure of the instruments, which may include direct loans, structured loans, equity, loan guarantees, or direct incentive payments. For each of these instruments, analytical cash flow models generate expected cash flows to and from the Government over the life of a program or facility. Further, each cash flow model reflects the specific terms and conditions of the program, technical assumptions regarding the underlying assets, risk of default or other losses, and other factors as appropriate. Models are used to generate cash flows for original subsidy rate estimates; to calculate changes in cost due to changes in contract terms or other Government actions (modification cost estimates); and to update costs for revised economic or performance assumptions and actual cash flows to date. The risk adjustments to the discount rates for TARP equity, loan, and guarantee transactions were made using

⁹ Section 123 of the EESA provides the Administration the authority to record TARP equity purchases pursuant to the FCRA, with required adjustments to the discount rate for market risks. The Making Home Affordable programs and FHA Hardest Hit Fund involve the purchase of financial instruments which have no provision for repayment or other return on investment, and do not constitute guarantees under FCRA. Therefore these purchases are recorded on a cash basis. Administrative expenses are recorded for all of TARP under the Office of Financial Stability and the Special Inspector General for TARP on a cash basis, consistent with other Federal administrative costs.

available data and methods to capture additional potential costs related to uncertainty around the expected cash flows to and from the public. The basic methods for each of these models are outlined below.

Direct Loans. Direct loan subsidy cost estimates are derived using analytical models that estimate the cash flows to and from the Government over the life of the loan. These cash flows include the scheduled principal, interest, and other payments to the Government, including estimated income from warrants or additional notes. These models also include estimates of delinquencies, default and recoveries, based on loan-specific factors including the value of any collateral provided by the contract. The probability and timing of default and recoveries are estimated by using applicable historical data and econometric projections when available, or publicly available proxy data including aggregated credit rating agency historical performance data.

Structured Loans. Structured loans such as the TALF are modeled according to the program structure, where an intermediary special purpose vehicle (SPV) is established to purchase or commit to purchase assets from beneficiaries. In general, structured loans are a hybrid of guarantees and direct loans. The Treasury makes a direct loan to a SPV; the SPV in turn enters into a contract with a beneficiary that resembles a guaranteed loan. Estimated cash flow assumptions reflect the anticipated behavior of the beneficiaries and the cash flows to and from the SPV and the Treasury.

In the case of the TALF, the New York Federal Reserve created an SPV to purchase and manage assets received in connection with any TALF loans. The Federal Reserve acquires assets either when a TALF participant defaults on the Federal Reserve financing or chooses to turn over the securing assets in lieu of the scheduled repayment at the end of the term. The SPV has committed, for a fee, to purchase all assets securing a TALF loan that are received by the New York Federal Reserve at a price equal to the TALF loan amount at the time of acquisition, plus accrued but unpaid interest. The Treasury made an initial allotment to the SPV of \$0.1 billion to fund the SPV, and the Treasury will purchase subordinated debt issued by the SPV to finance up to \$4.3 billion of asset purchases. The Treasury receives fees and interest income on the entire outstanding TALF facility, and amounts collected in the SPV. The Treasury projects cash flows to and from the Government based on estimated SPV performance, the estimated mix of assets funded through the TALF, the terms of the contracts, and other factors.

Guarantees. Cost estimates for guarantees reflect the net present value of estimated claim payments by the Government, net of income from fees, recoveries on defaults, or other sources. Under EESA, guarantees provided through TARP must have at most a zero-cost basis (i.e., fees and other income must completely offset estimated claim payments) at the time of commitment. In TARP guarantee transactions to date, guarantee fees were paid in the form of preferred stock and termination fees. The value of preferred stock is modeled using the same methodology discussed for other equity purchase programs be-

low. Claim payments were modeled consistent with the terms of the guarantee contract. For the Citigroup guarantee, Citigroup would have covered the first loss, and the Treasury would have borne the second loss. Projected claim payments on the guaranteed portfolio of assets reflected historical performance data on similar assets and estimates of future economic conditions such as unemployment rates, gross domestic product, and home price appreciation. However, the Citigroup guarantee was terminated with no claim payments made by the Treasury. The Budget reflects actual collections, and estimated savings from preferred stock proceeds.

Equity Purchases. Preferred stock cash flow projections for programs such as the CPP reflect the risk of losses associated with adverse events, likely failure of an institution, or increases in market interest rates. The model estimates how cash flows vary depending on: 1) current interest rates, which affect the institution's decision to repay the preferred stock; and 2) the strength of a financial institution's assets. The model also estimates the values and projects the cash flows of warrants using an option-pricing approach based on the current stock price and its volatility. Common equity is valued at market prices as of a certain date, such as November 30, 2010, for the 2012 Budget. For the purposes of this calculation, common equity is assumed to be sold to the public as soon as is practicable and advisable.

FHA Refinancing Letter of Credit. Under this program, the cost estimates reflect the present value of estimated claim payments made from the letter of credit (LOC) provider to the lenders of FHA-guaranteed loans, adjusted for market risks. Treasury has signed a LOC with Citigroup, committing \$8.1 billion of TARP funds to cover a certain portion of first losses on default claims of FHA Refinance mortgages plus administrative expenses. Through the LOC agreement, Treasury effectively makes claim payments to private lenders for defaulted debt obligations of non-Federal borrowers. Therefore, the program costs are estimated according to the principles of the Federal Credit Reform Act (FCRA), with a risk adjustment to the discount rate as prescribed by EESA. The

model projects TARP claim payments based on projected FHA Refinance volumes and claim rates. The full \$8 billion commitment was obligated at the point the LOC contract was signed, and outlays of subsidy are recorded as the underlying FHA Refinance loans are made. Payments from the LOC provider to lenders are reflected as a means of financing.

Other TARP Housing. Foreclosure mitigation incentive payments occur when the Government makes incentive payments for certain actions such as: successful modifications of first and second liens, on-schedule borrower payments on those modified loans, protection against further declines in home prices, completing a short sale, or receiving a deed in lieu of foreclosure. The method for estimating these cash flows includes forecasting the total eligible loans, the timing of the loans becoming eligible and entering into the program, loan characteristics, the overall participation rate in the program, the re-default rate, and home price appreciation. For the HFA Hardest-Hit Fund (HHF), the Government provides a cash infusion, similar to a grant, to the eligible entities of state Housing Financing Agencies (HFAs) to design and implement innovative programs to prevent foreclosures and bring stability to local housing markets. The estimated cash flows for the HHF are based on the plans submitted by the HFAs and approved by Treasury, which detail program design and anticipated activity.

TARP Program Costs and Current Value of Assets

This section provides the special analysis described under Sections 202 and 203 of EESA, including estimates of the cost to taxpayers and the current value and budgetary effects of TARP transactions as reflected in the Budget.¹⁰ The analysis includes explanations of the effects from subsidy cost reestimates and prior-year activity. It also includes what the budgetary effects would have been had all transactions been reflected on a cash basis. The infor-

¹⁰ The analysis does not assume the effects of a recoupment proposal under Section 134 of the EESA.

Table 4-1. CHANGE IN PROGRAMMATIC COSTS OF TROUBLED ASSET RELIEF ACTIONS (EXCLUDING DEBT SERVICE)

(In billions of dollars)

TARP Actions	2011 MSR ¹		2012 Budget		Change from 2011 MSR to 2012 Budget	
	TARP Obligations	Estimated Cost (+) / Savings (-)	TARP Obligations	Estimated Cost (+) / Savings (-)	TARP Obligations	Estimated Cost (+) / Savings (-)
Equity purchases	339.3	55.9	339.1	5.9	-0.2	-50.0
Structured and direct loans and asset-backed security purchases	101.4	22.7	85.1	16.5	-16.3	-6.1
Guarantees of troubled assets ²	5.0	-3.0	5.0	-3.7	.....	-0.7
TARP housing programs	48.7	48.7	45.6	45.6	-3.1	-3.1
Total	494.4	124.4	474.8	64.4	-19.6	-60.0
Memorandum:						
Deficit impact before administrative costs and interest effects ³		114.5		48.3		-66.2

¹ Total reflects estimated TARP obligations and costs, before enactment of the Dodd-Frank Act (P.L. 111-517) which limited TARP program levels to \$475 billion.

² The face value of assets supported by the Asset Guarantee Program was \$301 billion.

³ The 2012 Budget total deficit impact of the TARP program includes net downward interest on reestimates of \$16.2 billion.

mation below reflects the estimates of actual and anticipated use of TARP authority as of November 30, 2010, unless noted otherwise.

Table 4–1 summarizes TARP activity, and the estimated lifetime budgetary costs, comparing these amounts to estimates published in the 2011 MSR. The direct impact of TARP program costs on the deficit is now projected to be \$48.3 billion, down from \$114.5 billion as projected in the 2011 MSR. The subsidy cost represents the lifetime net present value cost of TARP obligations from the date TARP obligations originate. With the risk-adjustment to the discount rate required under EESA, the subsidy cost for TARP is now estimated to be \$64.4 billion. The current subsidy cost of TARP is higher than the expected eventual subsidy cost because of the risk adjustment to the discount rate, which adds a premium to TARP costs. Because actual cash flows with the public already include the effects of market risks, if actual cash flows match projections, the premium added to TARP costs is returned in downward reestimates. While TARP's cost to taxpayers will likely be lower than current estimates, the final cost will not be fully known until all TARP investments are extinguished. Also, the subsidy cost is higher than the deficit effect of TARP because it excludes interest received on subsidy cost reestimates. Gross TARP obligations counting against the program purchase authority total \$474.8 billion.

Current Value of Assets. Through its operations, TARP acquires financial instruments which in the aggregate are expected to provide future returns. The subsidy cost of TARP reflects the difference between what TARP pays for these instruments, and the value of assets acquired. Overall, TARP is currently expected to result in a cost because payments made by the TARP to purchase assets and cover liabilities are expected to exceed the value of assets acquired. At any given point in time, the current value of TARP assets reflects the estimated value of TARP investments that have not been repaid, sold, or written off, net of liabilities.

The value of future cash flows related to TARP transactions can 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 expected value of

TARP transactions, because they equal the present value of future anticipated cash flows to and from the public related to outstanding loans or guarantees. So, the net debt or cash balances reflect the expected value of the asset or future liabilities. A direct loan financing account, for example, receives the subsidy cost from the program account (reflecting the net present value cost of the loan), and borrows the difference between the face value of the loan and the subsidy cost from the Treasury to disburse a loan to a borrower. Future collections from the public – such as proceeds from stock sales, or payments of principal and interest – are financial assets. As inflows from the public are received, the value is realized. These amounts are used to repay borrowing, and reduce the debt balance in the financing account. The larger the subsidy cost for a given loan disbursed or equity purchased, the lower the estimated value of the cash flows from the public and asset value to the Government.¹¹

Table 4–2 shows the actual balances of TARP financing accounts as of the end of 2010, and projected balances for each subsequent year through 2021.¹² Actual net balances in financing accounts at the end of 2009 totaled \$129.9 billion. In 2010, total financing account balances decreased to \$122.0 billion, as repayments primarily from large banks exceeded disbursements of TARP assistance. Estimates in 2011 and beyond reflect reestimated activity for TARP outstanding as of September 30, 2010, and all other anticipated transactions. The value of TARP assets is expected to increase by the end of 2011 to \$134.6 billion, indicating that—as of the end of 2011—the Government is expected to hold TARP-related assets with an expected present value of \$134.6 billion in future cash flows, based on risk-adjusted discount rates. The expected increase over 2010 is primarily due to lower estimated costs for outstanding TARP investments, reflected in the downward reestimate to be executed

¹¹ As an extreme example, a direct loan program with 100 percent subsidy cost would require budget authority for the full amount of the loan. The financing account would receive the entire amount of a loan disbursement from the budgetary program account, and would not have to borrow from the Treasury. In this case, the loan would be estimated to have a zero asset value.

¹² Reestimates for TARP are calculated using actual data through September 30, 2010, and updated projections of future activity. Thus, the full impacts of TARP reestimates are reflected in the 2011 financing account balances.

Table 4–2. TROUBLED ASSET RELIEF PROGRAM CURRENT VALUE¹

(In billions of dollars)

	Actual		Estimate										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Financing Account Balances:													
Troubled Asset Relief Program Equity Purchase Financing Account	105.4	76.9	92.4	73.3	64.2	55.3	44.2	38.1	33.3	29.0	21.8	13.2	13.5
Troubled Asset Relief Program Direct Loan Financing Account	23.9	42.7	43.9	44.1	43.7	41.9	38.5	31.2	24.7	20.8	15.6	9.0	5.5
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			-2.6	-6.6	-7.3	-6.2	-4.8	-3.4	-2.2	-1.3	-0.6	-*	.....
Total Financing Account Balances	129.9	122.0	134.6	111.6	100.6	91.0	77.9	66.0	55.8	48.6	36.9	22.2	19.1

* \$50 million or less.

¹ Current value as reflected in the 2012 Budget. Amounts exclude the Making Home Affordable Program and the Hardest Hit Fund activities, which are reflected on a cash basis.

in 2011. It reflects the fact that actual performance exceeded expectations, market conditions improved, and the market risk adjustment to the discount rate was removed for actual transactions through the end of 2010. The 2011 value of TARP assets is also expected to increase due to draws on the AIG facility. The overall balance of the financing accounts is estimated to fall in 2012, and continue to decrease over time as the assets and loans acquired under the TARP program are repaid or sold, and liabilities funded.

TARP equity purchases are expected to reach a total value of \$92.4 billion in 2011, declining thereafter as participants repurchase stock and assets are sold. The value of direct loans is expected to increase to \$44.1 billion in 2012 as disbursements increase, predominantly due to the PPIP and TALF programs, which are expected to generate net positive returns overall. The value of TARP direct loans is expected to decline to \$5.5 billion by 2021 as loans are repaid and warrants and other assets are sold. The \$0.8 billion value under the Asset Guarantee Program (AGP) in 2011 reflects the warrants held by the Treasury and the expected receipt of trust preferred shares from the FDIC following termination of the guarantee on Citigroup assets. The value of the AGP is expected to decline, as preferred stock and warrants are sold. The FHA Refinance Letter of Credit reflects net cash balances, showing the reserves set aside to cover TARP's share of default claims for FHA Refinance mortgages over the 10-year letter of credit facility. These cash balances fall over the 10 year period as claims are paid.

Where Table 4-2 displays the value of TARP investments, guarantees, and loss share agreements, Table 4-3 shows the estimated face value of outstanding TARP investments at the end of each year through 2012. For equity investments, the par value of Treasury's remaining investment is reflected. The outstanding amount of equity investments increases slightly in 2011, as the expected AIG disbursements are greater than repurchases of other equity investments. Direct loans increase with planned disbursements under the AIFP and other programs, and fall in 2012 as loans are repaid. The face value of guarantees section in Table 4-3 reflects the full face value of the loan supported by TARP for programs that are reflected as loan guarantees for budget purposes. TARP's liability under the Asset Guarantee Program and the FHA Refinance mortgages through the

letter of credit facility is only a fraction of the face value of the underlying loans (see Table 4-6). There were no outstanding guarantees in 2010, with the termination of the Citibank guarantee in 2009. The face value of loans reported in this section increases by \$59.7 billion in 2011 and reaches \$137.8 billion in 2012, reflecting the full face value of FHA refinance loans supported by the TARP letter of credit. The overall outstanding face value of TARP investments, loan guarantees, and mortgages supported by the FHA Refinance letter of credit is projected to reach \$258.8 billion in 2012.

Estimate of the Deficit, Debt Held by the Public, and Gross Federal Debt, Based on the FCRA/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 debt service costs on Treasury borrowing to finance the program. The TARP is expected to reduce the 2011 deficit by \$30.6 billion, capturing direct program costs, net downward reestimates of \$41.6 billion (including interest on reestimates), administrative costs, Special Inspector General for TARP activities, and interest effects.

The estimates of debt due to TARP include borrowing to finance both the deficit impact of TARP activity, and the requirements of non-budgetary financing accounts. These estimates are shown in Table 4-4. Estimated debt due to TARP as of the end of 2011 is \$145.6 billion, and declines in later years as TARP loans are repaid and TARP equity purchases are sold or redeemed.

Debt held by the public net of financial assets reflects 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, or equity held by the Government. While debt held by the public is a key measure for examining the impact of TARP, it provides incomplete information on the program's effect on the Government's financial condition. The U.S. Government holds financial assets as a result of TARP assistance, which must be offset against debt held by the

Table 4-3. TROUBLED ASSET RELIEF PROGRAM FACE VALUE OF TARP OUTSTANDING¹

(In billions of dollars)

	Actual		Estimate	
	2009	2010	2011	2012
Troubled Asset Relief Program Equity Purchases	229.6	119.0	119.4	103.6
Troubled Asset Relief Program Direct Loans	60.5	15.7	22.7	17.4
Troubled Assets Insurance Financing Fund Guaranteed Assets	251.4	.....	.....	.....
FHA Refinance Letter of Credit .....	.....	.....	59.7	137.8
Total Face Value of TARP Outstanding	541.5	134.7	201.8	258.8

¹ Table reflects face value of TARP outstanding direct loans, preferred stock equity purchases, guaranteed assets, and the face value of FHA Refinance mortgages supported by the TARP Letter of Credit as of September 30, 2010. Financial instrument purchases under the Making Home Affordable Program and Hardest Hit Fund are reflected in the budget on a cash basis, and are not included here.

Table 4-4. TROUBLED ASSET RELIEF PROGRAM EFFECTS ON THE DEFICIT AND DEBT¹

(Dollars in billions)

	Actual		Estimate										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Deficit Effect:													
Programmatic and administrative expenses:													
Programmatic expenses:													
Equity purchases	115.3	8.4	3.3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Direct loans and purchases of asset-backed securities	36.9	-0.9	0.2	.....	-*	-*	.....	.....	.....	.....	.....	.....	.....
Guarantees of troubled asset purchases	-1.0	-1.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
TARP Housing Programs	*	0.5	9.8	13.2	9.4	5.1	4.1	2.1	1.1	0.2	*	*	.....
Reestimates of credit subsidy costs .....	.....	-116.5	-41.6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Subtotal, programmatic expenses	151.2	-109.9	-28.2	13.2	9.4	5.1	4.1	2.1	1.1	0.2	*	*	.....
Administrative expenses	0.1	0.2	0.5	0.3	0.3	0.2	0.2	0.2	0.1	0.1	*	*	*
Special Inspector General for TARP	*	*	0.1	*	*	*	*	*	*	*	0.1	0.1	0.1
Subtotal, programmatic and administrative expenses	151.3	-109.6	-27.7	13.6	9.7	5.4	4.4	2.3	1.2	0.3	0.1	0.1	0.1
Interest effects:													
Interest transactions with credit financing accounts ²	-2.8	-4.7	-15.4	-12.4	-11.9	-11.7	-11.1	-10.3	-9.2	-7.9	-6.3	-4.2	-2.6
Debt service ³	2.8	4.7	12.5	10.2	10.3	10.7	10.6	10.1	9.4	8.5	7.2	5.5	4.5
Subtotal, interest effects	*	*	-2.9	-2.2	-1.6	-1.0	-0.5	-0.2	0.2	0.5	1.0	1.3	1.9
Total deficit impact	151.3	-109.6	-30.6	11.4	8.1	4.4	3.8	2.1	1.4	0.9	1.1	1.4	2.0
Other TARP transactions affecting borrowing from the public — net disbursements of credit financing accounts:													
Troubled Asset Relief Program Equity Purchase Financing Account	105.4	-28.5	15.5	-19.1	-9.1	-8.9	-11.1	-6.1	-4.8	-4.3	-7.2	-8.6	0.3
Troubled Asset Relief Program Direct Loan Financing Account	23.9	18.8	1.2	0.1	-0.4	-1.8	-3.4	-7.2	-6.6	-3.9	-5.2	-6.6	-3.5
Troubled Assets Insurance Financing Fund Guaranteed Loan Financing Account	0.6	1.8	-1.5	*	-0.8	.....	.....	.....	.....	.....	-*	.....	.....
Troubled Assets Relief Program FHA Refinance Letter of Credit Financing Account .....	.....	.....	-2.6	-3.9	-0.7	1.1	1.4	1.4	1.2	0.9	0.7	0.6	.....
Total, other transactions affecting borrowing from the public ...	129.9	-7.9	12.6	-22.9	-11.0	-9.6	-13.1	-11.9	-10.2	-7.2	-11.7	-14.7	-3.2
Change in debt held by the public	281.2	-117.5	-18.0	-11.5	-2.9	-5.2	-9.2	-9.8	-8.8	-6.4	-10.6	-13.3	-1.2
Debt held by the public	281.2	163.6	145.6	134.1	131.2	126.0	116.8	107.0	98.2	91.8	81.2	67.9	66.7
As a percent of GDP	2.0%	1.1%	1.0%	0.8%	0.8%	0.7%	0.6%	0.5%	0.5%	0.4%	0.4%	0.3%	0.3%
Debt held by the public net of financial assets:													
Debt held by the public	281.2	163.6	145.6	134.1	131.2	126.0	116.8	107.0	98.2	91.8	81.2	67.9	66.7
Less financial assets net of liabilities — credit financing account balances:													
Troubled Assets Relief Program Equity Purchase Financing Account	105.4	76.9	92.4	73.3	64.2	55.3	44.2	38.1	33.3	29.0	21.8	13.2	13.5
Troubled Asset Relief Program Direct Loan Financing Account	23.9	42.7	43.9	44.1	43.7	41.9	38.5	31.2	24.7	20.8	15.6	9.0	5.5
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 .....	.....	.....	-2.6	-6.6	-7.3	-6.2	-4.8	-3.4	-2.2	-1.3	-0.6	-*	.....
Total, financial assets net of liabilities	129.9	122.0	134.6	111.6	100.6	91.0	77.9	66.0	55.8	48.6	36.9	22.2	19.1
Debt held by the public net of financial assets	151.3	41.6	11.1	22.5	30.6	35.0	38.9	41.0	42.4	43.2	44.3	45.7	47.7
As a percent of GDP	1.1%	0.3%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%

* \$50 million or less.

¹ Table reflects the deficit effect of budgetary costs, including 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 Federal Credit Reform Act.³ Includes estimated debt service effects of all TARP transactions that affect borrowing from the public.

Table 4-5. 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
Deficit Effect:													
Programmatic and administrative expenses:													
Programmatic expenses:													
Equity purchases	217.6	-121.9	-25.6	-26.7	-16.0	-15.4	-17.0	-11.5	-9.6	-8.5	-10.4	-10.7	-1.2
Direct loans and purchases of asset-backed securities ..	61.1	-1.0	-10.4	-4.7	-5.3	-6.8	-8.3	-11.7	-10.5	-7.2	-7.9	-8.5	-4.5
Guarantees of troubled asset purchases	-0.5	-0.3	-2.2	*	-0.8	.....	.....	.....	.....	.....	-*	.....	.....
TARP Housing Programs	*	0.5	7.2	9.3	8.6	6.0	5.2	3.1	1.8	0.8	0.4	0.3	.....
Subtotal, programmatic expenses	278.3	-122.6	-31.0	-22.1	-13.5	-16.2	-20.1	-20.1	-18.3	-14.9	-18.0	-18.9	-5.7
Administrative expenses	0.1	0.2	0.5	0.3	0.3	0.2	0.2	0.2	0.1	0.1	*	*	*
Special Inspector General for TARP	*	*	0.1	*	*	*	*	*	*	*	0.1	0.1	0.1
Subtotal, programmatic & administrative expenses	278.4	-122.3	-30.4	-21.7	-13.2	-15.9	-19.8	-19.9	-18.2	-14.8	-17.9	-18.8	-5.6
Debt service ²	2.8	4.7	12.5	10.2	10.3	10.7	10.6	10.1	9.4	8.5	7.2	5.5	4.5
Total deficit impact	281.2	-117.5	-18.0	-11.5	-2.9	-5.2	-9.2	-9.8	-8.8	-6.4	-10.6	-13.3	-1.2
Change in debt held by the public	281.2	-117.5	-18.0	-11.5	-2.9	-5.2	-9.2	-9.8	-8.8	-6.4	-10.6	-13.3	-1.2
Debt held by the public	281.2	163.6	145.6	134.1	131.2	126.0	116.8	107.0	98.2	91.8	81.2	67.9	66.7
As a percent of GDP	2.0%	1.1%	1.0%	0.8%	0.8%	0.7%	0.6%	0.5%	0.5%	0.4%	0.4%	0.3%	0.3%
Debt Held by the Public Net of Financial Assets:													
Debt held by the public	281.2	163.6	145.6	134.1	131.2	126.0	116.8	107.0	98.2	91.8	81.2	67.9	66.7
Less financial assets net of liabilities — credit financing account balances:													
Troubled Asset Relief Program Equity Purchase Financing Account	105.4	76.9	92.4	73.3	64.2	55.3	44.2	38.1	33.3	29.0	21.8	13.2	13.5
Troubled Asset Relief Program Direct Loan Financing Account	23.9	42.7	43.9	44.1	43.7	41.9	38.5	31.2	24.7	20.8	15.6	9.0	5.5
Troubled Assets Insurance Financing Fund Guaranteed Loan Financing Account	0.6	2.4	0.8	0.8	*	*	*	*	*	*	*	*	*
FHA Refinance Letter of Credit Financing Account .....	.....	.....	-2.6	-6.6	-7.3	-6.2	-4.8	-3.4	-2.2	-1.3	-0.6	0.0	0.0
Total, financial assets net of liabilities	129.9	122.0	134.6	111.6	100.6	91.0	77.9	66.0	55.8	48.6	36.9	22.2	19.1
Debt held by the public net of financial assets	151.3	41.6	11.1	22.5	30.6	35.0	38.9	41.0	42.4	43.2	44.3	45.7	47.7
As a percent of GDP	1.1%	0.3%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%

* \$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.

public and other financial liabilities to achieve a more complete understanding of the Government's financial condition.

Accounting for the financial assets acquired through TARP, the impact of the program on debt net of financial assets is projected to be \$11.1 billion as of the end of 2011. Amounts are lower than recent reports, due to both a reduction in the total amount of TARP investments and other support, and higher-than-anticipated TARP repayments in 2009 and 2010.

Under the FCRA, the financing account earns and pays interest at the same rate used to discount cash flows for the credit subsidy cost. Section 123 of EESA requires an adjustment to the discount rate for market risks. This results in subsidy costs for TARP equity purchases, direct loans, and guarantees that are higher than the net present value cost using Treasury discount rates under FCRA. Actual cash flows as of September 30, 2010 already reflect the effect of any market risks to that point, and therefore actual credit transactions with financing accounts reflect

Treasury interest rates under FCRA, with no adjustment.¹³ Future cash flows reflect a risk-adjusted discount rate, consistent with the FCRA requirement that financing account interest be earned or paid at the same rate used to discount the cash flows. This aligns the financing account balances with the current subsidy cost reflected in the Budget. For example, over time, if actual transactions with the public were consistent with projections, the TARP subsidy costs would reflect downward reestimates to return the premium charged under the market risk-adjusted discount rate. Although TARP subsidy costs would be lower, the cumulative deficit effect including interest effects would not be reduced because Treasury net interest earnings on TARP financing account balances would

¹³ 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 reflects discounting with Treasury rates.

be lower once those transactions were executed without the market-risk adjustment to the discount rate.

Estimate of the Current Value on a Cash Basis

The value of the assets acquired through TARP does not depend on whether the costs of acquiring or purchasing the assets are recorded in the budget on a cash basis, or a credit basis; their value would be the same either way. 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 the 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 the budgetary side, and the value of the assets is reflected in the financing accounts for equity purchases, direct loans and loan guarantees.¹⁴ If these purchases were instead presented in the budget on a cash basis, the value of assets purchased would not be reflected in the budget. Rather, 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.

Revised Estimate of the Deficit, Debt Held by the Public, and Gross Federal Debt Based on the Cash-basis Valuation

Estimates of the deficit and debt with TARP transactions calculated on a cash basis are reflected in Table 4–5, for comparison to those estimates in Table 4–4 reported above, in which TARP transactions are calculated consistently with FCRA and Section 123 of EESA.

If TARP transactions were reported on a cash basis, the deficit 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 guarantee as they occurred. Differences between actual and estimated performance, and updated estimates of future performance, would impact the deficit in the year that they occur, and there would be no credit reestimates.

Table 4–5 shows that if TARP transactions were reported on a cash basis, TARP would reduce the deficit in 2011 by an estimated \$18.0 billion, so the 2011 deficit would be \$12.6 billion higher than the estimate in the Budget that reflects TARP on a FCRA basis. The deficit would be higher because outlays would be reported for TARP disbursements that are now included in non-budgetary financing accounts for TARP, and the portion of TARP downward reestimates attributable to better-than-expected future inflows from the public would not be recognized up front, rather, as offsetting receipts when

they occur. Under this alternative approach, the impact of TARP on the debt, and on debt held net of financial assets, is the same as under FCRA with adjustments to the discount rate for market risks.

Portion of the Deficit Attributable to Any Action Taken by the Secretary, and the Extent to Which the Deficit Impact is Due to a Reestimate

Table 4–4 shows the portion of the deficit attributable to actions taken by the Treasury Secretary under the authorities of TARP. The largest effects are for reestimates of TARP activity outstanding as of September 30, 2010, and reductions in the total anticipated size of TARP from \$494.4 billion in TARP obligations at MSR to \$474.8 billion in the 2012 Budget. The specific effects are as follows:

- TARP reestimates and interest on reestimates will reduce the deficit by \$41.6 billion in 2011, including \$35.4 billion in reduced subsidy costs for TARP disbursements as of September 30, 2010, and \$6.2 billion in interest on reestimates. Reestimate effects and changes to anticipated activity together are estimated to reduce total TARP program costs (excluding administrative expenses) by \$48.3 billion from MSR.
- Program costs for purchases of troubled assets including costs associated with AIG disbursements, MHA incentive payments, FHA Refinance letter of credit loss sharing, and modifications of existing TARP activity (excluding reestimates) are estimated to increase the deficit by \$13.4 billion in 2011.
- TARP equity purchases in 2011 are expected to increase outlays by \$3.3 billion due to AIG's expected use of the capital facility, and PPIP purchases.
- Costs associated with new disbursements of direct loans under TARP, including funding under the AIFP program and the TALF, are estimated to result in \$0.2 billion in net outlays in 2011 through 2014, based on estimated loan disbursements.
- Outlays for the TARP Housing Programs are estimated at \$9.8 billion in 2011, which includes payments under the MHA program, Hardest Hit Fund, and subsidy costs for the FHA Refinance letter of credit facility. Outlays for TARP Housing are estimated to decline gradually through 2020.
- Administrative expenses for TARP are estimated at \$0.5 billion in 2011, and expected to fall as TARP winds down through 2021.
- Costs for the Special Inspector General for TARP are estimated at \$0.1 billion in 2011, and to remain relatively stable through 2021.
- 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 payment and receipt of interest are budgetary transactions and therefore affect

¹⁴ For the Making Home Affordable programs and the Hardest Hit Fund, Treasury's purchase of financial instruments does not result in the acquisition of an asset with potential for future returns, and do not constitute the economic equivalent of a loan guarantee under FCRA.

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 \$15.4 billion in 2011 and declines over time as the financing accounts repay borrowing from Treasury through proceeds and repayments on TARP equity purchases and direct loans.¹⁵

¹⁵ Actual TARP financing account interest for 2011 will reflect Treasury rates with no risk adjustment, as the effects of market risks would already be realized on actual cash flows.

The full impact of TARP on the deficit includes the estimated cost of Treasury borrowing from the public—debt service—for the higher outlays listed above. Debt service is estimated at \$12.5 billion for 2011 (as shown in Table 4–5), and then expected to fall gradually to \$4.5 billion in 2021 as the program winds down.

Analysis of TARP Reestimates. The costs of outstanding TARP assistance are reestimated annually by updating cash flows for actual experience and new assumptions, and adjusting for any changes by either recording additional subsidy costs (an upward reestimate) or by reducing subsidy costs (a downward reestimate). The reestimated dollar amounts reflect TARP disburse-

Table 4–6. TROUBLED ASSET RELIEF PROGRAM REESTIMATES

(Dollars in billions)

TARP Program and Cohort Year	Original subsidy rate	Current reestimate rate	Current reestimate amount	Net lifetime reestimate amount, excluding interest	TARP disbursements as of 9/30/2010
Equity Programs:					
Automotive Industry Financing Program (Equity)					
2009	54.52%	25.98%	-2.9	-5.1	12.5
2010	30.25%	7.93%	-0.9	-0.8	3.8
Capital Purchase Program					
2009	26.99%	-2.93%	-7.6	-62.3	204.6
2010	5.77%	18.28%	*	*	0.3
AIG Investments					
2009	82.78%	16.74%	-21.8	-27.9	47.5
Legacy Securities Public-Private Investment Program					
2009	34.62%	-1.68%	-0.4	-0.3	0.9
2010	22.97%	-0.80%	-1.7	-1.5	6.5
Targeted Investment Program					
2009	48.85%	-8.94%	0.3	-23.1	40.0
Community Development Capital Initiative					
2010	48.06%	50.05%	*	*	0.6
Subtotal equity program reestimates			-34.9	-121.1	316.7
Structured and Direct Loan Programs:					
Automotive Industry Financing Program (AIFP)					
2009	58.75%	25.66%	-7.5	-21.0	63.4
Legacy Securities Public Private Investment Program					
2009	-2.52%	5.52%	0.1	0.1	1.4
2010	-10.85%	-0.46%	1.4	1.4	7.8
Small Business Lending Initiative 7(a) purchases					
2010	0.48%	0.30%	-*	-*	0.2
Term-Asset Backed Securities Loan Facility ¹					
2009	-104.23%	-237.20%	*	-0.2	0.1
Subtotal direct loan program reestimates			-6.0	-19.7	73.0
Guarantee Programs:					
Asset Guarantee Program ²					
2009	-0.25%	-1.21%	-0.7	-1.21	301.0
Total TARP Reestimates			-41.6	-142.0	690.6

* \$50 million or less.

¹ The Term-Asset Backed Securities Loan Facility 2009 subsidy rate reflects the anticipated collections for Treasury's \$20 billion commitment, as a percent of estimated lifetime disbursements of roughly \$0.3 billion.

² Disbursement amount reflects the face value of guarantees of assets supported by the guarantee. The TARP obligation for this program was \$5 billion, the maximum contingent liability while the guarantee was in force.

ments through September 30, 2010, while subsidy rates reflect anticipated future disbursements. As noted above, the total decrease in the deficit attributable to TARP reestimates in 2011 is \$41.6 billion, reflecting a \$35.4 billion downward reestimate of the subsidy cost, plus \$6.2 billion in interest on the reestimates. Detailed information on downward reestimates is reflected in Table 4–6.

The subsidy cost for outstanding TARP equity is estimated to be substantially lower than originally estimated. The majority of reduced subsidy costs reflects significant repayments of CPP and TIP investments by financial institutions and higher-than-anticipated income from dividends and the sale of preferred, common stock or warrants, resulting in a positive return and a lower

subsidy rate for these 2009 investments. Costs for CPP investments in 2010 increased from the initial estimates, as many of the remaining CPP investments are in institutions that are not as strong as those that have repaid Treasury. However, the program as a whole is anticipated to result in net positive returns. Reduced subsidy costs for AIG investments and AIFP Equity are due to improved market conditions and performance expectations compared to original estimates. The \$4.3 billion TALF facility is estimated to generate a return of \$0.3 billion to the Treasury, primarily due to fees. The subsidy rate for TALF is based on disbursements, and the Treasury only expects to purchase a small amount of the total \$4.3 billion commitment but will collect fees on the full TALF

Table 4–7. DETAILED TARP PROGRAM LEVELS AND COSTS

(In billions of dollars)

Program	2011 MSR ¹		2012 Budget	
	Estimated TARP Cumulative Obligations	Subsidy Costs	Estimated TARP Cumulative Obligations	Subsidy Costs
Equity Purchases				
Capital Purchase Plan	204.9	1.2	204.9	–5.9
AIG Investments	69.8	49.9	69.8	11.7
Targeted Investment Program	40.0	–3.7	40.0	–3.6
Automotive Industry Financing Program (AIFP)	16.3	6.3	16.3	3.5
Public-Private Investment Program - Equity	7.5	1.8	7.5	–0.1
Community Development Capital Initiative	0.8	0.4	0.6	0.3
Subtotal equity purchases	339.3	55.9	339.1	5.9
Direct Loan Programs				
Automotive Industry Financing Program (AIFP)	65.5	24.4	65.5	16.8
Term Asset-Backed Securities Loan Facility (TALF)	20.0	–0.5	4.3	–0.3
Public-Private Investment Program - Debt	14.9	–1.3	14.9	*
Small Business 7(a) Program	1	*	0.4	*
Other Section 101	*	*	*	*
Subtotal direct loan programs	101.4	22.7	85.1	16.5
Guarantee Programs under Section 102				
Asset Guarantee Program	5.0	–3.0	5.0	–3.7
Non-Add Asset Guarantee Program Face Value	301.0		301.0	
Subtotal asset guarantees	5.0	–3.0	5.0	–3.7
TARP Housing Programs ^{2,3}				
Making Home Affordable (MHA) Programs	N/A	N/A	29.9	29.9
Hardest Hit Fund	N/A	N/A	7.6	7.6
Subtotal non-credit programs	N/A	N/A	37.5	37.5
FHA Refinance Letter of Credit	N/A	N/A	8.1	8.1
Subtotal TARP housing programs	48.7	48.7	45.6	45.6
Total program costs	494.4	124.4	474.8	64.4
Memorandum:				
Interest on Reestimates ⁴		–9.9		–16.2
Deficit impact before administrative costs and interest effects		114.5		48.3

* \$50 million or less.

¹ Estimates do not include the effects of the Dodd-Frank Act (Public Law 111-203), which limited total TARP program levels to \$475 billion.

² The 2011 MSR did not break out the TARP Housing costs as one line item. To increase transparency, the 2012 Budget disaggregates the TARP Housing costs.

³ 2011 MSR obligations and subsidy costs account for a reduction included in the Helping Families Save Their Homes Act, as an offset for Special Inspector General for the Troubled Asset Relief Program (SIGTARP) administrative costs.

⁴ Cumulative interest on reestimates is an adjustment for interest effects of changes in TARP subsidy costs from original subsidy estimates; such amounts are a component of the deficit impacts of TARP programs but are not a direct programmatic cost.

Table 4–8. COMPARISON OF OMB AND CBO TARP COSTS

(In billions of dollars)

Program	Risk-Adjusted Subsidy Costs	
	CBO Subsidy Cost ¹	OMB Subsidy Cost ²
Capital Purchase Program	-15	-6
Targeted Investment Program	-4	-4
AIG assistance	14	12
Automotive Industry Financing Program	19	20
Term Asset-Backed Securities Loan Facility	1	—*
Other programs ³	-2	-3
TARP housing programs	12	46
Total	25	64

* \$50 million or less.

¹ The CBO cost estimate published in January 2011.² Lifetime subsidy costs as reflected in the 2012 Budget, excluding interest on reestimates.³ "Other Programs" reflects an aggregate cost for PPIP (debt and equity purchases), CDCI, AGP, and small business programs.

facility. The reestimated rate declined dramatically, as TALF anticipates fewer default purchases, and income is anticipated to remain strong. Estimated costs for the AIFP direct loan program are also lower than last year because GM fully repaid its \$6.7 billion loan, with interest, and the financial condition of Chrysler, the only outstanding AIFP loan, has improved. The Asset Guarantee Program downward reestimate reflects an estimated increase in the value of preferred stock held by Treasury. No losses were paid through the program.

Differences Between Current and Previous OMB Estimates

As shown in Table 4–7, the Budget reflects a total TARP deficit impact of \$48.3 billion, a reduction of \$66.2 billion from the 2011 MSR projection of \$114.5 billion or \$292.7 billion from the 2010 MSR estimate of \$340.9 billion. The deficit impact differs from the subsidy cost of \$64.4 billion because the deficit impact reflects a \$16.2 billion cumulative downward adjustment for interest on reestimates (for 2010 and 2011 reestimates). These adjustments account for the time between when the subsidy cost was originally estimated and the time when the reestimate is booked. The subsidy cost of \$64.4 billion reflects the estimated present value cost of the program from the date TARP obligations originate.

There are two factors driving the significant reduction in total TARP costs: 1) lower subsidy costs on TARP obligations due to better-than-expected actual performance in some programs, and improved market conditions, and 2) prudent management of TARP programs. The financial and credit markets have progressively improved since the height of the economic crises, and as a result the stock markets are beginning to regain momentum. The vast majority of the \$168.7 billion in outstanding TARP balances are affected by movements in the equity markets. Therefore,

signals of appreciating share prices have improved the Government's outlook of TARP costs. In December 2010, Treasury sold the last tranche of its 7.7 billion shares in Citigroup common stock that was acquired through Citigroup's participation in CPP. In total, Treasury received \$32 billion from the sale of Citigroup common stock at an average selling price of \$4.14 per share, representing a per share premium of \$0.89. Treasury's dual strategy of gradually selling Citigroup's shares to avoid flooding the markets and depressing the company's share price and opportunistically selling a slightly higher volume of common stock when share prices appreciated, yielded the taxpayers nearly a \$7 billion return on the Citigroup CPP investment. This, coupled with higher-than-expected repayments, resulted in the estimated CPP cost falling by \$7.1 billion.

Similarly, Treasury's management of TARP investments in AIG and GM, coupled with strong equity markets significantly reduced the projected TARP costs compared to the 2011 MSR. The AIG common stock and the preferred interest shares in the two Special Purchase Vehicles held by the Federal Reserve Bank of New York that Treasury will receive as part of the AIG recapitalization deal announced in September 2010, was the predominant driver reducing the TARP AIG cost estimate by \$38.2 billion compared to the MSR projection of \$49.9 billion. GM's strong initial public offering (IPO) in November of 2010, which was largest global IPO in history, and the improved prospects of the U.S. auto industry contributed to the \$10.4 billion reduction in the TARP's auto investments relative to the 2011 MSR.

Differences Between OMB and CBO Estimates

Table 4–8 compares the subsidy cost for TARP reflected in the Budget against the costs estimated by the Congressional Budget Office in its January 2011 "Budget

and Economic Outlook: Fiscal Years 2011 Through 2021” Report.¹⁶

CBO estimates the total cost of TARP at \$25 billion, based on an estimated lifetime TARP activity level of \$433 billion. The Budget reflects current estimates of roughly \$475 billion in program level commitments, and \$64 billion in programmatic costs. Differences in the estimated cost of the TARP Housing programs, which stem from divergent demand and participation rate assumptions, are the main difference between OMB and CBO cost estimates. The CBO projects \$12 billion in total TARP Housing expenditures, while the Budget reflects a \$46 billion estimate.

Differences Between EESA and FCRA Cost Estimates

EESA directs that for asset purchases and guarantees under the Troubled Asset Relief Program, the cost shall be determined pursuant to the Federal Credit Reform Act of 1990 (FCRA), except that the discount rate shall be adjusted for market risks. EESA’s directive to adjust the FCRA discount rate for market risks effectively assumes a higher cost to finance these transactions than the FCRA, which requires that Treasury rates be used to

¹⁶ United States. Congressional Budget Office. Budget and Economic Outlook: Fiscal Years 2011 Through 2021. Washington: CBO, 2011. <http://www.cbo.gov/doc.cfm?index=12039>

discount cashflows. In implementing this requirement of EESA, the methodologies used by the Administration seek to capture the cost of the extra return that a private investor would seek in compensation for uncertainty surrounding risks of default and other losses reflected in the cashflows.¹⁷

Table 4–9 compares the subsidy costs and rates of TARP programs discounted at the Treasury rate adjusted for market risk and discounted at the unadjusted Treasury rate. The largest differences in the estimated subsidy rates reflect the most uncertainty regarding the probability of losses. For example, there is greater uncertainty regarding the value of Treasury’s investments in CPP and PPIP than there is related to value of Treasury’s investments in AIG, and so the difference between the market-risk adjusted cost versus the non-adjusted cost is greater for CPP and PPIP than for AIG. Removing the risk adjustment to the discount rate for Treasury’s investment in CPP and PPIP decreases the subsidy cost by \$4.4 billion and \$2.1 billion, respectively, whereas it only decreases the AIG subsidy cost by \$0.5 billion. For the TIP there is no difference in the subsidy cost because the TIP program has been fully repaid. With no further liabilities under AGP, the market risk adjustment is applied to the remaining Citigroup warrants and preferred shares that

¹⁷ For example, if there were a 100 percent default expectation on a loan, and losses given default were projected at 100 percent, the market risk adjustment to the discount rate would be zero. This reflects the fact that there are no unexpected losses if losses are expected to be 100 percent of the face value of the loan.

Table 4–9. COMPARISON OF EESA AND FCRA TARP SUBSIDY COSTS USING 2012 BUDGET VALUATIONS

(In billions of dollars)

Program	TARP Obligation	Subsidy Cost	
		EESA	FCRA
Capital Purchase Plan	204.9	-5.9	-10.4
Targeted Investment Program	40.0	-3.6	-3.6
Asset Guarantee Program	5.0	-3.7	-3.7
Community Development Capital Initiative	0.6	0.3	0.1
Term Asset-Backed Securities Loan Facility (TALF)	4.3	-0.3	-0.4
Small Business 7(a) Program	0.4	*	—*
Public Private Investment Program ¹	22.4	—*	-2.1
AIG Investments	69.8	11.7	11.2
Automotive Industry Financing Program ¹	81.8	20.3	16.4
Subtotal TARP equity and direct loans	429.2	18.8	7.5
TARP Housing Programs:			
Making Home Affordable Programs ²	29.9	29.9	29.9
Hardest Hit Fund ²	7.6	7.6	7.6
Subtotal non-credit programs	37.5	37.5	37.5
FHA Refinance Letter of Credit	8.1	8.1	5.0
Subtotal TARP housing programs	45.6	45.6	42.5
Total³	474.8	64.4	50.0

* \$50 million or less.

¹ Rates for PPIP and AIFP reflect weighted average subsidy costs across various instruments.

² TARP Making Home Affordable Programs and Hardest Hit Fund involve financial instruments without any provision for income or other returns, and are recorded on a cash basis. 100 percent is assumed for the subsidy cost.

³ Total subsidy costs do not include interest effects.

Treasury received as a fee, and has negligible effects on the AGP cost. The non-credit TARP Housing programs are reflected on a cash basis and, therefore, costs are not discounted, which is why there is no difference in the subsidy cost estimate. Using November 30, 2010 valuations, TARP investments discounted at a risk-adjusted rate will

cost an estimated \$64.4 billion or a net subsidy rate of 14 percent. TARP investments discounted at Treasury's cost of borrowing will cost an estimated \$50.2 billion or a net subsidy rate of 11 percent, a difference of 3 percentage points.

TARP OVERSIGHT AND ACCOUNTABILITY

Ensuring effective internal controls and monitoring of TARP programs and funds to protect taxpayer investments remains a top priority of TARP staff and those offices charged with TARP oversight and accountability. The Treasury has implemented a comprehensive set of assessments geared toward identifying risks, evaluating their potential impact, and prioritizing resource assignments to manage risks based on a combined top-down and bottom-up assessment of risk. The Internal Control Review organization within the Office of Financial Stability (OFS) utilizes the assessments to ensure appropriate coverage of high-impact areas. A Senior Assessment Team and the Internal Control Program Office guide OFS efforts to meet all applicable requirements for a sound system of internal controls, and to review and respond to all recommendations made by the four TARP oversight bodies—the Special Inspector General for TARP (SIGTARP), the Government Accountability Office (GAO), the Financial Stability Oversight Board, and the Congressional Oversight Panel. The soundness of Treasury's TARP compliance monitoring, internal control, and risk management policies and processes are reflected in the clean opinions issued by GAO after its audit of TARP financial statements for 2009 and 2010 and the associated internal control over financial reporting.

The Treasury has issued regulations governing executive compensation and conflicts of interest related to TARP

program administration and participation. Compliance with these rules is monitored on an ongoing basis, and reviews of participant conduct and program administration are conducted as appropriate. In executing its responsibility for monitoring compliance with executive compensation requirements, the Treasury has also created an Office of the Special Master for TARP to review TARP participant compliance with applicable legal and regulatory authority, and to recommend action to the Secretary when compensation is found to be awarded in a manner or amount deemed contrary to the public interest.

Special Inspector General for TARP (SIGTARP)

Section 121 of EESA created the Special Inspector General for the Troubled Asset Relief Program (SIGTARP) to prevent fraud, waste, and abuse in the administration of TARP programs through audits and investigations of the purchase, management, and sales of TARP assets. SIGTARP is required to submit quarterly reports to Congress, and has initiated 23 audits and over 130 investigations since its inception. Treasury's Office of Financial Stability has worked closely with SIGTARP staff in designing programs that incorporate strong and effective program safeguards against fraud, waste, and abuse. The Budget supports SIGTARP's continued oversight activities with a request for \$47.4 million in 2012 administrative cost appropriations.

5. LONG TERM BUDGET OUTLOOK

The horizon for most numbers in this budget is 10 years. In particular, the account-level estimates in the 2012 Budget extend to 2021. This 10-year horizon reflects a balance between the importance of considering both the current and future implications of budget decisions made today and a practical limit on the construction of detailed budget projections for years in the future.

Nonetheless, many decisions made today will have important repercussions beyond the 10-year horizon. It is also important to anticipate what future budgetary requirements beyond the 10-year horizon might flow from current laws and policies despite the uncertainty surrounding the assumptions needed for such estimates. Long-run budget projections can be useful in drawing attention to potential problems. Imbalances that may be manageable in the 10-year time frame can become unmanageable if allowed to grow.

To this end, the budget projections in this chapter extend the 2012 Budget for approximately 75 years through 2085. Because of the uncertainties involved in making long-run projections, results are presented for a base case and for several alternative scenarios.

The passage of the Affordable Care Act (ACA) has a profound effect on these projections. The cost-reduction mechanisms in the ACA significantly reduce projected budget deficits in the long run, and the 2012 Budget also includes other initiatives that would help control future deficits if enacted. Nonetheless, the Administration recognizes that there is considerable uncertainty in its long-term projections and that future challenges will require policy responses that have yet to be formulated. The projections in this chapter reflect the fact that, until these reforms are enacted, simply extending current laws and policies leaves the country with a large and growing publicly held debt. Reforms are needed to make sure that overall budgetary resources are large enough to support future spending and that programs like Medicare Part A and Social Security, which are expected to be financed from dedicated revenue sources, remain self-sustaining. The Administration intends to work with the Congress to develop additional policies that will assure fiscal sustainability in the future.

The key drivers of the long-range deficit are the Government's major health and retirement programs: Medicare, Medicaid and Social Security.

- Medicare finances health insurance for most of the Nation's seniors and many individuals with disabilities. Medicare's growth has generally exceeded that of other Federal spending for decades tracking the rapid growth in overall health care costs. The ACA would curtail this cost growth, but Medicare spending is still projected to reach higher levels relative to the economy and the Budget than it has today.

- Medicaid provides medical assistance, including acute and long-term care, to low-income children and families, seniors, and people with disabilities. Like Medicare, for decades Medicaid's growth has generally exceeded that of other Federal spending, and like Medicare it has generally tracked the growth in overall health costs. Medicaid assistance will expand further beginning in 2014 because of broadened Medicaid coverage provided by the ACA. However, Medicaid's finances are also expected to benefit from the ACA's reforms.
- Social Security provides retirement benefits, disability benefits, and survivors' insurance for the Nation's workers. Outlays for Social Security benefits will begin to exceed its dedicated revenue stream over the next quarter century putting pressure on the overall budget as trust fund balances are drawn down.

Long-range projections for Social Security and Medicare have been prepared for decades, and the actuaries at the Centers for Medicare and Medicaid Services have indicated that they intend to begin producing such projections for Medicaid. This is useful information, but individual programs, even large ones such as Medicare, Medicaid, and Social Security, do not determine by themselves the Government's overall budgetary position, which is why the projections in this chapter offer a useful complement to the long-run projections for the individual programs.

Future budget outcomes depend on a host of unknowns—changing economic conditions, unforeseen international developments, unexpected demographic shifts, the unpredictable forces of technological advance, and evolving political preferences to name a few. These uncertainties make even short-run budget forecasting quite difficult, and the uncertainties increase the further into the future projections are extended. While uncertainty makes forecast accuracy difficult to achieve, it does not detract from the importance of long-run budget projections, because future problems are often best addressed in the present. A full treatment of all the relevant risks is beyond the scope of this chapter, but the chapter does show how sensitive long-run budget projections are to changes in some of key economic and demographic assumptions.

The Long-Run Fiscal Challenge

The deficit is projected to fall from its recent peak levels as the economy recovers from the recession and the worldwide financial crisis eases. By the end of the 10-year budget window, the policies in this Budget stabilize the deficit at around 3 percent of GDP, and the debt held by the public is no longer rising as rapidly relative to

GDP. However, beyond 2021, the fiscal position deteriorates again mainly because of the aging of the population and the high continuing cost of the Government's health programs. The publicly-held debt rises unsustainably relative to GDP.

In the public sector as well as the private sector, health care costs have risen faster than inflation for decades. This rising cost trend has led to steady increases in the amounts spent on Medicare and Medicaid, while also making it more difficult for people to afford private health insurance. The ACA tackles both problems by extending health insurance coverage to millions of Americans who currently lack insurance, while slowing future growth in medical costs. When the law is fully implemented, the general rate at which Medicare spending per beneficiary has risen for more than four decades would be substantially reduced. However, health care costs would continue to rise as the population ages, threatening long-run fiscal sustainability. Population aging also poses a serious long-run budgetary challenge. Because of lower expected fertility and improved longevity, the Social Security actuaries project that the ratio of workers to Social Security beneficiaries will fall from around 3.3 currently to a little over 2 by the time most of the baby boomers have retired. From that point forward, the ratio of workers to beneficiaries is expected to continue to decline slowly. With fewer workers to pay the taxes needed to support the retired population, budgetary pressures will steadily mount and without reforms, trust fund exhaustion is projected by the Social Security Trustees to occur in 2037.

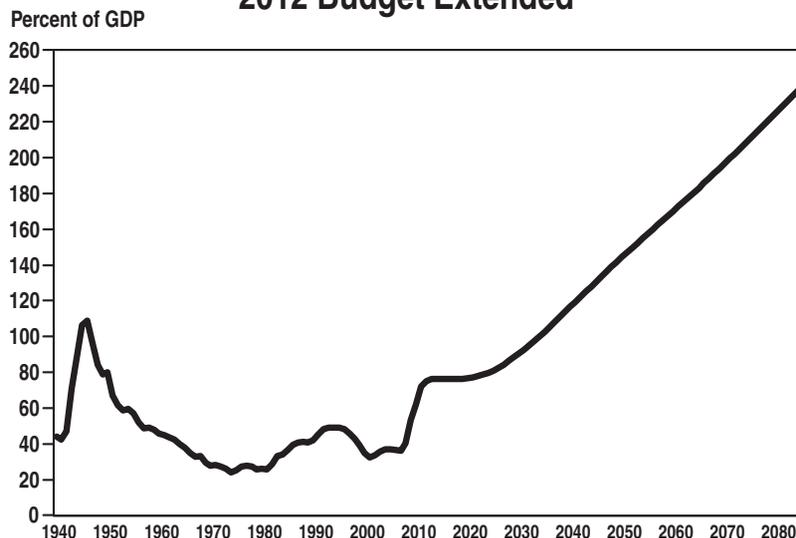
The Nation also faces the challenge of reforming the tax code to make it fairer and simpler and to provide sufficient revenue to meet long-run commitments. Resolving the long-run fiscal challenge will require a comprehensive approach, one that restrains spending growth but also addresses the sufficiency of our tax code. However, those necessary changes in tax policy have yet to be agreed upon.

Long-Run Budget Projections.—In 2010, the three major entitlement programs—Medicare, Medicaid, and Social Security—accounted for 44 percent of non-interest Federal spending, up from 30 percent in 1980. By 2035, when the surviving baby boomers will all be 70 or older, these three programs could account for more than 60 percent of non-interest Federal spending. Through the end of the projection period, in 2085, this figure would remain above 60 percent of non-interest spending. In other words without further reforms, nearly two-thirds of the budget, aside from interest, would go to these three programs alone. That would severely reduce the flexibility of the budget, and the Government's ability to respond to new challenges.

Because of these pressures, the overall budget may not be sustainable without either new cost-reducing measures or additional revenues. The budget projections shown in Table 5–1 illustrate that point. Without further adjustments to spending and revenue, the deficit will rise relative to the overall economy and the debt-to-GDP ratio will far exceed its previous peak level reached at the end of World War II. Reforms are needed to avoid such a development. The Administration aims to work with the Congress so that the ratio of debt to GDP stabilizes at an acceptable level once the economy has recovered.

Medicare and Medicaid.— In the long-run projections in this chapter, different assumptions about the growth rate of health care costs are made. In the base case, a continuation of current policy assumes that the provisions of the ACA are fully implemented, limiting health care costs in the long run compared with prior law. The long-run Medicare assumptions are essentially the same as those used in the latest Medicare Trustees' report (August 2010), which is consistent with how these long-term budget projections have generally been made in the past. The Trustees' projections imply that average long range annual growth in Medicare spending per enrollee is 0.3 percentage points per year above the growth

**Chart 5-1. Publicly Held Debt Under
2012 Budget Extended**



in GDP per capita. This growth rate is significantly smaller than their previous projections—a reduction they largely attribute to the ACA.¹ Along with the rules for Medicare, there are a number of reforms in the ACA that experts believe could produce significant savings relative to the historical trend and that would affect medical costs more broadly. One is an excise tax on the highest-cost insurance plans, which will encourage substitution of plans with lower costs, while raising take-home pay. There is also an array of delivery system reforms, including incentives for accountable care organizations and payment reform demonstrations that have the potential to re-orient the medical system toward providing higher quality care, not just more care, and thus reduce cost growth in the future.² Finally, the ACA established an independent payment advisory board that will be empowered to propose changes in Medicare should Medicare costs exceed the growth rate specified in law. The proposed changes in Medicare would take effect automatically, unless overridden by the Congress. Because of these broader reforms, Medicaid spending per beneficiary and private health spending per capita are also projected to slow, though not as much as Medicare.³

An alternative discussed below assumes that medical costs rise more rapidly than in the base case. This could happen, for example, if future Congresses and Administrations weaken the fiscal discipline in current

¹ The ACA provisions limiting growth in non-physician payments and other changes in assumptions in the 2010 Trustees' report reduce long range average annual growth in Medicare spending by 0.7 percentage points.

² Groups of providers meeting certain criteria can be recognized as accountable care organizations (ACOs), which allow them to coordinate care and manage chronic disease more easily thereby improving the quality of care for patients. ACOs can then share in any cost savings they achieve for Medicare if they meet quality standards.

³ The projections assume that growth in Medicaid spending per enrollee and private health spending per capita exceeds growth in GDP per capita by 0.65 percentage points.

law. The alternative assumes that costs per beneficiary rise at two percentage points per year above GDP per capita which would continue the historical experience of the last 50 years.

Revenues.—Projected revenues in these long-run budget projections start with the estimated receipts under the Administration's proposals in the 2012 Budget. There is some built-in momentum in the tax code that would tend to push up average tax rates over time. For example, the tax code is indexed for inflation, but not for increases in real income, so there is a tendency for individual income taxes to increase relative to incomes when real taxable incomes are rising, everything else equal. Beyond the 10-year budget window, the projections in this chapter assume that this feature of the current tax code will not be allowed to raise individual income taxes. The projections also assume that the Alternative Minimum Tax will be similarly indexed. While these assumptions tend to limit tax revenue, other assumptions work in the opposite direction. For example, the projections assume that the new revenue provisions in the ACA go into effect including the excise tax on high-premium health plans. On balance, the assumptions produce a gradual increase in the overall share of revenues relative to GDP. By 2050, the revenue share is 20.5 percent of GDP and by 2085 it is projected to be 21.2 percent of GDP. However, the projected revenues are insufficient to meet the Federal Government's projected future commitments as shown by the growing deficits in Table 5-1.

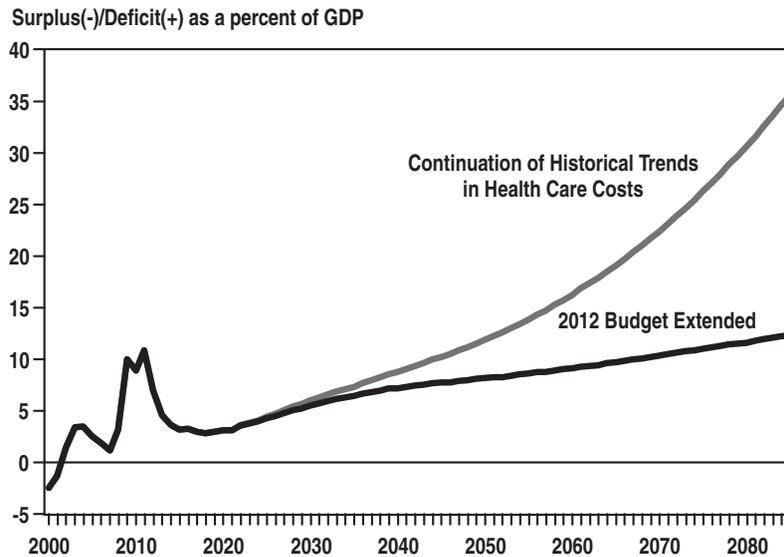
Discretionary Outlays.—Because discretionary spending is determined annually through the legislative process, there is no straightforward assumption for projecting its future path. The budget displays a path for discretionary spending over the next 10 years; beyond that time frame, however, there are several different plausible assumptions for the future path. One is to assume that discretionary spending will be held constant in inflation-ad-

Table 5-1. LONG-RUN BUDGET PROJECTIONS
(Receipts, Outlays, Surplus, or Deficit, and Debt as a Percent of GDP)

	1980	1990	2000	2010	2020	2030	2040	2050	2060	2070	2080	2085
Receipts	19.0	18.0	20.6	14.9	19.9	19.8	20.1	20.5	20.7	20.9	21.1	21.2
Outlays:												
Discretionary	10.1	8.7	6.3	9.0	5.7	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Mandatory:												
Social security	4.3	4.3	4.1	4.8	5.1	5.7	5.7	5.6	5.6	5.7	5.9	5.9
Medicare	1.1	1.7	2.0	3.1	3.3	4.3	4.9	5.1	5.2	5.3	5.3	5.3
Medicaid	0.5	0.7	1.2	1.9	2.4	2.8	3.1	3.3	3.3	3.3	3.3	3.3
Other	3.7	3.2	2.4	3.7	3.2	3.0	2.8	2.7	2.6	2.6	2.5	2.6
Subtotal, Mandatory	9.6	9.9	9.7	13.5	13.9	15.8	16.6	16.7	16.7	16.9	17.0	17.1
Net interest	1.9	3.2	2.3	1.4	3.4	4.1	5.3	6.5	7.7	8.9	10.2	10.9
Total outlays	21.7	21.9	18.2	23.8	23.0	25.3	27.3	28.7	29.9	31.3	32.7	33.5
Surplus or Deficit (–)	–2.7	–3.9	2.4	–8.9	–3.1	–5.5	–7.2	–8.2	–9.2	–10.4	–11.6	–12.3
Primary Surplus/Deficit (–)	–0.8	–0.6	4.7	–7.6	0.2	–1.5	–1.9	–1.7	–1.4	–1.4	–1.4	–1.4
Federal Debt Held by the public, End of Period	26.1	42.1	34.7	62.2	76.7	90.4	116.7	144.3	170.0	196.7	225.2	239.9

Note: The figures shown in this table beyond 2020 are the product of a long-range forecasting model maintained by the Office of Management and Budget. This model is separate from the models and capabilities that produce detailed programmatic estimates in the Budget. It was designed to produce long-range projections based on additional assumptions regarding growth in the economy, the long-range evolution of specific programs, and the demographic and economic forces affecting those programs. The model, its assumptions, and sensitivity testing of those assumptions are presented in this chapter.

Chart 5-2. Alternative Health Care Costs



justed terms, which would allow discretionary programs to increase with prices, but would not allow the programs to expand with population or real growth in the economy. However, extending this assumption over many decades is not realistic. When the population and economy grow, as assumed in these projections, the demand for public services is likely to expand as well. Therefore, the current base projection assumes that discretionary spending keeps pace with the growth in GDP in the long run, so that spending increases in inflation-adjusted terms whenever there is real economic growth. The chapter also uses alternative assumptions to show other possible paths. It is important to note that these paths are merely illustrative; they do not represent policy decisions by this Administration, or seek to project the policy decisions of future Administrations.

Table 5-1 shows how the budget would evolve without further changes in policy under the base assumptions described above. The key assumption is the full implementation of the ACA with its various provisions which control costs and alter incentives for medical practice. Under these assumptions, the future growth of Medicare and Medicaid slows sharply relative to the economy over the next 25 years, but increase more slowly after that as the age composition of the population begins to stabilize. Other mandatory programs do not increase relative to the size of the economy, and discretionary programs are held to a constant share of GDP by assumption. On the revenue side, once tax revenues recover from the economic downturn, revenues reach a ratio of 19.9 percent and then gradually grow to 21.2 percent by 2085. With total outlays increasing more rapidly than taxes, the deficit rises, and publicly held debt exceeds historical levels.

The ACA addresses the single most important long-run challenge to the Nation's fiscal future, which is rising health care costs. Even with this fundamental change,

however, an aging population and a continued high level of health costs will pose serious long-term budget problems. Medicare, Medicaid, and Social Security will absorb a much larger share of Federal resources than in the past limiting what the Government can do in other areas. The high level of debt to GDP that is projected risks unsustainability without further policy changes.

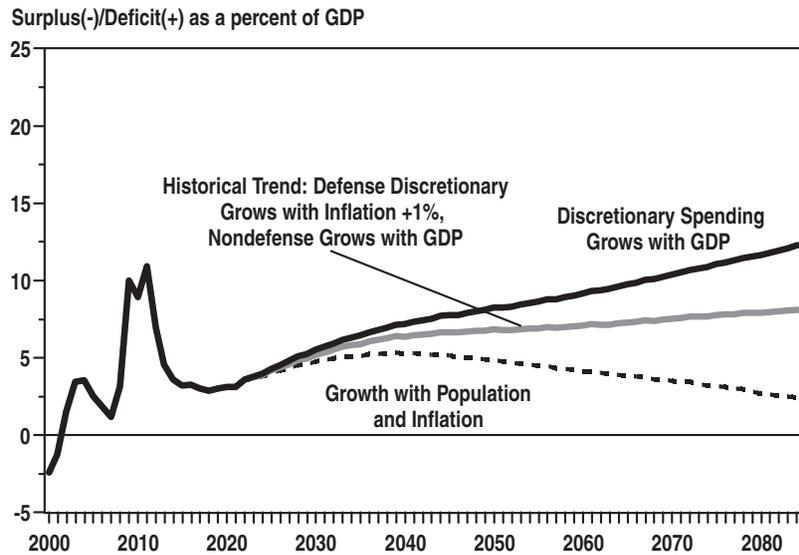
Alternative Policy, Economic, and Technical Assumptions

The quantitative results discussed above are sensitive to changes in underlying policy, economic, and technical assumptions. Some of the most important of these assumptions and their effects on the budget outlook are discussed below. Increasing deficits result for most plausible projections of the long run trends.

Health Spending.—The base projections for Medicare and Medicaid over the next 75 years assume an extension of current law. Chart 5-2 shows budget outcomes under these base assumptions and an alternative scenario. The alternative assumes spending per beneficiary grows 2 percentage points faster than GDP per capita, similar to the historical growth rate of medical costs in the United States since 1960.

Discretionary Spending.—The current base projection for discretionary spending assumes that after 2021, discretionary spending keeps pace with the growth in GDP (see Chart 5-3). An alternative assumption would be to allow discretionary spending to increase for inflation and population growth only. In this case, discretionary spending would remain constant in inflation-adjusted per capita terms. Yet another possible assumption is to allow nondefense discretionary spending to grow with GDP while defense spending is adjusted only for inflation plus one percent real growth per year. This latter combination

Chart 5-3. Alternative Discretionary Projections



is somewhat closer to historical experience over the last sixty years.

Alternative Revenue Projections.—In the base projection, tax receipts rise gradually relative to GDP, so that, by 2085, the share of revenues in GDP is 21.2 percent. Chart 5-4 shows alternative receipts assumptions. Allowing receipts to rise by an additional 2.0 percentage points of GDP relative to the base projections would stabilize the long-run budget deficit. Reducing taxes by 2 percentage points of GDP relative to the base projections would bring the projected rise in the deficit and the publicly-held debt forward in time.

Productivity.—The rate of future productivity growth has a major effect on the long-run budget outlook (see Chart 5-5). It is also highly uncertain. Over the next few decades, an increase in productivity growth would reduce

projected budget deficits. Higher productivity growth adds directly to the growth of the major tax bases, while it has a smaller immediate effect on outlay growth even assuming that discretionary spending rises with GDP. For much of the last century, output per hour in nonfarm business grew at an average rate of around 2-1/4 percent per year. Growth was not always steady. In the 25 years following 1948, labor productivity in the nonfarm business sector of the economy grew at an average rate of 2.7 percent per year, but this was followed by a period of much slower growth. From 1973 to 1995, output per hour in nonfarm business grew at an average annual rate of just 1.4 percent per year. In the latter half of the 1990s, however, the rate of productivity growth increased again and it has remained higher albeit with some fluctuations since then. Indeed, the average growth rate of productiv-

Chart 5-4. Alternative Revenue Projections

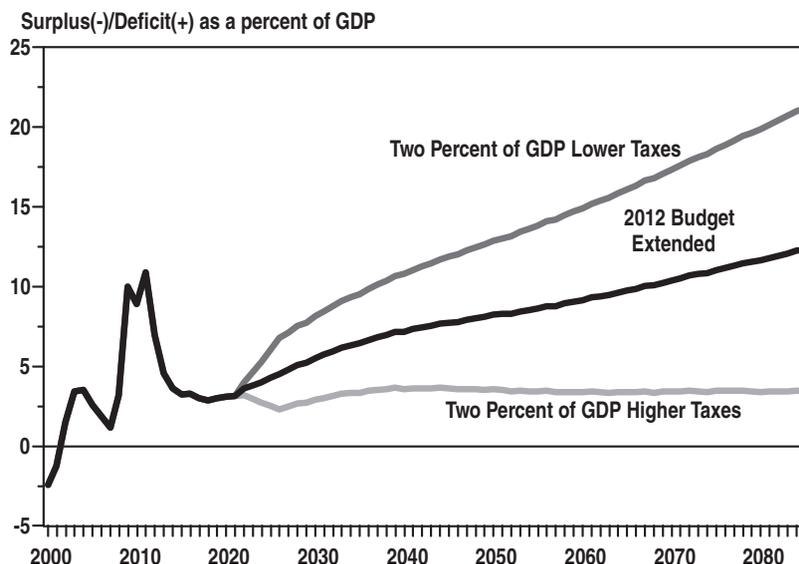
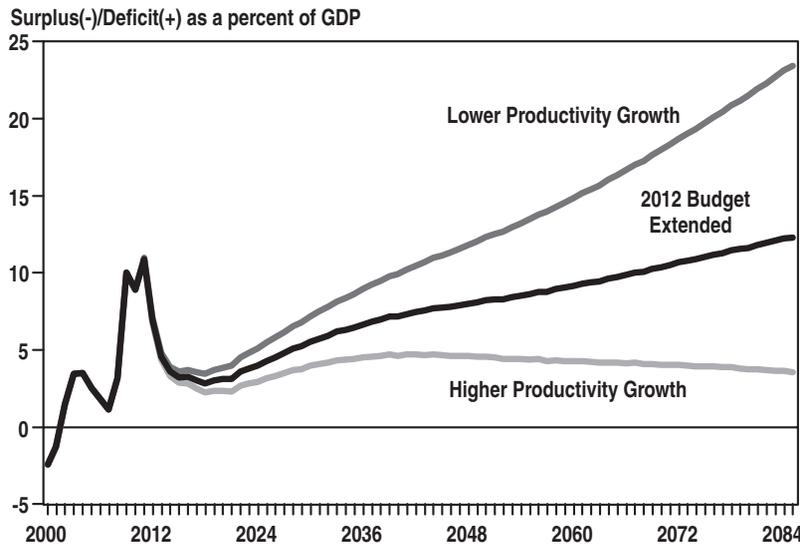


Chart 5-5. Alternative Productivity Assumptions



ity in nonfarm business has averaged 2.7 percent per year since the fourth quarter of 1995, the same as the average growth rate in the earlier postwar period.

The base projections assume that output per hour in nonfarm business will increase at an average annual rate of around 2.3 percent per year, close to its long-run average and slightly below its average growth rate since 1995. This implies that real GDP per hour worked will grow at an average annual rate of 1.9 percent per year. The difference is accounted for by the fact that the sectors of the economy that are counted in GDP outside of the nonfarm business sector tend to have lower productivity growth than nonfarm business does. The alternatives highlight the effect of raising and lowering the projected productivity growth rate by 1/4 percentage point.

Population.—The key assumptions for projecting long-run demographic developments are fertility, immigration, and mortality.

- The demographic projections assume that fertility will average about 2.0 total lifetime births per woman in the future, just slightly below the replacement rate needed to maintain a constant population in the absence of immigration—2.1 births per woman (see Chart 5-6). The alternatives are those in the latest Social Security trustees' report (1.7 and 2.3 births per woman).
- The rate of immigration is assumed to average around 1 million immigrants per year in these projections (see Chart 5-7). Higher immigration relieves some of the downward pressure on population growth from low fertility and allows total popula-

Chart 5-6. Alternative Fertility Assumptions

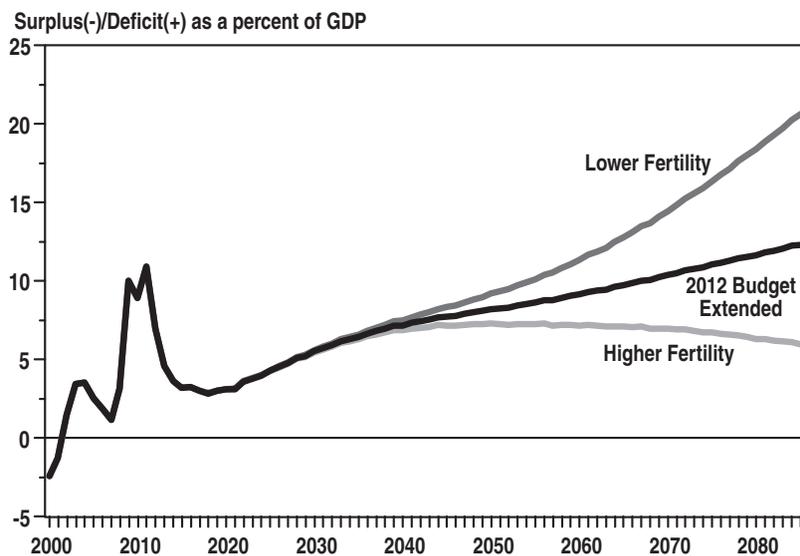
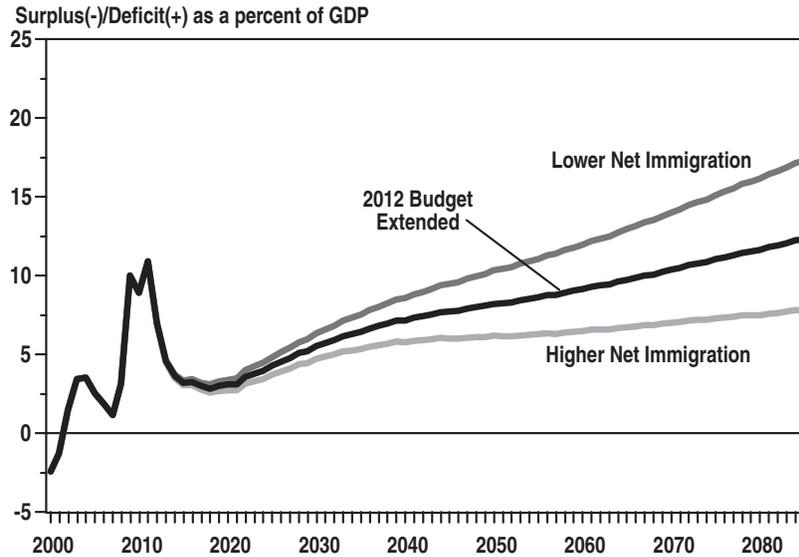


Chart 5-7. Alternative Immigration Assumptions



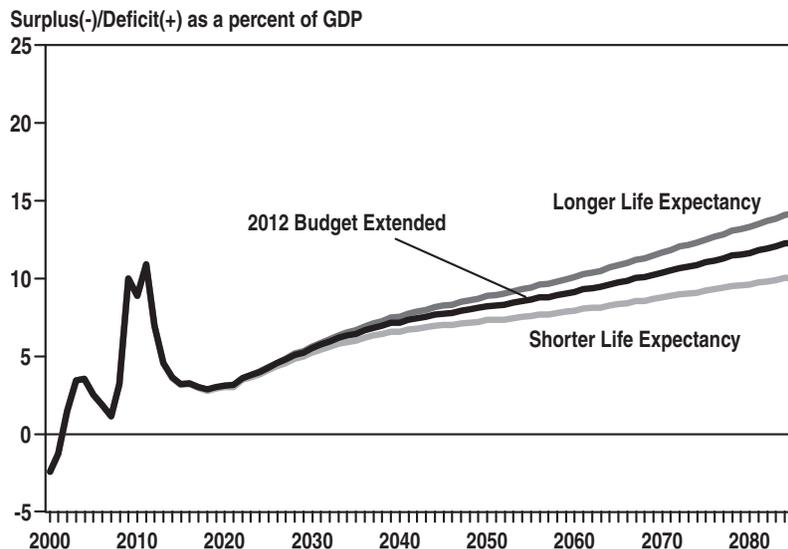
tion to expand throughout the projection period, although at a much slower rate than has prevailed historically. The alternatives are taken from the Social Security Trustees' Report (1.2 million total immigrants per year in the high alternative and 0.8 million in the low alternative).

- Mortality is projected to decline as people live longer in the future (see Chart 5-8). These assumptions parallel those in the latest Social Security Trustees' Report. The average period life expectancy for women is projected to rise from 80.3 years in 2009 to 86.7 years in 2085, and the average period life expectancy for men is expected to increase from 75.6 years in 2009 to 83.3 years in 2085. A technical panel advising the Social Security trustees has reported that the improvement in longevity might be even greater

than assumed here. The variations show the high and low alternatives from the latest Trustees' report (average female and male life expectancy reaching 83.0 and 79.3 in the low cost alternative and 90.3 and 87.5 in the high cost alternative).

The long-run budget outlook is highly uncertain. With pessimistic assumptions, the fiscal picture deteriorates much more than in the base projection. More optimistic assumptions imply a smaller rise in the deficit and the debt. But despite the uncertainty, these projections show under a wide range of forecasting assumptions that overall budgetary resources will be strained in future decades. These projections highlight the need for policy action to address the main drivers of future budgetary costs.

Chart 5-8. Alternative Mortality Assumptions



The Fiscal Gap

The fiscal gap is one measure of the size of the adjustment needed to preserve fiscal sustainability in the long run.⁴ It is defined as the increase in taxes or reduction in non-interest expenditures required to keep the long-run ratio of Government debt-to-GDP at its current level if implemented immediately. The gap is usually measured as a percentage of GDP. The fiscal gap is calculated over a finite time period, and therefore it may understate the adjustment needed to achieve longer-run sustainability.

Table 5-2 shows fiscal gap calculations for the base case calculated over a 75-year horizon and for the various alternative scenarios described above. The fiscal gap in the base case is 1.8 percent of GDP, and it ranges in the alternative scenarios from 0.2 percent of GDP to 4.8 percent of GDP. This suggests both that additional reforms are needed to put the Budget on a sustainable course and also underscores the importance of successful implementation of the ACA.

⁴ Alan J. Auerbach, "The U.S. Fiscal Problem: Where We Are, How We Got Here, and Where We're Going," NBER: Macroeconomics Annual 1994, pp 141 – 175.

Table 5-2. 75-YEAR FISCAL GAP UNDER ALTERNATIVE BUDGET SCENARIOS
(Percent of GDP)

Baseline	1.8
Health:	
Excess cost growth averages 2 percent	4.8
Discretionary Outlays:	
Grow with inflation plus population	0.2
Defense grows with inflation +1; nondefense grows with GDP	1.1
Revenues:	
Revenues exceed baseline by 2 percent of GDP	0.2
Revenues fall short of baseline by 2 percent of GDP	3.4
Productivity:	
Productivity grows by 0.25 percent per year faster than the baseline	0.3
Productivity grows by 0.25 percent per year slower than the baseline	3.4
Population:	
Fertility:	
2.3 births per woman	1.0
1.7 births per woman	2.7
Immigration:	
1.2 million immigrants per year	1.1
0.8 million immigrants per year	2.6
Mortality:	
Female life expectancy 83.0 years; male life expectancy 79.3 years in 2085	1.4
Female life expectancy 90.3 years; male life expectancy 87.5 years in 2085	2.1

Actuarial Projections for Social Security and Medicare

The Trustees for the Medicare Federal Hospital Insurance (HI) and Social Security trust funds issue annual reports that include projections of income and outgo for these funds over a 75-year period. These projections are based on different methods and assumptions than the long-run budget projections presented above. Even with these differences, the message is similar: the ACA has greatly curtailed the projected growth in per capita health care costs but even with this reform, the retirement of the baby-boom generation and continuing high medical costs will eventually exhaust the trust funds unless further action is taken.

The 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 period. The estimates cover periods ranging in length from 25 to 75 years. These balance calculations show what it would take to achieve a positive trust fund balance at the end of a specified period of time, not what it would take to maintain a positive balance indefinitely. To maintain a positive balance forever requires a larger adjustment than is needed to maintain a positive balance over 75 years when the annual balance in the program is negative at the end of the 75-year projection period, as it is expected to be for Social Security and Medicare without future reforms.

Table 5-3 shows the projected income rate, cost rate, and annual balance for the Medicare HI and OASDI Trust Funds at selected dates under the Trustees' intermediate assumptions. Data from both the 2009 and the 2010 reports are shown. As can be seen, there was a major improvement in the projections for Medicare's HI program between 2009 and 2010. This reflects passage of the ACA. Even with this major reform, however, there is still a long-run deficit in the HI program, albeit one that is much smaller than projected last year. These projections assume full implementation of the cost reductions under current law, over the entire long-run projection period. In the 2009 Trustees' report, Medicare HI trust fund costs as a percentage of Medicare covered payroll were projected to rise from 3.6 percent to 12.2 percent between 2010 and 2080 and the HI trust fund imbalance was projected to be -8.7 percent. In the 2010 report, costs rise from 3.7 percent of Medicare taxable payroll in 2010 to 4.9 percent in 2080 and the imbalance in the HI trust fund in 2080 is -0.7 percent. Demographic trends and continued high per-person costs combine to explain the continued small imbalance in the long-run projections.

As a result of reforms legislated in 1983, Social Security had been running a cash surplus with taxes exceeding costs up until 2010. This surplus in the Social Security trust fund helped to hold down the unified budget deficit. The cash surplus ended last year. The 2010 Social Security trustees report projects that the trust fund will

return to cash surplus briefly as the economy improves, but that cash deficits will reappear in 2015, and, from that point forward, Social Security will no longer act to hold down the unified budget deficit. Social Security will eventually begin to draw on its trust fund balances. Over time, as the ratio of workers to retirees falls, costs are projected to rise further from 13.1 percent of Social Security covered payroll today to 14.2 percent of payroll in 2020, 16.4 percent of payroll in 2030 and 17.3 percent of payroll in 2080. Revenues excluding interest are projected to rise only slightly from 12.3 percent of payroll

today to 13.3 percent in 2080. Thus the annual balance is projected to decline from -0.8 percent in 2010 to -1.1 percent of payroll in 2020, -3.2 percent of payroll in 2030, and -4.0 percent of payroll in 2080. On a 75-year basis, the actuarial deficit is projected to be 1.9 percent of payroll. In the process, the Social Security trust fund, which was built up since 1983, would be drawn down and eventually be exhausted in 2037. These projections assume that benefits would continue to be paid despite the negative balance in the trust funds after 2037.

Table 5-3. INTERMEDIATE ACTUARIAL PROJECTIONS FOR OASDI AND HI

	2010	2020	2030	2050	2080
	Percent of Payroll				
Medicare Hospital Insurance (HI)					
Income Rate					
2009 Trustees' Report	3.2	3.3	3.4	3.4	3.5
2010 Trustees' Report	3.2	3.4	3.6	3.9	4.3
Cost Rate					
2009 Trustees' Report	3.6	4.4	6.0	8.7	11.8
2010 Trustees' Report	3.7	3.5	4.3	5.0	4.9
Annual Balance					
2009 Trustees' Report	-0.4	-1.1	-2.6	-5.3	-8.3
2010 Trustees' Report	-0.5	-0.0	-0.7	-1.1	-0.7
Actuarial Balance:					
2009 Trustees' Report			25 years	50 years	75 years
2010 Trustees' Report			-1.4	-2.8	-3.9
			-0.3	-0.6	-0.7
	Percent of Payroll				
Old Age Survivors and Disability Insurance (OASDI)					
Income Rate					
2009 Trustees' Report	12.9	13.0	13.2	13.3	13.3
2010 Trustees' Report	12.3	13.1	13.2	13.2	13.3
Cost Rate					
2009 Trustees' Report	12.5	14.5	16.8	16.6	17.5
2010 Trustees' Report	13.1	14.2	16.4	16.3	17.3
Annual Balance					
2009 Trustees' Report	0.4	-1.5	-3.6	-3.4	-4.2
2010 Trustees' Report	-0.8	-1.1	-3.2	-3.1	-4.0
Actuarial Balance:					
2009 Trustees' Report			25 years	50 years	75 years
2010 Trustees' Report			-0.2	-1.5	-2.0
			-0.3	-1.5	-1.9

TECHNICAL NOTE: SOURCES OF DATA AND METHODS OF ESTIMATING

The long-range budget projections are based on 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 2011–2021, the assumptions are drawn from the Administration's economic projections used for the 2012 Budget. These budget assumptions reflect the President's policy proposals. 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 2010 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—1.9 percent per year.

CPI inflation holds stable at 2.1 percent per year, the unemployment rate is constant at 5.3 percent, and the yield on 10-year Treasury notes is steady at 5.3 percent. Consistent with the demographic assumptions in the Trustees' reports, U.S. population growth slows from around 1 percent per year to about two-thirds that rate by 2030, and slower rates of growth beyond that point. By the end of the projection period it is as low as 0.4 percent per year. Real GDP growth is less than its historical average of around 3.2 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, average real GDP growth averages between 2.3 percent and 2.4 percent per year for the period following the end of the 10-year budget window in 2021.

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 is unrealistic, but it simplifies comparisons of alternative policies.

Budget Projections.—For the period through 2021, receipts follow the 2012 Budget's policy projections. After 2021, total tax receipts rise gradually relative to GDP eventually reaching 21.2 percent in 2085. Discretionary spending follows the path in the Budget over the next 10 years and grows at the rate of growth in nominal GDP afterwards. Other spending also aligns with the Budget through the budget horizon. Long-run Social Security spending is projected by the Social Security actuaries using this chapter's long-range assumptions. Medicare benefits are projected based on a projection of beneficiary growth and excess health care cost growth from the 2010 Medicare Trustees' report, and the general inflation assumptions described above. Medicaid outlays are based on the economic and demographic projections in the model. 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.

6. FEDERAL BORROWING AND DEBT

Debt is the largest legally and contractually binding obligation of the Federal Government. At the end of 2010, the Government owed \$9,019 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 \$228 billion of interest on this debt. In addition to the Government's debt obligation, at the end of 2010, the Government held financial

Table 6-1. TRENDS IN FEDERAL 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 as a percent of: ³	
	Current dollars	FY 2010 dollars ¹	GDP	Credit market debt ²	Total outlays	GDP
1946	241.9	2,276.4	108.7	N/A	7.4	1.8
1950	219.0	1,677.3	80.2	53.3	11.4	1.8
1955	226.6	1,525.0	57.2	43.2	7.6	1.3
1960	236.8	1,414.9	45.6	33.7	8.5	1.5
1965	260.8	1,456.9	37.9	26.9	8.1	1.4
1970	283.2	1,315.5	28.0	20.8	7.9	1.5
1975	394.7	1,349.2	25.3	18.4	7.5	1.6
1980	711.9	1,683.0	26.1	18.5	10.6	2.3
1985	1,507.3	2,716.2	36.4	22.3	16.2	3.7
1990	2,411.6	3,721.8	42.1	22.6	16.2	3.5
1995	3,604.4	4,900.7	49.1	26.7	15.8	3.3
2000	3,409.8	4,268.2	34.7	19.1	13.0	2.4
2001	3,319.6	4,059.4	32.5	17.5	11.6	2.1
2002	3,540.4	4,259.4	33.6	17.5	8.9	1.7
2003	3,913.4	4,612.0	35.6	17.8	7.5	1.5
2004	4,295.5	4,935.6	36.8	18.0	7.3	1.4
2005	4,592.2	5,109.8	36.9	17.6	7.7	1.5
2006	4,829.0	5,195.4	36.5	16.9	8.9	1.8
2007	5,035.1	5,258.5	36.2	16.2	9.2	1.8
2008	5,803.1	5,924.8	40.3	17.5	8.7	1.8
2009	7,544.7	7,601.8	53.5	21.9	5.7	1.4
2010	9,018.9	9,018.9	62.2	N/A	7.2	1.7
2011 estimate	10,856.5	10,713.8	72.0	N/A	7.7	1.9
2012 estimate	11,881.1	11,563.8	75.1	N/A	10.2	2.4
2013 estimate	12,784.0	12,243.9	76.3	N/A	12.8	2.9
2014 estimate	13,562.2	12,778.2	76.3	N/A	14.3	3.2
2015 estimate	14,301.1	13,243.5	76.1	N/A	15.2	3.4
2016 estimate	15,063.9	13,711.6	76.1	N/A	15.8	3.6

N/A = Not available.

¹ Debt in current dollars deflated by the GDP chain-type price index with fiscal year 2010 equal to 100.

² Total credit market debt owed by domestic nonfinancial sectors, modified in some years to be consistent with budget concepts for the measurement of Federal debt. 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).

assets, net of other liabilities, of \$1,125 billion. Therefore, the Government's debt net of financial assets was \$7,894 billion, or 54.4 percent of GDP.

The deficit was \$1,293 billion in 2010. This \$1,293 billion deficit and other financing transactions totaling \$181 billion required the Government to increase its borrowing from the public by \$1,474 billion last year. Meanwhile, assets net of liabilities rose by \$226 billion in 2010. Debt held by the public net of financial assets increased from 47.1 percent of Gross Domestic Product (GDP) at the end of 2009 to 54.4 percent of GDP at the end of 2010. The deficit is estimated to increase to \$1,645 billion in 2011, and then begin to fall. Declining deficits are estimated to significantly reduce growth in debt as a percentage of GDP; debt net of financial assets is projected to reach 63.0 percent of GDP at the end of 2011 and 66.9 percent at the end of 2012 and then to remain relatively stable in subsequent years.

Trends in Debt Since World War II

Table 6–1 depicts trends in Federal debt held by the public from World War II to the present and estimates from the present through 2016. (It is supplemented for earlier years by Tables 7.1–7.3 in *Historical Tables*, which is published as a separate volume of the Budget.) Federal debt peaked at 108.7 percent of GDP in 1946, just after the end of the war. From then until the 1970s, Federal debt as a percentage of GDP decreased almost every year because of relatively small deficits, an expanding economy, and 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 80.2 percent of GDP to 25.3 percent, and from 53.3 percent of credit market debt to 18.4 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 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 after the middle of the decade. The growth of Federal debt accelerated at the beginning of the 1980s, due in large part to a deep recession, and the ratio of Federal debt to GDP grew sharply. It continued to grow throughout the 1980s as large tax cuts, enacted in 1981, and substantial increases in defense spending were only partially offset by reductions in domestic spending. The resulting deficits increased the debt to almost 50 percent of GDP by 1993. The ratio of Federal debt to credit market debt also rose, 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, from 1997 to 2001, as surpluses emerged. Debt fell from 49.3 percent of GDP in 1993 to 32.5 percent in 2001. 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 impressive progress in reducing the debt burden stopped and then reversed course beginning in 2002. A decline in the stock market, a recession, and the initially slow recovery from that recession all reduced tax receipts. The tax cuts of 2001 and 2003 had a similarly large and longer-lasting effect, as did the growing costs of the wars in Iraq and Afghanistan. Deficits ensued and debt began to rise, both in nominal terms and as a percentage of GDP. There was a small temporary improvement in 2006 and 2007 as economic growth led to a revival of receipt growth.

As a result of the most recent recession, which began in December 2007, and the massive financial and economic challenges it imposed on the Nation, the deficit began increasing rapidly in 2008. The deficit increased more substantially in 2009 as the Government continued to take aggressive steps to restore the health of the Nation's economy and financial markets. The deficit fell somewhat in 2010. The deficit is projected to increase in 2011 but then to recede thereafter. Debt net of financial assets as a percent of GDP is estimated to grow to 63.0 percent at the end of 2011 and 66.9 percent at the end of 2012 and then to remain relatively stable in later years.

Debt Held by the Public and Gross Federal Debt

The Federal Government issues debt securities for two principal purposes. First, it borrows from the public to finance the Federal deficit.¹ Second, it issues debt to Federal Government accounts, primarily trust funds, which 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."²

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.

¹ 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.

² 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 6–4, but also the debt of the Government-Sponsored Enterprises listed in Table 23–9 at the end of Chapter 23, "Credit and Insurance," and certain Government-guaranteed securities.

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 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.³ 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, with the Federal Government's recent extraordinary efforts to stabilize credit markets, the Government used the borrowed funds to acquire financial assets that would otherwise have required 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.)

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 charges 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 fund that holds the securities, and are a mechanism for crediting interest to that fund on its 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—

³ The Federal subsector of the national income and product accounts provides a measure of "net government saving" (based on current expenditures and current receipts) that can be used to analyze the effect of Federal fiscal policy on national saving within the framework of an integrated set of measures of aggregate U.S. economic activity. The Federal subsector and its differences from the budget are discussed in Chapter 29, "National Income and Product Accounts."

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 93 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. Chapter 5, "Long-Term Budget Outlook," projects Social Security and Medicare outlays to the year 2085 relative to GDP. The excess of future Social Security and Medicare benefits relative 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 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 6–2 summarizes Federal borrowing and debt from 2010 through 2021.⁵ In 2010 the Government borrowed \$1,474 billion, increasing the debt held by the public from \$7,545 billion at the end of 2009 to \$9,019 billion at the end of 2010. The debt held by Government accounts increased \$179 billion, and gross Federal debt increased by \$1,653 billion to \$13,529 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 6–2 shows the relationship between the

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 Treasury Department in coordination with the Office of Management and Budget.

⁵ For projections of the debt beyond 2021, see Chapter 5, "Long-Term Budget Outlook."

⁶ Treasury debt held by the public is measured as the sales price

Table 6-2. FEDERAL GOVERNMENT FINANCING AND DEBT
(In billions of dollars)

	Actual 2010	Estimate										
		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Financing:												
Unified budget deficit	1,293.5	1,645.1	1,101.2	767.5	644.6	606.7	648.7	626.7	618.9	681.5	735.3	773.9
Other transactions affecting borrowing from the public:												
Changes in financial assets and liabilities: ¹												
Change in Treasury operating cash balance ²	34.6	0.2	-235.0	.....	.....	.....	.....	.....	.....	.....	.....	.....
Net disbursements of credit financing accounts:												
Direct loan accounts	178.7	167.9	182.8	147.7	140.9	138.8	116.1	107.3	105.8	103.4	100.9	105.5
Guaranteed loan accounts	2.5	10.3	-3.7	-1.8	3.1	5.8	6.2	3.5	-1.3	-4.7	-6.4	-14.6
Troubled Asset Relief Program												
equity purchase accounts	-28.5	15.5	-19.1	-9.1	-8.9	-11.1	-6.1	-4.8	-4.3	-7.2	-8.6	0.3
Subtotal, net disbursements	152.7	193.7	160.0	136.8	135.1	133.6	116.1	106.0	100.2	91.4	85.9	91.2
Net purchases of non-Federal securities by the National Railroad Retirement Investment Trust	0.8	-1.2	-1.2	-1.1	-1.1	-1.1	-1.5	-1.0	-1.2	-1.3	-1.2	-1.2
Net change in other financial assets and liabilities ³	-6.9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Subtotal, changes in financial assets and liabilities	181.1	192.7	-76.2	135.7	134.0	132.5	114.6	105.0	99.0	90.2	84.8	90.0
Seigniorage on coins	-0.4	-0.3	-0.3	-0.4	-0.3	-0.3	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Total, other transactions affecting borrowing from the public	180.7	192.4	-76.6	135.3	133.7	132.2	114.1	104.5	98.5	89.7	84.3	89.5
Total, requirement to borrow from the public (equals change in debt held by the public)	1,474.2	1,837.5	1,024.7	902.8	778.2	738.9	762.8	731.2	717.4	771.2	819.6	863.4
Changes in Debt Subject to Statutory Limitation:												
Change in debt held by the public	1,474.2	1,837.5	1,024.7	902.8	778.2	738.9	762.8	731.2	717.4	771.2	819.6	863.4
Change in debt held by Government accounts	178.7	109.9	153.3	193.4	232.5	275.4	286.6	311.1	339.3	327.5	322.6	317.9
Less: change in debt not subject to limit and other adjustments	4.7	0.9	1.1	1.9	1.1	0.8	2.2	2.0	1.9	2.2	1.8	2.1
Total, change in debt subject to statutory limitation	1,657.7	1,948.4	1,179.2	1,098.1	1,011.8	1,015.2	1,051.7	1,044.3	1,058.6	1,100.9	1,144.0	1,183.4
Debt Subject to Statutory Limitation, End of Year:												
Debt issued by Treasury	13,502.7	15,449.2	16,627.1	17,723.8	18,734.3	19,748.5	20,798.9	21,842.5	22,900.5	24,000.8	25,144.8	26,328.2
Less: Treasury debt not subject to limitation (-) ⁴	-11.2	-9.4	-8.1	-6.7	-5.3	-4.3	-3.1	-2.3	-1.8	-1.1	-1.2	-1.2
Agency debt subject to limitation	*	*	*	*	*	*	*	*	*	*	*	*
Adjustment for discount and premium ⁵	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4
Total, debt subject to statutory limitation ⁶	13,510.8	15,459.2	16,638.4	17,736.5	18,748.3	19,763.5	20,815.2	21,859.5	22,918.1	24,019.0	25,163.0	26,346.4
Debt Outstanding, End of Year:												
Gross Federal debt: ⁷												
Debt issued by Treasury	13,502.7	15,449.2	16,627.1	17,723.8	18,734.3	19,748.5	20,798.9	21,842.5	22,900.5	24,000.8	25,144.8	26,328.2
Debt issued by other agencies	26.1	27.0	27.2	26.7	26.9	27.1	26.1	24.8	23.5	21.9	20.1	17.9
Total, gross Federal debt	13,528.8	15,476.2	16,654.3	17,750.5	18,761.2	19,775.5	20,825.0	21,867.3	22,924.0	24,022.7	25,164.9	26,346.2
Held by:												
Debt held by Government accounts	4,509.9	4,619.8	4,773.1	4,966.5	5,199.0	5,474.5	5,761.1	6,072.2	6,411.4	6,738.9	7,061.5	7,379.5
Debt held by the public ⁸	9,018.9	10,856.5	11,881.1	12,784.0	13,562.2	14,301.1	15,063.9	15,795.1	16,512.6	17,283.7	18,103.3	18,966.7

*\$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 assumed Supplementary Financing Program balance of \$200 billion on September 30, 2011, and zero on September 30, 2012, and beyond.

³ Besides checks outstanding, includes 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.

⁴ Consists primarily of debt issued by or held by the Federal Financing Bank.

⁵ 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.

⁶ The statutory debt limit is \$14,294 billion, as enacted on February 12, 2010.

⁷ 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).

⁸ At the end of 2010, the Federal Reserve Banks held \$811.7 billion of Federal securities and the rest of the public held \$8,207.2 billion. Debt held by the Federal Reserve Banks is not estimated for future years.

Federal deficit or surplus and the change in debt held by the public. The borrowing or debt repayment depends on the Federal 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 3, "Interactions Between the Economy and the Budget," in this volume.

The total or unified budget surplus consists of two parts: the on-budget surplus or deficit; and the surplus of the off-budget Federal entities, which have been excluded from the budget by law. Under present law, the off-budget Federal entities are the 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. As a result of the Government's recent extraordinary efforts to stabilize the Nation's credit markets, these other factors have significantly increased borrowing from the public. The other transactions affecting borrowing from the public are presented in Table 6–2 (an increase in the need to borrow is represented by a positive sign, like the deficit).

In 2010 the deficit was \$1,293 billion while these other factors—primarily the net disbursements of credit financing accounts—increased the need to borrow by \$181 billion. As a result, the Government borrowed \$1,474 billion from the public. The other factors are estimated to increase borrowing by \$192 billion in 2011 and reduce borrowing by \$77 billion in 2012. In 2013–2021, these other factors are expected to increase borrowing by annual amounts ranging from \$84 billion to \$135 billion.

Prior to 2008, the effect of these other transactions had been much smaller. In the 20 years between 1988 and 2007, the cumulative deficit was \$2,956 billion, the increase in debt held by the public was \$3,145 billion, and other factors added a total of \$190 billion of borrowing, 6 percent of total borrowing over this period. By contrast,

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 13, "Coverage of the Budget."

the other factors resulted in more than 40 percent of the total increase in borrowing from the public for 2008, nearly 20 percent of the increase for 2009, and over 12 percent of the increase for 2010.

Three specific factors presented in Table 6–2 are especially important.

Change in Treasury operating cash balance.—Since 2008, changes in the cash balance have been largely driven by fluctuations in the temporary Supplementary Financing Program (SFP). Under the SFP, Treasury issues short-term debt and deposits the cash proceeds with the Federal Reserve for use by the Federal Reserve in its actions to stabilize the financial markets. The cash balance increased by a record \$296 billion in 2008, primarily as a result of the creation of the SFP. In 2009, the cash balance decreased by \$96 billion, due to a \$135 billion reduction in the SFP balance offset by a \$38 billion increase in the non-SFP cash balance. In 2010, the cash balance increased by \$35 billion, to \$310 billion, due nearly entirely to an increase in the SFP balance. In the 10 years preceding 2008, changes in the cash balance had been much smaller, ranging from a decrease of \$26 billion in 2003 to an increase of \$23 billion in 2007. The operating cash balance is projected to be \$310 billion at the end of 2011, including an assumed SFP balance of \$200 billion and a non-SFP balance of \$110 billion. In 2012, the cash balance is projected to decrease by \$235 billion, to \$75 billion, including an assumed SFP balance of zero. Changes in the operating cash balance, while occasionally large, are inherently limited over time. 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), budget outlays for direct loans and loan guarantees consist of the estimated subsidy cost of the loans or guarantees at the time when the direct loans are disbursed or the guaranteed loans are made. The cash flows to and from the public resulting from these loans and guarantees—the disbursement and repayment of loans, the default payments on loan guarantees, the collections of interest and fees, and so forth—are not costs (or offsets to costs) to the Government except for their subsidy costs (the present value of the estimated net losses), which are already included in budget outlays. Therefore, they are non-budgetary in nature and are recorded as transactions of the non-budgetary financing account for each credit program.⁸

The financing accounts also include several types of intragovernmental transactions. In particular, they receive payment from the credit program accounts for the costs

⁸ The Federal Credit Reform Act of 1990 (sec. 505(b)) requires that the financing accounts be non-budgetary. As explained in Chapter 13, "Coverage of the Budget," they are non-budgetary in concept because they do not measure cost. For additional discussion of credit programs, see Chapter 23, "Credit and Insurance," and Chapter 12, "Budget Concepts."

of new direct loans and loan guarantees; they also receive payment for any upward reestimate of the costs of direct loans and loan guarantees outstanding. These collections are offset against the gross disbursements of the financing accounts in determining the accounts' total net cash flows. The gross disbursements include outflows to the public—such as of loan funds or default payments—as well as the payment of any downward reestimate of costs to budgetary receipt accounts. The total net cash flows 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 financing accounts do not affect Federal borrowing from the public. Although the deficit changes because of the budget'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, financing account receipts from the public 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 budget receipts.

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 2010, due primarily to the Troubled Asset Relief Program (TARP), downward reestimates were significantly larger than upward reestimates, resulting in a net downward reestimate of \$117 billion. In 2011, there is a net downward reestimate of \$54 billion, largely as a result of downward reestimates in the TARP and student loan programs.

The impact of the net financing disbursements on borrowing increased significantly in 2009, largely as a result of Government actions to address the Nation's financial and economic challenges including through TARP, purchases of mortgage-backed securities issued or guaranteed by the Government-Sponsored Enterprises (GSEs), and the Temporary Student Loan Purchase Program. Net financing disbursements increased from \$33 billion in 2008 to a record \$406 billion in 2009. In 2010, borrowing due to financing accounts fell by more than half, to \$153 billion, due in part to large repayments of TARP assistance. In 2011 borrowing due to financing accounts is estimated to increase to \$194 billion. After 2011, the credit financing accounts are expected to increase borrowing by amounts ranging from \$86 billion to \$160 billion over the next 10 years.

Net purchases of non-Federal securities by the National Railroad Retirement Investment Trust (NRRIT).—This trust fund was established by the Railroad Retirement and Survivors' Improvement Act of 2001. In 2003, most of

the assets in the Railroad Retirement Board trust funds were transferred to the NRRIT trust fund, which invests its assets primarily in private stocks and bonds. The Act required special treatment of the purchase or sale of non-Federal assets by this trust fund, treating such purchases as a means of financing rather than an outlay. Therefore, the increased need to borrow from the public to finance the purchase 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 factors and, with the opposite sign, in NRRIT's net outlays in the deficit, for no net impact on borrowing from the public. The increased borrowing associated with the initial transfer expanded publicly held debt by \$20 billion in 2003. Net transactions in subsequent years have been much smaller. In 2010, net purchases, including gains, were \$1 billion. Net reductions of roughly \$1 billion annually are projected for 2011 through 2021.⁹

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 92 percent of the total Federal debt held by Government accounts at the end of 2010. In 2010, the total trust fund surplus was \$123 billion, and trust funds invested \$143 billion in Federal securities. Investment may differ somewhat from the surplus due to changes in the amount of cash assets not currently invested. 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 6–5.

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 must 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 U.S. 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—

⁹ The budget treatment of this fund is further discussed in Chapter 12, “Budget Concepts.”

Table 6-3. DEBT HELD BY THE PUBLIC NET OF FINANCIAL ASSETS AND LIABILITIES

(Dollar amounts in billions)

	Actual 2010	Estimate										
		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Debt Held by the Public:												
Debt held by the public	9,018.9	10,856.5	11,881.1	12,784.0	13,562.2	14,301.1	15,063.9	15,795.1	16,512.6	17,283.7	18,103.3	18,966.7
As a percent of GDP	62.2%	72.0%	75.1%	76.3%	76.3%	76.1%	76.1%	76.1%	76.2%	76.4%	76.7%	77.0%
Financial Assets Net of Liabilities:												
Treasury operating cash balance	309.8	310.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0
Credit financing account balances:												
Direct loan accounts	668.0	835.9	1,018.7	1,166.5	1,307.4	1,446.2	1,562.2	1,669.6	1,775.3	1,878.7	1,979.6	2,085.1
Guaranteed loan accounts	-32.5	-22.2	-25.9	-27.8	-24.7	-18.8	-12.6	-9.2	-10.4	-15.2	-21.6	-36.2
TARP equity purchase accounts	76.9	92.4	73.3	64.2	55.3	44.2	38.1	33.3	29.0	21.8	13.2	13.5
Subtotal, credit financing account balances	712.4	906.1	1,066.1	1,202.9	1,338.0	1,471.6	1,587.7	1,693.7	1,793.9	1,885.4	1,971.3	2,062.5
Government-sponsored enterprise preferred stock	109.2	143.3	163.8	172.0	172.0	172.0	172.0	172.0	172.0	172.0	172.0	172.0
Non-Federal securities held by NRRIT	22.8	21.6	20.4	19.2	18.1	17.1	15.5	14.5	13.3	12.0	10.9	9.6
Other assets net of liabilities	-29.3	-29.3	-29.3	-29.3	-29.3	-29.3	-29.3	-29.3	-29.3	-29.3	-29.3	-29.3
Total, financial assets net of liabilities	1,125.0	1,351.7	1,296.1	1,439.9	1,573.9	1,706.4	1,821.0	1,925.9	2,024.9	2,115.1	2,199.9	2,289.9
Debt Held by the Public Net of Financial Assets and Liabilities:												
Debt held by the public net of financial assets	7,894.0	9,504.7	10,585.1	11,344.1	11,988.3	12,594.7	13,242.9	13,869.2	14,487.6	15,168.6	15,903.4	16,676.8
As a percent of GDP	54.4%	63.0%	66.9%	67.7%	67.4%	67.0%	66.9%	66.8%	66.8%	67.0%	67.4%	67.7%

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 loans. Similarly, when the National Railroad Retirement Investment Trust 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 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 net of financial assets than they do the debt held by the public.

The magnitude and the significance of the Government's financial assets has increased greatly since the later part of 2008, as a result of Government actions, such as implementation of TARP, to address the challenges facing the Nation's financial markets and economy.¹⁰

Table 6-3 presents debt held by the public net of the Government's financial assets and liabilities, or "net debt." 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. NRRIT's holdings of non-Federal securities are marked to market on a monthly basis. GSE preferred stock is measured at market value.

At the end of 2010, debt held by the public was \$9,019 billion, or 62.2 percent of GDP. The Government held \$1,125 billion in net financial assets, including a cash balance of \$310 billion, net credit financing account balances of \$712 billion,¹¹ and other assets and liabilities that aggregated to a net asset of \$103 billion. Therefore, debt net of financial assets was \$7,894 billion, or 54.4 percent of GDP. As shown in Table 6-3, the value of the Government's net financial assets is projected to increase to \$1,352 billion in 2011, due largely to increases in the net balances of credit financing accounts. While debt held by the public is expected to increase from 62.2 percent to 72.0 percent of GDP during 2011, net debt is expected to increase from 54.4 percent to 63.0 percent of GDP.

¹¹ Consistent with the presentation in the *Monthly Treasury Statement of Receipts and Outlays of the United States Government (Monthly Treasury Statement)*, Table 6-3 presents the net financial assets associated with direct and guaranteed loans in the financing accounts created under the Federal Credit Reform Act of 1990. Therefore, the figures differ by relatively small amounts from the figures in Chapter 31, "Budget and Financial Reporting," which reflect all loans made or guaranteed by the Federal Government, including loans originated prior to implementation of the FCRA.

¹⁰ For more information on these activities, see Chapter 4, "Financial Stabilization Efforts and Their Budgetary Effects."

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. A unique and important asset is the Government's sovereign power to tax. Federal assets and liabilities are analyzed within the broader conceptual framework of Federal resources and responsibilities in Chapter 31, "Budget and Financial Reporting," in this volume. 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 can be bought and sold on the secondary market. Treasury also sells to the public a relatively small amount of nonmarketable securities, such as savings bonds and State and Local Government Series securities (SLUGs).¹² Treasury nonmarketable debt cannot be bought or sold on the secondary market.

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. In addition, under the temporary Supplementary Financing Program, discussed above, Treasury issues cash management bills and deposits the proceeds with the Federal Reserve, for the Federal Reserve to use in its efforts to address the financial and economic challenges facing the Nation.

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 every six months to reflect inflation as measured by changes in the CPI-U (with a two-month lag). Although the principal value may be adjusted downward if inflation is negative, the principal value will not be reduced below the original par value.

Historically, the average maturity of outstanding debt issued by Treasury has been about five years. The average maturity of outstanding debt was 59 months at the end of 2010.

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. 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 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. The liquidity of 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 "risk-free." Therefore, the Treasury yield curve is commonly used as a benchmark for a wide variety of purposes in the financial markets. (This view of Treasury securities as "risk-free" would be jeopardized in the event that Treasury was not able to meet its obligations as a consequence of failure to enact necessary increases to the debt limit; see the discussion under "Limitations on Federal Debt.")

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 reduce the need for marketable borrowing. In 2009 and 2010, there was net disinvestment in nonmarketables, necessitating

¹² Under the State and Local Government Series 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.

additional marketable borrowing to finance the redemption of nonmarketable debt.¹³

Agency Debt

Some Federal agencies, shown in Table 6–4, sell or have sold debt securities to the public and, at times, to other Government accounts. At one time, several other agencies issued debt securities, but this activity has declined significantly over time. Currently, new debt is issued only by the Tennessee Valley Authority (TVA) and the Federal Housing Administration (FHA); the remaining agencies are repaying existing borrowing. Agency debt increased from \$25.5 billion at the end of 2009 to \$26.1 billion at the end of 2010, due to increases in debt issued by TVA, slightly offset by decreases in debt issued by other agencies. Agency debt is less than one-third of one percent of Federal debt held by the public. As a result of new borrowing by TVA, agency debt is estimated to increase by \$0.8 billion in 2011 and by \$0.2 billion in 2012.

The predominant agency borrower is the TVA, which had borrowed \$25.8 billion from the public as of the end of 2010, or 99 percent of the total debt of all agencies. TVA sells debt primarily to finance capital expenditures.

The 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/leaseback obligations and prepayment obligations. Under the lease/leaseback obligations method, TVA signs contracts to lease some facilities and equipment to private investors and simultaneously leases them

back. It receives a lump sum for leasing out its assets, and then leases them back at fixed annual payments for a set number of years. 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.

The Office of Management and Budget 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

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* 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 the National Railroad Retirement Investment Trust and treatment of the Federal debt held by the Securities Investor Protection Corporation.

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 Treasury.

Table 6–4. AGENCY DEBT
(In millions of dollars)

	2010 Actual		2011 Estimate		2012 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	–4	29	*	29	.....	29
Architect of the Capitol	–5	139	–6	133	–5	128
National Archives	–13	180	–14	166	–15	151
Tennessee Valley Authority:						
Bonds and notes	790	23,622	1,043	24,665	392	25,058
Lease/leaseback obligations	–52	1,352	–73	1,280	–78	1,202
Prepayment obligations	–105	822	–105	717	–105	612
Total, borrowing from the public	611	26,144	846	26,990	189	27,179
Borrowing from other funds:						
Tennessee Valley Authority	3	4	.....	4	.....	4
Total, borrowing from other funds	3	4	.....	4	.....	4
Total, agency borrowing	614	26,148	846	26,994	189	27,183

* \$500,000 or less.

Table 6-5. DEBT HELD BY GOVERNMENT ACCOUNTS¹
(In millions of dollars)

Description	Investment or Disinvestment (-)			Holdings End of 2012 Estimate
	2010 Actual	2011 Estimate	2012 Estimate	
Investment in Treasury debt:				
Defense: Host nation support fund for relocation	492	131	132	1,106
Energy:				
Nuclear waste disposal fund ¹	1,804	1,055	1,162	26,290
Uranium enrichment decontamination fund	*	-337	-528	3,896
Health and Human Services:				
Federal hospital insurance trust fund	-30,227	-39,781	-29,548	210,146
Federal supplementary medical insurance trust fund	9,218	-7,401	-13,020	50,561
Vaccine injury compensation fund	56	51	72	3,062
Child enrollment contingency fund	5	-101	-184	1,834
Homeland Security:				
Aquatic resources trust fund	-47	14	30	1,980
Oil spill liability trust fund	105	174	340	2,014
Housing and Urban Development:				
Federal Housing Administration mutual mortgage fund	-6,470	995	5,053	10,242
Guarantees of mortgage-backed securities	-5,696	-220	16	3,357
Interior:				
Abandoned mine reclamation fund	92	79	103	2,805
Bureau of Land Management permanent operating funds	-240	-205	-175	1,041
Environmental improvement and restoration fund	33	-16	6	1,189
Justice: Assets forfeiture fund	171	61	45	2,290
Labor:				
Unemployment trust fund	-925	-7,703	5,000	16,000
Pension Benefit Guaranty Corporation ¹	1,336	607	763	15,723
State: Foreign service retirement and disability trust fund	528	357	.....	16,219
Transportation:				
Airport and airway trust fund	-784	-240	-1,104	5,701
Transportation trust fund	12,970	-7,170	6,145	23,430
Aviation insurance revolving fund	181	117	153	1,722
Treasury:				
Exchange stabilization fund	1,821	2,264	1,604	24,304
Treasury forfeiture fund	678	-383	-250	750
Comptroller of the Currency assessment fund	61	39	44	1,109
Veterans Affairs:				
National service life insurance trust fund	-573	-664	-685	6,812
Veterans special life insurance fund	-4	-33	-46	1,918
Corps of Engineers: Harbor maintenance trust fund	455	292	.....	5,713
Other Defense-Civil:				
Military retirement trust fund	41,199	73,800	58,109	413,915
Medicare-eligible retiree health care fund	15,468	12,476	15,653	170,418
Education benefits fund	128	16	-27	2,015
Environmental Protection Agency:				
Leaking underground storage tank trust fund	98	164	182	3,774
Hazardous substance trust fund	339	372	410	4,433
International Assistance Programs: Overseas Private Investment Corporation	157	121	115	5,208
Office of Personnel Management:				
Civil service retirement and disability trust fund	26,121	22,998	20,323	823,686
Postal Service retiree health benefits fund	7,000	3,087	7,189	52,391
Employees life insurance fund	1,459	738	1,749	40,092
Employees health benefits fund	875	50	-258	16,036
Social Security Administration:				
Federal old-age and survivors insurance trust fund ²	102,795	85,191	103,462	2,587,764
Federal disability insurance trust fund ²	-20,710	-26,640	-26,664	133,918

Table 6-5. DEBT HELD BY GOVERNMENT ACCOUNTS¹—Continued
(In millions of dollars)

Description	Investment or Disinvestment (-)			Holdings End of 2012 Estimate
	2010 Actual	2011 Estimate	2012 Estimate	
District of Columbia: Federal pension fund	34	49	54	3,769
Farm Credit System Insurance Corporation: Farm Credit System Insurance fund	204	176	158	3,420
Federal Communications Commission: Universal service fund	74	-*	.....	6,081
Federal Deposit Insurance Corporation:				
Federal deposit insurance fund	21,365	-4,030	-4,628	28,783
Senior unsecured debt guarantee fund	-852	-559	186	5,785
FSLIC resolution fund	75	24	15	3,427
National Credit Union Administration:				
Share insurance fund	1,625	925	903	11,107
Central liquidity facility	137	99	104	2,174
Temporary corporate credit union stabilization fund	335	*	900	1,265
Postal Service funds ²	-2,858	-1,391	.....	.....
Railroad Retirement Board trust funds	-288	-3	-11	2,235
Securities Investor Protection Corporation	31	207	181	1,511
United States Enrichment Corporation fund	-2	70	70	1,707
Other Federal funds	-1,395	-327	37	4,659
Other trust funds	46	334	-9	3,437
Unrealized discount ¹	223	.....	.....	-1,105
Total, investment in Treasury debt¹	178,720	109,926	153,330	4,773,119
Investment in agency debt:				
Railroad Retirement Board:				
National Railroad Retirement Investment Trust	3	.....	.....	4
Total, investment in agency debt¹	3	.....	.....	4
Total, investment in Federal debt¹	178,723	109,926	153,330	4,773,123
MEMORANDUM				
Investment by Federal funds (on-budget)	37,969	16,232	28,704	397,149
Investment by Federal funds (off-budget)	-2,858	-1,391	.....	.....
Investment by trust funds (on-budget)	61,305	36,534	47,828	1,655,398
Investment by trust funds (off-budget)	82,085	58,552	76,798	2,721,682
Unrealized discount ¹	223	.....	.....	-1,105

* \$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 2010 the debt figures would be \$23.5 billion higher for the Nuclear waste disposal fund and \$0.5 billion higher for PBGC than recorded in this table.

² Off-budget Federal entity.

The budget presentation is consistent with the reporting of these obligations as liabilities on TVA's balance sheet under generally accepted accounting principles. Table 6-4 presents these alternative financing methods separately from TVA bonds and notes to distinguish between the types of borrowing. At the end of 2010, obligations were \$1.4 billion for lease/leasebacks and \$0.8 billion for pre-payments. Obligations for these two types of alternative financing are estimated to continue to decline as TVA fulfills the terms of the contracts.

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.

The amount of agency securities sold to the public has been reduced over time by borrowing from the Federal Financing Bank (FFB). The FFB is an entity within the

Treasury Department, one of whose purposes is to substitute Treasury borrowing for agency borrowing from the public. It has the authority to purchase agency debt and finance these purchases by borrowing from the Treasury. Agency borrowing from the FFB is not included in gross Federal debt. It would be double counting to add together (a) the agency borrowing from the FFB and (b) the Treasury borrowing from the public that is needed to provide the FFB with the funds to lend to the agencies. In addition, several agencies or programs are authorized to borrow from the Treasury Department's Bureau of the Public Debt (BPD). It would similarly be double-counting to add together the agency borrowing from BPD and the Treasury borrowing from the public that is needed to provide 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 current needs in order to meet future obligations. These cash surpluses are generally invested in Treasury debt.

New investment by trust funds and other Government accounts was \$179 billion in 2010. Investment by Government accounts is estimated to be \$110 billion in 2011 and \$153 billion in 2012, as shown in Table 6–5. The holdings of Federal securities by Government accounts are estimated to grow to \$4,773 billion by the end of 2012, or 30 percent of the gross Federal debt. The percentage is estimated to remain relatively stable 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 and Supplementary Medical Insurance trust funds; and four Federal employee retirement funds. These Federal employee retirement funds include the military retirement trust fund, the special fund for uniformed services Medicare-eligible retiree health care, the Civil Service Retirement and Disability Fund (CSRDF), and a separate special fund for Postal Service retiree health benefits. At the end of 2012, these Social Security, Medicare, and Federal employee retirement funds are estimated to own 93 percent of the total debt held by Government accounts. During 2010–2012, the Social Security OASI fund has a large surplus and is estimated to invest a total of \$291 billion, 66 percent of total net investment by Government accounts. Over this period, the military retirement trust fund is projected to invest \$173 billion, another 39 percent of the total. Some Government accounts reduce their investments in Federal securities during 2010–2012. During these years, the Medicare Hospital Insurance trust fund disinvests \$100 billion, or 23 percent of the total net investment, and the Social Security DI fund disinvests \$74 billion, or 17 percent of the total.

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 were 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 6–5 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 \$24.0 billion at the end of 2010.

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 6–5 it is shown as a separate item at the end of the table and not distributed by account. The amount was \$1.1 billion at the end of 2010.

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 United States Government.

The third part of Table 6–2 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. It issued \$14 billion of securities to the Civil Service Retirement and Disability Fund on November 15, 2004, in exchange for an equal amount of regular Treasury securities. The FFB securities have the same interest rates and maturities as the regular Treasury securities for which they were exchanged. The securities mature on dates from June 30, 2009, through June 30, 2019. At the end of 2010, \$10 billion of these securities remained outstanding.

The Housing and Economic Recovery Act of 2008 created a new type of debt not subject to limit. This debt, termed “Hope Bonds,” is issued by Treasury to the Federal Financing Bank for the HOPE for homeowners program. The outstanding balance of Hope Bonds was \$0.5 billion at the end of 2010 and is projected to increase by small amounts annually in 2011 through 2021.

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 \$488 million at the end of 2010 and is projected to gradually decline over time.

The sole agency debt currently subject to the general limit, \$10 million at the end of 2010, is certain debentures issued by the Federal Housing Administration.¹⁶

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 \$19.4 billion at the end of 2010 compared with the total unamortized discount (less premium) of \$59.0 billion on all Treasury securities.

Changes in the debt limit.—The statutory debt limit has been changed many times. Since 1960, Congress has passed 78 separate acts to raise the limit, extend the duration of a temporary increase, or revise the definition.¹⁷

The most recent debt limit increase, which raised the debt limit by \$1,900 billion to \$14,294 billion, was enacted on February 12, 2010. The limit had previously been increased by \$290 billion, from \$12,104 billion to \$12,394 billion, on December 28, 2009. The December increase, enacted shortly before the anticipated reaching of the previous limit, had been intended to cover only a short period.

Between July 2008 and February 2009, the debt limit was increased three times, in each case before the Government approached the limit. In these three instances, the increase was included in a larger piece of legislation aimed at stabilizing the financial markets and restoring economic growth. The increases provided room under the statutory debt ceiling for the activities authorized by each piece of legislation. On July 30, 2008, the debt limit was increased by \$800 billion, to \$10,615 billion, as part of the Housing and Economic Recovery Act of 2008. On October 3, 2008, the Emergency Economic Stabilization Act of 2008 increased the debt limit by \$700 billion, to \$11,315 billion. On February 17, 2009, the American Recovery and Reinvestment Act of 2009 increased the statutory limit by \$789 billion, to \$12,104 billion. At the dates of enactment, the debt subject to limit was at least a few hundred billion dollars below the previous ceiling.

¹⁶ At the end of 2010, there were also \$18 million of FHA debentures not subject to limit.

¹⁷ The Acts and the statutory limits since 1940 are listed in *Historical Tables, Budget of the United States Government, Fiscal Year 2012, Table 7.3.*

The debt reached or neared the ceiling prior to each of the five increases enacted between 2002 and 2007. The debt limit was increased to \$6,400 billion on June 28, 2002, to \$7,384 billion on May 27, 2003, to \$8,184 billion on November 19, 2004, to \$8,965 billion on March 20, 2006, and to \$9,815 billion on September 29, 2007.

At many times in the past several decades, including 2002, 2003, 2004, and 2006, the Government has reached the statutory debt limit before an increase has been enacted. When this has occurred, it has been necessary for the Treasury Department to take administrative actions to meet the Government's obligation to pay its bills and invest its trust funds while remaining below the statutory limit. One such measure is the partial or full disinvestment of the Government Securities Investment Fund (G-fund). This fund is one component of the Thrift Savings Plan (TSP), a defined contribution pension plan for Federal employees. The 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 2010, the TSP G-fund had an outstanding balance of \$124 billion. The Treasury Secretary is also authorized to declare a debt issuance suspension period, which allows him or her to redeem a limited amount of securities held by the Civil Service Retirement and Disability Fund and stop investing its receipts. The law requires that when any such actions are taken with the TSP G-fund or the CSRDF, 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 \$20 billion at the end of 2010. As the debt nears the limit, Treasury has also suspended acceptance of subscriptions to the State and Local Government Series to reduce unanticipated fluctuations in the level of the debt.

In addition to these steps, Treasury has previously replaced regular Treasury securities with borrowing by the FFB, which, as explained above, is not subject to the debt limit. This measure was most recently taken in November 2004, and the outstanding FFB securities began to mature in June 2009.

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. Without an increase, Treasury would be unable to make timely interest payments or redeem maturing 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

Table 6–6. FEDERAL FUNDS FINANCING AND CHANGE IN DEBT SUBJECT TO STATUTORY LIMIT
(In billions of dollars)

Description	Actual 2010	Estimate										
		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Change in Gross Federal Debt:												
Federal funds deficit (+)	1,416.8	1,691.2	1,226.6	913.4	833.6	835.0	888.0	886.8	901.3	946.8	991.9	1,036.3
Other transactions affecting borrowing from the public -- Federal funds ¹	179.9	193.6	-75.3	136.4	134.7	133.2	115.7	105.5	99.7	91.0	85.5	90.7
Increase (+) or decrease (-) in Federal debt held by Federal funds	35.1	14.8	28.7	47.6	43.5	47.1	47.3	51.1	56.9	62.1	66.0	55.5
Adjustments for trust fund surplus/deficit not invested/ disinvested in Federal securities ²	20.9	47.8	-2.0	-1.1	-1.1	-1.1	-1.5	-1.0	-1.2	-1.3	-1.2	-1.2
Change in unrealized discount on Federal debt held by Government accounts	0.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total financing requirements	1,653.0	1,947.4	1,178.0	1,096.2	1,010.7	1,014.4	1,049.5	1,042.3	1,056.7	1,098.6	1,142.2	1,181.3
Change in Debt Subject to Limit:												
Change in gross Federal debt	1,653.0	1,947.4	1,178.0	1,096.2	1,010.7	1,014.4	1,049.5	1,042.3	1,056.7	1,098.6	1,142.2	1,181.3
Less: increase (+) or decrease (-) in Federal debt not subject to limit	-1.1	-0.9	-1.1	-1.9	-1.1	-0.8	-2.2	-2.0	-1.9	-2.2	-1.8	-2.1
Less: change in adjustment for discount and premium ³	-3.7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total, change in debt subject to limit	1,657.7	1,948.4	1,179.2	1,098.1	1,011.8	1,015.2	1,051.7	1,044.3	1,058.6	1,100.9	1,144.0	1,183.4
ADDENDUM												
Debt subject to statutory limit ⁴	13,510.8	15,459.2	16,638.4	17,736.5	18,748.3	19,763.5	20,815.2	21,859.5	22,918.1	24,019.0	25,163.0	26,346.4

¹ Includes Federal fund transactions that correspond to those presented in Table 6-2, 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 \$14,294 billion.

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. In addition, the Federal Government would be forced to delay or discontinue payments on its broad range of obligations, 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, and other obligations.

The debt subject to limit is estimated to increase to \$15,459 billion by the end of 2011, above the current limit of \$14,294 billion. On February 2, 2011, Treasury estimated that the current limit would be reached between April 5 and May 31, 2011. Therefore, the Congress is anticipated to take up an increase to the statutory debt ceiling in the spring.

In contrast to recent debt limit increases, which have been in amounts sufficient to last for less than two years, the debt limit was increased three times during the 1990s by amounts large enough to last for two years or more. All three of these increases were enacted as part of a deficit reduction package or a plan to balance the budget and were intended to last a relatively long time: the Omnibus Budget Reconciliation Act of 1990; the Omnibus Budget Reconciliation Act of 1993; and the Balanced Budget Act of 1997. The 1997 increase lasted until 2002.

Federal funds financing and the change in debt subject to limit.—The change in debt held by the public, as shown in Table 6–2, and the change in debt 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 6–2. The change in debt held by Government accounts results in 22 percent of the estimated total increase in debt subject to limit from 2011 through 2021.

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.¹⁸

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

¹⁸ For further discussion of the trust funds and Federal funds groups, see Chapter 28, "Trust Funds and Federal Funds."

Table 6–7. FOREIGN HOLDINGS OF FEDERAL DEBT
(Dollar amounts in billions)

Fiscal Year	Debt held by the public			Change in debt held by the public	
	Total	Foreign ¹	Percentage foreign	Total ²	Foreign ¹
1965	260.8	12.3	4.7	3.9	0.3
1970	283.2	14.0	5.0	5.1	3.8
1975	394.7	66.0	16.7	51.0	9.2
1980	711.9	121.7	17.1	71.6	1.4
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
2006	4,829.0	2,025.3	41.9	236.8	95.7
2007	5,035.1	2,235.3	44.4	206.2	210.0
2008	5,803.1	2,799.5	48.2	767.9	564.2
2009	7,544.7	3,575.5	47.4	1,741.7	776.0
2010	9,018.9	4,261.2	47.2	1,474.2	685.7

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, and annual June benchmark revisions for 2002-2010.

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.

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 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 6–6 derives the change in debt subject to limit. In 2010 the Federal funds deficit was \$1,417 billion, and other factors increased financing requirements by \$180 billion. The net financing disbursements of credit financing accounts increased financing requirements by \$153 billion and the change in the Treasury operating cash balance increased financing requirements by \$35 billion. Other factors reduced financing requirements by \$6 billion. In addition, special funds and revolving funds, which are part of the Federal funds group, invested a net of \$35 billion in Treasury securities. An 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 the National Railroad Retirement Investment Trust's investments in non-Federal securities). As a net result of all these factors,

\$1,653 billion in financing was required, increasing gross Federal debt by that amount. Since Federal debt not subject to limit decreased by \$1 billion and the adjustment for discount and premium changed by \$4 billion, the debt subject to limit increased by \$1,658 billion, while debt held by the public increased by \$1,474 billion.

Debt subject to limit is estimated to increase by \$1,948 billion in 2011 and \$1,179 billion in 2012. 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 6–6. While debt held by the public increases by \$6,045 billion from the end of 2010 through 2016, debt subject to limit increases by \$7,304 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 1970 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 residents.

Foreign holdings of Federal debt are presented in Table 6–7. At the end of 2010, foreign holdings of Treasury debt were \$4,261 billion, which was 47 percent of the total debt

held by the public.¹⁹ Foreign central banks and foreign official institutions owned 74 percent of the foreign holdings of Federal debt; private investors owned nearly all the rest. This 74 percent is a small decrease from the 76 percent held by foreign central banks at the end of 2009. 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 from 34 percent at the end of 2002 to 42 percent at the end of 2004 and to 48 percent at the end of 2008. Foreign holdings were 47 percent at the end of 2009 and 2010. The increase in foreign holdings was about 47 percent of total Federal borrowing from the public in 2010 and 53 percent over the last five years. At the end of 2010, the nations holding the largest shares of U.S. Federal debt were China, which held 21 percent of all foreign holdings, Japan, which held 20 percent, and the United Kingdom, which held 11 percent.

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

¹⁹ The debt calculated by the Bureau of Economic Analysis, Department of Commerce, is different, though similar in size, because of a different method of valuing securities.

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, including the substantial Government efforts to support the credit markets during the recent financial turmoil, are discussed in Chapter 23, "Credit and Insurance," in this volume. Detailed data are presented in tables at the end of that chapter.

2. ECONOMIC ASSUMPTIONS

This chapter presents the economic forecast on which the 2013 Budget projections are based.¹ When the President took office in January 2009, the economy was in the midst of an historic economic crisis. The first order of business for the new Administration was to arrest the rapid decline in economic activity that threatened to plunge the country into a second Great Depression. The President and Congress took unprecedented actions to restore demand, stabilize financial markets, and put people back to work. These steps included passage of the American Recovery and Reinvestment Act (ARRA), signed by the President just 28 days after taking office. They also included the Financial Stability Plan, announced in February 2009, which encompassed wide-ranging measures to strengthen the banking system, increase consumer and business lending, and stem foreclosures and support the housing market. These and a host of other actions walked the economy back from the brink.

Production bottomed out during the spring, and the recession officially ended in June 2009.² This marked the end of the decline in production, but businesses were still shedding jobs. The unemployment rate reached a peak of 10.0 percent in October 2009, and payroll employment continued to fall until February 2010. The two years that followed have seen the economy gradually begin to recover. Over the past 10 quarters, through the fourth quarter of 2011, real Gross Domestic Product (GDP) has grown at an average rate of 2.4 percent, and since February 2010, 3.2 million jobs have been added in the private sector. Meanwhile, the unemployment rate has fallen from its October 2009 peak of 10.0 percent to 8.5 percent (as of December 2011).

The recovery is projected to gain momentum in 2012-2013 and to strengthen further in 2014. Unfortunately, even with healthy economic growth, unemployment is expected to be higher than normal for several more years. The Administration is projecting a full recovery from the recession of 2008-2009, but one that is drawn out because of the lingering effects of the financial crisis. A similar pattern of delayed growth is expected by the Federal Reserve and the Congressional Budget Office (see the discussion below on forecast comparisons).

Recent Economic Performance

The accumulated stresses from a contracting housing market and the resulting strains on financial markets brought the 2001-2007 expansion to an end in December

2007. In its early stages, the 2008-2009 recession was relatively mild, but financial conditions worsened sharply in the fall of 2008, and from that point forward the recession became much more severe. Before it ended, real GDP had fallen further and the downturn had lasted longer than any previous post-World War II recession. Looking ahead, the likely strength of the recovery is one of the key issues for the forecast, and the aftermath of the housing and financial crises has an important bearing on the expected strength of the recovery.

Housing Markets.—The economy's contraction had its origin in the housing market. In hindsight, it is clear that in the early years of the previous decade housing prices became caught up in a speculative bubble that finally burst. In 2006-2007, housing prices peaked, and from 2007 through 2008, housing prices fell sharply according to most measures.³ Since 2009, housing prices measured in real terms relative to the Consumer Price Index (CPI) have not increased, which has limited the recovery in household wealth (see chart below). During the downturn, as prices fell, investment in housing plummeted, reducing the annualized rate of real GDP growth by an average of 1 percentage point per quarter. With the slower decline of house prices since 2009, housing investment has begun to stabilize, neither adding nor subtracting from real GDP growth on average since 2009:Q2. However, so far housing investment has not made a positive contribution to growth on a sustained basis as it has done in past expansions.

In April 2009, monthly housing starts fell to an annual rate of just 478,000 units, the lowest level ever recorded for this series, which dates from 1959. Housing starts have fluctuated since then, responding to new tax incentives for home purchase and their expiration. The monthly data show housing starts of 657,000 at an annual rate in December 2011. In normal times, at least 1.5 million starts a year are needed to accommodate the needs of an expanding population and to replace older units, indicating that there is potential for a substantial housing rebound. A large overhang of vacant homes must be reduced, however, before a robust housing recovery can become established. The foreclosure rate in the third quarter of 2011 was 1.1 percent, which is down 0.2 percentage points from its rate in 2010:Q3, but remains one of the highest on record. With new foreclosures continuing to add to the stock of vacant homes, housing prices and new investment have remained subdued. The Administration forecast assumes a gradual recovery in housing activity that adds moderately to real GDP growth.

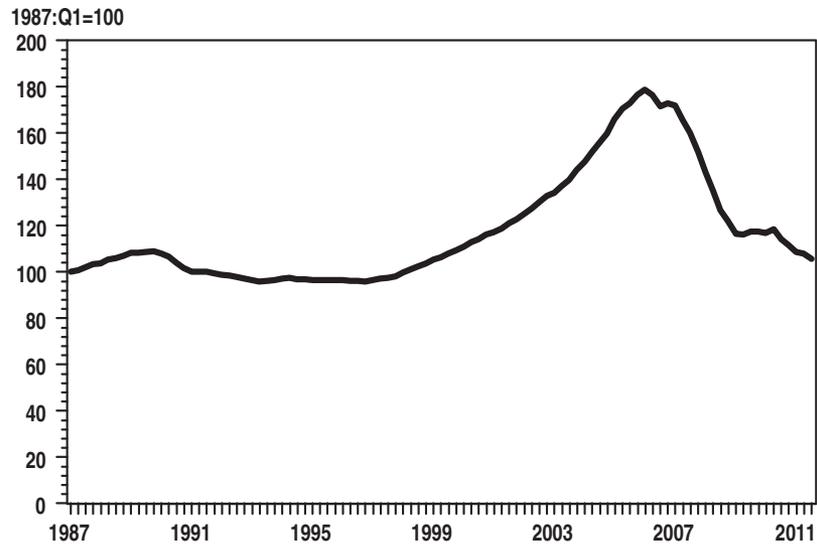
¹ In the Budget, economic performance is discussed in terms of calendar years. Budget figures are discussed in terms of fiscal years.

² The dating of U.S. business cycles is done by the National Bureau of Economic Research, a private institution that has supported economic research on business cycles and other topics for many decades.

³ There are several measures of national housing prices. Two respected measures that attempt to correct for variations in housing quality are the S&P/Case-Shiller Home Price Index and the Federal Housing Finance Agency (FHFA) Purchase-Only House Price Index. The Case-Shiller index peaked in 2006, while the FHFA index peaked in 2007.

Chart 2-1. Real House Prices Have Declined

Case-Shiller National Home Price Index Divided by the CPI-U Research Series

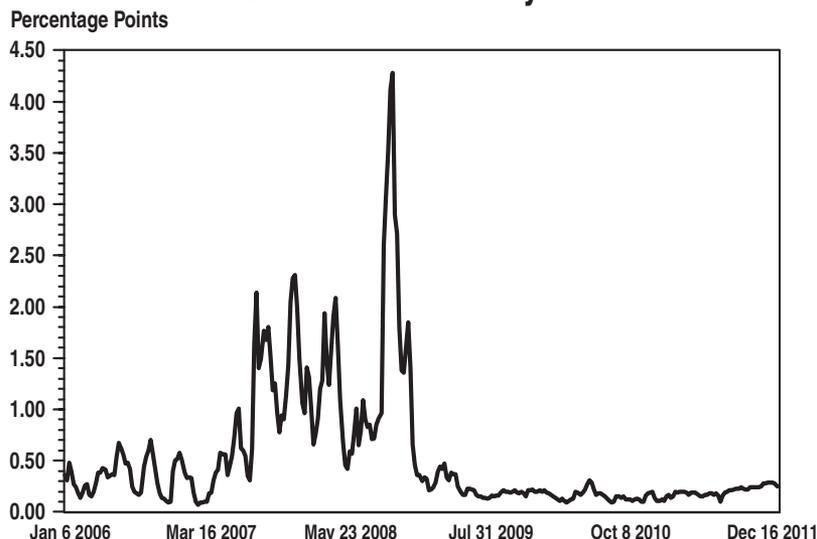


The Financial Crisis.—In August 2007, the United States subprime mortgage market became the focal point for a worldwide financial crisis. Subprime mortgages are provided to borrowers who do not meet the standard criteria for borrowing at the lowest prevailing interest rate, because of low income, a poor credit history, lack of a down payment, or other reasons. In the spring of 2007, there were over \$1 trillion outstanding in such mortgages, and because of falling house prices, many of these mortgages were on the brink of default. As banks and other investors lost confidence in the value of these high-risk mortgages and the mortgage-backed securities based on them, lending between banks froze. Non-bank lenders also became unwilling to lend. Financial market participants of all kinds were uncertain of the degree to which other participants' balance sheets had been contaminated. The heightened uncertainty was reflected

in unprecedented spreads between interest rates on Treasury securities and those on various types of financial market debt.

One especially telling differential was the spread between the yield on short-term U.S. Treasury securities, and the London interbank lending rate (LIBOR) which banks trading in the London money market charge one another for short-term lending in dollars. Historically, this differential has been 30 or 40 basis points. In August 2007, it shot up to over 200 basis points, and it spiked again, most dramatically, in September 2008 following the bankruptcy of Lehman Brothers (see chart). The policy response following the Lehman Brothers bankruptcy was crucial in restoring confidence and limiting the financial panic. Over the course of the following three months, the Federal Reserve lowered its short-term interest rate target to near zero, while creating new programs

Chart 2-2. The One-Month LIBOR Spread over the One-Month Treasury Yields



to provide credit to markets where financial institutions were no longer lending. The Troubled Asset Relief Program (TARP) provided the Treasury with the financial resources to bolster banks' capital position and to remove troubled assets from banks' balance sheets. In the spring of 2009, the Treasury and bank regulators conducted the Supervisory Capital Assessment Program, a stress test to determine the health of the 19 largest U.S. banks. The test provided more transparency for banks' financial positions, which reassured investors. Consequently, the banks have been able to raise private capital, providing further evidence that the credit crisis has eased. As these actions were taken, the LIBOR spread narrowed sharply, and other measures of credit risk also declined. During 2009, the spreads between Treasury yields and other interest rates generally regained pre-crisis levels, and they held these levels through 2011. This is the clearest evidence that the U.S. financial crisis has abated, although the access to credit for small businesses and homebuyers remains constrained.

While the U.S. crisis has eased, that is definitely not true worldwide. Europe continues to confront financial uncertainty stemming from the troubled financial condition of several countries in the Euro zone. After the Euro was established as the common currency for 17 European countries in 1999, interest rates in those countries moved close together as their inflation rates tended to converge. However, recent events have led markets to reassess the long-run solvency of some of the countries using the Euro, and the result has been a striking divergence in the interest rates charged to the various countries. High interest rates on their debt make it difficult for the most threatened of these countries to address the pressing fiscal issues that have put their long-run solvency in danger. The United States would certainly suffer if the crisis in the Euro zone were to intensify. U.S. banks and other financial institutions have investments in Europe that would be at risk. Uncertainty about these possibilities has troubled U.S. financial markets

along with other markets around the world throughout the past year. The atmosphere of financial uncertainty has contributed to the reluctance of many lenders to lend except for the safest of investments.

Negative Wealth Effects and Consumption.— Between the third quarter of 2007 and the first quarter of 2009, the real net worth of American households declined by 27 percent – the equivalent of more than one year's GDP. A precipitous decline in the stock market, along with falling house prices over this period, were the main reasons for the drop in household wealth. Since then, real wealth has risen, but the increase through the third quarter of 2011 was only 8 percent. House prices nationally are falling less rapidly, and the stock market has partially recovered, but real net worth remains 21 percent below its 2007 peak level.⁴

Americans have reacted to this massive loss of wealth by saving more. The personal saving rate had been declining since the 1980s, and it reached a low point of 1.3 percent in the third quarter of 2005. It remained low, averaging only 2.2 percent through the end of 2007, but since then, as wealth has declined, the saving rate has increased. It rose to a temporary high point of 6.2 percent in the second quarter of 2009, following a distribution of special \$250 payments to Social Security recipients and the implementation of other Recovery Act provisions. Since then, the saving rate has averaged 4.7 percent, although it dipped below 4.0 percent in the second half of 2011. In the long-run, increased saving is essential for future living standards to rise. However, a sudden increase in the desire to save implies a corresponding reduction in consumer demand, and a fall-off in consumption had a negative effect on the economy during the recession of 2008 and early 2009. During that period, real consumer spending fell at an annual rate of 2.3 percent. Since then, real consumer spending has recovered and now exceeds its

⁴ Real wealth is computed by deflating household net worth from the Flow-of-Funds Accounts by the Chain Price Index for Personal Consumption Expenditures. Data are available through 2011:Q3.

Chart 2-3. Personal Saving Rate

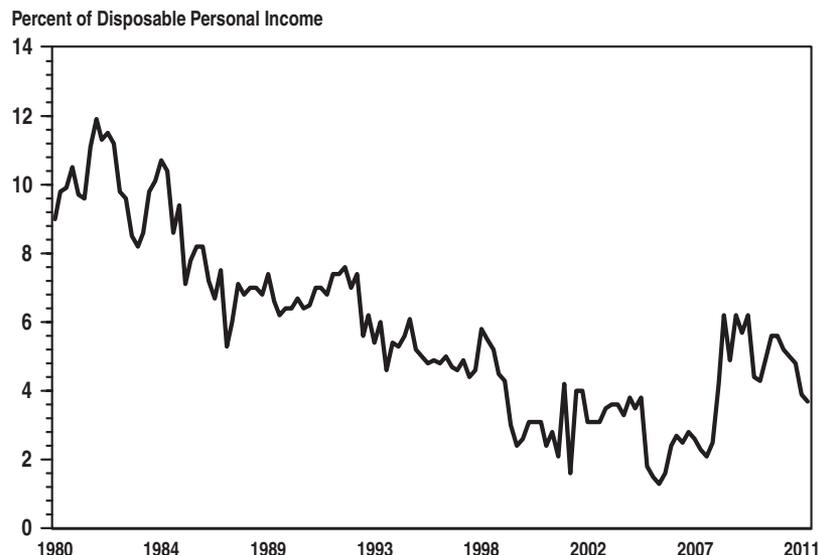
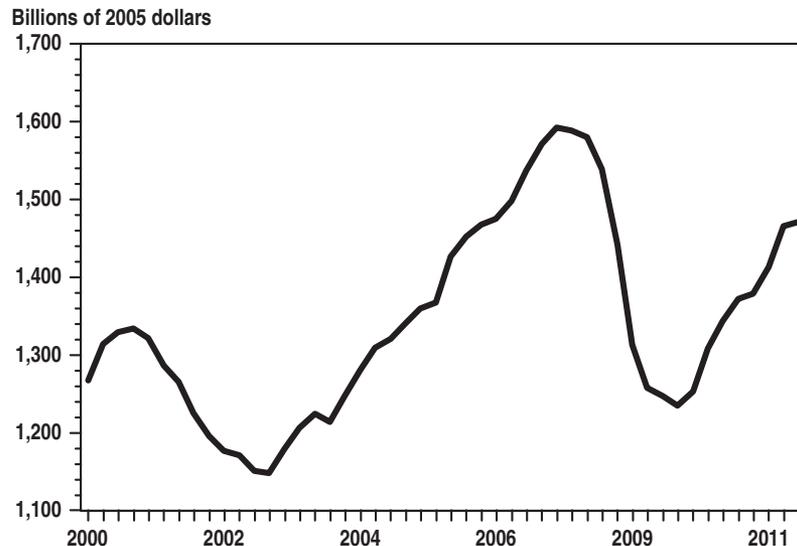


Chart 2-4. Real Business Fixed Investment



previous peak level. Continued growth in consumption is essential to a healthy recovery, and, if income also grows, increased consumption is compatible with a higher but stable saving rate.

Investment.—Business fixed investment fell sharply during the 2008-2009 contraction. It rose rapidly in 2010, and 2011, but even after the substantial increases in business spending for structures, equipment and software over the past 10 quarters, real investment remains well below its pre-recession levels implying room for further growth (see chart). The cost of capital is low and American corporations at the end of 2011 held substantial levels of cash reserves, which could provide funding for future investments as the economy continues to recover. The main constraint on business investment is poor sales expectations, which have been dampened by the slow pace of recovery. However, if consumption continues to expand, businesses are in a good position to expand investment. Strengthened by tax incentives, the outlook for investment is encouraging. Nevertheless, the pace of future growth could prove to be uneven, as investment tends to be volatile.

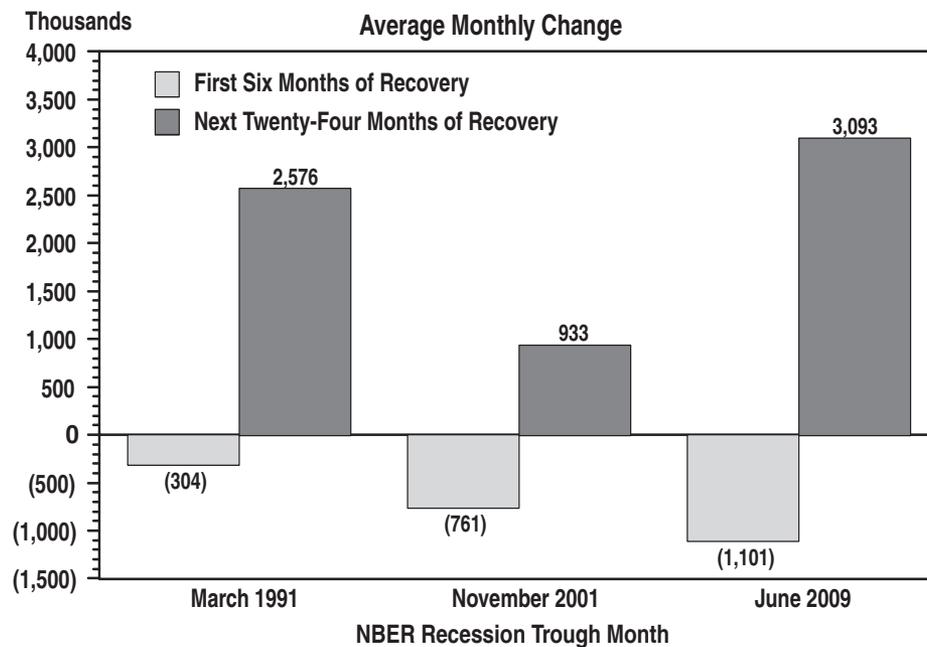
Net Exports.— Over the last two decades, the U.S. trade deficit expanded as foreign investors increased investment in the United States. The inflow of foreign capital helped fuel the housing bubble. The financial crisis and the resulting economic downturn sharply curtailed the flow of trade and foreign investment. In the third quarter of 2008, before the worst moment of the financial crisis, net exports measured at an annual rate, in the National Income Accounts, were -\$757 billion. Over the next three quarters, the deficit in net exports was more than cut in half, falling to -\$338 billion in the second quarter of 2009. Since then, as the U.S. economy has recovered, U.S. imports have grown at a faster pace than U.S. exports. Consequently, the net export balance has declined to -\$582 billion. It is unhealthy for the world economy to be too dependent on U.S. consumption spending, so further reductions in the U.S. trade deficit

would be desirable. The Administration's National Export Initiative is intended to increase U.S. exports to help reduce worldwide trade imbalances.

The Labor Market.—The unemployment rate peaked in 2009. It has declined since then, but it remains well above its historical average of under 6 percent, and the rate of long-term unemployment (those out of work for more than 6 months) is higher than at any other period since before World War II. The high rate of unemployment has had devastating effects on American families, and the recovery will not be real for most Americans until the job market also turns around. Historically, when the economy grows so does employment, and there are signs that this pattern is repeating itself in the current recovery, albeit slowly. Private employment has grown for 22 straight months, although at a relatively modest rate. The positive job growth has exceeded the job gains during similar periods in the two previous recoveries (see Chart 2-5).

The Recovery in 2011.— At the beginning of 2011, many private forecasters were expecting the recovery to pick up momentum over the course of the year. Instead, 2011 saw subpar growth due to unexpected headwinds. Global events weighed on the economy. Political uncertainty in the Middle East caused world oil markets to tighten, especially for the high-quality crude oil that is most useful in refining gasoline. The price of oil rose by 16 percent between September and December 2010 and then rose another 20 percent in March and April 2011. Consumers were pinched by the rising cost of fuel. Although the U.S. economy is less sensitive to oil price shocks than it was in the 1970s, higher fuel prices still exact a toll. On March 11, 2011, a severe earthquake followed by a devastating tsunami seriously damaged the coastal regions of northeastern Japan. These natural disasters had a worldwide impact as they curtailed production of parts needed for Japanese automobiles manufactured both in Japan and abroad. In the United States, for example, production of motor vehicles fell 6.3

Chart 2-5. Private Job Gains and Losses During Recent Recoveries



percent (0.5 million units at an annual rate) in the second quarter, with most of the decline at the American facilities of Japanese automakers. The combination of higher oil and gas prices along with the repercussions from the production cutbacks at motor vehicle assembly plants worked to offset the stimulative effects of lower payroll taxes and extended unemployment benefits enacted at the end of 2010. Fortunately, these particular headwinds are likely to be transitory. Oil prices have fluctuated over the last six months, but they were no higher in January 2012 than in May 2011. Meanwhile, Japanese manufacturing production has recovered from the effects of the earthquake allowing motor vehicle assemblies and sales in the United States to return to the levels reached before the disaster. As these shocks faded, economic growth picked up in the second half of 2011.

A more persistent source of sluggishness has been the sovereign debt crisis in Europe, which has repeatedly impinged on global equity markets and which threatens to place a new drag on consumer confidence and the global recovery going forward. In 2010, several European countries encountered difficulty in obtaining credit, and financial markets around the world responded negatively to these developments spreading the effects of the crisis to the United States and elsewhere. The European Union acted to confront these issues when they first emerged, and the affected governments have attempted to restrain their budget deficits. Even with these actions, however, the European recovery remains at risk because of increased uncertainty and because the measures taken to address the fiscal crisis have had the effect in some cases of limiting demand and hampering recovery. Concerns over sovereign debt returned in 2011 and spread to larger

countries in the European Union, creating renewed volatility in global financial markets.

Policy Background

Over the last 36 months, the Administration and the Federal Reserve have taken a series of fiscal and monetary policy actions to bring the recession to an end and expedite the recovery. On the fiscal policy side, the passage of ARRA was a crucial step early in the Administration, other important actions followed, and the 2013 Budget includes new proposals to promote growth and employment. Meanwhile, the Federal Reserve has kept its target interest rate near zero, and it has pursued other novel measures to unfreeze the Nation's credit markets and bolster economic growth. Several Administration policy initiatives have been pursued to stabilize the Nation's financial and housing markets.

Fiscal Policy.—The Federal budget affects the economy through many channels. For an economy coming out of a deep recession, the most important of these is the budget's effect on total demand. In a slumping economy, with substantial spare capacity, the level of demand is the main determinant of how much is produced and how many workers will be employed. Government spending on goods and services can substitute for missing private spending while changes in taxes and transfers can contribute to demand by enabling people to spend more than they otherwise could or would. ARRA bolstered aggregate demand in several ways helping to spark the recovery. It increased spending on goods and services at the Federal level; it provided assistance to State Governments; it included large tax reductions for middle-class families; and it also extended unemployment insurance and

COBRA benefits, which have allowed people to maintain spending at levels higher than would have been possible without it.

Job losses in 2009-2010 would have been much greater without ARRA as the steep slump was likely to have continued without intervention. In the first three months of 2009, private payroll employment was falling at an average rate of 783,000 jobs per month. By the last three months of 2009, the rate of job loss had declined to 129,000 per month. The private sector began to add jobs in March 2010, and has added jobs every month since then (through December 2011). In the last three months of 2011, the economy added an average of 155,000 private-sector jobs per month, and almost 2 million private sector jobs over the course of the year. It is not possible to judge the effectiveness of a macroeconomic policy without some idea of the alternative. Critics of Administration fiscal policy have argued that the poor job market is evidence of its ineffectiveness. However, the only way to know that is through a macroeconomic model that can be used to project the employment outcome under an alternative policy. In fact, results from a range of models imply that employment was significantly increased by ARRA. The Council of Economic Advisers' (CEA) latest assessment estimates that ARRA increased employment by between 2.2 million and 4.2 million jobs through the second quarter of 2011, an estimate that is in line with private forecasters.⁵

The Administration has continued to pursue policies to reduce unemployment and create jobs. In 2010, the President launched the National Export Initiative, to support new jobs in American export industries. In March 2010, the President signed the Hiring Incentives to Restore Employment (HIRE) Act, which provided subsidies for firms that hired unemployed workers and provided other incentives. In September 2010, the President signed the Small Business Jobs Act, which provided tax relief and better access to credit to small businesses. In December 2010, the President reached agreement with Congress to extend several expiring tax provisions and avoid a large tax increase in 2011: the Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act. The agreement included expanded tax incentives for business investment, a temporary reduction in payroll taxes, and extended long-term unemployment insurance benefits. These measures helped support economic growth in 2011. Although growth was held back by higher energy prices, the Japanese earthquake and tsunami, and the renewed financial crisis in Europe; growth would likely have been even weaker without the policy changes agreed to at the end of 2010.

The President has continued to call for measures that would strengthen growth and employment in the near term while also proposing fiscally responsible measures to reduce the long-run budget deficit. In the fall of 2011, the Administration proposed the American Jobs Act (AJA),

which would have extended and expanded the payroll tax cut enacted in December 2010. The AJA would also have extended unemployment insurance benefits for those out of work more than 26 weeks. The bill proposed new incentives for hiring long-term unemployed workers; new protections for the jobs of teachers, fire fighters, and police; more investment in community colleges and public schools; and creation of a national infrastructure bank to foster needed investments in public infrastructure. At the end of 2011, Congress extended the existing payroll tax cut and long-term unemployment insurance benefits for two months. This extension protected the average American family from an immediate tax increase that would have amounted to \$1,000 over the entire year. However, Congress must still act to extend this tax holiday for the full year and enact other measures that the President has proposed. The 2013 Budget includes many of the initiatives in the AJA, with enactment assumed for many of them by March 2012.

Economic recovery efforts increase the Federal budget deficit. This was the appropriate response to the crisis the Administration inherited, and it is expected to be temporary. The 2013 Budget provides a path to lower deficits over time. Once the economy recovers, unsustainably large deficits are bad for the economy. When private demand strengthens, deficits can raise interest rates and decrease private investment, as the Federal Government competes with investors in the credit markets. Deficits also contribute to the amount that the United States borrows from abroad. Persistently large deficits reduce future standards of living in two ways: higher interest rates and lower investment reduce productivity and future income, and an increase in foreign borrowing acts like a mortgage entailing future payments to foreign creditors. Deficits also limit the Government's maneuvering room to handle future crises. For these reasons, it is important to control the budget deficit and maintain fiscal discipline in the long run. But when unemployment is as high as it is today, budget deficits are essential to support demand in the private economy, and higher deficits can be used to reduce unemployment and strengthen economic growth. The Administration's policy proposals would use Federal borrowing to support economic growth in the near term, while constraining borrowing over time.

Monetary Policy.—The Federal Reserve is responsible for monetary policy. Traditionally, it has relied on a relatively narrow range of instruments to achieve its policy goals, but in the recent crisis the Fed has been forced to consider a broader approach. The short-term interest rate, the traditional tool of monetary policy, has been close to zero since the end of 2008, and the Fed has announced it will hold it near that level into 2014. Further cuts in short-term nominal rates are not possible, yet with unemployment high the Federal Reserve has needed to act in novel ways to achieve its dual mandate of stable prices and healthy economic growth. Consequently, the Federal Reserve has created new facilities to provide credit directly to the financial markets and has also bought longer-term securities for its portfolio.

⁵ The CEA "multipliers" used for these estimates are similar to those used by the Congressional Budget Office (CBO) and private forecasters such as Macroeconomic Advisers LLC. See Council of Economic Advisers, "The Economic Impact of the American Recovery and Reinvestment Act of 2009: Eighth Quarterly Report," December 9, 2011.

The combination of aggressive monetary and fiscal policies helped reverse the economic downturn in 2009 and set the stage for an economic recovery in the summer of 2009. However, following an initial burst of growth in late 2009 and early 2010, the economy slowed. To help counter the slowdown, the Federal Reserve expanded its balance sheet even further in another round of purchases of long-term Treasury securities. In 2011, the Fed undertook to shift the composition of its portfolio in such a way as to reduce the yield on longer term Treasury securities. Because much of the increase in Federal Reserve liabilities has gone into idle reserves of banks, and because of the considerable slack in the economy, current inflation risks remain low despite these aggressive measures. The Federal Reserve is prepared to reduce the assets on its balance sheet promptly and take other actions to reduce the growth of the money supply when the recovery gains strength and the unemployment rate falls.

Financial Stabilization Policies.—Over the course of the last 36 months, the U.S. financial system has been pulled back from the brink of a catastrophic collapse. The very real danger that the system would disintegrate in a cascade of failing institutions and crashing asset prices has been averted. The Administration’s Financial Stability Plan played a key role in cleaning up and strengthening the Nation’s banking system. This plan began with a forward-looking capital assessment exercise for the 19 U.S. banking institutions with assets in excess of \$100 billion. This was the so-called “stress test” aimed at determining whether these institutions had sufficient capital to withstand stressful deterioration in economic conditions. The resulting transparency and resolution of uncertainty about banks’ potential losses boosted confidence and allowed banks to raise substantial funds in private markets and repay tens of billions of dollars in taxpayer investments.

The Financial Stability Plan also aimed to unfreeze secondary markets for loans to consumers and businesses. The Administration has undertaken the Making Home Affordable plan to help distressed homeowners avoid foreclosure and stabilize the housing market. More than 5.5 million modification arrangements were started between April 2009 and the end of November 2011 – including more than 1.7 million Home Affordable Modification Program (HAMP) trial modification starts, 1.1 million Federal Housing Administration (FHA) loss mitigation and early delinquency interventions, and more than 2.6 million proprietary modifications under the public-private HOPE Now program. Many of these modifications are a direct result of the standards and processes the Administration’s programs have established. While some homeowners may have received help from more than one program, the total number of agreements offered continues to be more than double the number of foreclosure completions for the same period.

Another crucial response to the financial crisis was the implementation of the Troubled Asset Relief Program (TARP), which was established in the fall of 2008. TARP provided the Treasury with the financial resources to bolster banks’ capital positions and to remove troubled

assets from banks’ balance sheets. Under the Obama Administration, the focus of TARP was shifted from large financial institutions to households, small banks, and small businesses. Since the Administration took office, the projected cost of TARP has decreased dramatically and programs are being successfully wound down. On October 3, 2010, authority to make new investments under TARP expired. Today, the Federal Government maintains TARP programs only where it has existing contracts and commitments. The net cost of TARP is now projected to be only a small fraction of its originally projected cost.

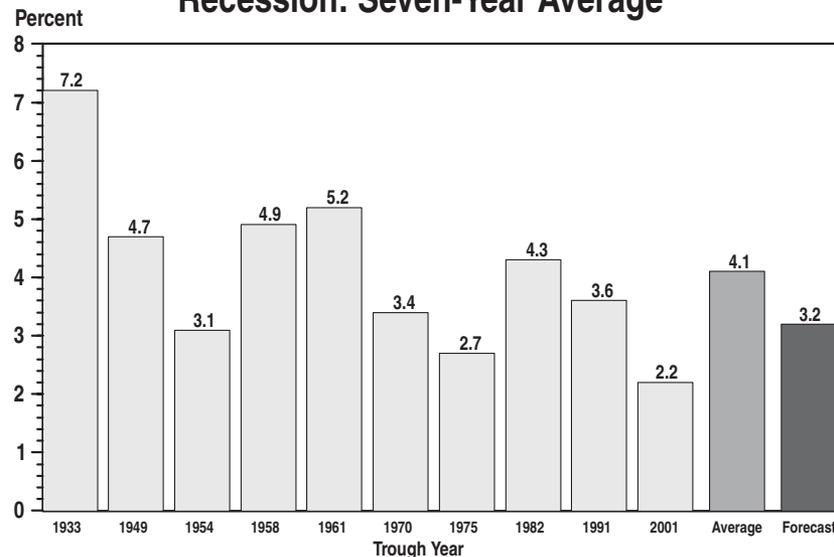
Economic Projections

The economic projections underlying the 2013 Budget estimates are summarized in Table 2–1. The assumptions are based on information available as of mid-November 2011. This section discusses the Administration’s projections and the next section compares these projections with those of the Federal Reserve’s Open Market Committee (FOMC), the Congressional Budget Office (CBO), and the Blue Chip Consensus of private forecasters.

Real GDP.—The Administration projects the economic recovery that began in 2009 will continue in 2012-2013 with real GDP growing at an annual rate of 3.0 percent (fourth quarter over fourth quarter). Although growth is projected to be stable, the key supports for growth are expected to shift over the two years. In 2012, the Administration’s budget proposals underpin growth, while in 2013 increased private demand is expected to play a larger role in supporting continued recovery. This economic forecast is based on the assumption that the Administration’s budget proposals are enacted in full. The Administration recognizes that not all forecasters share this assumption, and it is the main reason the Administration projections for real growth in 2012 are stronger than the consensus expectation. In 2014, growth is projected to increase to around 4 percent annually as the job market improves and residential investment recovers. Real GDP is projected to return to its long-run “potential” level by 2020, and to grow at a steady 2.5 percent rate for the remaining years of the forecast.

As shown in Chart 2-6, the Administration’s projections for real GDP growth over the first seven years of the expected recovery imply an average growth rate below the average for historical recoveries. Recent recoveries have been somewhat weaker than average, but the last two expansions were preceded by mild recessions with relatively little pent-up demand when conditions improved. Because of the depth of the recent recession, there is much more room for a rebound in spending and production than was true either in 1991 or 2001. On the other hand, lingering effects from the credit crisis and other special factors have limited the pace of the recovery until now. Thus, the Administration is forecasting a slower than normal recovery, but one that eventually restores GDP to near the level of potential that would have prevailed in the absence of a downturn. Some international economic organizations have argued that a financial recession permanently scars an economy, and this view is also shared by some American forecasters. On

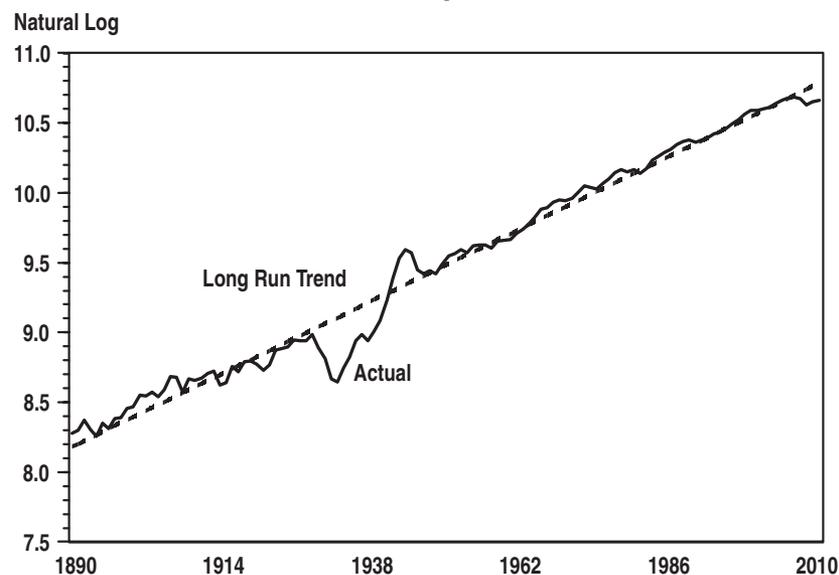
Chart 2-6. Real GDP Growth Following a Recession: Seven-Year Average



that view, there is no reason to expect a full recovery to the previous trend of real GDP. The statistical evidence for permanent scarring comes mostly from the experiences of developing countries and its relevance to the current situation in the United States is debatable. Historically, economic growth in the United States economy has shown considerable stability over time as displayed in Chart 2-7. Since the late 19th century, following every recession, the economy has returned to the long-term trend in per capita real GDP. This was true even following the only previous recession in which the United States experienced a disastrous financial crisis – 1929-1933 – although the recovery from the Great Depression was not complete until World War II restored demand.

The U.S. economy has enormous room for growth, although there are factors that could continue to limit that growth in the years ahead. On the positive side, the unemployment rate fell sharply at the end of 2011, and if the President's budget proposals are adopted, 2012 should get off to a solid start. The Federal Reserve's commitment to achieving its dual mandate means that monetary policy will continue to seek a robust recovery. However, financial markets here and in Europe have been troubled by concerns about weak economic growth and the sustainability of fiscal policy in some European countries. The drag from a European slowdown could hold back the U.S. economy.

Chart 2-7. Real Per Capita GDP 1890-2010



Sources: Angus Maddison, *The World Economy, Historical Statistics 1890-1929* and Bureau of Economic Analysis, *National Income and Product Accounts, 1929-2010*.

Table 2-1. ECONOMIC ASSUMPTIONS¹
(Calendar years; dollar amounts in billions)

	2010	Projections											
	Actual	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Gross Domestic Product (GDP):													
Levels, dollar amounts in billions:													
Current dollars	14,527	15,106	15,779	16,522	17,397	18,448	19,533	20,651	21,689	22,666	23,659	24,688	25,760
Real, chained (2005) dollars	13,088	13,323	13,687	14,097	14,606	15,211	15,821	16,431	16,952	17,403	17,844	18,290	18,748
Chained price index (2005 = 100)	111.0	113.4	115.3	117.2	119.1	121.3	123.5	125.7	127.9	130.2	132.6	135.0	137.4
Percent change, fourth quarter over fourth quarter:													
Current dollars	4.7	4.0	4.6	4.7	5.8	6.1	5.8	5.7	4.6	4.4	4.3	4.3	4.3
Real, chained (2005) dollars	3.1	1.7	3.0	3.0	4.0	4.2	3.9	3.8	2.8	2.6	2.5	2.5	2.5
Chained price index (2005 = 100)	1.6	2.2	1.6	1.6	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Percent change, year over year:													
Current dollars	4.2	4.0	4.5	4.7	5.3	6.0	5.9	5.7	5.0	4.5	4.4	4.3	4.3
Real, chained (2005) dollars	3.0	1.8	2.7	3.0	3.6	4.1	4.0	3.9	3.2	2.7	2.5	2.5	2.5
Chained price index (2005 = 100)	1.2	2.1	1.7	1.7	1.6	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Incomes, billions of current dollars:													
Domestic corporate profits	1,418	1,588	1,782	1,750	1,779	1,884	1,936	1,973	1,946	1,906	1,842	1,761	1,678
Employee compensation	7,971	8,278	8,595	8,955	9,433	9,992	10,622	11,297	11,953	12,586	13,230	13,885	14,587
Wages and salaries	6,408	6,668	7,025	7,253	7,601	8,063	8,578	9,150	9,696	10,219	10,749	11,277	11,850
Other taxable income ²	3,108	3,308	3,495	3,697	3,899	4,164	4,475	4,766	5,022	5,251	5,464	5,655	5,794
Consumer Price Index (all urban):³													
Level (1982-84 = 100), annual average	218.1	225.1	230.0	234.5	239.1	244.0	249.0	254.3	259.6	265.1	270.7	276.4	282.2
Percent change, fourth quarter over fourth quarter	1.2	3.6	1.9	1.9	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1
Percent change, year over year	1.6	3.2	2.2	1.9	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1
Unemployment rate, civilian, percent:													
Fourth quarter level	9.6	9.0	8.8	8.6	7.8	7.0	6.3	5.6	5.5	5.4	5.4	5.4	5.4
Annual average	9.6	9.0	8.9	8.6	8.1	7.3	6.5	5.8	5.5	5.4	5.4	5.4	5.4
Federal pay raises, January, percent:													
Military ⁴	3.4	1.4	1.6	1.7	NA	NA	NA	NA	NA	NA	NA	NA	NA
Civilian ⁵	2.0	0.0	0.0	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA
Interest rates, percent:													
91-day Treasury bills ⁶	0.1	0.1	0.1	0.2	1.4	2.7	3.8	4.1	4.1	4.1	4.1	4.1	4.1
10-year Treasury notes	3.2	2.8	2.8	3.5	3.9	4.4	4.7	5.0	5.1	5.1	5.1	5.3	5.3

NA = Not Available

¹Based on information available as of mid-November 2011.

²Rent, interest, dividend, and proprietors' income components of personal income.

³Seasonally adjusted CPI for all urban consumers.

⁴Percentages apply to basic pay only; percentages to be proposed for years after 2013 have not yet been determined.

⁵Overall average increase, including locality pay adjustments. Percentages to be proposed for years after 2013 have not yet been determined.

⁶Average rate, secondary market (bank discount basis).

Long-Term Growth.—The Administration forecast does not attempt to project cyclical developments beyond the next few years. The long-run projection for real economic growth and unemployment assumes that they will maintain trend values in the years following the return to full employment. In the non-farm business sector, productivity is assumed to grow at 2.3 percent per year in the long run, while nonfarm labor supply grows at a rate of 0.7 percent per year, so nonfarm business output grows approximately 3.0 percent per year. Real

GDP growth, reflecting the slower measured growth in productivity outside the nonfarm business sector, proceeds at a rate of 2.5 percent. That is markedly slower than the average growth rate of real GDP since 1947 — 3.2 percent per year. In the 21st century, real GDP growth in the United States is likely to be permanently slower than it was in earlier eras because of a slowdown in labor force growth initially due to the retirement of the post-World War II “baby boom” generation, and later by a decline in the growth of the working-age population.

Unemployment.—In December 2011, the overall unemployment rate was 8.5 percent. It had shown little movement since early 2011, before beginning to decline in September. When the forecast for the unemployment rate for the Budget was finalized in mid-November 2011, the reported unemployment rate for the latest month available, October 2011, was 9.0 percent. The Administration's forecast seeks to be a balanced reflection of the most likely outcomes, and this is a cautious forecast reflecting information available at the time of the forecast and expected relationships among economic variables. Were it possible to update the forecast for the Budget, the unemployment rate in these projections would be lower, reflecting the sharp decline in the unemployment rate near the end of last the year.

Inflation.—Over the four quarters ending in 2011:Q4, the price index for Personal Consumption Expenditures rose 2.6 percent, significantly higher than the 1.3 percent increase over the previous four quarters. Meanwhile, the Consumer Price Index for all urban consumers (CPI-U) rose by 3.0 percent for the twelve months ending in December 2011. Over the previous 12 months it had risen by just 1.4 percent. The increase in inflation in 2011 was due almost entirely to sharp movements in food and energy prices. The “core” CPI, excluding both food and energy, was up only 2.2 percent through the 12 months ending in December and the GDP price index for consumption excluding food and energy was up only 1.7 percent over the most recent four quarters. There was some increase in the rate of core inflation, but mainly as a result of temporary factors such as higher rent increases and the pass-through of higher prices for food and energy goods into the prices of such goods and services as airline fares.

Weak demand continues to hold down prices for many goods and services, and continued high unemployment is expected to preserve a relatively low inflation rate. As the economy recovers and the unemployment rate declines, the rate of inflation should remain near the Federal Reserve's implicit target of around 2 percent per year. With the recovery path assumed in the Administration forecast, the risk of outright deflation appears minimal. The Administration assumes that the rate of change in the CPI will average 2.1 percent and that the GDP price index will increase at a 1.8 percent annual rate in the long run.

Interest Rates.—Interest rates on Treasury securities fell sharply in late 2008, as both short-term and long-term rates declined to their lowest levels in decades. Since then Treasury rates have fluctuated, but they have not returned to their levels before the financial crisis, and at the end of 2011 long-term rates were especially low. In the last week of December, the yield on 10-year Treasuries was just 1.9 percent. Investors have sought the security of Treasury debt during the heightened financial uncertainty of the last few years, which has kept yields low. At the short end of the yield curve, the Federal Reserve is holding short-term rates near zero as it seeks to foster economic growth and lower unemployment. The Federal Reserve's policy of purchasing long-term Treasury securities may

also be helping to hold down long-term rates. In the Administration projections, interest rates are expected to rise, but only gradually as financial concerns are alleviated and the economy recovers from recession. The 91-day Treasury bill rate is projected to remain near zero into 2013 consistent with the Fed's announced intentions, and then to rise to 4.1 percent by 2017. The 10-year rate begins to rise in 2013 and reaches 5.3 percent by 2017. These forecast rates are historically low, reflecting lower inflation in the forecast than for most of the post-World War II period. After adjusting for inflation, the projected real interest rates are close to their historical averages.

Income Shares.—The share of labor compensation in GDP was extremely low by historical standards in 2011. It is expected to remain low for the next few years falling to a low point of 54.2 percent of GDP in 2013-2015. As the economy grows faster in the middle years of the forecast period, compensation is projected to rise, reaching 56.6 percent of GDP in 2022. In the expansion that ended in 2007, labor compensation tended to lag behind the growth in productivity, and that has also been true for the recent surge in productivity growth in 2009-2010. The share of taxable wages, which is strongly affected by changes in health insurance costs, is expected to rise from 44.1 percent of GDP in 2010 to 46.0 percent in 2022. Health reform is expected to limit the rise in employer-sponsored health insurance costs and allow for an increase in take-home pay. The share of domestic corporate profits was 9.8 percent of GDP in 2010. Profits dropped sharply in 2008-2009, but have recovered in 2010 and 2011. In the forecast, the ratio of domestic corporate profits to GDP falls to about 6.5 percent by the end of the 10-year projection period as the share of employee compensation slowly recovers.

Comparison with Other Forecasts

Table 2-2 compares the economic assumptions for the 2013 Budget with projections by CBO, the Blue Chip Consensus — an average of about 50 private-sector economic forecasts — and, for some variables, the Federal Reserve Open Market Committee. These other forecasts differ from the Administration's projections, but the forecast differences are relatively small compared with the margin of error in all economic forecasts. Like the Administration, the other forecasts project that real GDP will continue to grow as the economy recovers. The forecasts also agree that inflation will be low while outright deflation is avoided, and that the unemployment rate will decline while interest rates eventually rise.

There are some conceptual differences between the Administration forecast and the other economic forecasts. The Administration forecast assumes that the President's Budget proposals will be enacted. The 50 or so private forecasters in the Blue Chip Consensus make differing policy assumptions, but none would necessarily assume that the Budget is adopted in full. CBO is required to assume that current law will continue in making its projections, although CBO has recently begun to report alternative economic assumptions assuming a more

Table 2–2. COMPARISON OF ECONOMIC ASSUMPTIONS
(Calendar years)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Nominal GDP:												
2013 Budget ¹	15,106	15,779	16,522	17,397	18,448	19,533	20,651	21,689	22,666	23,659	24,688	25,760
Blue Chip	15,108	15,727	16,435	17,273	18,136	19,043	19,957	20,895	21,877	22,906	23,982	25,109
CBO	15,093	15,633	16,015	16,817	17,899	18,962	19,949	20,897	21,859	22,853	23,870	24,921
Real GDP (year-over-year):												
2013 Budget ¹	1.8	2.7	3.0	3.6	4.1	4.0	3.9	3.2	2.7	2.5	2.5	2.5
Blue Chip Consensus	1.7	2.2	2.6	2.9	2.9	2.9	2.7	2.5	2.5	2.5	2.5	2.5
CBO	1.7	2.2	1.0	3.6	4.9	4.2	3.3	2.8	2.6	2.5	2.4	2.4
Real GDP (fourth-quarter-over-fourth-quarter):												
2013 Budget ¹	1.7	3.0	3.0	4.0	4.2	3.9	3.8	2.8	2.6	2.5	2.5	2.5
Blue Chip	1.6	2.3	2.8	–	–	–	–	–	–	–	–	–
Federal Reserve Central Tendency	1.6–1.7	2.2–2.7	2.8–3.2	3.3–4.0	–	–	–	–	–	–	–	–
CBO	1.6	2.0	1.1	4.6	4.9	3.8	3.0	2.6	2.6	2.5	2.4	2.4
GDP Price Index:²												
2013 Budget ¹	2.1	1.7	1.7	1.6	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Blue Chip	2.2	1.9	1.9	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1
CBO	2.1	1.3	1.4	1.4	1.5	1.7	1.9	1.9	2.0	2.0	2.0	2.0
Consumer Price Index (CPI-U):²												
2013 Budget ¹	3.2	2.2	1.9	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1
Blue Chip	3.2	2.1	2.1	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.5	2.5
CBO	3.2	1.7	1.5	1.5	1.7	2.0	2.2	2.3	2.3	2.3	2.3	2.3
Unemployment Rate:³												
2013 Budget ¹	9.0	8.9	8.6	8.1	7.3	6.5	5.8	5.5	5.4	5.4	5.4	5.4
Blue Chip	9.0	8.7	8.3	7.7	7.1	6.6	6.2	6.0	6.0	6.0	6.0	6.0
Federal Reserve Central Tendency ⁴	8.7	8.2–8.5	7.4–8.1	6.7–7.6	–	–	–	–	–	–	–	–
CBO	9.0	8.8	9.1	8.7	7.4	6.3	5.7	5.5	5.5	5.4	5.4	5.3
Interest Rates:³												
91-Day Treasury Bills (discount basis):												
2013 Budget ¹	0.1	0.1	0.2	1.4	2.7	3.9	4.1	4.1	4.1	4.1	4.1	4.1
Blue Chip	0.1	0.1	0.4	1.9	3.0	3.4	3.7	3.7	3.7	3.7	3.7	3.7
CBO	0.1	0.1	0.1	0.4	1.6	2.6	3.2	3.6	3.8	3.8	3.8	3.8
10-Year Treasury Notes:												
2013 Budget ¹	2.8	2.8	3.5	3.9	4.4	4.7	5.0	5.1	5.1	5.1	5.3	5.3
Blue Chip	2.8	2.3	3.0	4.1	4.5	4.7	4.9	4.9	4.9	4.9	4.9	4.9
CBO	2.8	2.3	2.5	2.9	3.5	4.1	4.6	4.8	5.0	5.0	5.0	5.0

NA = Not Available

Sources: Administration; October 2011 and January 2012 *Blue Chip Economic Indicators*, Aspen Publishers, Inc.;

Federal Reserve Open Market Committee Press Release, January 25, 2012; and CBO, *The Budget and Economic Outlook*: January 2012.

¹ The 2013 Budget forecast was finalized in mid-November 2011.

² Year-over-year percent change.

³ Annual averages, percent.

⁴ Fourth quarter values.

plausible path for policy. The current law assumption implies, for example, that the 2001 and 2003 tax cuts expire at the end of 2012, which is why real GDP growth is so low and unemployment so high in the CBO projections for 2013.

In addition, the forecasts in the table were made at different times. The Administration projections were completed in mid-November. The three-month lag

between that date and the Budget release date occurs because the budget process requires a lengthy lead time to complete the estimates for agency programs that are incorporated in the Budget. Forecasts made at different dates will differ if there is economic news between the two dates that alters the economic outlook. The Blue Chip Consensus for 2012-2013 displayed in this table was the latest available, from early January; the Blue

Chip projections for 2014 to 2022, however, date to last October, as the Blue Chip extends its forecast beyond a two-year horizon only twice a year. The Federal Reserve forecast shown in Table 2-3 is from January 2012. The CBO forecast is from its January 2012 report.

Real GDP Growth.— In 2012, the Administration expects more growth than the other forecasters, mainly because the forecast assumes that all of the Budget proposals will be enacted. Other forecasters, make different assumptions. In 2013, the Administration holds growth steady while most other forecasters look for an increase. The Administration expects private demand to strengthen while fiscal policy shifts further toward constraint.

The most important difference among these forecasts is the expected rate of real GDP growth in the medium term. The Administration projects that real GDP will eventually recover most of the loss from the 2008-2009 recession. This implies a few years of higher than normal growth as real GDP makes up the lost ground. The Blue Chip average shows only a very limited recovery in this sense. In the Blue Chip projections, real GDP growth exceeds its long-run average only briefly throughout the 11-year forecast period, and much of the loss of real GDP experienced during the recession is permanent. Although somewhat higher than Blue Chip, CBO, anticipates only a partial recovery that would not return real GDP to the same level as in the Administration forecast.

In the long run, the real growth rates projected by the forecasters are similar. CBO projects a long-run growth rate of 2.4 percent per year, while the Blue Chip Consensus anticipates the same long-run growth rate as the Administration – 2.5 percent per year. Most of the difference between the Administration and CBO's long-run growth projection comes from a difference in the expected rate of growth of the labor force. Both forecasts assume that the labor force will grow more slowly than in the past because of population aging, but the Administration bases its population projections on the Census Bureau's projections, which tend to run about 0.1 percentage point higher than the CBO projections, which are based on population projections from the Social Security Administration.

All economic forecasts are subject to error, and the forecast errors are usually much larger than the forecast

differences discussed above. As discussed in chapter 3, past forecast errors among the Administration, CBO, and the Blue Chip have been roughly similar.

Unemployment, Inflation, and Interest Rates.— The Administration forecast of the unemployment rate was completed before the large drop in the unemployment rate in November-December 2011 and the downward revision to October's rate were known. The Blue Chip consensus forecast for 2012 has been lowered by 0.4 percentage points since mid-November when the Budget forecast was finalized. In the long-run perhaps reflecting slower average growth projections, the Blue Chip unemployment projection remains above the Administration's projections, but in 2012-2015 it is lower. The Federal Reserve forecast range for unemployment is also below the Administration's projections. These projections were made after observing the large decline in unemployment in late 2011. CBO's projections were completed after observing the decline in unemployment in late 2011. Nevertheless, the CBO projection of unemployment is only slightly below the Administration projection in 2012 and higher than the Administration in 2013-2015 reflecting the different policy assumptions underlying the two forecasts. Over time the Administration projects a return to the average unemployment rate that prevailed in the 1990s and 2000s.

The Administration, CBO, and the Blue Chip Consensus anticipate a subdued rate of inflation over the next two years. In the medium term, inflation is projected to return to a rate of around 2 percent per year, which is consistent with the Federal Reserve's long-run policy goal for inflation.

The forecasts are also similar in their projections for the path of interest rates. Short-term rates are expected to be near zero in 2011-2012, but then to increase beginning in 2013. The Administration projects a somewhat stronger rise in short-term rates than either the Blue Chip or CBO. The Administration projections are closer to market expectations as of late 2011. The interest rate on 10-year Treasury notes is projected to rise to 5.3 percent in the Administration projections. This is above the CBO and the Blue Chip projections.

Changes in Economic Assumptions

Some of the economic assumptions underlying this Budget have changed compared with those used for the

2012 Budget, but many of the forecast values are similar, especially in the long run (see Table 2–3). The previous Budget anticipated more rapid growth in 2011–2014 than the current Budget. The recovery began as anticipated in 2009, but the pace of growth through 2011 was somewhat slower than expected. The Administration continues to believe that the economy will regain most of the ground

lost in 2008–2009. This implies rapid growth in the future continuing for a few years. That growth will help return unemployment to its long-run average. As in last year's projections, inflation is also projected to return to its long-run averages, while interest rates, measured in real terms, also return to their historical averages.

Table 2–3. COMPARISON OF ECONOMIC ASSUMPTIONS IN THE 2012 AND 2013 BUDGETS

(Calendar years; dollar amounts in billions)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Nominal GDP:											
2012 Budget Assumptions ¹	15,037	15,819	16,780	17,803	18,799	19,770	20,706	21,619	22,562	23,542	24,565
2013 Budget Assumptions	15,106	15,779	16,522	17,397	18,448	19,533	20,651	21,689	22,666	23,659	24,688
Real GDP (2005 dollars):											
2012 Budget Assumptions ¹	13,380	13,868	14,475	15,104	15,676	16,201	16,663	17,092	17,519	17,957	18,406
2013 Budget Assumptions	13,323	13,687	14,097	14,606	15,211	15,821	16,431	16,952	17,403	17,844	18,290
Real GDP (percent change):²											
2012 Budget Assumptions	2.7	3.6	4.4	4.3	3.8	3.3	2.9	2.6	2.5	2.5	2.5
2013 Budget Assumptions	1.8	2.7	3.0	3.6	4.1	4.0	3.9	3.2	2.7	2.5	2.5
GDP Price Index (percent change):²											
2012 Budget Assumptions	1.3	1.5	1.6	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8
2013 Budget Assumptions	2.1	1.7	1.7	1.6	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Consumer Price Index (all-urban; percent change):²											
2012 Budget Assumptions	1.3	1.8	1.9	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1
2013 Budget Assumptions	3.2	2.2	1.9	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1
Civilian Unemployment Rate (percent):³											
2012 Budget Assumptions	9.3	8.6	7.5	6.6	5.9	5.5	5.3	5.3	5.3	5.3	5.3
2013 Budget Assumptions	9.0	8.9	8.6	8.1	7.3	6.5	5.8	5.5	5.4	5.4	5.4
91-day Treasury bill rate (percent):³											
2012 Budget Assumptions	0.2	1.0	2.6	3.7	4.0	4.1	4.1	4.1	4.1	4.1	4.1
2013 Budget Assumptions	0.1	0.1	0.2	1.4	2.7	3.9	4.1	4.1	4.1	4.1	4.1
10-year Treasury note rate (percent):³											
2012 Budget Assumptions	3.0	3.6	4.2	4.6	5.0	5.2	5.3	5.3	5.3	5.3	5.3
2013 Budget Assumptions	2.8	2.8	3.5	3.9	4.4	4.7	5.0	5.1	5.1	5.1	5.3

¹ Adjusted for July 2011 NIPA revisions.

² Calendar year over calendar year.

³ Calendar year average.

3. INTERACTIONS BETWEEN THE ECONOMY AND THE BUDGET

The economy and the budget are interrelated. Both budget outlays and the tax structure have substantial effects on national output, employment, and inflation; and economic conditions significantly affect the budget in various ways.

Because of the complex interrelationships between the budget and the economy, budget estimates depend to a very significant extent upon assumptions about the economy. This chapter attempts to quantify the relationship between macroeconomic outcomes and budget outcomes and to illustrate the challenges that uncertainty about the future path of the economy poses for making budget projections.¹

The first section of the chapter describes how changes in economic variables result in changes in receipts, outlays, and the deficit. The second section presents information on forecast errors for growth, inflation, and interest rates and how these forecast errors compare to those in forecasts made by the Congressional Budget Office (CBO) and the private-sector Blue Chip Consensus forecast. The third section presents specific alternatives to the current Administration forecast—both more optimistic and less optimistic with respect to real economic growth and unemployment—and describes the resulting effects on the deficit. The fourth section shows a probabilistic range of budget outcomes based on past errors in projecting the deficit. The last section discusses the relationship between structural and cyclical deficits, showing how much of the actual deficit is related to the economic cycle (e.g., the recent recession) and how much would persist even if the economy were at full employment.

Sensitivity of the Budget to Economic Assumptions

Both receipts and outlays are affected by changes in economic conditions. Budget receipts vary with individual and corporate incomes, which respond both to real economic growth and inflation. At the same time, outlays for many Federal programs are directly linked to developments in the economy. For example, most retirement and other social insurance benefit payments are tied by law to cost-of-living indices. Medicare and Medicaid outlays are

affected directly by the price of medical services. Interest on the debt is linked to market interest rates and the size of the budget surplus or deficit, both of which in turn are influenced by economic conditions. Outlays for certain benefits such as unemployment compensation and the Supplemental Nutrition Assistance Program vary with the unemployment rate.

This sensitivity complicates budget planning because differences in economic assumptions lead to changes in the budget projections. Economic forecasting inherently entails uncertainty. It is therefore useful to examine the implications of possible changes in economic assumptions. Many of the budgetary effects of such changes are fairly predictable, and a set of general principles or “rules of thumb” embodying these relationships can aid in estimating how changes in the economic assumptions would alter outlays, receipts, and the surplus or deficit. These rules of thumb should be understood as suggesting orders of magnitude; they do not account for potential secondary effects.

The rules of thumb show how the changes in economic variables affect Administration estimates for receipts and outlays, holding other factors constant. They are not a prediction of how receipts or outlays would actually turn out if the economic changes actually materialized. The rules of thumb are based on a fixed budget policy that is not always a good predictor of what might actually happen to the budget should the economic outlook change substantially. For example, unexpected downturns in real economic growth, and attendant job losses, usually give rise to legislative actions to stimulate the economy with additional countercyclical policies. Also, the rules of thumb do not reflect certain “technical” changes that often accompany the economic changes. For example, changes in capital gains realizations often accompany changes in the economic outlook. On the spending side of the budget, the rules of thumb do not capture changes in deposit insurance outlays, even though bank failures are generally associated with weak economic growth and rising unemployment.

Economic variables that affect the budget do not always change independently of one another. Output and employment tend to move together in the short run: a high rate of real GDP growth is generally associated with a declining rate of unemployment, while slow or negative growth is usually accompanied by rising unemployment, a relationship known as Okun’s Law. In the long run, however, changes in the average rate of growth of real GDP are mainly due to changes in the rates of growth of productivity and the labor force, and are not necessarily associated with changes in the average rate of unemployment. Expected inflation and interest rates are also closely interrelated: a higher expected rate of inflation increases nominal interest rates, while lower expected inflation reduces nominal interest rates.

¹ While this chapter highlights uncertainty with respect to budget projections in the aggregate, estimates for many programs capture uncertainty using stochastic modeling. Stochastic models measure program costs as the probability-weighted average of costs under different scenarios, with economic, financial, and other variables differing across scenarios. Stochastic modeling is essential to properly measure the cost of programs that respond asymmetrically to deviations of actual economic and other variables from forecast values. In such programs, the Federal Government is subject to “one-sided bets” where costs go up when variables move in one direction but do not go down when they move in the opposite direction. The cost estimates for the Pension Benefit Guarantee Corporation, student loan programs, the Troubled Asset Relief Program (TARP), and agriculture programs with price triggers all employ stochastic modeling.

Changes in real GDP growth or inflation have a much greater cumulative effect on the budget if they are sustained for several years than if they last for only one year. However, even temporary changes can have permanent effects if they permanently raise the level of the tax base or the level of Government spending. Moreover, temporary economic changes that affect the deficit or surplus change the level of the debt, affecting future interest payments on the debt. Highlights of the budgetary effects of these rules of thumb are shown in Table 3–1.

For real growth and employment:

- The first block shows the effect of a temporary reduction in real GDP growth by one percentage point sustained for one year, followed by a recovery of GDP to the base-case level (the Budget assumptions) over the ensuing two years. In this case, the unemployment rate is assumed to rise by one-half percentage point relative to the Budget assumptions by the end

Table 3–1. SENSITIVITY OF THE BUDGET TO ECONOMIC ASSUMPTIONS

(Fiscal years; in billions of dollars)

Budget effect	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total of Effects, 2012–2022
Real Growth and Employment												
Budgetary effects of 1 percent lower real GDP growth:												
(1) For calendar year 2012 only, with real GDP recovery in 2013–14: ¹												
Receipts	-14.1	-21.8	-10.2	-1.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	-45.9
Outlays	3.6	8.4	4.9	2.0	2.4	2.7	2.8	2.8	2.9	3.0	3.2	38.8
Increase in deficit (+)	17.7	30.2	15.2	3.1	2.2	2.5	2.6	2.7	2.8	2.8	3.0	84.7
(2) For calendar year 2012 only, with no subsequent recovery: ¹												
Receipts	-14.1	-29.3	-33.9	-36.1	-38.5	-40.9	-43.2	-45.6	-48.1	-50.6	-53.2	-433.5
Outlays	3.6	10.2	12.4	16.1	21.5	26.5	31.2	35.2	39.4	43.9	48.7	288.6
Increase in deficit (+)	17.7	39.4	46.3	52.3	60.0	67.3	74.4	80.8	87.5	94.4	101.9	722.1
(3) Sustained during 2012 - 2022, with no change in unemployment:												
Receipts	-14.2	-45.3	-84.2	-127.8	-177.0	-231.5	-291.1	-355.2	-423.4	-496.2	-574.3	-2,820.5
Outlays	-0.4	-0.8	-0.1	3.2	10.3	18.9	29.3	41.4	56.3	74.0	95.6	327.7
Increase in deficit (+)	13.8	44.5	84.2	131.0	187.3	250.5	320.4	396.6	479.7	570.2	669.9	3,148.2
Inflation and Interest Rates												
Budgetary effects of 1 percentage point higher rate of:												
(4) Inflation and interest rates during calendar year 2012 only:												
Receipts	19.7	39.6	39.1	37.5	39.8	42.5	45.1	47.8	50.4	53.4	56.1	470.9
Outlays	30.0	52.3	42.1	40.3	39.1	38.5	36.0	36.0	34.4	35.3	35.7	419.6
Decrease in deficit (-)	10.3	12.7	2.9	2.8	-0.7	-4.0	-9.1	-11.8	-16.0	-18.1	-20.4	-51.3
(5) Inflation and interest rates, sustained during 2012 - 2022:												
Receipts	19.7	61.0	106.1	153.4	208.0	267.6	334.2	407.7	486.2	570.3	659.3	3,273.4
Outlays	26.4	78.0	120.2	161.8	205.0	247.3	288.2	334.5	381.0	430.3	484.9	2,757.4
Decrease in deficit (-)	6.7	17.0	14.1	8.4	-3.1	-20.3	-46.0	-73.2	-105.2	-140.1	-174.4	-516.0
(6) Interest rates only, sustained during 2012 - 2022:												
Receipts	5.5	16.1	23.5	28.6	34.0	38.5	43.3	50.2	56.1	59.8	62.6	418.1
Outlays	18.5	53.4	75.5	93.8	111.7	130.2	145.7	160.9	175.7	191.1	206.1	1,362.6
Increase in deficit (+)	13.0	37.3	51.9	65.1	77.7	91.7	102.5	110.7	119.6	131.3	143.5	944.5
(7) Inflation only, sustained during 2012 - 2022:												
Receipts	14.2	44.7	82.1	124.1	173.1	227.9	289.4	355.6	427.9	508.0	593.7	2,840.5
Outlays	7.9	24.8	45.2	69.1	95.3	120.3	147.2	180.3	214.7	251.6	294.8	1,451.3
Decrease in deficit (-)	-6.2	-19.8	-36.9	-54.9	-77.8	-107.5	-142.2	-175.3	-213.2	-256.4	-298.9	-1,389.2
Interest Cost of Higher Federal Borrowing												
(8) Outlay effect of \$100 billion increase in borrowing in 2012	0.1	0.4	1.2	2.5	3.9	4.6	4.9	5.2	5.4	5.7	5.9	40.0

* \$50 million or less.

¹ The unemployment rate is assumed to be 0.5 percentage point higher per 1.0 percent shortfall in the level of real GDP.

of the first year, then return to the base case rate over the ensuing two years. After real GDP and the unemployment rate have returned to their base case levels, most budget effects vanish except for persistent out-year interest costs associated with larger near-term deficits.

- The second block shows the effect of a reduction in real GDP growth by one percentage point sustained for one year, with no subsequent “catch up,” accompanying a permanent increase in the natural rate of unemployment (and of the actual unemployment rate) of one-half percentage point relative to the Budget assumptions. In this scenario, the level of GDP and taxable incomes are permanently lowered by the reduced growth rate in the first year. For that reason and because unemployment is permanently higher, the budget effects (including growing interest costs associated with larger deficits) continue to grow in each successive year.
- The budgetary effects are much larger if the growth rate of real GDP is permanently reduced by one percentage point even leaving the unemployment rate

unchanged, as might result from a shock to productivity growth. These effects are shown in the third block. In this example, the cumulative increase in the budget deficit is many times larger than the effects in the first and second blocks.

For inflation and interest rates:

- The fourth block shows the effect of a one percentage point higher rate of inflation and one percentage point higher nominal interest rates maintained for the first year only. In subsequent years, the price level and nominal GDP would both be one percentage point higher than in the base case, but interest rates and future inflation rates are assumed to return to their base case levels. Receipts increase by somewhat more than outlays. This is partly due to the fact that outlays for annually appropriated spending are assumed to remain constant when projected inflation changes. Despite the apparent implication of these estimates, inflation cannot be relied upon to lower the budget deficit, mainly because policy-makers have traditionally prevented inflation

Table 3–2. FORECAST ERRORS, JANUARY 1982-PRESENT

REAL GDP ERRORS			
	Admin.	CBO	Blue Chip
2-Year Average Annual Real GDP Growth			
Mean Error	0.0	-0.1	-0.2
Mean Absolute Error	1.2	1.1	1.1
Root Mean Square Error	1.6	1.5	1.5
6-Year Average Annual Real GDP Growth			
Mean Error	0.1	-0.2	-0.2
Mean Absolute Error	0.8	0.8	0.8
Root Mean Square Error	1.0	1.0	1.0
INFLATION ERRORS			
	Admin.	CBO	Blue Chip
2-Year Average Annual Change in the GDP Price Index			
Mean Error	0.3	0.3	0.5
Mean Absolute Error	0.7	0.8	0.8
Root Mean Square Error	0.9	0.9	1.0
6-Year Average Annual Change in the GDP Price Index			
Mean Error	0.4	0.6	0.8
Mean Absolute Error	0.7	0.9	1.1
Root Mean Square Error	0.9	1.0	1.3
INTEREST RATE ERRORS			
	Admin.	CBO	Blue Chip
2-Year Average 91-Day Treasury Bill Rate			
Mean Error	0.3	0.5	0.7
Mean Absolute Error	1.0	0.9	1.1
Root Mean Square Error	1.3	1.2	1.3
6-Year Average 91-Day Treasury Bill Rate			
Mean Error	0.4	0.9	1.1
Mean Absolute Error	0.9	1.2	1.2
Root Mean Square Error	1.1	1.3	1.4

from permanently eroding the real value of spending.

- In the fifth block, the rate of inflation and the level of nominal interest rates are higher by one percentage point in all years. As a result, the price level and nominal GDP rise by a cumulatively growing percentage above their base levels. In this case, again the effect on receipts is more than the effect on outlays. As in the previous case, these results assume that annually appropriated spending remains fixed under the discretionary spending limits. Over the time period covered by the budget, leaving the discretionary limits unchanged would significantly erode the real value of this category of spending.
- The effects of a one percentage point increase in interest rates alone are shown in the sixth block. The outlay effect mainly reflects higher interest costs for Federal debt. The receipts portion of this rule-of-thumb is due to the Federal Reserve's deposit of earnings on its securities portfolio and the effect of interest rate changes on both individuals' income (and taxes) and financial corporations' profits (and taxes).
- The seventh block shows that a sustained one percentage point increase in CPI and GDP price index inflation decreases cumulative deficits substantially, due in part to the assumed erosion in the real value of appropriated spending. Note that the separate

effects of higher inflation and higher interest rates shown in the sixth and seventh blocks do not sum to the effects for simultaneous changes in both shown in the fifth block. This is because the gains in budget receipts due to higher inflation result in higher debt service savings when interest rates are also assumed to be higher in the fifth block than when interest rates are assumed to be unchanged in the seventh block.

- The last entry in the table shows rules of thumb for the added interest cost associated with changes in the budget deficit, holding interest rates and other economic assumptions constant.

The effects of changes in economic assumptions in the opposite direction are approximately symmetric to those shown in the table. The impact of a one percentage point lower rate of inflation or higher real growth would have about the same magnitude as the effects shown in the table, but with the opposite sign.

Forecast Errors for Growth, Inflation, and Interest Rates

As can be seen in Table 3-1, the single most important variable that affects the accuracy of the budget projections is the forecast of the growth rate of real GDP. The rate of inflation and the level of interest rates also have substantial effects on the accuracy of projections. Table

Chart 3-1. Real GDP: Alternative Projections

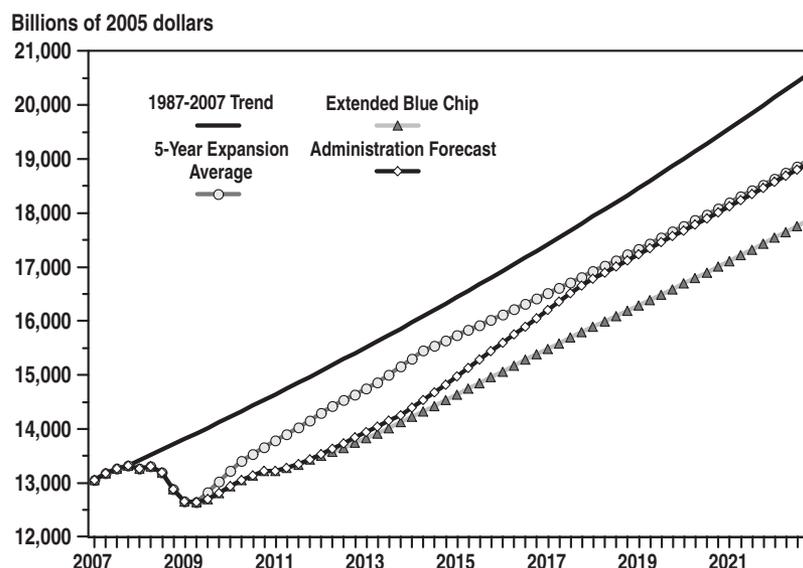


Table 3-3. BUDGET EFFECTS OF ALTERNATIVE SCENARIOS

(Fiscal years; dollar amounts in billions)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Alternative Budget Deficit Projections:											
Administration Economic Assumptions	1,327	901	668	610	649	612	575	626	658	681	704
Percent of GDP	8.5%	5.5%	3.9%	3.4%	3.4%	3.0%	2.7%	2.8%	2.8%	2.8%	2.8%
Alternative Scenario 1	1,152	701	441	402	481	492	490	553	587	608	630
Percent of GDP	7.4%	4.3%	2.6%	2.2%	2.5%	2.4%	2.3%	2.5%	2.5%	2.5%	2.5%
Alternative Scenario 2	1,341	927	715	704	801	830	851	940	1002	1053	1106
Percent of GDP	8.6%	5.7%	4.2%	3.9%	4.2%	4.1%	4.0%	4.2%	4.3%	4.3%	4.3%

3-2 shows errors in short- and long-term projections for past Administrations, and compares these errors to those of CBO and the Blue Chip Consensus of private forecasters for real GDP, inflation and short-term interest rates.²

Over both a two-year and six-year horizon, the average annual real GDP growth rate was very slightly overestimated by the Administration and slightly underestimated by the CBO and Blue Chip in the forecasts made since 1982. Overall, the differences between the three forecasters were minor. The mean absolute error in the annual average growth rate was about 1.5 percent per year for all forecasters for two-year projections, and was about one-third smaller for all three for the six-year projections. The greater accuracy in the six-year projections could reflect a tendency of real GDP to revert at least partly to trend, though the overall evidence on whether GDP is mean reverting is mixed. Another way to interpret the result is that it is hard to predict GDP around turning points in the business cycle, but somewhat easier to project the six-year growth rate based on assumptions about the labor force, productivity, and other factors that affect GDP.

Inflation, as measured by the GDP price index, was overestimated by all forecasters for both the two-year and six-year projections, with larger errors for the six-year projections. This reflects the gradual disinflation over the 1980s and early 1990s, which was greater than most forecasters expected. Average errors for all three sets of forecasts since 1994 were close to zero (not shown).

The interest rate on the 91-day Treasury bill was also overestimated by all three forecasters, with errors larger for the 6-year time horizon. Again this reflects the secular decline in interest rates over the past 30 years, reflecting lower inflation for most of the period, as well as a decline in real interest rates since 2000 resulting from weakness in the economy and Federal Reserve policy. The errors were somewhat less for the Administration than for CBO and the Blue Chip forecasts.

² Two-year errors for real GDP and the GDP price index are the average annual errors in percentage points for year-over-year growth rates for the current year and budget year. For interest rates, the error is based on the average error for the level of the 91-day Treasury bill rate for the two-year and six-year period. Administration forecasts are from the budgets released starting in February 1982 (1983 Budget) and through February 2009 (2010 Budget), so that the last year included in the projections is 2010. The six-year forecasts are constructed similarly, but the last forecast used is from February 2005 (2006 Budget). CBO forecasts are from 'The Budget and Economic Outlook' publications in January each year, and the Blue Chip forecasts are from their January projections.

Alternative Scenarios

The rules of thumb described above can be used in combination to show the effect on the budget of alternative economic scenarios. Considering explicit alternative scenarios can also be useful in gauging some of the risks to the current budget projections. For example, the strength of the recovery over the next few years remains highly uncertain. Those possibilities are explored in the two alternative scenarios presented in this section and which are shown in Chart 3-1.

In the first alternative, the projected growth rate follows the average strength of the expansions that followed previous recessions in the period since World War II. Real growth beginning in the third quarter of 2009, the start of the current recovery, averages 5.9 percent over the next four quarters, followed by growth rates of 3.8 percent, 3.7 percent, 3.1 percent, and 3.8 percent, respectively, over succeeding four-quarter intervals. The unemployment rate is also adjusted for the difference in growth rates using Okun's Law. In this case, the level of real GDP is substantially higher at the beginning of the current forecast period than in the Administration's projections, because the current recovery got off to a relatively slow start in 2009-2010. However, real GDP growth in the Administration's projections is similar to this alternative in the out years, and the unemployment rates are also similar by the end of the period. The Administration is projecting an average postwar recovery, but one that takes longer to gain traction because of the depth of the recession and the lingering effects of the financial crisis.

The second alternative scenario assumes that real GDP growth and unemployment beginning in 2010:Q4 follow the projections in the January Blue Chip forecast through the end of 2013 and that growth in 2014-2022 follows the path laid out in the October 2011 extension of the Blue Chip forecast. In this case, after 2011, the level of GDP remains lower than the Administration's forecast throughout the projection period. This alternative does not include a real recovery from the loss of output during the 2008-2009 downturn. Growth returns to normal, but without a substantial catch-up to make up for previous output losses. In effect, this alternative assumes there was a permanent loss of output resulting from the shocks experienced during the downturn.

Table 3-3 shows the budget effects of these alternative scenarios compared with the Administration's

Table 3-4. THE STRUCTURAL BALANCE

(Fiscal years; in billions of dollars)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Unadjusted surplus (-) or deficit	160.7	458.6	1,412.7	1,293.5	1,299.6	1,326.9	901.4	667.8	609.7	648.8	612.4	575.5	625.7	657.9	680.7	704.3
Cyclical component	-106.3	-24.4	375.4	502.4	527.3	572.6	584.4	593.3	452.5	300.0	159.3	47.6	13.4	1.3	0.0	0.0
Structural surplus (-) or deficit	267.0	483.0	1,037.3	791.1	772.3	754.4	317.0	74.5	157.2	348.7	453.1	527.8	612.4	656.6	680.7	704.3

(Fiscal years; percent of Gross Domestic Product)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Unadjusted surplus (-) or deficit	1.2%	3.2%	10.1%	9.0%	8.7%	8.5%	5.5%	3.9%	3.4%	3.4%	3.0%	2.7%	2.8%	2.8%	2.8%	2.8%
Cyclical component	-0.8%	-0.2%	2.7%	3.5%	3.5%	3.7%	3.6%	3.5%	2.5%	1.6%	0.8%	0.2%	0.1%	0.0%	0.0%	0.0%
Structural surplus (-) or deficit	1.9%	3.4%	7.4%	5.5%	5.2%	4.8%	1.9%	0.4%	0.9%	1.8%	2.2%	2.5%	2.7%	2.8%	2.8%	2.8%

NOTE: The NAIRU is assumed to be 5.4%.

economic forecast. Under the first alternative, budget deficits are modestly lower in each year compared to the Administration's forecast. In the second alternative, the deficit becomes progressively larger than the Administration's projection.

Many other scenarios are possible, of course, but the point is that the most important influences on the budget projections beyond the next year or two are the rate at which output and employment recover from the recession and the extent to which potential GDP returns to its pre-recession trend.

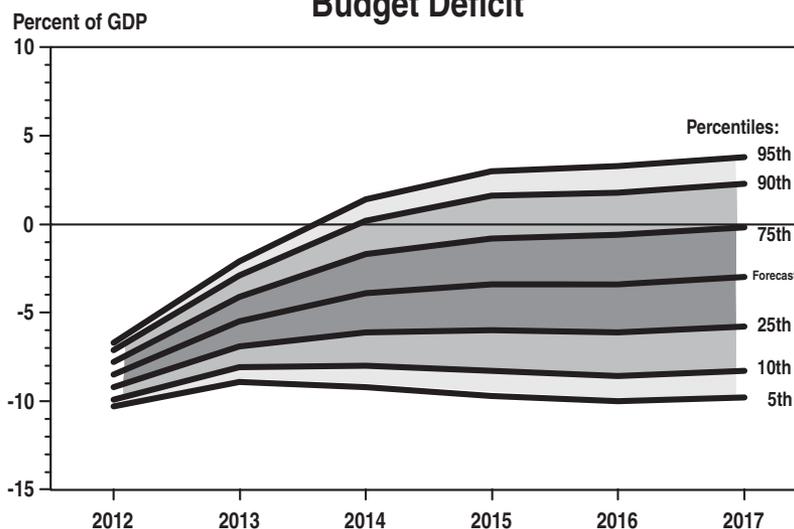
Uncertainty and the Deficit Projections

The accuracy of budget projections depends not only on the accuracy of economic projections, but also on technical factors and the differences between proposed policy and enacted legislation. Chapter 30 provides detailed information on these factors for the budget year projections (Table 30-6), and also shows how the deficit projections compared to actual outcomes, on average, over a five-year window using historical data from 1982 to 2011 (Table

30-7). The error measures can be used to show a probabilistic range of uncertainty of what the range of deficit outcomes may be over the next five years relative to the Administration's deficit projection. Chart 3-2 shows this cone of uncertainty, which is constructed under the assumption that future forecast errors would be governed by the normal distribution with a mean of zero and standard error equal to the root mean squared error, as a percent of GDP, of past forecasts. The deficit is projected to be 3.0 percent of GDP in 2017, but has a 90 percent chance of being within a range of a surplus of 3.8 percent of GDP and a deficit of 9.8 percent of GDP.

Structural and Cyclical Deficits

As shown above, the budget deficit is highly sensitive to the business cycle. When the economy is operating below its potential and the unemployment rate exceeds the level consistent with price stability, receipts are lower, outlays are higher, and the deficit is larger than it would be otherwise. These features serve as "automatic stabilizers" for the economy by restraining output when the

Chart 3-2. Range of Uncertainty for the Budget Deficit

economy threatens to overheat and cushioning economic downturns. They also make it hard to judge the overall stance of fiscal policy simply by looking at the unadjusted budget deficit.

An alternative measure of the budget deficit is called the structural deficit. This measure provides a more useful perspective on the stance of fiscal policy than does the unadjusted unified budget deficit. The portion of the deficit traceable to the automatic effects of the business cycle is called the cyclical component. The remaining portion of the deficit is called the structural deficit. The structural deficit is a better gauge of the underlying stance of fiscal policy than the unadjusted unified deficit because it removes most of the effects of the business cycle. So, for example, the structural deficit would include fiscal policy changes such as the 2009 Recovery Act, but not the automatic changes in unemployment insurance or reduction in tax receipts that would have occurred without the Act.

Estimates of the structural deficit, shown in Table 3-4, are based on the historical relationship between changes in the unemployment rate and real GDP growth, as well as relationships of unemployment and real GDP growth with receipts and outlays. These estimated relationships take account of the major cyclical changes in the economy and their effects on the budget, but they do not reflect all the possible cyclical effects on the budget, because economists have not been able to identify the cyclical factor in some of these other effects. For example, the sharp decline in the stock market in 2008 pulled down capital gains-related receipts and increased the deficit in 2009 and beyond. Some of this decline is cyclical in nature, but economists have not pinned down the cyclical component of the stock market with any precision, and for that reason, all of the stock market's contribution to receipts is counted in the structural deficit.

Another factor that can affect the deficit and is related to the business cycle is labor force participation. Since the official unemployment rate does not include workers who have left the labor force, the conventional measures

of potential GDP, incomes, and Government receipts understate the extent to which potential work hours are under-utilized because of a decline in labor force participation. The key unresolved question here is to what extent changes in labor force participation are cyclical and to what extent they are structural. By convention, in estimating the structural budget deficit, all changes in labor force participation are treated as structural.

There are also lags in the collection of tax revenue that can delay the impact of cyclical effects beyond the year in which they occur. The result is that even after the unemployment rate has fallen, receipts may remain cyclically depressed for some time until these lagged effects have dissipated. The recent recession has added substantially to the estimated cyclical component of the deficit, but for all the reasons stated above, the cyclical component is probably an understatement. As the economy recovers, the cyclical deficit is projected to decline and after unemployment reaches 5.4 percent, the level assumed to be consistent with stable inflation, the estimated cyclical component vanishes, leaving only the structural deficit, although some lagged cyclical effects would arguably still be present.

Despite these limitations, the distinction between cyclical and structural deficits is helpful in understanding the path of fiscal policy. The large increase in the deficit in 2009 and 2010 is due to a combination of both components of the deficit. There is a large increase in the cyclical component because of the rise in unemployment. That is what would be expected considering the severity of the recent recession. Finally, there is a large increase in the structural deficit because of the policy measures taken to combat the recession. This reflects the Government's decision to make active use of fiscal policy to lessen the severity of the recession and to hasten economic recovery. In 2011–2017, the cyclical component of the deficit is projected to decline sharply as the economy recovers. The structural deficit shrinks during 2011–2013 as the temporary spending and tax measures in the Recovery Act end.

4. FINANCIAL STABILIZATION EFFORTS AND THEIR BUDGETARY EFFECTS

In response to the financial crisis of 2008, the U.S. Government took unprecedented and decisive action to mitigate damage to the U.S. economy and financial markets. The Department of the Treasury, the Board of Governors of the Federal Reserve System, the Federal Deposit Insurance Corporation, the National Credit Union Administration, the Securities and Exchange Commission, and the Commodity Futures Trading Commission worked cooperatively under the direction of the Administration to expand access to credit, strengthen financial institutions, restore confidence in U.S. financial markets, and stabilize the housing sector. In 2010, the President signed into law comprehensive Wall Street reform to ensure that the Government has the tools and authority to prevent another crisis of this magnitude, to resolve significant financial institution failures more effectively, and to protect consumers of financial products. In 2011, the Administration continued its work to operationalize these Wall Street reforms, including taking the necessary steps to ensure that the Consumer Financial Protection Bureau is able to exercise the full range of its statutory consumer protection authorities.

This chapter provides a summary of key Government programs supporting economic recovery and financial market reforms, followed by a report analyzing the cost and budgetary effects of the 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. This report analyzes transactions as of November 30, 2011, and expected transactions as reflected in the Budget. The TARP costs discussed in the report and included in the Budget are the estimated present value of the TARP investments, reflecting the actual and expected dividends, interest, and principal redemptions the Government receives against its investments; this credit reform treatment of TARP transactions is authorized by Section 123 of EESA.

The Treasury's authority to make new TARP commitments expired on October 3, 2010. However, Treasury continues to manage the outstanding TARP investments, and is authorized to expend additional TARP funds pursuant to obligations entered into prior to October 3, 2010. In July 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act reduced total TARP purchase authority to \$475 billion.

The Administration's current estimate of TARP's deficit cost for its cumulative \$470.7 billion in obligations is \$68 billion (see Tables 4-1 and 4-7). This estimated direct impact of TARP on the deficit has been reduced by \$273 billion from the highest cost estimate, published in the Mid-Session Review of the 2010 Budget (2010 MSR), due to improvements in the estimated returns on TARP investments and lower overall TARP obligations. The

Treasury has received higher-than-expected repayments and redemptions from TARP recipients. Notably, a total of \$245 billion was invested in banking institutions, and as of December 31, 2011, Treasury had recovered more than \$258 billion from these institutions through repayments, dividends, interest, and other income. The 2012 MSR estimated a \$47 billion deficit cost of purchases and guarantees associated with an estimated \$471 billion in obligations. 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 using the market-risk adjusted discount rate, but that cost will not be fully known until all TARP investments have been extinguished. (See Table 4-9 for an estimate of TARP subsidy costs stripped of the market-risk adjustment.)

Progress in Implementation of Wall Street Reforms

On July 21, 2010, just over a year after the Administration delivered its financial reform proposal to Congress, the President signed into law the Dodd-Frank Wall Street Reform and Consumer Protection Act¹ (the "Wall Street Reform Act" or the "Act"). The Act implements the Administration's critical objectives, which include: to help prevent future financial crises in part by filling gaps in the U.S. regulatory regime; to better protect consumers of financial products and services; to prevent unnecessary and harmful risk taking that threatens the economy; and to provide the Government with more effective tools to manage financial crises. Important milestones in the implementation of the Act include:

Orderly Liquidation Authority (OLA): The Act makes clear that no financial firm will be considered "too big to fail" in the future. Instead, the Federal Deposit Insurance Corporation (FDIC) now has the ability to unwind failing systemically-significant, nonbank financial institutions in an orderly manner to prevent widespread disruptions to U.S. financial stability. Through its new orderly liquidation authority under the Act, the FDIC serves as receiver of financial institutions whose failure is determined to pose a significant systemic risk to U.S. financial stability. On July 6, 2011, the FDIC, in consultation with the Financial Stability Oversight Council (FSOC), approved a final rule with respect to OLA which, among other things, clarified provisions governing clawback of executive compensation and identified the treatment of secured creditors and contingent claims. On September 13, 2011, the FDIC and the Federal Reserve Board (FRB) issued a joint final rule to implement resolution plan requirements or

¹ P.L. 111-203.

“living wills” for certain nonbank financial companies and bank holding companies, which in the case of default are essential to ensuring organized and least-costly resolutions for large and complex financial institutions. Moreover, as of preparation of this Budget, the FDIC, in consultation with the FSOC, had approved a Notice of Proposed Rulemaking (NPR) governing the calculation of the Maximum Obligation Limit, which would dictate the amount that the FDIC may borrow from Treasury in the event of an orderly liquidation. The Act requires that all net costs of liquidation be recovered by assessing fees after the fact on large financial institutions so that taxpayers incur no costs. According to Title II of the Act, FDIC costs associated with administering OLA are covered by the FSOC and are included in this Budget.

While the Budget includes an estimated cost to the Government that is based on the probability of default under this enhanced orderly liquidation authority, the total costs of any liquidation will be, by law, recovered in full, so there is no cost to the taxpayer. The displayed cost from this authority of \$19 billion over the budget period is due to the fact that cost recovery occurs only after liquidation expenses are incurred.

Monitoring Systemic Risk: The Act also established the Financial Stability Oversight Council (FSOC) to identify, monitor, and respond to emerging threats to U.S. financial stability. The FSOC is charged with coordinating the financial regulatory framework across the various Federal agencies by harmonizing prudential standards and addressing gaps in the U.S. regulatory regime. The FSOC in an independent council chaired by the Secretary of the Treasury, with the heads of the Federal financial regulators and an independent insurance expert serving as voting members. The FSOC has held 12 meetings, with the initial focus on fulfilling statutory requirements established by the Wall Street Reform Act. The FSOC has moved quickly, while emphasizing the importance of transparency and stakeholder collaboration throughout the process. As part of its macro-prudential mandate, the FSOC published an NPR in January 2011, establishing the criteria for which nonbank, systemically-significant financial institutions will be designated for heightened supervision by the Federal Reserve. This rule received a significant number of public comments and, therefore, the FSOC re-proposed this NPR in October 2011 in order to bring more clarity to the market and provide market participants additional time to comment on this substantial rulemaking. On July 18, 2011, the FSOC also finalized a rule regarding the criteria for designating financial market utilities (FMU), such as clearinghouses, as systemically important, thus requiring designated FMUs to meet certain risk management standards and undergo additional examinations. The FSOC has also conducted studies and made recommendations on a number of topics, notably the effective implementation of the Volcker Rule as established in the Wall Street Reform Act. The Volcker Rule was authorized to reduce risk-taking and increase stability in the banking sector by prohibiting Federally-insured banking institutions, subject to certain exceptions, from engaging in proprietary trading and investing

in hedge funds and private equity firms. Going forward, the FSOC will continue to monitor and track the prevalent risk in the financial system with a focus on housing, commodity market volatility, the European financial markets, and the U.S. fiscal position.

The Act established the Financial Research Fund (FRF) to fund the FSOC and the Office of Financial Research (OFR), which is a component of the FSOC created, to improve the quality of financial data available to policymakers and to facilitate more robust and sophisticated analysis of the financial system. The OFR is in the process of comprehensively cataloguing the data that are currently collected by U.S. financial regulators in order to identify deficiencies and redundancies in the existing regulatory framework, as well as enhancing the quality of the financial data infrastructure through the promotion of a global Legal Entity Identifier (LEI) for financial institutions. There is no net taxpayer cost for these activities. As specified in the Act, the Budget reflects funding for the FSOC and OFR through transfers from the Federal Reserve for 2011 and 2012; thereafter, both entities will be fee-funded.

Enhanced Consumer Protection: The Wall Street Reform Act created a single independent regulator – the Consumer Financial Protection Bureau (CFPB) – whose sole mission is to look out for consumers in the increasingly complex financial marketplace. The CFPB consolidates the regulation and enforcement of existing consumer financial products, services and laws, and issues and enforces new regulations on nonbank financial institutions (e.g., payday lenders and credit providers). On July 21, 2011, the Treasury Department transferred power to the CFPB, one year after the agency was created by the Wall Street Reform Act. On January 4, 2012, Richard Cordray was appointed Director of the Bureau, and with his appointment, the CFPB is now able to implement the full range of its authorities. The CFPB is authorized to enforce existing consumer financial protection regulations affecting banks and affiliates (those with over \$10 billion in assets), as transferred to the CFPB by the seven regulatory agencies whose regulatory authority was consolidated in the Bureau under the Act. Notable existing regulations include the Fair Credit Reporting Act, Truth in Lending Act, and the Real Estate Settlement Procedures Act. The CFPB is also authorized to issue and enforce new rulemakings pertaining to prohibiting unfair, deceptive, or abusive practices and ensuring that the features of a consumer financial product or service are fairly, accurately, and effectively disclosed. In addition, the CFPB is charged with supervising nonbank financial firms in specific markets regardless of size, such as mortgage lenders, consumer reporting agencies, debt collectors, private education lenders, and payday lenders. In July, the CFPB debuted its toll-free telephone number for consumers to file and track complaints, along with a Web-based system for consumers to file credit card complaints. The CFPB has also proposed new, simplified mortgage disclosure forms to aid consumers in comparing mortgage products, and unveiled its Know Before You Owe prototype credit card disclosure form. On January 5, 2012, the CFPB

launched the Nation's first nonbank supervision program. The Bureau's approach to nonbank examination will be the same as its approach for banks. In October 2011 and January 2012, respectively, the Bureau released a general CFPB Examination Manual to guide examination processes for banks and nonbanks, as well as the Mortgage Origination Examination Manual, which specifically outlines procedures for supervising mortgage originators in both the banking and non-banking sectors. The CFPB is funded through transfers from the Federal Reserve and has authority, in the event of a funding shortfall, to request that Congress appropriate additional discretionary funds from 2010 to 2014. No such request is expected over the Budget horizon. The Budget reflects funding for the CFPB through these authorized transfers from the Federal Reserve, estimated at \$448 million in 2013.

Deposit and Share Insurance and their Coverage: The Wall Street Reform Act permanently increased the standard maximum deposit and share insurance amounts from \$100,000 to \$250,000, which applies to both the FDIC and the National Credit Union Administration, and requires the FDIC to base deposit insurance premiums on an insured depository institution's total liabilities instead of total insured deposits. To improve the security of the FDIC fund backing this insurance, the Act requires the FDIC to increase the reserve ratio of the Deposit Insurance Fund (DIF) to at least 1.35 percent of total insured deposits by September 30, 2020, resulting in an increase in assessments on deposit institutions. These changes are reflected in the Budget and their effects are discussed in greater detail in the Credit and Insurance chapter in this volume.

Increased Transparency in Financial Markets: As the regulators of U.S. financial markets, the Securities and Exchange Commission (SEC) and Commodity Futures Trading Commission (CFTC) are key components of the Administration's efforts to reform dangerous Wall Street practices that threaten economic stability. Both agencies have worked tirelessly over the past three years to address many of the root causes of the crisis, to adapt their organizations to more effectively monitor regulated industries and activities, and to implement enforcement strategies designed to both punish noncompliant actors and deter noncompliance system-wide. In 2011, the SEC brought new sophistication to core agency functions, began implementing complex and comprehensive Wall Street Reform Act mandates, advanced an investor-focused agenda, and improved the productivity of its 3,800 member staff.

Over the past year, new specialized SEC Enforcement Division units continued to build expertise in complex, high-priority areas. Complementing this new organization was the increasing use of sophisticated analytic tools and data-based templates that identify suspicious trading patterns and activities, allowing Enforcement to more quickly identify and pursue unlawful conduct in the marketing, sale, and trading of securities products. In 2011, the SEC filed 735 enforcement actions—more than it ever filed in a single year. As a result of this aggressive enforcement agenda, the SEC obtained more than \$2.8 billion in ill-gotten gains and penalties in 2011. As part of

its enforcement efforts, the SEC has continued to bring actions against those suspected of misconduct related to the financial crisis of 2008. To date, the SEC has filed 36 separate actions in financial crisis-related cases against 81 defendants—nearly half of whom were CEOs, CFOs, and senior corporate executives of public companies—resulting in approximately \$1.97 billion in ill-gotten gains, penalties, and monetary relief obtained on behalf of the American people.

The Wall Street Reform Act tasked the SEC with writing a large number of new rules. In addition to managing the complexity and interrelatedness of the mandated rules, the SEC has worked to provide certainty to financial markets and participants by finalizing rules as quickly as possible without compromising the agency's ability to review, evaluate, and make changes to reflect the large number of public comments received on its proposed rulemakings. By December 31, 2011, the SEC had proposed or adopted more than three-fourths of the rules required by the Act. Among its accomplishments in reform rulemaking, the SEC has: proposed rules that will improve the integrity of the process that yielded so many flawed ratings of subprime mortgage products, by increasing transparency of the rating process and of the agencies that produce ratings, and by protecting against conflicts of interest when entities or individuals provide ratings for their clients; made available to regulators and the investing public information about the identities, size, and disciplinary history of hedge fund and other private fund advisers, enabling more efficient investing and more effective oversight of these previously unregulated entities; and worked with the CFTC to develop the regulatory blueprint and requirements for a transparent, efficient, and competitive marketplace for over-the-counter swaps and derivatives.

The SEC has also initiated a review of its offering rules to evaluate their impact on small business capital formation and to consider appropriate changes to boost participation and reduce barriers to entry. As part of this effort, the SEC created an Advisory Committee on Small and Emerging Companies.

In addition to its longstanding responsibility to ensure fair, open, and efficient future markets, the Wall Street Reform Act authorized the CFTC regulate the swaps marketplace through oversight of derivatives dealers and open trading and clearing of standardized derivatives on regulated platforms. To adapt its mission to include these new responsibilities, the CFTC is drafting numerous rules required to implement the Act. Through September 30, 2011, CFTC issued 52 proposed rules and 15 final rules; received, reviewed and analyzed approximately 28,000 comments; and held 14 technical conferences. The CFTC anticipates completion of the vast majority of the rules required by the Wall Street Reform Act by March 2012, and essentially all rules by July 2012—within 24 months of enactment of the Act.

While devoting significant resources to timely and thorough implementation of new Wall Street Reform Act authorities, the CFTC has continued its market surveillance and enforcement activities. The Commission under-

took 99 enforcement actions in 2011, the highest in the agency's history and a 74 percent increase over the prior fiscal year. The Commission also opened more than 450 investigations. More than 70 indictments and convictions were obtained in criminal cases related to CFTC enforcement actions. The most notable fraud case was *CFTC vs. Walsh, et al.*, where the Court ordered an initial distribution and return of approximately \$792 million to commodity pool investors.

The CFTC has actively consulted with other Federal financial regulators, as well as international counterparts, to ensure harmonization of new proposed rules. Additionally, the CFTC has demonstrated a commitment to public transparency in its adoption of Wall Street Reform Act implementing regulations, requesting and incorporating input from the public during the earliest stages of rule development, publishing a wide variety of materials and disclosures on its website, and conducting all Commission reviews of proposed rules in open forums.

The CFTC's review of Designated Contract Markets has been extremely limited due to funding constraints over the last year, which presents an oversight risk of exchanges that are responsible for the vast majority of U.S. futures trading volume. Annual reviews of major exchanges are important to provide assurance to the public and other regulators of the exchanges' ongoing core principle compliance. The Commission did review Self-Regulatory Organizations (SROs) to assess compliance with the CEA and Commission requirements and deficiencies noted were communicated to the SRO in draft form.

The next two years will be critical for the SEC and the CFTC as the agencies continue to identify and pursue unlawful activities stemming from the 2008 financial crisis and to operationalize the mandates of the Wall Street Reform Act.

On top of its traditional market oversight and investor protection responsibilities, the SEC will fully implement the following new authorities in 2012 and 2013: oversight and examination of new security-based swap clearing agencies, dealers, and data repositories; oversight and examination of private fund advisers managing thousands of pooled investment vehicles that will be newly registered with the SEC; reviewing disclosures of asset-backed securities issuers; registration of municipal advisers; and enhanced supervision of credit rating agencies. In addition, the SEC will continue the work of strengthening its core programs and operations, including detecting and pursuing securities fraudsters, reviewing public company disclosures and financial statements, inspecting the activities of investment advisers, investment companies, broker-dealers, and other registered entities, and maintaining fair and efficient markets. Building on a 2009 reorganization and recommendations from consultants and auditors, the SEC will focus its efforts on increasing coverage of registered investment advisory firms by adding new positions to the examination program; enhancing disclosure reviews of large or financially significant companies; and leveraging technology to streamline operations and bolster program effectiveness. All of these responsibilities are essential to restoring investor confi-

dence and trust in financial institutions and markets in the wake of the 2008 financial crisis. In support of the SEC's mission, the President's Budget provides \$1,566 million in new resources, an increase of \$242 million over the agency's 2012 appropriation. The Budget also projects that the SEC will obligate \$50 million from its mandatory Reserve Fund for investments in information technology systems and other necessary improvements.

The President's Budget provides significant increases for the CFTC in 2013 in support of base regulatory work as well as Wall Street Reform Act implementation. For CFTC, \$308 million is provided, an increase of \$103 million or 50 percent over 2012. Additionally, the Administration urges the Congress to enact legislation authorizing the CFTC to collect user fees to fund its activities. Such legislation would bring the CFTC into line with all other Federal financial regulators, which are funded in whole or in part through user fees. Upon enactment of legislation permitting the CFTC to collect user fees, the Administration will transmit a budget amendment to reflect the funding of CFTC's 2013 appropriation through offsetting collections.

Streamlined Insurance Sector Regulation: The Federal Insurance Office (FIO), housed within the Treasury, was established by the Wall Street Reform Act to "monitor all aspects of the insurance industry, including identifying issues or gaps in the regulation of insurers that could contribute to" systemic risk. The FIO was created, in part, to streamline what is currently a decentralized regulatory regime. On October 17, 2011, the FIO announced that it was seeking public comment for its first mandatory report under the Act on how to modernize and improve the country's insurance regulatory system. The FIO will also play a role in support of FSOC; it will advise the Secretary on international issues related to insurance investment risk and regulation, and it will assume responsibility for the Treasury's Terrorism Risk Insurance Program. In May 2011, Treasury announced the formation of a Federal Advisory Committee on Insurance to offer recommendations to the FIO on issues related to the FIO's responsibilities. The vision for the FIO is that it will also provide the Federal Government with the ability to immediately estimate exposures related to catastrophic events, such as the September 11th terrorist attacks or Hurricane Katrina. The FIO is funded with discretionary resources through the Treasury's Departmental Offices (DO) request, and the Budget includes funding for this office.

International Financial Reform. The financial crisis was an international event not limited to U.S. markets, corporations, and consumers. In addition to its demonstrated commitment to achieving meaningful financial reform at home, the Administration continues to ensure coordination of financial reform principles across the globe. At the G-20 Summit in Pittsburgh in September 2009, President Obama and other G-20 leaders established the G-20 as the premier forum for international economic cooperation. Over the course of Summits held in London (April 2009), Pittsburgh (September 2009), Toronto (June 2010), Seoul (November 2010), and Cannes (November 2011), the Administration and G-20 leaders have committed to an ambitious agenda for financial regulatory re-

form. Their reform commitments have extended the scope of regulation, will improve transparency and disclosure, and will strengthen banks through increased and higher quality capital and introduction of a leverage ratio that will limit the amount banks may lend relative to their capital reserves. Together, the U.S. and its global allies are building effective resolution regimes, including cross-border resolution frameworks, and are developing higher prudential standards for systemically important financial institutions to reflect the greater risk those institutions pose to financial system stability. Treasury Secretary Geithner and others in the Administration have ensured that these commitments are fully consistent with our domestic financial reform agenda.

The Administration continues to work cooperatively with its G-20 partners to close regulatory gaps. These efforts reflect the parties' recognition of the interconnectedness of financial markets and the need to preclude opportunities for regulatory arbitrage, in which firms seek jurisdictions and financial instruments that are less regulated and, in doing so, allow risk to build up covertly, posing a threat to financial stability. In developing regulatory reforms that strengthen the resilience of the financial system to withstand the level of stress seen in the crisis, the Administration and its G-20 partners have remained mindful of the need to undertake reform in ways consistent with cultivating vibrant, innovative, and healthy markets that can do what financial markets do best: allocate scarce resources efficiently.

Federal Reserve Programs

Beginning in August 2007, the Federal Reserve responded to the crisis by implementing a number of programs designed to support the liquidity positions of financial institutions and foster improved conditions in financial markets. The Federal Reserve actions can be divided into three groups. The first set of tools involved the provision of short-term liquidity to banks and other financial institutions through the traditional discount window to stem the precipitous decline in interbank lending. The Term Auction Facility (TAF), which was created in December 2007, allowed depository institutions to access Federal Reserve funds through an auction process, wherein depository institutions bid for TAF funds at an interest rate that was determined by the auction. The final TAF auction was held in March 2010 and, in total, the Federal Reserve disbursed over \$3.8 trillion in TAF loans. All TAF loans were repaid in full, with interest. The Federal Reserve also initiated the Term Securities Lending Facility (TSLF) and the Primary Dealer Credit Facility (PDCF), both of which provided additional liquidity to the system and helped stabilize the broader financial markets. The PDCF and TSLF expired on February 1, 2010, consistent with the Federal Reserve's June 2009 announcement.

The second set of tools involved the provision of liquidity directly to borrowers and investors in key credit markets. The Commercial Paper Funding Facility (CPFF), Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility (AMLF), Money Market Investor

Funding Facility (MMIFF), and the Term Asset-Backed Securities Loan Facility (TALF) fall into this category. As a third set of instruments, the Federal Reserve expanded its traditional tool of open market operations to support the functioning of credit markets through the purchase of longer-term secondary market securities for the Federal Reserve's System Open Market Account portfolio. In light of improved functioning of financial markets, many of the new programs have expired or been closed including the MMIFF (October 30, 2009), AMLF (February 1, 2010), and CPFF (February 1, 2010).

To address the frozen consumer and commercial credit markets, the Federal Reserve announced on November 25, 2008, that in conjunction with the Treasury Department it would lend up to \$200 billion to holders of newly issued AAA-rated asset-backed securities through the TALF. The program was expanded as part of the Administration's Financial Stability Plan and launched in March 2009. The program supported the issuance of asset-backed securities collateralized by student loans, auto loans, credit card loans, Small Business Administration guaranteed loans, commercial mortgage loans, and certain other loans. As part of the program, Treasury provided through TARP authorities protection to the Federal Reserve by originally covering the first \$20 billion in losses on all TALF loans. However, in July 2010, Treasury, in consultation with the Federal Reserve, reduced its loss-coverage to \$4.3 billion, which represented approximately 10 percent of the total \$43 billion outstanding in the facility when the program was closed to new lending on June 30, 2010.

To support mortgage lending and housing markets, the Federal Reserve began purchasing up to \$175 billion of Government-Sponsored Enterprise (GSE) debt and up to \$1.25 trillion of GSE mortgage-backed securities (MBS) beginning in December 2008. The Federal Reserve completed its purchase of \$1.25 trillion in GSE MBS in March 2010, and purchased \$172.1 billion of GSE debt as of December 2011. Purchasing GSE debt and MBS has provided liquidity to the mortgage market, which facilitated the issuance of new mortgage loans to homebuyers at affordable interest rates. The Federal Reserve also purchased \$300 billion in longer-term Treasury securities in 2009 to improve interest rate conditions in mortgage and other private credit markets.

To support a stronger paced economic recovery, in November 2010 the Federal Reserve announced plans to purchase up to \$600 billion of additional long-term Treasury securities as part of its "quantitative easing" program. The purchases were extended over an eight-month period; however, the Federal Open Market Committee stipulated that it would continually monitor economic conditions and alter the timing and amount of purchases of Treasury securities, as necessary, to maximize employment and maintain price stability, consistent with its statutory mandate.

Earnings resulting from the expansion of the Federal Reserve's balance sheet through the purchase of GSE debt, GSE MBS, and long-term Treasury securities have increased the profits the Federal Reserve remits to the Treasury, reducing the budget deficit. In 2011, Treasury

received \$82.6 billion from the Federal Reserve, which represents a 9 percent increase over 2010 deposits. The Budget projects Treasury will receive \$81.3 billion and \$80.5 billion from the Federal Reserve in 2012 and 2013, respectively.

Federal Deposit Insurance Corporation (FDIC) Programs

Using its existing authority, the FDIC created the Temporary Liquidity Guarantee Program (TLGP) in October 2008, to help restore confidence in the banking sector and prevent large scale deposit flight. There are two components to the TLGP: the Debt Guarantee Program and the Transaction Account Guarantee (TAG). For the first time ever, the Debt Guarantee Program (DGP) allowed participating institutions (banks and their holding companies and affiliates) to issue FDIC-guaranteed senior secured debt. Therefore, if a participating institution defaulted on its debt, the FDIC would make required principal and interest payments to unsecured senior debt holders. The FDIC charged additional fees and surcharges for any participating institutions that voluntarily opted into this program. Originally, the guarantee was limited to unsecured debt issued between October 14, 2008, and June 30, 2009, and the FDIC debt guarantee coverage extended through June 30, 2012. On March 17, 2009, the FDIC extended coverage to debt issued through October 31, 2009, and extended the guarantee through December 31, 2012. The FDIC also levied a surcharge on debt issued between April 1, 2009, and October 31, 2009, which was transferred to the Deposit Insurance Fund. On October 20, 2009, the FDIC adopted a final rule reaffirming that the FDIC will not guarantee any debt issued after October 31, 2009. The rule also established a limited, six-month emergency guarantee facility upon expiration of the program; however, this facility was never utilized. As of September 30, 2011, there was \$224.9 billion of debt outstanding in the senior unsecured debt guarantee program.

TAG, the second component of the TLGP, extended an unlimited FDIC guarantee to participating insured depository institutions on non-interest bearing transaction account deposits, which included low-interest negotiable order of withdrawal (NOW) accounts and Interest on Lawyers Trust Accounts (IOLTAs). The FDIC charged additional premiums for any banks that voluntarily opted into this program. This guarantee was designed to protect small business payrolls held at small and medium sized banks.

The Wall Street Reform Act modified authorities for these programs and authorized the FDIC to provide two years of unlimited insurance coverage, through the Deposit Insurance Fund, for non-interest bearing transaction account deposits starting on December 31, 2010 (excluding NOW accounts and IOLTAs). However, the Permanent Federal Deposit Insurance Coverage for Interest on Lawyers Trust Accounts Act (P.L. 111-343) enacted on December 29, 2010, extended the two years of unlimited coverage to IOLTAs as well, though not the NOW accounts. The coverage extended through the Act is provided to all insured institutions and there are no

separate fees associated with this coverage. Due to the passage of the Act, the FDIC Board adopted a final rule in October 2010, stating that the TAG would not be extended beyond its December 31, 2010, expiration date. The Budget reflects TAG account transactions for the first quarter of 2011, after which losses on non-interest bearing transaction accounts are reflected in the FDIC's Deposit Insurance Fund.

The FDIC has further collaborated with the Treasury Department and the Federal Reserve to provide exceptional assistance to institutions such as Citigroup. Alongside the Treasury and the Federal Reserve, the FDIC guaranteed up to \$10 billion of a \$301 billion portfolio of residential and commercial mortgage-backed securities at Citigroup. The guarantee was terminated in December 2009 as part of a larger Citigroup initiative to repay Federal support.

For a more detailed analysis of active FDIC programs, see the section titled, "Deposit Insurance" in the Credit and Insurance chapter in this volume.

National Credit Union Administration (NCUA) Programs

The NCUA has continued to take aggressive actions in response to dislocations in financial markets in order to maintain member and investor confidence, limit losses, and promote recovery in the credit union system. These actions have included raising the deposit insurance coverage to \$250,000 in 2009, providing liquidity loans to member credit unions totaling \$24 billion, and stabilizing five credit unions through conservatorship. NCUA has also executed multiple programs amidst the economic crises to ensure liquidity and ultimately the continued safety and soundness of the credit union system, including the Corporate System Resolution Program under the Temporary Corporate Credit Union Stabilization Fund.

For a more detailed analysis of active NCUA programs, see the section titled, "Deposit Insurance" in the Credit and Insurance chapter in this volume.

Housing Market Programs under the Housing and Economic Recovery Act

To avoid a possible collapse of the housing finance market and further risks to the broader financial market, the Federal Housing Finance Agency (FHFA) placed the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac) into conservatorship on September 6, 2008. On the following day, the U.S. Treasury launched three new programs to provide temporary financial support to these housing Government-Sponsored Entities (GSEs) and to stabilize the housing market under the broad authority provided in the Housing and Economic Recovery Act (HERA) of 2008 (P.L. 110-289). First, the Treasury Department provided capital to the GSEs through Senior Preferred Stock Purchase Agreements (PSPAs) to ensure that the GSEs maintain a positive net position (i.e., assets are greater than or equal to liabilities). 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 calendar years 2010 through 2012, less any surplus remaining as of December 31, 2012. Second, the Treasury established a line of credit for Fannie Mae, Freddie Mac, and the Federal Home Loan Banks to ensure they have adequate funding on a short-term, as-needed basis. This line of credit was never used. The Treasury also initiated purchases of GSE guaranteed mortgage-backed securities (MBS) in the open market (separate from the Federal Reserve's MBS purchase program discussed above), with the goal of increasing liquidity in the secondary mortgage market. In December 2009, the Treasury initiated two additional purchase programs under HERA authority to support housing assistance provided through new and existing State and local Housing Financing Agencies (HFAs) revenue bonds. Treasury's authority to enter new obligations under the GSE PSPA agreement, MBS purchase, and HFA support programs expired on December 31, 2009. However, Treasury's existing commitments continue to support any needed capital infusions through PSPAs, and new and existing HFA housing bond issuances, and Treasury will continue to collect proceeds from the sale or repayment of the securities that it owns.

The Budget assumes that Treasury will make cumulative investments in Fannie Mae and Freddie Mac of \$221 billion from 2009 through 2013 and receive dividends of \$73 billion over the same period. Starting in 2013, the Budget forecasts that Fannie Mae and Freddie Mac will have sufficient earnings to pay part but not all of the scheduled dividend payments. The Budget assumes additional net dividend receipts of \$121 billion from 2014-2022. The cumulative cost of the PSPA agreements from the first PSPA purchase through 2022 is estimated to be \$28 billion. The Budget also includes new fees resulting from a provision in the Temporary Payroll Tax Cut Continuation Act of 2011 requiring the GSEs to increase their fees by an average of at least 0.10 percentage points above the average guarantee fee imposed in 2011. Revenues generated by these fee increases will be remitted directly to the Treasury for deficit reduction, and the Budget estimates resulting deficit reductions of \$37 billion from 2012 through 2022.

In addition, significant assistance has been provided to the mortgage market through the Federal Housing Administration (as described in the Credit and Insurance chapter), through Federal Reserve Bank purchases of GSE MBS (as described above), and through the Department of the Treasury (as described below).

A more detailed analysis of these housing assistance programs and the future of the GSEs is provided in the "Credit and Insurance" chapter of this volume.

Treasury Programs

Small Business Lending Programs. To increase the availability and affordability of credit to help small businesses drive economic recovery and create jobs, the Small Business Jobs Act of 2010 (P.L. 111-240) created two new programs proposed by the Administration that are being administered by the Department of the Treasury:

the State Small Business Credit Initiative (SSBCI), which provides capital through grants to State programs that support lending to small businesses, and the Small Business Lending Fund (SBLF), which was authorized to provide up to \$30 billion in capital to qualified community banks and other targeted lenders with assets of less than \$10 billion to encourage their lending to small businesses.

The SSBCI authorizes Treasury to disburse \$1.5 billion to new and existing State programs such as Capital Access Programs (CAPs) and Other Credit Support Programs (OCSPs) that will leverage private financing to spur up to \$15 billion in new lending to small businesses and small manufacturers. For every dollar of Federal funding, SSBCI requires at least \$10 in private lending. A total of 53 States and territories (out of a possible 56) applied to take part in the SSBCI. A total of 5 municipalities in the three States that did not apply (Wyoming, North Dakota, and Alaska) submitted their applications directly to SSBCI by the statutory deadline of September 27, 2011 for a total of 58 applications received by the program. As of January 1, 2012, SSBCI has approved funding for 47 States, 3 territories, and the District of Columbia for a total of \$1.4 billion, and approximately \$460 million has been disbursed. (Note: SSBCI funds States in three equal tranches. States, territories, and municipalities must prove that they have disbursed at least 80 percent of prior funds before receiving the remaining tranches.) Treasury expects to disburse nearly all of the \$1.5 billion funds. While it is still too early to measure the success of the SSBCI program, initial reports are promising, with 12 states reporting using SSBCI funds to support loans and investments. SSBCI will start receiving data-driven reports from recipient States, territories, and municipalities this year, which it will use to assess performance and provide tailored technical assistance, including assessment and communication across states of "best practices" to maximize the effectiveness of funding.

The SBLF authorized Treasury to lend up to \$30 billion of capital to eligible financial institutions (those having less than \$10 billion in assets) and participating institutions are required to pay dividends based on the volume growth of their small business lending portfolio. Providing this low-cost capital to lenders will increase their loans to small businesses many times over. The application period closed in June 2011 and all awards were made by September 27, 2011, the statutory end of the funding phase of the program. Treasury received 933 applications totaling \$11.8 billion. Of these, 332 institutions were approved for a total of \$4.03 billion, with some institutions screened out due in part to stringent credit requirements aimed at protecting taxpayer dollars and avoiding lending to institutions that were likely to default on their SBLF obligations. Banks ineligible for the program included: (1) institutions listed on the regulator's problem bank list with expected CAMELS score greater than 4; and (2) TARP Capital Purchase Program (CPP) refinancings with more than one missed CPP dividend payment. SBLF is expected to create a positive return for taxpayers given the prudent lending standards established by the program. For more information on SSBCI and SBLF,

please see the “Credit and Insurance” chapter, in this volume.

Troubled Asset Relief Program (TARP). EESA authorized the 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. Treasury has used its authority under EESA to provide capital to and restore confidence in U.S. financial institutions, to restart markets critical to financing American households and businesses, and to address housing market problems and the foreclosure crisis. Under EESA, the Secretary’s authority was originally limited to \$700 billion in obligations at any one time, as measured by the total purchase price paid for assets and guaranteed amounts outstanding. The Helping Families Save Their Homes Act of 2009 (P.L. 111-22) reduced total TARP purchase authority by \$1.3 billion, and in July 2010, the Wall Street Reform Act further reduced total TARP purchase authority to a maximum of \$475 billion in cumulative obligations.

On December 9, 2009, and as authorized by EESA, the Secretary of the Treasury certified to Congress that an extension of TARP purchase authority until October 3, 2010, was necessary “to assist American families and stabilize financial markets because it will, among other things, enable us to continue to implement programs that address housing markets and needs of small businesses, and to maintain the capacity to respond to unforeseen threats.” On October 3, 2010, the Treasury’s authority to make new TARP commitments expired. The 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.

In extending TARP authority through October 3, 2010, the Secretary outlined the Government’s four elements of its strategy to wind down TARP and related programs: First, the Treasury would wind down those programs that are no longer necessary, such as the Capital Purchase Program (CPP); funding for the CPP ended on December 31, 2009. Second, new planned programs in 2010 under the extension of the purchase authority would be limited to three areas: (1) continued foreclosure mitigation for responsible American homeowners and stabilization of the housing market; (2) initiatives to provide capital to small and community banks; and (3) potentially increased commitment to the Term Asset-Backed Securities Loan Facility (TALF) to improve securitization markets that facilitate consumer and small business loans, as well as commercial mortgage loans. Third, the Government would maintain the capacity to respond to unforeseen threats. The Government would not use remaining TARP funds unless necessary to respond to an immediate and substantial threat to the economy stemming from financial instability. Fourth, the Government would manage equity investments acquired through TARP while protecting taxpayer interests. It would continue to manage those investments in a commercial manner and seek to dispose of them as soon as practicable.

Section 202 of EESA requires the Office of Management and Budget (OMB) to semi-annually report the estimated

cost of TARP assets purchased and guarantees issued pursuant to EESA. The most recent report was issued November 8, 2011.² Consistent with the requirement to analyze transactions occurring no less than thirty days before publication, the 2013 Budget data presented in this report reflect revised subsidy costs for the TARP programs using actual performance and updated market information through November 30, 2011. For information on subsequent TARP program developments, please consult the Treasury Department’s Troubled Asset Relief Program Monthly 105(a) Reports.

Market Impact

Although challenges in the economy remain, TARP’s support to the banking sector through the Capital Purchase Program (CPP), Targeted Investment Program (TIP), Asset Guarantee Program, and the Community Development Capital Initiative (CDCI) has helped strengthen the financial position of the Nation’s banking institutions. Net income of insured financial institutions for the quarter ending September 30, 2011, was \$35.3 billion, which marked nine consecutive quarters of year-over-year net income gains.³ This growth in earnings has largely been fueled by financial institutions reducing the loan loss provisions on their balance sheets based on improved forecasts of their asset quality. Total provisions for loan losses for all insured depository institutions was reduced by nearly half to \$18.6 billion as of September 30, 2011, on a year-over-year basis. This reduction in loan loss reserves points to improving credit and market conditions.

The gradual healing of the banking sector, coupled with the TARP programs aimed at reviving the credit markets, have facilitated the improved flow of credit in both the commercial and consumer markets. Together, the Term Asset Backed Securities Loan Facility (TALF) and the Public Private Investment Program (PPIP) helped to improve the overall credit climate for businesses, as evidenced by the declining cost of long-term investment grade borrowing, which has fallen from a peak of roughly 570 basis points over benchmark Treasury securities at the height of the crisis to just 206 basis points over Treasuries as of December 31, 2011.⁴ However, additional progress is needed to increase businesses’ access to credit at reasonable rates, enabling the economy to achieve its full potential.

Emergency loans to General Motors and Chrysler via the TARP Automotive Industry Financing Program (AIFP) spurred the resurgence of the U.S. auto manufacturing industry. The Administration’s assistance to both GM and Chrysler was conditioned on the requirement that stakeholders make difficult, but necessary restructuring and reorganization decisions in order for these companies to

² See “OMB Report under the Economic Stabilization Act, Section 202,” November 8, 2011. <http://www.whitehouse.gov/sites/default/files/omb/reports/emergency-economic-stabilization-act-of-2008.pdf>

³ Federal Deposit Insurance Corporation, *Quarterly Banking Profile*, September 2011. <http://www2.fdic.gov/qbp/2011sep/qbp.pdf>

⁴ Spreads for the cost of long-term investment grade borrowing are based upon 10-year Treasury yield and FINRA/Bloomberg Investment Grade U.S. Corporate Bond Index yield.

emerge from bankruptcy and achieve long-term viability. Although AIFP is still estimated to result in a net cost to taxpayers, the Government has been able to recover much more from auto companies than originally estimated, and far sooner, while reinvigorating one of America's critical industries. New Chrysler has posted seven consecutive quarters of operating profit and has announced more than \$4.5 billion in investments in plants and technology since emerging from bankruptcy in 2009.⁵ The story has been similar for New GM — and the industry as a whole. For the first time since 2004, Ford, Chrysler, and GM all achieved positive quarterly net profits in the first quarter of 2011.⁶ In addition, the Big Three automakers increased their market share in 2010 for the first time since 1995.⁷ The auto industry is leading a resurgence in American manufacturing that translates to the creation of more American jobs, with nearly 160,000 jobs created in the American auto industry in 2010 and 2011.

Although the housing market is still recovering, the Administration's housing programs implemented through the TARP have helped stabilize the market and kept millions of borrowers in their homes. As of December 31, 2011, nearly 910,000 borrowers have received permanent modifications through the Home Affordable Modification Program (HAMP), which amounts to an estimated \$10 billion in realized aggregate savings for these

homeowners. In addition to helping these borrowers, the Administration's TARP housing programs have been a catalyst to private sector modifications, as they have paved the way for private lenders and investors to acknowledge that a borrower's debt-to-income ratio is a key determinant of mortgage affordability and therefore linked to credit performance. Since April 2009, HAMP, FHA, and the private sector HOPE Now alliance have initiated more than 5.5 million mortgage modifications, which is nearly double the number of foreclosure completions that were executed in the same period. The Administration has continued to respond to the evolving housing crisis by implementing programs that provide mortgage relief to unemployed homeowners and those with negative home equity. Furthermore, through the HFA Hardest Hit Fund, the Administration has allocated \$7.6 billion to eligible States to implement innovative housing programs to bring stability to local housing markets and meet the unique needs of their communities.

Deficit Impact

Nearly three years after the first TARP dollars were disbursed, the TARP has not only helped to stabilize financial markets and set the foundation for economic recovery, but it has done so at a much lower cost than originally estimated. As of December 31, 2011, total repayments and income on TARP investments were approximately \$318 billion, which is 77 percent of the \$414 billion in total disbursements to date. The projected total lifetime deficit impact of TARP programmatic costs, reflecting recent activity and revised subsidy estimates based on market data as of November 30, 2011, is now estimated at \$67.8 billion (see Table 4-1).

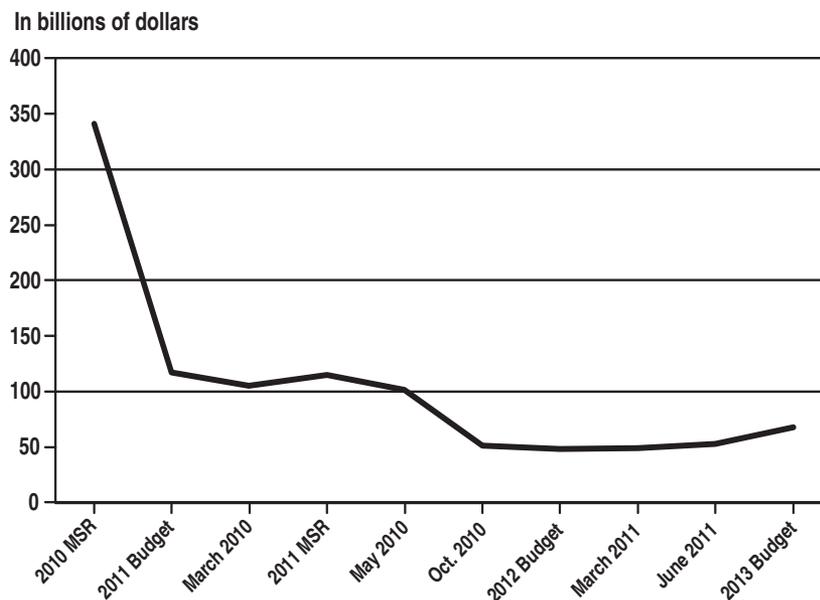
Compared to the 2012 MSR estimate of \$46.8 billion, the estimated deficit impact of TARP increased by \$21

⁵ Chrysler Corporation, *Third Quarter 2011 Financial Results Webcast*, October, 28, 2011 http://www.chryslergrouppllc.com/en-us/investor/presentations/QAWebcasts/ChryslerDocuments/Q3_2011_Presentation.pdf

⁶ Department of the Treasury, Secretary Timothy F. Geithner's Written Testimony before the Congressional Oversight Panel, <http://cybercemetery.unt.edu/archive/cop/20110402013407/http://cop.senate.gov/documents/testimony-121610-geithner.pdf>

⁷ White House Report, *The Resurgence of the American Automotive Industry*, June 2011.

Chart 4-1. Estimate of TARP's Deficit Impact



Source: OMB and Treasury.

billion. This increase was largely attributable to the lower valuation of the AIG and GM common stock held by Treasury. AIG's share price fell by \$6.01 (or 21 percent), while GM's share price fell by \$9.07 (or 30 percent), relative to the share prices used to formulate the June 30th Valuation.⁸ AIG and GM losses were partly offset by a higher valuation for the PPIP, as the value of commercial and mortgage-back securities held in the portfolios of Public-Private Investment Funds improved.

There has been a notable reduction in TARP's projected deficit impact from the \$341 billion estimate published in the 2010 MSR (see graph below). The Budget reflects a total TARP deficit impact of \$67.8 billion, a \$273 billion reduction from the 2010 MSR and a \$288 billion reduction from the Congressional Budget Office's March 2009 estimate of \$356 billion.

A description of the TARP programs, followed by a detailed analysis of the programmatic changes to the TARP and the cost estimates since the publication of the 2012 MSR, is provided below.

Description of Assets Purchased Through the TARP, by Program

Capital Purchase Program (CPP). Pursuant to EESA, the Treasury created the CPP in October 2008 to restore confidence throughout the financial system by ensuring that the Nation's banking institutions have a sufficient capital cushion against potential future losses and to support lending to creditworthy borrowers. All eligible CPP recipients completed funding by December 31, 2009, and Treasury purchased \$204.9 billion in preferred stock in 707 financial institutions under the CPP program. As of December 31, 2011, Treasury had received approximately \$185 billion in principal repayments (i.e., redemptions of common and preferred stock, CDCI conversions, and refinancings to SBLF) and nearly \$26 billion in revenues from dividends, interest, warrants, gains/other interest and fees. Total redemptions and income now exceed Treasury's initial investment.

Community Development Capital Initiative (CDCI). The CDCI program invests lower-cost capital in 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. These institutions could apply for capital investments of up to 3.5 percent of total assets – an amount approximately equivalent to the 5 percent of risk-weighted assets available under the CDCI program to banks and thrifts. TARP capital of \$570 million has been committed to this program.

Capital Assistance Program and Other Programs (CAP). The Treasury launched the CAP in March 2009 as the next phase of its effort to ensure that institutions have enough capital to lend, even under more distressed economic scenarios. The CAP was announced in conjunction with the commencement of a supervisory capital assessment process, commonly referred to as the "stress tests". The CAP was available to institutions that participated in the "stress tests" as well as others. Of the ten bank holding companies that were identified by the test as needing to raise more capital, nine have met or exceeded the capital raising requirements through private efforts. The Treasury provided an additional \$3.8 billion in capital to GMAC, now Ally Financial, under the Auto Industry Financing Program (described above) to assist its fundraising efforts to meet the requirements of the stress test results. Due to the success of the stress tests, efforts to raise private capital, and CPP, as well as other Government efforts, the Treasury did not receive any applications for the CAP, which terminated on November 9, 2009.

American International Group (AIG) Investments. The Federal Reserve Bank of New York (FRBNY) and the Treasury provided financial support to AIG in order to mitigate broader systemic risks that would have resulted from the disorderly failure of the company. To prevent the company from entering bankruptcy and to resolve the liquidity issues it faced, the FRBNY provided an \$85 billion line of credit to AIG in September 2008 and received preferred shares that entitled it to 79.8 percent of the voting rights of AIG's common stock. After TARP was enacted, the Treasury and FRBNY 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, the Treasury had purchased \$40 billion in preferred shares from AIG through TARP, which have subsequently been converted to common stock. In April 2009, Treasury also extended a \$29.8 billion line of credit, of which AIG drew down \$27.8 billion as of January 2011, in exchange for additional preferred stock. The remaining \$2 billion obligation was subsequently canceled.

AIG executed a recapitalization plan with FRBNY, Treasury, and the AIG Credit Facility Trust in mid-January 2011 that has allowed for the acceleration of the Government's exit from AIG. As a result of the restructuring and AIG's ensuing public offering, the Treasury now has a 77 percent ownership (or 1.45 billion shares) stake in AIG, which represents a 15 percentage point reduction from Treasury's 92 percent ownership stake in January 2011. Moreover, AIG has fully repaid the FRBNY. A summary of the deal terms and recent transactions is provided below:

- AIG fully repaid the remaining \$20 billion line of credit held by the FRBNY (including accrued interest and fees) using \$27.2 billion raised from the initial public offering of the AIA Group Limited (AIA) and the sale of its American Life Insurance Company (ALICO) to MetLife. The line of credit was subsequently canceled.

⁸ The 2013 Budget valuation used the November 30, 2011 share price of \$23.31 for Treasury's AIG common stock and \$21.29 for Treasury's GM common stock.

- AIG drew \$20.3 billion from the remaining \$22.3 billion TARP line of credit to buy-out the FRBNY's preferred interests in special purposes vehicles (SPV) holdings within AIA and ALICO. In exchange, Treasury received the preferred interests in the two SPV's, which are supported by interests in a number of AIG subsidiaries that were valued at \$24.5 billion as of September 30, 2011. In February 2011, AIG sold subsidiaries AIG Star Life and AIG Edison Life Insurance Companies and provided \$2.1 billion in proceeds to Treasury. On March 2, 2011, AIG sold common stock and equity shares in MetLife for \$9.6 billion in gross proceeds. AIG used \$6 billion of these proceeds to repay U.S. taxpayers, which represented Treasury's share of preferred interests in the ALICO SPV that was transferred from the FRBNY. As of November 30, 2011, Treasury held approximately \$8.2 billion of preferred equity interest of designated AIG assets held in the AIA SPV. The 2013 Budget cost estimates assume full repayment of the Treasury's preferred equity interest, as the estimated value of the underlying assets in the AIA SPV far exceed Treasury's \$8.2 billion holdings, based on November 30, 2011, market pricing.
- The January 2011 recapitalization agreement allowed AIG to draw down \$2.0 billion in previous obligations from the TARP credit line for general corporate purposes as necessary. However, these funds were not drawn down and in May 2011, AIG canceled the outstanding \$2 billion credit line with Treasury in conjunction with AIG's sale of 100 million primary shares of common stock.
- When the recapitalization closed in January 2011, Treasury exchanged its Series E and F preferred interest holdings acquired through the TARP for 1.09 billion shares in AIG common stock, which facilitates Treasury's ability to exit the program as common stock is more liquid than preferred interest holdings.
- As part of the initial aid package extended to AIG in 2008, the FRBNY received AIG Series C convertible preferred shares worth 79.8 percent of AIG common stock in January 2009, and transferred ownership to an independent Trust that names the U.S. Treasury as beneficiary. As part of the January recapitalization plan, the Series C preferred shares held by the Trust were exchanged for 562.9 million shares of AIG common stock. Immediately after the exchange, the Trust distributed all of its AIG common stock to the Treasury, and was subsequently dissolved. (Note: the transfer of AIG common stock from the Trust to the Treasury was not a TARP purchase, and thus the value of this stock received from the Federal Reserve is not included in the TARP cost estimates.)
- On May 24, 2011, Treasury sold 200 million shares of its common stock through a public offering at \$29.00 per share, netting \$5.8 billion in proceeds for taxpayers. Approximately two-thirds of the proceeds, or \$3.8 billion, represented sales of stock acquired

from TARP assistance to AIG and is included in TARP AIG net cost estimates, while the remaining one-third, or \$2 billion, represented the sale of AIG common stock that was transferred to the Treasury from the Federal Reserve.

- On August 18, 2011, Treasury received an additional payment of \$2.2 billion funded through proceeds from the sale of AIG's Nan Shan life insurance subsidiary. This was followed by an additional repayment of \$972 million on November 1, 2011, that was funded primarily through the scheduled release of escrowed proceeds from AIG's sale of ALICO, a subsidiary, to MetLife, Inc. Proceeds from both of these repayments were used to pay back the U.S. taxpayers' investments in AIG. After this repayment, Treasury's remaining outstanding investment in AIG, including common shares and preferred interests, was \$50 billion.

Targeted Investment Program (TIP). The goal of the TIP was to stabilize the financial system by making investments in institutions that are critical to the functioning of the financial system. Investments made through the TIP sought to avoid significant market disruptions resulting from the deterioration of one financial institution that could threaten other financial institutions and impair broader financial markets, and thereby pose a threat to the overall economy. Under the TIP, the Treasury purchased \$20 billion in preferred stock from Citigroup and \$20 billion in preferred stock from Bank of America. The Treasury also received stock warrants from each company. Both Citigroup and Bank of America repaid their TIP investments in full in December 2009, along with dividend payments of approximately \$3.0 billion. In March 2010, Treasury sold all of its Bank of America warrants for \$1.2 billion, and in January 2011, the Treasury sold Citigroup warrants acquired through the TIP for \$190.4 million. The TIP is closed and has no remaining assets; taxpayers received a positive return of 8.5 percent on these investments.

Asset Guarantee Program (AGP). The TARP created the AGP to provide Government assurances for assets held by financial institutions that were critical to the functioning of the nation's financial system. In January 2009, the Treasury, the Federal Reserve, and the FDIC negotiated a potential loss-sharing arrangement under the AGP on up to \$118 billion of financial instruments owned by Bank of America. In May 2009, Bank of America announced its intention to terminate negotiations with respect to the loss-sharing arrangement. In September 2009, the Treasury, the Federal Reserve, the FDIC, and Bank of America entered into a termination agreement pursuant to which Bank of America agreed to pay a termination fee of \$425 million to the Government parties. Of this amount, \$276 million was paid to the TARP in 2009 for the value Bank of America received from the announcement of the government's willingness to guarantee and share losses on the pool of assets.

The Treasury, the Federal Reserve and the FDIC entered into a final agreement for a loss-sharing arrange-

ment with Citigroup on January 15, 2009. Under the agreement, the Treasury guaranteed up to \$5 billion of potential losses incurred on a \$301 billion portfolio of financial assets held by Citigroup. The agreement was terminated, effective December 23, 2009. The U.S. Government parties did not pay any losses under the agreement, and retained \$5.2 billion of the \$7 billion in trust preferred securities that were part of the initial agreement with Citigroup.⁹ TARP retained \$2.2 billion of the trust preferred securities, as well as warrants for common stock shares that were issued by Citigroup as consideration for the guarantee. Treasury sold the trust preferred securities on September 30, 2010, and the warrants on January 25, 2011, liquidating its direct holdings in Citigroup. However, Treasury is entitled to receive up to \$800 million in additional Citigroup trust preferred securities held by the FDIC (net of any losses suffered by the FDIC) under Citigroup's use of the Temporary Liquidity Guarantee Program. The AGP program is now closed and will generate a positive return to the taxpayers from the preferred securities and other considerations.

Automotive Industry Financing Program (AIFP). In December 2008, the Treasury established the AIFP to prevent a disruption of the domestic automotive industry, in order to mitigate a systemic threat to the Nation's economy and a potential loss of thousands of jobs. Through TARP, the Treasury originally committed \$84.8 billion through loans and equity investments to participating domestic automotive manufacturers, auto finance companies, and auto parts manufacturers and suppliers. As of December 31, 2011, Treasury had recouped nearly 50 percent of its investments in GM and had fully exited its Chrysler Group LLC investments. Below is a summary of the securities TARP received in exchange for the assistance provided to automotive manufacturers and recent transactions:

- Treasury received 60.8 percent of the common equity and \$2.1 billion in preferred stock in "New GM" when the sale of assets from the old GM to the new GM took place on July 10, 2009. In April 2010, GM fully repaid its \$7 billion loan, ahead of its publicly stated goal to repay the entire loan by June 2010. As part of New GM's initial public offering (IPO) in November 2010, Treasury sold nearly 359 million shares of New GM common stock at \$33.00 per share, and subsequently sold an additional 53.7 million shares in December 2010 at the same price. In total, TARP raised \$13.5 billion in net proceeds from the New GM IPO and reduced its ownership stake by nearly half, to approximately 32 percent. New GM also repurchased \$2.1 billion in preferred stock from TARP in December 2010. As of December 31, 2011, TARP had recouped \$24.1 billion of the \$51.03 billion in aid extended to GM.
- Treasury also received a \$7.1 billion debt security and a 9.9 percent share of the equity in the newly

formed, post-bankruptcy Chrysler Group LLC (New Chrysler). As part of the bankruptcy proceedings, New Chrysler also assumed \$500 million of debt from TARP's original \$4 billion loan to Chrysler Holding (Old Chrysler). Therefore, TARP held a \$3.5 billion loan with Old Chrysler in addition to investments in New Chrysler. In April 2010, TARP received a \$1.9 billion repayment of its investments in Old Chrysler. This repayment, while less than the amount Treasury invested, was significantly more than the Administration had previously estimated to recover. As part of the repayment agreement, Treasury agreed to write off the \$1.6 billion balance remaining under the \$3.5 billion TARP loan to Old Chrysler. On May 24, 2011, six years ahead of schedule, Chrysler Group LLC repaid the remaining \$5.1 billion in TARP loans and terminated the remaining \$2.1 billion TARP loan commitment. Finally, on June 2, 2011, Treasury reached an agreement to sell to Fiat Treasury's 6 percent fully diluted equity interest in New Chrysler and Treasury's interest in an agreement with the UAW retiree trust for \$560 million. The closing of this transaction in July 2011 marked Treasury's full exit from its TARP investments in Chrysler. In total, Chrysler repaid \$11.1 billion¹⁰ of the \$12.4 billion in aid provided by the U.S. Government, which far exceeded expectations when the program was first unveiled in December 2008.

- The Treasury has also purchased investments totaling \$16.3 billion in Ally Financial (formerly GMAC). On December 30, 2010, Treasury converted \$5.5 billion of its \$11.4 convertible preferred stock in Ally Financial into common stock. On March 2, 2011, Treasury sold all of its trust preferred securities for approximately \$2.7 billion. Ally Financial filed a registration statement with the Securities and Exchange Commission for a proposed initial public offering on March 31, 2011, proceeds of which are expected to facilitate Ally paying back TARP and ending governmental ownership shares. As of December 31, 2011, Treasury had recouped \$5.3 billion of its \$16.3 billion in Ally-related investments, including \$2.7 billion in dividends and interest.

Both the Auto Supplier Support Program (ASSP) and the Auto Warranty Commitment Program (AWCP) have closed and, in aggregate, these investments did not result in losses. The Government originally committed \$5 billion in loans to ASSP, ensuring the auto suppliers received compensation for products and services purchased by automakers. Through the AWCP, the Government extended support to protect consumer warranties on purchased GM and Chrysler vehicles while the companies worked through their restructuring plans. Treasury no longer holds warranties under the AWCP.

TARP Housing Programs. To mitigate foreclosures and preserve homeownership, in February 2009

⁹ Trust Preferred Securities (TruPS) are financial instruments that have the following features: they are taxed like debt; counted as equity by regulators; are generally longer term; have early redemption features; make quarterly fixed interest payments; and mature at face value.

¹⁰ 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 UAW retiree trust that were executed on July 21, 2011.

the Administration announced a comprehensive housing program utilizing up to \$50 billion in funding through the TARP. The Government-Sponsored Entities (GSEs) Fannie Mae and Freddie Mac participated in the Administration's program both as the Treasury Department's financial agents for Treasury's contracts with servicers, and by implementing similar policies for their own mortgage portfolios.¹¹ These housing programs are focused on creating sustainably affordable mortgages for responsible homeowners who are making a good faith effort to make their mortgage payments, while mitigating the spillover effects of foreclosures on neighborhoods, communities, the financial system and the economy. Following the enactment of the Wall Street Reform Act, Treasury reduced its commitments to the TARP Housing programs to \$45.6 billion. These programs fall into three initiatives:

1. Making Home Affordable (MHA);
2. Housing Finance Agency (HFA) Hardest-Hit Fund (HHF); and
3. Federal Housing Administration (FHA) Refinance Program¹².

The MHA initiative includes among its components the Home Affordable Modification Program (HAMP), FHA-HAMP, the Second Lien Modification Program (2MP), and the second lien extinguishment portion of the FHA-Refinance Program, and Rural Development-HAMP.¹³ Under MHA programs, the Treasury contracts with servicers to modify loans in accordance with the program's guidelines, and to make incentive payments to the borrowers, servicers, and investors for those modification or other foreclosure alternatives. As of December 31, 2011, 143 non-GSE mortgage servicers had signed up to participate in the HAMP and over 1.75 million trial modification offers had been extended to borrowers. Nearly 910,000 permanent modifications were initiated as of the end of December 2011, which have saved homeowners nearly \$10 billion in reduced mortgage payments. Program implementation has continually improved since its inception in February 2009. As of December 2011, 83 percent of homeowners who started a trial modification after June 1, 2010, had converted to permanent modifications within an average of 3.5 months – a higher conversion rate and shorter time to convert than earlier in the program. In addition to providing responsible homeowners with sustainable mortgages, the MHA initiative has also, for the

first time, standardized the mortgage modification process across the servicing industry. In January 2012, the Administration extended MHA programs until December 31, 2013.

Treasury also offers other forms of incentives to encourage mortgage loan modifications, or prevent foreclosure under the HAMP, as part of its MHA program. For example, Treasury provides payments to servicers and investors to protect against declining home prices as part of encouraging mortgage modifications in communities that have experienced continued home price depreciation. When a mortgage modification is not possible, Treasury contracts with servicers to provide incentives that encourage borrower short sales (sales for less than the value of the mortgage in satisfaction of the mortgage) or deeds-in-lieu (when the homeowner voluntarily transfers ownership of the property to the servicer in full satisfaction of the total amount due on the mortgage) via the Home Affordable Foreclosure Alternatives Program (HAFA), in order to provide a means for borrowers to avoid foreclosure. Since the inception of the program, over 38,600 HAFA agreements have been initiated.

As part of its ongoing effort to continuously refine the targeting of mortgage assistance to address the sector's greatest needs, the Administration created several programs that will give a greater number of responsible borrowers an opportunity to remain in their homes and reduce costly foreclosures. Major programs announced since December 31, 2009, include:

Home Affordable Unemployment Program (part of HAMP): Unemployed borrowers that meet eligibility criteria will receive temporary mortgage payment assistance while they look for a new job. In an effort to keep more unemployed borrowers in their homes and allow them an opportunity to find new employment, Treasury extended the minimum period for which unemployed borrowers receive temporary payment assistance from 3 months to 12 months in July 2011. In response to the Administration's efforts, 12-month forbearance is becoming an industry standard, with Fannie Mae and Freddie Mac now applying it to mortgages they own and Wells Fargo and Bank of America now offering it as their default approach for unemployed borrowers.

Principal Reduction Alternative (PRA, part of HAMP): Servicers who have signed up for this program are required to consider an alternative mortgage modification that emphasizes principal relief for borrowers who owe more than their home is worth. Under the alternative approach, if the servicer reduces borrower loan principal using this program, investors will receive incentive payments based on a percentage of each dollar of loan principal written off. Borrowers and investors will receive principal reduction and the incentives, respectively, through a pay-for-success structure. There have been over 36,400 PRA trial modifications initiated as of December 31, 2011, with the median principal amount reduced for active permanent modifications of over \$66,300, representing a median reduction of over 31 percent from the original loan.

HFA Hardest-Hit Fund (HHF): The \$7.6 billion HHF provides the eligible entities of Housing Finance Agencies

¹¹ For additional information on MHA programs, visit: <http://www.makinghomeaffordable.gov/>.

¹² This program has also been referred to as the FHA Short Refinance Program or Option in other reporting. The FHA Refinance Program is not a Treasury program, but is supported through the TARP with nearly \$3.0 billion available to provide incentive payments to extinguish second lien mortgages to facilitate refinancing the first liens, and an additional \$8.1 billion is committed to cover a share of any losses on FHA Refinance loans.

¹³ For additional information on MHA programs, visit: <http://www.makinghomeaffordable.gov/>.

from 18 states and the District of Columbia with funding to design and implement innovative programs to prevent foreclosures and bring stability to local housing markets. The Administration targeted areas hardest hit by unemployment and home price declines through the program. Approximately 70 percent of the HHHF funds are dedicated to programs that help unemployed borrowers stay in their homes, while the remaining 30 percent of HHHF funds facilitate principal write-downs for borrowers who owe more than their home is worth. The flexibility of the HHHF funds has allowed States to design and tailor innovative programs to meet the unique needs of their community. For example, Oregon has recently implemented a program through which the state's Housing Finance Agency will purchase mortgages of homeowners who have sustained a financial shock, rehabilitate the loan by reducing the borrowers' principal balance, and subsequently sell the loan after the borrowers' circumstances stabilize and a reliable payment history is established. The design of Oregon's model allows the Housing Finance Agency to generate enough cash flow to create a revolving loan fund that provides on-going support to responsible, but vulnerable homeowners.

FHA Refinance Program: This program, which is administered by the Federal Housing Administration and supported by TARP, was initiated in September 2010 and allows eligible borrowers who are current on their mortgage but owe more than their home is worth, to re-finance into an FHA-guaranteed loan if the lender writes off at least 10 percent of the existing loan. Nearly \$3.0 billion in TARP funds allocated under the MHA are available to provide incentive payments to extinguish second lien mortgages to facilitate refinancing the first liens under the MHA, and an additional \$8.1 billion is committed to cover a share of any losses on the loans and administrative expenses. In January 2012, the Administration extended the FHA Refinance Program until December 31, 2014.

Credit Market Programs. The Credit Market programs are designed to facilitate lending that supports consumers and small businesses, through the Term Asset-Backed Securities Loan Facility (TALF), the CDCI discussed previously, and the Small Business Administration's guaranteed loan program (SBA 7(a)).

TALF: The TALF is a joint initiative with the Federal Reserve that provides financing (TALF loans) to private investors to help facilitate the restoration of efficient and robust secondary markets for various types of credit. The Treasury provides protection to the Federal Reserve through a loan to the 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. The Treasury has disbursed \$0.1 billion of this amount to the TALF SPV to implement the program, representing a notional amount used to establish the SPV. The Treasury's total TALF purchases will depend on actual TALF loan defaults. In July 2010, Treasury, in consultation with the Federal Reserve, reduced the maximum amount of assets Treasury will ac-

quire to \$4.3 billion, or 10 percent of the total \$43 billion outstanding in the facility when the program was closed to new lending on June 30, 2010.

SBA 7(a): In March 2009, Treasury and the Small Business Administration announced a Treasury program to purchase SBA-guaranteed securities ("pooled certificates") to re-start the secondary market in these loans. Treasury subsequently developed a pilot program to purchase SBA-guaranteed securities, and purchased 31 securities with an aggregate face value of approximately \$368 million. Treasury reduced its commitment to the Small Business 7(a) program from \$1 billion to \$370 million, as demand for the program waned due to significantly improved secondary market conditions for these securities following the original announcement of the program. On June 2, 2011, Treasury began the disposition of its SBA 7(a) securities. As of December 31, 2011, 23 securities have been sold for approximately \$272 million representing an estimated \$4 million return relative to the initial purchase amount for these 23 securities.

Public Private Investment Program (PPIP). The Treasury, in conjunction with the Federal Deposit Insurance Corporation (FDIC) and the Federal Reserve, introduced the PPIP on March 23, 2009, to address the volatile market cycle affecting troubled legacy assets clogging the balance sheets of private-sector financial institutions. The PPIP is designed to improve the financial position of financial institutions by facilitating the removal of legacy assets from their balance sheets. Legacy assets include both real estate loans held on banks' balance sheets (legacy loans) as well as securities backed by residential and commercial real estate loans (legacy securities). The Treasury implemented the legacy securities PPIP and initially announced that it would provide up to \$100 billion. However, Treasury has subsequently reduced the PPIP commitment twice since the need for Government intervention in the legacy securities market has waned as market conditions have improved and investment of private capital have increased. PPIP closed for new funding on June 30, 2010. The Budget reflects \$21.9 billion in PPIP commitments.

Method for Estimating the Cost of TARP Transactions

Exercising its authority under EESA, the Treasury has purchased financial instruments with varying terms and conditions. Consistent with the provisions of Section 123 of EESA, the costs of equity purchases, loans, guarantees, and loss sharing under the FHA Refinance program through the TARP are reflected on a net present value basis, as determined under the Federal Credit Reform Act (FCRA) of 1990 (2 U.S.C. 661 et seq.), with an EESA-required adjustment to the discount rate for market risks. The budgetary cost of these transactions is reflected as the net present value of estimated cash flows to and from the Government, excluding administrative costs. Costs for the incentive payments under TARP Housing programs, other than loss sharing under the FHA Refinance pro-

gram, involve financial instruments without any provision for future returns, and are recorded on a cash basis.¹⁴

The costs of each transaction reflect the underlying structure of the instruments, which may include direct loans, structured loans, equity, loan guarantees, or direct incentive payments. For each of these instruments, cash flow models are used to estimate future cash flows to and from the Government over the life of a program or facility. Further, each cash flow model reflects the specific terms and conditions of the program, technical assumptions regarding the underlying assets, risk of default or other losses, actual transactions to date, and other factors as appropriate. Models generate cash flows for original subsidy rate estimates; calculate changes in cost due to changes in contract terms or other Government actions (modification cost estimates); and calculate changes in cost due to updated economic or performance assumptions, and actual cash flows to date. The risk adjustments to the discount rates for TARP equity, loan, and guarantee transactions were made using available data and methods to capture additional potential costs related to uncertainty around the expected cash flows to and from the public. The basic methods for each of these models are outlined below.

Direct Loans. Direct loan model cash flows include the scheduled principal, interest, and other payments to the Government, including estimated income from warrants or additional notes. These models include estimates of delinquencies, default and recoveries, based on loan-specific factors including the value of any collateral provided by the contract. The probability and timing of default and recoveries are estimated using applicable historical data and econometric projections where available, or publicly available proxy data including aggregated credit rating agency historical performance data.

Structured Loans. Structured loans such as the TALF are modeled according to the program structure, where an intermediary special purpose vehicle (SPV) is established to purchase or commit to purchase assets from beneficiaries. In general, TARP structured loans are a hybrid of guarantees and direct loans. The Treasury makes a direct loan to a SPV; the SPV in turn enters into a contract with a beneficiary that resembles a guaranteed loan. Estimated cash flow assumptions reflect the anticipated behavior of the beneficiaries and the cash flows to and from the SPV and the Treasury. The Treasury projects cash flows to and from the Government based on estimated SPV performance, the estimated mix of assets funded through the facility, the terms of the contracts, and other factors.

In the case of the TALF, the New York Federal Reserve created an SPV to purchase and manage assets received in connection with any TALF loans. The Federal Reserve

acquires assets either when a TALF participant defaults on the Federal Reserve financing or chooses to turn over the securing assets in lieu of the scheduled repayment at the end of the term. The SPV has committed, for a fee, to purchase all assets securing a TALF loan that are received by the New York Federal Reserve at a price equal to the TALF loan amount at the time of acquisition, plus accrued but unpaid interest. The Treasury made an initial allotment to the SPV of \$0.1 billion to fund the SPV, and the Treasury will purchase subordinated debt issued by the SPV to finance up to \$4.3 billion of asset purchases. The Treasury receives fees and interest income on the entire outstanding TALF facility, and amounts collected in the SPV.

Guarantees. Cost estimates for guarantees reflect the net present value of estimated claim payments by the Government, net of income from fees, recoveries on defaults, or other sources. Under EESA, asset guarantees provided through TARP must be structured such that fees and other income must completely offset estimated losses at the time of commitment. In TARP's Asset Guarantee Program, fees were paid in the form of preferred stock and termination fees. The value of preferred stock is modeled using the same methodology discussed for other equity purchase programs below. Claim payments were modeled consistent with the terms of the guarantee contract, and reflected historical performance data on similar assets and estimates of future economic conditions such as unemployment rates, gross domestic product, and home price appreciation. However, the AGP was terminated with no claim payments made by the Treasury. The budget reflects actual and estimated collections from preferred stock proceeds.

Equity Purchases. Preferred stock cash flow projections reflect the risk of losses associated with adverse events, likely failure of an institution, or increases in market interest rates. Estimated cash flows vary depending on: 1) current interest rates, which affect the institution's decision to repay the preferred stock; and 2) the strength of a financial institution's assets. The model also estimates the values and projects the cash flows of warrants using an option-pricing approach based on the current stock price and its volatility. Common equity is valued at market prices as of a fixed date, such as November 30, 2011, for the 2013 Budget. For the purposes of this calculation, common equity is assumed to be sold to the public as soon as is practicable and advisable.

FHA Refinance Program. Under this program, the cost estimates reflect the present value of estimated claim payments made from the letter of credit (LOC) provider to the lenders of FHA-guaranteed loans, adjusted for market risks. Treasury has signed a LOC with Citigroup, committing \$8.1 billion of TARP funds to cover a portion of default claims of FHA Refinance mortgages, plus administrative expenses. Through the LOC agreement, Treasury effectively makes claim payments to private lenders for defaulted debt obligations of non-Federal borrowers. Therefore, the program costs are estimated according to the principles of FCRA, with a risk adjustment to the discount rate as prescribed by EESA. The model

¹⁴ Section 123 of the EESA provides the Administration the authority to record TARP equity purchases pursuant to the FCRA, with required adjustments to the discount rate for market risks. The Making Home Affordable programs and HFA Hardest Hit Fund involve the purchase of financial instruments which 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 are recorded for all of TARP under the Office of Financial Stability and the Special Inspector General for TARP on a cash basis, consistent with other Federal administrative costs.

Table 4–1. CHANGE IN PROGRAMMATIC COSTS OF TROUBLED ASSET RELIEF ACTIONS (EXCLUDING DEBT SERVICE)

(In billions of dollars)

TARP Actions	2012 MSR		2013 Budget		Change from 2012 MSR to 2013 Budget	
	TARP Obligations ¹	Estimated Cost (+) / Savings (–)	TARP Obligations ¹	Estimated Cost (+) / Savings (–)	TARP Obligations ¹	Estimated Cost (+) / Savings (–)
Equity purchases	337.1	5.2	337.1	17.2	.....	11.9
Structured & direct loans and asset-backed security purchases	83.0	15.7	83.0	19.1	.....	3.3
Guarantees of troubled asset purchases ²	5.0	–3.6	5.0	–3.6	.....	0.0
TARP housing programs	45.6	45.6	45.6	45.6	.....	0.0
Total programmatic costs³	470.7	62.9	470.7	78.2	.....	15.3
Memorandum:						
Deficit impact before administrative costs and interest effects		46.8		67.8		21.0

¹ TARP obligations are net of cancellations.² The face value of assets supported by the Asset Guarantee Program was \$301 billion.³ Total programmatic costs of the TARP exclude interest on reestimates of \$16.2 billion in “2012 MSR” and \$10.4 billion in “2013 Budget.”

projects TARP claim payments based on projected FHA Refinance volumes and claim rates. The full \$8 billion commitment was obligated at the point the LOC contract was signed, and outlays of subsidy are recorded as the underlying FHA Refinance loans are made.

Other TARP Housing. Foreclosure mitigation incentive payments occur when the Government makes incentive payments to borrowers and servicers for certain actions such as: successful modifications of first and second liens, on-schedule borrower payments on those modified loans, protection against further declines in home prices, completing a short sale, or receiving a deed in lieu of foreclosure. The method for estimating these cash flows includes forecasting the total eligible loans, the timing of the loans entering into the program, loan characteristics, the overall participation rate in the program, the re-default rate, home price appreciation, and the size of the incentive payments. For the HFA Hardest-Hit Fund (HHF), the Government provides a cash infusion, similar to a grant, to the eligible entities of state Housing Financing Agencies (HFAs) to design and implement innovative programs to prevent foreclosures and bring stability to local housing markets. The estimated cash flows for the HHF are based on the plans submitted by the HFAs and approved by Treasury, which detail program design and anticipated activity.

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.¹⁵ This section explains the changes in TARP costs, including whether such changes are due to actual performance, or changes in future expectations. The analysis also includes an estimate of what the budgetary effects would have been had

all TARP transactions been reflected on a cash basis, and also shows the estimated cost for transactions using the standard methodology required under the FCRA, without the adjustment to the discount rate for market risks prescribed by EESA. It also includes a comparison of the cost estimates with previous estimates provided by OMB and the Congressional Budget Office (CBO).

Table 4–1, below, summarizes the current and anticipated activity under TARP, and the estimated lifetime budgetary cost reflected in the Budget, compared to estimates from the 2012 MSR. The direct impact of TARP on the deficit, including interest on reestimates, and using the risk-adjustment to the discount rate required under EESA, is projected to be \$67.8 billion, up \$21.0 billion from \$46.8 billion as projected in the 2012 MSR. The subsidy cost represents the lifetime net present value cost of TARP obligations from the date the obligations originated. The subsidy cost for TARP excluding interest on reestimates is now estimated to be \$78.2 billion.¹⁶ The eventual subsidy cost of TARP is likely to be lower than the current subsidy cost because projected cashflows are discounted using a risk adjustment to the discount rate as required by EESA, which adds a premium to current estimates of TARP costs on top of market risks already reflected in cash flows with the public. If actual cash flows match projections, the risk premium added to TARP costs is essentially returned via downward subsidy reestimates over time. While TARP’s overall cost to taxpayers will likely be lower than current estimates, the final cost 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

¹⁵ The analysis does not assume the effects on net TARP costs of a recoupment proposal authorized under Section 134 of EESA. Please see Chapter 2 for discussion of the Financial Crisis Responsibility Fee.

¹⁶ With the exception of the Making Home Affordable and HFA Hardest-Hit Fund programs, all the other TARP investments are reflected on a present value basis pursuant to the FCRA.

Table 4–2. 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
Financing account balances:														
Troubled Asset Relief Program Equity Purchase Financing Account ..	105.4	76.9	74.9	48.2	33.2	18.2	13.6	12.5	8.9	7.1	5.8	2.4	2.1	1.9
Troubled Asset Relief Program Direct Loan Financing Account	23.9	42.7	28.5	20.2	12.0	9.7	6.7	3.8	0.9	0.6	0.5	0.1	0.1	0.1
Troubled Assets Insurance Financing Fund Guaranteed Loan Financing Account	0.6	2.4	0.8	0.8	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Troubled Assets Relief Program FHA Refinance Letter of Credit Financing Account			–*	–2.8	–5.1	–6.8	–6.3	–4.8	–3.3	–2.0	–0.9			
Total financing account balances	129.9	122.0	104.1	66.4	40.5	21.3	14.2	11.6	6.6	5.7	5.4	2.5	2.3	2.1

* \$50 million or less.

¹ Current value as reflected in the 2013 Budget. Amounts exclude the Making Home Affordable and HFA Hardest Hit Fund, activities that are reflected on a cash basis.

cashflows to and from the public.¹⁷ So, the net debt or cash balances reflect the expected present value of the asset 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 effectively true-up the net debt or cash balance in the financing account, with updated estimates of the present value of these financial assets or liabilities. For example, if an asset is valued at \$100 million and the net debt in the financing account is \$90 million, there will be a downward reestimate, returning the \$10 million in excess subsidy to the General Fund. Accordingly, the net debt balance in the financing account after the reestimate will be \$100 million—equal to the reestimated value of the asset. The larger the subsidy cost for a given loan disbursed or equity purchased, the lower the estimated value of the cash flows from the public and asset value to the Government.¹⁸

Table 4–2 shows the actual balances of TARP financing accounts as of the end of 2011, and projected balances for each subsequent year through 2022.¹⁹ Actual net balances in financing accounts at the end of 2009 totaled \$129.9 billion. By the end of 2011, total financing account balances decreased to \$104.1 billion, as repayments, primarily from large banks, exceeded disbursements of TARP assistance committed in prior years. Estimates in 2012 and beyond reflect reestimated value for TARP investments outstanding as of September 30, 2011, and all other an-

¹⁷ For example, to disburse a loan to a borrower, a direct loan financing account receives the subsidy cost from the program account. The financing account borrows the difference between the face value of the loan and the subsidy cost from the Treasury. As inflows from the public are received, the value is realized and these amounts are used to repay the financing account's debt to Treasury.

¹⁸ As an extreme example, a direct loan program with 100 percent subsidy cost would require budget authority for the full amount of the loan. The financing account would receive the entire amount of a loan disbursement from the budgetary program account, and would not have to borrow from the Treasury. In this case, the loan would be estimated to have a zero asset value.

¹⁹ Reestimates for TARP are calculated using actual data through September 30, 2011, and updated projections of future activity. Thus, the full impacts of TARP reestimates are reflected in the 2012 financing account balances.

anticipated transactions. The value of TARP assets is expected to fall by the end of 2012 to \$66.4 billion, based on risk adjusted discount rates. To view net TARP costs, the value of these outstanding assets could be compared against the costs TARP incurred to acquire the assets. The expected decrease during 2012 is primarily due to winding down TARP assets and an upward reestimate for outstanding investments to be executed in 2012. The upward reestimates are driven primarily by the lower value of AIG and AIFP investments, offset in part by downward reestimates associated with the Legacy Securities Public-Private Partnership Program. The overall balance of the financing accounts is estimated to continue to fall significantly as TARP investments wind down, to \$40.5 billion in 2013, and \$21.3 billion in 2014, and is expected to continue to decrease over time as the assets and loans acquired under the TARP program are repaid or sold, and liabilities funded.

The value of TARP equity purchases reached \$76.9 billion in 2010, and fell \$2 billion in 2011 reflecting the 2011 downward reestimate, final AIG funding, and repayments from large financial institutions. The value of the TARP equity portfolio is anticipated to continue declining as participants repurchase stock and assets are sold. The value of direct loans is expected to decrease to \$20.2 billion in 2012, gradually declining to \$0.1 billion by 2020 as loans are repaid and warrants and other assets are sold. The \$0.8 billion value under the Asset Guarantee Program (AGP) in 2012 reflects the estimated value of warrants held by the Treasury and the expected receipt of trust preferred shares from the FDIC following termination of the guarantee on Citigroup assets. The value of the AGP is expected to decline, as preferred stock and warrants are sold. The FHA Refinance program reflects net cash balances, showing the reserves set aside to cover TARP's share of default claims for FHA Refinance mortgages over the 10-year letter of credit facility. These cash balances fall as claims are paid, and reach zero by 2020 as the TARP coverage expires.

Where Table 4–2 displays the estimated value of TARP investments, guarantees, and loss share agreements over time, Table 4–3 shows the estimated face value of outstanding TARP investments at the end of each year

Table 4-3. TROUBLED ASSET RELIEF PROGRAM FACE VALUE OF TARP OUTSTANDING¹

(In billions of dollars)

	Actual			Estimate	
	2009	2010	2011	2012	2013
Troubled Asset Relief Program Equity Purchases	229.6	119.0	88.2	72.3	54.4
Troubled Asset Relief Program Direct Loans	60.5	15.7	11.5	12.4	11.5
Troubled Assets Insurance Financing Fund Guaranteed Assets	251.4	.....	.....	.....	.....
FHA Refinance Letter of Credit .....	.....	.....	0.1	51.9	100.5
Total face value of TARP outstanding	541.5	134.7	99.8	136.6	166.4

¹ Table reflects face value of TARP outstanding direct loans, preferred stock equity purchases, guaranteed assets, and the face value of FHA Refinance mortgages supported by the TARP Letter of Credit. Financial instrument purchases under the Making Home Affordable Program and HFA Hardest Hit Fund are reflected in the budget on a cash basis, and are not included here.

through 2013. For equity investments, the par value of Treasury's remaining investment is reflected. The outstanding amount of equity investments overall decreased in 2011, as repurchases of equity investments exceeded AIG disbursements. Direct loans increase with planned disbursements under the PPIP program, and fall in 2013 as loans are repaid. Under FCRA, the total outstanding reflects the full face value of loans supported by a Federal guarantee, any portion of which may be guaranteed. TARP's liability under the Asset Guarantee Program was only a fraction of the face value of the underlying loans (see Table 4-6), and is currently zero, with the termination of the Citibank guarantee in 2009. Likewise, the full face value of FHA Refinance mortgages supported by the letter of credit facility far exceeds TARP's liability, which is capped at \$8.1 billion (including \$100 million set aside for administrative fees). The TARP coverage ratio or share of default losses was 8.85 percent in 2011 and is estimated to be 15.57 percent in 2012. The face value of FHA refi loans supported by the TARP LOC was less than \$0.1 billion in 2011, but is expected to increase to more than \$51.9 billion in 2012 and \$100.5 billion in 2013. The overall outstanding face value of TARP investments, loan guarantees, and mortgages supported by the FHA Refinance Letter of Credit is projected to reach \$166.4 billion in 2013.

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. Direct activity under the TARP is expected to increase the 2012 deficit by \$34.7 billion, which is largely attributable to net upward reestimates of program costs totaling \$21.1 billion (including interest on reestimates) and outlays for TARP housing programs estimated to be \$13.6 billion. The total deficit effect including interest effects is estimated at \$31.0 billion for 2012. The estimates of U.S. Treasury debt attributable to TARP include both borrowing to finance 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 2012 is \$101.8 billion, and this figure declines to \$77.1 billion in 2014 as TARP loans are repaid and TARP equity purchases are sold or redeemed. Even as the TARP program is winding down, the debt due to TARP increases annually starting in 2015, with additional borrowing to finance the debt service on past TARP costs.

Debt held by the public net of financial assets reflects the cumulative amount of money the Federal 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 U.S. 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 the TARP program is estimated to be \$35.4 billion as of the end of 2012. This is \$21.1 billion higher than the projected 2012 debt held net of financial assets reflected in the 2012 MSR, primarily due to net increases in TARP subsidy costs reflected in the 2012 reestimates.

Under the FCRA, the financing account earns and pays interest on its Treasury borrowings at the same 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, 2011, 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 present in these years, with no additional risk adjustment.²⁰ Future cash flows reflect a risk adjusted discount rate and the corresponding financing account interest

²⁰ 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 cashflows using Treasury rates.

Table 4-4. 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
Deficit effect:														
Programmatic and administrative expenses:														
Programmatic expenses:														
Equity purchases	115.3	8.4	19.1	0.2	*	.....	.....	.....	.....	.....	.....	.....	.....	.....
Direct loans and purchases of asset-backed securities ...	36.9	-0.9	-0.3	-0.3	-*	.....	.....	.....	.....	.....	.....	.....	.....	.....
Guarantees of troubled asset purchases	-1.0	-1.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
TARP housing programs	*	0.5	1.9	13.6	12.1	8.1	5.4	2.4	1.2	0.2	*	*	.....	.....
Reestimates of credit subsidy costs .....	.....	-116.5	-58.5	21.1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Subtotal, programmatic expenses	151.2	-109.9	-37.7	34.7	12.1	8.1	5.4	2.4	1.2	0.2	*	*	.....	.....
Administrative expenses	0.1	0.2	0.4	0.5	0.3	0.2	0.2	0.2	0.1	0.1	*	*	*	*
Special Inspector General for TARP	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Subtotal, programmatic & administrative expenses	151.3	-109.6	-37.3	35.2	12.5	8.4	5.6	2.6	1.4	0.4	0.1	0.1	0.1	0.1
Interest effects:														
Interest transactions with credit financing accounts ²	-2.8	-4.7	-3.0	-7.5	-4.8	-3.0	-2.2	-1.8	-1.7	-1.4	-1.2	-1.0	-0.3	-0.2
Debt service ³	2.8	4.7	3.0	3.3	3.4	3.9	4.7	5.4	5.6	5.5	5.2	4.8	4.6	4.2
Subtotal, interest effects	*	*	*	-4.2	-1.4	0.9	2.5	3.6	3.9	4.1	4.0	3.9	4.4	3.9
Total deficit impact	151.3	-109.6	-37.3	31.0	11.1	9.3	8.1	6.1	5.3	4.4	4.1	3.9	4.5	4.0
Other TARP transactions affecting borrowing from the public														
— net disbursements of credit financing accounts:														
Troubled Asset Relief Program Equity Purchase Financing Account	105.4	-28.5	-2.0	-26.7	-14.9	-15.0	-4.5	-1.2	-3.6	-1.8	-1.2	-3.4	-0.2	-0.2
Troubled Asset Relief Program Direct Loan Financing Account	23.9	18.8	-14.2	-8.3	-8.2	-2.3	-3.0	-2.9	-2.8	-0.3	-0.2	-0.4	.....	.....
Troubled Assets Insurance Financing Fund Guaranteed Loan Financing Account	0.6	1.8	-1.6	*	-0.4	-0.2	-0.1	-*	-*	-*	-*	-*	-*	-*
Troubled Assets Relief Program FHA Refinance Letter of Credit Financing Account .....	.....	.....	-*	-2.8	-2.4	-1.7	0.5	1.5	1.5	1.3	1.1	0.9	.....	.....
Total, other transactions affecting borrowing from the public	129.9	-7.9	-17.8	-37.7	-25.9	-19.1	-7.1	-2.6	-5.0	-0.8	-0.3	-2.9	-0.3	-0.2
Change in debt held by the public	281.2	-117.5	-55.1	-6.7	-14.8	-9.8	1.0	3.5	0.3	3.6	3.8	1.0	4.2	3.8
Debt held by the public	281.2	163.6	108.5	101.8	87.0	77.1	78.2	81.7	81.9	85.5	89.3	90.4	93.6	97.4
As a percent of GDP	2.0%	1.1%	0.7%	0.7%	0.5%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
Debt held by the public net of financial assets:														
Debt held by the public	281.2	163.6	108.5	101.8	87.0	77.1	78.2	81.7	81.9	85.5	89.3	90.4	93.6	97.4
Less financial assets net of liabilities — credit financing account balances:														
Troubled Assets Relief Program Equity Purchase Financing Account	105.4	76.9	74.9	48.2	33.2	18.2	13.6	12.5	8.9	7.1	5.8	2.4	2.1	1.9
Troubled Asset Relief Program Direct Loan Financing Account	23.9	42.7	28.5	20.2	12.0	9.7	6.7	3.8	0.9	0.6	0.5	0.1	0.1	0.1
Troubled Assets Insurance Financing Fund Guaranteed Loan Financing Account	0.6	2.4	0.8	0.8	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Troubled Assets Relief Program FHA Refinance Letter of Credit Financing Account .....	.....	.....	-*	-2.8	-5.1	-6.8	-6.3	-4.8	-3.3	-2.0	-0.9	.....	.....	.....
Total, financial assets net of liabilities	129.9	122.0	104.1	66.4	40.5	21.3	14.2	11.6	6.6	5.7	5.4	2.5	2.3	2.1
Debt held by the public net of financial assets	151.3	41.6	4.4	35.4	46.5	55.8	63.9	70.1	75.3	79.8	83.9	87.8	91.3	95.3
As a percent of GDP	1.1%	0.3%	0.0%	0.2%	0.3%	0.3%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%

* \$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.

rate, consistent with the EESA requirement. For on-going 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 the 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 reflected in the financing accounts.²¹ If these pur-

²¹ For the Making Home Affordable programs and the HFA Hardest Hit Fund, Treasury's purchase of financial instruments does not result in the acquisition of an asset with potential for future cash flows, and therefore are recorded on a cash basis.

chases 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

Estimates of the deficit and debt under TARP transactions calculated on a cash basis are reflected in Table 4–5, for comparison to those estimates in Table 4–4 reported above in which TARP transactions are calculated consistent with FCRA and Section 123 of EESA.

If TARP transactions were reported on a cash basis, the annual budgetary effect would include the full amount of government disbursements for activities such as equity purchases and direct loans, offset by cash inflows from

Table 4–5. TROUBLED ASSET RELIEF PROGRAM EFFECTS ON THE DEFICIT AND DEBT CALCULATED ON A CASH BASIS¹
(Dollars in billions)

	Actual			Estimate											
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Deficit effect:															
Programmatic and administrative expenses:															
Programmatic expenses:															
Equity purchases	217.6	-121.9	-36.8	-16.8	-18.6	-17.4	-6.0	-2.2	-4.5	-2.5	-1.7	-3.8	-0.5	-0.4	
Direct loans and purchases of asset-backed securities ...	61.1	-1.0	-21.3	-4.6	-9.3	-2.7	-3.3	-3.1	-2.9	-0.3	-0.2	-0.4	.....	.....
Guarantees of troubled asset purchases	-0.5	-0.3	-2.3	*	-0.5	-0.2	-0.1	*	*	*	*	*	*	*	
TARP housing programs	*	0.5	1.9	10.9	9.8	6.3	5.6	3.3	2.0	0.8	0.4	0.3	.....	.....
Subtotal, programmatic expenses	278.3	-122.6	-58.5	-10.5	-18.6	-14.0	-3.9	-2.1	-5.5	-2.0	-1.5	-3.9	-0.5	-0.4	
Administrative expenses	0.1	0.2	0.4	0.5	0.3	0.2	0.2	0.2	0.1	0.1	*	*	*	*	
Special Inspector General for TARP	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Subtotal, programmatic & administrative expenses	278.4	-122.3	-58.1	-10.0	-18.2	-13.7	-3.7	-1.9	-5.3	-1.9	-1.4	-3.8	-0.4	-0.4	
Debt service ²	2.8	4.7	3.0	3.3	3.4	3.9	4.7	5.4	5.6	5.5	5.2	4.8	4.6	4.2	
Total deficit impact	281.2	-117.5	-55.1	-6.7	-14.8	-9.8	1.0	3.5	0.3	3.6	3.8	1.0	4.2	3.8	
Change in debt held by the public	281.2	-117.5	-55.1	-6.7	-14.8	-9.8	1.0	3.5	0.3	3.6	3.8	1.0	4.2	3.8	
Debt held by the public	281.2	163.6	108.5	101.8	87.0	77.1	78.2	81.7	81.9	85.5	89.3	90.4	93.6	97.4	
As a percent of GDP	2.0%	1.1%	0.7%	0.7%	0.5%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	
Debt held by the public net of financial assets:															
Debt held by the public	281.2	163.6	108.5	101.8	87.0	77.1	78.2	81.7	81.9	85.5	89.3	90.4	93.6	97.4	
Less financial assets net of liabilities — credit financing account balances:															
Troubled Asset Relief Program Equity Purchase Financing Account	105.4	76.9	74.9	48.2	33.2	18.2	13.6	12.5	8.9	7.1	5.8	2.4	2.1	1.9	
Troubled Asset Relief Program Direct Loan Financing Account	23.9	42.7	28.5	20.2	12.0	9.7	6.7	3.8	0.9	0.6	0.5	0.1	0.1	0.1	
Troubled Assets Insurance Financing Fund Guaranteed Loan Financing Account	0.6	2.4	0.8	0.8	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
FHA Refinance Letter of Credit Financing Account .....	.....	.....	*	-2.8	-5.1	-6.8	-6.3	-4.8	-3.3	-2.0	-0.9	.....	.....	.....
Total, financial assets net of liabilities	129.9	122.0	104.1	66.4	40.5	21.3	14.2	11.6	6.6	5.7	5.4	2.5	2.3	2.1	
Debt held by the public net of financial assets	151.3	41.6	4.4	35.4	46.5	55.8	63.9	70.1	75.3	79.8	83.9	87.8	91.3	95.3	
As a percent of GDP	1.1%	0.3%	0.0%	0.2%	0.3%	0.3%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	

* \$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.

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 guarantee as they occurred. Updates to estimates of future performance would impact the deficit in the year that they occur, and there would not be credit reestimates.

Under cash reporting, TARP would reduce the deficit in 2012 by an estimated \$6.7 billion, so the 2012 deficit would be \$37.7 billion lower if TARP were reflected on a cash basis than the estimate in the Budget. The deficit would be lower because repayments and proceeds of sales that are now included in non-budgetary financing accounts for TARP would be reflected as offsetting receipts when they occur. 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 reestimate, in contrast with 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.

Portion of the Deficit Attributable to TARP, and the Extent to Which the Deficit Impact is Due to a Reestimate

Table 4–4 shows the portion of the deficit attributable to TARP transactions. The largest changes in the overall TARP effects on the deficit are the result of reestimates of TARP activity outstanding as of September 30, 2011, and November 30, 2011. The specific effects are as follows:

- TARP reestimates and interest on reestimates will increase the deficit by \$21.1 billion in 2012, including \$15.2 billion in increased subsidy costs for TARP programs, and \$5.9 billion in interest on reestimates.
- Program costs for purchases of assets including costs associated with PPIP investments, MHA incentive payments, FHA Refinance program loss sharing, and modifications of existing TARP activity (excluding reestimates) are estimated to increase the deficit by \$13.6 billion in 2012, \$3.6 billion less than the estimated 2012 deficit effects reflected in the 2012 MSR. This decrease is primarily due to the extension of TARP housing programs.
- TARP equity purchase outlays in 2012 are estimated to increase the deficit by \$0.2 billion due to the drawing of additional capital by the PPIP fund managers. Subsidy costs associated with new disbursements of direct loans from previous TARP obligations are estimated to result in a \$0.3 billion reduction in net outlays in 2012, largely due to expected returns from PPIP debt purchases. These amounts have not changed since the 2012 MSR. Outlays for the TARP Housing Programs are estimated at \$13.6 billion in 2012, which includes payments under the MHA program, Hardest Hit Fund, and subsidy costs for the FHA Refinance program. Outlays for TARP Housing Program are estimated to increase through 2014, and then decline gradually through 2021.
- Administrative expenses for TARP are estimated at \$0.3 billion in 2013, and expected to decrease annually as TARP winds down through 2022. Costs for the Special Inspector General for TARP are estimated at less than \$0.1 billion in 2013, and are expected to remain relatively stable through 2022.
- 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 \$7.5 billion in 2012 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 estimated at \$3.3 billion for 2012 (as shown in Table 4–4), and then expected to increase to \$5.6 billion by 2017 due to TARP housing. Total debt service will continue over time after the TARP winds down, due to the financing of past TARP costs.

Analysis of TARP Reestimates. The costs of outstanding TARP assistance are reestimated 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 reestimated dollar amounts to be recorded in 2012 reflect TARP disbursements through September 30, 2011, while reestimated subsidy rates reflect the full lifetime costs, including anticipated future disbursements. As noted above, the total increase in the deficit attributable to TARP reestimates in 2012 is \$21.1 billion, reflecting a \$15.2 billion net upward reestimate of the subsidy cost, plus \$5.9 billion in interest on the reestimates. Detailed information on upward and downward reestimates to program is reflected in Table 4–6.

The current reestimate reflects an increase in estimated TARP costs from the 2012 Budget. Increased subsidy costs for AIG investments, AIFP, and the AGP program are due to weaker market conditions and performance expectations compared to 2012 Budget estimates, resulting in a lower estimated value of Treasury holdings. The subsidy cost for outstanding TARP equity is estimated to be substantially lower than originally estimated overall. The majority of reduced subsidy costs reflect significant repayments of CPP and TIP investments by financial institutions and higher-than-anticipated income from dividends and the sale of preferred, common stock or war-

Table 4-6. TROUBLED ASSET RELIEF PROGRAM REESTIMATES

(Dollars in billions)

TARP Program and Cohort Year	Original subsidy rate	Current reestimate rate	Current reestimate amount	Net lifetime reestimate amount, excluding interest	TARP disbursements as of 9/30/2011
Equity programs:					
Automotive Industry Financing Program (Equity)					
2009	54.52%	42.64%	3.6	-3.1	12.5
2010	30.25%	9.68%	0.2	-0.7	3.8
Capital Purchase Program					
2009	26.99%	-5.63%	-1.1	-63.1	204.6
2010	5.77%	18.17%	-0.0	0.0	0.3
AIG Investments					
2009	82.78%	32.85%	14.6	-32.0	67.8
Legacy Securities Public-Private Investment Program					
2009	34.62%	-20.80%	-0.0	-0.3	0.7
2010	22.97%	-45.90%	-2.4	-4.0	6.5
Targeted Investment Program					
2009	48.85%	-8.47%	0.0	-23.2	40.0
Community Development Capital Initiative					
2010	48.06%	27.19%	-0.1	-0.1	0.6
Subtotal equity program reestimates			14.9	-126.4	336.8
Structured and direct loan programs:					
Automotive Industry Financing Program (AIFP)					
2009	58.75%	28.34%	6.2	-17.70	63.4
Legacy Securities Public Private Investment Program					
2009	-2.52%	3.02%	-0.1	0.1	1.4
2010	-10.85%	2.18%	0.3	1.6	13.0
Small Business Lending Initiative 7(a) purchases					
2010	0.48%	-0.86%	-0.0	-0.0	0.4
Term-Asset Backed Securities Loan Facility ¹					
2009	-104.23%	-407.95%	-0.1	-0.3	0.1
Subtotal direct loan program reestimates			6.2	-16.3	78.2
Guarantee programs:					
Asset Guarantee Program ²					
2009	-0.25%	-1.10%	0.0	-1.18	301.0
Total TARP reestimates			21.1	-143.9	716.0

¹ The Term-Asset Backed Securities Loan Facility subsidy rate is calculated as a percent of estimated lifetime disbursements.

² Disbursement amount reflects the face value of assets supported by the guarantee. The TARP obligation for this program was \$5 billion, the maximum contingent liability while the guarantee was in force.

rants in prior years. The \$4.3 billion TALF facility reflects a downward reestimate and is estimated to generate a return of \$0.4 billion to the Treasury, primarily due to fees. The subsidy rate for TALF is based on disbursements, and the Treasury only expects to purchase a small amount of the total \$4.3 billion commitment but will collect fees on the full TALF facility.

Differences Between Current and Previous OMB Estimates

As shown in Table 4-7, the Budget reflects a total TARP deficit impact of \$67.8 billion. This is an increase of \$21.0 billion from the 2012 MSR projection of \$46.8 billion and \$14.6 billion from the June 30th valuation of \$53.2 mil-

lion. This increase is primarily due to increased estimates of the cost of TARP investments and guarantees. The reestimates performed for MSR do not include updates to estimated subsidy rates or market valuations, such as for common stock held by Treasury. Therefore, the June 30th valuation, being more comparable to the reestimates performed for the Budget because it includes adjustments to reflect recent market performance, is presented in Table 4-7 as a source of comparison.

The estimated TARP deficit impact differs from the subsidy cost of \$78.2 billion in the Budget because the deficit impact reflects a \$10.4 billion cumulative downward adjustment for interest on reestimates. These adjustments account for the time between when the subsidy

Table 4–7. DETAILED TARP PROGRAM LEVELS AND COSTS

(In billions of dollars)

Program	June 30th Valuation		2013 Budget	
	TARP Obligations	Subsidy Costs	TARP Obligations	Subsidy Costs
Equity programs:				
Capital Purchase Program	204.9	-7.2	204.9	-6.7
AIG Investments ¹	67.8	19.8	67.8	24.0
Targeted Investment Program	40.0	-3.6	40.0	-3.6
Automotive Industry Financing Program (AIFP)	16.3	3.2	16.3	5.5
Public-Private Investment Program - Equity	7.5	-1.9	7.5	-2.2
Community Development Capital Initiative.	0.6	0.2	0.6	0.2
Subtotal equity programs	337.1	10.4	337.1	17.2
Direct loan programs:				
Automotive Industry Financing Program (AIFP) ²	63.4	16.5	63.4	19.3
Term Asset-Backed Securities Loan Facility (TALF)	4.3	-0.3	4.3	-0.4
Public-Private Investment Program - Debt	14.9	*	14.9	0.2
Small Business 7(a) Program	0.4	*	0.4	*
Subtotal direct loan programs	83.0	16.6	83.0	19.1
Guarantee programs under Section 102:				
Asset Guarantee Program	5.0	-3.7	5.0	-3.6
Non-Add Asset Guarantee Program Face Value	301.0		301.0	
Subtotal asset guarantees	5.0	-3.7	5.0	-3.6
TARP housing programs:				
Making Home Affordable (MHA) Programs	29.9	29.9	29.9	29.9
HFA Hardest Hit Fund	7.6	7.6	7.6	7.6
Subtotal non-credit programs	37.5	37.5	37.5	37.5
FHA Refinance Letter of Credit	8.1	8.1	8.1	8.1
Subtotal TARP housing programs	45.6	45.6	45.6	45.6
Totals	470.7	69.0	470.7	78.2
Memorandum:				
Interest on reestimates ³		-15.8		-10.4
Deficit impact before administrative costs and interest effects		53.2		67.8

* \$50 million or less.

¹ June 30th Valuation reflects the cancelation of AIG's outstanding \$2 billion credit facility with Treasury.² June 30th Valuation reflects the Chrysler Group LLC termination of a remaining \$2.1 billion TARP loan commitment.³ Interest on reestimates is an adjustment for interest effects of changes in TARP subsidy costs from original subsidy estimates; such amounts are a component of the deficit impacts of TARP programs but are not direct programmatic costs.

cost was originally estimated and the time when the reestimate is booked.

Differences Between OMB and CBO Estimates

Table 4–8 compares the subsidy cost for TARP reflected in MSR against the costs estimated by the Congressional Budget Office in its “Report on the Troubled Asset Relief Program – December 2011.”²²

CBO estimates the total cost of TARP at \$34 billion, based on estimated lifetime TARP obligations of \$429 billion. The Budget reflects current estimates of roughly \$471 billion in program obligations, and \$78.2 billion in programmatic costs. Differences in the estimated cost of the TARP Housing programs, which stem from divergent demand and participation rate assumptions, are the main

difference between OMB and CBO cost estimates. The CBO projects \$13 billion in total TARP Housing expenditures, while the Budget reflects a \$46 billion estimate. CBO and OMB cost estimates for the Capital Purchase Program are \$10 billion apart because of different assumptions for the remaining institutions with investments in the program. Similarly, CBO and OMB cost estimates for the Automotive Industry Financing Program are \$5 billion apart due to different assumptions for the future performance of equity investments in the program.

Differences Between EESA and FCRA Cost Estimates

EESA directs that for asset purchases and guarantees under TARP, the cost shall be determined pursuant to the FCRA, except that the discount rate shall be adjusted for market risks. EESA's directive to adjust the FCRA discount rate for market risks effectively assumes higher losses on these transactions than those estimated under

²² United States. Congressional Budget Office. Report on the Troubled Asset Relief Program – December 2011. Washington: CBO, 2011. http://cbo.gov/ftpdocs/126xx/doc12611/12-16-TARP_report.pdf

Table 4–8. COMPARISON OF OMB AND CBO TARP COSTS

(In billions of dollars)

Program	Risk-Adjusted Subsidy Costs	
	CBO Subsidy Cost ¹	OMB Subsidy Cost ²
Capital Purchase Program	-17	-7
Targeted Investment Program	-8	-4
AIG Assistance	25	24
Automotive Industry Financing Program	20	25
Term Asset-Backed Securities Loan Facility	*	—*
Other Programs ³	*	-5
TARP Housing Programs	13	46
Total	34	78

* \$500 million or less.

¹ CBO estimates from December 2011, available online at: http://www.cbo.gov/ftpdocs/126xx/doc12611/12-16-TARP_report.pdf.² Lifetime subsidy costs as reflected in the 2013 Budget, excluding interest on reestimates.³ "Other Programs" reflects an aggregate cost for PPIP (debt and equity purchases), CDCI, AGP, and small business programs.

FCRA guidelines, which require that Treasury rates be used to discount expected cashflows. In implementing this requirement of EESA, the market risk adjustment is intended to capture the cost of the extra return on investment that a private investor would seek in compensation for uncertainty surrounding risks of default and other losses reflected in the cashflows.²³

Table 4–9 compares the subsidy costs and subsidy rates of TARP programs discounted at the Treasury rate adjusted for market risk (EESA), and discounted at the unadjusted Treasury rate (FCRA) using November 30th subsidy cost valuations. The largest differences between these two reflect the most uncertainty regarding the probability of losses. For example, there is greater uncertainty regarding the value of Treasury's mortgage-backed security investments in PPIP than there is compared to the valuation of Treasury's investments in CPP and TALF, and so the difference between the market-risk adjusted cost versus the non-adjusted cost (as a percent change in dollar costs) is greater for PPIP than for CPP and TALF. Removing the market risk adjustment from the discount rate for Treasury's investment in PPIP decreases its subsidy cost by 122 percent (\$2.4 billion), whereas it only decreases the CPP and TALF program by 61 percent (or \$3.0 billion) and 30 percent (or \$0.1 billion), respectively. There is a relatively small difference in the FCRA and market risk cost of AGP because there is only a negligible market risk adjustment for the outstanding \$800 million in additional Citigroup trust preferred securities that the Treasury is entitled to receive from the FDIC. For the TIP there is no difference because the TIP program has been fully repaid and its final value is known. Treasury holdings within the AIG and AIFP programs include sig-

²³ For example, if there were a 100 percent default expectation on a loan, and losses given default were projected at 100 percent, the market risk adjustment to the discount rate would be zero. This reflects the fact that there are no unexpected losses if losses are expected to be 100 percent of the face value of the loan.

nificant amounts of common stock, the value of which is based on the closing November 30, 2011, share price. The share price of common stock is inherently adjusted for market risk and, therefore, there is no additional market risk adjustment necessary for the EESA directive. As a result, there is no difference in the cost of AIG and AIFP between values calculated using the Treasury and risk adjusted rate. The FHA refinance program cost estimate is 53 percent (or \$4.3 billion) lower under FCRA than under EESA due to a relatively large estimated risk premium associated with risk of mortgage defaults (and TARP losses). The non-credit TARP Housing programs are reflected on a cash basis and, therefore, costs are not discounted, which is why there is no difference in the subsidy cost estimate. Using November 30, 2011, valuations, TARP investments discounted at a risk adjusted rate will cost an estimated \$78.2 billion, which suggests a net subsidy rate of 17 percent. TARP investments discounted under FCRA will cost an estimated \$67.3 billion, or a net subsidy rate of 14 percent.

TARP OVERSIGHT AND ACCOUNTABILITY

Ensuring effective internal controls and monitoring of TARP programs and funds to protect taxpayer investments remains a top priority of TARP staff and those offices charged with TARP oversight and accountability. The Treasury has implemented a comprehensive set of assessments geared toward identifying risks, evaluating their potential impact, and prioritizing resource assignments to manage risks based on a combined top-down and bottom-up assessment of risk. The Internal Control Review organization within the Office of Financial Stability (OFS) utilizes the assessments to ensure appropriate coverage of high-impact areas. A Senior Assessment Team and the Internal Control Program Office guide OFS efforts to meet all applicable requirements for a sound system of internal controls, and to review and respond to all recom-

Table 4–9. COMPARISON OF EESA AND FCRA TARP SUBSIDY COSTS USING 2013 BUDGET VALUATIONS

(In billions of dollars)

Program	TARP Obligations ¹	Subsidy Cost	
		EESA	FCRA
Equity, direct loan, and asset guarantee programs:			
Capital Purchase Program	204.9	-6.7	-10.7
Targeted Investment Program	40.0	-3.6	-3.6
Asset Guarantee Program	5.0	-3.6	-3.7
Community Development Capital Initiative	0.6	0.2	0.1
Term Asset-Backed Securities Loan Facility	4.3	-0.4	-0.5
Small Business 7(a) Program	0.4	*	*
Public Private Investment Program ²	22.4	-2.0	-4.4
AIG Investments	67.8	24.0	24.0
Automotive Industry Financing Program ²	79.7	24.8	24.8
Subtotal TARP equity, direct loans, and guarantee programs.....	425.1	32.6	26.0
TARP housing programs:			
Making Home Affordable Programs ³	29.9	29.9	29.9
HFA Hardest Hit Fund ³	7.6	7.6	7.6
Subtotal non-credit programs	37.5	37.5	37.5
FHA Refinance Letter of Credit	8.1	8.1	3.8
Subtotal TARP Housing	45.6	45.6	41.3
Total ⁴	470.7	78.2	67.3

* \$50 million or less.

¹ TARP obligations reflect the cancellation of AIG's outstanding \$2 billion credit facility with Treasury and the Chrysler Group LLC termination of a remaining \$2.1 billion TARP loan commitment.² Rates for PPIP and AIFP reflect weighted average subsidy costs across various instruments.³ TARP Making Home Affordable Programs and HFA Hardest Hit Fund involve financial instruments without any provision for income or other returns, and are recorded on a cash basis. The table reflects 100 percent subsidy cost for these programs.⁴ Total subsidy costs do not include interest effects or administrative costs.

mentations made by the four TARP oversight bodies—the Special Inspector General for TARP (SIGTARP), the Government Accountability Office (GAO), the Financial Stability Oversight Board, and the Congressional Oversight Panel (terminated April 3, 2011). The soundness of Treasury's TARP compliance monitoring, internal control, and risk management policies and processes are reflected in the clean opinions issued by GAO after its audit of TARP financial statements for 2009, 2010 and 2011 and the associated internal control over financial reporting.

The Treasury has issued regulations governing executive compensation and conflicts of interest related to TARP program administration and participation. Compliance with these rules is monitored on an ongoing basis, and reviews of participant conduct and program administration are conducted as appropriate. In executing its responsibility for monitoring compliance with executive com-

penetration requirements, the Treasury has also created an Office of the Special Master for TARP to review TARP participant compliance with applicable legal and regulatory authority, and to recommend action to the Secretary when compensation is found to be awarded in a manner or amount deemed contrary to the public interest.

Special Inspector General for TARP (SIGTARP)

Section 121 of EESA created the Special Inspector General for the Troubled Asset Relief Program (SIGTARP) to prevent fraud, waste, and abuse in the administration of TARP programs through audits and investigations of the purchase, management, and sales of TARP assets. SIGTARP is required to submit quarterly reports to Congress, and as of its latest report released on October 27, 2011, it has initiated 28 audits, 2 evaluations, and over 150 investigations since its inception.

5. LONG TERM BUDGET OUTLOOK

The horizon for the detailed estimates of receipts and outlays in the President's Budget is 10 years. Accordingly, the account-level estimates in the 2013 Budget extend to 2022. This 10-year horizon reflects a balance between the importance of considering both the current and future implications of budget decisions made today and a practical limit on the construction of detailed budget projections for years in the future.

Decisions made today can have important repercussions beyond the 10-year horizon. It is important to anticipate future budgetary requirements beyond the 10-year horizon, and the effects of changes in policy on those requirements, despite the uncertainty surrounding the assumptions needed for such estimates. Long-run budget projections can be useful in drawing attention to potential problems that could become unmanageable if allowed to grow.

To this end, the budget projections in this chapter extend the 2013 Budget for 75 years through 2087. Because of the uncertainties involved in making long-run projections, results are presented for a base case and for several alternative scenarios.

The passage of the Affordable Care Act (ACA) in 2010 had a profound effect on these projections. The cost-reduction mechanisms in the ACA significantly reduce projected budget deficits in the long run. In 2011, following weeks of negotiation with the Administration, Congress passed the Budget Control Act of 2011 (BCA). The BCA reduces long-run budget deficits by constraining spending over the next 10 years, and the 2013 Budget includes other initiatives that would help control future deficits if enacted. Nonetheless, the Administration recognizes that there is considerable uncertainty in its long-term projections and that future challenges will require policy responses that have yet to be formulated. The projections in this chapter reflect the fact that, until these reforms are enacted, simply extending current laws and policies leaves the country with a large and growing publicly held debt. Reforms are needed to make sure that overall budgetary resources are sufficient to support future spending and that programs like Medicare Part A and Social Security, which are expected to be financed from dedicated revenue sources, remain self-sustaining. The Administration intends to work with the Congress to develop additional policies that will assure fiscal sustainability in the future.

When the current Administration took office, the budget deficit was rising sharply because of the declining economy and measures taken to revive it. Revenues had fallen, as a share of GDP, to their lowest level since 1950. Spending on programs like unemployment insurance had also risen sharply. The measures taken by the Administration to revive economic growth will also help

to increase revenues, and, over the next ten years, the revenue shortfall is projected to be made up. By 2022, revenues as a share of GDP are projected to be above their historical average over the last 40 years. Meanwhile, measures like the ACA and the BCA along with the proposals in this Budget will constrain future spending and help narrow the deficit. By the end of the period, the primary budget is balanced and the debt-to-GDP ratio will have been stabilized. Beyond the 10-year horizon, however, demographic pressures and continued high costs for health care are likely to begin gradually pushing up the deficit and the ratio of debt to GDP.

The key drivers of the long-range deficit are the Government's major health and retirement programs: Medicare, Medicaid and Social Security. Revenues rise somewhat relative to GDP, but not enough to keep pace with the increase in health and retirement program spending.

- Medicare finances health insurance for most of the Nation's seniors and many individuals with disabilities. Medicare's growth has generally exceeded that of other Federal spending for decades, tracking the rapid growth in overall health care costs. The ACA will curtail this cost growth, but Medicare spending is still projected to reach higher levels relative to the economy and the budget than those that prevail today.
- Medicaid provides medical assistance, including acute and long-term care, to low-income children and families, seniors, and people with disabilities. Medicaid's growth has also generally exceeded that of other Federal spending, and like Medicare it has generally tracked the growth in overall health costs. Medicaid assistance will expand further beginning in 2014 because of broadened coverage provided by the ACA. Medicaid's finances are also expected to benefit from the ACA's reforms.
- Social Security provides retirement benefits, disability benefits, and survivors' insurance for the Nation's workers. Outlays for Social Security benefits will begin to exceed the program's dedicated income in a little more than a decade putting pressure on the overall budget as trust fund balances are drawn down.

Long-range projections for Social Security and Medicare have been prepared for decades, and the actuaries at the Centers for Medicare and Medicaid Services have indicated that they intend to begin producing such projections for Medicaid. This is useful information, but it does not indicate the Government's overall budgetary po-

sition, which is the reason the projections in this chapter offer a useful complement to the long-run projections for the individual programs.

Future budget outcomes depend on a host of unknowns—changing economic conditions, unforeseen international developments, unexpected demographic shifts, the unpredictable forces of technological advance, and evolving political preferences to name a few. These uncertainties make even short-run budget forecasting quite difficult, and the uncertainties increase the further into the future projections are extended. While uncertainty makes forecast accuracy difficult to achieve, it does not detract from the importance of long-run budget projections, because future problems are often best addressed in the present. A full treatment of all the relevant risks is beyond the scope of this chapter, but the chapter does show how sensitive long-run budget projections are to changes in some of key economic and demographic assumptions.

The Long-Run Fiscal Challenge

The 2013 Budget includes \$3 trillion in net deficit reduction over the next 10 years. Combined with the approximately \$1 trillion in savings from the provisions in Title I of the BCA, this would generate more than \$4 trillion in deficit reduction over the next decade. These savings would bring the Nation to the point where current spending is no longer adding to debt and where debt is no longer increasing as a share of the economy—an important milestone on the way to restoring fiscal discipline and moving the budget toward balance. By the end of the 10-year budget window, the policies in this Budget stabilize the deficit at less than 3 percent of GDP. Beyond 2022, however, the fiscal position gradually deteriorates mainly because of the aging of the population and the high continuing cost of the Government's health programs. By 2030, the deficit is projected to be 4.5 percent of GDP, and by 2040 it is nearly 6 percent. The deficit continues to rise for the next 75 years, and the publicly-held debt is also projected to rise persistently relative to GDP (see Chart 5-1).

Health care costs have risen faster than inflation for decades. This rising cost trend has contributed to steady increases in the amounts spent on Medicare and Medicaid, while also making it more difficult for people to afford private health insurance. The ACA tackles both problems by extending health insurance coverage to millions of Americans who currently lack insurance, while making reforms that will slow future growth in medical costs. When the law is fully implemented, Medicare spending per beneficiary would rise at rates substantially below those at which spending has grown for four decades. Even with these changes, however, health care costs are likely to continue to rise faster than inflation as the population ages, posing a danger to long-run budget stability.

Population aging also poses a serious long-run budgetary challenge. Because of lower expected fertility and improved longevity, the Social Security actuaries project that under current law in which the normal retirement age rises to 67, the ratio of workers to Social Security beneficiaries will fall from around 2.9 currently to a little over 2 by the time most of the baby boomers have retired. From that point forward, the ratio of workers to beneficiaries is expected to continue to decline slowly. With fewer workers to pay the taxes needed to support the retired population, budgetary pressures will steadily mount and without reforms, trust fund exhaustion is projected by the Social Security Trustees to occur in 2036. The country also faces the challenge of reforming the tax code to make it fairer and simpler and to provide sufficient revenue to meet long-run commitments. Resolving the long-run fiscal challenge will require a comprehensive approach, one that restrains spending growth but also addresses the sufficiency of the tax code. The 2013 Budget includes several proposed changes to the tax code that would close loopholes and eliminate tax breaks for special interests. It also calls on Congress to undertake comprehensive tax reform to both lower tax rates and generate new revenues.

Long-Run Budget Projections.—In 2011, the three major entitlement programs — Medicare, Medicaid, and Social Security — accounted for 44 percent of non-interest

Chart 5-1. Publicly Held Debt Under 2013 Budget Policy Extended

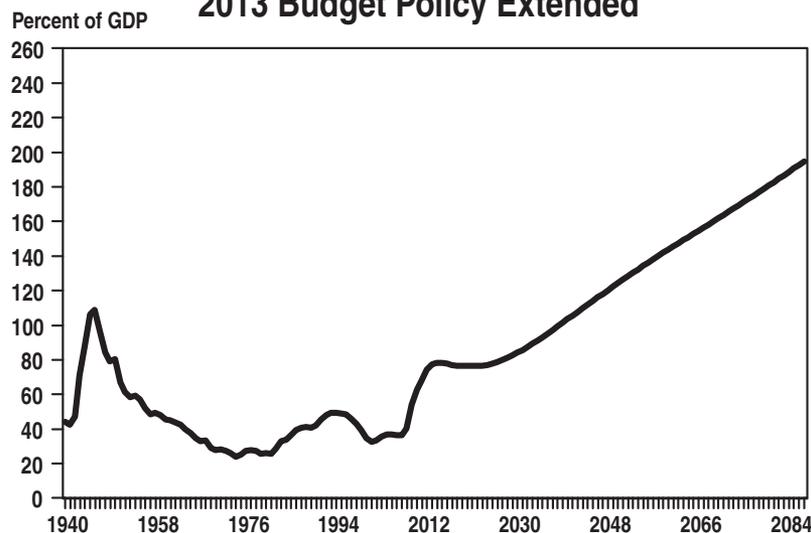


Table 5–1. LONG-RUN BUDGET PROJECTIONS
(Receipts, Outlays, Surplus or Deficit, and Debt as a Percent of GDP)

	1980	1990	2000	2010	2020	2030	2040	2050	2060	2070	2080	2085
Receipts	19.0	18.0	20.6	15.1	19.7	20.0	20.2	20.3	20.5	20.7	20.8	20.9
Outlays:												
Discretionary	10.1	8.7	6.3	9.1	5.3	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Mandatory:												
Social Security	4.3	4.3	4.1	4.9	5.2	5.8	5.8	5.7	5.6	5.7	5.8	5.8
Medicare	1.1	1.7	2.0	3.1	3.3	4.3	4.8	5.0	5.0	5.1	5.1	5.1
Medicaid	0.5	0.7	1.2	1.9	2.2	2.5	2.8	3.0	2.9	2.9	2.9	2.8
Other	3.7	3.2	2.4	3.7	3.4	3.1	2.9	2.8	2.7	2.6	2.6	2.6
Subtotal, mandatory	9.6	9.9	9.7	13.6	14.0	15.8	16.4	16.4	16.3	16.3	16.3	16.3
Net interest	1.9	3.2	2.3	1.4	3.2	3.8	4.6	5.6	6.5	7.3	8.1	8.6
Total outlays	21.7	21.9	18.2	24.1	22.5	24.5	26.0	27.0	27.7	28.6	29.4	29.9
Surplus or deficit (–)	–2.7	–3.9	2.4	–9.0	–2.8	–4.5	–5.8	–6.6	–7.2	–7.9	–8.6	–9.0
Primary surplus/deficit(–)	–0.8	–0.6	4.7	–7.6	0.4	–0.7	–1.2	–1.1	–0.7	–0.6	–0.5	–0.4
Federal debt held by the public, end of period	26.1	42.1	34.7	62.8	76.5	84.2	103.5	124.4	143.7	161.8	180.8	190.6

Note: The figures shown in this table beyond 2020 are the product of a long-range forecasting model maintained by the Office of Management and Budget. This model is separate from the models and capabilities that produce detailed programmatic estimates in the Budget. It was designed to produce long-range projections based on additional assumptions regarding growth in the economy, the long-range evolution of specific programs, and the demographic and economic forces affecting those programs. The model, its assumptions, and sensitivity testing of those assumptions are presented in this chapter.

Federal spending, up from 30 percent in 1980. By 2035, when the surviving baby boomers will all be 70 or older, these three programs could account for more than 60 percent of non-interest Federal spending. Through the end of the projection period, in 2087, this figure would continue to rise gradually. In other words without further reforms, more than three-fifths of the budget, aside from interest, would go to these three programs alone. That would severely reduce the flexibility of the budget, and the Government's ability to respond to new challenges.

Because of these pressures, further cost-reducing measures or additional revenues are needed to stabilize the budget outlook in the long run. The budget projections shown in Table 5–1 illustrate that point. The policies in the 2013 Budget, would stabilize the budget outlook over the next 10 years by generating \$3 trillion in additional deficit reduction. However, after stabilizing the debt-to-GDP ratio over that time period, the deficit and the debt-ratio begin to rise again in the period after 2022, with the debt-to-GDP ratio eventually far exceeding its previous peak level reached at the end of World War II. The policies in the 2013 Budget will allow more time to develop long-term policies to address the persistently-rising debt.

Medicare and Medicaid.— In the long-run projections in this chapter, different assumptions about the growth rate of health care costs are made. In the base case, a continuation of current policy assumes that the provisions of the ACA are fully implemented, limiting health care costs in the long run compared with prior law. The long-run Medicare assumptions for the years following the 10-year budget window are essentially the same as those in the latest Medicare Trustees' report (May 2011), which is consistent with how these long-term budget projections have generally been made in the past. The Trustees' projections imply that average long-range annual growth in Medicare spending per enrollee is 0.2 percentage points per year faster than the projected growth rate in GDP per capita. This growth rate for Medicare is significantly smaller than

previous projections prior to the passage of the ACA—a reduction the Trustees largely attribute to the ACA.

Along with the rules for Medicare, there are a number of reforms in the ACA that experts believe could produce significant savings relative to the historical trend and that would affect medical costs more broadly. One is an excise tax on the highest-cost insurance plans, which will encourage substitution of plans with lower costs, while raising take-home pay. There is also an array of delivery system reforms, including incentives for accountable care organizations and payment reform demonstrations that have the potential to re-orient the medical system toward providing higher quality care, not just more care, and thus reduce cost growth in the future.¹ Finally, the ACA established an independent payment advisory board that will be empowered to propose changes in Medicare should Medicare costs exceed the growth rate specified in law. The proposed changes in Medicare would take effect automatically, unless overridden by the Congress. Because of these broader reforms, Medicaid spending per beneficiary and private health spending per capita are also projected to slow, though not as much as Medicare.²

An alternative discussed below assumes that medical costs rise more rapidly than in the base case. This could happen, for example, if future Congresses and Administrations weaken the budgetary discipline embodied in current law. The alternative assumes that costs per beneficiary rise at two percentage points per year above GDP per capita which would continue the historical experience of the last 50 years.

¹ Groups of providers meeting certain criteria can be recognized as accountable care organizations (ACOs), which allow them to coordinate care and manage chronic disease more easily thereby improving the quality of care for patients. ACOs can then share in any cost savings they achieve for Medicare if they meet quality standards.

² The projections assume that growth in Medicaid spending per enrollee and private health spending per capita exceeds growth in GDP per capita by 0.6 percentage points.

Revenues.—Projected revenues in these long-run budget projections start with the estimated receipts under the Administration’s proposals in the 2013 Budget. There is some built-in momentum in the tax code that tends to push up average tax rates over time when real incomes are rising, as assumed in these projections. For example, the tax code is indexed for inflation, but not for increases in real income, so there is a tendency for individual income taxes to increase relative to incomes when real taxable incomes are rising, everything else equal. Historically, Congress has acted to forestall this tendency by periodically lowering tax rates. Beyond the 10-year budget window, the projections in this chapter assume that individual income tax rates will not rise automatically with real wage growth. The projections also assume that the Alternative Minimum Tax (AMT) will not be allowed to expand as it would under current law. In recent years, Congress and the Administration have always acted to curtail the spread of the AMT preventing the increase in revenues from that source implied by current law. While these assumptions tend to limit tax revenue, other assumptions work in the opposite direction. For example, the projections assume that the new revenue provisions in the ACA go into effect including the excise tax on high-premium health plans. On balance, the assumptions produce a gradual increase in the overall share of revenues relative to GDP rising to nearly 21 percent by the end of the long-run projection period. Despite the increase, projected revenues are insufficient to meet the Federal Government’s projected future commitments as shown by the growing deficits in Table 5-1.

Discretionary Outlays.—Because discretionary spending is determined annually through the legislative process, there is no straightforward assumption for projecting its future path. The budget displays a path for discretionary spending over the next 10 years; beyond that time frame, however, there are several different plausible assumptions for the future path. One is to assume that discretionary spending will be held constant in inflation-adjusted terms, which would allow discretionary programs to increase with prices, but would not allow the programs to expand with population or real growth in the economy. Extending this assumption over many decades is not realistic, when the population and economy are projected to grow, as assumed in these projections. Therefore, the base projection assumes that discretionary spending keeps pace with the growth in GDP in the long run. The chapter also uses alternative assumptions for discretionary spending to show other possible paths. It is important to note that these paths are merely illustrative; they are not intended to represent the policy preferences of this Administration or future Administrations.

Table 5-1 shows how the budget would evolve without further changes in policy under the base assumptions described above. The key assumptions are the full implementation of the ACA with its various provisions to control costs and alter incentives for medical practice, the BCA which limits discretionary spending over the next ten years, and the adoption of the proposals in this Budget to control the deficit and reform taxes. Under these as-

sumptions, the future growth of Medicare and Medicaid is projected to slow sharply relative to GDP, and future discretionary spending is much lower relative to GDP than has been true in recent decades. Social Security benefits rise relative to the economy over the next 20 years, but increase more slowly after that as the age composition of the population begins to stabilize. Other mandatory programs generally decline relative to the size of the economy. These include Federal pension benefits for Government workers. The shift in the 1980s from the Civil Service Retirement System (CSRS) to the Federal Employees Retirement System (FERS) is having a marked effect on Federal civilian pensions, which is expected to continue as FERS comes to dominate future pension projections. The defined benefit pension plan in FERS is much smaller than the traditional Federal pension benefit under CSRS. On the revenue side, once tax revenues recover from the economic downturn, revenues gradually grow but by less than future spending. With total outlays increasing more rapidly than taxes, the deficit rises, and publicly held debt exceeds historical levels.

The ACA addresses the single most important long-run challenge to the Nation’s fiscal future, which is rising health care costs. Even with this fundamental change, however, an aging population and a continued high level of health costs will pose serious long-term budget problems. Under current policies, Medicare, Medicaid, and Social Security are projected to absorb a much larger share of Federal resources than in the past, limiting what the Government can do in other areas. The ratio of debt to GDP, which is stabilized within the 10-year budget window, is projected to resume its growth in the long run without further policy changes.

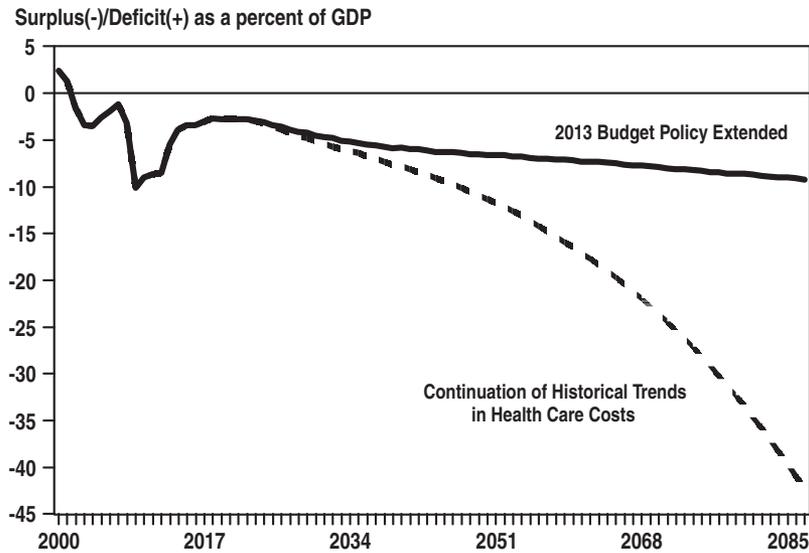
Alternative Policy, Economic, and Technical Assumptions

The quantitative results discussed above are sensitive to changes in underlying policy, economic, and technical assumptions. Some of the most important of these assumptions and their effects on the budget outlook are discussed below. For most plausible alternative projections of long-run trends, the deficit and debt rise even more than in the base projections discussed above.

Health Spending.—The base projections for Medicare and Medicaid over the next 75 years assume an extension of current law. Chart 5-2 shows budget outcomes under these base assumptions and an alternative scenario. The alternative assumes spending per beneficiary grows 2 percentage points faster than GDP per capita, similar to the historical growth rate of medical costs in the United States since 1960.

Discretionary Spending.—The current base projection for discretionary spending assumes that after 2022, discretionary spending keeps pace with the growth in GDP (see Chart 5-3). An alternative assumption would be to allow discretionary spending to increase for inflation and population growth only. In this case, discretionary spending would remain constant in inflation-adjusted per capita terms. Yet another possible assumption is to al-

Chart 5-2. Alternative Health Care Costs



low nondefense discretionary spending to grow with GDP while defense spending is adjusted only for inflation plus one percent real growth per year. This latter combination is somewhat closer to historical experience over the last 60 years.

Alternative Revenue Projections.—In the base projection, tax receipts rise gradually relative to GDP. Chart 5-4 shows alternative receipts assumptions. Allowing receipts to rise by an additional 2 percentage points of GDP relative to the base projections would stabilize the long-run budget deficit. Reducing taxes by 2 percentage points of GDP relative to the base projections would bring the projected rise in the deficit and the publicly-held debt forward in time.

Productivity.—The rate of future productivity growth has a major effect on the long-run budget outlook (see

Chart 5-5). It is also highly uncertain. Over the next few decades, an increase in productivity growth would reduce projected budget deficits. Higher productivity growth adds directly to the growth of the major tax bases, while it has a smaller immediate effect on outlay growth even assuming that discretionary spending rises with GDP. For much of the last century, output per hour in nonfarm business grew at an average rate of around 2.2 percent per year. Growth was not always steady. In the 25 years following 1948, labor productivity in the nonfarm business sector of the economy grew at an average rate of 2.7 percent per year, but this was followed by a period of much slower growth. From 1973 to 1995, output per hour in non-farm business grew at an average annual rate of just 1.5 percent per year. In the latter half of the 1990s, however, the rate of productivity growth increased again

Chart 5-3. Alternative Discretionary Projections

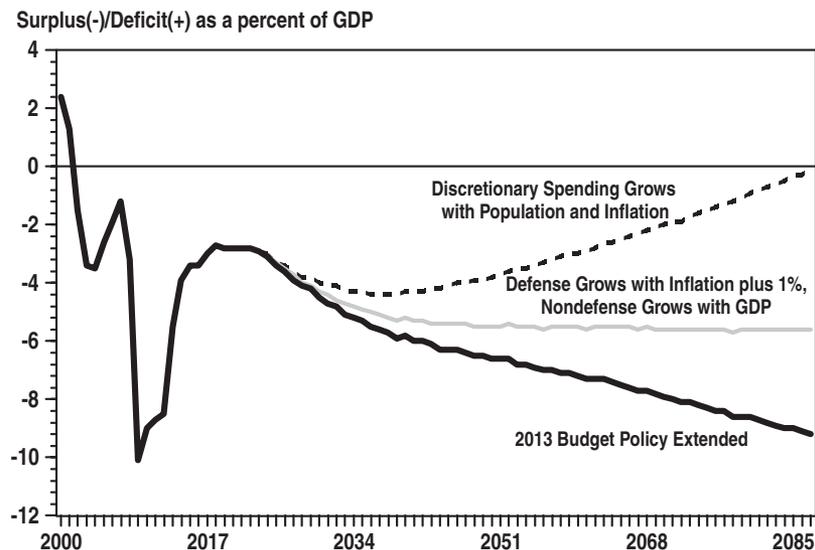
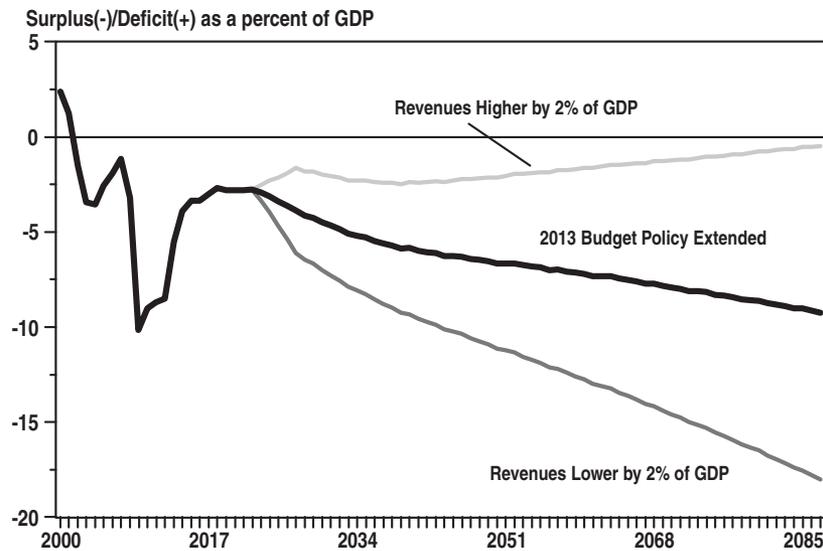


Chart 5-4. Alternative Revenue Projections



and it has remained higher albeit with some fluctuations since then. Indeed, the average growth rate of productivity in nonfarm business has averaged 2.5 percent per year since the fourth quarter of 1995.

The base projections assume that output per hour in nonfarm business will increase at an average annual rate of around 2.3 percent per year, close to its long-run average and slightly below its average growth rate since 1995. This implies that real GDP per hour worked will grow at an average annual rate of 1.9 percent per year. The difference is accounted for by the fact that the sectors of the economy that are counted in GDP outside of the nonfarm business sector tend to have lower productivity growth than nonfarm business does. The alternatives highlight the effect of raising and lowering the projected productivity growth rate by 1/4 percentage point.

Population.—The key assumptions for projecting long-run demographic developments are fertility, immigration, and mortality.

- The demographic projections assume that fertility will average about 2.0 total lifetime births per woman in the future, just slightly below the replacement rate needed to maintain a constant population in the absence of immigration—2.1 births per woman (see Chart 5-6). The alternatives are those in the latest Social Security trustees' report (1.7 and 2.3 births per woman).
- The rate of immigration is assumed to average around 1 million immigrants per year in the long run (see Chart 5-7). Higher immigration relieves some of the downward pressure on population growth from low fertility and allows total population to expand throughout the projection period, although at

Chart 5-5. Alternative Productivity Assumptions

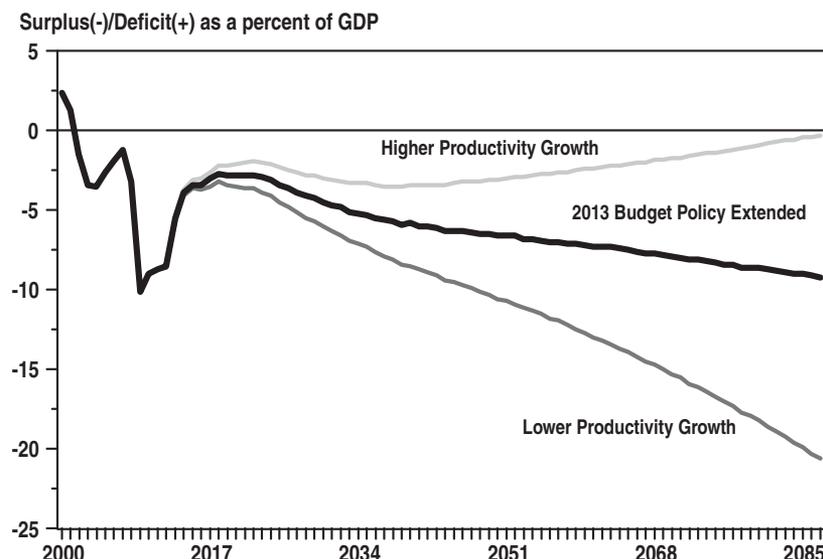
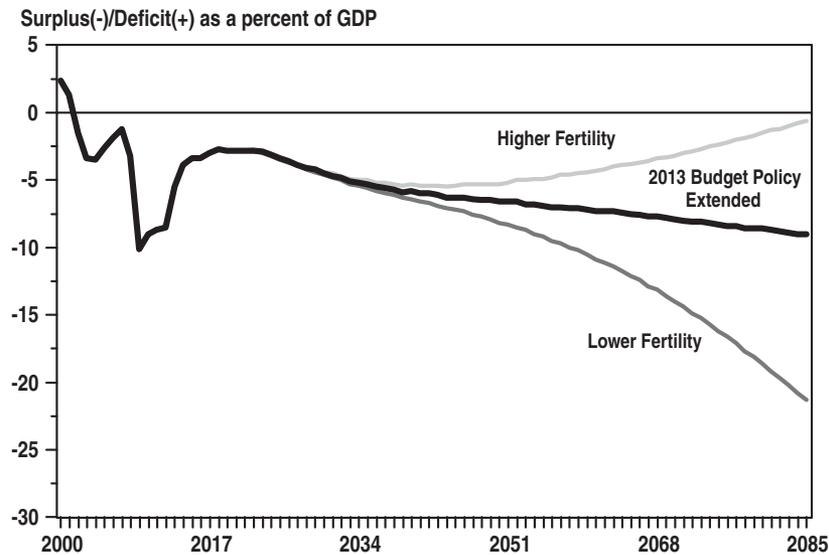


Chart 5-6. Alternative Fertility Assumptions

a much slower rate than has prevailed historically. The alternatives are taken from the Social Security Trustees' Report (1.3 million total immigrants per year in the high alternative and 0.8 million in the low alternative).

- Mortality is projected to decline as people live longer in the future (see Chart 5-8). These assumptions parallel those in the latest Social Security Trustees' Report. The average life expectancy at birth for women is projected to rise from 80.5 years in 2010 to 86.7 years in 2085, and the average for men is expected to increase from 75.8 years in 2010 to 83.3 years in 2085. A technical panel advising the Social Security trustees has reported that the improvement in longevity might be even greater than assumed here. The variations show the high and low alternatives from the latest Trustees' report (average female and

male life expectancy reaching 83.2 and 79.4 in the low cost alternative and 90.3 and 87.6 in the high cost alternative).

The long-run budget outlook is highly uncertain. With pessimistic assumptions, the fiscal picture deteriorates much more than in the base projection. More optimistic assumptions imply a smaller rise in the deficit and the debt. But despite the uncertainty, these projections show under a wide range of forecasting assumptions that overall budgetary resources will be strained in future decades. These projections highlight the need for policy action to address the main drivers of future budgetary costs.

The Fiscal Gap

The fiscal gap is one measure of the size of the adjustment needed to preserve fiscal sustainability in the long

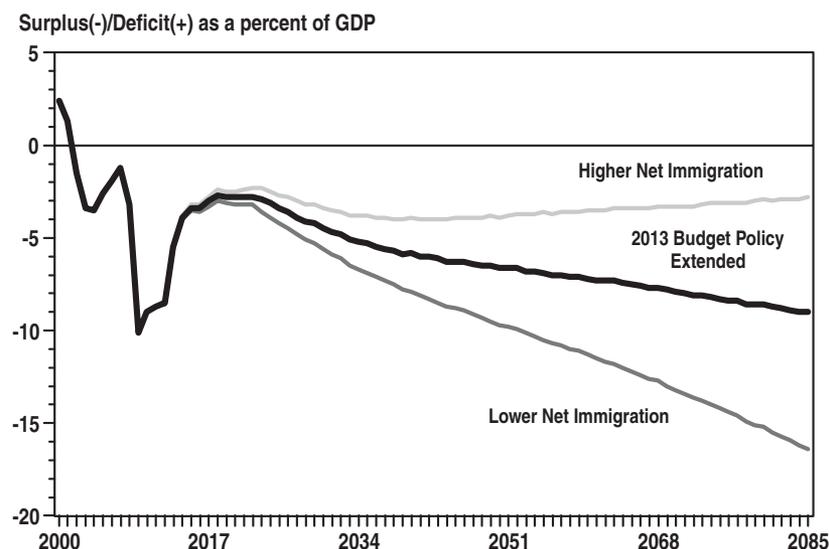
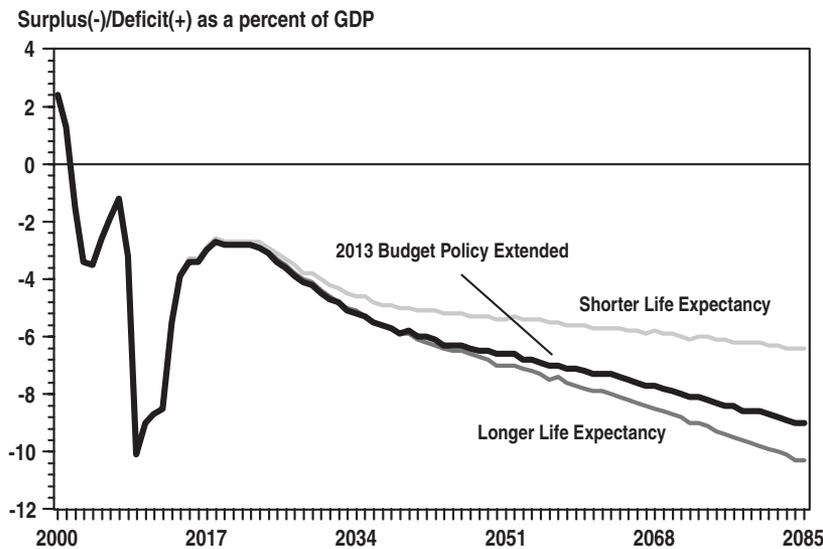
Chart 5-7. Alternative Immigration Assumptions

Chart 5-8. Alternative Mortality Assumptions



run.³ It is defined as the increase in taxes or reduction in non-interest expenditures required to keep the long-run ratio of Government debt-to-GDP at its current level if implemented immediately. The gap is usually measured as a percentage of GDP. The fiscal gap is calculated over a finite time period, and therefore it may understate the adjustment needed to achieve permanent sustainability.

Table 5-2 shows fiscal gap calculations for the base case calculated over a 75-year horizon and for the various

alternative scenarios described above. The fiscal gap in the base case is 1.3 percent of GDP, and it ranges in the alternative scenarios from -0.3 percent of GDP to 5.3 percent of GDP. This suggests that additional reforms are needed to be sure the budget is on a permanently sustainable course in the long run.

Actuarial Projections for Social Security and Medicare

The Trustees for the Medicare Federal Hospital Insurance (HI) and Social Security trust funds issue annual reports that include projections of income and outgo for these funds over a 75-year period. These projections are based on different methods and assumptions than the long-run budget projections presented above. Even with these differences, the message is similar: the ACA is projected to curtail the projected growth in per capita health care costs but even with this reform, the retirement of the baby-boom generation and continuing high medical costs will eventually exhaust the trust funds unless further action is taken.

The 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 period. The estimates cover periods ranging in length from 25 to 75 years. These balance calculations show what it would take to achieve a positive trust fund balance at the end of a specified period of time, not what it would take to maintain a positive balance indefinitely. To maintain a positive balance forever requires a larger adjustment than is needed to maintain a positive balance over 75 years when the annual balance in the program is negative at the end of the 75-year projection period, as it is expected to be for Social Security and Medicare without future reforms.

Table 5-2. 75-YEAR FISCAL GAP UNDER ALTERNATIVE BUDGET SCENARIOS
(Percent of GDP)

Base Case	1.3
Health:	
Excess cost growth averages 2 percent.	5.3
Discretionary Outlays:	
Grow with inflation plus population	-0.1
Defense grows with inflation 1%; nondefense grows with GDP	0.8
Revenues:	
Revenues exceed base case by 2 percent of GDP	-0.3
Revenues fall short of base case by 2 percent of GDP	2.9
Productivity:	
Productivity grows by 0.5 percent per year faster than the base case	-0.2
Productivity grows by 0.5 percent per year slower than the base case	3.0
Population:	
Fertility:	
2.3 births per woman	-0.1
1.7 births per woman	2.8
Immigration:	
1.3 million immigrants per year	0.1
0.8 million immigrants per year	2.6
Mortality in 2085:	
Female life expectancy 83.2; male life expectancy 79.4	1.5
Female life expectancy 90.3; male life expectancy 87.6	1.9

³ Alan J. Auerbach, "The U.S. Fiscal Problem: Where We Are, How We Got Here, and Where We're Going," NBER: Macroeconomics Annual 1994, pp 141 – 175.

Table 5-3. INTERMEDIATE ACTUARIAL PROJECTIONS FOR OASDI AND HI

	2010	2020	2030	2050	2080
	Percent of Payroll				
Medicare Hospital Insurance (HI)					
Income Rate					
2009 Trustees' Report	3.2	3.3	3.4	3.4	3.5
2010 Trustees' Report	3.2	3.4	3.6	3.9	4.3
2011 Trustees' Report	3.2	3.5	3.6	3.9	4.3
Cost Rate					
2009 Trustees' Report	3.6	4.4	6.0	8.7	11.8
2010 Trustees' Report	3.7	3.5	4.3	5.0	4.9
2011 Trustees' Report	3.8	3.6	4.4	5.1	5.0
Annual Balance					
2009 Trustees' Report	-0.4	-1.1	-2.6	-5.3	-8.3
2010 Trustees' Report	-0.5	-0.0	-0.7	-1.1	-0.7
2011 Trustees' Report	-0.6	-0.2	-0.8	-1.2	-0.7
Projection Interval:			25 years	50 years	75 years
Actuarial Balance: 2009 Trustees' Report			-1.4	-2.8	-3.9
Actuarial Balance: 2010 Trustees' Report			-0.3	-0.6	-0.7
Actuarial Balance: 2011 Trustees' Report			-0.5	-0.8	-0.8
	Percent of Payroll				
Old Age Survivors and Disability Insurance (OASDI)					
Income Rate					
2009 Trustees' Report	12.9	13.0	13.2	13.3	13.3
2010 Trustees' Report	12.3	13.1	13.2	13.2	13.3
2011 Trustees' Report	12.5	13.1	13.2	13.2	13.3
Cost Rate					
2009 Trustees' Report	12.5	14.5	16.8	16.6	17.5
2010 Trustees' Report	13.1	14.2	16.4	16.3	17.3
2011 Trustees' Report	13.4	14.2	16.7	16.7	17.4
Annual Balance					
2009 Trustees' Report	0.4	-1.5	-3.6	-3.4	-4.2
2010 Trustees' Report	-0.8	-1.1	-3.2	-3.1	-4.0
2011 Trustees' Report	-0.9	-1.1	-3.4	-3.4	-4.1
Projection Interval:			25 years	50 years	75 years
Actuarial Balance: 2009 Trustees' Report			-0.2	-1.5	-2.0
Actuarial Balance: 2010 Trustees' Report			-0.3	-1.5	-1.9
Actuarial Balance: 2011 Trustees' Report			-0.6	-1.8	-2.2

Table 5-3 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. Data from the 2009 and the 2010 reports are shown along with the latest data from the 2011 reports. The large improvement in the HI Trust Fund balance between 2009 and 2010 can be seen in Table 5-3. This is the result of the passage of the ACA. Even with the ACA there is still a long-run deficit in the HI program, albeit one that is much smaller than projected in 2009 and earlier. These projections assume full implementation of the cost reductions under current law, over the entire long-run projection period. In the 2009 Trustees' report, Medicare HI trust fund costs as a percentage of Medicare covered payroll were projected to rise from 3.6 percent to 11.8 percent between 2010 and 2080

and the HI trust fund imbalance was projected to be -8.3 percent in 2080. In the 2010 report, costs rise from 3.7 percent of Medicare taxable payroll in 2010 to 4.9 percent in 2080 and the imbalance in the HI trust fund in 2080 is -0.7 percent. On average, the HI cost rate has increased slightly in the 2011 report compared with 2010, although the final value of the HI cost rate is slightly lower in the 2011 report than it was in 2010. The large improvement in the trust fund imbalance projected in 2010 is largely unchanged in 2011. Demographic trends and continued high per-person costs combine to explain the continued imbalance in the long-run projections.

Medicare Funding Warning. Under the Medicare Modernization Act (MMA) of 2003, the Medicare Trustees must issue a "warning" when in two consecutive Trustees' reports they project that the share of Medicare funded by

general revenues will exceed 45 percent in the current year or any of the subsequent six years. Such a warning was included in the 2011 Trustees Report. The MMA requires that the President submit legislation, within 15 days of submitting the Budget, which will reduce general revenue funding to 45 percent of overall Medicare outlays or lower in the immediate seven-fiscal-year window. In accordance with the Recommendations Clause of the Constitution, and as the Executive Branch has noted in prior years, the Executive Branch considers this requirement to be advisory and not binding. However, the proposals in this Budget would further strengthen Medicare's finances and extend its solvency.

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. The 2011 Social Security trustees report projects that on a cash-flow basis the trust fund will not return to surplus without further reforms. Consequently, Social Security will no longer act to hold down the unified budget deficit. Even so, the program will continue to experience a surplus for some years because of the Trust Funds' interest earnings. Eventually, 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 from 13.4 percent of Social Security covered payroll in 2010 to 14.2 percent of payroll in 2020, 16.7 percent of payroll in 2030 and 17.4 percent of payroll in 2080. Revenues excluding interest are projected to rise only slightly from 12.5 percent of payroll today to 13.3 percent in 2080. Thus the annual balance is projected to decline from -0.9 percent of payroll in 2010 to -1.1 percent of payroll in 2020, -3.4 percent of payroll in 2030, and -4.1 percent of payroll in 2080. On a 75-year basis, the actuarial deficit is projected to be -2.2 percent of payroll. In the process, the Social Security trust fund, which was built up since 1983, would be drawn down and eventually be exhausted in 2036. 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 would be paid after the trust funds are exhausted. Some benefits, however, could still be partially funded from current revenues. The 2011 Trustees' report presents projections on this point. Beginning in 2036, 77 percent of projected Social Security scheduled benefits would be funded. This percentage would eventually decline to 74 percent by 2085.

TECHNICAL NOTE: SOURCES OF DATA AND METHODS OF ESTIMATING

The long-range budget projections are based on 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 2012-2022, the assumptions are drawn from the Administration's economic projections used for the 2013 Budget. These budget assumptions reflect the President's policy proposals. 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 2011 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—1.9 percent per year.

CPI inflation holds stable at 2.1 percent per year, the unemployment rate is constant at 5.4 percent, the yield on 10-year Treasury notes is steady at 5.3 percent, and the 91-day Treasury bill rate is 4.1 percent. Consistent with the demographic assumptions in the Trustees' reports, U.S. population growth slows from around 1 percent per year to about two-thirds that rate by 2030, and slower rates of growth beyond that point. By the end of the projection period total population growth is as low as 0.4 percent per year. Real GDP growth is projected to

be less than its historical average of around 3.2 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, average real GDP growth averages between 2.3 percent and 2.4 percent per year for the period following the end of the 10-year budget window in 2022.

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 is unrealistic, but it simplifies comparisons of alternative policies.

Budget Projections.—For the period through 2022, receipts follow the 2013 Budget's policy projections. After 2022, total tax receipts rise gradually relative to GDP. Discretionary spending follows the path in the Budget over the next 10 years and grows at the rate of growth in nominal GDP afterwards. Other spending also aligns with the Budget through the budget horizon. Long-run Social Security spending is projected by the Social Security actuaries using this chapter's long-range economic and demographic assumptions. Medicare benefits are projected based on a projection of beneficiary growth and excess health care cost growth from the 2011 Medicare Trustees' report, and the general inflation assumptions described above. Medicaid outlays are based on the economic and demographic projections in the model. 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.

6. FEDERAL BORROWING AND DEBT

Debt is the largest legally and contractually binding obligation of the Federal Government. At the end of 2011, the Government owed \$10,128 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 \$266 billion of interest on this debt. At the same time, the Government also held financial assets, net of other liabilities, of \$958 billion. Therefore, debt net of financial assets was \$9,170 billion, or 61.3 percent of GDP.

The \$10,128 billion debt held by the public at the end of 2011 represents an increase of \$1,109 billion, or 4.9 percent of GDP, over the level at the end of 2010. In 2011, the \$1,300 billion deficit, partially offset by \$190 billion of other financing transactions,¹ caused the Government to increase its borrowing from the public by \$1,109 billion. Debt held by the public increased from 62.8 percent of Gross Domestic Product (GDP) at the end of 2010 to 67.7 percent of GDP at the end of 2011. Meanwhile, assets net of liabilities fell by \$167 billion in 2011, as activities undertaken in previous years to help stabilize credit markets (particularly temporary increases to the Treasury operating cash balance) began to wind down. Debt held by the public net of financial assets increased from 55.0 percent of GDP at the end of 2010 to 61.3 percent of GDP at the end of 2011. The deficit is estimated to increase to \$1,327 billion in 2012, and then begin to fall. Declining deficits and continued GDP growth are estimated to significantly reduce growth in debt as a percentage of GDP; debt net of financial assets is projected to reach 67.1 percent of GDP at the end of 2012 and 69.5 percent at the end of 2013 and then to begin to decline very gradually after 2014.

Trends in Debt Since World War II

Table 6–1 depicts trends in Federal debt held by the public from World War II to the present and estimates from the present through 2017. (It is supplemented for earlier years by Tables 7.1–7.3 in *Historical Tables*, which is published as a separate volume of the Budget.) Federal debt peaked at 108.7 percent of GDP in 1946, just after the end of the war. From then until the 1970s, Federal debt as a percentage of GDP decreased almost every year because of relatively small deficits, an expanding economy, and 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 80.2 percent of GDP

to 25.3 percent, and from 53.3 percent of credit market debt to 18.4 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 after the middle of the decade. The growth of Federal debt accelerated at the beginning of the 1980s, due in large part to a deep recession, and the ratio of Federal debt to GDP grew sharply. It continued to grow throughout the 1980s as large tax cuts, enacted in 1981, and substantial increases in defense spending were only partially offset by reductions in domestic spending. The resulting deficits increased the debt to almost 50 percent of GDP by 1993. The ratio of Federal debt to credit market debt also rose, 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, from 1997 to 2001, as surpluses emerged. Debt fell from 49.3 percent of GDP in 1993 to 32.5 percent of GDP in 2001. Over that same period, debt fell from 26.6 percent of total credit market debt to 17.5 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 impressive progress in reducing the debt burden stopped and then reversed course beginning in 2002. A decline in the stock market, a recession, and the initially slow recovery from that recession all reduced tax receipts. The tax cuts of 2001 and 2003 had a similarly large and longer-lasting effect, as did the growing costs of the wars in Iraq and Afghanistan. Deficits ensued and debt began to rise, both in nominal terms and as a percentage of GDP. There was a small temporary improvement in 2006 and 2007 as economic growth led to a short-lived revival of receipt growth.

As a result of the most recent recession, which began in December 2007, and the massive financial and economic challenges it imposed on the Nation, the deficit began increasing rapidly in 2008. The deficit increased more substantially in 2009 as the Government continued to take aggressive steps to restore the health of the

¹ For further discussion of these other financing transactions, see the discussion in the "Government Deficits or Surpluses and the Change in Debt" section of this chapter and the presentation in Table 6-2.

Table 6-1. TRENDS IN FEDERAL 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 as a percent of: ³	
	Current dollars	FY 2011 dollars ¹	GDP	Credit market debt ²	Total outlays	GDP
1946	241.9	2,324.7	108.7	N/A	7.4	1.8
1950	219.0	1,712.9	80.2	53.3	11.4	1.8
1955	226.6	1,557.3	57.2	43.2	7.6	1.3
1960	236.8	1,444.9	45.6	33.7	8.5	1.5
1965	260.8	1,487.7	37.9	26.9	8.1	1.4
1970	283.2	1,343.4	28.0	20.8	7.9	1.5
1975	394.7	1,377.8	25.3	18.4	7.5	1.6
1980	711.9	1,718.7	26.1	18.5	10.6	2.3
1985	1,507.3	2,773.7	36.4	22.3	16.2	3.7
1990	2,411.6	3,800.7	42.1	22.6	16.2	3.5
1995	3,604.4	5,004.6	49.1	26.7	15.8	3.3
2000	3,409.8	4,358.5	34.7	19.1	13.0	2.4
2001	3,319.6	4,145.5	32.5	17.5	11.6	2.1
2002	3,540.4	4,349.4	33.6	17.5	8.9	1.7
2003	3,913.4	4,711.4	35.6	17.8	7.5	1.5
2004	4,295.5	5,043.6	36.8	17.4	7.3	1.4
2005	4,592.2	5,222.2	36.9	17.1	7.7	1.5
2006	4,829.0	5,311.0	36.6	16.5	8.9	1.8
2007	5,035.1	5,378.6	36.3	15.8	9.2	1.8
2008	5,803.1	6,058.4	40.5	17.1	8.7	1.8
2009	7,544.7	7,764.6	54.1	21.3	5.7	1.4
2010	9,018.9	9,196.4	62.8	24.7	6.6	1.6
2011	10,128.2	10,128.2	67.7	26.8	7.4	1.8
2012 estimate	11,578.1	11,367.7	74.2	N/A	7.1	1.7
2013 estimate	12,636.7	12,204.7	77.4	N/A	7.9	1.8
2014 estimate	13,445.3	12,779.9	78.4	N/A	9.2	2.1
2015 estimate	14,197.6	13,257.5	78.1	N/A	10.9	2.4
2016 estimate	14,980.2	13,741.0	77.8	N/A	12.5	2.8
2017 estimate	15,713.5	14,158.8	77.1	N/A	13.8	3.1

N/A = Not available.

¹ Debt in current dollars deflated by the GDP chain-type price index with fiscal year 2011 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).

Nation's economy and financial markets. The deficit fell somewhat in 2010 and increased only slightly in 2011. The deficit is projected to increase in 2012 but then to recede thereafter. Debt held by the public as a percent of GDP is estimated to grow to 74.2 percent at the end of 2012 and 77.4 percent at the end of 2013. Debt net of financial assets as a percent of GDP is estimated to grow to 67.1 percent at the end of 2012 and 69.5 percent at the end of 2013 and then to begin to decline slowly after

2014. To ensure continued reductions in the debt in relation to the economy, the Administration has proposed a budget enforcement mechanism that sets declining annual ceilings for debt net of financial assets as a percentage of GDP, beginning with 2014. Under the proposal, the ceilings would be enforced by automatic reductions in spending and tax expenditures. For further discussion of this "debt trigger" mechanism, see Chapter 14, "Budget Process," in this volume.

Debt Held by the Public and Gross Federal Debt

The Federal Government issues debt securities for two principal purposes. First, it borrows from the public to finance the Federal deficit.² Second, it issues debt to Federal Government accounts, primarily trust funds, which 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 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.⁴ 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, with the Federal Government’s recent extraordinary efforts to stabilize credit markets, the Government used the borrowed funds to acquire financial assets that would otherwise have required 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.)

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 charges 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 93 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.⁵

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. Chapter 5, “Long-Term Budget Outlook,” projects Social Security and Medicare outlays to the year 2085 relative

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 6–4, but also the debt of the Government-Sponsored Enterprises listed in Table 23–9 at the end of Chapter 23, “Credit and Insurance,” and certain Government-guaranteed securities.

⁴ The Federal subsector of the national income and product accounts provides a measure of “net government saving” (based on current expenditures and current receipts) that can be used to analyze the effect of Federal fiscal policy on national saving within the framework of an integrated set of measures of aggregate U.S. economic activity. The Federal subsector and its differences from the budget are discussed in Chapter 29, “National Income and Product Accounts.”

⁵ 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 Treasury Department in coordination with the Office of Management and Budget.

Table 6–2. FEDERAL GOVERNMENT FINANCING AND DEBT
(In billions of dollars)

	Actual 2011	Estimate										
		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Financing:												
Unified budget deficit	1,299.6	1,326.9	901.4	667.8	609.7	648.8	612.4	575.5	625.7	657.9	680.7	704.3
Other transactions affecting borrowing from the public:												
Changes in financial assets and liabilities: ¹												
Change in Treasury operating cash balance	-251.7	1.9										
Net disbursements of credit financing accounts:												
Direct loan accounts	49.5	138.5	162.1	156.6	148.6	135.5	125.7	116.8	109.6	108.0	106.5	110.8
Guaranteed loan accounts	10.3	9.6	11.5	0.6	-0.3	1.3	-0.2	1.3	0.8	-1.6	-5.1	-5.4
Troubled Asset Relief Program equity purchase accounts	-2.0	-26.7	-14.9	-15.0	-4.5	-1.2	-3.6	-1.8	-1.2	-3.4	-0.2	-0.2
Subtotal, net disbursements	57.9	121.4	158.6	142.2	143.8	135.6	122.0	116.3	109.1	103.0	101.1	105.1
Net purchases of non-Federal securities by the National Railroad Retirement Investment Trust ...	-1.3	-0.3	-1.4	-1.4	-1.2	-1.7	-1.1	-1.2	-1.3	-1.2	-1.2	-1.0
Net change in other financial assets and liabilities ² ..	4.9											
Subtotal, changes in financial assets and liabilities	-190.3	123.0	157.3	140.8	142.6	133.9	120.8	115.1	107.8	101.8	99.9	104.1
Seigniorage on coins		-0.1	*	*	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Total, other transactions affecting borrowing from the public	-190.3	122.9	157.2	140.8	142.6	133.9	120.8	115.0	107.8	101.8	99.8	104.1
Total, requirement to borrow from the public (equals change in debt held by the public) ...	1,109.3	1,449.9	1,058.6	808.6	752.3	782.6	733.2	690.5	733.5	759.6	780.5	808.4
Changes in Debt Subject to Statutory Limitation:												
Change in debt held by the public	1,109.3	1,449.9	1,058.6	808.6	752.3	782.6	733.2	690.5	733.5	759.6	780.5	808.4
Change in debt held by Government accounts	126.1	136.8	138.4	143.4	174.4	182.3	201.4	228.4	173.5	164.8	150.9	123.8
Less: change in debt not subject to limit and other adjustments	0.3	0.7	1.1	0.8	0.8	1.8	1.1	1.0	1.2	1.2	1.9	1.8
Total, change in debt subject to statutory limitation	1,235.7	1,587.3	1,198.2	952.8	927.5	966.7	935.7	919.9	908.2	925.7	933.3	934.0
Debt Subject to Statutory Limitation, End of Year:												
Debt issued by Treasury	14,737.2	16,323.3	17,520.0	18,471.5	19,398.0	20,363.4	21,298.5	22,217.8	23,125.3	24,050.9	24,984.2	25,918.2
Less: Treasury debt not subject to limitation (-) ³	-9.4	-8.1	-6.7	-5.3	-4.3	-3.0	-2.3	-1.8	-1.1	-1.1	-1.1	-1.2
Agency debt subject to limitation	*	*	*	*	*	*	*	*	*	*	*	*
Adjustment for discount and premium ⁴	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7	18.7
Total, debt subject to statutory limitation ⁵	14,746.6	16,333.9	17,532.1	18,484.9	19,412.5	20,379.2	21,314.9	22,234.8	23,142.9	24,068.6	25,001.8	25,935.8
Debt Outstanding, End of Year:												
Gross Federal debt: ⁶												
Debt issued by Treasury	14,737.2	16,323.3	17,520.0	18,471.5	19,398.0	20,363.4	21,298.5	22,217.8	23,125.3	24,050.9	24,984.2	25,918.2
Debt issued by other agencies	27.0	27.6	27.9	28.5	28.7	28.2	27.8	27.4	26.9	25.6	23.7	21.9
Total, gross Federal debt	14,764.2	16,350.9	17,547.9	18,500.0	19,426.7	20,391.7	21,326.3	22,245.2	23,152.1	24,076.6	25,008.0	25,940.1
Held by:												
Debt held by Government accounts	4,636.0	4,772.8	4,911.2	5,054.7	5,229.1	5,411.4	5,612.8	5,841.3	6,014.7	6,179.5	6,330.4	6,454.2
Debt held by the public ⁷	10,128.2	11,578.1	12,636.7	13,445.3	14,197.6	14,980.2	15,713.5	16,403.9	17,137.4	17,897.1	18,677.6	19,485.9

*\$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 or held 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 \$16,394 billion, as increased after January 27, 2012.

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 2011, the Federal Reserve Banks held \$1,664.7 billion of Federal securities and the rest of the public held \$8,463.5 billion. Debt held by the Federal Reserve Banks is not estimated for future years.

to GDP. The excess of future Social Security and Medicare benefits relative 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 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 6–2 summarizes Federal borrowing and debt from 2011 through 2022.⁶ In 2011 the Government borrowed \$1,109 billion, increasing the debt held by the public from \$9,019 billion at the end of 2010 to \$10,128 billion at the end of 2011. The debt held by Government accounts increased \$126 billion, and gross Federal debt increased by \$1,235 billion to \$14,764 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.⁷ Table 6–2 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 Federal 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 3, “Interactions Between the Economy and the Budget,” in this volume.

The total or unified budget surplus consists of two parts: the on-budget surplus or deficit; and the surplus of the off-budget Federal entities, which have been excluded from the budget by law. Under present law, the off-budget Federal entities are the Social Security trust funds (Old-Age and Survivors Insurance and Disability Insurance) and the Postal Service fund.⁸ 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. As a result of the Government’s recent extraordinary efforts to stabilize the Nation’s credit markets, these other factors have had significantly increased effects on borrowing from the public. The other transactions affecting borrowing from the public are presented in Table 6–2 (an increase in the need to borrow is represented by a positive sign, like the deficit).

In 2011 the deficit was \$1,300 billion while these other factors—primarily the change in the Treasury operating cash balance, partly offset by the net activity of credit financing accounts—reduced the need to borrow by \$190 billion. As a result, the Government borrowed \$1,109 billion from the public. The other factors are estimated to increase borrowing by \$123 billion in 2012 and \$157 billion in 2013. In 2014–2022, these other factors are expected to increase borrowing by annual amounts ranging from \$100 billion to \$143 billion.

Prior to 2008, the effect of these other transactions had been much smaller. In the 20 years between 1988 and 2007, the cumulative deficit was \$2,956 billion, the increase in debt held by the public was \$3,145 billion, and other factors added a total of \$190 billion of borrowing, 6 percent of total borrowing over this period. By contrast, the other factors resulted in more than 40 percent of the total increase in borrowing from the public for 2008, nearly 20 percent of the increase for 2009, and over 12 percent of the increase for 2010. In 2011, the other factors reduced borrowing by about 15 percent.

Three specific factors presented in Table 6–2 are especially important.

Change in Treasury operating cash balance.—In 2008–2011, changes in the cash balance were largely driven by fluctuations in the temporary Supplementary Financing Program (SFP). Under the SFP, Treasury issued short-term debt and deposited the cash proceeds with the Federal Reserve for use by the Federal Reserve in its actions to stabilize the financial markets. The cash balance increased by a record \$296 billion in 2008, primarily as a result of the creation of the SFP. In 2009, the cash balance decreased by \$96 billion, due to a \$135 billion reduction in the SFP balance offset by a \$38 billion increase in the non-SFP cash balance. In 2010, the cash balance increased by \$35 billion, to \$310 billion, due nearly entirely to an increase in the SFP balance. In 2011, the cash balance decreased by \$252 billion to \$58 billion, due largely to a \$200 billion decrease in the SFP balance. As the Federal Government neared the debt ceiling, the SFP balance was reduced down to zero. In the 10 years preceding 2008, changes in the cash balance had been much smaller, ranging from a decrease of \$26 billion in 2003 to an increase of \$23 billion in 2007. The operating cash balance is projected to increase by \$2 billion, to \$60 billion at the end of 2012. Changes in the operating cash balance, while occasionally large, are inherently limited over time. 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.

⁶ For projections of the debt beyond 2022, see Chapter 5, “Long-Term Budget Outlook.”

⁷ 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.

⁸ For further explanation of the off-budget Federal entities, see Chapter 13, “Coverage of the Budget.”

Net financing disbursements of the direct loan and guaranteed loan financing accounts.—Under the Federal Credit Reform Act of 1990 (FCRA), budget outlays for direct loans and loan guarantees consist of the estimated subsidy cost of the loans or guarantees at the time when the direct loans are disbursed or the guaranteed loans are made. The cash flows to and from the public resulting from these loans and guarantees—the disbursement and repayment of loans, the default payments on loan guarantees, the collections of interest and fees, and so forth—are not costs (or offsets to costs) to the Government except for their subsidy costs (the present value of the estimated net losses), which are already included in budget outlays. Therefore, although they affect Treasury’s net borrowing requirements, they are non-budgetary in nature and are recorded as transactions of the non-budgetary financing account for each credit program.⁹

The financing accounts also include several types of intragovernmental transactions. In particular, they receive payment from the credit program accounts for the costs of new direct loans and loan guarantees; they also receive payment for any upward reestimate of the costs of direct loans and loan guarantees outstanding. These collections are offset against the gross disbursements of the financing accounts in determining the accounts’ total net cash flows. The gross disbursements include outflows to the public—such as of loan funds or default payments—as well as the payment of any downward reestimate of costs to budgetary receipt accounts. The total net cash flows 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 financing accounts do not affect Federal borrowing from the public. Although the deficit changes because of the budget’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, financing account receipts from the public 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 budget receipts.

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 2011, due primarily to the Troubled Asset Relief Program (TARP) and student loan programs, down-

ward reestimates were significantly larger than upward reestimates, resulting in a net downward reestimate of \$71 billion. In 2012, there is a net upward reestimate of \$14 billion, due largely to upward reestimates in the TARP and Federal Housing Administration Mutual Mortgage Insurance programs.

The impact of the net financing disbursements on borrowing increased significantly in 2009, largely as a result of Government actions to address the Nation’s financial and economic challenges including through TARP, purchases of mortgage-backed securities issued or guaranteed by the Government-Sponsored Enterprises (GSEs), and the Temporary Student Loan Purchase Program. Net financing disbursements increased from \$33 billion in 2008 to a record \$406 billion in 2009. In 2010, borrowing due to financing accounts fell by more than half, to \$153 billion, due in part to large repayments of TARP assistance. In 2011, borrowing due to financing accounts fell to \$58 billion, due largely to sales of GSE mortgage-backed securities. In 2012 credit financing accounts are projected to increase borrowing by \$121 billion. After 2012, the credit financing accounts are expected to increase borrowing by amounts ranging from \$101 billion to \$159 billion over the next 10 years.

Net purchases of non-Federal securities by the National Railroad Retirement Investment Trust (NRRIT).—This trust fund was established by the Railroad Retirement and Survivors’ Improvement Act of 2001. In 2003, most of the assets in the Railroad Retirement Board trust funds were transferred to the NRRIT trust fund, which invests its assets primarily in private stocks and bonds. The Act required special treatment of the purchase or sale of non-Federal assets by this trust fund, treating such purchases as a means of financing rather than 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 factors and, with the opposite sign, in NRRIT’s net outlays in the deficit, for no net impact on borrowing from the public. The increased borrowing associated with the initial transfer expanded publicly held debt by \$20 billion in 2003. Net transactions in subsequent years have been much smaller. In 2011, net reductions, including redemptions and losses, were \$1 billion. Net redemptions of \$0.3 billion are projected for 2012 and net redemptions of roughly \$1 billion annually are projected for subsequent years.¹⁰

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 92 percent of the total Federal debt held by Government accounts at the end of 2011. In 2011, the total trust fund surplus was \$97 billion, and trust funds invested \$99 billion in Federal securities. Investment may differ somewhat from the surplus due to

⁹ The Federal Credit Reform Act of 1990 (sec. 505(b)) requires that the financing accounts be non-budgetary. As explained in Chapter 13, “Coverage of the Budget,” they are non-budgetary in concept because they do not measure cost. For additional discussion of credit programs, see Chapter 23, “Credit and Insurance,” and Chapter 12, “Budget Concepts.”

¹⁰ The budget treatment of this fund is further discussed in Chapter 12, “Budget Concepts.”

changes in the amount of cash assets not currently invested. 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 6–5.

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 must 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 U.S. 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 loans. Similarly, when the National Railroad Retirement Investment Trust 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 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 net of financial assets than they do the debt held by the public.

The magnitude and the significance of the Government's financial assets increased greatly from the later part of 2008 through 2010, as a result of Government actions, such as implementation of TARP, to address the challenges facing the Nation's financial markets and economy.¹¹ In 2011, as some of these activities continued to wind down, the Government's net financial assets decreased from \$1,125 billion to \$958 billion.

Table 6–3 presents debt held by the public net of the Government's financial assets and liabilities, or “net debt.” Treasury debt is presented in the Budget at book value, with no adjustments for the change in economic

¹¹ For more information on these activities, see Chapter 4, “Financial Stabilization Efforts and Their Budgetary Effects.”

Table 6–3. DEBT HELD BY THE PUBLIC NET OF FINANCIAL ASSETS AND LIABILITIES

(Dollar amounts in billions)

	Actual	Estimate										
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Debt Held by the Public:												
Debt held by the public	10,128.2	11,578.1	12,636.7	13,445.3	14,197.6	14,980.2	15,713.5	16,403.9	17,137.4	17,897.1	18,677.6	19,485.9
As a percent of GDP	67.7%	74.2%	77.4%	78.4%	78.1%	77.8%	77.1%	76.5%	76.4%	76.5%	76.5%	76.5%
Financial Assets Net of Liabilities:												
Treasury operating cash balance	58.1	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Credit financing account balances:												
Direct loan accounts	717.5	856.0	1,018.1	1,174.7	1,323.3	1,458.8	1,584.5	1,701.3	1,810.9	1,918.9	2,025.4	2,136.2
Guaranteed loan accounts	-22.1	-12.5	-1.0	-0.3	-0.6	0.7	0.5	1.8	2.6	1.0	-4.1	-9.5
TARP equity purchase accounts	74.9	48.2	33.2	18.2	13.6	12.5	8.9	7.1	5.8	2.4	2.1	1.9
Subtotal, credit financing account balances	770.3	891.7	1,050.3	1,192.5	1,336.3	1,472.0	1,593.9	1,710.2	1,819.3	1,922.3	2,023.5	2,128.6
Government-sponsored enterprise preferred stock	133.0	163.6	173.4	176.5	176.5	176.5	176.5	176.5	176.5	176.5	176.5	176.5
Non-Federal securities held by NRRIT	21.4	21.1	19.8	18.4	17.2	15.5	14.4	13.2	11.9	10.7	9.5	8.5
Other assets net of liabilities	-25.1	-25.1	-25.1	-25.1	-25.1	-25.1	-25.1	-25.1	-25.1	-25.1	-25.1	-25.1
Total, financial assets net of liabilities	957.8	1,111.4	1,278.4	1,422.4	1,565.1	1,699.0	1,819.8	1,934.9	2,042.7	2,144.5	2,244.4	2,348.6
Debt Held by the Public Net of Financial Assets and Liabilities:												
Debt held by the public net of financial assets	9,170.4	10,466.7	11,358.3	12,022.9	12,632.5	13,281.2	13,893.6	14,469.0	15,094.7	15,752.5	16,433.1	17,137.3
As a percent of GDP	61.3%	67.1%	69.5%	70.1%	69.5%	69.0%	68.2%	67.5%	67.3%	67.3%	67.3%	67.2%

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. NRRIT's holdings of non-Federal securities are marked to market on a monthly basis. GSE preferred stock is measured at market value.

At the end of 2011, debt held by the public was \$10,128 billion, or 67.7 percent of GDP. The Government held \$958 billion in net financial assets, including a cash balance of \$58 billion, net credit financing account balances of \$770 billion,¹² and other assets and liabilities that aggregated to a net asset of \$129 billion. Therefore, debt net of financial assets was \$9,170 billion, or 61.3 percent of GDP. As shown in Table 6-3, the value of the Government's net financial assets is projected to increase to \$1,111 billion in 2012, due largely to increases in the net balances of credit financing accounts. While debt held by the public is expected to increase from 67.7 percent to 74.2 percent of GDP during 2012, net debt is expected to increase from 61.3 percent to 67.1 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. A unique and important asset is the Government's sovereign power to tax. Federal assets and liabilities are analyzed within the broader conceptual framework of Federal resources and responsibilities in Chapter 31, "Budget and Financial Reporting," in this volume. 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 can be bought and sold on the secondary market. Treasury also sells to the public a relatively small amount of nonmarketable securities, such as savings bonds and State and Local Government Series securities (SLUGs).¹³ Treasury nonmarketable debt cannot be bought or sold on the secondary market.

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 every six months to reflect inflation as measured by changes in the CPI-U (with a two-month lag). Although the principal value may be adjusted downward if inflation is negative, the principal value will not be reduced below the original par value.

Historically, the average maturity of outstanding debt issued by Treasury has been about five years. The average maturity of outstanding debt was 63 months at the end of 2011.

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. 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 Consistent with the presentation in the *Monthly Treasury Statement of Receipts and Outlays of the United States Government (Monthly Treasury Statement)*, Table 6-3 presents the net financial assets associated with direct and guaranteed loans in the financing accounts created under the Federal Credit Reform Act of 1990. Therefore, the figures differ by relatively small amounts from the figures in Chapter 31, "Budget and Financial Reporting," which reflect all loans made or guaranteed by the Federal Government, including loans originated prior to implementation of the FCRA.

¹³ Under the State and Local Government Series 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.

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. The liquidity of 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 “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 reduce the need for marketable borrowing. In 2011, there was net disinvestment in nonmarketables, necessitating additional marketable borrowing to finance the redemption of nonmarketable debt.¹⁴

Agency Debt

A few Federal agencies, shown in Table 6–4, 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 (FHA); the remaining agencies are repaying existing borrowing. Agency debt increased from \$26.1 billion at the end of 2010 to \$27.0 billion at the end of 2011, due to increases in debt issued by TVA,

slightly offset by decreases in debt issued by other agencies. Agency debt is less than one-third of one percent of Federal debt held by the public. As a result of new borrowing by TVA, agency debt is estimated to increase by \$0.6 billion in 2012 and by \$0.3 billion in 2013.

The predominant agency borrower is the TVA, which had borrowed \$26.7 billion from the public as of the end of 2011, or 99 percent of the total debt of all agencies. TVA sells debt primarily to finance capital expenditures.

The 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/leaseback obligations and prepayment obligations. Under the lease/leaseback obligations method, TVA signs contracts to lease some facilities and equipment to private investors and simultaneously leases them back. It receives a lump sum for leasing out its assets, and then leases them back at fixed annual payments for a set number of years. TVA retains substantially all of the economic benefits and risks related to ownership of the assets.¹⁵ 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.

The Office of Management and Budget 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

¹⁴ 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 Treasury.

¹⁵ 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.

Table 6–4. AGENCY DEBT
(In millions of dollars)

	2011 Actual		2012 Estimate		2013 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		28.8	*	29.0		29.0
Architect of the Capitol	–5.4	133.3	–5.3	128.0	–7.0	121.0
National Archives	–14.0	165.7	–15.2	150.5	–16.5	134.0
Tennessee Valley Authority:						
Bonds and notes	1,031.7	24,654.0	–2,651.3	22,002.6	513.4	22,516.0
Lease/leaseback obligations	–70.4	1,282.0	3,421.9	4,703.9	–78.9	4,625.0
Prepayment obligations	–105.3	716.8	–105.3	611.5	–101.2	510.3
Total, borrowing from the public	836.7	26,980.7	644.9	27,625.5	309.8	27,935.4
Borrowing from other funds:						
Tennessee Valley Authority ¹	1.6	5.9		5.9		5.9
Total, borrowing from other funds	1.6	5.9		5.9		5.9
Total, agency borrowing	838.4	26,986.6	644.9	27,631.5	309.8	27,941.3
Memorandum:						
Tennessee Valley Authority bonds and notes, total	1,033.3	24,659.9	–2,651.3	22,008.6	513.4	22,522.0

* \$500,000 or less.

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

Table 6-5. DEBT HELD BY GOVERNMENT ACCOUNTS¹
(In millions of dollars)

Description	Investment or Disinvestment (-)			Holdings, End of 2013 Estimate
	2011 Actual	2012 Estimate	2013 Estimate	
Investment in Treasury debt:				
Defense: Host nation support fund for relocation	-3	266	.....	1,106
Energy:				
Nuclear waste disposal fund ¹	2,095	1,755	1,258	29,180
Uranium enrichment decontamination fund	-389	-476	10	3,906
Health and Human Services:				
Federal hospital insurance trust fund	-33,535	-19,619	-24,346	201,974
Federal supplementary medical insurance trust fund	-536	-3,946	1,135	67,635
Vaccine injury compensation fund	169	344	357	3,809
Child enrollment contingency fund	-25	-92	-187	1,814
Homeland Security:				
Aquatic resources trust fund	-54	-88	-49	1,745
Oil spill liability trust fund	724	358	339	2,922
Housing and Urban Development:				
Federal Housing Administration mutual mortgage fund	-37	-4,157	7,529	7,529
Guarantees of mortgage-backed securities	-1,428	217	-197	2,154
Interior:				
Abandoned mine reclamation fund	84	29	-43	2,694
Bureau of Land Management permanent operating funds	-255	-209	-172	785
Environmental improvement and restoration fund	30	-19	1	1,212
Justice: Assets forfeiture fund	220	1,299	-1,414	2,290
Labor:				
Unemployment trust fund	-2,672	379	170	16,579
Pension Benefit Guaranty Corporation ¹	1,137	244	1,552	17,287
State: Foreign service retirement and disability trust fund	534	534	478	17,409
Transportation:				
Airport and airway trust fund	1,596	-230	-993	7,418
Transportation trust fund	-8,153	-7,633	16,803	25,472
Aviation insurance revolving fund	179	224	192	2,047
Treasury:				
Exchange stabilization fund	2,285	1,583	.....	24,304
Treasury forfeiture fund	202	-478	-375	732
Comptroller of the Currency assessment fund	146	-62	-115	994
Veterans Affairs:				
National service life insurance trust fund	-620	-688	-695	6,158
Veterans special life insurance fund	-15	-49	-53	1,879
Corps of Engineers: Harbor maintenance trust fund	781	568	548	7,319
Other Defense-Civil:				
Military retirement trust fund	44,034	97,465	57,315	480,820
Medicare-eligible retiree health care fund	19,452	12,486	7,336	181,563
Education benefits fund	-18	-149	-128	1,731
Environmental Protection Agency:				
Leaking underground storage tank trust fund	22	318	26	3,794
Hazardous substance trust fund	-141	177	103	3,789
International Assistance Programs: Overseas Private Investment Corporation	139	96	83	5,290
Office of Personnel Management:				
Civil service retirement and disability trust fund	23,448	8,666	9,896	822,375
Postal Service retiree health benefits fund	1,592	3,118	3,076	49,902
Employees life insurance fund	2,073	2,016	2,068	43,762
Employees health benefits fund	2,949	1,238	49	20,481
Social Security Administration:				
Federal old-age and survivors insurance trust fund ²	93,421	90,923	72,652	2,656,106

Table 6–5. DEBT HELD BY GOVERNMENT ACCOUNTS¹—Continued
(In millions of dollars)

Description	Investment or Disinvestment (–)			Holdings, End of 2013 Estimate
	2011 Actual	2012 Estimate	2013 Estimate	
Federal disability insurance trust fund ²	–25,256	–29,374	–33,487	99,104
District of Columbia: Federal pension fund	–7	21	9	3,689
Farm Credit System Insurance Corporation:				
Farm Credit System Insurance fund	126	211	147	3,570
Federal Communications Commission:				
Universal service fund	–266	92	43	5,950
Federal Deposit Insurance Corporation:				
Deposit insurance fund	–2,516	–19,008	17,058	32,976
Senior unsecured debt guarantee fund	1,143	–1,004	–1	6,296
FSLIC resolution fund	–13	53	73	3,500
National Credit Union Administration:				
Share insurance fund	1,454	–12	139	10,860
Central liquidity facility	125	105	110	2,311
Temporary corporate credit union stabilization fund	1,822	–635	55	1,606
Postal Service funds ²	424	*	.....	1,815
Railroad Retirement Board trust funds	–106	–265	–133	1,745
Securities Investor Protection Corporation ³	238	59	141	1,620
United States Enrichment Corporation fund	26	5	4	1,602
Other Federal funds	–626	26	–70	4,279
Other trust funds	2	105	148	3,367
Unrealized discount ¹	90	.....	.....	–1,015
Total, investment in Treasury debt¹	126,089	136,786	138,445	4,911,241
Investment in agency debt:				
Railroad Retirement Board:				
National Railroad Retirement Investment Trust	2	.....	.....	6
Total, investment in agency debt¹	2	.....	.....	6
Total, investment in Federal debt¹	126,090	136,786	138,445	4,911,247
Memorandum:				
Investment by Federal funds (on-budget)	26,787	–4,467	36,357	410,948
Investment by Federal funds (off-budget)	424	*	.....	1,815
Investment by trust funds (on-budget)	30,626	79,704	62,923	1,744,289
Investment by trust funds (off-budget)	68,164	61,548	39,165	2,755,210
Unrealized discount ¹	90	.....	.....	–1,015

* \$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 2011 the debt figures would be \$22.4 billion higher for the Nuclear waste disposal fund and \$0.2 billion higher for PBGC than recorded in this table.

² Off-budget Federal entity.

³ Amounts on calendar-year basis.

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.¹⁶

¹⁶ This budgetary treatment differs from the treatment in the *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 budget presentation is consistent with the reporting of these obligations as liabilities on TVA's balance sheet under generally accepted accounting principles. Table 6–4 presents these alternative financing methods separately from TVA bonds and notes to distinguish between the types of borrowing. Obligations for lease/leasebacks were \$1.3 billion at the end of 2011 and are estimated to increase to \$4.7 billion at the end of 2012. Obligations for prepayments were \$0.7 billion at the end of 2011 and

The other factors are adjustments for the timing of the reporting of Federal debt held by the National Railroad Retirement Investment Trust and treatment of the Federal debt held by the Securities Investor Protection Corporation.

are estimated to be \$0.6 billion at the end of 2012. After 2012, obligations for these two types of alternative financing are estimated to gradually decline as TVA fulfills the terms of the contracts.

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.

A number of Federal agencies borrow from the Bureau of the Public Debt (BPD) or the Federal Financing Bank (FFB), both within the Department of the Treasury. Agency borrowing from the FFB or the BPD is not included in gross Federal debt. It would be double counting to add together (a) the agency borrowing from the BPD or FFB and (b) the Treasury borrowing from the public that is needed to provide the BPD 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 current needs in order to meet future obligations. These cash surpluses are generally invested in Treasury debt.

New investment by trust funds and other Government accounts was \$126 billion in 2011. Investment by Government accounts is estimated to be \$137 billion in 2012 and \$138 billion in 2013, as shown in Table 6–5. The holdings of Federal securities by Government accounts are estimated to increase to \$4,911 billion by the end of 2013, or 28 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 and Supplementary Medical Insurance trust funds; and four Federal employee retirement funds. These Federal employee retirement funds include the military retirement trust fund, the special fund for uniformed services Medicare-eligible retiree health care, the Civil Service Retirement and Disability Fund (CSRDF), and a separate special fund for Postal Service retiree health benefits. At the end of 2013, these Social Security, Medicare, and Federal employee retirement funds are estimated to own

93 percent of the total debt held by Government accounts. During 2011–2013, the Social Security OASI fund has a large surplus and is estimated to invest a total of \$257 billion, 64 percent of total net investment by Government accounts. Over this period, the military retirement trust fund is projected to invest \$199 billion, 50 percent of the total. Some Government accounts reduce their investments in Federal securities during 2011–2013. During these years, the Social Security DI fund disinvests \$88 billion, or 22 percent of the total net investment and the Medicare Hospital Insurance trust fund disinvests \$78 billion, or 19 percent of the total.

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 were 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 6–5 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 \$22.7 billion at the end of 2011.

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 6–5 it is shown as a separate item at the end of the table and not distributed by account. The amount was \$1.0 billion at the end of 2011.

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 United States Government.

The third part of Table 6–2 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. It issued \$14 billion of securities to the Civil Service Retirement and Disability Fund on November 15, 2004, in exchange for an equal amount of regular Treasury securities. The FFB securities have the same interest rates and maturities as the regular Treasury securities for which they were exchanged. The securities mature on dates from June 30, 2009, through June 30, 2019. At the end of 2011, \$8 billion of these securities remained outstanding.

The Housing and Economic Recovery Act of 2008 created a new type of debt not subject to limit. This debt, termed "Hope Bonds," is issued by Treasury to the Federal Financing Bank for the HOPE for homeowners program. The outstanding balance of Hope Bonds was \$0.5 billion at the end of 2011 and is projected to increase by small amounts annually in 2012 through 2022.

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 \$487 million at the end of 2011 and is projected to gradually decline over time.

The sole agency debt currently subject to the general limit, \$10 million at the end of 2011, 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 \$18.7 billion at the end of 2011 compared with the total unamortized discount (less premium) of \$53.1 billion on all Treasury securities.

Changes in the debt limit.—The statutory debt limit has been changed many times. Since 1960, Congress has passed 79 separate acts to raise the limit, extend the duration of a temporary increase, or revise the definition.¹⁸

The Budget Control Act of 2011, enacted on August 2, 2011, created a new framework for increasing the debt limit, based on the President's submission of a series of written certifications that such increases are necessary because the debt subject to limit is within \$100 billion of the current limit. The certification triggering the first two increases was submitted immediately following the Act's enactment. Consequently, the debt limit was first in-

creased by \$400 billion, from \$14,294 billion to \$14,694 billion, effective as of August 2, 2011, and then by an additional \$500 billion, from \$14,694 billion to \$15,194 billion, effective after the close of business on September 21.

The Act also provided for a third increase of \$1,200 billion, to \$16,394 billion.¹⁹ Under the Act, the third part of the increase was scheduled to occur 15 calendar days after the President submitted certification to Congress that the debt subject to limit was within \$100 billion of the \$15,194 billion limit (unless Congress enacted a joint resolution of disapproval). The certification was submitted on January 12, 2012, and the increase took effect after the close of business on January 27.

Between July 2008 and February 2010, the debt limit was increased five times. On February 12, 2010, the debt limit was increased by \$1,900 billion to \$14,294 billion and on December 28, 2009, by \$290 billion to \$12,394 billion. The December 2009 increase, enacted shortly before the anticipated reaching of the previous limit, had been intended to cover only a short period. In the three instances between July 2008 and February 2009, the increase was included in a larger piece of legislation aimed at stabilizing the financial markets and restoring economic growth and provided room under the statutory debt ceiling for the activities authorized by each piece of legislation. On July 30, 2008, the debt limit was increased by \$800 billion, to \$10,615 billion, as part of the Housing and Economic Recovery Act of 2008. On October 3, 2008, the Emergency Economic Stabilization Act of 2008 increased the debt limit by \$700 billion, to \$11,315 billion. On February 17, 2009, the American Recovery and Reinvestment Act of 2009 increased the statutory limit by \$789 billion, to \$12,104 billion. At the dates of enactment, the debt subject to limit was at least a few hundred billion dollars below the previous ceiling.

At many times in the past several decades, including 2011, the Government has reached the statutory debt limit before an increase has been enacted. When this has occurred, it has been necessary for the Treasury Department to take administrative actions to meet the Government's obligation to pay its bills and invest its trust funds while remaining below the statutory limit. One such measure is the partial or full disinvestment of the Government Securities Investment Fund (G-fund). This fund is one component of the Thrift Savings Plan (TSP), a defined contribution pension plan for Federal employees. The 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 2011, the TSP G-fund had an outstanding balance of \$139 billion. The Treasury Secretary is also authorized to declare

¹⁷ At the end of 2011, there were also \$18 million of FHA debentures not subject to limit.

¹⁸ The Acts and the statutory limits since 1940 are listed in *Historical Tables, Budget of the United States Government, Fiscal Year 2013*, Table 7.3.

¹⁹ Under the Act, if the constitutional amendment voted on pursuant to Title II of the Act (balanced budget amendment) had been submitted to the States for ratification, the increase would have been \$1,500 billion, or if a Joint Select Committee on Deficit Reduction bill had been enacted, pursuant to Title IV of the Act, that achieved an amount of deficit reduction greater than \$1,200 billion, the increase would have been equal to that amount, but not greater than \$1,500 billion.

a debt issuance suspension period, which allows him or her to redeem a limited amount of securities held by the Civil Service Retirement and Disability Fund and stop investing its receipts. The law requires that when any such actions are taken with the TSP G-fund or the CSRDF, 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. In 2011, Treasury determined that, because the special fund for Postal Service retiree health benefits was governed by the same laws as the CSRDF, administrative actions could also be taken with that fund.²⁰ Therefore, reinvestment of the Postal Service Retiree Health Benefits Fund's maturing balances and investment of new interest collections was briefly postponed. After the debt limit increase, the foregone interest was restored to the Postal Service Retiree Health Benefits Fund. Another measure for staying below the debt limit is disinvestment of the Exchange Stabilization Fund. The outstanding balance in the Exchange Stabilization Fund was \$23 billion at the end of 2011.

As the debt nears the limit, Treasury has also suspended acceptance of subscriptions to the State and Local Government Series to reduce unanticipated fluctuations in the level of the debt. In 2011, Treasury also allowed the cash balance in the temporary Supplementary Financing Program to decline from \$200 billion to zero by not rolling over the bills as they matured. Because Treasury does not currently have any plans to resume the SFP, this action

²⁰ Both the CSRDF and the Postal Service Retiree Health Benefits Fund are administered by the Office of Personnel Management.

is not anticipated to be an available administrative action in the future.

In addition to these steps, Treasury has previously replaced regular Treasury securities with borrowing by the FFB, which, as explained above, is not subject to the debt limit. This measure was most recently taken in November 2004, and the outstanding FFB securities began to mature in June 2009.

At the time of submission of the January 12, 2012, certification, the debt was already at the then-current limit of \$15,194 billion, which had been reached on January 4. Therefore, Treasury had begun to use some of its administrative actions, such as use of the Exchange Stabilization Fund and the TSP G-fund.

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. Without an increase, Treasury would be unable to make timely interest payments or redeem maturing 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 val-

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

(In billions of dollars)

Description	Actual 2011	Estimate										
		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Change in Gross Federal Debt:												
Federal funds deficit (+)	1,396.6	1,426.2	1,010.1	777.2	745.3	783.9	762.9	745.3	734.9	764.8	791.9	788.6
Other transactions affecting borrowing from the public— Federal funds ¹	-188.9	123.2	158.6	142.2	143.8	135.6	121.9	116.3	109.0	103.0	101.1	105.1
Increase (+) or decrease (-) in Federal debt held by Federal funds	27.2	-4.5	36.4	34.1	38.9	47.1	50.9	58.6	64.3	57.9	39.6	39.5
Adjustments for trust fund surplus/deficit not invested/ disinvested in Federal securities ²	0.4	41.8	-8.0	-1.4	-1.2	-1.7	-1.1	-1.2	-1.3	-1.2	-1.2	-1.0
Change in unrealized discount on Federal debt held by Government accounts	0.1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total financing requirements	1,235.4	1,586.7	1,197.1	952.0	926.7	964.9	934.6	918.9	906.9	924.4	931.4	932.2
Change in Debt Subject to Limit:												
Change in gross Federal debt	1,235.4	1,586.7	1,197.1	952.0	926.7	964.9	934.6	918.9	906.9	924.4	931.4	932.2
Less: increase (+) or decrease (-) in Federal debt not subject to limit	-1.0	-0.7	-1.1	-0.8	-0.8	-1.8	-1.1	-1.0	-1.2	-1.2	-1.9	-1.8
Less: change in adjustment for discount and premium ³ ...	0.7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total, change in debt subject to limit	1,235.7	1,587.3	1,198.2	952.8	927.5	966.7	935.7	919.9	908.2	925.7	933.3	934.0
Memorandum:												
Debt subject to statutory limit ⁴	14,746.6	16,333.9	17,532.1	18,484.9	19,412.5	20,379.2	21,314.9	22,234.8	23,142.9	24,068.6	25,001.8	25,935.8

* \$50 million or less.

¹ Includes Federal fund transactions that correspond to those presented in Table 6-2, 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 \$16,394 billion, as increased after January 27, 2012.

ue of the dollar and further increasing interest rates on non-Federal, as well as Treasury, debt. In addition, the Federal Government would be forced to delay or discontinue payments on its broad range of obligations, 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, and other obligations.

The debt subject to limit is estimated to increase to \$16,334 billion by the end of 2012 and to \$17,532 billion by the end of 2013.

Federal funds financing and the change in debt subject to limit.—The change in debt held by the public, as shown in Table 6–2, and the change in debt 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 6–2. The change in debt held by Government accounts results in 16 percent of the estimated total increase in debt subject to limit from 2012 through 2022.

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.²¹

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 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 6–6 derives the change in debt subject to limit. In 2011 the Federal funds deficit was \$1,397 billion, and other factors decreased financing requirements by \$189 billion. The change in the Treasury operating cash balance reduced financing requirements by \$252 billion, while the net financing disbursements of credit financing accounts increased financing requirements by \$58 billion. Other factors increased financing requirements by \$5 billion. In addition, special funds and revolving funds, which are part of the Federal funds group, invested a net of \$27 billion in Treasury securities. An 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 the National Railroad Retirement Investment Trust's investments in non-Federal securities). As a net result of all these factors, \$1,235 billion in financing was required, increasing gross Federal debt by that amount. Since Federal debt not subject to limit decreased by \$1 billion and the adjustment for discount and premium changed by \$1 billion, the debt subject to limit increased by \$1,236 billion, while debt held by the public increased by \$1,109 billion.

Debt subject to limit is estimated to increase by \$1,587 billion in 2012 and by \$1,198 billion in 2013. 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 6–6. While debt held by the public increases by \$5,585 billion from the end of 2011 through 2017, debt subject to limit increases by \$6,568 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 1970 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 residents.

Foreign holdings of Federal debt are presented in Table 6–7. At the end of 2011, foreign holdings of Treasury debt were \$4,660 billion, which was 46 percent of the total debt held by the public.²² Foreign central banks and foreign official institutions owned 75 percent of the foreign holdings of Federal debt; private investors owned nearly all the rest. At the end of 2011, the nations holding the largest shares of U.S. Federal debt were China, which held 25 percent of all foreign holdings, Japan, which held 21 percent, and the United Kingdom, which held 9 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

²¹ For further discussion of the trust funds and Federal funds groups, see Chapter 28, "Trust Funds and Federal Funds."

²² The debt calculated by the Bureau of Economic Analysis, Department of Commerce, is different, though similar in size, because of a different method of valuing securities.

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 from 34 percent at the end of 2002 to 42 percent at the end of 2004 and to 48 percent at the end of 2008. Foreign holdings were 48 percent at the end of 2010 and fell to 46 percent at the end of 2011. The increase in foreign holdings was about 30 percent of total Federal borrowing from the public in 2011 and 50 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 di-

rect 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, including the substantial Government efforts to support the credit markets during the recent financial turmoil, are discussed in Chapter 23, "Credit and Insurance," in this volume. Detailed data are presented in tables at the end of that chapter.

Table 6–7. FOREIGN HOLDINGS OF FEDERAL DEBT

(Dollar amounts in billions)

Fiscal Year	Debt held by the public			Change in debt held by the public	
	Total	Foreign ¹	Percentage foreign	Total ²	Foreign ¹
1965	260.8	12.3	4.7	3.9	0.3
1970	283.2	14.0	5.0	5.1	3.8
1975	394.7	66.0	16.7	51.0	9.2
1980	711.9	121.7	17.1	71.6	1.4
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
2006	4,829.0	2,025.3	41.9	236.8	95.7
2007	5,035.1	2,235.3	44.4	206.2	210.0
2008	5,803.1	2,802.4	48.3	767.9	567.1
2009	7,544.7	3,570.6	47.3	1,741.7	768.2
2010	9,018.9	4,324.2	47.9	1,474.2	753.6
2011	10,128.2	4,660.2	46.0	1,109.3	336.0

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, and annual June benchmark revisions for 2002–2010.

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.

PERFORMANCE AND MANAGEMENT

7. DELIVERING A HIGH-PERFORMANCE GOVERNMENT

The work of the Federal Government has a real effect on people's lives – on small business-owners who need loans, on young people who want to go to college, on the men and women in our Armed Forces who need the best resources when in uniform and who, after they have served, deserve the benefits they earned. Whether protecting individuals and communities, modernizing infrastructure, investing in our children, or taking care of the most vulnerable, the American people deserve a highly effective government.

The Nation's current fiscal situation makes it more important than ever for government agencies to use taxpayer money wisely to achieve more mission for the money. Building a government that works smarter, better, and more efficiently to deliver results for the American people is a cornerstone of this Administration. This chapter discusses the Administration's approach to improving the performance of the Federal Government, progress of this effort, challenges remaining, and the path forward.

Driving Federal Performance

We must use taxpayer dollars in the most effective and efficient ways we can, continually searching for smarter ways to serve the American people, businesses, and communities. A critical part of our effort is creating a culture of continual performance improvement where Federal agencies constantly strive to improve the quality of Americans' lives and find lower-cost ways to achieve positive outcomes.

The Administration's approach to delivering more effective and efficient government is straightforward, and builds on a careful examination of best management practices in the Federal Government, State and local governments, other countries, and businesses (described in the President's 2011 and 2012 Budgets). The Administration has built on these lessons learned, and the groundwork established by Congress and previous Administrations. This approach rests on three mutually reinforcing practices.

1. **Choose Areas of Focus and Clear Goals.** Leaders at all levels of the organization choose a limited number of areas of focus that have high potential to advance the well-being of the American people, cut the costs of delivery, or both. Where goals are likely to accelerate progress, leaders set clear, ambitious goals for outcome-focused and management priorities. For each area of focus, senior officials responsible for leading change are clearly identified and goals are clearly communicated to employees, delivery partners, and the public.
2. **Measure and Analyze Performance.** Agencies measure, analyze, and discuss performance infor-

mation to reinforce priorities, motivate action, and illuminate a path to improvement. They analyze data to find problems to fix, successful practices to spread, and the root causes of both. Armed with this understanding, they take actions to achieve better outcomes and cut the costs of delivery. Agencies also communicate goals, measurements, progress, and strategies to enlist external ideas, expertise, and assistance to improve performance and boost accountability.

3. **Deliver Better Results with Frequent, Data-Driven Reviews.** Leaders conduct frequent, in-depth performance reviews to drive progress on priorities. They review progress with those involved in implementation and adjust agency action quickly, as needed, to improve outcomes and reduce costs.

Progress on Agency Priorities

The Administration's performance management approach is fueling progress on performance and productivity. Federal agencies are widely adopting these performance improvement practices and beginning to see changes on the ground. Leadership engagement, not just in goal-setting but in running frequent progress reviews to identify actions an agency can take to improve results, is on the rise across the Federal government. At the same time, agencies are learning how outcome-focused goals can help them break down organizational barriers, leading to better results than one agency can achieve on its own. As described in "Reducing Crime on Indian Reservations" on the following page, efforts at the Department of Interior to reduce crime on Indian reservations exemplify how these practices can coalesce to produce breakthrough performance.

Performance results like this are not limited to Interior; other agencies are also making great progress on their mission-focused priorities, some of which they identified as two-year Agency Priority Goals (introduced as High Priority Performance Goals) in the 2011 Budget.

Streamlining Student Loans and Strengthening Teacher Evaluation Systems

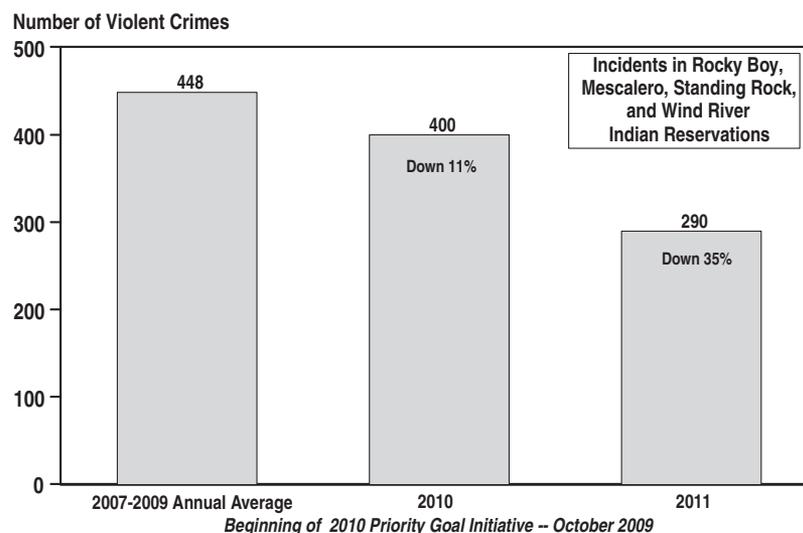
The Department of Education (Education) set a goal that all participating higher education institutions and loan servicers will be operationally ready to originate and service Federal Direct Student Loans through an efficient and effective student aid delivery system with simplified applications and minimal disruption to students. Within six months of the enactment of the Student Aid and Fiscal Responsibility Act (SAFRA), Education successfully moved to making students loans directly instead of hav-

REDUCING CRIME ON INDIAN RESERVATIONS

High crime rates on some Indian reservations have long been a public concern, especially to the Native American community at large. The Department of the Interior's (Interior) pilot program to reduce crime on Indian reservations demonstrates how transformative it can be when an agency adopts a goal that matters to a community, takes actions to address the problem, regularly measures and reviews relevant data to see if change is happening, and engages the local community in every aspect of the effort. To seek solutions to this long-standing issue – but given tough constraints on its budget – Interior started a pilot program to test and identify effective crime reduction strategies on Indian lands. In the 2011 Budget, Interior set an agency High Priority Performance Goal to reduce crime by at least 5 percent on four reservations with some of the highest crime rates.

When this goal was set, most considered it ambitious; Interior had never before adopted a crime reduction goal and does not control many of the factors that affect the crime rate. Nevertheless, by the end of 2011, the initiative far exceeded its goal, reducing violent crime, on average, by a remarkable 35 percent across all four reservations, with crime going down on three of the four.

Chart 7-1. Safe Indian Communities Priority Goal



The importance and resonance of the goal won the cooperation of law enforcement partners and the enthusiasm of the local communities. This enabled a comprehensive strategy that involved community policing, tactical deployment, and inter-agency and intergovernmental partnerships between the Federal Bureau of Investigations (FBI), Department of Justice (DOJ), and the tribal police departments. The number of Indian country and DOJ officers on the ground was doubled and the number of law enforcement officers who received basic training increased ten-fold. Interior also supported officer-initiated programs to help victims and their families along with programs to strengthen community relationships with law enforcement. Community-launched innovations also played a role, such as an initiative on Rocky Boy's Reservation in Montana to reduce juvenile delinquency and criminal behavior.

Recognizing the importance of fresh and actionable data, Interior has now established a computer-aided system to help analyze crime data, identify crime trends, and report criminal offenses. These data and trend analyses were used to allocate resources and to evaluate law enforcement and community policing strategies.

The results strongly affirm the value of a data-based, goal-oriented approach that empowers local officials to drive change. In the next two years, Interior is seeking to spread this success, starting with a replication demonstration at two new reservations, while continuing efforts on the original four reservations.

ing third party lenders make them. This lending approach serves students better and, according to Congressional Budget Office estimates, will save taxpayers more than \$60 billion over ten years. Education is also supporting and encouraging states to strengthen teacher evaluation systems given the evidence that teacher effectiveness contributes more to improving student academic outcomes

than any other school characteristic. Education has made considerable progress – forty-one states adopted such systems over the last two years.

Improving Health and Well-Being

To improve not just the education of students but other aspects of their well-being, the Department of Agriculture

(USDA) set a goal to partner with local schools, propose national standards, and take other actions that will result in improved quality of food sold in schools throughout the school day. Since 2009, USDA has signed up over 1600 more schools for its Healthier US School Challenge, a program that certifies schools as meeting rigorous quality standards for the food they offer. In addition, toward its goal of improving the availability and accessibility of health insurance coverage by increasing enrollment of eligible children in Children's Health Insurance Program (CHIP) by 9 percent over the 2008 baseline and increasing enrollment of eligible children in Medicaid by 11 percent over the 2008 baseline by the end of FY 2011, the Department of Health and Human Services (HHS) enrolled an additional 4.8 million children in the CHIP and Medicaid from 2008 to 2010, thus providing greater access to health care.

Agencies are working to improve the well-being of adults, as well. To save lives and tens of billions of dollars in Medicare and Medicaid costs, HHS launched the Partnership for Patients and set a new Priority Goal to reduce the rate of hospital acquired conditions and hospital readmissions. More than 3,100 hospitals and nearly 3,500 other partners, such as physician, nurses groups, and employers, have already joined this initiative. HHS has adopted a 2012-2013 Priority Goal focusing on reducing hospital associated infections reflecting this effort. Working in conjunction with the Interagency Council on Homelessness, the Departments of Veterans Affairs (VA) and Housing and Urban Development (HUD) set a goal to reduce the population of homeless veterans to 59,000 by June 2012, and have reduced the population of homeless veterans from 75,609 in January 2009 to 67,495 in January 2011. Building upon this progress, VA and HUD set a Priority Goal to house another 24,400 Veterans by the end of 2013 on the way to eliminating veteran homelessness by 2015.

Energy Savings for Low-Income Families and Clean Energy Production

The Department of Energy (Energy) and the Department of Housing and Urban Development (HUD) set a joint goal to enable the cost-effective energy retrofits of 1.2 million housing units by the end of 2013. By supporting energy conservation in over 750,000 homes of lower income and middle class families, Energy has already helped reduce energy costs, on average, by over \$400 per home each year. These changes have reduced the overall annual energy consumption by 20 percent for these homes, but also cut annual greenhouse gas emissions nearly 2.0 million metric tons. HUD similarly reduced energy consumption at 120,000 HUD-assisted housing units. Energy, in the same period, has invested in reducing the cost of batteries for electric drive vehicles to help increase the market for Plug-In Hybrids and All-Electric Vehicles.

Not surprisingly, because agencies were asked to set stretch targets to reach higher levels of performance, agencies did not attain every Priority Goal. In fact, if every target had been met it would indicate that the goals

were insufficiently ambitious - not bold enough to spur the sort of innovation and focus associated with challenging but realistic targets. The experience of Interior on its energy goal illustrates not just the performance-improving power of a stretch target but also of the Administration's emphasis on performance progress, rather than goal attainment for its own sake, to create a healthy performance-improving dynamic across the Federal government. Interior set a goal to authorize 9000 megawatts of solar, wind, and geothermal energy projects by the end of 2011. It did not reach its target, but did approve more than 6,000 megawatts of new renewable energy capacity on Interior land - enough to power, when fully developed, more than 1 million homes. Prior to setting this goal in October 2009, Interior had approved only a small number of projects like this. It had a slower than expected start-up because it had to move along a learning curve, yet by setting a stretch goal in this area Interior was highly successful - permitting more than 6,000 megawatts in 2 years. To continue progress in this area, Interior set a new Priority Goal to increase the approved capacity for production of renewable energy resources to 11,000 megawatts by the end of 2013.

Strengthening Small and Medium-Sized Businesses

The Small Business Administration (SBA) increased small business access to capital by growing the number of active lending partners and bringing 1,200 new or returning lenders into the 7(a) loan program. Loans approved by active lenders reached nearly \$20 million in 2011, up from \$12 million in 2010 and \$9 million in 2009. The Department of Commerce (Commerce) increased the number of small and medium-sized enterprises that entered a 2nd or additional market, not quite reaching its 2011 target but nonetheless up 20% between 2009 to 2011 (over 3000 businesses in 2011) despite staffing decreases and modest global economic growth in that period. Commerce has adopted a new 2012-2013 Priority Goal to expand its export activity, one of many strategies outlined in the National Export Initiative (NEI) report that contribute to the President's directive to double U.S. exports by 2014, a new Cross-Agency Priority Goal.

Improving Water Quality and Aquatic Health

Commerce has also worked closely with Regional Fishery Management Councils (RFMCs) to end and prevent overfishing. The agency set a goal to reduce the number of stocks subject to overfishing to zero by the end of 2011; improve the Fish Stock Sustainability Index (FSSI) to 586 by the end of 2011; and ensure that all 46 Federal fishery management plans have required catch limits to end overfishing in place by the end of 2011. By the end of December 2011, all stocks subject to overfishing had annual catch limits in place, and the Fish Stock Sustainability Index rose from 565.5 (in 2009) to 598.5. At the same time, the effort to ensure all Fishery Management Plans have annual catch limits is moving forward at a steady pace. Forty Fishery Management Plans have been completed as of December 31, 2011 and

six will be completed in time to be effective for the respective 2012 fishing years.

In other agency efforts related to aquatic health, the Corps of Engineers completed 27 projects restoring over 12,000 acres of aquatic habitat, most of it to improve the Upper Mississippi River, surpassing its goal of 10,300 acres. In a separate effort to improve the health of the Nation's waters, the Environmental Protection Agency (EPA) focused approximately 60% of its water quality enforcement actions on facilities discharging to waters that do not meet water quality standards, up from 32 percent in 2009 and well above the agency's goal of at least 37 percent. This resulted in reductions in harmful discharges from 195 facilities into these waters.

National Security

One of the Department of State's goals is to improve global controls to prevent the spread of nuclear weapons and enable the secure, peaceful use of nuclear energy. The 2010 Nuclear Security Summit moved the U.S. closer to this goal by strengthening international cooperation to control weapons-usable nuclear materials and prevent nuclear terrorism - actions critical to our own national security. Attending states pledged specific national actions to prevent terrorists, criminals, and proliferators from acquiring nuclear materials, ranging from ratification of a convention to extremely complicated steps converting reactors from the use of highly-enriched to low-enriched uranium. The number of countries ratifying the Amendment to the Convention on Physical Protection of Nuclear Materials (CPPNM) is now at 52, up from 20 at the end of 2008.

Improving Customer Service and Saving Taxpayer Dollars

Both the Department of the Treasury (Treasury) and the Social Security Administration (SSA) are making it easier for their customers, while saving taxpayer dollars. Treasury has saved over \$63.9 million by encouraging taxpayers to file electronically - increasing the electronic filing rate for individual tax returns to 76.9 percent in the 2011 season, up from 66 percent in 2009. SSA increased online retirement benefit applications from single digits in most prior years to the highest usage ever - 41 percent in FY 2011. These online services reduce the time employees spend handling applications, which frees them to handle other work. SSA has achieved this success while maintaining high customer satisfaction. The online claim application is one of three SSA electronic services that consistently tops the American Customer Satisfaction Index survey, rating higher than popular private sector electronic services.

Despite this progress, some agencies did not meet their goals because of fiscal pressures. While the Priority Goals were intended to be budget neutral, they were not budget independent. For example, in the President's 2011 Budget the Social Security Administration had a target for completing 3.409 million initial disability claims. However, Congress appropriated \$1 billion less than the President requested and the agency could not complete all of the

work related to their disability programs. To compensate for this, SSA decreased its target for the number of initial disability claims completed to 3.273 million. The agency was able to leverage technology to identify and fast-track the most severe disability claims. From October 2010 through June 2011, the agency fast-tracked over 108,000 initial disability cases, or 4.6 percent of all disability claims filed through the two fast-track processes. Learning from this experience, SSA continues to refine the predictive model and selection software to maximize capacity and accurately identify these cases.

More complete performance updates on the 2010-2011 Agency Priority Goals and other agency performance goals for the 15 Cabinet agencies and nine other large departments can be found at each agency's Performance.gov home page (click on the annual performance plans and reports button or access all 24 agency plans and reports at <http://my-goals.performance.gov/agency/plans>). Updates on government-wide management priorities established under the Accountable Government Initiative can also be found at Performance.gov under the Area of Focus tabs.

Building a Culture of Continual Performance Improvement

Agency heads have charged their leadership teams with transforming the way their agencies use goals, measurement, analysis, and data-driven discussions to drive performance improvements. This transformation is increasingly evident. As discussed above, agencies are using goals not just as words on the pages of reports required by Congress or OMB, but instead as simple, powerful tools for communicating priorities and focusing agency action. Complementing progress on the Agency Priority Goals, this budget continues efforts to integrate performance more directly into the use of traditional government tools such as grants. Race to the Top grants, for example, are being used to enlist state and local education leaders willing to commit to rigorous standards and high-quality assessments, build better data systems to inform decisions and improve instruction, attract and retain great teachers, and adopt the most promising evidence-based practices to turn-around the lowest performing schools. Similarly, HHS has established stronger performance expectations for its early childhood grants, requiring Head Start grantees that fail to meet rigorous benchmarks to re-compete for continued Federal funding to help children from low-income families achieve their full potential.

As discussed in AP Chapter 8: Program Evaluation and Data Analytics, a number of agencies have begun to use tiered grant-funding to encourage state, local, and not-for-profit delivery partners to improve performance in three complementary ways: scale, validate, and develop. Scale-up grants promote adoption of effective practices identified through objectives searches of the evidence and experience. Validation grants support replication demonstrations before scale-up to test if practices effective in one location or situation can be replicated in others. Smaller grants support development and testing of

new high-potential practices. In addition, the President's Budget proposes Pay for Success pilots.

Looking Forward

Over the next year, the Administration will continue to build upon these efforts to deliver more value for the taxpayer's dollar. It will continue to strengthen its approach of using goals to communicate priorities, focus agency actions on innovative solutions, support cross-agency collaboration, and enlist external ideas and assistance. The Administration will continue to measure and analyze to find lower cost ways to deliver more mission for the money. It will set ambitious goals to stimulate innovation and motivate effort, and communicate progress and strategies to boost accountability to the public. Increasingly, it will reach out to field employees, other offices, other agencies, and delivery partners to engage them in regular data-driven reviews to find smarter ways to accomplish priority objectives. And, it will strengthen networks, within and beyond government, to tackle common problems and pursue shared areas of opportunity.

Agency Priority Goals

Major Federal agencies have set near-term Agency Priority Goals for 2012-2013, which are a subset of agencies' broader goals and objectives. Over half of the agency goals, such as Interior's goal to permit renewable energy on Interior land, continue Agency Priority Goals set with the 2011 Budget, but update the targets. Other goals address a problem tackled with a 2010-2011 goal, but frame the goals in ways more likely to accelerate progress. For example, an HHS goal expands from tracking the percentage of Recovery Act funded communities that adopt smoke-free policies to a goal to reduce nation-wide cigarette consumption per capita. Still other goals expand into areas previously untouched by previous Agency Priority Goals, such as the Commerce Department's weather-forecasting goal.

The full list of Agency Priority Goals can be found at www.Goals.Performance.gov and are sortable by agency and by theme. Agency Priority Goals are presented this year in the context of agency strategic goals and objectives to show how Agency Priority Goals fit within the context of agencies' longer term strategic goals, and each agency's full set of performance objectives. In addition, to make the goals more understandable to the public, each goal includes an "Impact Statement" that describes generally what the goal is trying to accomplish, paired with a time-specific target to guide agency action.

Cross-Agency Priority Goals

In addition, the Administration has adopted interim Cross-Agency Priority (CAP) Goals. This Administration, Congress, the U.S. Government Accountability Office (GAO), and others have long recognized that government often tackles problems in stove-piped or fragmented ways that can prevent problems from being effectively addressed. To enhance progress in areas needing more cross-government collaboration, the GPRA Modernization Act

requires OMB to establish a limited number of CAP Goals for both crosscutting policy and government-wide management areas. The goals are to be revised or updated at least every four years, starting with the 2015 Budget. At the same time, the law instructs the Administration to set interim CAP goals concurrent with the 2013 Budget.

To develop the interim CAP Goals, OMB and the Performance Improvement Council worked with senior policy officials and agencies, and consulted with Congress. GAO studies were also considered in selecting CAP Goals. Emphasis was placed on choosing goals that reflect Presidential priorities and where increased cross-agency coordination and regular review are expected to speed progress. The limited number of interim CAP Goals therefore reflect a subset of Presidential priorities and opportunities for increased cross-agency collaboration. CAP Goals are complemented by other cross-agency coordination and goal-setting efforts, such as those of the Federal Food Safety Working Group and the Office of National Drug Control Policy (ONDCP). ONDCP has established government-wide goals and measurements to combat the public health and safety consequences of drug use, and coordinates inter-agency efforts to cut drug use among youth by 15 percent, drug-induced deaths and drug-related morbidity by 15 percent, and drugged driving by 10 percent in five years. The National Drug Control Strategy is available at <http://www.whitehouse.gov/ondcp/2011-national-drug-control-strategy>. The Federal Food Safety Working Group issued an update on its progress since its March 2009 formation at http://www.whitehouse.gov/sites/default/files/fsug_report_final.pdf.

The Administration set interim CAP Goals in the following areas:

- Science, Technology, Engineering, and Math (STEM) Education
- Veterans Career Readiness
- Broadband
- Entrepreneurship and Small Businesses
- Energy Efficiency
- Exports
- Job Training
- Cybersecurity
- Sustainability
- Financial Management
- Human Capital Management
- Information Technology Management
- Procurement and Acquisition Management
- Real Property Management

The interim CAP Goals can be found at www.Goals.Performance.gov. The website, which comprises the Federal performance plan, is the beginning of a broader transition to providing the public more dynamic, useful, and current performance information. Progress on each Priority Goal will be published through a central website starting in the fall of 2012.

Frequent Data-Driven Reviews

For each Agency Priority Goal, the agency head or Chief Operating Officer (COO), often the Deputy Secretary, will continue running data-driven performance reviews

on their Priority Goals at least once a quarter. Some COOs also run quarterly performance reviews with their Departmental components - agencies, bureaus, or programs. At the same time, leaders of individual components, such as the heads of the FBI, Customs and Border Patrol, Federal Emergency Management Agency, and the Food and Drug Administration, are running their own frequent data-driven reviews. OMB, with support from the Performance Improvement Council, will initiate progress reviews on CAP Goals later this year.

Producing Results for the American People

In the coming year, the Administration will continue to develop tools and offer services to strengthen agency performance improvement capacity and to foster inter-agency networks to facilitate expertise and data sharing, co-investment, and learning. It will strengthen a working group begun in 2011 to help agencies improve and benchmark their data-driven progress reviews. The Administration will continue to foster inter-agency networks, such as the Benefits Processing Working Group,

launched in 2010, and will also work to launch additional networks to develop measures for other common government functions, such as reducing the number of undesirable incidents and their associated costs. Additionally, the Administration will develop training opportunities and career pathways to strengthen performance improvement skills and capacity across the Federal government.

The Administration is strongly committed to responding to the President's charge to deliver a government that works, a government that is smarter, leaner, and more effective, one that produces tangible results all around us – in a small business opening its doors, more homes becoming energy-efficient, new wind turbines generating clean renewable energy, healthier children, better served veterans, and falling crime rates. Leadership engagement, clear goals, measurement, analysis of progress, and frequent progress reviews to find and promote what works and fix or eliminate what does not are keys to fulfilling that commitment to improve the lives of the American people.

8. PROGRAM EVALUATION AND DATA ANALYTICS

The Administration is committed to using taxpayer dollars efficiently and effectively. Central to that commitment is a culture where agencies constantly ask, and try to answer, questions that help them find, implement, spread, and sustain effective programs and practices; find and fix or eliminate ineffective ones; test promising programs and practices to see if they are effective and can be replicated; and find lower-cost ways to achieve positive impacts. The Federal fiscal situation necessitates doing more with less, not only to reduce budget deficits, but also to build confidence that Americans are receiving maximum value for their hard-earned tax dollars. It is therefore critical to apply an evidence-based approach to government management that utilizes rigorous methods appropriate to the situation, learns from experience, and is open to experimentation. This application requires selecting and implementing promising policies, programs, and strategies, monitoring of their implementation, evaluating their effectiveness, and adapting them over time to meet emerging challenges informed by ongoing measures of the well-being of Americans and the Nation.

One of the challenges to evidence-based policy-making is that it is sometimes hard to say whether a program is working well or not. Historically, evaluations have been an afterthought when programs are designed, and once a program has been in place for a while, building a constituency for rigorous evaluation is hard. Further, the use of data and evaluation on an ongoing basis to manage and improve programs is rare. The Administration is committed to addressing this problem.

This Administration is strongly encouraging appropriately rigorous evaluations and data analytics to determine the impact of programs and practices on outcomes, complementing the performance measurement and management practices described in chapter 7, “Delivering a High-Performance Government”, in this volume. In many policy debates, stakeholders come to the table with deep disagreements about the effectiveness or ineffectiveness of particular interventions. Evaluations that are sufficiently rigorous, relatively straightforward, and free from political interference are especially valuable in such circumstances.

Evaluations do what performance measurement, alone, cannot. Evaluations determine whether programs produce outcomes superior to alternative policy choices, or not putting into place a policy at all. This is in contrast with performance measurement, which tracks implementation and progress toward intended program outcomes, but typically does not compare outcomes to alternative programs or the status quo. If a particular job training approach has a high job placement rate, is it because it is effective or because it attracts those easiest to place in jobs? An evaluation would compare the employment of

participants in the job training program to comparable individuals who did not participate in the program in order to isolate the effects of the training from other factors. Evaluations can answer a wide-range of germane questions such as whether workers are safer in facilities that are inspected more frequently, whether one option for turning around a low-performing school is more effective than another, whether outcomes for families are substantially improved in neighborhoods that receive intensive services, whether no-fee debit cards increase savings among the unbanked, and whether re-employment services are cost-effective.

Evaluation is one component of the evidence infrastructure that plays a role in a wide range of decision-making. The best government programs embrace a culture where broad statistical data series, performance and other measurement, evaluation, and other data analytics are regularly used and complement one another. Agencies use broad statistical data series to understand social and economic conditions of the populations to be served, and to inform the design of new or revised policies. They use performance measurement to monitor the implementation of their policies, to detect promising practices for improving performance and to identify challenges. They use descriptive evidence about program recipients, program stakeholders, and community conditions to target their resources more precisely to areas of high need and opportunity. Regression analyses of administrative data can, for example, shed light on how to better match recipients with appropriate services. Rigorous evaluations using experimental or quasi-experimental methods identify the effects of programs in situations where doing so is difficult using other methods; and rigorous qualitative evidence complements what can be learned from quantitative evidence and provides greater insight into how programs and practices can be implemented more and less successfully.

Developing and supporting the use of data and evaluation in decision-making requires a coordinated effort between those charged with managing the operations of a program and those responsible for using data and evaluation to understand a program’s effectiveness. It requires consistent messages from multiple leaders in an agency to ensure that evidence is valued, collected or built, analyzed, understood, and appropriately acted upon. No one individual in an agency has the knowledge and skills necessary to develop research designs that address actionable questions, understand different types of evidence, interpret evidence, and develop and implement effective, evidence-based practices. Rather, it takes a leadership team, at the agency level, to oversee these efforts and to build and sustain a culture of learning. Complementing this team with a team of “implementers” at the program

level encourages the use of evidence and data so that it will filter down into program management.

Who is on these teams and how their work is divided depends upon the specific needs, personnel, and structure of a given agency. Success of these teams depends on including leadership at the agency and bureau level capable of supporting and requiring programs' use of data and evaluation in program operations. This leadership team, working together with OMB and Congress, can make sure that the right questions are being asked about the program's effectiveness and its operations. Program managers are responsible for creating a culture where all operational decisions and internal and external communications of progress are based on evidence and data. In order to do so, the program managers need a team of both data analysts and evaluators. These individuals can provide the data and analysis packaged in a way that helps inform the program's operational and policy decisions, including understanding the different types of evidence available and its implications for decisions, as well as identifying the need for new descriptive data and evaluation studies.

The Administration and Congress have made considerable progress in making Federal decision-making more based in data and evidence. Chapter 7, "Delivering a High-Performance Government", in this volume discusses how Administration efforts are helping focus agencies on setting high-priority goals and measuring their progress on those goals.

In the area of evaluation, the Administration has moved to adopt a multi-tiered approach to evidence-based funding for new grant-based initiatives targeted towards education interventions, teenage pregnancy prevention, social innovations, home visitations for new parents, workforce interventions, and science, technology, engineering, and math programs. The initiatives offer the most funding to programs and practices supported by the strongest evidence. Programs with some, but not as much, supportive evidence also receive significant funding, the condition that the programs will be rigorously evaluated going forward. Over time, the Administration anticipates that some second-tier programs will move to the first tier as they prove more promising and cost-effective than other programs. Finally, agencies are encouraged to innovate and test ideas with strong potential—ideas supported by preliminary research findings or reasonable hypotheses. At all levels, it is important to build implementation evidence into this multi-tiered approach so that we understand how best to scale successful programs and to create more and better program options.

A good example of this approach—in which new or expanded programs have evaluation "baked into their DNA"—is the Department of Education's Invest in Innovation Fund (i3). The i3 fund invests in high-impact, potentially transformative education interventions—ranging from new ideas with huge potential to those that have proven their effectiveness and are ready to be scaled up. Whether applicants to i3 are eligible for funding to develop, validate, or scale up their program, and therefore how much funding they are eligible to receive, depends

on the strength of the existing evidence of the program's effectiveness, the magnitude of the impact the evidence demonstrates the program is likely to have, and the program's readiness for scaling up.

This multi-tiered structure provides objective criteria to inform decisions about programs and practices in which to invest and create the right incentives for the future. Organizations understand that to be considered for significant funding, they must provide credible evaluation results that show promise, and, before that evidence is available, be ready to subject their models to analysis. As more models move into the top tier, this approach creates pressure on all the top-tier models to compete to improve their effectiveness to continue to receive support. The Administration is also working with agencies to adopt common evidence standards (where such common standards are appropriate) and to develop more robust "what works" repositories across a wide range of programs.

The Administration has also championed the Pay for Success model. In the Pay for Success model, philanthropic and other private investors provide up-front funding for services for a target population to achieve specific outcomes that are measured in terms of improved lives and reduced costs. The government pays only if agreed-upon goals are achieved. Pay for Success allows the government to better partner with and leverage the resources of philanthropic and other investors to help drive evidence-based innovation and invest in what works.

The Pay for Success model is particularly well-suited to cost-effective interventions that produce government savings, since those savings can be used to pay for results. For example, effective prisoner re-entry interventions can reduce future prison costs, and a portion of those savings can be used to pay back the investors. More effective workforce systems could increase job placement and improve job retention and again, some savings may be used to repay the investments. The Administration is promoting the Pay for Success model in several Federal grant programs and is helping several states and localities that are seeking to implement the Pay for Success model. In addition, the Administration is exploring ways in which appropriations bills can better account for programs that generate savings for other programs.

The Administration supports evaluations with rigorous research designs that address questions critical to program design, and supports strengthened agency capacity to support such evaluations, even in tight budget times. The Recovery Act launched a number of evaluations across the Federal Government on such topics as the effects of different rent formulas on housing assistance recipients, the effects of smart grid meters on residential electricity usage, and the effects of extended unemployment insurance benefit programs on employment outcomes. Even with scarce dollars, agencies continue to direct scarce dollars to evaluations to assure they are not funding programs without positive impacts, the biggest waste of all.

Research and evaluation are part of any comprehensive effort to use data and evidence to serve the American people in more cost-effective ways. So ideally the fund-

ing for research and evaluation would not be viewed as optional but rather as an essential element of running effective government programs. New funding for research and evaluation is only part of the Administration's efforts to re-invigorate evaluation activities across the Federal Government. The Administration is also working to build agency capacity for a robust evaluation and data analytics infrastructure, whether that is supporting an agency in standing up a central evaluation office, empowering existing evaluation offices, institutionalizing policies that lead to strong evaluations, helping spread effective procurement practices, or hiring evaluation and data analytics experts into key administrative positions.

Part of that evaluation and data analytics infrastructure is helping agencies make better use of administrative data. Administrative data, especially when linked across programs or to survey data, can sometimes make rigorous program evaluations much more informative and much less costly. Data from an early childhood program linked to the data from juvenile justice systems or K-16 educational systems shed light on the long-term effects of interventions in ways that would be cost-prohibitive in a long-term survey follow-up. Linking records from across programs also enables policy makers to better understand how families access combinations of government assistance programs, such as food assistance and unemployment insurance, during times of economic challenges. This sort of analysis is not evaluation, but is an incredibly important aspect of agency management – looking at available information to find patterns, relationships, anomalies, and other features to inform priority-setting, program design, and hypothesis formulation.

Moreover, when skilled data analysts have access to linked administrative data with appropriate privacy protections, the cost of additional policy-relevant research is extremely modest. The private sector is increasingly using such data analytics to drive decisions on how to allocate resources and better serve their customers. There is perhaps even greater potential in the public sector to make use of such analytics, although realizing this potential will also take a concerted effort to hire and retain skilled data analysts, increased attention to the multiple legal and policy contexts that make data access a continued challenge, and infrastructure investments that support this sort of analysis by more people across the organization.

In addition, an inter-agency working group is beginning to share best practices across the Federal Government and to discuss issues, such as how to do a better job disseminating evidence of what works, integrating cost-effectiveness analysis into evaluations, and making better use of administrative data for evaluation and other data analytics purposes. OMB is also building tools that should make it easier for agencies to make information available online about their completed and underway evaluations.

Rigorous evaluation will be a central component of several cross-agency initiatives designed to identify more cost-effective approaches to achieving positive outcomes for disadvantaged populations. These populations are often eligible for multiple services and benefits administered

by separate Federal and State agencies, which are poorly coordinated and governed by rules that stifle effective collaboration and innovation. In 2012, the Departments of Labor and Education will support joint pilots to test interventions and systemic reforms with the potential to improve education and employment outcomes at lower cost to taxpayers. The Departments of Education, Labor, and Health and Human Services and the Social Security Administration will launch a joint initiative to test interventions that improve outcomes for children with disabilities and their families, which may yield substantial savings through reduced long-term reliance on the Supplemental Security Income program and other public services. OMB's Partnership Fund for Program Integrity Innovation is testing promising solutions developed collaboratively by Federal agencies, States, and other stakeholders to improve payment accuracy, improve administrative efficiency, and enhance service delivery in benefit programs that serve overlapping populations. Evaluation of these pilots will help determine which strategies lead to better results at lower cost, allowing Federal and State governments to identify the most promising strategies that warrant expansion.

The Administration is committed to producing more and better empirical evidence. There is, however, perhaps an even greater need to promote greater demand for data and evidence in Federal decision-making processes. The process of setting high-priority goals and measuring progress towards meeting them is beginning to increase the demand for data, its analysis, and complementary evaluations, as leaders running frequent data-driven reviews to achieve progress on ambitious goals search for increasingly effective and cost-effective practices to speed progress toward the goals they have set.

State, local, and tribal governments face a similar need to prioritize programs that achieve the best results. One particularly interesting model is the Washington State Institute for Public Policy. The Institute provides a good example of how a centralized evaluation and research agency can conduct reviews of existing evaluation research to identify policies, practices, and strategies that are most likely to give taxpayers a return on their investment. It was created by the Washington state legislature to carry out practical, non-partisan research – at legislative direction – of importance to Washington State. The Institute has its own set of policy analysts and economists, specialists from universities, and consultants whom it engages to conduct policy analysis. It does a systematic review of evidence and has a methodology for comparing the relative return-on-investment of alternative interventions and presents the results in a straightforward, user-friendly manner. The Institute provides a potential model for Federal, state, local, and tribal government as well as for not-for-profit and for-profit organizations. An example of an assessment of the evidence for options to improve statewide outcomes in a variety of areas, including child maltreatment, crime, and education can be found at the Institute's website here: <http://www.wsipp.wa.gov/rpt-files/11-07-1201.pdf>.

The President has made it clear that policy decisions should be driven by evidence—evidence about what works and what does not and evidence that identifies the greatest needs and challenges. By instilling a culture of learning into Federal programs, the Administration will

build knowledge so that spending decisions are based not only on good intentions, but also on strong evidence that yield the highest social returns on carefully targeted investments.

9. BENEFIT-COST ANALYSIS

I. INTRODUCTION

Federal Government policies and programs make use of our Nation's limited resources to achieve important social goals, including economic growth, job creation, education, national security, environmental protection, and public health. Many Federal programs require governmental expenditures, such as those funding early childhood education or job training. Moreover, many policies entail social expenditures that are not reflected in budget numbers. For example, environmental, energy efficiency, and workplace safety regulations impose compliance costs on the private sector. In all cases, the American people expect the Federal Government to design programs and policies to manage and allocate scarce fiscal resources prudently, and to ensure that programs achieve the maximum benefit to society and do not impose unjustified or excessive costs.

A crucial tool used by the Federal Government to achieve these objectives is benefit-cost analysis, which provides a systematic accounting of the social benefits and costs of Government policies. Executive Order 13563, issued in January 2011, makes a firm commitment to cost-benefit analysis and to ensuring that the benefits of regulations justify the costs. It states, among other things, that each agency must "use the best available techniques to quantify anticipated present and future benefits and costs as accurately as possible." It also states that agencies must "propose or adopt a regulation only upon a reasoned determination that its benefits justify its costs (recognizing that some benefits and costs are difficult to quantify.)"

The goal of benefit-cost analysis is to promote social welfare -- to ensure that the consequences of regulations are desirable on balance. The use of monetary equivalents does of course create numerous challenges, both conceptual and empirical; philosophers and economists have grappled with those challenges.¹ The translation of regulatory

consequences into monetary figures is meant to promote sensible comparisons, and should be understood as an administrable method for promoting that assessment. Other considerations, not subject to that translation, may also matter. As Executive Order 13563 also states, "each agency may consider (and discuss qualitatively) values that are difficult or impossible to quantify, including equity, human dignity, fairness, and distributive impacts."

The assessment of benefits and costs of a government policy are meant to offer a concrete description of the anticipated consequences of the policy. Such an accounting helps policymakers to design programs to be both efficient and effective and to avoid unnecessary or unjustified costs and burdens. That accounting also allows the American people to see the expected consequences of programs and to hold policymakers accountable for their actions.

As noted, quantification and monetization produce significant challenges, but serious efforts have been made to meet those challenges. Those efforts are continuing. Importantly, there is a close relationship between open government and benefit-cost analysis. Because analysis is often improved through transparency and public comments, transparency and consideration of benefits and costs are tightly connected in practice. Especially in a difficult economic period, it is important to analyze both benefits and costs and to take steps to eliminate unnecessary burdens, which may have adverse effects on job creation and growth. Executive Order 13563 calls for such steps with its efforts to discipline the flow of new regulations and its requirement of retrospective analysis of existing significant rules. Retrospective analysis has recently become a central part of the regulatory process as agencies identify outdated or redundant regulations and is helping to eliminate billions of dollars in regulatory burdens, in areas including environmental protection, transportation, labor, health care, and agriculture.

Press, 2011)]

¹ See Adler (2011). [Reference is to Matthew D. Adler, *Well-Being and Fair Distribution: Beyond Cost-Benefit Analysis*, Oxford University

II. BENEFIT-COST ANALYSIS OF FEDERAL REGULATIONS

Overview of Benefit-Cost Analysis of Federal Regulation

For over three decades, benefit-cost analysis has played a critical role in the evaluation and design of significant Federal regulatory actions. While there are precursors in earlier administrations, the Reagan Administration was the first to establish a broad commitment to benefit-cost analysis in regulatory decision making through its Executive Order 12291. The Clinton Administration continued that commitment when it updated the principles

and processes governing regulatory review in Executive Order 12866, which continues in effect today. Executive Order 12866 requires executive agencies to catalogue and assess the benefits and costs of planned significant regulatory actions. It also requires agencies (1) to undertake regulatory action only on the basis of a "reasoned determination" that the benefits justify the costs and (2) to choose the regulatory approach that maximizes net social benefits, that is, benefits minus costs (unless the law governing the agency's action requires another approach). Executive Order 13563, issued in January 2011, reaffirms

the requirements of Executive Order 12866 and imposes a set of important additional requirements designed to promote sound analysis, to increase flexibility, to promote public participation, to harmonize conflicting and redundant requirements, and to ensure scientific integrity.

Operating under the broad framework established by Executive Orders 13563 and 12866, the Office of Management and Budget requires careful analysis of the costs and benefits of significant rules; identification of the approach that maximizes net benefits; detailed exploration of reasonable alternatives, alongside assessments of their costs and benefits; cost-effectiveness; and attention to unquantifiable benefits and costs as well as to distributive impacts. Central goals are to ensure that regulations will be effective in achieving their purposes and that they do not impose excessive costs. As noted, it is especially important to maximize net benefits, and to avoid unjustified burdens, in a period of economic difficulty. Notably, Executive Order 13563 specifically refers to “job creation,” and where feasible, agencies have recently devoted a great deal of attention to the anticipated job impacts (whether positive or negative) of regulations.

Under Executive Order 13563, agencies are authorized to consider “values that are difficult or impossible to quantify, including equity, human dignity, fairness, and distributive impacts.” In analyzing the effects of rules issued under the Americans with Disabilities Act, for example, it is legitimate to consider the dignitary values² associated with protection against discrimination, and also the equitable goals of the statute. Also, in eliminating the ban on entry into the United States of those who are HIV-positive, it is legitimate to consider dignitary and equitable factors that properly bear on the decision to eliminate that ban.

Reviewing agencies’ benefit-cost analyses and working with agencies to improve them, OMB provides a centralized repository of analytical expertise in its Office of Information and Regulatory Affairs (OIRA). OMB’s guidance to agencies on how to do benefit-cost analysis for proposed regulations is contained in its Circular A-4. A-4 directs agencies to specify the goal of a planned regulatory intervention, to consider a range of regulatory approaches for achieving that goal, to select the least burdensome approach, and to estimate the benefits and costs of each alternative considered. To the extent feasible, agencies are re-

quired to monetize benefits and costs, so that they are expressed in comparable units of value. This process enables the agency to identify (and generally to choose) the approach that maximizes the total net benefits to society generated by the rule. OIRA has recently issued a primer on Circular A-4 and also a response to Frequently Asked Questions.

For example, consider a regulation that sets standards for how quickly a truck’s brakes must be able to bring it to a stop.³ A shorter stopping distance generates greater safety benefits, but also will impose larger compliance costs (if more effective brakes are more expensive). The agency should attempt to quantify both the safety benefits of reduced stopping distance and the costs of regulatory requirements. It should consider a range of stopping distances to determine the optimal one that maximizes net benefits. At such an optimal standard, making the stopping distance even shorter would impose compliance costs greater than additional safety benefits. At the same time, making the stopping distance longer than optimal results in a loss in safety benefits that is greater than the cost savings. Careful benefit-cost analysis enables the agency to determine the optimal standard. It helps to show that some approaches would be insufficient and that others would be excessive.

To be sure, quantification of the relevant variables, and monetization of those variables, can present serious challenges. OIRA and relevant agencies have developed a range of strategies for meeting those challenges; many of them are sketched in Circular A-4, and we take up one such approach below. Efforts continue to be made to improve current analyses and to disclose and test their underlying assumptions. In some cases, identification of costs and benefits will leave significant uncertainties. In some cases, the monetized figures will not be sufficient to settle the appropriate choice. But much of the time, an understanding of costs and benefits will rule out some possible courses of action, and will show where, and why, reasonable people might differ. Such an understanding will also help to identify the most effective courses of action and to eliminate unjustified costs and burdens—in the process potentially helping to promote competitiveness, innovation, job creation, and economic growth. (Recall that the purpose of cost-benefit analysis is to provide an administrable method for assessing the consequences of regulation.)

² Dignitary value is defined as “a concern for values inherent in or intrinsic to our common humanity-values such as autonomy, self-respect, or equality that might be nurtured or suppressed depending on the form that governmental decision making takes.” The definition is available at <http://digitalcommons.law.yale.edu/>.

³ The National Highway Traffic Safety Administration issued a new safety standard for air brake systems to improve the stopping distance performance of trucks. See 49 CFR § 571.

Table 9–1. ESTIMATES OF THE TOTAL ANNUAL BENEFITS AND COSTS OF MAJOR RULES REVIEWED BY OMB IN 2010

(In billions of 2001 dollars)

Rule	Agency	Benefits	Costs
Energy Conservation Standards for Small Electric Motors	DOE	0.7-0.8	0.2
Energy Efficiency Standards for Commercial Clothes Washers	DOE	0-0.1	<0.1
Energy Efficiency Standards for Pool Heaters and Direct Heating Equipment and Water Heaters	DOE	1.3-1.8	1.0-1.1
Medical Examination of Aliens--Removal of Human Immunodeficiency Virus (HIV) Infection from Definition of Communicable Disease of Public Health Significance ...	HHS	Not Estimated	<0.1
Regulations Restricting the Sale and Distribution of Cigarettes and Smokeless Tobacco to Protect Children and Adolescents	HHS	Not Estimated	Not Estimated
Use of Ozone-Depleting Substances; Removal of Essential Use Designations [Flunisolide, Triamcinolone, Metaproterenol, Pirbuterol, Albuterol and Ipratropium in Combination, Cromolyn, and Nedocromil]	HHS	Not Estimated	Not Estimated
Interim Final Rules under the Paul Wellstone and Pete Domenici Mental Health Parity and Addiction Equity Act of 2008	HHS/DOL/TREAS	Not Estimated	<0.1
Interim Final Rules for Group Health Plans and Health Insurance Issuers Relating to Dependent Coverage of Children to Age 26 under the Patient Protection and Affordable Care Act	HHS/DOL/TREAS	Not Estimated	<0.1
Interim Final Rules for Group Health Plans and Health Insurance Coverage Relating to Status as a Grandfathered Health Plan under the Patient Protection and Affordable Care Act	HHS/DOL/TREAS	Not Estimated	<0.1
Patient Protection and Affordable Care Act: Preexisting Condition Exclusions, Lifetime and Annual Limits, Rescissions, and Patient Protections	HHS/DOL/TREAS	Not Estimated	<0.1
Interim Final Rules for Group Health Plans and Health Insurance Issuers Relating to Internal Claims and Appeals and External Review Processes under the Patient Protection and Affordable Care Act	HHS/DOL/TREAS	Not Estimated	<0.1
Interim Final Rules for Group Health Plans and Health Insurance Issuers Relating to Coverage of Preventive Services under the Patient Protection and Affordable Care Act	HHS/DOL/TREAS	Not Estimated	Not Estimated
Migratory Bird Hunting; Final Frameworks for Early-Season Migratory Bird Hunting Regulations	DOI	0.2-0.3	Not estimated
Migratory Bird Hunting; Final Frameworks for Late Season Migratory Bird Hunting Regulations	DOI	0.2-0.3	Not estimated
Nondiscrimination on the Basis of Disability in Public Accommodations and Commercial Facilities	DOJ	1.0-2.1	0.5-0.7
Nondiscrimination on the Basis of Disability in State and Local Government Services	DOJ	0.2-0.3	0.1-0.2
Electronic Prescriptions for Controlled Substances	DOJ	0.3-1.3	<0.1
Cranes and Derricks in Construction	DOL	0.2	0.1
Improved Fee Disclosure for Pension Plans	DOL	Not Estimated	<0.1
Automatic Dependent Surveillance--Broadcast (ADS-B) Equipage Mandate to Support Air Traffic Control Service	DOT	0.1-0.2	0.2
Electronic On-Board Recorders for Hours-of-Service Compliance	DOT	0.2	0.1
Positive Train Control	DOT	<0.1	0.5-1.3
Pipeline Safety: Distribution Integrity Management	DOT	0.1	0.1
Passenger Car and Light Truck Corporate Average Fuel Economy Standards MYs 2012 to 2016	DOT and EPA	3.9-18.2	1.7-4.7
S.A.F.E. Mortgage Licensing Act	TREAS	Not Estimated	0.1-0.2
Control of Emissions from New Marine Compression-Ignition Engines at or above 30 Liters per Cylinder	EPA	Not Estimated	Not Estimated
National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines	EPA	0.7-1.9	0.3
National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines--Existing Stationary Spark Ignition (Gas-Fired)	EPA	0.4-1.0	0.2
NESHAP: Portland Cement Notice of Reconsideration	EPA	6.1-16.3	0.8-0.9
Prevention of Significant Deterioration/Title V Greenhouse Gas Tailoring Rule	EPA	Not Estimated	Not Estimated
Renewable Fuels Standard Program	EPA	Not Estimated	Not Estimated
Review of the National Ambient Air Quality Standards for Sulphur Dioxide	EPA	2.8-38.6	0.3-2.0
Lead; Amendment to the Opt-out and Recordkeeping Provisions in the Renovation, Repair, and Painting Program	EPA	0.8-3.0	0.3
Revisions to the Spill Prevention, Control, and Countermeasure (SPCC) Rule	EPA	0	-0.1

The Benefits and Costs of Federal Regulation in FY 2010

Each year, OMB reports to Congress agencies' estimates of the benefits and costs of major regulations reviewed in the prior fiscal year. Table 9–1 presents the benefit and cost estimates for the 34 non-budgetary rules reviewed by OMB in FY 2010.⁴ Of those, agencies monetized both the benefits and costs for 18.⁵

Most of the benefits and costs reported in Table 9–1 are expressed as ranges, and sometimes as wide ranges, because of uncertainty about the likely consequences of rules. Quantification and monetization raise difficult conceptual and empirical questions. Prospective benefit-cost analysis requires predictions about the future—both about what will happen if the regulatory action is taken and what will happen if it is not—and what the future holds is typically not known for certain. A standard goal of the agency's analysis is to produce both a central "best estimate," which reflects the expected value of the benefits and costs of the rule, as well as a description of the ranges of plausible values for benefits, costs, and net benefits. These estimates inform the decisionmakers and the public of the degree of uncertainty associated with the regulatory decision. The process of public scrutiny can sometimes reduce that uncertainty.

To illustrate some of the underlying issues, consider the EPA's recent National Ambient Air Quality Standard (NAAQS) for Sulfur Dioxide. The benefits of the rule are estimated to be somewhere between \$2.8 to \$38.6 billion—an expansive range. Almost all of these estimated benefits are due to co-benefits of reduced mortality resulting from the reduction in particulate matter emissions caused by the rule. However, there is substantial uncertainty with respect to (a) the relationship between exposure to particulate matter and premature death and (b) the proper monetary valuation of avoiding a premature death. Hence, the agency reported a wide range of plausible values for the benefits of the NAAQS for Sulfur Dioxide. Similar uncertainties in both the science used to predict the consequences of rules and the monetary values of those consequences, contribute to the uncertainty represented in the ranges of benefits and costs for other rules in Table 9–1. Despite these uncertainties, benefit-cost analysis often reduces the range of reasonable approaches – and simultaneously helps to inform the decision about which approach is most reasonable.

⁴ FY 201020 is the most recent period for which such a summary is available. These estimates were reported in OMB, 2011 Report to Congress on the Benefits and Costs of Federal Regulations and Unfunded Mandates on State, Local, and Tribal Entities. A detailed description of the assumptions and calculations underlying these estimates is provided in that Report.

⁵ (1) The Department of Health and Human Services issued six rules to implement health insurance reforms. (2) The Department of Interior adopted two Migratory Bird Hunting regulations where the agency assessed benefits associated with increased consumer welfare of hunting allowances. (3) The Environmental Protection Agency assessed the benefits and costs for both national and international coordinated strategy to control emissions from ocean-going vessels, adopted a case-study approach to examine the effects of the Renewable Fuels Program, and provided illustrative estimates for the Greenhouse Gas Tailoring Rule.

Quantification and Breakeven Analysis

In some cases, the effort to monetize certain benefits (such as protection of streams and wildlife) will run into serious obstacles; quantification may be possible but not monetization. In other cases, analysts will know the direction of an effect, and perhaps be able to specify a range, but precise quantification itself will not be possible. Recognizing these points, OMB has recommended that consistent with Executive Orders 13563 and 12866, the best practice is to accompany all significant regulations with (1) a tabular presentation, placed prominently and offering a clear statement of qualitative and quantitative benefits and costs of the proposed or planned action, together with (2) a presentation of uncertainties and (3) similar information for reasonable alternatives to the proposed or planned action. An advantage of this approach is transparency. If, for example, it is possible to quantify certain benefits (such as protection of water quality) but not to monetize them, then the public should be made aware of that fact. At the same time, qualitative discussion of nonquantifiable benefits should help the public, and relevant decisionmakers, to understand the goal of the regulation and how it might achieve that goal.

When quantification is not possible, many agencies have found it both useful and informative to engage in "breakeven analysis." Under this approach, agencies specify how high the unquantified or unmonetized benefits would have to be in order for the benefits to justify the costs. Suppose, for example, that regulation that protects water quality costs \$105 million annually, and that it also has significant effects in reducing pollution in rivers and streams. It is clear that the regulation would be justified if and only if those effects could reasonably be valued at \$105 million or more. Once the nature and extent of the water quality benefits are understood, it might well be easy to see whether or not the benefits plausibly justify the costs -- and if the question is difficult, at least it would be clear why it is difficult. Breakeven analysis is an important tool, and it has analytical value when quantification is speculative or impossible.

Current Agency Practice for Values of Mortality Reduction

Since agencies often design health and safety regulation to reduce risks to life, evaluation of these benefits can be the key part of the analysis. When monetizing reduced mortality risks, agencies often use what is commonly described as a "Value of a Statistical Life," or VSL. The term is misleading because it suggests, erroneously, that the goal of monetization is to place a "value" on individual lives. The goal is instead to value reductions in small risks of premature death (such as 1 in 100,000); it follows that "VSL" actually refers to the value of gaining small risk reductions. There is no effort to suggest that any individual's life can be expressed in monetary terms.

Circular A-4 provides background on the theory and practice of calculating VSL. It states that a substantial majority of the studies of VSL indicate a value that varies "from roughly \$1 million to \$10 million per statisti-

cal life.” In practice, agencies have tended to use a value in the middle or upper range of this distribution. (Note that Circular A-4 was issued in 2003 and that because of income growth, the figure increases over time.) OMB believes that it is important to consult the relevant literature, which contains a range of significant empirical findings and conceptual claims, in order to base analysis on the best available research. Below we provide a brief summary of the VSL values agencies have adopted in recent Regulatory Impact Analyses (RIAs).

Two agencies, EPA and DOT, have developed official guidance on VSL. In its 2011 update to its guidelines, DOT uses a value of \$6.2 million (\$2011), and requires all the components of the Department to use this value in their RIAs. EPA recently changed its VSL to \$6.3 million (\$2000) and adjusts this value for real income growth to later years. For example, in its final rule setting a new primary standard for Sulfur Dioxide, EPA adjusted VSL to account for a different currency year (\$2006) and to account for income growth to 2020, which yields a VSL of \$8.9 million. EPA stated in this RIA, however, that it is continuing their efforts to update this guidance.

OMB believes in the importance of consulting the growing empirical and conceptual work in this domain.

Cost-per-life-saved of Health and Safety Regulation

For regulations intended to reduce mortality risks, another analytic tool that can be used to assess regulations, and to help avoid unjustified burdens, is cost-effectiveness analysis. Some agencies develop estimates of the “net cost per life saved” for regulations intended to improve public health and safety. To calculate this figure, the costs of the rule minus any monetized benefits other than mortality reduction are placed in the numerator, and the expected reduction in mortality in terms of total number of lives saved is placed in the denominator. This measure avoids any assignment of monetary values to reductions in mortality risk. It still reflects, however, a concern for economic efficiency, insofar as choosing a regulatory option that reduces a given amount of mortality risk at a lower net cost to society would conserve scarce resources compared to choosing another regulatory option that would reduce the same amount of risk at greater net costs.

Table 9–2. ESTIMATES OF THE NET COSTS PER LIFE SAVED OF SELECTED HEALTH AND SAFETY RULES RECENTLY REVIEWED BY OMB

(In millions of 2001 dollars)

Rule	Agency	Net Cost per Life Saved	Notes
Prevention of Salmonella Enteritidis in Shell Eggs	HHS/FDA	Negative	Morbidity benefits exceed costs.
New Entrant Safety Assurance Process	DOT/FMCSA	Negative	Property damage and morbidity benefits exceed costs.
Reduced Stopping Distance Requirements for Truck Tractors	DOT/NHTSA	Negative	Property damage benefits exceed costs.
Roof Crush Resistance	DOT/NHTSA	\$6.4-11.0	The agency estimates that the rule will prevent 135 fatalities and 1,065 nonfatal injuries annually. These figures translate into 156 equivalent fatalities. The main estimates value equivalent fatalities prevented at \$6.1 million. It follows that the value of nonfatal injuries prevented is \$6.1 million*(156-135)=\$128.1 million annually. Total costs associated with the rule range from \$875 million to \$1,400 million annually. If we subtract the injury benefits from costs, the range of net cost per life saved is thus \$5.5 million to \$9.4 million (2007 dollar). Adjusting to \$2001 yields \$6.4 million to \$11.0 million.

Although the Department of Homeland Security has no official policy on VSL, it recently sponsored a report through its U.S. Customs and Border Protection, and has used the recommendations of this report to inform VSL values for several recent rulemakings. This report recommends \$6.3 million (\$2008) and also recommends that DHS adjust this value upward over time for real income growth (in a manner similar to EPA’s adjustment approach). Other regulatory agencies that have used a VSL in individual rulemakings include DOL’s Occupational Safety and Health Administration (OSHA) and HHS’ Food and Drug Administration (FDA). In a rulemaking revising worker safety standards when using cranes and derricks in construction, OSHA updated the previously used VSL of \$7.0 million (\$2003) to \$8.7 million (\$2010). The FDA is using a value of \$7.9 million (\$2010), but also often uses a monetary value of the remaining life years saved by alternative policies. This is sometimes referred to as a “Value of a Statistical Life Year” or VSLY. As noted,

Table 9–2 presents the net cost per life saved for four recent health and safety rules for which calculation is possible. The net cost per life saved is calculated using 3 percent discount rate and using agencies’ best estimates for costs and expected mortality reduction where those were provided by the agency. There is substantial variation in the net cost per life saved by these rules, ranging from negative (that is, the non-mortality-related benefits outweigh the costs), to potentially as high as \$11.0 million.

This table is designed to be illustrative rather than definitive, and continuing work must be done to ensure that estimates of this kind are complete and not misleading. For example, some mortality-reducing rules have a range of other benefits, including reductions in morbidity, and it is important to include these benefits in cost-effectiveness analysis. Other rules have benefits that are exceedingly difficult to quantify but nonetheless essential to consider; consider rules that improve water quality or have aes-

thetic benefits. Nonetheless, it is clear that some rules are far more cost-effective than others, and it is valuable to take steps to catalogue variations and to increase the

likelihood that scarce resources will be used as effectively as possible.

III. BENEFIT-COST ANALYSIS OF BUDGETARY PROGRAMS

As noted, Executive Orders 13563 and 12866 require agencies, to the extent permitted by law, to “propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs.” OIRA works actively with agencies to promote compliance with this requirement.

Historically, benefit-cost analysis of Federal budgetary programs has been more limited than that of regulatory policy. Increasingly, though, the Federal Government explicitly employs benefit-cost analysis to ensure that projects and spending programs have benefits in excess of costs, maximize net benefits, and allocate federal dollars most efficiently across potential projects.

In the 1936 Flood Control Act, for example, Congress stated as a matter of policy that the Federal government should undertake or participate in flood control projects if the benefits exceeded the costs, where the lives and social security of people are at stake. By the late 1970s, the Army Corps of Engineers had begun to use benefit-cost analysis to improve the return on investment at a given project site. The Corps did this by designing projects based on increments of work whose benefits exceeded their costs. More recently, the Budget has used benefits and costs, along with other criteria, to develop an overall program for the Corps that yields the greatest net benefits or cost effectiveness.

Benefit-cost analysis can also be used to evaluate programs retrospectively to determine whether they should be either expanded or discontinued and how they can be improved. Chapter 8, “Program Evaluation”, in this volume discusses current efforts to improve program evaluation. Evidence that an activity can yield substantial net benefits has motivated the creation and expansion of a substantial number of programs. For example, longitudinal studies have shown that each dollar spent on high quality pre-school programs serving disadvantaged children yields substantially more than a dollar (in present value) in higher wages, less crime, and less use of public services, motivating an expansion of funding for quality

pre-K programs. Similar evidence has spurred the decision to expand funding for nurse-family partnerships, finding that each dollar spent in the program leads to more than a dollar of benefits mostly in reduced government expenditures on health care, educational and social services, and criminal justice, and that the highest returns were present in serving the most disadvantaged families. Similarly, GAO has concluded that the Women, Infants, and Children (WIC) program produces monetary benefits that exceed its costs by reducing the incidence of low birth weight and iron deficiency, which are linked to children’s behavior and development.

OMB continually works with executive agencies to improve their benefit-cost analyses, and to increase transparency. In its 2011 annual report to Congress on the benefits and costs of Federal regulations,⁶ OMB continues to support the recommendations for improvement in agencies’ benefit-cost analysis by promoting (1) clarity with respect to underlying assumptions and anticipated consequences, (2) prominent tabular presentations of costs and benefits, and (3) careful consideration of the comments offered by members of the public on proposed rules. Furthermore, OMB recommends that benefit-cost analysis should be seen and used as a central part of open government. By providing the public with information about proposed and final regulations, by revealing assumptions and subjecting them to public assessment, and by drawing attention to the consequences of alternative approaches, such analysis can promote public understanding, scrutiny, and improvement of rules. OMB continues to explore ways to ensure that benefit-cost analysis helps promote the commitment to open government.

⁶ OMB, 2011 Report to Congress on the Benefits and Costs of Federal Regulations and Unfunded Mandates on State, Local, and Tribal Entities.

⁷ See Transparency and Open Government, Memorandum for the Heads of Executive Departments and Agencies, President Obama, Jan. 21, 2009. For discussion of this point and its relationship to retrospective analysis of the effects of regulations, see Greenstone (2009).

IV. IMPROVING BENEFIT-COST ANALYSIS

In the Memorandum on Transparency and Open Government, issued on January 21, 2009, the President called for the establishment of “a system of transparency, public participation, and collaboration.”⁸ The memorandum elaborated the principles of such a system, designed to promote accountability and disclosure of information that “the public can readily find and use.” The memorandum noted that “[k]nowledge is widely dispersed in society, and public officials benefit from having access to that dispersed knowledge.” Implementing the President’s memorandum, agencies have begun to take a series of

concrete measures described in the Open Government Directive to put into practice the commitments to transparency, participation, and collaboration.⁹

The goals of this effort are to promote accountability, and to ensure that regulations are informed, to the extent possible, by a careful analysis of the likely consequences, and to reduce the dual risks of excessive and insufficient regulation. A particular goal, in the current period, is to avoid unjustified or excessive burdens on business, state and local government, and individuals. The recent agency checklist for Regulatory Impact Analysis is designed to promote these various goals (see Appendix).

⁸ Available at: <http://www.gpoaccess.gov/presdocs/2009/DPCPD200900010.pdf>

⁹ Available at: <http://www.openthegovernment.org/otg/OGD.pdf>

Participation and Collaboration in the Regulatory Process

Executive Order 13563 states that “regulations shall be based, to the extent feasible and consistent with law, on the open exchange of information and perspectives” To promote that open exchange, Executive Order 13563 directs agencies to provide the public with timely access to regulatory analyses and supporting documents on regulations.gov to ensure a meaningful opportunity for public comment.

The Internet provides an ideal vehicle for making information public and, under Executive Order 13563, the Administration has committed to publish as much as possible online in a format that can be retrieved, downloaded, indexed, and searched by commonly-used web search applications. Importantly, this commitment promotes public accessibility of the analysis of benefits and costs, together with the supporting materials, in order to ensure that the analysis is subject to public scrutiny. That process of scrutiny can help to increase benefits, decrease costs, or both.

Agencies now publish a great deal of information relevant to rulemaking and benefit-cost analysis, including underlying data, online and in downloadable, as well as traditional, formats. Executive Order 13563 directs agencies to use regulations.gov to make the online record as complete as possible¹⁰ and to take all necessary steps to make relevant material available to the public for comment.

Executive Order 13563 requires that the public should generally receive a comment period of at least 60 days for proposed regulatory actions. Even where statutes necessitate shorter comment periods, agencies can seek public comment and respond in a timely fashion to suggestions about potential improvements in rules and underlying analyses.

Publicly Accessible Summaries and Tables with Key Information

In order to improve analysis of the effects of regulations, and simultaneously to improve accountability, OMB has called for a clear, salient, publicly accessible executive summary of both benefits and costs—written in a “plain language” manner designed to be understandable to the public. For all economically significant regulations, Executive Orders 13563 and 12866 require agencies to provide a description of the need for the regulatory action and a clear summary of the analysis of costs and benefits, both qualitative and quantitative. The summary often includes an accounting of benefits and costs of alternative approaches, and where relevant, an analysis of distributional impacts on subpopulations (such as disabled people or those with low income).

As noted, some benefits and costs can be quantified and monetized, while some can be described only in qualitative terms. A useful way to communicate effects that cannot be easily quantified or monetized is to present ranges of values (as agencies frequently now do).

Simple, Straightforward Justification of Preferred Option

Executive Orders 13563 and 12866 require the executive summary to include “an explanation of why the planned regulatory action is preferable to the identified potential alternative,” and demonstrate that the agency has selected the approach “that maximizes net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity) unless a statute requires another regulatory approach.”

Under the Executive Orders, agencies are required to provide a “reasoned determination that the benefits of the intended regulation justify its costs,” to the extent permitted by law. In making those determinations, agencies should pay close attention to quantifiable and monetizable benefits and costs, but are permitted to consider values that are hard or impossible to quantify in light of existing knowledge, as well as distributional effects, human dignity, fairness, and considerations of equity (including, where relevant, considerations of environmental justice).

We have noted that where nonquantified or nonmonetized variables are important to the agency’s determination, agencies often use “breakeven analysis,” explaining how high the nonquantified or nonmonetized benefits would have to be in order for the benefits to justify the costs. In those situations, agencies make underlying assumptions transparent to the public and available through the rulemaking process. Where the agency has proceeded even though the benefits do not justify the costs, and where the agency has not selected the approach that maximizes net benefits, it should carefully explain its reasoning (as, for example, where a statute so requires).

Benefit-cost analysis is a useful and often indispensable method for evaluating programs and options. In some cases, it reveals that apparently attractive proposals are too expensive to be worthwhile. In other cases, it shows that costly proposals are well-justified, because the benefits are significantly higher than the costs. Often benefit-cost analysis helps to identify the range of reasonable options. It is true that conceptual and empirical challenges remain and that it is important to assess the evolving literature in order to meet those challenges. Especially in a period of serious economic difficulties, greater use and improvement of benefit-cost analysis are high priorities.

¹⁰ Available at: http://www.whitehouse.gov/omb/assets/inforeg/edocket_final_5-28-2010.pdf

APPENDIX

AGENCY CHECKLIST: REGULATORY IMPACT ANALYSIS

With this document, the Office of Information and Regulatory Affairs is providing a checklist to assist agencies in producing regulatory impact analyses (RIAs), as required for economically significant rules by Executive Order 12866 and OMB Circular A-4.

Nothing herein alters, adds to, or reformulates existing requirements in any way. Moreover, this checklist is limited to the requirements of Executive Order 12866 (available at: http://www.reginfo.gov/public/jsp/Utilities/EO_12866.pdf) and Circular A-4 (available at: <http://www.whitehouse.gov/OMB/circulars/a004/a-4.pdf>); it does not address requirements imposed by other authorities, such as the National Environmental Policy Act, the Regulatory Flexibility Act, the Unfunded Mandates Reform Act, the Paperwork Reduction Act, and various Executive Orders that require analysis. Executive Order 12866 and Circular A-4, as well as those other authorities, should be consulted for further information.

Checklist for Regulatory Impact Analysis:

Does the RIA include a reasonably detailed description of the need for the regulatory action?^{11 12}

Does the RIA include an explanation of how the regulatory action will meet that need?¹³

Does the RIA use an appropriate baseline (i.e., best assessment of how the world would look in the absence of the proposed action)?¹⁴

Is the information in the RIA based on the best reasonably obtainable scientific, technical, and economic information and is it presented in an accurate, clear, complete, and unbiased manner?¹⁵

¹¹ Required under Executive Order 12866, Section 6(a)(3)(B)(i): "The text of the draft regulatory action, together with a reasonably detailed description of the need for the regulatory action and an explanation of how the regulatory action will meet

¹² Circular A-4 states: "If the regulation is designed to correct a significant market failure, you should describe the failure both qualitatively and (where feasible) quantitatively." (P. 4)

¹³ See note 1 above.

¹⁴ Circular A-4 states: "You need to measure the benefits and costs of a rule against a baseline. This baseline should be the best assessment of the way the world would look absent the proposed action... In some cases, substantial portions of a rule may simply restate statutory requirements that would be self-implementing, even in the absence of the regulatory action. In these cases, you should use a pre-statute baseline." (P. 15-16)

¹⁵ Circular A-4 states: "Because of its influential nature and its special role in the rulemaking process, it is appropriate to set minimum quality standards for regulatory analysis. You should provide documentation that the analysis is based on the best reasonably obtainable scientific, technical, and economic information available... you should assure compliance with the Information Quality Guidelines for your agency and OMB's Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies..." (P. 17). The IQ Guidelines (paragraph V.3.a) define objectivity to

Are the data, sources, and methods used in the RIA provided to the public on the Internet so that a qualified person can reproduce the analysis?¹⁶

To the extent feasible, does the RIA quantify and monetize the anticipated benefits from the regulatory action?^{17 18}

To the extent feasible, does the RIA quantify and monetize the anticipated costs?¹⁹

Does the RIA explain and support a reasoned determination that the benefits of the intended regulation justify its costs (recognizing that some benefits and costs are difficult to quantify)?²⁰

include "whether disseminated information is being presented in an accurate, clear, complete, and unbiased manner." <http://www.whitehouse.gov/omb/assets/omb/fedreg/reproducible2.pdf>

¹⁶ Circular A-4 states: "A good analysis should be transparent and your results must be reproducible. You should clearly set out the basic assumptions, methods, and data underlying the analysis and discuss the uncertainties associated with the estimates. A qualified third party reading the analysis should be able to understand the basic elements of your analysis and the way in which you developed your estimates. To provide greater access to your analysis, you should generally post it, with all the supporting documents, on the internet so the public can review the findings." (P. 17). OMB IQ Guidelines (paragraph V.3.b.ii) further states: "If an agency is responsible for disseminating influential scientific, financial, or statistical information, agency guidelines shall include a high degree of transparency about data and methods to facilitate the reproducibility of such information by qualified third parties."

¹⁷ Required under Executive Order 12866, Section 6(a)(3)(C)(i): "An assessment, including the underlying analysis, of benefits anticipated from the regulatory action (such as, but not limited to, the promotion of the efficient functioning of the economy and private markets, the enhancement of health and safety, the protection of the natural environment, and the elimination or reduction of discrimination or bias) together with, to the extent feasible, a quantification of those benefits."

¹⁸ Circular A-4 states: "You should monetize quantitative estimates whenever possible. Use sound and defensible values or procedures to monetize benefits and costs, and ensure that key analytical assumptions are defensible. If monetization is impossible, explain why and present all available quantitative information." (P. 19). Circular A-4 also offers a discussion of appropriate methods for monetizing benefits that might not easily be turned into monetary equivalents.

¹⁹ Required under Executive Order 12866, Section 6(a)(3)(C)(ii): "An assessment, including the underlying analysis, of costs anticipated from the regulatory action (such as, but not limited to, the direct cost both to the government in administering the regulation and to businesses and others in complying with the regulation, and any adverse effects on the efficient functioning of the economy, private markets (including productivity, employment, and competitiveness), health, safety, and the natural environment), together with, to the extent feasible, a quantification of those costs;" See also note 6 above.

²⁰ Executive Order 12866, Section 1(b)(6) states that to the extent permitted by law, "[e]ach agency shall assess both the costs and the benefits of the intended regulation and, recognizing that some costs and benefits are difficult to quantify, propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs." As Executive Order 12866 recognizes, a statute may require an agency to proceed with a regulation even if the benefits do not justify the costs; in such a case, the agency's analysis may not show any such justification.

Does the RIA assess the potentially effective and reasonably feasible alternatives?²¹

Does the RIA assess the benefits and costs of different regulatory provisions separately if the rule includes a number of distinct provisions?²²

Does the RIA assess at least one alternative that is less stringent and at least one alternative that is more stringent?²³

Does the RIA consider setting different requirements for large and small firms?²⁴

Does the preferred option have the highest net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity), unless a statute requires a different approach?²⁵

Does the RIA include an explanation of why the planned regulatory action is preferable to the identified potential alternatives?²⁶

²¹ Required under Executive Order 12866, Section 6(a)(3)(C)(iii): “An assessment, including the underlying analysis, of costs and benefits of potentially effective and reasonably feasible alternatives to the planned regulation, identified by the agencies or the public (including improving the current regulation and reasonably viable nonregulatory actions).”

²² Circular A-4 states: “You should analyze the benefits and costs of different regulatory provisions separately when a rule includes a number of distinct provisions.” (P. 17)

²³ Circular A-4 states: “you generally should analyze at least three options: the preferred option; a more stringent option that achieves additional benefits (and presumably costs more) beyond those realized by the preferred option; and a less stringent option that costs less (and presumably generates fewer benefits) than the preferred option.” (P. 16)

²⁴ Circular A-4 states: “You should consider setting different requirements for large and small firms, basing the requirements on estimated differences in the expected costs of compliance or in the expected benefits. The balance of benefits and costs can shift depending on the size of the firms being regulated. Small firms may find it more costly to comply with regulation, especially if there are large fixed costs required for regulatory compliance. On the other hand, it is not efficient to place a heavier burden on one segment of a regulated industry solely because it can better afford the higher cost. This has the potential to load costs on the most productive firms, costs that are disproportionate to the damages they create. You should also remember that a rule with a significant impact on a substantial number of small entities will trigger the requirements set forth in the Regulatory Flexibility Act. (5 U.S.C. 603(c), 604).” (P. 8)

²⁵ Executive Order 12866, Section 1(a) states: “agencies should select those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity) unless a statute requires another regulatory approach.”

²⁶ Required under Executive Order 12866, Section 6(a)(3)(C)(iii): “An assessment, including the underlying analysis, of costs and benefits of potentially effective and reasonably feasible alternatives to the planned regulation, identified by the agencies or the public (including improving the current regulation and reasonably viable nonregulatory actions), and an explanation why the planned regulatory action is preferable to the identified potential alternatives.”

Does the RIA use appropriate discount rates for benefits and costs that are expected to occur in the future?²⁷

Does the RIA include, if and where relevant, an appropriate uncertainty analysis?²⁸

Does the RIA include, if and where relevant, a separate description of distributive impacts and equity?²⁹

Does the RIA provide a description/accounting of transfer payments?³⁰

²⁷ Circular A-4 contains a detailed discussion, generally calling for discount rates of 7 percent and 3 percent for both benefits and costs. It states: “Benefits and costs do not always take place in the same time period. When they do not, it is incorrect simply to add all of the expected net benefits or costs without taking account of when they actually occur. If benefits or costs are delayed or otherwise separated in time from each other, the difference in timing should be reflected in your analysis.... For regulatory analysis, you should provide estimates of net benefits using both 3 percent and 7 percent.... If your rule will have important inter-generational benefits or costs you might consider a further sensitivity analysis using a lower but positive discount rate in addition to calculating net benefits using discount rates of 3 and 7 percent.” (PP. 31, 34, 36)

²⁸ Circular A-4 provides a detailed discussion. Among other things, it states: “Examples of quantitative analysis, broadly defined, would include formal estimates of the probabilities of environmental damage to soil or water, the possible loss of habitat, or risks to endangered species as well as probabilities of harm to human health and safety. There are also uncertainties associated with estimates of economic benefits and costs, such as the cost savings associated with increased energy efficiency. Thus, your analysis should include two fundamental components: a quantitative analysis characterizing the probabilities of the relevant outcomes and an assignment of economic value to the projected outcomes.” (P. 40). Circular A-4 also states: “You should clearly set out the basic assumptions, methods, and data underlying the analysis and discuss the uncertainties associated with the estimates.” (P. 17)

²⁹ Executive Order 12866, Section 1(b)(5) states; “When an agency determines that a regulation is the best available method of achieving the regulatory objective, it shall design its regulations in the most cost-effective manner to achieve the regulatory objective. In doing so, each agency shall consider incentives for innovation, consistency, predictability, the costs of enforcement and compliance (to the government, regulated entities, and the public), flexibility, distributive impacts, and equity” (emphasis added).

Circular A-4 states: “The term ‘distributional effect’ refers to the impact of a regulatory action across the population and economy, divided up in various ways (e.g., income groups, race, sex, industrial sector, geography)... Your regulatory analysis should provide a separate description of distributional effects (i.e., how both benefits and costs are distributed among sub-populations of particular concern) so that decision makers can properly consider them along with the effects on economic efficiency... Where distributive effects are thought to be important, the effects of various regulatory alternatives should be described quantitatively to the extent possible, including the magnitude, likelihood, and severity of impacts on particular groups.” (P. 14)

³⁰ Circular A-4 states: “Distinguishing between real costs and transfer payments is an important, but sometimes difficult, problem in cost estimation. . . . Transfer payments are monetary payments from one group to another that do not affect total resources available to society. . . . You should not include transfers in the estimates of the benefits and costs of a regulation. Instead, address them in a separate discussion of the regulation’s distributional effects.” (P. 14)

Does the RIA analyze relevant effects on disadvantaged or vulnerable populations (e.g., disabled or poor)?³¹

Does the analysis include a clear, plain-language executive summary, including an accounting statement that summarizes the benefit and cost estimates for the regulatory action under consideration, including the qualitative and non-monetized benefits and costs?³²

³¹ Circular A-4 states: “Your regulatory analysis should provide a separate description of distributional effects (i.e., how both benefits and costs are distributed among sub-populations of particular concern) so that decision makers can properly consider them along with the effects on economic efficiency. Executive Order 12866 authorizes this approach. Where distributive effects are thought to be important, the effects of various regulatory alternatives should be described quantitatively to the extent possible, including the magnitude, likelihood, and severity of impacts on particular groups.” (P. 14)

³² Circular A-4 states: “Your analysis should also have an executive summary, including a standardized accounting statement.” (P. 3). OMB recommends that: “Regulatory analysis should be made as transparent as possible by a prominent and accessible executive summary—written in a “plain language” manner designed to be understandable to the public—that outlines the central judgments that support regulations, including the key findings of the analysis (such as central assumptions and uncertainties)...If an agency has analyzed the costs and benefits of regulatory alternatives to the planned action (as is required for economically significant regulatory actions), the summary should include such information.” See 2010 Report to Congress on the Benefits and Costs of Federal Regulations and Unfunded Mandates on State, Local, and Tribal Entities, page 51. Available at: <http://www.whitehouse.gov/sites/>

Does the analysis include a clear and transparent table presenting (to the extent feasible) anticipated benefits and costs (quantitative and qualitative)?³³

[default/files/omb/legislative/reports/2010_Benefit_Cost_Report.pdf](http://www.whitehouse.gov/sites/default/files/omb/legislative/reports/2010_Benefit_Cost_Report.pdf)

³³ Circular A-4 states: “You need to provide an accounting statement with tables reporting benefit and cost estimates for each major final rule for your agency.” (P. 44). Circular A-4 includes an example of a format for agency consideration. OMB recommends “that agencies should clearly and prominently present, in the preamble and in the executive summary of the regulatory impact analysis, one or more tables summarizing the assessment of costs and benefits required under Executive Order 12866 Section 6(a)(3)(C)(i)-(iii). The tables should provide a transparent statement of both quantitative and qualitative benefits and costs of the proposed or planned action as well as of reasonable alternatives. The tables should include all relevant information that can be quantified and monetized, along with relevant information that can be described only in qualitative terms. It will often be useful to accompany a simple, clear table of aggregated costs and benefits with a separate table offering disaggregated figures, showing the components of the aggregate figures. To the extent feasible in light of the nature of the issue and the relevant data, all benefits and costs should be quantified and monetized. To communicate any uncertainties, we recommend that the table should offer a range of values, in addition to best estimates, and it should clearly indicate impacts that cannot be quantified or monetized. If nonquantifiable variables are involved, they should be clearly identified. Agencies should attempt, to the extent feasible, not merely to identify such variables but also to signify their importance.” See 2010 Report to Congress on the Benefits and Costs of Federal Regulations and Unfunded Mandates on State, Local, and Tribal Entities, page 51. Available at: http://www.whitehouse.gov/sites/default/files/omb/legislative/reports/2010_Benefit_Cost_Report.pdf

10. SOCIAL INDICATORS

The social indicators presented in this chapter illustrate in broad terms how the Nation is faring in selected areas, including the economy, energy, the environment, health, and education, among others. The indicators shown in the tables in this chapter are only a subset drawn from the vast array of available data on conditions in the United States. In choosing indicators for these tables, priority was given to measures that were consistently available over an extended period. Such indicators make it easier to draw comparisons and establish trends.

The individual 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 outcomes of Government policies, because they do not show the direct results of Government activities, but they do provide a quantitative measure of the progress or lack of progress toward some of the ultimate ends that Government policy is intended to promote. The "Program Evaluation" and "Benefit-Cost Analysis" chapters of this volume discuss approaches toward assessing directly the impacts of particular Government programs.

The President has made it clear that policy decisions should be based upon evidence—evidence about what the Nation's greatest needs and challenges are and evidence about what strategies are working. The social indicators in this chapter provide useful information both for prioritizing budgetary and policymaking resources and for evaluating how well existing approaches are working.

Economic Conditions: The 2008-2009 economic downturn produced the worst labor market in more than a generation. Unemployment is higher than at any time in the past quarter century, and the employment-to-population ratio has fallen below 60 percent for the first time since 1984. Real GDP per capita has declined over the past five years.

Income and Wealth: Over the entire period from 1960 to 2011 shown in the tables the primary pattern has been one of rising living standards. Real disposable income per capita has more than tripled as technological progress and the accumulation of human and physical capital have increased the Nation's productive capacity. Average household net worth has more than doubled. But these gains have not been evenly distributed. Median household income is up only 23 percent (since 1967) and was lower in 2010 than in 1997. The largest income gains have been concentrated among higher-income families and individuals. Similarly, the median wealth of households in the decade before retirement has risen, but not nearly as rapidly as mean wealth. Changing household composition is partly responsible for these trends. The numbers of two-earner households and single-parent households have both increased. Stagnating wages for

low-skill workers are another reason why rising average incomes have not had more impact on the most economically vulnerable Americans.

Economic Inequality: The rise in the share of national income received by those at the top of the income distribution can be seen in the two inequality measures in Table 10-1. The share of income accruing to the lower 60 percent of households has fallen from 32.3 percent in 1970 to 26.4 percent in 2010. The income share of the top one percent of taxpayers has risen from around eight percent in the two decades between 1960 and 1980 to 18 percent in 2008. The poverty rate, which fell dramatically between 1960 and 1970, as the economy prospered and as Social Security and other safety-net programs expanded, is at about the same level as it was in 1966—despite the large increase in per capita income—and 15 percent of American households are food-insecure.

Setting the Stage for Future Prosperity: The Nation's future economic prosperity depends on having a highly skilled workforce, an expanding stock of physical capital, including advanced infrastructure, and a business environment that encourages innovation. Environmental quality is also important for future well-being.

Saving: National saving is a key determinant of future prosperity because it supports capital accumulation. Table 10-1 shows that net national saving, which was already low by international standards when it averaged around 10 percent in the 1960s and 1970s, fell from 6.2 percent in 2000 to 2.0 percent in 2007 as Federal budget surpluses turned to deficits, and fell even further in the recession that followed. During the recent economic downturn, personal saving has rebounded to around 5 percent, but net national saving, which includes the Government's dis-saving, has turned slightly negative. Despite the current low saving rate, previous saving has resulted in a large accumulation of physical capital. The stock of physical capital including consumer durable goods like cars and appliances amounted to \$49 trillion in 2010, more than four times the size of the capital stock in 1960, after accounting for inflation.

Innovation: National Research and Development (R&D) spending has hovered between 2.5 percent and 2.8 percent of GDP for most of the past 50 years. Successful R&D can result in new innovations, which can also be encouraged by patent protection. Patents encourage innovation by awarding an inventor the right to exclude others from the use of an invention unless compensated. The patent system also assures publication of patented ideas distributing knowledge that might otherwise be kept confidential. Patents by U.S. inventors have increased threefold since 1960.

Environmental Quality: The Nation's future well-being and prosperity depends also on stewardship of our

natural resources, the environment, and on our ability to bring about a clean energy economy. The country has made major strides in improving air quality since the passage of the Clean Air Act in 1970. Concentrations of the main criteria pollutants tracked by the Environmental Protection Agency have declined significantly since 1970. The largest decline was for lead, which was removed from gasoline, but there have also been large declines in the emissions of carbon monoxide, nitrogen oxides, and sulfur dioxide. The air has become markedly cleaner in the United States as a result of this progress. Progress on improving water quality has also been noticeable as an increasing proportion of the population is served by improved water treatment facilities.

Moving forward, the greatest environmental challenge is reducing greenhouse gas emissions. In 2009, emissions were 5,618 teragrams. The President announced a target reduction of 17 percent in greenhouse gas emissions between 2005 and 2020, with an ultimate reduction of 83 percent between 2005 and 2050. While technological advances and a shift in production patterns mean that Americans now use about half as much energy per real dollar of GDP as they did 50 years ago, rising income levels mean that per capita consumption has remained roughly constant. Only seven percent of U.S. energy production is from renewable sources.

Health, Education, and Civic Engagement: Table 10-2 focuses on additional national priorities: health, education, community involvement and civic engagement.

Health: The first three groups of indicators in this table show measures related to the Nation's health. The United States devotes a large fraction of its income to health care, and that share has increased more than threefold since 1960. In the latest data, the share of GDP accounted for by health expenditures was 17.8 percent of GDP in 2009, and the share is projected to have remained near that level in 2010-2011. This is the largest it has ever been and well above what other nations spend on health. Despite the large expenditures on health care, many Americans were unable to obtain health insurance. In 2010, about 50 million people, 16 percent of the U.S. population, lacked health insurance. In 2010, the President signed into law the Affordable Care Act, which is projected to reduce the number of uninsured by 32 million Americans.

The United States has seen progress over the last 50 years in some important indicators of health status. Infant mortality has fallen from 26 deaths per 1,000 live births in 1960 to less than 7 deaths since 2000. In 2009, infant mortality fell to all-time low of 6.4 per 1,000 live births. Life expectancy at birth has increased substantially, rising by more than eight years since 1960, although it lags behind that in many other developed countries. Running counter to these positive trends, 21 percent of the adult population still smokes (a level below historic highs, but still troubling), and about 33 percent of the population is classified as obese according to criteria established by the Centers for Disease Control and Prevention, up from 15 percent twenty years ago.

Education: The Administration is committed to returning America to being number one in the world in

high school and college graduation rates and academic achievement, which is critical to long-term prosperity and growth. Between 1960 and 1980, the percentage of 18-24 year olds with a high school diploma increased from 60 percent to 81 percent, a gain of about 10 percentage points per decade. Progress has slowed since then with only a four percentage point gain over the past 30 years. College enrollment rates have continued to rise. In 1980 only a quarter of 18-24 year olds were enrolled in college. In the latest data that number was 41 percent. The most thorough measurement of education achievement is the National Assessment of Educational Progress (NAEP). These measures have been taken since the 1980s. They show only very gradual improvement in mathematics and no discernible progress in reading for American 17-year olds.

Housing: Americans are generally well housed, but some of the population faces housing problems. In 2009, about 5 percent of households with children lived in inadequate housing as defined by the Census Bureau. These problems usually consisted of poor plumbing, inadequate heating, or other physical maintenance problems. About six percent of these households were experiencing overcrowding. Both measures were down from levels reported in the 1980s. However, many families have experienced increased housing costs relative to income. In 2009, 39 percent of families with children were spending more than 30 percent of reported income on housing and utilities, up from 17 percent in 1980.

Crime: Since 1980, there has been a remarkable decline in violent crime. The two crime measures shown in Table 10-2 are based on different types of record keeping. The murder rate is based on reported homicides compiled by the Federal Bureau of Investigation from local law enforcement agencies, while the violent crime statistic is based on surveys of victims. The violent crime rate has declined to about 30 percent of its peak level in 1979. Meanwhile, the murder rate has been cut in half.

Families: Measures of family instability increased significantly up until around 1995. Since 1995, births to unmarried adolescents age 15 to 17 have dropped from around 30 per 1,000 women to about 19 per 1,000. After rising for more than three decades, the percentage of children living only with their mother stabilized at around 24 percent of all children from 1995 through 2009.

Charitable Giving: Americans increased their charitable contributions at an average real rate of slightly less than two percent per year between 1960 and 2008; real GDP per capita grew by slightly more than two percent per year over that interval. Charitable giving measured in real terms dropped slightly in 2008 and again in 2009, as the recession and capital losses cut into family resources, but the level of giving appears to have rebounded in 2010, and it remains above its level in 2006.

Voting: Another measure of American's willingness to participate in civic activity, the voting rate for President, was at 64 percent in 1960, but averaged about 55 percent from 1972 through 2000 before rising to 60 percent in 2004 and 62 percent in 2008.

Other Compilations of Economic and Social Indicators: There are many other sources of data on trends in American social and economic conditions, including the *Statistical Abstract* published annually by the Census Bureau (the Census Bureau has announced plans to cease publication of the *Statistical Abstract* following the 2012 volume). Some examples are described below. Cutting across a range of social and economic domains, the Interagency Forum on Child and Family Statistics annually assembles *American's Children: Key National Indicators of Well-Being* (<http://www.childstats.gov>). The Interagency Forum on Aging-Related Statistics publishes *Older Americans: Key Indicators of Well-Being* every other year (http://www.agingstats.gov/agingstatsdotnet/main_site/default.aspx).

There are also topic-specific indicators, which highlight performance in specific areas. *Science and Engineering Indicators*, published by the National Science Board, provides a broad base of quantitative information on the U.S.

and international science and engineering enterprise: (<http://www.nsf.gov/statistics/indicators>). The Science Resources Statistics Division at the National Science Foundation is doing developmental work on measuring innovation, an important component of the scientific enterprise not currently included in our measures. *Healthy People 2020* within the Department of Health and Human Services offers a statement of national health objectives that identifies the most significant preventable threats to health and establishes national goals to reduce these threats. The National Center for Health Statistics annually publishes *Health, United States* (<http://www.cdc.gov/nchs/hus.htm>), a comprehensive compilation of health indicators. The National Center for Education Statistics within the Department of Education publishes the *Condition of Education* (<http://nces.ed.gov/programs/coe>). The website includes a set of indicators and also special analyses and a user's guide.

Table 10-1. ECONOMIC AND SOCIAL INDICATORS

Calendar Years		1960	1970	1980	1990	1995	2000	2005	2009	2010	2011
Economic Conditions											
Living Standards:											
1	Real GDP per person (2005 dollars) ¹	15,716	20,915	25,675	32,157	34,122	39,752	42,715	41,409	42,308	42,631
	average annual percent change (5-year trend)	0.8	2.3	2.6	2.3	1.2	3.1	1.4	-0.2	-0.2	-0.4
2	Real disposable income per capita average (2005 dollars) ²	10,860	15,151	18,855	23,557	24,939	28,886	31,318	32,141	32,446	32,495
	average annual percent change (5-year trend)	1.2	3.2	2.0	1.8	1.1	3.0	1.6	0.6	0.7	0.1
3	Real median income: all households (2010 dollars)	N/A	43,055	44,616	48,423	48,408	53,164	51,739	50,599	49,445	N/A
	average annual percent change (5-year trend)	N/A	N/A	0.5	1.2	-0.0	1.9	-0.5	-0.2	-0.9	N/A
4	Poverty rate (%) ²	22.2	12.6	13.0	13.5	13.8	11.3	12.6	14.3	15.1	N/A
5	Food-insecure households (percent of all households) ³	N/A	N/A	N/A	N/A	11.9	10.5	11.0	14.7	14.5	N/A
Jobs and Unemployment:											
6	Civilian unemployment rate (%)	5.5	4.9	7.1	5.5	5.6	4.0	5.1	9.3	9.6	9.0
7	Unemployment plus marginally attached and underemployed (%)	N/A	N/A	N/A	N/A	10.0	7.0	8.9	16.3	16.8	15.9
8	Employment-population ratio % ⁴	56.1	57.4	59.2	62.8	62.9	64.4	62.7	59.3	58.5	58.4
9	Payroll employment change - December to December (millions)	-0.4	-0.5	0.3	0.3	2.2	2.0	2.5	-5.1	0.9	1.6
10	Payroll employment change - 5-year annual average (millions)	0.2	1.7	2.6	2.1	1.8	2.9	0.5	-0.6	-0.9	-1.0
Economic Inequality:											
11	Income share of lower 60% of all households	N/A	32.3	31.2	29.3	28.0	27.3	26.6	26.6	26.4	N/A
12	Income share of top 1% of all taxpayers	8.4	7.8	8.2	13.0	13.5	16.5	17.4	N/A	N/A	N/A
Wealth Creation:											
13	Net national saving rate (% of GDP) ⁵	10.4	8.1	7.1	3.9	4.7	6.2	3.0	-1.9	-0.4	-0.3
14	Personal Saving Rate (% of Disposable Personal Income) ⁵	7.2	9.4	9.8	6.5	5.2	2.9	1.5	5.1	5.3	4.5
15	Average household net worth (2011 dollars) ⁵	233,621	280,457	307,200	366,831	412,725	523,483	608,807	493,011	515,875	483,249
16	Median wealth of households aged 55-64 (2009 dollars) ⁶	N/A	N/A	N/A	166,668	163,752	210,052	281,741	222,300	N/A	N/A
Innovation:											
17	R&D spending (% of GDP)	2.6	2.5	2.3	2.6	2.5	2.7	2.6	2.8	2.7	2.7
18	Patents issued to U.S. residents (thousands)	42.3	50.6	41.7	56.1	68.2	103.6	88.5	107.0	132.5	N/A
19	Multifactor productivity (average 5 year percent change)	1.0	0.9	0.8	0.7	0.5	1.3	1.8	0.2	0.6	N/A
20	Nonfarm output per hour (average 5 year percent change) ¹	1.8	2.1	1.1	1.5	1.5	2.7	3.1	1.4	1.9	1.9
Capital and Infrastructure:											
21	Bridges that are structurally deficient or functionally obsolete (%) ⁷	N/A	N/A	N/A	N/A	31.8	28.6	26.3	24.8	24.3	N/A
22	Real net stock of fixed assets and consumer durable goods (\$2010 bills)	11,257	16,430	22,639	29,946	33,316	39,209	45,155	48,872	49,324	N/A
Energy and Environment:											
Air Quality - Mean Pollution Concentration levels ⁸ :											
23	Carbon Monoxide (ppm) based on 104 monitoring sites	N/A	N/A	8.951	6.130	4.797	3.461	2.296	N/A	N/A	N/A
24	Ground Level Ozone (ppm) based on 247 monitoring sites	N/A	N/A	0.101	0.089	0.090	0.082	0.080	0.070	0.073	N/A
25	Lead (ug/m3) based on 31 monitoring sites	N/A	N/A	1.338	0.525	0.357	0.270	0.194	0.226	0.144	N/A
26	Nitrogen Dioxide (ppb) based on 81 monitoring sites	N/A	N/A	27.341	23.935	22.438	20.034	16.871	13.564	13.076	N/A
Particulate Matter (ug/m3):											
27	PM10 based on 279 monitoring sites	N/A	N/A	N/A	82.663	68.551	64.344	59.093	50.624	51.022	N/A
28	PM 2.5 based on 646 monitoring sites	N/A	N/A	N/A	N/A	N/A	13.620	12.958	9.816	9.992	N/A
29	Sulfur Dioxide (ppm) based on 141 monitoring sites	N/A	N/A	11.830	8.306	5.926	5.102	4.299	2.528	2.443	N/A
Water Quality:											
30	Population served by secondary treatment or better (millions) ⁶	53.4	85.9	117.9	154.4	163.3	189.1	205.2	208.0	210.2	212.5
Climate Change:											
31	Net greenhouse gas emissions (teragrams CO2 equivalent) ⁹	N/A	N/A	N/A	5,320	5,928	6,536	6,157	5,618	N/A	N/A
32	Per capita greenhouse gas emissions (megagrams CO2 equivalent)	N/A	N/A	N/A	21.3	22.3	23.2	20.8	18.3	N/A	N/A
33	Per 2005\$ of GDP greenhouse emissions (kilograms CO2 equivalent)	N/A	N/A	N/A	0.663	0.652	0.583	0.488	0.442	N/A	N/A
Energy:											
34	Energy consumption per capita (millions of BTUs)	250	331	344	338	342	350	339	308	317	N/A
35	Energy consumption per real dollar of GDP (thousands of BTUs)	15.9	15.9	13.4	10.5	10.0	8.8	7.9	7.3	7.4	N/A
36	Energy production from renewable sources (% of total)	N/A	N/A	N/A	N/A	N/A	N/A	6.4	8.2	7.5	N/A

¹ Values for 2011 based on Administration projection for 2011.Q4 growth.

² The poverty rate does not reflect noncash government transfers.

³ These households were unable to acquire adequate food to meet the needs of all their members at some time during the year because they had insufficient money or other resources for food.

⁴ Civilian employment as a percent of the civilian noninstitutional population age 16 and above.

⁵ 2011 through 2011.Q3 only.

⁶ Data interpolated for some years.

⁷ Bridges are structurally deficient if they have been restricted to light vehicles, require immediate rehabilitation, or are closed. They are functionally obsolete if they no longer meet the criteria for the system of which the bridge is carrying a part.

⁸ ppm -- parts per million; ug/m3 -- micrograms per cubic meter

⁹ This is a net measure reflecting both sources and sinks of greenhouse gas.

Table 10–2. ECONOMIC AND SOCIAL INDICATORS

Calendar Years		1960	1970	1980	1990	1995	2000	2005	2009	2010	2011
Access to Health Care:											
37	Total national health expenditures (percent of GDP) ¹	5.2	7.2	9.2	12.5	13.9	13.8	16.0	17.8	17.8	17.9
38	Percentage of population without health insurance	N/A	N/A	N/A	12.9	14.4	13.1	14.6	16.1	16.3	N/A
39	% of children age 19–35 months with recommended immunizations ²	N/A	N/A	N/A	N/A	N/A	72.8	80.8	71.9	N/A	N/A
Health Status:											
40	Infant mortality (per 1000 live births) ³	26.0	20.0	12.6	9.2	7.6	6.9	6.9	6.4	N/A	N/A
41	Low birthweight (<2,500 gms) percentage of babies	7.7	7.9	6.8	7.0	7.3	7.6	8.2	8.2	8.1	N/A
42	Life expectancy at birth (years) ³	69.7	70.8	73.7	75.4	75.8	76.8	77.4	78.2	N/A	N/A
Health Risks:											
43	Cigarette smokers (% population 18 and older)	N/A	39.2	32.7	25.3	24.6	23.1	20.8	20.6	N/A	N/A
44	Obesity (% of population with BMI over 30) ⁴	13.3	N/A	15.1	22.9	N/A	30.1	33.9	N/A	N/A	N/A
45	Alcohol (% high school seniors engaged in heavy drinking) ⁵	N/A	N/A	41.2	32.2	29.8	30.0	26.2	25.2	N/A	N/A
46	Physical activity: % of adults engaged in regular physical activity ⁶	N/A	N/A	N/A	N/A	N/A	15.0	17.1	19.1	N/A	N/A
Education:											
47	High school graduates (% of population 25 and older)	44.6	55.2	68.6	77.6	81.7	84.1	85.2	86.7	87.1	N/A
48	Percentage of 18–24 year olds with a high school diploma	59.9	78.8	80.9	81.7	80.8	81.9	82.9	84.3	N/A	N/A
49	Percentage of 18–24 year olds enrolled in college	N/A	25.7	25.6	32.0	34.3	35.5	38.9	41.3	N/A	N/A
50	College graduates (% of population 25 and older)	8.4	11.0	17.0	21.3	23.0	25.6	27.6	29.5	29.9	N/A
National Assessment of Educational Progress ⁷											
51	Reading 17-year olds	N/A	N/A	283	288	286	285	284	N/A	N/A	N/A
52	Mathematics 17-year olds	N/A	N/A	297	303	305	306	305	N/A	N/A	N/A
Housing:											
53	Percentage of families with children with inadequate housing ⁸	N/A	N/A	9	9	7	7	5	5	N/A	N/A
54	Percentage of families with children with crowded housing	N/A	N/A	9	7	7	7	6	6	N/A	N/A
55	Percentage of families with children with costly housing ⁹	N/A	N/A	17	25	28	28	34	39	N/A	N/A
Crime:											
56	Violent crime rate (per 100,000 population 12 and older) ¹⁰	N/A	N/A	4,940	4,410	4,610	2,740	2,100	1,690	1,490	N/A
57	Murder rate (per 100,000 population) ¹¹	5.1	7.8	10.2	9.4	8.2	5.5	5.6	5.0	4.8	N/A
Families:											
58	Births to unmarried women age 15–17 (per 1,000)	N/A	N/A	20.6	29.6	30.1	23.9	19.7	19.3	N/A	N/A
59	Children living with mother only (% of all children)	9.2	11.6	18.6	21.6	24.0	22.3	23.4	24.4	25.2	N/A
Civic Engagement:											
60	Individual charitable giving per capita (2011 dollars)	321	460	489	559	529	808	863	778	782	N/A
61	Percentage of Americans volunteering ¹²	N/A	N/A	N/A	20.4	N/A	N/A	27.0	26.8	26.3	N/A
		(1960)	(1968)	(1972)	(1976)	(1980)	(1984)	(1988)	(2004)	(2008)	(2012)
62	Voting for President by election year (% eligible population) ¹³	63.8	61.5	56.2	54.8	54.2	55.2	52.8	60.1	61.7	N/A

¹ The 2010 and 2011 values are projected, the last actual data are for 2009.

² The 4:3:1:3:3 series consisting of 4 doses (or more) of diphtheria, tetanus toxoids, and pertussis (DTP) vaccines, diphtheria and tetanus toxoids (DT), or diphtheria, tetanus toxoids, and any acellular pertussis (DTaP) vaccines; 3 doses (or more) of poliovirus vaccines; 1 dose (or more) of any measles-containing vaccine; 3 doses (or more) of Haemophilus influenzae type b (Hib) vaccines; and 3 doses (or more) of hepatitis B vaccines.

³ Data for 2009 are preliminary.

⁴ BMI refers to body mass index. A BMI over 30 is the criterion for obesity used by the Centers for Disease Control and Prevention.

⁵ Data are interpolated. Percentage of high school students who had five or more drinks in a row at least once within the two weeks prior to the survey.

⁶ Participation in leisure-time aerobic and muscle-strengthening activities that meet the 2008 Federal physical activity guidelines for adults 18 years of age and over.

⁷ Data are interpolated. Actual survey years were 1973, 1978, 1982, 1986, 1990, 1992, 1994, 1996, 1999, 2004, and 2008.

⁸ Inadequate housing has moderate to severe physical problems, usually poor plumbing or heating or upkeep problems. Some data are interpolated.

⁹ Expenditures for housing and utilities exceed 30 percent of reported income. Some data are interpolated.

¹⁰ Includes crimes both reported and not reported to law enforcement. Offenses include homicide, rape, robbery, aggravated assault and simple assault.

¹¹ Based on reported crimes. Not all crimes are reported, and the fraction that go unreported may have varied over time, preliminary data for 2008.

¹² Data from 1974, 1989, and since 2005 are drawn from the Current Population Survey.

¹³ As computed by Professor Michael McDonald, George Mason University, after adjusting the population for those not eligible to vote in Presidential elections.

Table 10-3. SOURCES FOR ECONOMIC AND SOCIAL INDICATORS

Indicator:	Source:
Economic, Environmental, and Energy Indicators (Table 10-1):	
Real GDP per person	U.S. Department of Commerce, Bureau of Economic Analysis, National Economic Accounts Data.
Real disposable income per capita	U.S. Department of Commerce, Bureau of Economic Analysis, National Economic Accounts Data.
Real median income: all households	U.S. Census Bureau, Housing and Household Economic Statistics Division
Poverty rate	U.S. Census Bureau, Housing and Household Economic Statistics Division
Food-insecure households	U.S. Census Bureau, Current Population Survey Food Security Supplement; tabulated by U.S. Department of Agriculture, Economic Research Service
Civilian unemployment rate	U.S. Department of Labor, Bureau of Labor Statistics, Current Population Survey.
Unemployment plus marginally attached and underemployed	U.S. Department of Labor, Bureau of Labor Statistics, Current Population Survey.
Employment-population ratio	U.S. Department of Labor, Bureau of Labor Statistics, Current Population Survey.
Payroll employment	U.S. Department of Labor, Bureau of Labor Statistics, Current Employment Statistics program.
Income share of lower 60% of all households	U.S. Census Bureau, Housing and Household Economic Statistics Division
Income share of top 1% of all taxpayers	Thomas Piketty and Emanuel Saez, "Income Inequality in the United States, 1913-1998" Quarterly Journal of Economics, 118(1), 2003, 1-39 (tables and figures updated to 2008, July 2010)
Net national saving rate	U.S. Department of Commerce, Bureau of Economic Analysis, National Economic Accounts Data.
Personal Saving Rate	U.S. Department of Commerce, Bureau of Economic Analysis, National Economic Accounts Data.
Average household net worth	Board of Governors of the Federal Reserve System, Flow of Funds Accounts of the United States, and U.S. Census Bureau, Housing and Economic Statistics Division.
Median wealth of households aged 55-64	Board of Governors of the Federal Reserve System, 2009 Survey of Consumer Finances Chartbook.
R&D spending	National Science Foundation, Division of Science Resources Statistics, National Patterns of R&D Resources
Patents issued to U.S. residents	U.S. Patent and Trademark Office, Electronic Information Products Division, Patent Technology Monitoring Team, submissions to the World Intellectual Property Organization.
Multifactor productivity	U.S. Department of Labor, Bureau of Labor Statistics, Major Sector Productivity Program.
Nonfarm output per hour	U.S. Department of Labor, Bureau of Labor Statistics, Major Sector Productivity Program.
Bridges that are structurally deficient or functionally obsolete	U.S. Federal Highway Administration, Office of Bridge Technology, "National Bridge Inventory."
Real net stock of fixed assets and consumer durable goods	U.S. Department of Commerce, Bureau of Economic Analysis, National Economic Accounts Data.
Carbon Monoxide	U.S. Environmental Protection Agency, Office of Air and Radiation, Air Trends
Ground Level Ozone	U.S. Environmental Protection Agency, Office of Air and Radiation, Air Trends
Lead	U.S. Environmental Protection Agency, Office of Air and Radiation, Air Trends
Nitrogen Dioxide	U.S. Environmental Protection Agency, Office of Air and Radiation, Air Trends
PM10	U.S. Environmental Protection Agency, Office of Air and Radiation, Air Trends
PM 2.5	U.S. Environmental Protection Agency, Office of Air and Radiation, Air Trends
Sulfur Dioxide	U.S. Environmental Protection Agency, Office of Air and Radiation, Air Trends
Population served by secondary treatment or better	U.S. Environmental Protection Agency, Clean Watersheds Needs Survey 2008 Report to Congress, June 10, 2010 (includes a projection for 2028) EPA-832-R-10-002.
Net greenhouse gas emissions	U.S. Environmental Protection Agency, 2010 Inventory of Greenhouse Gases Emissions and Sinks: 1990-2008.
Energy consumption per capita	U.S. Energy Information Administration, Annual Energy Review 2009, August 19, 2010 energy overview table 1.5.
Energy consumption from renewable sources	U.S. Energy Information Administration, Independent Statistics and Analysis
Health, Education, and Other Social Indicators (Table 10-2):	
Total national health expenditures	Centers for Medicare and Medicaid Services, National Health Expenditures Data, January 2011.
Percentage of population without health insurance	U.S. Census Bureau, Housing and Household Economic Statistics Division
% of children age 19-35 months with recommended immunizations	Childstats.gov, Forum on Child and Family Statistics
Infant mortality	Centers for Disease Control and Prevention, National Vital Statistics Report
Low birthweight percentage of babies	Centers for Disease Control and Prevention, National Vital Statistics Report
Life expectancy at birth	Centers for Disease Control and Prevention, National Vital Statistics Report
Cigarette smokers (% population 18 and older)	Health United States 2010, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics
Obesity (% of population with BMI over 30) (d)	Health United States 2010, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics
% high school students engaged in heavy drinking	Health United States 2010, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics
% of adults engaged in regular physical activity	Health United States 2010, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics
High school graduates (% of population 25 and older)	U.S. Census Bureau, Current Population Survey
Percentage of 18-24 year olds with a high school diploma	U.S. Census Bureau, Current Population Survey
Percentage of 18-24 year olds enrolled in college	U.S. Census Bureau, Current Population Survey
College graduates (% of population 25 and older)	U.S. Census Bureau, Current Population Survey
NAEP: Reading 17-year olds	National Assessment of Educational Progress, National Center for Education Statistics

Table 10–3. SOURCES FOR ECONOMIC AND SOCIAL INDICATORS—Continued

Indicator:	Source:
NAEP: Mathematics 17-year olds	National Assessment of Educational Progress, National Center for Education Statistics
Percentage of families with children with inadequate housing	U.S. Census Bureau, American Housing Survey. Tabulated by U.S. Department of Housing and Urban Development
Percentage of families with children with crowded housing	U.S. Census Bureau, American Housing Survey. Tabulated by U.S. Department of Housing and Urban Development
Percentage of families with children with costly housing	U.S. Census Bureau, American Housing Survey. Tabulated by U.S. Department of Housing and Urban Development
Violent crime rate (per 100,000 population 12 and older)	U.S. Department of Justice, Bureau of Justice Statistics, Violent Crime Trends
Murder rate (per 100,000 population)	U.S. Department of Justice, Federal Bureau of Investigation, Criminal Justice Information Services Division
Births to unmarried women age 15-17 (per 1,000)	Centers for Disease Control and Prevention, National Vital Statistics Report
Children living with mother only	Annual Social and Economic Supplement to the Current Population Survey, Detailed Poverty Tabulations various years
Individual Charitable Giving	Statistical Abstract 2012, Center on Philanthropy at Indiana University, Giving USA.
Percentage of Americans volunteering	Corporation for National and Community Service, "Volunteer Growth in America: A Review of Trends since 1974" based on the Current Population Survey.
Voting for President by election year (% eligible population)	The United States Elections Project, Dr. Michael McDonald, George Mason University, Fairfax, Virginia.

11. IMPROVING THE FEDERAL WORKFORCE

The United States has overcome great challenges throughout our history because Americans of every generation have stepped forward to aid their Nation through service, both in civilian government and in the Uniformed Services. Today's Federal public servant carries forward that proud American tradition. Whether it is defending our homeland, restoring confidence in our financial system and supporting an historic economic recovery effort, providing health care to our veterans, or searching for cures to the most vexing diseases, we are fortunate to be able to rely upon a skilled workforce committed to public service.

A high-performing government depends on an engaged, well-prepared, and well-trained workforce with the right set of skills for the missions the government needs to achieve. However, tight fiscal resources, rapidly changing problems, and new technologies that change the way a program can be delivered are all challenges the Federal workforce must address. This chapter discusses trends in Federal employment, composition, and compensation, and presents the Administration's plans for achieving the talented Federal workforce needed to serve the American people effectively and efficiently.

Trends in Federal Employment

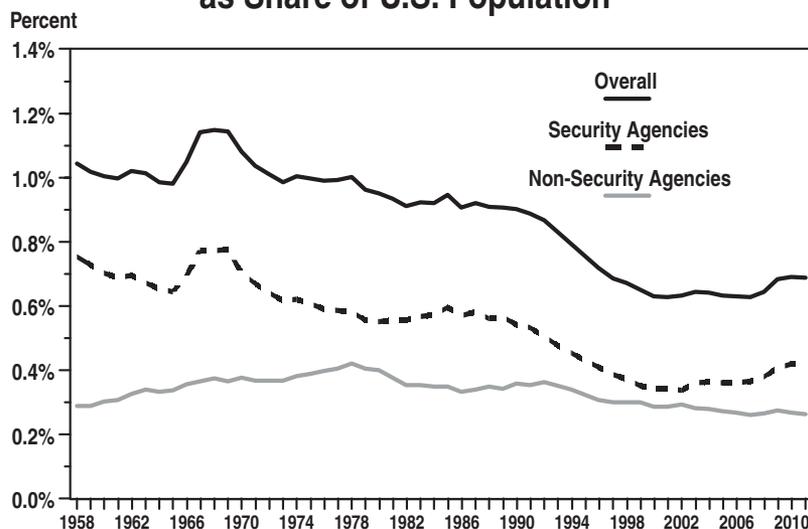
The size of the Federal civilian workforce relative to the country's population has declined dramatically over

the last several decades, notwithstanding occasional upticks due, for example, to military conflicts and the enumeration of the Census. In the 1950s and 1960s, there were on average 92 residents for every Federal worker. In the 1980s and 1990s, there were on average 106 residents for every Federal worker. By 2011, the ratio had increased to 145 residents for every Federal worker. Since the 1950s and 1960s, the U.S. population increased by 76 percent, the private sector workforce surged 133 percent, while the size of the Federal workforce rose just 11 percent. Relative to the private sector, the Federal workforce is less than half the size it was back in the 1950s and 1960s. The picture that emerges is one of a Federal civilian workforce whose size has significantly shrunk compared to the size of the overall U.S. population, the private sector workforce, and the size of Federal expenditures.

Chart 11-1 shows Federal civilian employment (excluding the U.S. Postal Service) as a share of the U.S. resident population from 1958 to 2011. The chart shows the overall decline noted above in both security and non-security agencies.

Except for employment peaks associated with the decennial census, Federal employment, in absolute terms, increased slightly in the 1980s and then dropped in the 1990s. This overall downward trend began to reverse itself in 2001, following the September 11 attack. Following that tragic event, the Federal workforce expanded to deal with national security and homeland safety issues

Chart 11-1. Federal Civilian Workforce as Share of U.S. Population



Source: Office of Personnel Management.

Notes: Security agencies include the Department of Defense, the Department of Homeland Security, the Department of State, and the Department of Veterans Affairs. Nonsecurity agencies include the remainder of the Executive Branch.

and to serve our veterans. Between 2001 and 2011, security agency employment grew, while non-security employment declined. For example, civilians working for the Department of the Army grew by more than 60,000, with a similar level of increase in people working for the Veterans Health Administration. Customs and Border Protection also grew more than 30,000 to keep our citizens safe at home.

Following this decade of growth, total Federal employment levels flattened out with minimal year-to-year shifts in 2012 and 2013. Table 11-2 shows actual Federal civilian full-time equivalent (FTE) employment levels in the Executive Branch by agency for 2010 and 2011, with estimates for 2012 and 2013. Estimated employment levels for 2013 result in nearly flat levels – a 0.1 percent increase when compared to the prior year. Capped levels of budget authority enacted through the Budget Control Act (BCA) and in the 2013 Budget are having a direct impact on FTE levels in all agencies. Among the 34 departments and agencies presented in Table 11-2, increases exist in less than one-third. Among the 15 Cabinet agencies, increases of more than 1 percent exist at only four – the Departments of Veterans Affairs (VA), Commerce (DOC), Health and Human Services (HHS), and the Treasury.

In security agencies, limited increases in VA and the Department of Homeland Security correlate with increased demand for services in veterans' medical care and continued emphasis on strengthening air travel safety and border protection. Even prior to the enactment of the BCA, in January 2011, the Department of Defense (DOD) initiated a policy to reduce staffing with the goal of holding to 2010 levels for most of the Department. The graduated reductions estimated by DOD in both 2012 and 2013 seek to achieve this goal while minimizing the impact on the workforce and the communities in which those workers live.

Beyond the security agencies, 2013 increases in non-security agencies are narrowly focused and are frequently supported by congressionally-authorized fees, not taxpayer dollars. Increased receipts from fees support timely commercialization of innovative technologies through faster and higher-quality patent reviews at the Patent and Trade Office of DOC, stronger food safety measures at the Food and Drug Administration of HHS, and enhancements to create stronger, more stable financial markets consistent with the Wall Street Reform Act. Increases in the category listed as "All other small agencies" in Table 11-2 are similarly driven by efforts to reform Wall Street and protect its customers. Commitments to activate new Federal prisons already constructed with funding appropriated as early as 2001 and as recently as 2010, result in limited necessary personnel increases at the Department of Justice in 2012 and 2013. And stepping up Internal Revenue Service (Treasury) program integrity efforts to ensure companies and individuals are paying their fair share is an investment that more than pays for itself and will result in a five-to-one increase in tax revenues.

Beneath many of the staffing topline are programs that pursue aggressive actions to reduce and reallocate staff from lower to higher priority programs. Some agen-

cies have imposed hiring freezes, others are using replacement ratios to allow fewer hires than separations, and many are offering early retirement and separation incentives. Across the Government, agencies are embracing a variety of workforce reduction tools to bring their personnel levels down. These complement other aggressive cost-saving measures across all agencies such as real estate closures, consolidation of back-office functions, and strategic sourcing, as well as agency-specific initiatives, such as the Department of Agriculture's Blueprint for Stronger Service to streamline operations, launched in January 2012, which involves consolidating more than 200 offices across the country while ensuring that the most vital services the offices provide continue.

Federal Pay Trends

After more than a decade when the percentage increase in annual Federal pay raises did not keep pace with the percentage increase in private sector pay raises, Congress passed the Federal Employees Pay Comparability Act of 1990 (FEPCA) pegging Federal pay raises, as a default, to changes in the 15-month-lagged Employment Cost Index (ECI) series of wage and salaries for private industry workers, and to locality pay adjustments. The ECI measures private sector pay, holding constant industry and occupation composition. The law gives the President the authority to propose alternative pay adjustments for both base and locality pay. Presidents have regularly proposed alternative pay plans. Chart 11-2 shows how the Federal pay scale has compared to the ECI since 1990.

In late 2010, as one of several steps the Administration took to put the Nation on a sustainable fiscal path, the President proposed and Congress enacted a two-year freeze on across-the-board pay adjustments for civilian Federal employees. This has created structural savings in the Budget of \$60 billion over 10 years. The President also issued a memorandum directing agencies to freeze pay schedules and forgo general pay increases for civilian Federal employees in administratively determined pay systems.

For 2013, the President is proposing a 0.5 percent pay increase. While modest, the Administration's decision to propose an increase in pay for civilian Federal employees reflects the understanding that while the continuation of a pay freeze was unsustainable, the tight fiscal environment required a responsible approach that enables the investment needed to spur jobs and economic growth for decades to come. This pay increase proposal permits savings of approximately \$28 billion over 10 years and \$2 billion in 2013 within the BCA caps, reallocated to priorities and services the American people depend on and that would not otherwise have been available under the spending caps. Proposing a pay increase below the level of the private sector (or ECI) was not taken lightly, given the two-year pay freeze in 2011 and 2012 -- but recognizes the real constraints of the current budget situation.

The 2013 Budget also includes a deficit reduction proposal that would dedicate an additional 1.2 percent of employee salary (phased-in at 0.4 percent over three years) for contri-

butions toward retirement benefits. This change in employee contribution levels would not change the amount of each Federal employee's pension benefit, but would result in \$21 billion over 10 years in mandatory savings.

Composition of the Federal Workforce and Factors Affecting Federal Pay

Federal worker compensation receives a great deal of attention, in particular, in comparison to that of private sector workers. Comparisons of the pay of Federal employees and private sector employees, for example, should account for factors affecting pay, such as differences in skill levels, complexity of work, scope of responsibility, size of organization, location, experience level, and exposure to personal danger. Some of the factors affecting pay are discussed below.

Type of occupation. The last half century has seen significant shifts in the composition of the Federal workforce, with related effects on pay. Fifty years ago, most white-collar Federal employees performed clerical tasks, such as posting Census figures in ledgers and retrieving taxpayer records from file rooms. Today their jobs are vastly different, requiring advanced skills to serve a knowledge-based economy. Professionals such as doctors, engineers, scientists, statisticians, and lawyers now make up a large portion of the Federal workforce. Between 1981 and 2011, the proportion of the Federal workforce in clerical occupations fell from 19.4 percent to 5.1 percent of the workforce, and the proportion of blue-collar workers fell from 22.0 percent to 9.7 percent.

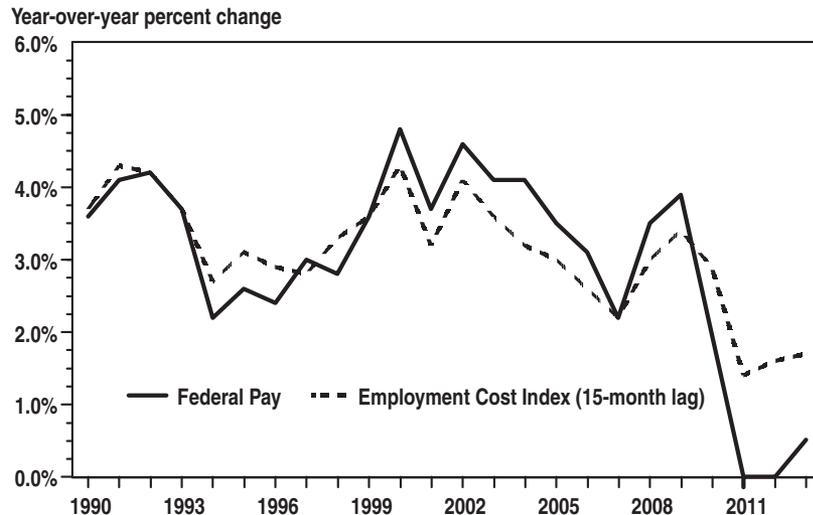
Today, a large number of Federal employees must manage highly sensitive tasks that require great skill, experience, and judgment. Federal employees increasingly need

sophisticated management and negotiation skills to affect change, not just across the Federal Government, but also with other levels of government, not-for-profit providers, and for-profit contractors. Using data from the Current Population Survey 2007-2011 of full-time, full-year workers, Table 11-1 breaks all Federal and private sector jobs into 22 occupation groups. That breakdown shows that Federal and private sector workers do very different types of work. More than half (55 percent) of Federal workers work in the nine highest-paying occupation groups as judges, engineers, scientists, nuclear plant inspectors, etc., compared to about a third (33 percent) of private sector workers in those same nine highest paying occupation groups. In contrast, 46 percent of private sector workers work in the seven lowest-paying occupation groups as cooks, janitors, service workers, clerks, laborers, manufacturing workers, etc. About 27 percent of Federal workers work in those seven lowest-paying occupation groups.

Education level. The size and complexity of much Federal work necessitates a highly educated workforce whether that work is analyzing security and financial risks, forecasting weather, planning bridges to withstand extreme weather events, conducting research to advance human health and energy efficiency, or advancing science to fuel future economic growth. Chart 11-3 presents the comparative differences in the education level of the Federal civilian and private sector workforce. About 21 percent of Federal workers have a master's degree, professional degree, or doctorate versus only 9 percent in the private sector. Only one-in-five Federal employees has not attended college, whereas 41 percent of workers in the private sector have not attended college.

Size of organization and responsibilities. Another important difference between Federal workers and pri-

Chart 11-2. 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. Employment Cost Index is the wages and salaries, private industry workers series.

Table 11–1. 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	1.7%	0.6%
Engineers	4.1%	1.9%
Scientists and social scientists	4.8%	0.6%
Managers	11.2%	13.2%
Doctors, nurses, psychologists, etc.	7.4%	5.1%
Miscellaneous professionals	15.1%	8.0%
Administrators, accountants, HR personnel	7.0%	2.6%
Pilots, conductors, and related mechanics	2.0%	0.8%
Inspectors	1.2%	0.3%
Total Percentage	54.5%	33.1%
Medium Paid Occupations Ranked by Private Sector Salary		
Sales including real estate, insurance agents	1.0%	6.6%
Other miscellaneous occupations	3.2%	4.4%
Automobile and other mechanics	1.8%	3.0%
Law enforcement and related occupations	8.5%	0.8%
Office workers	2.5%	6.3%
Social workers	1.5%	0.5%
Total Percentage	18.5%	21.5%
Lowest Paid Occupations Ranked by Private Sector Salary		
Drivers of trucks and taxis	0.7%	3.4%
Laborers and construction workers	4.4%	10.4%
Clerks	14.2%	11.4%
Manufacturing	2.5%	7.8%
Other miscellaneous service workers	2.5%	6.3%
Janitors and housekeepers	1.6%	2.4%
Cooks, bartenders, bakers, and wait staff	0.9%	4.0%
Total Percentage	26.8%	45.7%

Source: 2007–2011 Current Population Survey.

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.

private sector workers is the average size of the organizations in which they work. Federal agencies are large and often face challenges of enormous scale, such as distributing benefit payments to over 60 million Social Security and Supplemental Security Income beneficiaries each year, providing medical care to 8.8 million of the Nation's veterans, and managing defense contracts costing billions of dollars. Workers from large firms (those with 1,000 or more employees) are paid about 14 percent more than workers from small firms (those with fewer than 100 employees), even after accounting for occupational type, level of education, and other characteristics.

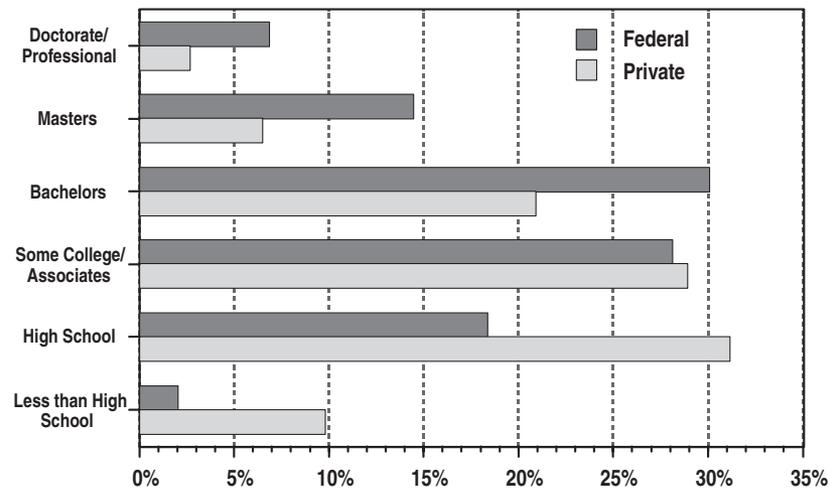
Demographic characteristics. Federal workers tend to have demographic characteristics associated with higher pay in the private sector. They are more experienced, older and live in higher cost metropolitan areas. For example, 22 percent of Federal workers are 55 or older – up from 15 percent 10 years ago and significantly

more than the 18 percent in the private sector. Chart 11-4 shows the difference in age distribution between Federal and private sector workers.

Challenges

With the backdrop of tightening fiscal constraints, the Federal Government faces specific human capital challenges, including an aging and retiring workforce and a personnel system that requires further modernization. If the Government loses top talent, experience, and institutional memory through retirements, but cannot recruit, retain, and train highly qualified workers, Government performance suffers. While the age distribution and potential for a large number of retiring workers poses a challenge, it also creates an opportunity to streamline the workforce and to infuse it with new – and in some cases lower-cost – workers excited about Government service

Chart 11-3. Education Level Distribution in Federal vs. Private Workforce



Source: 2007-2011 Current Population Survey.

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 hours of work.

and equipped with strong technology skills, problem-solving ability, and fresh perspectives to tackle problems that Government must address.

To address issues in the long-term, Federal managers and employees need to rely on a modernized personnel system. To that end, the Administration proposed to the Joint Select Committee on Deficit Reduction that the Congress establish a Commission on Federal Public Service Reform comprised of Members of Congress, representatives from the President's National Council on Federal Labor-Management Relations, members of the private sector, and academic experts. The Commission would develop recommendations on reforms to modernize Federal personnel policies and practices within fiscal constraints, including, but not limited to compensation, staff development and mobility, and personnel performance and motivation.

This section discusses two major Federal workforce challenges, and the following section describes actions this Administration is taking to address those challenges.

Aging Workforce

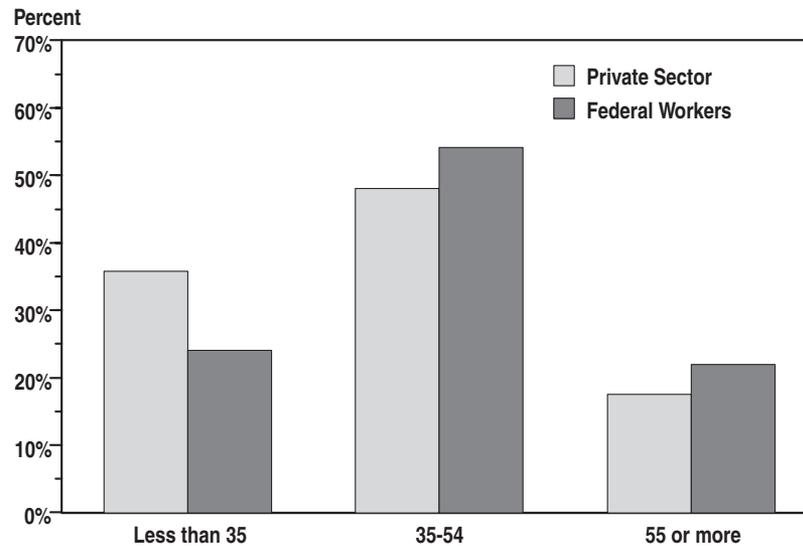
As discussed above, the Federal workforce of 2011 is older than Federal workforces of past decades and older than the private sector workforce. The number of Federal retirements is on a slow and steady increase, rising from 95,425 in 2009 to 96,133 in 2010 and 98,731 in 2011.

Given these demographics, the Federal Government faces two immediate challenges: preparing for retirements to maximize knowledge transfer from one generation to the next, and hiring and developing the next gen-

eration of the Government workforce to accomplish the varied and challenging missions the Federal Government must deliver.

Developing and Engaging Personnel to Improve Performance

One well-documented challenge in any organization is managing a workforce so it is engaged, innovative, and committed to continuous improvement, while at the same time dealing with poor performers who fail to improve as needed. Federal employees are generally positive about the importance of their work and express a high readiness to put in extra effort to accomplish the goals of their agencies. Results from the Federal Employee Viewpoint Survey (EVS) indicate 92 percent of respondents answer positively to the statement "The work I do is important." and nearly 97 percent of respondents answer positively to the statement "When needed I am willing to put in the extra effort to get a job done." However in contrast, Federal employees have repeatedly identified the inability to deal with poor performers as an area of weakness over the past 10 years. In 2011, only 31 percent of employees sampled in the EVS answered positively that "In my work unit, steps are taken to deal with a poor performer who cannot or will not improve." In addition, only 41 percent agreed that "creativity and innovation are rewarded". Over the past year, the Office of Personnel Management (OPM) and the Office of Management and Budget (OMB) have jointly met with agencies to review agency progress on their action plans to address weaknesses identified through the EVS.

Chart 11-4. Federal vs. Private Age Distribution

Source: 2011 Current Population Survey (covering calendar year 2010).
 Notes: Federal workers exclude the military and Postal Service, but include all other Federal workers 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.

Progress Improving Employee Performance and Human Capital Management

The Administration has made considerable progress improving employee performance and human capital management through multiple efforts, including: strengthened labor-management partnerships, better alignment between employee performance and organizational performance objectives, increased agency use of personnel data for decision-making, better hiring practices, heightened attention to a diverse and inclusive workforce, and a new Senior Executive Service (SES) performance appraisal system.

Strengthening Labor-Management Relations

On December 9, 2009, the President issued Executive Order 13522 “Creating Labor-Management Forums to Improve the Delivery of Government Services”. Cooperative labor-management forums have been formed across the Federal Government to resolve workplace issues and improve mission performance and service delivery to the American public. The Administration developed guidelines to help each forum define its objectives and measure results along three dimensions: mission accomplishment, employee perceptions, and labor-management relations. Training opportunities have been provided to support these efforts. For example, VA and the Federal Labor Relations Authority made web-based training available at no cost across the Executive Branch.

In addition, a working group of the National Council on Federal Labor-Management Relations partnered with members of the Chief Human Capital Officers Council to recommend a new employee performance manage-

ment framework, referred to as the Goals-Engagement-Accountability-Results framework. Elements of this framework are now being tested by several pilot agencies, including VA, OPM, the Coast Guard, the Department of Housing and Urban Development, and the Department of Energy.

Developing and Using Personnel Analytics

The Administration is committed to strengthening Federal agencies’ capacity to analyze human resources data to address workplace problems, improve productivity, and cut costs. The Federal Government began annual administration of the EVS in 2010 to make it more useful as a managerial tool to help agencies identify areas of personnel management strength and weakness. In 2011, to enhance its value, the survey was administered in a way that provided more managers with EVS information specific to their organizational unit. In 2012, OPM will survey all permanent civilian employees, rather than sampling as it did in 2011, to increase further agencies’ ability to pinpoint areas of strength and weakness. In addition, Performance.gov provides agencies and the public a window on key human resources data – including Government-wide and agency-specific hiring times, applicant and manager satisfaction, employee engagement and retention, diversity and disability, and veterans hiring and employment.

Building a Workforce with the Skills Necessary to Meet Agency Missions

The demands of the workplace necessitate new and evolving skill sets in the workforce of the Federal Government. The Government Accountability Office has

identified critical employee skills gaps as an area of high risk. As a result, the Administration has established a Cross-Agency Priority Goal in this area and OPM will lead the multiagency effort to close critical skills gaps across the Federal Government. OPM and the Chief Human Capital Officers Council will develop and implement a Government-wide plan to achieve this goal.

This effort will build on progress already being made closing critical skills gaps in acquisition and information technology (IT). Spending on Federal contracts nearly doubled between 2001 and 2008, while the acquisition workforce responsible for negotiating, awarding, and managing these contracts remained essentially flat. While private sector contractors provide a wide range of services to help Federal employees carry out agency missions and operations, such as scientific research, IT support, and construction services, the lag in building a skilled acquisition workforce that kept pace with contracting requirements contributed to ineffective and wasteful contracting practices and imbalances in our relationship with contractors. Over the past three years, this Administration has worked to reverse this trend and restore accountability and fiscal responsibility. Through a focus on building the capacity and capability of the acquisition workforce and other key initiatives, the Federal Government reduced spending in Government contracting in 2010 for the first time in 13 years, reduced the use of many high-risk contracting practices, and made other significant improvements to the Federal contracting process. Continuing these and other efforts to increase efficiencies in Federal contracting -- while achieving further savings through the Campaign to Cut Waste -- depends on a strong, well-trained acquisition workforce, and the Administration continues to undertake the human capital planning and actions needed to improve Federal contracting.

The Administration is also committed to building a more efficient and effective 21st Century Government for the American people through the strategic use of IT, and strengthening the IT workforce is a key element in its plan to reform Federal IT management. To ensure we have experienced and talented managers to oversee large, complex IT investments and maximize the return on taxpayer dollars at every step in the process, the Administration created a new role for IT program managers with rigorous requirements. In addition, the Presidential Technology

Fellows Program was launched to reduce the barriers to entering public service and to provide highly talented technology professionals access to unique career opportunities in a variety of Federal agencies. The Entrepreneur-in-Residence program was also initiated, which enables the Government to capitalize on subject matter experts across various communities to bring innovative practices and technologies into the Government.

A Diverse and Inclusive Workforce

The American people are best served by a Federal workforce that reflects the rich diversity of the populace and encourages collaboration, fairness, and innovation. Pursuant to the President's Executive Order 13583, signed in August 2011, the first Government-wide Diversity and Inclusion Strategic Plan was issued and provides agencies with the shared goals of workforce diversity, workplace inclusion, and sustainability. The Strategic Plan efforts will focus on outreach, recruitment, and career development to draw from all segments of society, including those who are underrepresented, as well as on the retention, inclusion, and leadership development of all Federal employees.

New Senior Executive Service Performance Appraisal System

In January 2012, OPM and OMB issued a standard Government-wide SES performance appraisal system to meet the SES performance management needs of all agencies and their SES employees. An interagency work group developed this system after examining a number of current SES performance management systems at several agencies and benchmarking with the private sector through the President's Management Advisory Board, a group of private sector leaders that advise the Government on management best practices. The new system will provide a consistent and uniform framework for agencies to communicate expectations and evaluate the performance of SES members, particularly centering on the role and responsibility of SES employees to provide executive leadership. The new system will also provide the necessary flexibility and enable appropriate customization. Agencies will have the opportunity to transition to this new system over the next year or two as their current system certifications expire, or earlier if desired.

Table 11-2. FEDERAL CIVILIAN EMPLOYMENT IN THE EXECUTIVE BRANCH

(Civilian employment as measured by FTEs in thousands, excluding the Postal Service)

Agency	Actual		Estimate		Change: 2012 to 2013	
	2010	2011	2012	2013	FTE	Percent
Cabinet agencies:						
Agriculture	96.3	95.9	93.3	92.3	-1.0	-1.1%
Commerce	123.3	41.3	40.5	42.0	1.5	3.7%
Defense	741.4	771.3	764.3	756.8	-7.5	-1.0%
Education	4.1	4.4	4.3	4.3	0.0	0.0%
Energy	16.1	16.1	16.5	16.4	-0.1	-0.6%
Health and Human Services	66.1	68.8	70.1	71.5	1.4	2.0%
Homeland Security	173.0	179.5	187.5	188.9	1.4	0.7%
Housing and Urban Development	9.5	9.5	9.4	9.4	0.0	0.0%
Interior	70.9	70.5	70.4	69.8	-0.6	-0.9%
Justice	113.4	116.3	117.9	118.6	0.7	0.6%
Labor	16.9	16.9	17.4	17.4	0.0	0.0%
State	31.6	32.4	32.4	32.5	0.1	0.3%
Transportation	57.2	57.4	57.7	57.9	0.2	0.3%
Treasury	111.9	110.7	108.2	111.8	3.6	3.3%
Veterans Affairs	284.8	295.7	302.3	306.6	4.3	1.4%
Other agencies—excluding Postal Service:						
Broadcasting Board of Governors	1.9	1.9	2.0	1.9	-0.1	-5.0%
Corps of Engineers—Civil Works	23.6	23.7	23.0	22.7	-0.3	-1.3%
Environmental Protection Agency	17.2	17.3	17.1	17.1	0.0	0.0%
Equal Employment Opportunity Comm	2.4	2.5	2.4	2.4	0.0	0.0%
Federal Deposit Insurance Corporation	7.1	8.3	8.7	8.4	-0.3	-3.4%
General Services Administration	12.5	12.7	13.2	13.0	-0.2	-1.5%
International Assistance Programs	4.9	5.2	5.4	5.4	0.0	0.0%
National Aeronautics and Space Admin	18.4	18.6	18.4	18.2	-0.2	-1.1%
National Archives and Records Admin	3.2	3.3	3.3	3.3	0.0	0.0%
National Labor Relations Board	1.6	1.7	1.7	1.7	0.0	0.0%
National Science Foundation	1.4	1.4	1.4	1.5	0.1	7.1%
Nuclear Regulatory Commission	4.0	4.0	4.0	3.9	-0.1	-2.5%
Office of Personnel Management	4.8	5.4	5.7	5.3	-0.4	-7.0%
Railroad Retirement Board	1.0	1.0	1.0	0.9	-0.1	-10.0%
Securities and Exchange Commission	3.7	3.8	3.9	4.5	0.6	15.4%
Small Business Administration	3.4	3.4	3.4	3.4	0.0	0.0%
Smithsonian Institution	5.1	5.2	5.2	5.2	0.0	0.0%
Social Security Administration	67.3	67.6	65.4	63.4	-2.0	-3.1%
Tennessee Valley Authority	12.0	12.4	12.8	12.9	0.1	0.8%
All other small agencies ¹	15.9	16.3	17.7	18.7	1.0	5.6%
Total, Executive Branch civilian employment ² ...	2,127.9	2,102.4	2,107.6	2,110.0	2.4	0.1%
Security FTE per P.L. 112-25	1,241.7	1,290.1	1,297.9	1,296.3	-1.6	-0.1%
Nonsecurity FTE	886.2	812.3	809.7	813.7	4.0	0.5%

¹ FTE increases in the Consumer Financial Protection Bureau and the Commodity Futures Trading Commission comprise 70% of the increase between 2012 and 2013.

² Totals may not add due to rounding.

Table 11-3. TOTAL FEDERAL EMPLOYMENT
(As measured by FTEs)

Description	2011 Actual	Estimate		Change: 2012 to 2013	
		2012	2013	FTE	Percent
Executive branch civilian personnel:					
Subtotal, excluding Postal Service	2,102,369	2,107,586	2,110,012	2,426	0.1%
Postal Service ¹	603,070	579,069	574,142	-4,927	-0.9%
Subtotal, Executive Branch civilian personnel	2,705,439	2,686,655	2,684,154	-2,501	-0.1%
Executive branch uniformed military personnel:					
Department of Defense ²	1,534,424	1,499,930	1,466,664	-33,266	-2.2%
Department of Homeland Security (USCG)	42,429	43,088	42,540	-548	-1.3%
Commissioned Corps (DOC, EPA, HHS)	6,821	6,845	6,845	0	0.0%
Subtotal, uniformed military personnel	1,583,674	1,549,863	1,516,049	-33,814	-2.2%
Subtotal, Executive Branch	4,289,113	4,236,518	4,200,203	-36,315	-0.9%
Legislative Branch ³	31,684	34,685	34,515	-170	-0.5%
Judicial Branch	35,381	34,914	35,164	250	0.7%
Grand total	4,356,178	4,306,117	4,269,882	-36,235	-0.8%

¹ Includes Postal Rate Commission.

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

³ FTE data not available for the Senate (positions filled were used).

Table 11-4. PERSONNEL COMPENSATION AND BENEFITS
(In millions of dollars)

Description	2011 Actual	2012 Estimate	2013 Request	Change: 2012 to 2013	
				Dollars	Percent
Civilian personnel costs:					
Executive Branch (excluding Postal Service):					
Direct compensation	175,931	177,035	179,942	2,907	1.6%
Personnel benefits	63,919	64,495	65,816	1,321	2.0%
Subtotal, Executive Branch	239,850	241,530	245,758	4,228	1.8%
Postal Service:					
Direct compensation	37,495	35,691	30,003	-5,688	-15.9%
Personnel benefits	15,126	8,697	11,711	3,014	34.7%
Subtotal	52,621	44,388	41,714	-2,674	-6.0%
Legislative Branch: ¹					
Direct compensation	2,154	2,110	2,132	22	1.0%
Personnel benefits	653	647	663	16	2.5%
Subtotal	2,807	2,757	2,795	38	1.4%
Judicial Branch:					
Direct compensation	3,226	3,206	3,249	43	1.3%
Personnel benefits	1,067	1,081	1,105	24	2.2%
Subtotal	4,293	4,287	4,354	67	1.6%
Total, civilian personnel costs	299,571	292,962	294,621	1,659	0.6%
Military personnel costs:					
Department of Defense					
Direct compensation	78,828	78,023	78,270	247	0.3%
Personnel benefits	50,940	51,346	48,163	-3,183	-6.2%
Subtotal	129,768	129,369	126,433	-2,936	-2.3%
All other executive branch, uniformed personnel:					
Direct compensation	2,455	2,506	2,721	215	8.6%
Personnel benefits	792	822	763	-59	-7.2%
Subtotal	3,247	3,328	3,484	156	4.7%
Total, military personnel costs ²	133,015	132,697	129,917	-2,780	-2.1%
Grand total, personnel costs	432,586	425,659	424,538	-1,121	-0.3%
ADDENDUM					
Former Civilian Personnel:					
Retired pay for former personnel					
Government payment for Annuity:	71,983	81,820	85,231	3,411	4.2%
Employee health benefits	10,260	10,475	11,027	552	5.3%
Employee life insurance	45	45	45	0	0.0%
Former military personnel:					
Retired pay for former personnel	50,997	52,685	54,759	2,074	3.9%
Military annuitants health benefits	8,756	9,471	9,727	256	2.7%

¹ Excludes members and officers of the Senate.

² Amounts in this table for military compensation reflect direct pay and benefits for all servicemembers, including active duty, guard, and reserve members.

ECONOMIC AND BUDGET ANALYSES

2. ECONOMIC ASSUMPTIONS AND INTERACTIONS WITH THE BUDGET

This chapter presents the economic forecast on which the 2014 Budget projections are based.¹ When the President took office in January 2009, the economy was in the midst of an historic economic crisis. The first order of business for the new Administration was to arrest the rapid decline in economic activity that threatened to plunge the country into a second Great Depression. The President and the Congress took unprecedented actions to restore demand, stabilize financial markets, and put people back to work. These steps included passage of the American Recovery and Reinvestment Act (ARRA), signed by the President just 28 days after taking office. They also included the Financial Stability Plan, announced in February 2009, which encompassed wide-ranging measures to strengthen the banking system, increase consumer and business lending, and stem foreclosures and support the housing market. These and a host of other actions walked the economy back from the brink. The economy bottomed out in June 2009 and gradually started to recover in late 2009.² Further measures to aid the recovery were taken in December 2010, such as cutting payroll taxes and extending unemployment insurance. Over the past 14 quarters, through the fourth quarter of 2012, real Gross Domestic Product (GDP) has grown at an average annual rate of 2.1 percent, and since February 2010, 6.4 million jobs have been added in the private sector. Meanwhile, the unemployment rate has fallen from its October 2009 peak of 10.0 percent to 7.7 percent (as of February 2013).

At the start of this year, the American Taxpayer Relief Act of 2012 (ATRA) prevented income tax increases on the vast majority of taxpayers in 2013 and provided greater certainty for the years ahead. With this legislation, the recovery is projected to gain momentum in 2013 and to strengthen further in 2014. However, even with healthy economic growth, unemployment is expected to be higher than is consistent with full employment for several more years. The Administration is projecting unemployment to continue to decline over the next five years, stabilizing at 5.4 percent by 2018.

This chapter contains several sections:

- The first section of this chapter reviews recent economic performance.
- The second section discusses the Administration's economic projections.
- The third section compares the Administration's to

other forecasts and to the Administration's projection in last year's Budget.

- The fourth section describes how changes in economic variables result in changes in receipts, outlays, and the deficit.
- The fifth section presents information on forecast errors for growth, inflation, and interest rates and how these forecast errors compare to those in forecasts made by the Congressional Budget Office (CBO) and the private-sector Blue Chip Consensus forecast.
- The sixth section presents alternatives to the current Administration forecast—based on both more optimistic and less optimistic assumptions with respect to real economic growth and unemployment—and describes the resulting effects on the deficit.
- The seventh section shows a probabilistic range of budget outcomes based on past errors in projecting the deficit.
- The last section discusses the relationship between structural and cyclical deficits, showing how much of the actual deficit is related to the economic cycle (e.g., the recent recession) and how much would persist even if the economy were at full employment.

Recent Economic Performance

The accumulated stresses from a contracting housing market and the resulting strains on financial markets brought the 2001-2007 expansion to an end in December 2007. In its early stages, the 2008-2009 recession was relatively mild, but financial conditions worsened sharply in the fall of 2008, and from that point forward the recession became much more severe. Before it ended, real GDP had fallen further and the downturn had lasted longer than any previous post-World War II recession. Looking ahead, the likely strength of the recovery is one of the key issues for the forecast, and the aftermath of the housing and financial crises has an important bearing on the expected strength of the recovery.

Housing Markets Begin to Show Strength.—The housing market has shown clear signs of recovery, after its collapse in 2007 and 2008 which was a major cause of the financial crisis and recession. In 2006-2007, housing prices peaked, and from 2007 through 2008, housing prices fell sharply according to all available measures.³

¹ In the Budget, economic performance is discussed in terms of calendar years. Budget figures are discussed in terms of fiscal years.

² The dating of U.S. business cycles is done by the National Bureau of Economic Research, a private institution that has supported economic research on business cycles and other topics for many decades.

³ There are several measures of national housing prices. Two respected measures that attempt to correct for variations in housing quality are the S&P/Case-Shiller Home Price Index and the Federal Housing Finance Agency (FHFA) Purchase-Only House Price Index. The Case-Shiller index peaked in 2006, while the FHFA index peaked in 2007.

During the downturn, as house prices fell, investment in housing plummeted, reducing the annualized rate of real GDP growth by an average of 1 percentage point per quarter. Housing prices started to rise again in 2012, with a modest gain of 4 percent over the year. Residential investment began to increase steadily in the second quarter of 2011, and rose by more than 14 percent during 2012.

In April 2009, housing starts fell to an annual rate of just 478,000 units, the lowest level ever recorded for this series, which dates from 1959. Housing starts rose modestly over the next two years, but increased 37 percent to over 950,000 units over the 12 months through December 2012. Typically, at least 1.5 million starts a year are needed to accommodate the needs of an expanding population and to replace older units, indicating potential for a substantial housing rebound. Although a large overhang of vacant homes must be reduced before a robust housing recovery can become firmly established, there are indications that this is gradually happening with reduced vacancies and fewer foreclosures. The Administration forecast assumes a continued recovery in housing activity that adds moderately to real GDP growth over the forecast horizon.

The Risk of an International Slowdown.—While the U.S. economy has returned to moderate growth, worldwide recovery is uneven. Europe continues to confront financial uncertainty stemming from the troubled financial condition of several countries in the Euro zone. After the Euro was established as the common currency for 17 European countries in 1999, interest rates in those countries moved close together as their inflation rates tended to converge. However, recent events have led markets to reassess the long-run solvency of some of the countries using the Euro, and the result has been a striking divergence in the interest rates charged on sovereign debt of the various countries. High interest rates on their debt make it difficult for the most threatened of these countries to address the pressing fiscal issues that have put some countries' long-run solvency at risk.

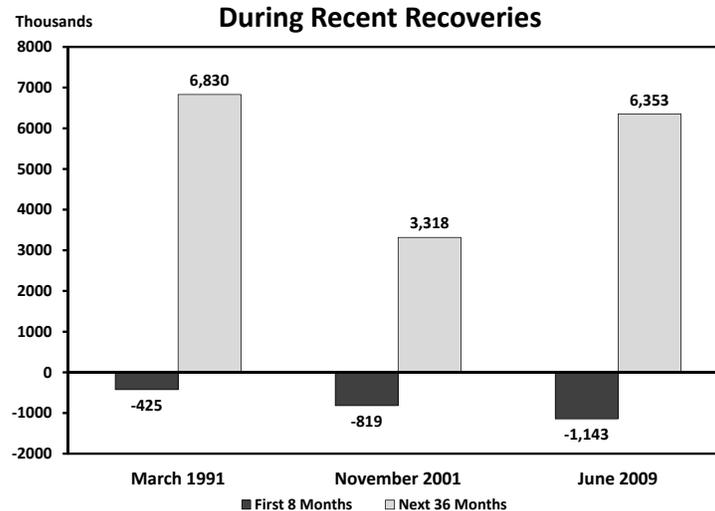
At the beginning of 2012, many private forecasters were expecting the recovery to accelerate over the course of the year. Instead, 2012 saw subpar growth due to unexpected headwinds. A persistent source of sluggishness has been the sovereign debt crisis in Europe, which has curbed global equity markets and will likely continue to weigh on confidence and the global recovery going forward. The European Union and European Central Bank have acted to confront these issues, and the affected governments have attempted to cut their budget deficits. Despite these actions, however, the European recovery remains at risk because of on-going structural adjustments and because the necessary austerity measures taken to address the fiscal crisis have in some cases limited demand and wages, resulting in social unrest. Several European countries have had slowing or negative growth in recent quarters, and there also has been a slowdown in growth in many emerging market economies.

Deleveraging has Slowed Consumption Growth.—Between the third quarter of 2007 and the first quarter of 2009, the real net worth of American households declined by \$16 trillion (24 percent) – the equivalent of more than one year's GDP. A precipitous decline in the stock market, along with falling house prices over this period, were the main reasons for the drop in household wealth. Since then, real household wealth, including financial assets, has risen substantially to near its previous peak, although total net worth remains below the prior peak level because housing prices have only recently started to recover.⁴

Americans reacted to this massive loss of wealth by saving more. The personal saving rate had been declining since the 1980s, and it reached a low point of 1.3 percent in the third quarter of 2005. It remained low, averaging only 2.2 percent through the end of 2007, but since then, as wealth has declined, the saving rate has increased to an average of 4.4 percent over the past three years. A sudden

⁴ Real wealth is computed by deflating household net worth from the Flow-of-Funds Accounts by the Chained Price Index for Personal Consumption Expenditures. Data are available through 2012:Q3.

**Chart 2-1. Private Job Gains and Losses
During Recent Recoveries**



increase in the desire to save implies a corresponding reduction in consumer demand, and a fall-off in consumption had a negative effect on the economy during the recession of 2008 and early 2009. During that period, real consumer spending fell at an annual rate of 2.3 percent. Since then, real consumer spending has recovered and now exceeds its previous peak level, although it has increased only 1.9 percent over the past four quarters. Continued growth in consumption is essential to a healthy recovery, and, as income also grows, increased consumption is compatible with a higher but stable saving rate.

Rebound in Business Investment.—Business fixed investment fell sharply during the 2008-2009 contraction. It rose rapidly in 2010 through 2012, but even after the substantial increases in business spending for structures, equipment and software over the past 10 quarters, real investment remains well below its pre-recession levels implying room for further growth. The cost of capital is low and American corporations at the end of 2012 held substantial levels of cash reserves, which could provide funding for future investments as the economy continues to recover. The main constraint on business investment

Table 2-1. ECONOMIC ASSUMPTIONS¹

(Calendar years; dollar amounts in billions)

	Actual	Projections											
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Gross Domestic Product (GDP):													
Levels, dollar amounts in billions:													
Current dollars	15,076	15,705	16,384	17,235	18,181	19,192	20,247	21,275	22,247	23,219	24,216	25,253	26,331
Real, chained (2005) dollars	13,299	13,600	13,907	14,358	14,864	15,399	15,943	16,441	16,873	17,283	17,692	18,104	18,526
Chained price index (2005 = 100), annual average	113.4	115.5	117.8	120.1	122.4	124.7	127.0	129.4	131.9	134.4	136.9	139.5	142.2
Percent change, fourth quarter over fourth quarter:													
Current dollars	4.0	4.1	4.5	5.4	5.6	5.6	5.5	4.9	4.4	4.4	4.3	4.3	4.3
Real, chained (2005) dollars	2.0	2.0	2.6	3.4	3.6	3.6	3.5	2.9	2.4	2.4	2.3	2.3	2.3
Chained price index (2005 = 100)	2.0	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
Percent change, year over year:													
Current dollars	4.0	4.2	4.3	5.2	5.5	5.6	5.5	5.1	4.6	4.4	4.3	4.3	4.3
Real, chained (2005) dollars	1.8	2.3	2.3	3.2	3.5	3.6	3.5	3.1	2.6	2.4	2.4	2.3	2.3
Chained price index (2005 = 100)	2.1	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
Incomes, billions of current dollars:													
Domestic Corporate Profits	1,388	1,511	1,566	1,743	1,833	1,939	1,950	1,855	1,742	1,658	1,504	1,422	1,328
Employee Compensation	8,295	8,591	8,903	9,353	9,891	10,460	11,070	11,671	12,253	12,841	13,456	14,065	14,708
Wages and salaries	6,661	6,902	7,182	7,549	7,970	8,438	8,945	9,435	9,911	10,387	10,879	11,364	11,885
Other taxable income ²	3,252	3,387	3,519	3,643	3,828	4,032	4,300	4,585	4,832	5,054	5,257	5,455	5,666
Consumer Price Index (all urban):³													
Level (1982-84 = 100), annual average	224.9	229.6	234.5	239.7	244.9	250.3	255.8	261.5	267.2	273.1	279.1	285.2	291.5
Percent change, fourth quarter over fourth quarter	3.3	1.9	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
Percent change, year over year	3.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
Unemployment rate, civilian, percent:													
Fourth quarter level	8.7	7.9	7.5	7.0	6.5	6.0	5.6	5.4	5.4	5.4	5.4	5.4	5.4
Annual average	8.9	8.1	7.7	7.2	6.7	6.2	5.7	5.5	5.4	5.4	5.4	5.4	5.4
Federal pay raises, January, percent:													
Military ⁴	1.4	1.6	1.7	1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
Civilian ⁵	0.0	0.0	0.5	1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
Interest rates, percent:													
91-day Treasury bills ⁶	0.1	0.1	0.1	0.2	0.4	1.3	2.3	3.2	3.6	3.7	3.7	3.7	3.7
10-year Treasury notes	2.8	1.8	2.0	2.6	3.1	3.7	4.1	4.4	4.6	4.8	5.0	5.0	5.0

N/A = Not Available

¹ Based on information available as of mid-November 2012.

² Rent, interest, dividend, and proprietors' income components of personal income.

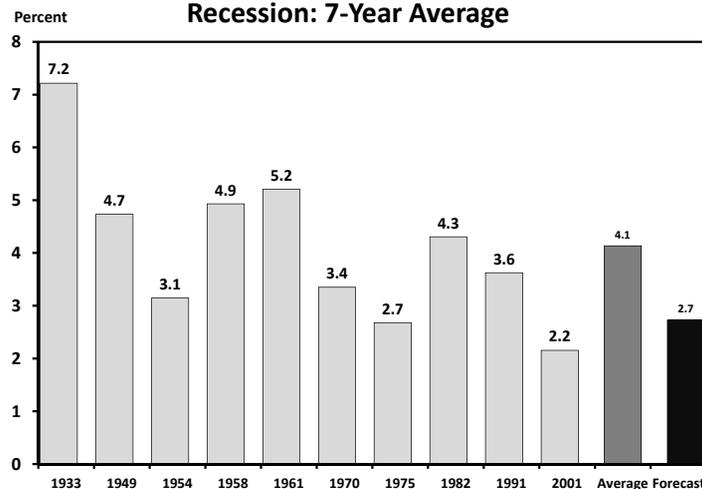
³ Seasonally adjusted CPI for all urban consumers.

⁴ Percentages apply to basic pay only; percentages to be proposed for years after 2014 have not yet been determined.

⁵ Overall average increase, including locality pay adjustments. Percentages to be proposed for years after 2014 have not yet been determined.

⁶ Average rate, secondary market (bank discount basis).

Chart 2-2. Real GDP Growth Following a Recession: 7-Year Average



is poor sales expectations, which have been dampened by the slow pace of recovery. However, if consumption picks up, businesses are in a good position to expand investment. Nevertheless, the pace of future growth could prove to be uneven, as investment tends to be volatile.

Steady Progress in the Labor Market.—The unemployment rate peaked in 2009. It has declined since then, but it remains well above its historical average of under 6 percent, and the rate of long-term unemployment (those out of work for more than 6 months) remains high. The high rate of unemployment has had devastating effects on American families, and the recovery will not be real for most Americans until the job market strengthens further. Historically, when the economy grows, so does employment, and there are signs that this pattern is repeating itself in the current recovery, albeit slowly. Private employment has grown for 36 straight months, although at a relatively modest rate. The positive job growth has far exceeded the job gains in the recovery following the 2001 recession, and is only slightly less than equivalent in comparison to the 1990s expansion (see Chart 2-1).

Economic Projections

The economic projections underlying the 2014 Budget estimates are summarized in Table 2-1. The assumptions are based on information available as of mid-November 2012. This section discusses the Administration's projections, and the next section compares these projections with those of the Federal Reserve's Open Market Committee (FOMC), the CBO, and the Blue Chip Consensus of private forecasters.

Real GDP.—The Administration projects the economic recovery that began in mid-2009 will continue with real GDP growing at an average annual rate of 2.9 percent over the next 10 years. At the beginning of 2013, the enactment of the American Taxpayer Relief Act removed much of the uncertainty about tax changes that existed when the Administration finalized its economic assumptions in November. However, the projected growth rate

in November was based on policy assumptions that were similar to ATRA in regard to tax extensions. The middle class tax cuts were made permanent, tax rates on regular income were raised for the wealthiest taxpayers; and rates were also raised on dividends and capital gains (relative to 2012 tax law). The temporary two percentage point payroll tax cut of 2011-12 expired. The effective increase in the payroll tax rate is expected to produce some fiscal drag during 2013, and as a result the Administration projects 2.6 percent GDP growth over the four quarters of the year, accelerating to 3.4 percent growth in 2014 when increased private demand is expected to play a larger role in supporting continued recovery. This economic forecast, as always, is based on the assumption that the Administration's budget proposals are enacted in full, including a proposal for infrastructure spending to boost the economy and lay a foundation for long-term growth, and that the sequester that took effect on March 1st of this year is avoided and the harmful, across-the-board cuts are reversed. The economy is expected to continue to grow at a pace of about 3.5 percent over the following three years. Real GDP growth is projected to return to its "potential" growth rate of 2.4 percent by 2019, and to grow at a steady 2.3 percent rate for the remaining four years of the forecast. The slight drop off in the last few years is due to demographic factors that lower the labor force participation rate as the baby boom generation retires.

As shown in Chart 2-2, the Administration's projections for real GDP growth over the first seven years of the expected recovery imply an average growth rate below the average for historical recoveries. Recent recoveries have been somewhat weaker than average, but the last two expansions were preceded by mild recessions with relatively little pent-up demand when conditions improved. Because of the depth of the recent recession, there is much more room for a rebound in spending and production than was true either in 1991 or 2001. On the other hand, lingering effects from the credit crisis and other special factors have limited the pace of the recovery until now.

BOX 2-1. SUPPLY-SIDE ANALYSIS OF LONG-TERM GROWTH

The growth rate of the economy over the long run is determined by the growth of its supply-side components, demographics, and technological change. The growth rate that characterizes the long-run trend in real U.S. GDP—or potential GDP—plays an important role in guiding the Administration’s long-run forecast. Through 2020, potential real GDP is projected to grow at a 2.4 percent annual rate, before slowing to 2.3 percent during the three years 2021–23, reflecting the increasing size of the retiring baby-boom cohorts.

Table 2-2 shows the Administration’s forecast for the contribution of each supply-side factor to the growth in potential real GDP: the working-age population, the rate of labor force participation, the employed share of the labor force, the ratio of nonfarm business employment to household employment, the length of the workweek, labor productivity, and the ratio of real GDP to nonfarm output. Each column in Table 2-2 shows the average annual growth rate for each factor over a specific period of time. The first column shows the long-run average growth rates between the business-cycle peak of 1953 and the business-cycle peak of 2007, with business-cycle peaks chosen as end points to remove the substantial fluctuations within cycles so as to reveal long-run trends. The second column shows average growth rates between the fourth quarter of 2007 and the third quarter of 2012, a period that includes the 2007–09 recession and the recovery so far. The third column shows the Administration’s projection for the entire 11-year forecast period, from the third quarter of 2012 to the fourth quarter of 2023. And the fourth column shows average projected growth rates between the fourth quarter of 2020 and the fourth quarter of 2023, that is, the last three years of the forecast interval when the economy is assumed to settle into steady-state growth.

Summing the growth rates of these components, real GDP is projected to rise at an average 2.8 percent a year over the projection period (line 8, column 3), somewhat faster than the 2.4 percent annual growth rate for potential real GDP (line 9, column 3). Actual GDP can and is expected to grow faster than potential GDP primarily because of the projected rise in the employment rate (line 3, column 3) as millions of currently unemployed workers find jobs. Real potential GDP (line 9, columns 3 and 4) is projected to grow more slowly than the long-term historical growth rate of 3.2 percent a year (line 9, column 1). The projected slowdown in real potential GDP growth primarily reflects the lower projected growth rate of the working-age population and the retirement of the baby-boom cohort.

Table 2-2. COMPONENTS OF ACTUAL AND POTENTIAL REAL GDP GROWTH, 1952–2023

Component	Average Annual Growth rate ^a			
	History, peak-to-peak	Recent history, since peak	Forecast	Out-year forecast
	1953:Q2 to 2007:Q4 ^b	2007:Q4 to 2012:Q3	2012:Q3 to 2023:Q4	2020:Q4 to 2023:Q4
1 Civilian noninstitutional population aged 16+	1.4	1.2	1.0	1.0
2 Labor force participation rate	0.2	-0.8	-0.1	-0.4
3 Employed share of the labor force	-0.0	-0.7	0.3	0.0
4 Ratio of nonfarm business employment to household employment	0.0	-0.7	-0.0	0.0
5 Average weekly hours (nonfarm business)	-0.3	-0.0	-0.1	-0.1
6 Output per hour (productivity, nonfarm business)	2.1	1.6	2.2	2.2
7 Ratio of real GDP to nonfarm business output	-0.2	0.0	-0.3	-0.4
8 Sum: Actual real GDP	3.2	0.5	2.8	2.3
9 Memo: Potential real GDP	3.2	2.0	2.4	2.3

^a All contributions are in percentage points at an annual rate, forecast finalized in mid-November 2012.

^b 1953:Q2 and 2007:Q4 are business-cycle peaks.

Note: Population, labor force, and household employment have been adjusted for discontinuities in the population series. Nonfarm business employment, workweek, and productivity come from the Labor Productivity and Costs database maintained by the Bureau of Labor Statistics.

Source: Bureau of Labor Statistics, Current Population Survey, Labor Productivity and Costs; Bureau of Economic Analysis, National Income and Product Accounts; Department of the Treasury; Office of Management and Budget; CEA calculations.

The U.S. economy has enormous room for growth, although there are factors that could continue to limit that growth in the years ahead. On the positive side, the unemployment rate has fallen since the recession trough and further progress is expected in 2013-14, particularly if the President’s Budget proposals are adopted. The Federal Reserve’s recent directive states

that a “highly accommodative stance of monetary policy will remain appropriate for a considerable time.” However, financial markets here and in Europe have been troubled by weak economic growth and the sustainability of fiscal policy in some European countries. The drag from a European slowdown could hold back the U.S. economy.

Long-Term Growth.—The Administration’s forecast does not attempt to project cyclical developments beyond the next few years. The long-run projection for real economic growth and unemployment assumes that they will maintain trend values in the years following the return to full employment. Real GDP, reflecting the slower growth in productivity outside the nonfarm business sector, grows at a rate of 2.3 percent in the final years of the projection. That is markedly slower than the average growth rate of real GDP since 1947 of 3.2 percent per year. In the 21st Century, real GDP growth in the United States is likely to be permanently slower than it was in earlier eras because of a slowdown in labor force growth initially due to the retirement of the post-World War II baby boom generation, and later due to a decline in the growth of the working-age population.

Box 2-1 describes the components of long-term growth rates and how they relate to the Administration’s forecast in more detail.

Unemployment.—In February 2013, the overall unemployment rate was 7.7 percent. In line with the increased growth in the economy projected after 2013, the unemployment rate is expected to ease to 5.4 percent by 2018 and to remain at that level during the period of trend growth during the last few years of the forecast.

Inflation.—The Consumer Price Index for all urban consumers (CPI-U) rose by 1.7 percent for the 12 months ending in December 2012. Over the previous 12 months it had risen by 3.0 percent. The decrease in inflation in 2012 was due almost entirely to sharp movements in food and energy prices. The “core” CPI, excluding both food and energy, was up 1.9 percent through the 12 months ending in December, little changed from the 2.2 percent during 2011.

Weak demand continues to hold down prices for many goods and services, and continued high unemployment is expected to result in a relatively low inflation rate. As the economy recovers and the unemployment rate declines, the rate of inflation should remain near the Federal Reserve’s target of around 2 percent per year. With the recovery path assumed in the Administration forecast, the risk of outright deflation appears minimal. The Administration assumes that the rate of change in the CPI will average 2.2 percent and that the GDP price index will increase at a 1.9 percent annual rate in the long run.

Interest Rates.—Interest rates on Treasury securities fell sharply in late 2008, as both short-term and long-term rates declined to their lowest levels in decades. Since then Treasury rates have fluctuated, but they have not returned to the levels before the financial crisis, and at the end of 2012 long-term rates were especially low. In the first week of January, the yield on 10-year Treasuries was just 1.9 percent. Investors have sought the security of Treasury debt during the heightened financial uncertainty of the last few years, which has kept yields low. At the short end of the yield curve, the Federal Reserve is holding short-term rates near zero as it seeks to foster economic growth and lower unemployment. The Federal Reserve’s policy of purchasing long-term Treasury securities may also be helping to hold down long-term rates.

In the Administration projections, interest rates are expected to rise, but only gradually as financial concerns are alleviated and the economy recovers from recession. The 91-day Treasury bill rate is projected to remain near zero into 2015 consistent with the Federal Reserve’s announced intentions, and then to rise to 3.7 percent by 2017. The 10-year rate begins to rise in 2013 and reaches 5.0 percent by 2021. After adjusting for inflation, the projected real interest rates are close to their historical averages.

Income Shares.—The share of labor compensation in GDP was extremely low by historical standards in 2012. It is expected to remain low for the next few years falling to a low point of 54.3 percent of GDP in 2013-2014. As the economy grows faster in the middle years of the forecast period, and as employment increases as a result, compensation is projected to rise, reaching 55.9 percent of GDP in 2023. In the expansion that ended in 2007, labor compensation tended to lag behind the growth in productivity, and that has also been true for the surge in productivity growth in 2009-2010. The share of taxable wages, which is strongly affected by changes in health insurance costs, is expected to rise from 43.8 percent of GDP in 2013 to 45.1 percent in 2023. The share of domestic corporate profits is expected to decline from 12.4 percent of GDP in 2012 to 8.2 percent in 2023, which is close to its historical average.

Comparison with Other Forecasts

Table 2–3 compares the economic assumptions for the 2014 Budget with projections by CBO, the Blue Chip Consensus — an average of about 50 private-sector economic forecasts — and, for some variables, the Federal Reserve Open Market Committee. These other forecasts differ from the Administration’s projections, but the forecast differences are relatively small compared with the margin of error in all economic forecasts. Like the Administration, the other forecasts project that real GDP will continue to grow as the economy returns to a normal level of unemployment. The forecasts also agree that inflation will be low while outright deflation is avoided, and that interest rates will eventually rise to more normal levels.

There are some conceptual differences between the Administration forecast and the other economic forecasts. The Administration forecast assumes that the President’s Budget proposals will be enacted, and passage of those proposals will boost growth. The 50 or so private forecasters in the Blue Chip Consensus make differing policy assumptions, and some may not assume that the sequester will be successfully replaced with balanced deficit reduction or that the Congress will enact other policies the Administration has proposed to boost growth. CBO is required to assume that current law will continue in making its projections. As a result, their February projections assumed that the sequester would take place, as well as other fiscal tightening actions that would lower growth in 2013. Specifically, CBO stated that its 1.4 percent projection for real GDP growth this year could be as much

Table 2-3. COMPARISON OF ECONOMIC ASSUMPTIONS
(Calendar years)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Nominal GDP:												
2014 Budget	15,705	16,384	17,235	18,181	19,192	20,247	21,275	22,247	23,219	24,216	25,253	26,331
CBO	15,692	16,149	16,863	17,913	19,087	20,224	21,178	22,129	23,099	24,093	25,117	26,180
Blue Chip	15,682	16,239	16,993	17,888	18,793	19,725	20,684	21,667	22,676	23,730	24,835	26,002
Real GDP (year-over-year):												
2014 Budget	2.3	2.3	3.2	3.5	3.6	3.5	3.1	2.6	2.4	2.4	2.3	2.3
CBO	2.3	1.4	2.6	4.1	4.4	3.8	2.6	2.4	2.3	2.2	2.2	2.2
Blue Chip	2.2	1.8	2.7	3.1	2.9	2.8	2.7	2.6	2.5	2.5	2.5	2.5
Real GDP (fourth-quarter-over-fourth-quarter):												
2014 Budget	2.0	2.6	3.4	3.6	3.6	3.5	2.9	2.4	2.4	2.3	2.3	2.3
CBO	1.9	1.4	3.4	4.4	4.3	3.2	2.5	2.4	2.2	2.2	2.2	2.2
Blue Chip	1.6	2.3	2.8	3.2	2.8	2.8	2.6	2.6	2.5	2.5	2.5	2.5
Federal Reserve Central Tendency		2.3 - 2.8	2.9 - 3.4	2.9 - 3.7								
GDP Price Index:¹												
2014 Budget	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
CBO	1.8	1.5	1.8	2.0	2.1	2.1	2.1	2.0	2.1	2.0	2.0	2.0
Blue Chip	1.8	1.7	1.9	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
Consumer Price Index (CPI-U):¹												
2014 Budget	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
CBO	2.1	1.6	1.9	2.1	2.1	2.2	2.3	2.3	2.3	2.3	2.3	2.3
Blue Chip	2.1	1.8	2.1	2.3	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3
Unemployment Rate:²												
2014 Budget	8.1	7.7	7.2	6.7	6.2	5.7	5.5	5.4	5.4	5.4	5.4	5.4
CBO	8.1	7.9	7.8	7.1	6.3	5.6	5.5	5.5	5.4	5.4	5.3	5.3
Blue Chip	8.1	7.7	7.3	6.7	6.3	6.0	5.7	5.6	5.6	5.6	5.6	5.6
Federal Reserve Central Tendency ³		7.3 - 7.5	6.7 - 7.0	6.0 - 6.5								
Interest Rates:²												
91-Day Treasury Bills (discount basis):												
2014 Budget	0.1	0.1	0.2	0.4	1.3	2.3	3.2	3.6	3.7	3.7	3.7	3.7
CBO	0.1	0.1	0.2	0.2	1.5	3.4	4.0	4.0	4.0	4.0	4.0	4.0
Blue Chip	0.1	0.1	0.2	0.9	2.1	3.0	3.3	3.5	3.6	3.6	3.6	3.6
10-Year Treasury Notes:												
2014 Budget	1.8	2.0	2.6	3.1	3.7	4.1	4.4	4.6	4.8	5.0	5.0	5.0
CBO	1.8	2.1	2.7	3.5	4.3	5.0	5.2	5.2	5.2	5.2	5.2	5.2
Blue Chip	1.8	2.1	2.7	3.4	4.1	4.5	4.7	4.7	4.7	4.7	4.7	4.7

N/A = Not Available

Sources: Administration; CBO, The Budget and Economic Outlook: Fiscal Years 2013 to 2023; March 2013 Blue Chip Economic Indicators, Aspen Publishers, Inc.; Federal Reserve Open Market Committee, March 20, 2013.

¹ Year-over-year percent change.

² Annual averages, percent.

³ Average of 4th quarter values.

as 1-1/2 percentage points higher if the sequester, payroll tax increase, and other actions were not taken.

The Administration projections were completed in mid-November. The five-month lag between that date and the Budget release is due in part because the budget process requires lead time to complete the estimates for agency programs that are incorporated in the Budget. Forecasts made at different dates will differ if economic news between the two dates alters the economic outlook. The Blue Chip Consensus for 2013-2023 in this table was the latest available, from early March. The FOMC members'

central tendency of their forecasts are from March 2013. The CBO forecast is from its February 2013 report.

Real GDP Growth.— In 2013, the Administration expects more growth than the other forecasters, mainly because the forecast assumes that all of the Budget proposals will be enacted. Other forecasters make different assumptions. In 2014, the Administration expects growth to increase, while most other forecasters also look for an increase but to a lesser degree.

The Administration projects that real GDP will eventually recover much of the loss from the 2008-2009 recession.

This implies a few years of higher-than-normal growth as real GDP makes up the lost ground. The Blue Chip average shows only a very limited recovery in this sense. In the Blue Chip projections, real GDP growth exceeds its long-run average only briefly in the 11-year forecast period, and much of the loss of real GDP experienced during the recession is permanent. CBO anticipates a stronger recovery than Blue Chip that would return real GDP to nearly the same level as in the Administration forecast. In the long run, the real growth rates projected by the forecasters are similar, ranging between 2.3 and 2.5 percent.

All economic forecasts are subject to error, and looking back the forecast errors are usually much larger than the forecast differences discussed above. As discussed in a section later in this chapter, past forecast errors among the Administration, CBO, and the Blue Chip have been roughly similar.

Unemployment, Inflation, and Interest Rates.—The Administration forecasts unemployment falling steadily over the next few years to a level of 5.4 percent. The Blue Chip and CBO also show a decline in unemployment, but at a slower rate. By the end of the forecast, CBO and the Administration have about the same level of unemployment, while the Blue Chip has it declining to only 6.0 percent. The Administration's unemployment projection is within the range of the Federal Reserve forecast. Nevertheless, the CBO projection of unemployment is higher than the

Administration in 2013-2015, reflecting the different policy assumptions underlying the two forecasts. Over time the Administration projects a return to the average unemployment rate that prevailed in the 1990s and 2000s.

The Administration, CBO, and the Blue Chip Consensus anticipate a subdued rate of inflation over the next two years. In the medium term, inflation is projected to return to a rate of around two percent per year, which is consistent with the Federal Reserve's long-run policy goal for inflation. All forecasts all have interest rates increasing substantially in the long run to similar levels. However, the path of interest rate adjustment differs substantially, with the Blue Chip showing a rise in rates that begins before the other forecasters.

Changes in Economic Assumptions.—The 2014 Budget forecast reflects economic developments over the past year, but some of the forecast values are similar to those of the 2013 Budget, especially in the long run (see Table 2-4). The previous Budget anticipated more rapid growth in 2013-2017 than the current Budget, and assumed a slightly higher rate of potential GDP growth in the long run. The projection for the long-term unemployment rate has remained unchanged, but the forecast starts from a lower level, reflecting the sharper-than-expected decline in 2012. Projected interest rates are lower in the medium term, reflecting the additional actions by the Federal Reserve to keep rates low for an extended

Table 2-4. COMPARISON OF ECONOMIC ASSUMPTIONS IN THE 2013 AND 2014 BUDGETS

(Calendar years; dollar amounts in billions)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Nominal GDP:											
2013 Budget Assumptions ¹	15,779	16,522	17,397	18,448	19,533	20,651	21,689	22,666	23,659	24,688	25,760
2014 Budget Assumptions	15,705	16,384	17,235	18,181	19,192	20,247	21,275	22,247	23,219	24,216	25,253
Real GDP (2005 dollars):											
2013 Budget Assumptions ¹	13,687	14,097	14,606	15,211	15,821	16,431	16,952	17,403	17,844	18,290	18,748
2014 Budget Assumptions	13,600	13,907	14,358	14,864	15,399	15,943	16,441	16,873	17,283	17,692	18,104
Real GDP (percent change):²											
2013 Budget Assumptions	2.7	3.0	3.6	4.1	4.0	3.9	3.2	2.7	2.5	2.5	2.5
2014 Budget Assumptions	2.3	2.3	3.2	3.5	3.6	3.5	3.1	2.6	2.4	2.4	2.3
GDP Price Index (percent change):²											
2013 Budget Assumptions	1.7	1.7	1.6	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
2014 Budget Assumptions	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
Consumer Price Index (all-urban; percent change):²											
2013 Budget Assumptions	2.2	1.9	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1
2014 Budget Assumptions	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
Civilian Unemployment Rate (percent):³											
2013 Budget Assumptions	8.9	8.6	8.1	7.3	6.5	5.8	5.5	5.4	5.4	5.4	5.4
2014 Budget Assumptions	8.1	7.7	7.2	6.7	6.2	5.7	5.5	5.4	5.4	5.4	5.4
91-day Treasury bill rate (percent):³											
2013 Budget Assumptions	0.1	0.2	1.4	2.7	3.9	4.1	4.1	4.1	4.1	4.1	4.1
2014 Budget Assumptions	0.1	0.1	0.2	0.4	1.3	2.3	3.2	3.6	3.7	3.7	3.7
10-year Treasury note rate (percent):³											
2013 Budget Assumptions	2.8	3.5	3.9	4.4	4.7	5.0	5.1	5.1	5.1	5.3	5.3
2014 Budget Assumptions	1.8	2.0	2.6	3.1	3.7	4.1	4.4	4.6	4.8	5.0	5.0

¹ Adjusted for July 2012 NIPA revisions.

² Calendar year over calendar year.

³ Calendar year average.

period, and they are slightly lower in the long term as well. As in last year's projections, inflation is also projected to return to its long-run average consistent with Federal Reserve policy, now estimated at 0.1 percentage point higher than last year at 2.2 percent for the CPI-U and 1.9 percent for the GDP price index.

Sensitivity of the Budget to Economic Assumptions

Both receipts and outlays are affected by changes in economic conditions. Budget receipts vary with individual and corporate incomes, which respond to both real economic growth and inflation. At the same time, outlays for many Federal programs are directly linked to developments in the economy. For example, most retirement and other social insurance benefit payments are tied by law

to consumer price indices. Medicare and Medicaid outlays are affected directly by the price of medical services. Interest on the debt is linked to market interest rates and the size of the budget surplus or deficit, both of which in turn are influenced by economic conditions. Outlays for certain benefits such as unemployment compensation and the Supplemental Nutrition Assistance Program vary with the unemployment rate.

This sensitivity complicates budget planning because differences in economic assumptions lead to changes in the budget projections. Economic forecasting inherently entails uncertainty. It is therefore useful to examine the implications of possible changes in economic assumptions. Many of the budgetary effects of such changes are fairly predictable, and a set of general principles or "rules of thumb" embodying these relationships can aid in estimating how

Table 2-5. SENSITIVITY OF THE BUDGET TO ECONOMIC ASSUMPTIONS
(Fiscal years; in billions of dollars)

Budget effect	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total of Effects, 2013–2023
Real Growth and Employment												
Budgetary effects of 1 percent lower real GDP growth:												
(1) For calendar year 2013 only, with real GDP recovery in 2014–15:												
Receipts	-16.2	-24.5	-11.2	-1.1	0.4	0.4	0.4	0.4	0.3	0.4	0.3	-50.5
Outlays	4.0	9.4	4.7	0.8	1.2	2.0	2.4	2.6	2.7	2.8	2.9	35.6
Increase in deficit (+)	20.2	33.9	15.9	1.9	0.8	1.6	2.0	2.3	2.4	2.5	2.6	86.1
(2) For calendar year 2013 only, with no subsequent recovery:												
Receipts	-16.2	-32.9	-37.8	-40.4	-43.4	-46.2	-49.1	-51.9	-55.0	-58.0	-61.3	-492.3
Outlays	4.0	11.4	13.0	15.3	19.3	24.5	29.5	33.7	37.8	42.1	46.6	277.2
Increase in deficit (+)	20.2	44.3	50.8	55.7	62.7	70.7	78.6	85.7	92.8	100.1	107.9	769.5
(3) Sustained during 2013 - 2023, with no change in unemployment:												
Receipts	-16.4	-50.6	-93.9	-143.4	-200.4	-262.1	-330.1	-402.1	-480.2	-564.0	-654.4	-3,197.6
Outlays	-0.3	-0.7	-0.9	0.1	4.9	14.8	28.0	41.7	57.1	75.6	97.0	317.2
Increase in deficit (+)	16.1	49.9	93.0	143.6	205.2	276.9	358.2	443.8	537.3	639.6	751.4	3,514.9
Inflation and Interest Rates												
Budgetary effects of 1 percentage point higher rate of:												
(4) Inflation and interest rates during calendar year 2013 only:												
Receipts	21.3	41.5	41.6	41.1	44.5	47.8	50.9	53.9	57.1	60.3	63.4	523.4
Outlays	22.1	39.5	32.0	32.7	32.0	31.9	30.5	30.4	29.0	29.8	29.5	339.4
Decrease in deficit (-)	0.8	-2.0	-9.7	-8.4	-12.5	-15.9	-20.5	-23.4	-28.0	-30.5	-33.9	-184.0
(5) Inflation and interest rates, sustained during 2013 - 2023:												
Receipts	21.3	63.7	111.0	165.2	229.6	296.7	369.2	448.3	540.3	638.6	741.0	3,624.8
Outlays	19.8	68.0	111.8	155.3	196.2	236.2	278.4	321.4	363.8	411.8	454.4	2,617.1
Decrease in deficit (-)	-1.5	4.3	0.8	-9.9	-33.4	-60.5	-90.8	-126.8	-176.5	-226.8	-286.6	-1,007.6
(6) Interest rates only, sustained during 2013 - 2023:												
Receipts	5.0	13.8	19.2	24.9	32.5	36.6	39.3	42.7	50.1	57.2	60.6	381.8
Outlays	11.0	41.5	64.5	83.3	101.3	119.1	135.2	151.0	164.0	177.3	188.9	1,237.2
Increase in deficit (+)	5.9	27.7	45.3	58.5	68.8	82.6	95.9	108.3	114.0	120.2	128.3	855.4
(7) Inflation only, sustained during 2013 - 2023:												
Receipts	16.2	49.7	91.3	139.7	196.2	259.0	328.5	403.8	488.0	578.8	677.4	3,228.5
Outlays	8.8	26.8	48.0	73.3	97.2	120.9	149.0	178.8	211.2	249.7	285.3	1,449.0
Decrease in deficit (-)	-7.4	-22.9	-43.4	-66.4	-99.0	-138.1	-179.5	-224.9	-276.9	-329.1	-392.0	-1,779.5
Interest Cost of Higher Federal Borrowing												
(8) Outlay effect of \$100 billion increase in borrowing in 2013	0.1	0.2	0.3	0.9	2.0	3.2	4.0	4.4	4.6	4.8	5.0	29.5

¹ The unemployment rate is assumed to be 0.5 percentage point higher per 1.0 percent shortfall in the level of real GDP.

changes in the economic assumptions would alter outlays, receipts, and the surplus or deficit. These rules of thumb should be understood as suggesting orders of magnitude; they do not account for potential secondary effects.

The rules of thumb show how the changes in economic variables affect Administration estimates for receipts and outlays, holding other factors constant. They are not a prediction of how receipts or outlays would actually turn out if the economic changes actually materialized. The rules of thumb are based on a fixed budget policy that is not always a good predictor of what might actually happen to the budget should the economic outlook change substantially. For example, unexpected downturns in real economic growth, and attendant job losses, usually give rise to legislative actions to stimulate the economy with additional countercyclical policies. Also, the rules of thumb do not reflect certain “technical” changes that often accompany the economic changes. For example, changes in capital gains realizations often accompany changes in the economic outlook. On the spending side of the budget, the rules of thumb do not capture changes in deposit insurance outlays, even though bank failures are generally associated with weak economic growth and rising unemployment.

Economic variables that affect the budget do not always change independently of one another. Output and employment tend to move together in the short run: a high rate of real GDP growth is generally associated with a declining rate of unemployment, while slow or negative growth is usually accompanied by rising unemployment, a relationship known as Okun’s Law. In the long run, however, changes in the average rate of growth of real GDP are mainly due to changes in the rates of growth of productivity and the labor force, and are not necessarily associated with changes in the average rate of unemployment. Expected inflation and interest rates are also closely interrelated: a higher expected rate of inflation increases nominal interest rates, while lower expected inflation reduces them.

Changes in real GDP growth or inflation have a much greater cumulative effect on the budget if they are sustained for several years than if they last for only one year. However, even temporary changes can have lasting effects if they permanently raise the level of the tax base or the level of Government spending. Moreover, temporary economic changes that affect the deficit or surplus change the level of the debt, affecting future interest payments. Highlights of the budgetary effects of these rules of thumb are shown in Table 2-5.

For real growth and employment:

- The first block shows the effect of a temporary reduction in real GDP growth by one percentage point sustained for one year, followed by a recovery of GDP to the base-case level (the Budget assumptions) over the ensuing two years. In this case, the unemployment rate is assumed to rise by one-half percentage point relative to the Budget assumptions by the end of the first year, then return to the base case rate over the ensuing two years. After real GDP and the unemploy-

ment rate have returned to their base case levels, most budget effects vanish except for persistent out-year interest costs associated with larger near-term deficits.

- The second block shows the effect of a reduction in real GDP growth by one percentage point sustained for one year, with no subsequent “catch up,” accompanying a permanent increase in the natural rate of unemployment (and of the actual unemployment rate) of one-half percentage point relative to the Budget assumptions. In this scenario, the level of GDP and taxable incomes are permanently lowered by the reduced growth rate in the first year. For that reason and because unemployment is permanently higher, the budget effects (including growing interest costs associated with larger deficits) continue to grow in each successive year.
- The budgetary effects are much larger if the growth rate of real GDP is permanently reduced by one percentage point even leaving the unemployment rate unchanged, as might result from a shock to productivity growth. These effects are shown in the third block. In this example, the cumulative increase in the budget deficit is many times larger than the effects in the first and second blocks.

For inflation and interest rates:

- The fourth block shows the effect of a one percentage point higher rate of inflation and one percentage point higher nominal interest rates maintained for the first year only. In subsequent years, the price level and nominal GDP would both be one percentage point higher than in the base case, but interest rates and future inflation rates are assumed to return to their base case levels. Receipts increase by somewhat more than outlays. This is partly due to the fact that outlays for annually appropriated spending are assumed to remain constant when projected inflation changes. Despite the apparent implication of these estimates, inflation cannot be relied upon to lower the budget deficit, mainly because policy-makers have traditionally prevented inflation from permanently eroding the real value of spending.
- In the fifth block, the rate of inflation and the level of nominal interest rates are higher by one percentage point in all years. As a result, the price level and nominal GDP rise by a cumulatively growing percentage above their base levels. In this case, again the effect on receipts is more than the effect on outlays. As in the previous case, these results assume that annually appropriated spending remains fixed under the discretionary spending limits. Over the time period covered by the budget, leaving the discretionary limits unchanged would significantly erode the real value of this category of spending.
- The effects of a one percentage point increase in interest rates alone are shown in the sixth block. The out-

Table 2-6. FORECAST ERRORS, JANUARY 1982-PRESENT

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

lay effect mainly reflects higher interest costs for Federal debt. The receipts portion of this rule-of-thumb is due to the Federal Reserve's deposit of earnings on its securities portfolio and the effect of interest rate changes on both individuals' income (and taxes) and financial corporations' profits (and taxes).

- The seventh block shows that a sustained one percentage point increase in CPI and GDP price index inflation decreases cumulative deficits substantially, due in part to the assumed erosion in the real value of appropriated spending. Note that the separate effects of higher inflation and higher interest rates shown in the sixth and seventh blocks do not sum to the effects for simultaneous changes in both shown in the fifth block. This is because the gains in budget receipts due to higher inflation result in higher debt service savings when interest rates are also assumed to be higher in the fifth block than when interest rates are assumed to be unchanged in the seventh block.
- The last entry in the table shows rules of thumb for the added interest cost associated with changes in the budget deficit, holding interest rates and other economic assumptions constant.

The effects of changes in economic assumptions in the opposite direction are approximately symmetric to those

shown in the table. The impact of a one percentage point lower rate of inflation or higher real growth would have about the same magnitude as the effects shown in the table, but with the opposite sign.

Forecast Errors for Growth, Inflation, and Interest Rates

As can be seen in Table 2-5, the single most important variable that affects the accuracy of the budget projections is the forecast of the growth rate of real GDP. The rate of inflation and the level of interest rates also have substantial effects on the accuracy of projections. Table 2-6 shows errors in short- and long-term projections in past Administration forecasts, and compares these errors to those of CBO and the Blue Chip Consensus of private forecasts for real GDP, inflation and short-term interest rates.⁵

⁵ Two-year errors for real GDP and the GDP price index are the average annual errors in percentage points for year-over-year growth rates for the current year and budget year. For interest rates, the error is based on the average error for the level of the 91-day Treasury bill rate for the two-year and six-year period. Administration forecasts are from the budgets released starting in February 1982 (1983 Budget) and through February 2010 (2011 Budget), so that the last year included in the projections is 2011. The six-year forecasts are constructed similarly, but the last forecast used is from February 2006 (2007 Budget). CBO forecasts are from "The Budget and Economic Outlook" publications in January each year, and the Blue Chip forecasts are from their January projections.

Table 2-7. BUDGET EFFECTS OF ALTERNATIVE SCENARIOS

(Fiscal years; in billions of dollars)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Alternative Budget Deficit Projections:											
Administration Economic Assumptions	973	744	576	528	487	475	498	503	501	519	439
Percent of GDP	6.0%	4.4%	3.2%	2.8%	2.4%	2.3%	2.3%	2.2%	2.1%	2.1%	1.7%
Alternative Scenario 1	992	787	640	624	633	663	711	732	742	768	696
Percent of GDP	6.2%	4.7%	3.6%	3.4%	3.3%	3.3%	3.3%	3.3%	3.2%	3.2%	2.8%
Alternative Scenario 2	978	744	567	523	504	501	506	481	443	424	304
Percent of GDP	6.1%	4.4%	3.2%	2.8%	2.5%	2.4%	2.3%	2.1%	1.8%	1.7%	1.1%

Over both a two-year and six-year horizon, the average annual real GDP growth rate was very slightly overestimated by the Administration and slightly underestimated by the CBO and Blue Chip in the forecasts made since 1982. Overall, the differences between the three forecasters were minor. The mean absolute error in the annual average growth rate was about 1.5 percentage point per year for all forecasters for two-year projections, and was about one-third smaller for all three for the six-year projections. The greater accuracy in the six-year projections could reflect a tendency of real GDP to revert at least partly to trend, though the overall evidence on whether GDP growth is mean reverting is mixed. Another way to interpret the result is that it is hard to predict GDP around turning points in the business cycle, but somewhat easier to project the six-year growth rate based on assumptions about the labor force, productivity, and other factors that affect GDP.

Inflation, as measured by the GDP price index, was overestimated by all forecasters (with Blue Chip having the largest errors) for both the two-year and six-year projections, with larger errors for the six-year projections. This reflects the gradual disinflation over the 1980s and early 1990s, which was greater than most forecasters expected. Average errors for all three sets of forecasts since 1994 were close to zero (not shown).

The interest rate on the 91-day Treasury bill was also overestimated by all three forecasters, with errors larger for the six-year time horizon. Again this reflects the secular decline in interest rates over the past 30 years, reflecting lower inflation for most of the period, as well as a decline in real interest rates since 2000 resulting from weakness in the economy and Federal Reserve policy. The errors were somewhat less for the Administration than for CBO and the Blue Chip forecasts.

Alternative Scenarios

The rules of thumb described above can be used in combination to show the effect on the budget of alternative economic scenarios. Considering explicit alternative scenarios can also be useful in gauging some of the risks to the current budget projections. For example, the strength of the recovery over the next few years remains highly uncertain. Those possibilities are explored in the two alternative scenarios presented in this section and shown in Chart 2-3.

The first alternative scenario assumes that real GDP growth and unemployment beginning in 2012:Q4 follow the projections in the March 2013 Blue Chip forecast through the end of 2023, which includes their semi-annual long-run extension of the Blue Chip forecast. In this

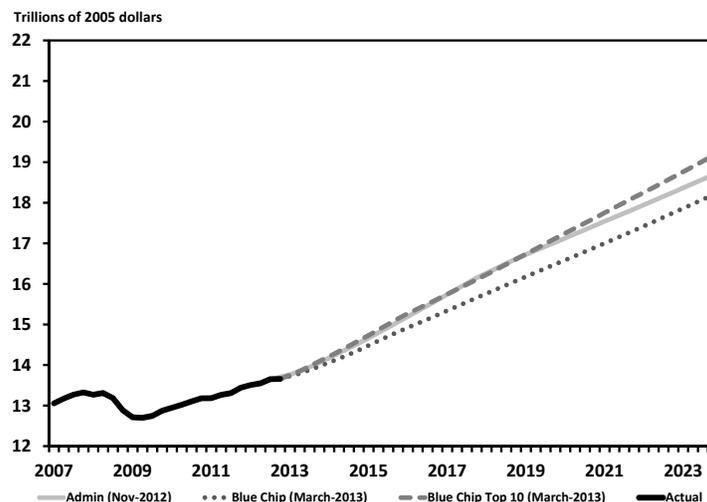
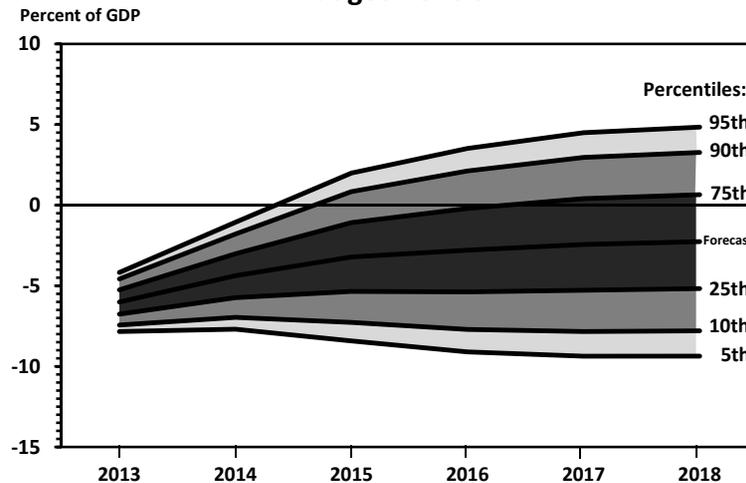
Chart 2-3. Real GDP: Alternative Projections

Chart 2-4. Range of Uncertainty for the Budget Deficit



case, after 2012, the level of GDP remains lower than the Administration's forecast throughout the projection period. This alternative includes a smaller real recovery from the loss of output during the 2008-2009 recession. Growth returns to normal, but without a substantial catch-up to make up for previous output losses.

The second alternative is the average of the highest 10 real GDP projections of the Blue Chip forecasters, also based on the March forecasts. This forecast is close to the Administration's forecast through 2017 with the high-10 Blue Chip growth exceeding the Administration's in the out years.

Table 2-7 shows the budget effects of these alternative scenarios compared with the Administration's economic forecast. Under the first alternative, budget deficits are significantly higher in each year compared to the Administration's forecast. In the second alternative, the deficit is close to the Administration's projection in the near term, but results in a lower deficit in the long run and cumulatively over 10 years.

Many other scenarios are possible, of course, but the point is that the most important influences on the budget projections beyond the next year or two are the rate at which GDP and employment recover from the recession.

Uncertainty and the Deficit Projections

The accuracy of budget projections depends not only on the accuracy of economic projections, but also on technical factors and the differences between proposed policy and enacted legislation. Chapter 29 provides detailed information on these factors for the budget year projections (Table 29-6), and also shows how the deficit projections compared to actual outcomes, on average, over a five-year window using historical data from 1982 to 2012 (Table 29-7). The error measures can be used to show a probabilistic range of uncertainty of what the range of deficit outcomes may be over the next five years relative to the Administration's deficit projection. Chart 2-4 shows this cone of uncertainty, which is constructed under the as-

sumption that future forecast errors would be governed by the normal distribution with a mean of zero and standard error equal to the root mean squared error, as a percent of GDP, of past forecasts. The deficit is projected to be 2.3 percent of GDP in 2018, but has a 90 percent chance of being within a range of a surplus of 4.8 percent of GDP and a deficit of 9.4 percent of GDP.

Structural and Cyclical Deficits

As shown above, the budget deficit is highly sensitive to the business cycle. When the economy is operating below its potential and the unemployment rate exceeds the level consistent with price stability, receipts are lower, outlays are higher, and the deficit is larger than it would be otherwise. These features serve as "automatic stabilizers" for the economy by restraining output when the economy threatens to overheat and cushioning economic downturns. They also make it hard to judge the overall stance of fiscal policy simply by looking at the unadjusted budget deficit.

An alternative measure of the budget deficit is called the structural deficit. This measure provides a more useful perspective on the stance of fiscal policy than does the unadjusted unified budget deficit. The portion of the deficit traceable to the automatic effects of the business cycle is called the cyclical component. The remaining portion of the deficit is called the structural deficit. The structural deficit is a better gauge of the underlying stance of fiscal policy than the unadjusted unified deficit because it removes most of the effects of the business cycle. So, for example, the structural deficit would include fiscal policy changes such as the 2009 Recovery Act, but not the automatic changes in unemployment insurance or reduction in tax receipts that would have occurred without the Act.

Estimates of the structural deficit, shown in Table 2-8, are based on the historical relationship between changes in the unemployment rate and real GDP growth, as well as relationships of unemployment and real GDP growth with receipts and outlays. These estimated relationships

Table 2–8. THE STRUCTURAL BALANCE

(Fiscal years; in billions of dollars)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Unadjusted surplus (–) or deficit	161	459	1,413	1,293	1,300	1,087	973	744	576	528	487	475	498	503	501	519	439
Cyclical component	–107	–41	311	437	451	454	522	482	404	291	169	64	10	–3	2	–1	0
Structural surplus (–) or deficit	268	499	1,102	857	849	633	450	262	172	237	318	411	488	506	499	520	439

(Fiscal years; percent of Gross Domestic Product)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Unadjusted surplus (–) or deficit	1.2%	3.2%	10.1%	9.0%	8.7%	7.0%	6.0%	4.4%	3.2%	2.8%	2.4%	2.3%	2.3%	2.2%	2.1%	2.1%	1.7%
Cyclical component	–0.8%	–0.3%	2.2%	3.0%	3.0%	2.9%	3.2%	2.8%	2.3%	1.5%	0.8%	0.3%	0.0%	–0.0%	0.0%	–0.0%	0.0%
Structural surplus (–) or deficit	1.9%	3.5%	7.9%	6.0%	5.7%	4.1%	2.8%	1.5%	1.0%	1.3%	1.6%	2.0%	2.2%	2.2%	2.1%	2.1%	1.7%

NOTE: The NAIRU is assumed to be 5.4%.

take account of the major cyclical changes in the economy and their effects on the budget, but they do not reflect all the possible cyclical effects on the budget, because economists have not been able to identify the cyclical factor in some of these other effects. For example, the sharp decline in the stock market in 2008 pulled down capital gains-related receipts and increased the deficit in 2009 and beyond. Some of this decline is cyclical in nature, but economists have not identified the cyclical component of the stock market with any precision, and for that reason, all of the stock market's contribution to receipts is counted in the structural deficit.

Another factor that can affect the deficit and is related to the business cycle is labor force participation. Since the official unemployment rate does not include workers who have left the labor force, the conventional measures of potential GDP, incomes, and Government receipts understate the extent to which potential work hours are under-utilized because of a decline in labor force participation. The key unresolved question here is to what extent changes in labor force participation are cyclical and to what extent they are structural. By convention, in estimating the structural budget deficit, all changes in labor force participation are treated as structural.

There are also lags in the collection of tax revenue that can delay the impact of cyclical effects beyond the year in which they occur. The result is that even after the unemployment rate has fallen, receipts may remain cyclically

depressed for some time until these lagged effects have dissipated. The recent recession has added substantially to the estimated cyclical component of the deficit, but for all the reasons stated above, the cyclical component is probably understated. As the economy recovers, the cyclical deficit is projected to decline. After unemployment reaches 5.4 percent, the level assumed to be consistent with stable inflation, the estimated cyclical component vanishes, leaving only the structural deficit, although some lagged cyclical effects would arguably still be present.

Despite these limitations, the distinction between cyclical and structural deficits is helpful in understanding the path of fiscal policy. The large increase in the deficit in 2009 and 2010 is due to a combination of both components of the deficit. There is a large increase in the cyclical component because of the rise in unemployment. That is what would be expected considering the severity of the recent recession. Finally, there is a large increase in the structural deficit because of the policy measures taken to combat the recession. This reflects the Government's decision to make active use of fiscal policy to lessen the severity of the recession and to hasten economic recovery. Between 2014 and 2018, the cyclical component of the deficit is projected to decline sharply as the economy recovers at an above-trend rate of GDP growth. The structural deficit shrinks during 2012–2014, reflecting the measures of fiscal constraint that have been enacted combined with the Administration's policy proposals.

3. FINANCIAL STABILIZATION EFFORTS AND THEIR BUDGETARY EFFECTS

In response to the financial crisis of 2008, the U.S. Government took unprecedented and decisive action to mitigate damage to the U.S. economy and financial markets. The Department of the Treasury, the Board of Governors of the Federal Reserve System, the Federal Deposit Insurance Corporation, the National Credit Union Administration, the Office of the Comptroller of the Currency, the Securities and Exchange Commission, and the Commodity Futures Trading Commission worked cooperatively with the Administration to expand access to credit, strengthen financial institutions, restore confidence in U.S. financial markets, and stabilize the housing sector. In 2010, the President signed into law comprehensive Wall Street reform to ensure that the Government has the tools and authority to prevent another crisis of this magnitude, to resolve significant financial institution failures more effectively, and to protect consumers of financial products. In 2012, the Administration continued its work to operationalize these Wall Street reforms.

This chapter provides a summary of key Government programs supporting economic recovery and financial market reforms, followed by a report analyzing the cost and budgetary effects of the 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. This report analyzes transactions as of December 31, 2012, and expected transactions as reflected in the Budget. The TARP costs discussed in the report and included in the Budget are the estimated net present value of the TARP investments, reflecting the actual and expected dividends, interest, and principal redemptions the Government receives against its investments; this credit reform treatment of TARP transactions is authorized by Section 123 of EESA.

The Treasury's authority to make new TARP commitments expired on October 3, 2010. However, Treasury continues to manage the outstanding TARP investments, and is authorized to expend additional TARP funds pursuant to obligations entered into prior to October 3, 2010. In July 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act (P.L. 111–203) reduced total TARP purchase authority to \$475 billion.

The Administration's current estimate of TARP's deficit cost for \$457.8 billion in cumulative obligations is \$47.5 billion (see Tables 3–1 and 3–7). This estimated direct impact of TARP on the deficit has been reduced by \$294 billion from the highest cost estimate, published in the Mid-Session Review of the 2010 Budget (2010 MSR), due to realized returns on TARP investments that exceeded expectations, and lower overall TARP obligations. The Treasury has received higher-than-expected repayments and redemptions from TARP recipients. Notably, a total of \$245 billion was invested in banking institutions, and

as of December 31, 2012, Treasury had recovered more than \$268 billion from these institutions through repayments, dividends, interest, and other income. 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 market risk premiums are returned, but the total cost will not be fully known until all TARP investments have been extinguished. (See Table 3–9 for an estimate of TARP subsidy costs stripped of the market-risk adjustment.) Additionally, Treasury has benefited from \$17.5 billion in non-TARP AIG receipts.

Progress in Implementation of Wall Street Reforms

On July 21, 2010, just over a year after the Administration delivered its financial reform proposal to Congress, the President signed into law the Dodd-Frank Wall Street Reform and Consumer Protection Act¹ (the “Wall Street Reform Act” or the “Act”). The Act embodies the Administration's critical objectives for achieving a more stable financial system, which include: helping prevent future financial crises in part by filling gaps in the U.S. regulatory regime; better protecting consumers of financial products and services; preventing unnecessary and harmful risk-taking that threatens the economy; and providing the Government with more effective tools to manage financial crises. Important milestones in the implementation of the Act include:

Orderly Liquidation Authority (OLA): The Act makes clear that no financial company will be considered “too big to fail” in the future, and that taxpayers will not be on the hook for the costs of those that do fail. Instead, the Federal Deposit Insurance Corporation (FDIC) now may unwind failing systemically-significant, nonbank financial institutions in an orderly manner to prevent widespread disruptions to U.S. financial stability. Through its new orderly liquidation authority under the Act, the FDIC serves as receiver of non-depository financial companies whose failure and resolution under otherwise applicable law is determined to pose a significant systemic risk to U.S. financial stability. After issuing a joint final rule in 2011 to implement resolution plan requirements or “living wills” for certain nonbank financial companies and bank holding companies, in July of 2012 the Federal Reserve and the FDIC received the first such plans from covered institutions. On June 12, 2012, the FDIC also approved a revised notice of proposed rulemaking (NPR) that outlines standards for determining if a company is predominantly engaged in financial activities and, thus, resolvable under

¹ P.L. 111-203.

OLA. Additionally, on June 22, 2012, the Treasury and the FDIC, in consultation with the Financial Stability Oversight Council (FSOC), published a joint final rule governing the calculation of the Maximum Obligation Limitation, which limits the aggregate amount of outstanding obligations that the FDIC may issue or incur in connection with the orderly liquidation of a non-depository financial company. The Act requires that all net costs of liquidation be recovered by assessing fees after the fact on large financial companies and certain non-bank financial companies so that taxpayers bear no losses from the exercise of OLA. According to Title II of the Act, certain FDIC implementation expenses associated with administering OLA are treated as expenses of the FSOC and are included in this Budget.

While the Budget includes an estimated cost to the Government that is based on the probability of default under this new orderly liquidation authority, the total costs of any liquidation will be, by law, recovered in full, so there is no cost to the taxpayer. The displayed cost from this authority of \$20 billion over the budget window is due to the fact that cost recovery occurs only over a period of years after liquidation expenses are incurred.

Monitoring Systemic Risk: The Act established the Financial Stability Oversight Council (FSOC) to identify, monitor, and respond to emerging threats to U.S. financial stability. The FSOC is also charged with facilitating information sharing and coordination among Federal and state agencies regarding domestic financial services policy development and identifying gaps in the U.S. regulatory regime that could pose risks to U.S. financial stability. The FSOC is chaired by the Secretary of the Treasury, with the heads of the Federal financial regulators and an independent insurance expert serving as voting members. The FSOC has held more than 25 meetings, with the initial focus on fulfilling statutory requirements established by the Wall Street Reform Act. The FSOC has moved quickly to identify key issues and firms posing risks to systemic stability, while emphasizing the importance of transparency and stakeholder collaboration throughout the process. As part of its macro-prudential mandate, the FSOC published a final rule and guidance in April 2012 describing how nonbank financial companies will be evaluated for designation for Federal Reserve supervision and enhanced prudential standards. In addition, on July 18, 2012, the FSOC designated eight systemically important financial market utilities that will be subject to enhanced risk management standards. On November 19, 2012, the FSOC published proposed recommendations for the SEC to implement structural reforms of money market mutual funds. The FSOC has also conducted studies and made recommendations on a number of topics, notably on the effective implementation of the Volcker Rule under the Wall Street Reform Act. The Volcker Rule was created to reduce risk-taking and increase stability in the banking sector by prohibiting Federally-insured banking institutions, subject to certain exceptions, from engaging in proprietary trading and investing in hedge funds and private equity firms. Going forward, the FSOC will continue to monitor emerging threats to financial stability and moni-

tor risks in the financial system including risks related to housing, commodity market volatility, the European financial markets, and the U.S. fiscal position.

The Act established the Financial Research Fund (FRF) to fund the FSOC, the Office of Financial Research (OFR), and certain OLA implementation expenses of the FDIC. The OFR, housed within the Treasury Department, was created to improve the quality of financial data available to policymakers and to facilitate more robust and sophisticated analysis of the financial system. The OFR is in the process of comprehensively cataloguing the data that are currently collected by U.S. financial regulators in order to identify deficiencies and redundancies in the existing regulatory framework, as well as enhancing the quality of the financial data infrastructure through the development of a global Legal Entity Identifier (LEI) for entities engaged in financial transactions. As specified in the Act, for the first two years after the date of the enactment, funding for the FRF was provided through transfers from the Federal Reserve; in 2014 and thereafter, the FRF will be fee-funded through assessments on bank holding companies with total consolidated assets of \$50 million or greater and nonbank financial companies supervised by the Federal Reserve.

Enhanced Consumer Financial Protection: The Wall Street Reform Act created a single independent regulator – the Consumer Financial Protection Bureau (CFPB) – whose sole mission is to look out for consumers in the increasingly complex financial marketplace. The CFPB is an independent bureau in the Federal Reserve System responsible for the regulation and enforcement of existing consumer financial products, services and laws, and issues and enforces new regulations on nonbank financial institutions (e.g., payday lenders and credit providers). On July 21, 2011, as designated by the Treasury Department, the authorities of seven regulatory agencies were transferred to the CFPB – one year after the agency was created by the Wall Street Reform Act. On January 4, 2012, Richard Cordray was appointed Director of the CFPB. The CFPB is authorized to supervise and enforce existing consumer financial protection regulations affecting a bank and its affiliates if the bank has assets of \$10 billion or more. Notable existing regulations include those issued under the Fair Credit Reporting Act, Truth in Lending Act, and the Real Estate Settlement Procedures Act. The CFPB is also authorized to issue new rules; enforce prohibitions against unfair, deceptive, or abusive practices; and improve disclosures about the features of consumer financial products and services. In 2012, the CFPB, working with other Federal banking regulators, acted under this authority in bringing four enforcement actions that benefited 5.75 million harmed individuals and resulted in approximately \$536 million in consumer refunds and penalties.

In addition, the CFPB is charged with supervising nonbank financial firms in specific markets regardless of size, such as mortgage lenders and servicers, consumer reporting agencies, debt collectors, private education lenders, and payday lenders. In 2012, the rules implementing many of these authorities were finalized. In July,

the CFPB adopted a rule to begin supervising larger consumer credit reporting agencies; in October, the CFPB adopted another rule allowing the agency to supervise large consumer debt collectors. This is the first time either of these types of businesses will be supervised at the Federal level. In addition, the CFPB proposed rules that will help consumers better understand mortgage costs and compare home loans. In 2012, the CFPB also released reports on student loans, credit scores, and reverse mortgages. In addition to handling consumer complaints about mortgages and credit cards, in 2012 the Bureau began accepting and responding to consumer complaints about credit reporting, private student loans, bank accounts and services, and consumer loans. The CFPB is funded through transfers from the Federal Reserve and, until the end of FY 2014, it has authority, in the event of a funding shortfall, to request that Congress appropriate additional discretionary funds. No such request is expected over the Budget horizon. The Budget reflects funding for the CFPB through these authorized transfers from the Federal Reserve, estimated at \$497 million in 2014.

Deposit and Share Insurance and their Coverage: The Wall Street Reform Act permanently increased the standard maximum deposit and share insurance amounts from \$100,000 to \$250,000, which applies to both the FDIC and the National Credit Union Administration, and requires the FDIC to base deposit insurance premiums on an insured depository institution's total assets less tangible equity instead of domestic insured deposits. To strengthen the insurance fund's resources, the Act requires the reserve ratio of the Deposit Insurance Fund (DIF) to reach at least 1.35 percent of total insured deposits by September 30, 2020. These changes are reflected in the Budget and their effects are discussed in greater detail in the Credit and Insurance chapter in this volume.

Increased Transparency in Financial Markets: As the regulators of U.S. financial markets, the Securities and Exchange Commission (SEC) and Commodity Futures Trading Commission (CFTC) are key components of the Administration's efforts to reform dangerous Wall Street trading practices that increase economic volatility and undermine market stability. Both agencies continue to work tirelessly to address many of the root causes of the crisis, to adapt their organizations to more effectively monitor ever-changing regulated industries and activities, and to implement enforcement strategies designed to both punish violators and deter wrongdoing. In 2012, the SEC brought new sophistication to core agency functions, began implementing complex and comprehensive Wall Street Reform Act mandates, advanced an investor-focused agenda, and improved the productivity of its 3,800 member staff.

In 2012, the SEC's Enforcement Division filed 734 enforcement actions—the second highest number ever in a single year. The agency also continued to hold accountable those whose actions contributed to the financial crisis, and has now charged 154 entities and individuals, including 65 CEOs, CFOs, and senior corporate officers, and obtained nearly \$2.7 billion in monetary relief. The enforcement program also ferreted out insider trading, filing

cases against financial professionals, hedge fund managers, and corporate insiders, many with direct ties to some of the nation's largest companies, and worked to ensure the integrity of our financial markets. The SEC's strong performance is due in large part to the Enforcement Division's strategic reforms – including an expansion of in-house expertise, flatter management structure, streamlined processes, increased use of information technology, and enhanced market intelligence capabilities – that are now bearing fruit. As a result, the SEC stands ready to address increasingly sophisticated misconduct in the rapidly growing and complex financial markets.

The Wall Street Reform Act tasked the SEC with writing a large number of new rules. In addition to managing the complexity and interrelatedness of the mandated rules, the SEC has worked to provide certainty to financial markets and participants by finalizing rules as quickly as possible without compromising the agency's ability to review, evaluate, and make changes to reflect the large number of public comments received on its proposed rulemakings. As of February 2013, the SEC had proposed or adopted more than 80 percent of the rules required by the Act. For example, the SEC has proposed or adopted substantially all the rules needed to create a new regulatory system to bring greater efficiency and transparency to the derivatives market. Additionally, the SEC announced that more than 1,400 new advisers to major hedge funds and other private funds had registered with the agency and begun reporting information that the SEC will share with the Financial Stability Oversight Commission.

The Commission also began work on the rulemaking required under the Jumpstart Our Business Startups Act (JOBS Act), including proposing rules to eliminate the prohibition against general solicitation and general advertising in certain securities offerings, and provided related guidance on submitting draft registration statements to companies. The agency also approved rules submitted by the Financial Industry Regulatory Authority (FINRA) and U.S. exchanges that will limit investors' exposure to unusual volatility in individual securities and the broader U.S. stock market. One initiative prevents trades in individual exchange-listed stocks from occurring outside of a specified price band, while another updates the circuit breakers that, when triggered, halt trading in all exchange-listed securities throughout the U.S. markets. In addition, the agency took important steps to upgrade its institutional capabilities for regulating today's electronic marketplace by adopting rules that expand available information about the most active traders in the market and will enhance the ability of the agency to surveil the markets and enforce trading rules. The agency also implemented a new system, MIDAS, to collect and analyze market data offered by the exchanges to their customers.

In addition to its longstanding responsibility to ensure fair, open, and efficient future markets, the Wall Street Reform Act authorized the CFTC to regulate the swaps marketplace through oversight of swap dealers and open trading and clearing of standardized derivatives on regulated platforms. Despite its constrained funding due to

congressional appropriations that in recent years have been significantly below the Administration's request, the CFTC has adapted its mission to include these new responsibilities, the CFTC has drafted numerous rules required to implement the Act. Through September 30, 2012, CFTC issued 64 proposed rules and finalized 40 final rules and orders, including most of the foundational requirements for substantive swap market reform. Registration of data repositories, swap execution facilities, swap dealers and other swap intermediaries began in 2012 and is expected to be essentially complete in 2013. Central clearing for swaps is underway and real-time reporting of swaps trade data will commence imminently. The CFTC has actively consulted with other Federal financial regulators, as well as international counterparts, to ensure harmonization of new rules. Additionally, the CFTC has demonstrated a commitment to public transparency in its adoption of Wall Street Reform Act implementing regulations, requesting and incorporating input from the public during the earliest stages of rule development, publishing a wide variety of materials and disclosures on its website, and conducting many Commission reviews of proposed and final rules in open forums.

While devoting significant resources to timely and thorough implementation of new Wall Street Reform Act authorities, the CFTC has continued its market surveillance and enforcement activities in the historically-regulated futures and options markets. The Commission continued to increase the annual number of enforcement actions, filing 102 cases in 2012 and opening 350 new investigations. In addition, the Commission obtained orders imposing more than \$931 million in sanctions, including more than \$475 million in civil monetary penalties and over \$456 million in restitution and disgorgement.

In a landmark case in June 2012, the Commission filed charges against Barclays PLC and two affiliates for attempted manipulation and false reporting concerning global benchmark interest rates. The charges were simultaneously settled pursuant to an Order requiring Barclays to pay \$200 million, then the largest fine ever imposed by the CFTC, and requiring Barclays to implement a number of measures to ensure the integrity of the bank's benchmark submissions.

The Commission filed numerous charges related to protection of customer funds 2012. In response to these actions, and other high-profile cases, the Commission has published a rule, and held a public meeting to receive input on, enhancing protection of customers and customer funds held by futures commission merchants and Derivatives Clearing Organizations (DCOs). The Commission is also seeking resources in order to conduct periodic reviews of these entities to ensure compliance with Commission regulations related to segregation and protection of customer funds.

The CFTC conducts systematic examinations of Designated Contract Markets (DCOs), and Designated Self-Regulatory Organizations (and soon, swap data repositories and swap execution facilities) to provide assurance to the public and other regulators of the market participants' ongoing compliance with the core principles

of the Commodities Exchange Act. Resource constraints have severely limited the Commission's ability to conduct annual examinations of even the most significant entities, compromising the Commission's effectiveness in protecting the public interest. Designation by the FSOC of two DCOs as systemically important mandates that the Commission perform annual examinations of these entities, an activity that the Commission cannot adequately perform given current staffing levels.

The next two years will be critical for the SEC and the CFTC as the agencies continue to identify and pursue wrongdoing in the markets and to operationalize the mandates of the Wall Street Reform Act. On top of its traditional market oversight and investor protection responsibilities, the SEC will fully implement the following new authorities in 2013 and 2014: oversight and examination of new security-based swap clearing agencies, dealers, and data repositories; oversight and examination of private fund advisers managing thousands of pooled investment vehicles that will be newly registered with the SEC; reviewing disclosures of asset-backed securities issuers; registration of municipal advisers; and enhanced supervision of credit rating agencies. In addition, the SEC will continue the work of strengthening its core programs and operations, including detecting and pursuing securities fraudsters, reviewing public company disclosures and financial statements, inspecting the activities of investment advisers, investment companies, broker-dealers, and other registered entities, and maintaining fair and efficient markets. Building on its 2009 reorganization and recommendations from consultants and auditors, the SEC will focus its efforts on increasing coverage of registered investment advisory firms by adding new positions to the examination program; enhancing disclosure reviews of large or financially significant companies; and leveraging technology to streamline operations and bolster program effectiveness. All of these responsibilities are essential to restoring investor confidence and trust in financial institutions and markets in the wake of the 2008 financial crisis. In support of the SEC's mission, the President's Budget provides \$1,674 million in new resources in 2014. The Budget also projects that the SEC will obligate \$50 million from its mandatory Reserve Fund for investments in information technology systems and other necessary improvements.

In 2014, CFTC will have fully integrated the swaps market into its span of responsibilities, including market, trade practice, financial and risk surveillance; routine examinations of significant entities and "for cause" examinations as needed on an expanded population of entities; and both punitive and deterrence-based enforcement actions. The President's Budget provides significant increases for the CFTC in 2014 in support of base regulatory work as well as Wall Street Reform Act implementation. For CFTC, \$315 million is provided, an increase of \$7 million over the 2013 President's Budget (\$109 million or 50 percent over 2012 levels). Additionally, the Administration supports legislation authorizing the CFTC to collect user fees to fund its activities. Such legislation would bring the

CFTC into line with other Federal financial regulators, which are funded in whole or in part through user fees.

Streamlined Insurance Sector Regulation. The Federal Insurance Office (FIO), housed within the Treasury Department, was established by the Wall Street Reform Act to “monitor all aspects of the insurance industry, including identifying issues or gaps in the regulation of insurers that could contribute to” systemic risk. The FIO was created, in part, to streamline what is currently a decentralized regulatory regime. On October 17, 2011, the FIO announced that it was seeking public comment for its first mandatory report under the Act on how to modernize and improve the country’s insurance regulatory system. The FIO will also play a role in support of FSOC; it will advise the Secretary on international issues related to insurance investment risk and regulation, and it will assist the Secretary in administering Treasury’s Terrorism Risk Insurance Program. In November 2011, Treasury launched a fifteen-member Federal Advisory Committee on Insurance to offer recommendations to the FIO on issues related to the FIO’s responsibilities. The Advisory Committee demonstrated its responsiveness in November 2012, holding a public meeting soon after Hurricane Sandy struck the East Coast of the U.S. to discuss the future of flood insurance. On June 27, 2012, the FIO published a notice requesting views from interested parties on the office’s mandated report on the global reinsurance market. The vision for the FIO is that it will also provide the Federal Government with the ability to immediately estimate exposures related to catastrophic events, such as the September 11th terrorist attacks or Hurricane Katrina. The FIO is funded with discretionary resources through the Treasury’s Departmental Offices (DO) request, and the Budget includes funding for this office.

International Financial Reform. The financial crisis was an international event not limited to U.S. markets, corporations, and consumers. In addition to its demonstrated commitment to achieving meaningful financial reform at home, the Administration continues to ensure coordination of financial reform principles across the globe. At the G-20 Summit in Pittsburgh in September 2009, President Obama and other G-20 leaders established the G-20 as the premier forum for international economic cooperation. Over the course of Summits held in London (April 2009), Pittsburgh (September 2009), Toronto (June 2010), Seoul (November 2010), and Cannes (November 2011), and Los Cabos (June 2012), the Administration and G-20 leaders have committed to an ambitious agenda for financial regulatory reform. Their reform commitments have extended the scope of regulation, will improve transparency and disclosure, and will strengthen banks through increased and higher quality capital and introduction of a leverage ratio that will limit the amount banks may lend relative to their capital reserves. In June 2012, the Federal banking regulators invited comment on three joint proposed rules that would revise and replace the agencies’ current capital rules. The proposals would implement certain aspects of Basel

II and Basel III capital reforms. Together, the U.S. and its global allies are building effective resolution regimes, including cross-border resolution frameworks, and are developing higher prudential standards for systemically important financial institutions to reflect the greater risk those institutions pose to financial system stability. To facilitate bilateral discussions and cooperation, the FDIC is negotiating memoranda of understanding with certain foreign counterparts that will provide a basis for international information sharing and cooperation relating to cross-border resolution planning and implementation. The Treasury Department, working together with other agencies, has ensured that these commitments are fully consistent with our domestic financial reform agenda.

The Administration continues to work cooperatively with its G-20 partners to close regulatory gaps. These efforts reflect the parties’ recognition of the interconnectedness of financial markets and the need to preclude opportunities for regulatory arbitrage, in which firms seek jurisdictions and financial instruments that are comparatively less regulated and, in doing so, allow risk to build up covertly, posing a threat to financial stability. In developing regulatory reforms that strengthen the resilience of the financial system to withstand the level of stress seen in the crisis, the Administration and its G-20 partners have remained mindful of the need to undertake reform in ways consistent with cultivating vibrant, innovative, and healthy markets that can do what financial markets do best: allocate scarce resources efficiently.

Federal Reserve Programs

Beginning in August 2007, the Federal Reserve responded to the crisis by implementing a number of programs designed to support the liquidity positions of financial institutions and foster improved conditions in financial markets. The Federal Reserve actions can be divided into three groups. The first set of tools involved the provision of short-term liquidity to banks and other financial institutions through the traditional discount window to stem the precipitous decline in interbank lending. The Term Auction Facility (TAF), which was created in December 2007, allowed depository institutions to access Federal Reserve funds through an auction process, wherein depository institutions bid for TAF funds at an interest rate that was determined by the auction. The final TAF auction was held in March 2010 and, in total, the Federal Reserve disbursed over \$3.8 trillion in TAF loans. All TAF loans were repaid in full, with interest. The Federal Reserve also initiated the Term Securities Lending Facility (TSLF) and the Primary Dealer Credit Facility (PDCF), both of which provided additional liquidity to the system and helped stabilize the broader financial markets. The PDCF and TSLF expired on February 1, 2010, consistent with the Federal Reserve’s June 2009 announcement.

The second set of tools involved the provision of liquidity directly to borrowers and investors in key credit markets. The Commercial Paper Funding Facility (CPFF), Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility (AMLF), Money Market Investor

Funding Facility (MMIFF), and the Term Asset-Backed Securities Loan Facility (TALF) fall into this category. As a third set of instruments, the Federal Reserve expanded its traditional tool of open market operations to support the functioning of credit markets through the purchase of longer-term secondary market securities for the Federal Reserve's System Open Market Account portfolio. In light of improved functioning of financial markets, many of the new programs have expired or been closed including the MMIFF (October 30, 2009), AMLF (February 1, 2010), and CPFF (February 1, 2010).

To address the frozen consumer and commercial credit markets, the Federal Reserve announced on November 25, 2008, that in conjunction with the Treasury Department it would lend up to \$200 billion to holders of newly issued AAA-rated asset-backed securities through the TALF. The program was expanded as part of the Administration's Financial Stability Plan and launched in March 2009. The program supported the issuance of asset-backed securities collateralized by student loans, auto loans, credit card loans, Small Business Administration guaranteed loans, commercial mortgage loans, and certain other loans. As part of the program, Treasury provided through TARP authorities protection to the Federal Reserve by originally covering the first \$20 billion in losses on all TALF loans. However, in July 2010, Treasury, in consultation with the Federal Reserve, reduced its loss-coverage to \$4.3 billion, which represented approximately 10 percent of the total \$43 billion outstanding in the facility when the program was closed to new lending on June 30, 2010. Borrowers have continued to repay their loans early at a rapid pace, in part because interest rates on TALF loans were designed to be higher than market rates in more-normal conditions. In June 2012, Treasury, in consultation with the Federal Reserve, further reduced its loss-coverage to \$1.4 billion. Finally, Treasury and the Federal Reserve announced in January 2013 that Treasury's commitment of TARP funds to provide credit protection was no longer necessary due to the fact that the accumulated fees collected through TALF exceeded the total principal amount of outstanding TALF loans. As of January 15, 2013, Treasury had recognized a gain of \$424 million on TALF, with additional gains expected in the future.

To support mortgage lending and housing markets, the Federal Reserve began purchasing up to \$175 billion of Government-Sponsored Enterprise (GSE) debt and up to \$1.25 trillion of GSE mortgage-backed securities (MBS) beginning in December 2008. The Federal Reserve completed its purchase of \$1.25 trillion in GSE MBS in March 2010, and purchased \$172.1 billion of GSE debt as of December 2011. Purchasing GSE debt and MBS provided liquidity to the mortgage market, which facilitated the issuance of new mortgage loans to homebuyers at affordable interest rates. The Federal Reserve also purchased \$300 billion in longer-term Treasury securities in 2009 to improve interest rate conditions in mortgage and other private credit markets.

To support a stronger paced economic recovery in November 2010 the Federal Reserve announced plans

to purchase up to \$600 billion of additional long-term Treasury securities as part of its "quantitative easing two" program. The purchases were extended over an eight-month period and, ultimately, the program concluded in June 2011. Starting in September 2011, the Federal Open Market Committee (FOMC) announced "operation twist" which planned to extend the average maturity of the Fed's portfolio by replacing \$400 billion in short-term bonds with longer-term bonds, thereby keeping long-term interest rates low with less chance of increasing inflation. In a June 2012 FOMC meeting, the program was extended though the end of calendar year 2012. In a significant shift away from the Federal Reserve's time-limited approach to monetary policy, on December 12, 2012, the FOMC announced that the Federal Reserve would continue to purchase MBS and longer-term Treasury securities every month to keep interest rates low until specified thresholds are met. The FOMC indicated that this extraordinary support would continue until either unemployment drops below 6.5 percent, or inflation exceeds 2.5 percent.

Earnings resulting from the expansion of the Federal Reserve's balance sheet through the purchase of GSE debt, GSE MBS, and long-term Treasury securities have, over the last several years increased the surplus the Federal Reserve deposits in the Treasury, reducing the budget deficit, though various factors in 2012 led to a slight decline in year-over-year deposits. In 2012, Treasury received \$82 billion from the Federal Reserve, which represents a less than 1 percent decrease below 2011 deposits. The Budget projects Treasury will receive \$82.9 billion and \$92.0 billion from the Federal Reserve in 2013 and 2014, respectively.

Federal Deposit Insurance Corporation (FDIC) Programs

Using its existing authority, the FDIC created the Temporary Liquidity Guarantee Program (TLGP) in October 2008, to help restore confidence in the banking sector and prevent large scale deposit flight. There were two components to the TLGP: the Debt Guarantee Program and the Transaction Account Guarantee Program (TAG). The Debt Guarantee Program (DGP) allowed participating institutions (banks and their holding companies and affiliates) to issue FDIC-guaranteed senior secured debt. Therefore, if a participating institution defaulted on its debt, the FDIC would make required principal and interest payments to holders of senior unsecured debt. The FDIC charged additional fees and surcharges for any participating institutions that voluntarily opted into this program. Originally, the guarantee was limited to unsecured debt issued between October 14, 2008, and June 30, 2009, and the FDIC debt guarantee coverage extended through June 30, 2012. On March 17, 2009, the FDIC extended coverage to debt issued through October 31, 2009, and extended the guarantee through December 31, 2012. The FDIC also levied a surcharge on debt issued between April 1, 2009, and October 31, 2009, which was transferred to the Deposit Insurance Fund. On October 23, 2009, the FDIC adopted

a final rule reaffirming that the FDIC would not guarantee any debt issued after October 31, 2009. The rule also established a limited, six-month emergency guarantee facility upon expiration of the program; however, this facility was never utilized. As of December 31, 2012, there was no debt outstanding in the senior unsecured debt guarantee program.

TAG, the second component of the TLGP, extended an unlimited FDIC guarantee to participating insured depository institutions on non-interest bearing transaction account deposits, which included low-interest negotiable order of withdrawal (NOW) accounts and Interest on Lawyers Trust Accounts (IOLTAs). The FDIC charged additional premiums for any banks that voluntarily opted into this program. This guarantee helped to facilitate economic recovery by, among other things, promoting business confidence in the banks that held their payroll deposits. The original Transaction Account Guarantee expired on December 31, 2010.

The Wall Street Reform Act provided two additional years of unlimited insurance for non-interest bearing transaction accounts—starting on December 31, 2010, and ending on December 31, 2012. The Permanent Federal Deposit Insurance Coverage for Interest on Lawyers Trust Accounts Act (P.L. 111-343) enacted on December 29, 2010, extended the two years of unlimited coverage to IOLTAs as well, though not to NOW accounts. The coverage extended through the Act was provided to all insured institutions and there were no separate fees associated with this coverage.

The FDIC has further collaborated with the Treasury Department and the Federal Reserve to provide exceptional assistance to institutions such as Citigroup. Alongside the Treasury and the Federal Reserve, the FDIC guaranteed up to \$10 billion of a \$301 billion portfolio of residential and commercial mortgage-backed securities at Citigroup. The guarantee was terminated in December 2009 as part of a larger Citigroup initiative to repay Federal support.

For a more detailed analysis of active FDIC programs, see the section titled, “Deposit Insurance” in the Credit and Insurance chapter in this volume.

National Credit Union Administration (NCUA) Programs

The NCUA has continued to take aggressive actions, as well as implement new policies, in response to dislocations in financial markets in order to maintain member and investor confidence, limit losses, and promote recovery in the credit union system. These actions have included raising the deposit insurance coverage to \$250,000 in 2009, providing liquidity loans to member credit unions totaling \$24 billion, and stabilizing five credit unions through conservatorship. NCUA has also executed multiple programs amidst the economic crises to ensure liquidity and ultimately the continued safety and soundness of the credit union system, including the Corporate System Resolution Program under the Temporary Corporate Credit Union Stabilization Fund.

For a more detailed analysis of active NCUA programs, see the section titled, “Deposit Insurance” in the Credit and Insurance chapter in this volume.

Housing Market Programs under the Housing and Economic Recovery Act

To avoid a possible collapse of the housing finance market and further risks to the broader financial market, the Federal Housing Finance Agency (FHFA) placed the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac) into conservatorship on September 6, 2008. On the following day, the U.S. Treasury launched three new programs to provide temporary financial support to these housing Government-Sponsored Entities (GSEs) and to stabilize the housing market under the broad authority provided in the Housing and Economic Recovery Act (HERA) of 2008 (P.L. 110–289). First, the Treasury Department provided capital to the GSEs through Senior Preferred Stock Purchase Agreements (PSPAs) to ensure that the GSEs maintain a positive net position (i.e., assets are greater than or equal to liabilities). 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 calendar years 2010 through 2012, less any surplus remaining as of December 31, 2012. Second, the Treasury established a line of credit for Fannie Mae, Freddie Mac, and the Federal Home Loan Banks to ensure they have adequate funding on a short-term, as-needed basis. This line of credit was never used. The Treasury also initiated purchases of GSE guaranteed mortgage-backed securities (MBS) in the open market (separate from the Federal Reserve’s MBS purchase program discussed above), with the goal of increasing liquidity in the secondary mortgage market. In December 2009, the Treasury initiated two additional purchase programs under HERA authority to support housing assistance provided through new and existing State and local Housing Financing Agencies (HFAs) revenue bonds. Treasury’s authority to enter new obligations under the GSE PSPA agreement, MBS purchase, and HFA support programs expired on December 31, 2009. However, Treasury’s existing commitments continue to support any needed capital infusions through PSPAs, and new and existing HFA housing bond issuances, and Treasury will continue to collect proceeds from the sale or repayment of the securities that it owns.

As of December 31, 2012, Treasury has provided \$187.5 billion to Fannie Mae and Freddie Mac under the PSPAs. The PSPAs also require that the GSEs 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 redemption value of Treasury’s senior preferred stock. Amendments to the PSPAs effected on August 17th, 2012, replace 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 is initially set at \$3.0 billion for calendar year 2013, and declines by \$600 mil-

lion at the beginning of each calendar year thereafter until it reaches zero. GSEs have paid \$55.2 billion in dividends as of December 31, 2012. The Budget estimates additional net dividend receipts of \$183.3 billion from January 1, 2013 through 2023. The cumulative budgetary impact of the PSPA agreements from the first PSPA purchase through 2023 is estimated to be savings of \$51 billion. The Temporary Payroll Tax Cut Continuation Act of 2011 signed into law on December 23, 2011, required that the GSEs increase their fees by an average of at least 0.10 percentage points above the average guarantee fee imposed in 2011. 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 \$21 billion from 2012 through 2023. In addition, significant assistance has been provided to the mortgage market through the Federal Housing Administration, through Federal Reserve Bank purchases of GSE MBS (as described above), and through the Department of the Treasury (as described below). A more detailed analysis of these housing assistance programs and the future of the GSEs is provided in the "Credit and Insurance" chapter of this volume.

Treasury Programs

Small Business Lending Programs. To increase the availability and affordability of credit to help small businesses drive economic recovery and create jobs, the Small Business Jobs Act of 2010 (P.L. 111-240) created two new programs proposed by the Administration that are being administered by the Department of the Treasury: the State Small Business Credit Initiative (SSBCI), which provides capital through grants to State programs that support lending to small businesses, and the Small Business Lending Fund (SBLF), which was authorized to provide up to \$30 billion in capital to qualified community banks and other targeted lenders with assets of less than \$10 billion to encourage their lending to small businesses.

The SSBCI authorizes Treasury to disburse \$1.5 billion to new and existing State programs such as Capital Access Programs (CAPs) and Other Credit Support Programs (OCSPs) that will leverage private financing to spur up to \$15 billion in new lending to small businesses and small manufacturers. For every dollar of Federal funding, SSBCI requires at least \$10 in private lending. A total of 53 States and territories (out of a possible 56) applied to take part in the SSBCI. A total of 5 municipalities in the three States that did not apply (Wyoming, North Dakota, and Alaska) submitted their applications directly to SSBCI by the statutory deadline of September 27, 2011, for a total of 58 applications received by the program. Through 2012, SSBCI approved funding for 47 States, the District of Columbia, five U.S. territories and four municipalities. SSBCI estimates that approximately \$1.46 billion will be disbursed by the end of September 2014, with \$1.1 billion disbursed by the end of September 2013. (Note: SSBCI funds States in three equal tranches. States, territories, and municipalities must prove that they have disbursed at least 80 percent of prior funds be-

fore receiving the remaining tranches.) Treasury expects to disburse nearly all of the \$1.5 billion funds. While it is still too early to measure the success of the SSBCI program, initial reports are promising, with 54 Participating States, territories, and municipalities reporting using SSBCI funds to support loans and investments. SSBCI receives quarterly reports from Participating States showing the gross amount of funds used and more detailed annual reports on a transaction level basis. Annual reports for the period ending December 31, 2012, are due March 31, 2013 and will represent the first full year of activity for most Participating States. SSBCI uses the reports to assess performance and provide tailored technical assistance, including assessment and communication across states of "best practices" to maximize the effectiveness of funding. In 2013 and 2014 Treasury will provide more intensive technical assistance.

The SBLF authorized Treasury to lend up to \$30 billion of capital to eligible financial institutions (those having less than \$10 billion in assets) and participating institutions are required to pay dividends based on the volume growth of their small business lending portfolio. Providing this low-cost capital to lenders is designed to increase their loans to small businesses. The application period closed in June 2011 and all awards were made by September 27, 2011, the statutory end of the funding phase of the program. Treasury received 933 applications totaling \$11.8 billion. Of these, 332 institutions were approved for over \$4.0 billion, with some institutions screened out due in part to stringent credit requirements aimed at protecting taxpayer dollars and avoiding lending to institutions that were likely to default on their SBLF obligations. Banks ineligible for the program included: (1) institutions listed on the regulator's problem bank list with expected CAMELS score greater than 4; and (2) TARP Capital Purchase Program (CPP) participants with more than one missed CPP dividend payment. As of September 30, 2012, SBLF participants had increased their small business lending by \$7.4 billion over the baseline with 78 percent of SBLF participants increasing small business lending by 10 percent or more. SBLF is expected to create a positive return for taxpayers given the prudent lending standards established by the program. For more information on SSBCI and SBLF, please see the "Credit and Insurance" chapter, in this volume.

Troubled Asset Relief Program (TARP). The 2008 EESA authorized the 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. Treasury has used its authority under EESA to provide capital to and restore confidence in U.S. financial institutions, to restart markets critical to financing American households and businesses, and to address housing market problems and the foreclosure crisis. Under EESA, the Secretary's authority was originally limited to \$700 billion in obligations at any one time, as measured by the total purchase price paid for assets and guaranteed amounts outstanding. The Helping Families Save Their Homes Act of 2009 (P.L. 111-22) reduced total TARP purchase authority by

\$1.3 billion, and in July 2010, the Wall Street Reform Act further reduced total TARP purchase authority to a maximum of \$475 billion in cumulative obligations.

On December 9, 2009, and as authorized by EESA, the Secretary of the Treasury certified to Congress that an extension of TARP purchase authority until October 3, 2010, was necessary “to assist American families and stabilize financial markets because it will, among other things, enable us to continue to implement programs that address housing markets and needs of small businesses, and to maintain the capacity to respond to unforeseen threats.” On October 3, 2010, the Treasury’s authority to make new TARP commitments expired. The 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.

In extending TARP authority through October 3, 2010, the Secretary outlined the Government’s four elements of its strategy to wind down TARP and related programs: First, the Treasury would wind down those programs that are no longer necessary, such as the Capital Purchase Program (CPP); funding for the CPP ended on December 31, 2009. Second, new planned programs in 2010 under the extension of the purchase authority would be limited to three areas: (1) continued foreclosure mitigation for responsible American homeowners and stabilization of the housing market; (2) initiatives to provide capital to small and community banks; and (3) potentially increased commitment to the Term Asset-Backed Securities Loan Facility (TALF) to improve securitization markets that facilitate consumer and small business loans, as well as commercial mortgage loans. Third, the Government would maintain the capacity to respond to unforeseen threats. The Government would not use remaining TARP funds unless necessary to respond to an immediate and substantial threat to the economy stemming from financial instability. Fourth, the Government would manage equity investments acquired through TARP while protecting taxpayer interests. It would continue to manage those investments in a commercial manner and seek to dispose of them as soon as practicable.

Section 202 of EESA requires the Office of Management and Budget (OMB) to report the estimated cost of TARP assets purchased and guarantees issued pursuant to EESA. The most recent report was issued August 31, 2012.² Consistent with the requirement to analyze transactions occurring no less than thirty days before publication, the 2014 Budget data presented in this report reflect revised subsidy costs for the TARP programs using actual performance and updated market information through December 31, 2012. For information on subsequent TARP program developments, please consult the Treasury Department’s Troubled Asset Relief Program Monthly 105(a) Reports.

² See “OMB Report under the Economic Stabilization Act, Section 202,” August 31, 2012. http://www.whitehouse.gov/sites/default/files/omb/reports/tarp_report_august_2012.pdf

TARP Market Impact

Although challenges in the economy remain, TARP’s support to the banking sector through the Capital Purchase Program (CPP), Targeted Investment Program (TIP), Asset Guarantee Program, and the Community Development Capital Initiative (CDCI) helped stabilize the financial system and strengthen the financial position of the Nation’s banking institutions. Net income of insured financial institutions for the quarter ending September 30, 2012, was \$37.6 billion, which marked the highest quarterly net income reported by the industry since the third quarter (calendar year) of 2006.³ This growth in earnings is attributable to financial institutions reducing the loan loss provisions on their balance sheets based on improved forecasts of their asset quality and higher revenues in the form of non-interest income and gains on asset sales. As of September 30, 2012, total provisions for loan losses for all insured depository institutions declined year over year for a 12th consecutive quarter, falling to \$14.8 billion from \$18.6 billion in the prior year. This continued reduction in loan loss reserves points to improving credit and market conditions.

The on-going healing of the banking sector, coupled with the TARP programs aimed at reviving the credit markets, have facilitated the improved flow of credit in both the commercial and consumer markets. Together, the Term Asset Backed Securities Loan Facility (TALF) and the Public Private Investment Program (PPIP) helped to improve the overall credit climate for businesses, as evidenced by the declining cost of long-term investment grade borrowing, which has fallen from a peak of roughly 570 basis points over benchmark Treasury securities at the height of the crisis to just 160 basis points over Treasuries as of December 31, 2012.⁴ However, additional progress is needed to increase small businesses’ access to credit, and enable the economy to achieve its full potential.

Emergency loans to General Motors and Chrysler via the TARP Automotive Industry Financing Program (AIFP) spurred the resurgence of the U.S. auto manufacturing industry. The Administration’s assistance to both GM and Chrysler was conditioned on the requirement that stakeholders make difficult, but necessary restructuring and reorganization decisions in order for these companies to emerge from bankruptcy and achieve long-term viability. Although AIFP is still estimated to result in a net cost to taxpayers, the Government has been able to recover much more from auto companies than originally estimated, and far sooner, while reinvigorating one of America’s critical industries. New Chrysler has posted eleven consecutive quarters of operating profit and has announced more than \$8.9 billion in investments in plants and technology since emerging from bankruptcy in 2009.⁵ The story has

³ Federal Deposit Insurance Corporation, *Quarterly Banking Profile*, September 2012. <http://www2.fdic.gov/qbp/2012sep/qbp.pdf>

⁴ Spreads for the cost of long-term investment grade borrowing are based upon 10-year Treasury yield and FINRA/Bloomberg Investment Grade U.S. Corporate Bond Index yield.

⁵ Chrysler, *Third Quarter 2012 Financial Results Webcast*, October, 30, 2012 http://www.chryslergroupllc.com/Investor/presentations/QAWebcasts/ChryslerDocuments/Q3_2012_Presentation.pdf

been similar for New GM—and the industry as a whole. In January 2012, GM announced that it had regained its spot as the world's largest global seller of automobiles and as of November 2012, auto sales are the highest they have been in more than four years. The auto industry is leading a resurgence in American manufacturing that translates to the creation of more American jobs, with nearly 250,000 jobs created in the American auto industry over the past three years.

Although the housing market is still recovering, the Administration's housing programs implemented through the TARP have helped stabilize the market and kept millions of borrowers in their homes. As of December 31, 2012, more than 1.1 million borrowers have received permanent modifications through the Home Affordable Modification Program (HAMP), which amounts to an estimated \$17.3 billion in realized monthly mortgage payment savings for these homeowners. In addition to helping these borrowers, the Administration's TARP housing programs have been a catalyst to private sector mortgage modifications. Since April 2009, HAMP, FHA, and the private sector HOPE Now alliance have initiated more than 6.2 million mortgage modifications, which is nearly double the number of foreclosure completions that were executed in the same period. The Administration has continued to respond to the evolving housing crisis by implementing programs that provide mortgage relief to unemployed homeowners and those with negative home equity. Furthermore, through the HFA Hardest Hit Fund, the Administration has allocated \$7.6 billion to eligible States to implement innovative housing programs to bring stability to local housing markets and meet the unique needs of their communities.

Deficit Impact

Over four years after the first TARP dollars were disbursed, the TARP has not only helped to stabilize financial markets and set the foundation for economic recovery, but it has done so at a much lower cost than originally estimated. As of December 31, 2012, total repayments and income on TARP investments were approximately \$387 billion, which is 93 percent of the \$418 billion in total disbursements to date. The projected total lifetime deficit impact of TARP programmatic costs, reflecting recent activity and revised subsidy estimates based on market data as of December 31, 2012, is now estimated at \$47.5 billion (see Table 3–1).⁶

Compared to the 2013 MSR estimate of \$68 billion, the estimated deficit impact of TARP decreased by \$20.5 billion. This decrease was largely attributable to the higher valuation of the AIG and GM common stock sold via public offering or held by Treasury as well as lower expected costs associated with TARP's support of the FHA Refinance Program. In 2012, Treasury sold its remaining AIG common stock holdings via 5 public offerings at prices ranging from \$29.00 to \$32.50, representing a weighted average share price increase of \$2.36 from the May 31st valuation. Additionally, GM's share price increased

by \$6.63 (or 30 percent), relative to the share prices used to formulate the May 31st valuation.⁷

There has been a notable reduction in TARP's projected deficit impact from the \$341 billion estimate published in the 2010 MSR (see graph below). The Budget reflects a total TARP deficit impact of \$47.5 billion, a \$294 billion reduction from the 2010 MSR and a \$309 billion reduction from the Congressional Budget Office's March 2009 estimate of \$356 billion.

A description of the TARP programs, followed by a detailed analysis of the programmatic changes to the TARP and the cost estimates since the publication of the 2013 MSR, is provided below.

Description of Assets Purchased Through the TARP, by Program

Capital Purchase Program (CPP). Pursuant to EESA, the Treasury created the CPP in October 2008 to restore confidence throughout the financial system by ensuring that the Nation's banking institutions have a sufficient capital cushion against potential future losses and to support lending to creditworthy borrowers. All eligible CPP recipients completed funding by December 31, 2009, and Treasury purchased \$204.9 billion in preferred stock in 707 financial institutions under the CPP program. As of December 31, 2012, Treasury had received approximately \$194 billion in principal repayments (i.e., redemptions of common and preferred stock, CDCI conversions, and refinances to SBLF) and \$26.5 billion in revenues from dividends, interest, warrants, gains/other interest and fees. Total redemptions and income now exceed Treasury's initial investment by \$15.5 billion. As of December 31, 2012, \$7.4 billion remained outstanding under the program.

Community Development Capital Initiative (CDCI). The CDCI program invests lower-cost capital in 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. These institutions could apply for capital investments of up to 3.5 percent of total assets — an amount approximately equivalent to the 5 percent of risk-weighted assets available under the CDCI program to banks and thrifts. TARP capital of \$570 million has been committed to this program. As of December 31, 2012, approximately \$530 million remained outstanding under the program.

Capital Assistance Program and Other Programs (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

⁶ Note, including proceeds from Treasury's non-TARP holdings in AIG, the total deficit impact is estimated at \$30 billion.

⁷ The 2014 Budget valuation used the December 31, 2012 share price of \$28.83 for Treasury's GM common stock.

announced that 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 received them through the Automotive Industry Financing Program, 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. The Federal Reserve Bank of New York (FRBNY) and the Treasury provided financial support to AIG in order to mitigate broader systemic risks that would have resulted from the disorderly failure of the company. To prevent the company from entering bankruptcy and to resolve the liquidity issues it faced, the FRBNY provided an \$85 billion line of credit to AIG in September 2008 and received preferred shares that entitled it to 79.8 percent of the voting rights of AIG's common stock. After TARP was enacted, the Treasury and FRBNY 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, the Treasury had purchased \$40 billion in preferred shares from AIG through TARP, which were subsequently converted into common stock. In April 2009, Treasury also 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 subsequently canceled.

AIG executed a recapitalization plan with FRBNY, Treasury, and the AIG Credit Facility Trust in mid-January 2011 that allowed for the acceleration of the Government's exit from AIG. Following the restructuring and AIG's ensuing public offering in May of 2011, the Treasury had a 77 percent ownership (or 1.45 billion shares) stake in AIG, which represented a 15 percentage point reduction from Treasury's 92 percent ownership stake in January 2011. Throughout 2012, Treasury completed public offerings to further reduce its AIG ownership stake. In December 2012, Treasury sold its remaining balance of AIG common in a public offering that reduced Treasury's AIG common stock position to zero. With this final sale, the Treasury and the FRBNY have fully recovered all funds committed to stabilize AIG during the financial crisis and realized an additional \$22.7 billion positive return.⁸ In March 2013, Treasury sold its remaining 2.7 million warrants for \$25.2 million and has fully exited its investment in AIG. A summary of the deal terms and recent transactions is provided below:

- On March 7, 2012, Treasury announced an agreement with AIG that provided for the repayment of

the government's remaining \$8.5 billion preferred equity investment in the AIG-owned entity AIA Aurora LLC (AIA SPV) from the following sources: (1) \$5.6 billion in proceeds from AIG's sale of ordinary shares of AIA (2) \$1.6 billion in proceeds from the FRBNY's final disposition of Maiden Lane II LLC securities announced on February 28, 2012 and (3) \$1.6 billion in escrowed cash proceeds resulting from AIG's sale of its American Life Insurance Co. (ALICO) subsidiary to MetLife, Inc.

- On March 8, 2012, Treasury sold approximately 207 million shares of AIG common stock through a public offering at \$29.00 per share, netting \$6.0 billion in proceeds for taxpayers. As part of the offering, AIG agreed to purchase approximately 103.5 million shares at \$29.00 per share, representing \$3.0 billion of Treasury's expected proceeds from the sale. Approximately two-thirds of the proceeds are attributable to shares received as a result of the TARP assistance to AIG, while the remaining one-third is attributable to the shares transferred to the Treasury from the FRBNY.
- On March 22, 2012, AIG made the final \$1.5 billion payment to Treasury to retire Treasury's preferred interest in the AIG-owned entity AIA Aurora LLC (AIA SPV) — a special purpose vehicle that holds ordinary shares in AIA Group Limited (AIA), more than one year ahead of schedule. With this payment, Treasury's preferred equity investment related to AIG has been repaid in full.
- On May 10, 2012 Treasury sold approximately 188.5 million shares of AIG common stock through a public offering at \$30.50 per share, netting \$5.75 billion in proceeds for taxpayers.
- On August 8, 2012 Treasury sold approximately 188.5 million shares of AIG common stock through a public offering at \$30.50 per share, for an additional \$5.75 billion in proceeds.
- On September 14, 2012 Treasury sold approximately 636.9 million shares of AIG common stock through a public offering at \$32.50 per share, netting \$20.7 billion in proceeds for taxpayers.
- On December 14, 2012 Treasury sold its entire remaining position of approximately 234 million shares of AIG common stock through a public offering at \$32.50 per share, netting \$7.6 billion in proceeds for taxpayers.

Targeted Investment Program (TIP). The goal of the TIP was to stabilize the financial system by making investments in institutions that are critical to the functioning of the financial system. Investments made through the TIP sought to avoid significant market disruptions resulting from the deterioration of one financial institution that could threaten other financial institutions and impair broader financial markets, and thereby pose a threat to the overall economy. Under the TIP, the

⁸ 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 the FRBNY for the benefit of Treasury as a result of its loan to AIG (non-TARP shares).

Treasury purchased \$20 billion in preferred stock from Citigroup and \$20 billion in preferred stock from Bank of America. The Treasury also received stock warrants from each company. Both Citigroup and Bank of America repaid their TIP investments in full in December 2009, along with dividend payments of approximately \$3.0 billion. In March 2010, Treasury sold all of its Bank of America warrants for \$1.2 billion, and in January 2011, the Treasury sold Citigroup warrants acquired through the TIP for \$190.4 million. The TIP is closed and has no remaining assets.

Asset Guarantee Program (AGP). The TARP created the AGP to provide Government assurances for assets held by financial institutions that were critical to the functioning of the nation's financial system. In January 2009, the Treasury, the Federal Reserve, and the FDIC negotiated a potential loss-sharing arrangement under the AGP on up to \$118 billion of financial instruments owned by Bank of America. In May 2009, Bank of America announced its intention to terminate negotiations with respect to the loss-sharing arrangement. In September 2009, the Treasury, the Federal Reserve, the FDIC, and Bank of America entered into a termination agreement pursuant to which Bank of America agreed to pay a termination fee of \$425 million to the Government parties. Of this amount, \$276 million was paid to the TARP in 2009 for the value Bank of America received from the announcement of the government's willingness to guarantee and share losses on the pool of assets.

The Treasury, the Federal Reserve and the FDIC entered into a final agreement for a loss-sharing arrangement with Citigroup on January 15, 2009. Under the agreement, the Treasury guaranteed up to \$5 billion of potential losses incurred on a \$301 billion portfolio of financial assets held by Citigroup. The agreement was terminated, effective December 23, 2009. The U.S. Government parties did not pay any losses under the agreement, and retained \$5.2 billion of the \$7 billion in trust preferred securities that were part of the initial agreement with Citigroup.⁹ TARP retained \$2.2 billion of the trust preferred securities, as well as warrants for common stock shares that were issued by Citigroup as consideration for the guarantee. Treasury sold the trust preferred securities on September 30, 2010, and the warrants on January 25, 2011. On December 28, 2012, Treasury received \$800 million in additional Citigroup trust preferred securities from the FDIC as contemplated by the agreements entered into by Treasury and the FDIC. The AGP program will generate a positive return to the taxpayers from the preferred securities and other considerations.

Automotive Industry Financing Program (AIFP). In December 2008, the Treasury established the AIFP to prevent a disruption of the domestic automotive industry, in order to mitigate a systemic threat to the Nation's economy and a potential loss of thousands of jobs. Through TARP, the Treasury originally committed \$84.8 billion through loans and equity investments to partici-

pating domestic automotive manufacturers, auto finance companies, and auto parts manufacturers and suppliers. As of December 31, 2012, Treasury had recouped nearly 58 percent of its investments in GM and had fully exited its Chrysler Group LLC investments. Below is a summary of the securities TARP received in exchange for the assistance provided to automotive manufacturers and recent transactions:

- Treasury received 60.8 percent of the common equity and \$2.1 billion in preferred stock in "New GM" when the sale of assets from the old GM to the new GM took place on July 10, 2009. In April 2010, GM fully repaid its \$7 billion loan, ahead of its publicly stated goal to repay the entire loan by June 2010. As part of New GM's initial public offering (IPO) in November 2010, Treasury sold nearly 359 million shares of New GM common stock at \$33.00 per share, and subsequently sold an additional 53.7 million shares in December 2010 at the same price. In total, TARP raised \$13.5 billion in net proceeds from the New GM IPO and reduced its ownership stake by nearly half, to approximately 32 percent. New GM also repurchased \$2.1 billion in preferred stock from TARP in December 2010. In December 2012, GM purchased 200 million shares of GM common stock from Treasury at \$27.50 per share (a 10 percent premium) for proceeds of \$5.5 billion and Treasury also announced its intent to fully exit its investment in GM within the next 12-15 months. As of December 31, 2012, TARP had recouped \$29.5 billion of the \$51.03 billion in aid extended to GM.
- Treasury also received a \$7.1 billion debt security and a 9.9 percent share of the equity in the newly formed, post-bankruptcy Chrysler Group LLC (New Chrysler). As part of the bankruptcy proceedings, New Chrysler also assumed \$500 million of debt from TARP's original \$4 billion loan to Chrysler Holding (Old Chrysler). Therefore, TARP held a \$3.5 billion loan with Old Chrysler in addition to investments in New Chrysler. In April 2010, TARP received a \$1.9 billion repayment of its investments in Old Chrysler. This repayment, while less than the amount Treasury invested, was significantly more than the Administration had previously estimated to recover. As part of the repayment agreement, Treasury agreed to write off the \$1.6 billion balance remaining under the \$3.5 billion TARP loan to Old Chrysler. On May 24, 2011, six years ahead of schedule, Chrysler Group LLC repaid the remaining \$5.1 billion in TARP loans and terminated the remaining \$2.1 billion TARP loan commitment. Finally, on June 2, 2011, Treasury reached an agreement to sell to Fiat Treasury's 6 percent fully diluted equity interest in New Chrysler and Treasury's interest in an agreement with the UAW retiree trust for \$560 million. The closing of this transaction in July 2011 marked Treasury's full exit from its TARP investments in Chrysler. In total, Chrysler repaid \$11.1

⁹ Trust Preferred Securities (TruPS) are financial instruments that have the following features: they are taxed like debt; counted as equity by regulators; are generally longer term; have early redemption features; make quarterly fixed interest payments; and mature at face value.

billion¹⁰ of the \$12.4 billion in aid provide by the U.S. Government, which far exceeded expectations when the program was first unveiled in December 2008.

- Treasury has also purchased investments totaling \$16.3 billion in Ally Financial (formerly GMAC). On December 30, 2010, Treasury converted \$5.5 billion of its \$11.4 billion in convertible preferred stock in Ally Financial into common stock. On March 2, 2011, Treasury sold all of its trust preferred securities for approximately \$2.7 billion. In May 2012, Ally Financial began exploring strategic alternatives for its international businesses in a manner that Ally believes will maximize value for its shareholders and Residential Capital, its mortgage subsidiary, filed for Chapter 11 bankruptcy. As of December 31, 2012, Treasury had recouped \$5.8 billion of its \$16.3 billion in Ally-related investments, including \$3.1 billion in dividends and interest.

Both the Auto Supplier Support Program (ASSP) and the Auto Warranty Commitment Program (AWCP) have closed and, in aggregate, these investments did not result in losses. The Government originally committed \$5 billion in loans to ASSP, ensuring the auto suppliers received compensation for products and services purchased by automakers. Through the AWCP, the Government extended support to protect consumer warranties on purchased GM and Chrysler vehicles while the companies worked through their restructuring plans. Treasury no longer holds warranties under the AWCP.

Credit Market Programs. The Credit Market programs are designed to facilitate lending that supports consumers and small businesses, through the Term Asset-Backed Securities Loan Facility (TALF), the CDCI discussed previously, and the Small Business Administration's guaranteed loan program (SBA 7(a)).

TALF: The TALF was a joint initiative with the Federal Reserve that provides financing (TALF loans) to private investors to help facilitate the restoration of efficient and robust secondary markets for various types of credit. The Treasury provided protection to the Federal Reserve through a loan to the 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. The Treasury has disbursed \$0.1 billion of this amount to the TALF SPV to implement the program, representing a notional amount used to establish the SPV. Treasury's total TALF purchases were designed to be dependent on actual TALF loan defaults, and to date none has occurred. In July 2010, Treasury, in consultation with the Federal Reserve, reduced the maximum amount of assets Treasury would acquire to \$4.3 billion, or 10 percent of the total \$43 billion outstanding in the facility when the program was closed to new lending on June 30, 2010. In June 2012, Treasury, in consultation with the Federal Reserve, further reduced its loss-coverage to \$1.4 billion. Finally, Treasury and

the Federal Reserve announced in January 2013 that Treasury's commitment of TARP funds to provide credit protection was no longer necessary due to the fact that the accumulated fees collected through TALF exceeded the total principal amount of TALF loans outstanding. As of January 15, 2013, Treasury had recognized a cash gain of \$424 million on TALF, with additional gains expected in the future.

SBA 7(a): In March 2009, Treasury and the Small Business Administration announced a Treasury program to purchase SBA-guaranteed securities ("pooled certificates") to re-start the secondary market in these loans. Treasury subsequently developed a pilot program to purchase SBA-guaranteed securities, and purchased 31 securities with an aggregate face value of approximately \$368 million. Treasury reduced its commitment to the Small Business 7(a) program from \$1 billion to \$370 million, as demand for the program waned due to significantly improved secondary market conditions for these securities following the original announcement of the program. 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). The Treasury announced the Legacy Securities Public-Private Investment Partnership (PPIP) on March 23, 2009 to help restart the market for legacy mortgage-backed securities, thereby helping financial institutions begin to remove these assets from their balance sheets and allowing for a general increase in credit availability to consumers and small businesses. Under the program, Public-Private Investment Funds (PPIFs) are 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. PPIP closed for new funding on June 30, 2010 and the PPIFs can no longer deploy capital and make new investments as of December 2012 although they may continue to manage these investments for up to five additional years following the termination of their investment period. As of December 31, 2012, \$18.6 billion of the \$21.9 billion in funds originally committed to PPIP had been disbursed and \$15.0 billion had been repaid. Additionally, five of the nine PPIFs had completely wound down, returning their funds to Treasury and their private investors at a profit.

TARP Housing Programs. To mitigate foreclosures and preserve homeownership, in February 2009 the Administration announced a comprehensive housing program utilizing up to \$50 billion in funding through the TARP. The Government-Sponsored Entities (GSEs) Fannie Mae and Freddie Mac participated in the Administration's program both as the Treasury Department's financial agents for Treasury's contracts with servicers, and by implementing similar policies for their own mortgage portfolios.¹¹ These housing programs are focused on creating sustainably affordable mortgages

¹⁰ 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 UAW retiree trust that were executed on July 21, 2011.

¹¹ For additional information on MHA programs, visit: <http://www.makinghomeaffordable.gov/>.

for responsible homeowners who are making a good faith effort to make their mortgage payments, while mitigating the spillover effects of foreclosures on neighborhoods, communities, the financial system and the economy. Following the enactment of the Wall Street Reform Act, Treasury reduced its commitments to the TARP Housing programs to \$45.6 billion. These programs fall into three initiatives:

1. Making Home Affordable (MHA);
2. Housing Finance Agency (HFA) Hardest-Hit Fund (HHF); and
3. Federal Housing Administration (FHA) Refinance Program.¹²

The MHA initiative includes among its components the Home Affordable Modification Program (HAMP), FHA-HAMP, the Second Lien Modification Program (2MP), and the second lien extinguishment portion of the FHA-Refinance Program, and Rural Development-HAMP.¹³ Under MHA programs, the Treasury contracts with servicers to modify loans in accordance with the program's guidelines, and to make incentive payments to the borrowers, servicers, and investors for those modification or other foreclosure alternatives. As of December 31, 2012, 78 non-GSE mortgage servicers had signed up to participate in the HAMP. Over 1.5 million MHA homeowner assistance actions, including over 1.1 million HAMP permanent modifications, were initiated as of the end of December 2012. Through HAMP, homeowners have saved approximately \$17.3 billion in reduced mortgage payments. Program implementation has continually improved since its inception in February 2009. As of December 2012, 87 percent of homeowners who started a trial modification after June 1, 2010, had converted to permanent modifications within an average of 3.5 months – a higher conversion rate and shorter time to convert than earlier in the program. In addition to providing responsible homeowners with sustainable mortgages, the MHA initiative has also, for the first time, made significant progress in offering consumer protections for homeowners and standardizing the mortgage modification process across the servicing industry, which has contributed to over 6 million Government and private sector modifications and loss mitigation actions occurring since April 2009. In January 2012, the Administration extended the deadline to apply for MHA programs until December 31, 2013. Additionally, in June 2012, the Administration expanded MHA eligibility to include (1) homeowners who are applying for a modification on a home that is not their primary residence, but the property is currently rented or the homeowner intends to rent it, (2) homeowners who previously did

not qualify for HAMP because their mortgage debt-to-income ratio was 31.0 percent or lower, and (3) homeowners who previously received a HAMP permanent modification, but defaulted on their payments, therefore losing good standing.

Treasury also offers other forms of incentives to encourage mortgage loan modifications, or prevent foreclosure under the HAMP, as part of its MHA program. For example, Treasury provides payments to servicers and investors to protect against declining home prices as part of encouraging mortgage modifications in communities that have experienced continued home price depreciation. When a mortgage modification is not possible, Treasury contracts with servicers to provide incentives that encourage borrower short sales (sales for less than the value of the mortgage in satisfaction of the mortgage) or deeds-in-lieu (when the homeowner voluntarily transfers ownership of the property to the servicer in full satisfaction of the total amount due on the mortgage) via the Home Affordable Foreclosure Alternatives Program (HAFA), in order to provide a means for borrowers to avoid foreclosure. Since the inception of the program, over 101,000 HAFA transactions have been completed.

As part of its ongoing effort to continuously refine the targeting of mortgage assistance to address the sector's greatest needs, the Administration created several programs that will give a greater number of responsible borrowers an opportunity to remain in their homes and reduce costly foreclosures. Major programs announced since December 31, 2009, include:

Home Affordable Unemployment Program (part of HAMP): Unemployed borrowers that meet eligibility criteria will receive temporary mortgage payment assistance while they look for a new job. In an effort to keep more unemployed borrowers in their homes and allow them an opportunity to find new employment, Treasury extended the minimum period for which unemployed borrowers receive temporary payment assistance from 3 months to 12 months in July 2011. In response to the Administration's efforts, 12-month forbearance is becoming an industry standard, with Fannie Mae and Freddie Mac now applying it to mortgages they own and Wells Fargo and Bank of America now offering it as their default approach for unemployed borrowers.

Principal Reduction Alternative (PRA, part of HAMP): Servicers who have signed up for this program are required to consider an alternative mortgage modification that emphasizes principal relief for borrowers who owe more than their home is worth. Under the alternative approach, if the servicer reduces borrower loan principal using this program, investors will receive incentive payments based on a percentage of each dollar of loan principal written off. Borrowers and investors will receive principal reduction and the incentives, respectively, through a pay-for-success structure. In February 2012, Treasury issued guidance that tripled the amount of financial incentives under PRA for investors who agree to reduce principal for eligible underwater homeowners. There have been nearly 114,000 PRA trial modifications initiated as

¹² This program has also been referred to as the FHA Short Refinance Program or Option in other reporting. The FHA Refinance Program is not a Treasury program, but is supported through the TARP with \$1 billion to cover a share of any losses on FHA Refinance loans.

¹³ For additional information on MHA programs, visit: <http://www.makinghomeaffordable.gov/>.

of December 31, 2012, with the median principal amount reduced for active permanent modifications of \$72,900.

HFA Hardest-Hit Fund (HHF): The \$7.6 billion HHF provides the eligible entities of Housing Finance Agencies from 18 states and the District of Columbia with funding to design and implement innovative programs to prevent foreclosures and bring stability to local housing markets. The Administration targeted areas hardest hit by unemployment and home price declines through the program. Approximately 70 percent of the HHF funds are dedicated to programs that help unemployed borrowers stay in their homes, while the remaining 30 percent of HHF funds facilitate principal write-downs for borrowers who owe more than their home is worth. The flexibility of the HHF funds has allowed States to design and tailor innovative programs to meet the unique needs of their community. For example, Nevada recently implemented a principal reduction program that leverages refinances under the Home Affordable Refinance Program (HARP) while California recently implemented a program that uses principal reduction in conjunction with a modification or recast.

FHA Refinance Program: This program, which is administered by the Federal Housing Administration and supported by TARP, was initiated in September 2010 and allows eligible borrowers who are current on their mortgage but owe more than their home is worth, to re-finance into an FHA-guaranteed loan if the lender writes off at least 10 percent of the existing loan. Nearly \$3.0 billion in TARP funds allocated under the MHA are available to provide incentive payments to extinguish second lien mortgages to facilitate refinancing the first liens into an FHA-insured mortgage, and an additional \$8.1 billion was originally committed to cover a share of any losses on the loans and administrative expenses. In January 2012, the Administration extended the FHA Refinance Program until December 31, 2014. In 2013, Treasury's commitment to cover a share of any losses under the FHA Refinance Program was reduced from \$8.1 billion to \$1.0 billion.

Method for Estimating the Cost of TARP Transactions

Exercising its authority under EESA, the Treasury has purchased financial instruments with varying terms and conditions. Consistent with the provisions of Section 123 of EESA, the costs of equity purchases, loans, guarantees, and loss sharing under the FHA Refinance program through the TARP are reflected on a net present value basis, as determined under the Federal Credit Reform Act (FCRA) of 1990 (2 U.S.C. 661 et seq.), with an EESA-required adjustment to the discount rate for market risks. The budgetary cost of these transactions is reflected as the net present value of estimated cash flows to and from the Government, excluding administrative costs. Costs for the incentive payments under TARP Housing programs, other than loss sharing under the FHA Refinance program, involve financial instruments

without any provision for future returns, and are recorded on a cash basis.¹⁴

The costs of each transaction reflect the underlying structure of the instruments, which may include direct loans, structured loans, equity, loan guarantees, or direct incentive payments. For each of these instruments, cash flow models are used to estimate future cash flows to and from the Government over the life of a program or facility. Further, each cash flow model reflects the specific terms and conditions of the program, technical assumptions regarding the underlying assets, risk of default or other losses, actual transactions to date, and other factors as appropriate. Models generate cash flows for original subsidy rate estimates; calculate changes in cost due to changes in contract terms or other Government actions (modification cost estimates); and calculate changes in cost due to updated economic or performance assumptions, and actual cash flows to date. The risk adjustments to the discount rates for TARP equity, loan, and guarantee transactions were made using available data and methods to capture additional potential costs related to uncertainty about the expected cash flows to and from the public. The basic methods for each of these models are outlined below.

Direct Loans. Direct loan model cash flows include the scheduled principal, interest, and other payments to the Government, including estimated income from warrants or additional notes. These models include estimates of delinquencies, default and recoveries, based on loan-specific factors including the value of any collateral provided by the contract. The probability and timing of default and recoveries are estimated using applicable historical data and econometric projections, where available, or publicly available proxy data including aggregated credit rating agency historical performance data.

Structured Loans. Structured loans such as the TALF are modeled according to the program structure, where an intermediary special purpose vehicle (SPV) is established to purchase or commit to purchase assets from beneficiaries. In general, TARP structured loans are a hybrid of guarantees and direct loans. The Treasury makes a direct loan to a SPV; the SPV in turn enters into a contract with a beneficiary that resembles a guaranteed loan. Estimated cash flow assumptions reflect the anticipated behavior of the beneficiaries and the cash flows to and from the SPV and the Treasury. The Treasury projects cash flows to and from the Government based on estimated SPV performance, the estimated mix of assets funded through the facility, the terms of the contracts, and other factors.

In the case of the TALF, the New York Federal Reserve created an SPV to purchase and manage assets received in connection with any TALF loans. The Federal Reserve

¹⁴ Section 123 of the EESA provides the Administration the authority to record TARP equity purchases pursuant to the FCRA, with required adjustments to the discount rate for market risks. The Making Home Affordable programs and HFA Hardest Hit Fund involve the purchase of financial instruments which 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 are recorded for all of TARP under the Office of Financial Stability and the Special Inspector General for TARP on a cash basis, consistent with other Federal administrative costs.

Table 3-1. CHANGE IN PROGRAMMATIC COSTS OF TROUBLED ASSET RELIEF ACTIONS (EXCLUDING DEBT SERVICE)

(In billions of dollars)

TARP Actions	2013 MSR		2014 Budget		Change from 2013 MSR to 2014 Budget	
	TARP Obligations ¹	Estimated Cost (+) / Savings (-)	TARP Obligations ¹	Estimated Cost (+) / Savings (-)	TARP Obligations ¹	Estimated Cost (+) / Savings (-)
Equity Purchases	337.1	17.5	336.8	10.2	-0.3	-7.3
Structured & direct loans and asset-backed security purchases	82.4	19.1	77.5	17.4	-5.0	-1.6
Guarantees of troubled asset purchases ²	5.0	-3.6	5.0	-3.8	.....	-0.2
TARP Housing Programs ³	45.6	45.6	38.5	37.6	-7.1	-8.0
Total programmatic costs⁴	470.1	78.6	457.8	61.5	-12.3	-17.1
Memorandum:						
Deficit impact before administrative costs and interest effects		68.0		⁵ 47.5		-20.5

¹ TARP obligations are net of cancellations.² The total assets supported by the Asset Guarantee Program were \$301 billion.³ TARP obligations under the FHA Refinance Letter of Credit provide first loss coverage of eligible FHA insured mortgages.⁴ Total programmatic costs of the TARP exclude interest on reestimates.⁵ The total deficit impact of TARP includes \$18.1 billion in subsidy cost for TARP investments in AIG. Including proceeds from Treasury's non-TARP holdings in AIG, the net cost to the Government of AIG is \$0.5 billion.

acquires assets either when a TALF participant defaults on the Federal Reserve financing or chooses to turn over the securing assets in lieu of the scheduled repayment at the end of the term. The SPV has committed, for a fee, to purchase all assets securing a TALF loan that are received by the New York Federal Reserve at a price equal to the TALF loan amount at the time of acquisition, plus accrued but unpaid interest. The Treasury made an initial allotment to the SPV of \$0.1 billion to fund the SPV, and committed to purchase subordinated debt issued by the SPV to finance asset purchases; no further purchases by Treasury were made. The Treasury receives fees and interest income on the entire outstanding TALF facility, and amounts collected in the SPV.

Guarantees. Cost estimates for guarantees reflect the net present value of estimated claim payments by the Government, net of income from fees, recoveries on defaults, or other sources. Under EESA, asset guarantees provided through TARP must be structured such that fees and other income must completely offset estimated losses at the time of commitment. In TARP's Asset Guarantee Program, fees were paid in the form of preferred stock and termination fees. The value of preferred stock is modeled using the same methodology discussed for other equity purchase programs below. Claim payments were modeled consistent with the terms of the guarantee contract, and reflected historical performance data on similar assets and estimates of future economic conditions such as unemployment rates, gross domestic product, and home price appreciation. However, the AGP was terminated with no claim payments made by the Treasury. The budget reflects actual and estimated collections from preferred stock proceeds.

Equity Purchases. Preferred stock cash flow projections reflect the risk of losses associated with adverse events, likely failure of an institution, or increases in market interest rates. Estimated cash flows vary depending on: 1) current interest rates, which affect the insti-

tution's decision to repay the preferred stock; and 2) the strength of a financial institution's assets. The model also estimates the values and projects the cash flows of warrants using an option-pricing approach based on the current stock price and its volatility. Common equity is valued at market prices as of a fixed date, such as December 31, 2012, for the 2014 Budget. For the purposes of this calculation, common equity is assumed to be sold to the public as soon as is practicable and advisable.

FHA Refinance Program. Under this program, the cost estimates reflect the present value of estimated claim payments made from the letter of credit (LOC) provider to the lenders of FHA-guaranteed loans, adjusted for market risks. Treasury signed a LOC with Citigroup, originally committing \$8.1 billion of TARP funds to cover a portion of default claims of FHA Refinance mortgages, plus administrative expenses. Following changes to the FHA program fee structure anticipated to start in 2013, the LOC is planned to be reduced from a \$8.1 billion commitment to a \$1.0 billion commitment. Through the LOC agreement, Treasury is committed to make claim payments to private lenders to cover a portion of defaulted debt obligations of non-Federal borrowers. Therefore, the program costs are estimated according to the principles of FCRA, with a risk adjustment to the discount rate as prescribed by EESA. The model projects TARP claim payments based on projected FHA Refinance volumes and net claim rates. The full commitment was obligated at the point the LOC contract was signed, and outlays of subsidy are recorded as the underlying FHA Refinance loans are made.

Other TARP Housing. Foreclosure mitigation incentive payments occur when the Government makes incentive payments to borrowers and servicers for certain actions such as: successful modifications of first and second liens, on-schedule borrower payments on those modified loans, protection against further declines in home prices, completing a short sale, or receiving a deed in lieu of foreclosure. The method for estimating these cash flows includes forecasting the total eligible loans, the timing of the loans

Table 3–2. 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
Financing Account Balances:															
Troubled Asset Relief Program Equity Purchase Financing Account	105.4	76.9	74.9	13.6	10.3	5.0	1.0	0.8	0.7	0.6	0.5	0.5	0.4	0.4	0.4
Troubled Asset Relief Program Direct Loan Financing Account	23.9	42.7	28.5	17.9	7.8	1.6	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
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	18.0	6.5	1.7	1.5	1.5	1.4	1.3	1.3	1.3	1.3	1.3

* \$50 million or less.

¹ Current value as reflected in the 2014 Budget. Amounts exclude HAMP activities that are reflected on a cash basis.

entering into the program, loan characteristics, the overall participation rate in the program, the re-default rate, home price appreciation, and the size of the incentive payments. For the HFA Hardest-Hit Fund (HHF), the Government provides a cash infusion, similar to a grant, to the eligible entities of state Housing Financing Agencies (HFAs) to design and implement innovative programs to prevent foreclosures and bring stability to local housing markets. The estimated cash flows for the HHF are based on the plans submitted by the HFAs and approved by Treasury, which detail program design and anticipated activity.

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.¹⁵ This section explains the changes in TARP costs, including whether such changes are due to actual performance, or changes in future expectations. The analysis also includes an estimate of what the budgetary effects would have been had all TARP transactions been reflected on a cash basis, and also shows the estimated cost for transactions using the standard methodology required under the FCRA, without the adjustment to the discount rate for market risks prescribed by EESA. It also includes a comparison of the cost estimates with previous estimates provided by OMB and the Congressional Budget Office (CBO).

Table 3–1, above, summarizes the current and anticipated activity under TARP, and the estimated lifetime budgetary cost reflected in the Budget, compared to estimates from the 2013 MSR. The direct impact of TARP on the deficit, including interest on reestimates, and the risk-adjustment to the discount rate required under EESA, is projected to be \$47.5 billion, down \$20.5 billion from \$68 billion as projected in the 2013 MSR. The subsidy cost represents the lifetime net present value cost of TARP obligations from the date of disbursement. The

subsidy cost for TARP excluding interest on reestimates is now estimated to be \$61.5 billion.¹⁶ The final subsidy cost of TARP is likely to be lower than the current estimate, because projected cashflows 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 cash flows with the public. Over time, the risk premium added to TARP costs is essentially returned to the General Fund via downward subsidy reestimates. 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 cashflows to and from the public.¹⁷ So, the net debt or cash balances reflect the expected present value of the asset 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 effectively true-up the net debt or cash balance in the financing account, with updated estimates of the present value of these financial assets or liabilities. For example, if an asset is valued at \$100 million and the net debt in the financing account is \$90 million, there will be a downward reestimate, returning the \$10 million in excess subsidy to the General Fund. Accordingly, the net debt balance in the financing account after the reestimate will be \$100 million—equal to the reestimated value of the asset. The larger the subsidy cost for a given loan disbursed or equity purchased, the lower the estimated

¹⁶ With the exception of the Making Home Affordable and HFA Hardest-Hit Fund programs, all the other TARP investments are reflected on a present value basis pursuant to the FCRA and the EESA.

¹⁷ 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 the difference between the face value of the loan and the subsidy cost from the Treasury. 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.

¹⁵ The analysis does not assume the effects on net TARP costs of a recoupment proposal authorized under Section 134 of EESA.

Table 3-3. TROUBLED ASSET RELIEF PROGRAM FACE VALUE OF TARP OUTSTANDING¹

(In billions of dollars)

	Actual				Estimate	
	2009	2010	2011	2012	2013	2014
Troubled Asset Relief Program Equity Purchases	229.6	119.0	88.2	33.8	18.4	9.3
Troubled Asset Relief Program Direct Loans	60.5	15.7	11.5	6.6	1.1	0.9
Troubled Assets Insurance Financing Fund Guaranteed Assets	251.4	.....	.....	.....	.....	.....
FHA Refinance Letter of Credit .....	.....	.....	0.1	0.3	5.5	5.5
Total Face Value of TARP Outstanding	541.5	134.7	99.8	40.7	25.1	15.7

¹ Table reflects face value of TARP outstanding direct loans, preferred stock equity purchases, guaranteed assets, and the face value of FHA Refinance mortgages supported by the TARP Letter of Credit. Financial instrument purchases under the Making Home Affordable Program and Hardest Hit Fund are reflected in the budget on a cash basis, and are not included here.

value of the cash flows from the public and asset value to the Government.¹⁸

Table 3-2 shows the actual balances of TARP financing accounts as of the end of 2012, and projected balances for each subsequent year through 2023.¹⁹ Based on actual net balances in financing accounts at the end of 2009, the value of TARP assets totaled \$129.9 billion. By the end of 2012, total TARP net asset value decreased to \$32.2 billion, reflecting the realization of the value of TARP assets as repayments, primarily from large banks, exceeded amounts TARP paid for financial assets. Estimates in 2013 and beyond reflect estimated TARP net asset values over time as of December 31, 2012, and all other anticipated transactions. The overall balance of the financing accounts is estimated to continue to fall significantly over the next few years, as TARP investments wind down, from \$18 billion at the end of 2013, to \$6.5 billion in 2014, and \$1.7 billion in 2015 as the assets and loans acquired under the TARP program wind down.

The value of TARP equity purchases reached \$76.9 billion in 2010, and fell \$2 billion in 2011 reflecting the 2011 downward reestimate, final AIG funding, and repayments from large financial institutions. The value of the TARP equity portfolio is anticipated to continue declining as participants repurchase stock and assets are sold. The value of TARP direct loans is expected to decrease to \$7.8 billion in 2013, gradually declining to \$0.9 billion by 2015 as loans are repaid and warrants and other assets are sold. The \$0.8 billion value under the Asset Guarantee Program (AGP) in 2012 reflects the estimated value of the expected receipt of trust preferred shares from the FDIC following termination of the guarantee on Citigroup assets which was subsequently sold in February 2013 for \$894 million²⁰. The FHA Refinance program reflects net cash balances, showing the reserves set aside to cover

¹⁸ As an extreme example, a direct loan program with 100 percent subsidy cost would require budget authority for the full amount of the loan. The financing account would receive the entire amount of a loan disbursement from the budgetary program account, and would not have to borrow from the Treasury. In this case, the loan would be estimated to have a zero asset value.

¹⁹ Reestimates for TARP are calculated using actual data through September 30, 2012, and updated projections of future activity. Thus, the full impacts of TARP reestimates are reflected in the 2013 financing account balances.

²⁰ Transactions that occurred after December 31, 2012 are described for narrative continuity, but are not included in the reestimate of TARP program costs contained in the 2014 Budget.

TARP's share of default claims for FHA Refinance mortgages over the 10-year letter of credit facility. These cash balances fall as claims are paid and as the TARP coverage expires.

Where Table 3-2 displays the estimated value of TARP investments, guarantees, and loss share agreements over time, Table 3-3 shows the estimated face value of outstanding TARP investments at the end of each year through 2013. For equity investments, the par value of Treasury's remaining investment is reflected. The outstanding amount of equity investments and direct loans decreased in 2012, as Treasury continued to wind down its equity investments and receive repayments on outstanding loans. Under FCRA, the total outstanding reflects the full face value of loans supported by a Federal guarantee, any portion of which may be guaranteed. TARP's liability under the Asset Guarantee Program was only a fraction of the face value of the underlying loans (see Table 3-6), and was extinguished with the termination of the Citibank guarantee in 2009. Likewise, the full face value of FHA Refinance mortgages supported by the letter of credit facility far exceeds TARP's liability, which is capped at \$1.0 billion (including \$100 million set aside for administrative fees). The TARP coverage ratio or share of default losses was 15.17 percent in 2012 and is estimated to be 9.82 percent in 2013 for covered FHA Short Refinancing loans. The overall outstanding face value of mortgages supported by the FHA Refinance Letter of Credit is projected to reach \$5.5 billion in 2013. Currently it is not anticipated that additional guarantees will require TARP loss coverage after 2013, though a reserve is maintained to support the program through December 31, 2014.²¹ The face value of TARP FHA Refinance Letter of Credit instruments in table 3-3 does not include new FHA Refinancing guarantees expected to be provided after 2013 that do not need TARP loss coverage.

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

²¹ Changes to the FHA program fee structure anticipated to start in 2013 are sufficient to cover anticipated losses. As a result, TARP first-loss coverage is not anticipated on FHA Short Refi loans after the revised fee structure is implemented.

Table 3-4. TROUBLED ASSET RELIEF PROGRAM EFFECTS ON THE DEFICIT AND DEBT¹

(Dollars in billions)

	Actual				Estimate										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Deficit Effect:															
Programmatic and administrative expenses:															
Programmatic expenses:															
Equity purchases	115.3	8.4	19.1	1.0	*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Direct loans and purchases of asset-backed securities ...	36.9	-0.9	-0.3	-0.1	*	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Guarantees of troubled asset purchases	-1.0	-1.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
TARP housing programs	*	0.5	1.9	3.1	13.1	7.8	6.2	3.1	1.6	0.3	*	*	.....	.....	.....
Reestimates of credit subsidy costs .....	.....	-116.5	-58.5	20.3	-12.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Subtotal, programmatic expenses	151.2	-109.9	-37.7	24.3	0.6	7.8	6.2	3.1	1.6	0.3	*	*	.....	.....	.....
Administrative expenses	0.1	0.2	0.4	0.3	0.4	0.2	0.2	0.2	0.1	0.1	0.1	*	*	*	*
Special Inspector General for TARP	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Subtotal, programmatic & administrative expenses	151.3	-109.6	-37.3	24.6	1.1	8.0	6.5	3.3	1.7	0.4	0.1	0.1	0.1	0.1	0.1
Interest effects:															
Interest transactions with credit financing accounts ²	-2.8	-4.7	-3.0	-1.6	-3.8	-1.7	-0.1	-0.1	-0.1	-0.1	-0.1	-*	-*	-*	-*
Debt service ³	2.8	4.7	3.0	1.9	1.1	0.4	0.1	0.5	1.1	1.7	2.0	2.2	2.3	2.4	2.5
Subtotal, interest effects	*	*	*	0.2	-2.8	-1.3	*	0.5	1.0	1.6	2.0	2.1	2.3	2.4	2.5
Total deficit impact	151.3	-109.6	-37.3	24.9	-1.7	6.7	6.5	3.7	2.8	2.0	2.1	2.2	2.4	2.5	2.6
Other TARP transactions affecting borrowing from the public — net disbursements of credit financing accounts:															
Troubled Asset Relief Program Equity Purchase Financing Account	105.4	-28.5	-2.0	-61.3	-3.2	-5.4	-4.0	-0.2	-0.1	-0.1	-0.1	-*	-*	-*	-*
Troubled Asset Relief Program Direct Loan Financing Account	23.9	18.8	-14.2	-10.6	-10.1	-6.2	-0.8	.....	.....	.....	.....	.....	.....	.....	.....
Troubled Assets Insurance Financing Fund Guaranteed Loan Financing Account	0.6	1.8	-1.6	-*	-0.8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Troubled Assets Relief Program FHA Refinance Letter of Credit Financing Account .....	.....	.....	-*	-*	-0.1	*	*	*	*	*	*	*	.....	.....	.....
Total, other transactions affecting borrowing from the public	129.9	-7.9	-17.8	-71.9	-14.2	-11.5	-4.8	-0.2	-*	-*	-0.1	-*	-*	-*	-*
Change in debt held by the public	281.2	-117.5	-55.1	-47.0	-15.9	-4.8	1.8	3.6	2.7	2.0	2.0	2.2	2.3	2.4	2.5
Debt held by the public	281.2	163.6	108.5	61.5	45.6	40.8	42.6	46.1	48.8	50.8	52.8	55.0	57.3	59.7	62.3
As a percent of GDP	2.0%	1.1%	0.7%	0.4%	0.3%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
Debt held by the public net of financial assets:															
Debt held by the public	281.2	163.6	108.5	61.5	45.6	40.8	42.6	46.1	48.8	50.8	52.8	55.0	57.3	59.7	62.3
Less financial assets net of liabilities — credit financing account balances:															
Troubled Assets Relief Program Equity Purchase Financing Account	105.4	76.9	74.9	13.6	10.3	5.0	1.0	0.8	0.7	0.6	0.5	0.5	0.4	0.4	0.4
Troubled Asset Relief Program Direct Loan Financing Account	23.9	42.7	28.5	17.9	7.8	1.6	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
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 .....	.....	.....	-*	-*	-0.1	-0.1	-0.1	-0.1	-0.1	-*	-*	-*	-*	-*	-*
Total, financial assets net of liabilities	129.9	122.0	104.1	32.2	18.0	6.5	1.7	1.5	1.5	1.4	1.3	1.3	1.3	1.3	1.3
Debt held by the public net of financial assets	151.3	41.6	4.4	29.3	27.6	34.3	40.9	44.6	47.3	49.4	51.4	53.7	56.0	58.5	61.0
As a percent of GDP	1.1%	0.3%	0.0%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%

* \$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.

Table 3-5. TROUBLED ASSET RELIEF PROGRAM EFFECTS ON THE DEFICIT AND DEBT CALCULATED ON A CASH BASIS¹

(Dollars in billions)

	Actual				Estimate											
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	
Deficit Effect:																
Programmatic and administrative expenses:																
Programmatic expenses:																
Equity purchases	217.6	-121.9	-36.8	-47.2	-14.1	-6.5	-4.4	-0.3	-0.1	-0.1	-0.2	-0.1	-0.1	-*	-*	
Direct loans and purchases of asset-backed securities ...	61.1	-1.0	-21.3	-5.0	-15.4	-6.8	-0.5	.....	.....	.....	.....	.....	.....	.....	.....
Guarantees of troubled asset purchases	-0.5	-0.3	-2.3	-*	-1.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
TARP housing programs	*	0.5	1.9	3.1	13.0	7.8	6.3	3.1	1.6	0.3	*	*	.....	.....	.....
Subtotal, programmatic expenses	278.3	-122.6	-58.6	-49.2	-17.4	-5.5	1.4	2.8	1.5	0.2	-0.2	-0.1	-0.1	-*	-*	
Administrative expenses	0.1	0.2	0.4	0.3	0.4	0.2	0.2	0.2	0.1	0.1	0.1	*	*	*	*	
Special Inspector General for TARP	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Subtotal, programmatic & administrative expenses	278.4	-122.3	-58.1	-48.9	-17.0	-5.2	1.6	3.0	1.6	0.3	-0.1	*	*	*	0.1	
Debt service ²	2.8	4.7	3.0	1.9	1.1	0.4	0.1	0.5	1.1	1.7	2.0	2.2	2.3	2.4	2.5	
Total deficit impact	281.2	-117.5	-55.1	-47.0	-15.9	-4.8	1.8	3.6	2.7	2.0	2.0	2.2	2.3	2.4	2.5	
Change in debt held by the public	281.2	-117.5	-55.1	-47.0	-15.9	-4.8	1.8	3.6	2.7	2.0	2.0	2.2	2.3	2.4	2.5	
Debt held by the public	281.2	163.6	108.5	61.5	45.6	40.8	42.6	46.1	48.8	50.8	52.8	55.0	57.3	59.7	62.3	
As a percent of GDP	2.0%	1.1%	0.7%	0.4%	0.3%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	
Debt Held by the Public Net of Financial Assets:																
Debt held by the public	281.2	163.6	108.5	61.5	45.6	40.8	42.6	46.1	48.8	50.8	52.8	55.0	57.3	59.7	62.3	
Less financial assets net of liabilities — credit financing account balances:																
Troubled Asset Relief Program Equity Purchase Financing Account	105.4	76.9	74.9	13.6	10.3	5.0	1.0	0.8	0.7	0.6	0.5	0.5	0.4	0.4	0.4	
Troubled Asset Relief Program Direct Loan Financing Account	23.9	42.7	28.5	17.9	7.8	1.6	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	
Troubled Assets Insurance Financing Fund Guaranteed Loan Financing Account	0.6	2.4	0.8	0.8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
FHA Refinance Letter of Credit Financing Account .....	.....	.....	-*	-*	-0.1	-0.1	-0.1	-0.1	-0.1	-*	-*	-*	-*	-*	-*
Total, financial assets net of liabilities	129.9	122.0	104.1	32.2	18.0	6.5	1.7	1.5	1.5	1.4	1.3	1.3	1.3	1.3	1.3	
Debt held by the public net of financial assets	151.3	41.6	4.4	29.3	27.6	34.3	40.9	44.6	47.3	49.4	51.4	53.7	56.0	58.5	61.0	
As a percent of GDP	1.1%	0.3%	0.0%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	

* \$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.

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. Direct activity under the TARP is expected to increase the 2013 deficit by \$1.1 billion. This reflects estimated TARP housing outlays of \$13.1 billion, offset by \$12.5 billion in downward reestimates of subsidy costs, including interest on reestimates. The estimates of U.S. Treasury debt attributable to TARP include both borrowing to finance 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 2013 is \$45.6 billion. Even as the TARP program is winding down, the debt due to TARP increases annually starting in 2015, with additional borrowing to finance TARP housing programs and debt service on TARP costs.

Debt held by the public net of financial assets reflects the cumulative amount of money the Federal Government has borrowed from the public for the program and not re-

paid, 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 U.S. 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 the TARP program is estimated to be \$27.6 billion as of the end of 2013. This is \$12 billion lower than the projected 2013 debt held net of financial assets reflected in the 2013 MSR. However, debt net of financial assets is anticipated to increase annually starting in 2014, due to the realization of the value of TARP assets, as investments continue to wind down and debt is incurred to finance TARP housing costs and debt service.

In 2013, Table 3–4 shows total TARP activity including interest effects reducing the deficit by \$1.7 billion. However, the \$3.8 billion in interest transactions with financing accounts is primarily due to the risk-adjustment to the discount rate required under EESA. Actual financing account interest transactions are estimated to be roughly \$1.9 billion, which suggests an overall deficit effect of TARP in 2013 of \$0.2 billion. Under the FCRA, the financing account earns and pays interest on its Treasury borrowings at the same 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, 2012, 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 present in these years, with no additional risk adjustment.²² Future cash flows reflect a risk adjusted discount rate and the corresponding financing account interest rate, consistent with the EESA requirement. For on-going 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 the 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 reflected in the financing accounts.²³ 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

Estimates of the deficit and debt under TARP transactions calculated on a cash basis are reflected in Table 3–5,

²² 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 cashflows using Treasury rates.

²³ For the Making Home Affordable programs and the HFA Hardest Hit Fund, Treasury's purchase of financial instruments does not result in the acquisition of an asset with potential for future cash flows, and therefore are recorded on a cash basis.

for comparison to those estimates in Table 3–4 reported above in which TARP transactions are calculated consistent with FCRA and Section 123 of EESA.

If TARP transactions were reported on a cash basis, the annual budgetary effect 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 guarantee as they occurred. Updates to estimates of future performance would impact the deficit in the year that they occur, and there would not be credit reestimates.

Under cash reporting, TARP would decrease the deficit in 2013 by an estimated \$15.9 billion, so the 2013 deficit would be \$14.2 billion lower if TARP were reflected on a cash basis than the estimate in the Budget. The deficit would be lower because repayments and proceeds of sales that are now included in non-budgetary financing accounts for TARP would be reflected as offsetting receipts when they occur. 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 reestimate, in contrast with 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.

Portion of the Deficit Attributable to TARP, and the Extent to Which the Deficit Impact is Due to a Reestimate

Table 3–4 shows the portion of the deficit attributable to TARP transactions. The largest changes in the overall TARP effects on the deficit are the result of reestimates of TARP activity outstanding as of September 30, 2012, and December 31, 2012. The specific effects are as follows:

- TARP reestimates and interest on reestimates will decrease the deficit by \$12.5 billion in 2013, including \$9.1 billion in decreased subsidy costs for TARP programs, and \$3.4 billion in interest on reestimates.
- Outlays for the TARP Housing Programs are estimated at \$13.1 billion in 2013, which includes payments under the MHA program, Hardest Hit Fund, and subsidy costs for the FHA Refinance program. Outlays for TARP Housing Program are estimated to increase peak in 2013, and then decline gradually through 2020.
- Administrative outlays for TARP are estimated at \$0.4 billion in 2013, and expected to decrease annually thereafter as TARP winds down through 2023. Costs for the Special Inspector General for TARP are estimated at \$48 million in 2014, and are expected to remain relatively stable through 2023.
- Interest transactions with credit financing accounts include interest paid to Treasury on borrowing by the financing accounts, offset by interest paid by

Table 3-6. TROUBLED ASSET RELIEF PROGRAM REESTIMATES

(Dollars in billions)

TARP Program and Cohort Year	Original subsidy rate	Current reestimate rate	Current reestimate amount	Net lifetime reestimate amount, excluding interest	TARP disbursements as of 12/31/2012 ¹
Equity Programs:					
Automotive Industry Financing Program (Equity)					
2009	54.52%	40.14%	-0.4	-3.2	12.5
2010	30.25%	3.99%	-0.1	-0.8	3.8
Capital Purchase Program					
2009	26.99%	-6.35%	-1.8	-65.0	204.6
2010	5.77%	11.90%	-*	*	0.3
AIG Investments					
2009	82.78%	22.89%	-7.1	-37.8	67.8
Legacy Securities Public-Private Investment Program					
2009	34.62%	-20.41%	*	-0.3	0.7
2010	22.97%	-42.16%	0.4	-3.2	5.5
Targeted Investment Program					
2009	48.85%	-8.47%	*	-23.2	40.0
Community Development Capital Initiative					
2010	48.06%	25.09%	-*	-0.1	0.6
Subtotal equity program reestimates			-9.0	-133.7	335.8
Structured and Direct Loan Programs:					
Automotive Industry Financing Program (AIFP)					
2009	58.75%	23.97%	-3.0	-19.3	63.4
Legacy Securities Public Private Investment Program					
2009	-2.52%	-0.29%	-*	*	1.4
2010	-10.85%	2.63%	-0.1	1.4	11.0
Small Business Lending Initiative 7(a) purchases					
2010	0.48%	-1.35%	-*	-*	0.4
Term-Asset Backed Securities Loan Facility ²					
2009	-104.23%	-501.79%	-0.1	-0.4	0.1
Subtotal direct loan program reestimates			-3.3	-18.2	76.2
Guarantee Programs:					
Asset Guarantee Program ³					
2009	-0.25%	-1.16%	-0.2	-1.3	301.0
FHA Refinance Letter of Credit					
2011	1.26%	0.96%	-*	-*	0.1
2012	4.00%	3.95%	-*	-*	0.2
Subtotal guarantee program reestimates			-0.2	-1.3	301.3
Total TARP Reestimates			-12.5	-153.3	713.4

* \$50 million or less.

¹ Disbursements do not reflect cancelled or closed out facilities.² The Term-Asset Backed Securities Loan Facility 2009 subsidy rate reflects the anticipated collections for Treasury's \$20 billion commitment, as a percent of estimated lifetime disbursements of roughly \$0.3 billion.³ Disbursement amount reflects the face value of guarantees of assets supported by the guarantee. The TARP obligation for this program was \$5 billion, the maximum contingent liability while the guarantee was in force.

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 \$3.8 billion in 2013

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 estimated at \$1.1 billion for 2013 (as shown in Table

Table 3–7. DETAILED TARP PROGRAM LEVELS AND COSTS

(In billions of dollars)

Program	May 31 st Valuation		2014 Budget	
	TARP Obligations	Subsidy Costs	TARP Obligations	Subsidy Costs
Equity Purchases				
Capital Purchase Program	204.9	-7.4	204.9	-7.7
AIG Investments	67.8	21.9	67.8	18.1
Targeted Investment Program	40.0	-3.6	40.0	-3.6
Automotive Industry Financing Program (AIFP)	16.3	5.8	16.3	5.3
Public-Private Investment Program - Equity	7.5	-2.3	7.2	-2.0
Community Development Capital Initiative	0.6	0.1	0.6	0.2
Subtotal equity purchases	337.1	14.6	336.8	10.2
Direct Loan Programs				
Automotive Industry Financing Program (AIFP)	63.4	19.6	63.4	17.7
Term Asset-Backed Securities Loan Facility (TALF)	4.3	-0.4	0.1	-0.5
Public-Private Investment Program - Debt	14.4	-0.3	13.6	0.2
Small Business 7(a) Program	0.4	*	0.4	*
Subtotal direct loan programs	82.4	18.9	77.5	17.4
Guarantee Programs under Section 102				
Asset Guarantee Program ¹	5.0	-3.7	5.0	-3.8
Subtotal asset guarantees	5.0	-3.7	5.0	-3.8
TARP Housing Programs				
Making Home Affordable (MHA) Programs	29.9	29.9	29.9	29.9
Hardest Hit Fund	7.6	7.6	7.6	7.6
Subtotal non-credit programs	37.5	37.5	37.5	37.5
FHA Refinance Letter of Credit ²	8.1	8.1	1.0	0.1
Subtotal TARP housing programs	45.6	45.6	38.5	37.6
Totals	470.1	75.4	457.8	61.5
Memorandum:				
Interest on reestimates ³		-11.9		-13.9
Deficit impact before administrative costs and interest effects		63.5		47.5

* \$50 million or less

¹ The total assets supported by the Asset Guarantee Program were \$301 billion.² TARP obligations under the FHA Refinance Letter of Credit provide first loss coverage of eligible FHA insured mortgages.³ Total programmatic costs of the TARP exclude interest on reestimates of \$11.9 billion in "May 31st Valuation" and \$13.9 billion in "2014 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.

3–4), and then expected to increase to \$2.5 billion by 2023, largely due to outlays for TARP housing programs. Total debt service will continue over time after the TARP winds down, due to the financing of past TARP costs.

Analysis of TARP Reestimates. The costs of outstanding TARP assistance are reestimated 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 reestimated dollar amounts to be recorded in 2013 reflect TARP disbursements through December 31, 2012, while reestimated subsidy rates reflect the full lifetime costs, including anticipated future disbursements. As noted above, the total decrease in the deficit attributable to TARP reestimates in 2013 is \$12.5 billion, reflecting a \$9.1 billion net downward reestimate

of the subsidy cost and \$3.4 billion in net downward interest on the reestimates. Detailed information on upward and downward reestimates to program costs are reflected in Table 3–6.

The current reestimate reflects a significant decrease in estimated TARP costs from the 2013 Budget. This decrease was due in large part improved market conditions and significant progress winding down TARP investments over the past year, most notably the higher valuations of AIG common stock and realized sale proceeds, and higher valuation of GM common stock.

Differences Between Current and Previous OMB Estimates

As shown in Table 3–7, the Budget reflects a total TARP deficit impact of \$47.5 billion before administra-

Table 3–8. COMPARISON OF OMB AND CBO TARP COSTS

(In billions of dollars)

Program	Estimates of Deficit Impact	
	CBO Cost Estimate ¹	OMB Cost Estimate
Capital Purchase Program	-18	-15
Targeted Investment Program	-8	-4
AIG Assistance	14	15
Automotive Industry Financing Program	20	20
Term Asset-Backed Securities Loan Facility	*	-1
Other Programs ²	-1	-6
TARP Housing Programs	16	38
Total	24	47

* Amounts round to less than \$1 billion.

¹ CBO estimates from October 2012, available online at http://www.cbo.gov/sites/default/files/cbofiles/attachments/TARP10-2012_0.pdf² "Other Programs" reflects an aggregate cost for PPIP (debt and equity purchases), CDCI, AGP, and small business programs.

tive costs and interest effects. This is a decrease of \$20.5 billion from the 2013 MSR projection of \$68.0 billion and \$16.0 billion from the May 31st valuation of \$63.5 billion. The estimates included in MSR do not include updates to estimated subsidy rates or market valuations, such as for common stock held by Treasury. While the May 31st valuation is not reflected in the deficit, it is more comparable to budget estimates because it includes adjustments to reflect recent market performance, and is presented in Table 3–7 as for comparison to 2014 Budget estimates.

The estimated TARP deficit impact reflected in 3–7 differs from the subsidy cost of \$61.5 billion in the Budget because the deficit impact reflects a \$13.9 billion cumulative downward adjustment for interest on reestimates. These adjustments account for the time between when the subsidy cost was originally estimated and the time when the reestimate is booked.

Differences Between OMB and CBO Estimates

Table 3–8 compares the subsidy cost for TARP reflected in MSR against the costs estimated by the Congressional Budget Office in its "Report on the Troubled Asset Relief Program – October 2012."²⁴

CBO estimates the total cost of TARP at \$24 billion, based on estimated lifetime TARP obligations of \$431 billion. The Budget reflects current estimates of roughly \$457.8 billion in program obligations, and \$61.5 billion in programmatic costs, excluding interest on reestimates. Differences in the estimated cost of the TARP Housing programs, which stem from divergent demand and participation rate assumptions, are the main difference between OMB and CBO cost estimates. The CBO projects \$16 billion in total TARP Housing expenditures, while the Budget reflects a \$37.6 billion estimate. CBO and OMB cost estimates for the Capital Purchase Program are \$10 billion apart because of different assumptions for the remaining institutions with investments in the

program. Similarly, CBO and OMB cost estimates for the Automotive Industry Financing Program are \$3 billion apart due to different assumptions for the future performance of equity investments in the program.

Differences Between EESA and FCRA Cost Estimates

EESA directs that for asset purchases and guarantees under TARP, the cost shall be determined pursuant to the FCRA, except that the discount rate shall be adjusted for market risks. EESA's directive to adjust the FCRA discount rate for market risks effectively assumes higher losses on these transactions than those estimated under FCRA guidelines, which require that Treasury rates be used to discount expected cashflows. In implementing this requirement of EESA, the market risk adjustment is intended to capture the cost of the extra return on investment that a private investor would seek in compensation for uncertainty surrounding risks of default and other losses reflected in the cashflows.²⁵

Table 3–9 compares the subsidy costs and subsidy rates of TARP programs discounted at the Treasury rate adjusted for market risk (EESA), and discounted at the unadjusted Treasury rate (FCRA) using 2014 Budget estimated cashflows with the public. Now that the bulk of TARP financial assets have wound down, removing the market risk adjustment from the discount rate for TARP direct, guaranteed, and equity programs (excluding housing programs) decreases subsidy costs by only 1.6 percent (\$0.4 billion). Programs that have fully wound down reflect no difference between the EESA and FCRA estimates, as there are no future cashflows which would be discounted using a risk-adjusted rate under EESA. Treasury holdings within the AIFP program include a significant amount of common stock, the value of which is based on the closing December 31, 2012, share price. The share price of common stock is inherently adjusted

²⁴ United States. Congressional Budget Office. Report on the Troubled Asset Relief Program – October 2012. Washington: CBO, 2012. http://www.cbo.gov/sites/default/files/cbofiles/attachments/TARP10-2012_0.pdf

²⁵ For example, if there were a 100 percent default expectation on a loan, and losses given default were projected at 100 percent, the market risk adjustment to the discount rate would be zero. This reflects the fact that there are no unexpected losses if losses are expected to be 100 percent of the face value of the loan.

Table 3–9. COMPARISON OF EESA AND FCRA TARP SUBSIDY COSTS

(In billions of dollars)

Program	TARP Obligations	Subsidy Cost	
		EESA	FCRA
Capital Purchase Program	204.9	–7.7	–7.9
Targeted Investment Program	40.0	–3.6	–3.6
Asset Guarantee Program ¹	5.0	–3.8	–3.8
Community Development Capital Initiative	0.6	0.2	0.2
Term Asset-Backed Securities Loan Facility	0.1	–0.5	–0.5
Small Business 7(a) Program	0.4	–*	–*
Public Private Investment Program ²	20.8	–1.8	–1.9
AIG Investments	67.8	18.1	18.1
Automotive Industry Financing Program ²	79.7	23.0	23.0
Subtotal TARP equity and direct loans	424.5	23.8	23.4
TARP Housing Programs			
Making Home Affordable Programs ³	29.9	29.9	29.9
Hardest Hit Fund ³	7.6	7.6	7.6
Subtotal Non-Credit Programs	37.5	37.5	37.5
FHA Refinance Letter of Credit ⁴	1.0	0.1	0.1
Subtotal TARP Housing	38.5	37.6	37.6
Total ⁵	457.8	61.5	61.0

* \$50 million or less

¹ The total assets supported by the Asset Guarantee Program were \$301 billion.² Rates for PPIP and AIFP reflect weighted average subsidy costs across various instruments.³ TARP Making Home Affordable Programs and Hardest Hit Fund involve financial instruments without any provision for income or other returns, and are recorded on a cash basis. The table reflects 100 percent subsidy cost for these programs.⁴ TARP obligations under the FHA Refinance Letter of Credit provide first loss coverage of eligible FHA insured mortgages.⁵ Total subsidy costs do not include interest effects or administrative costs. Costs at EESA and FCRA discount rates are the same for common stock programs and for programs that are closed or awaiting a closing reestimate.

for market risk and, therefore, there is no additional market risk adjustment necessary for the EESA directive. As a result, there is no difference in the cost of AIFP between values calculated using the Treasury and risk adjusted rate. The non-credit TARP Housing programs are reflected on a cash basis and, therefore, costs are not discounted, which is why there is no difference in the subsidy cost estimate. Using December 31, 2012, valuations, TARP investments discounted at a risk adjusted rate will cost an estimated \$61.5 billion, which suggests a net subsidy rate of 13.4 percent. TARP investments discounted under FCRA are estimated to have a lifetime cost of \$61 billion, or a net subsidy rate of 13.3 percent.

TARP OVERSIGHT AND ACCOUNTABILITY

Ensuring effective internal controls and monitoring of TARP programs and funds to protect taxpayer investments remains a top priority of TARP staff and those offices charged with TARP oversight and accountability. The Treasury has implemented a comprehensive set of assessments geared toward identifying risks, evaluating their potential impact, and prioritizing resource assignments to manage risks based on a combined top-down and bottom-up assessment of risk. The Internal Control Review organization within the Office of Financial Stability (OFS) utilizes the assessments to ensure appropriate coverage of high-impact areas. A Senior Assessment Team and the

Internal Control Program Office guide OFS efforts to meet all applicable requirements for a sound system of internal controls, and to review and respond to all recommendations made by the four TARP oversight bodies—the Special Inspector General for TARP (SIGTARP), the Government Accountability Office (GAO), the Financial Stability Oversight Board, and the Congressional Oversight Panel (terminated April 3, 2011). The soundness of Treasury's TARP compliance monitoring, internal control, and risk management policies and processes are reflected in the clean opinions issued by GAO after its audit of TARP financial statements for 2009, 2010, 2011, and 2012 and the associated internal control over financial reporting.

The Treasury has issued regulations governing executive compensation and conflicts of interest related to TARP program administration and participation. Compliance with these rules is monitored on an ongoing basis, and reviews of participant conduct and program administration are conducted as appropriate. In executing its responsibility for monitoring compliance with executive compensation requirements, the Treasury has also created an Office of the Special Master for TARP to review TARP participant compliance with applicable legal and regulatory authority, and to recommend action to the Secretary when compensation is found to be awarded in a manner or amount deemed contrary to the public interest.

Special Inspector General for TARP (SIGTARP)

Section 121 of EESA created the Special Inspector General for the Troubled Asset Relief Program (SIGTARP) to prevent fraud, waste, and abuse in the administration of TARP programs through audits and investigations of

the purchase, management, and sales of TARP assets. SIGTARP is required to submit quarterly reports to Congress, and as of its latest report released on October 25, 2012, it has issued 19 reports and led over 150 investigations since its inception.

4. LONG TERM BUDGET OUTLOOK

The horizon for the detailed estimates of receipts and outlays in the President's Budget is 10 years. This 10-year horizon balances consideration of the future impacts of budget decisions made today and a practical limit on the construction of detailed budget projections for years in the future.

Decisions made today can have important repercussions beyond the 10-year horizon. It is important to anticipate budgetary requirements beyond the 10-year horizon, and the effects of changes in policy on those requirements, despite the uncertainty surrounding the assumptions needed for such estimates. Long-run budget projections can be useful in drawing attention to potential problems that could become unmanageable if allowed to grow.

To this end, the budget projections in this chapter extend the 2014 Budget for 75 years through 2088. Because of the uncertainties involved in making long-run projections, results are presented for a base case and for several alternative scenarios.

Recent legislation has led to significant improvements in the Nation's long-term fiscal health. First, the passage of the Affordable Care Act (ACA) in 2010 enacted cost-reduction mechanisms in the health sector that will reduce deficits by more than \$1 trillion over the first two decades, according to the Congressional Budget Office (CBO), and have the potential to significantly reduce the trajectory of health spending, and future budget deficits, over the long run. Second, the Budget Control Act of 2011 (BCA) reduced the long-term path of discretionary spending by placing such spending under tight limits through 2021. Most recently, enactment of the American Taxpayer Relief Act of 2012 this past January increased income tax rates on the highest-income taxpayers, increasing tax receipts above prior projections.

The 2014 Budget includes further initiatives that would help control future deficits. The projections in this chapter include several methodological changes that highlight the fact that simply extending current laws and the Budget's policies puts the country on a course to balance the budget, with the publicly held debt falling relative to the economy even sooner. While additional reforms may be required to ensure that programs like Medicare Part A and Social Security, which are financed from dedicated revenue sources, remain self-sustaining, overall budgetary resources would be sufficient to support future spending over the long term if Budget policies and assumptions are carried forward. Nonetheless, there is considerable uncertainty in the Administration's long-term projections, and future challenges will require policy responses that have yet to be formulated.

When the current Administration took office, the budget deficit was rising sharply because of the declining

economy and measures taken to revive it. Revenues had fallen, as a share of GDP, to their lowest level since 1950. Spending on countercyclical programs like unemployment insurance had also risen sharply. The measures taken by the Administration to revive economic growth are helping to increase revenues, and the tax increases on high-income taxpayers will boost revenues further. Meanwhile, as noted above, measures like the ACA and the BCA along with the proposals in this Budget will constrain future spending and help narrow the deficit. By the end of the 10-year period, the primary budget—receipts and non-interest spending—is estimated to be in surplus with the debt-to-GDP ratio declining. Beyond the 10-year horizon, however, demographic pressures and continued high costs for health care are likely to begin gradually pushing up the deficit and the ratio of debt to GDP for an additional 15 years before the easing of baby boom retirements, continued control in Government discretionary spending and health costs, and gradually rising revenues due to growing household income turn the country on a course toward reducing the debt-to-GDP ratio and balancing the budget in 2055.

The key to long-range fiscal sustainability is balancing the Government's commitments for major health and retirement programs—Medicare, Medicaid and Social Security—with sufficient tax receipts along with control in discretionary and non-entitlement spending, while allowing for additional entitlement reforms as appropriate.

- Medicare's growth has generally exceeded that of other Federal spending for decades, tracking the rapid growth in overall health care costs. The ACA is curtailing this cost growth, but Medicare spending is still projected to reach higher levels relative to the economy and the rest of the budget than those that prevail today, due both to rising health costs and the aging population.
- Medicaid's growth has, like Medicare, generally tracked the growth in overall health costs, and therefore historically exceeded that of other Federal spending. Medicaid assistance will expand further beginning in 2014 because of broadened coverage provided by the ACA. However, the ACA's reforms are also expected to reduce Medicaid per beneficiary spending growth in the long-run projections, as Medicare cost containment spills over into the rest of the health sector.
- Outlays for Social Security benefits will rise as a share of the economy as the population ages, putting pressure on the long-term budget.
- Discretionary spending for both defense and nondefense programs will continue to shrink relative to

the economy as discretionary spending limits hold this form of spending to growth rates lower than inflation. It is unlikely that the growth in discretionary spending will continuously remain lower than inflation over the very long term, so after the end of the 10-year budget window, the projections allow for growth with inflation and population growth to effectively hold discretionary spending constant on a real per capita basis.

- Without any further changes in tax law, revenues will gradually rise as a share of the economy over the 75-year horizon, as individuals' real incomes rise into higher tax brackets (which are indexed for inflation). Without future legislative action to cut taxes, revenues will continue to gradually rise as a share of the economy.

Future budget outcomes depend on a host of unknowns—changing economic conditions, unforeseen international developments, unexpected demographic shifts, the unpredictable forces of technological advance, and evolving political preferences, to name a few reasons that the budget outcomes could change for reasons other than the inevitability of future legislated changes. These uncertainties make even short-run budget forecasting quite difficult, and the uncertainties increase the further into the future projections are extended. A full treatment of all the relevant risks is beyond the scope of this chapter, but the chapter does show how sensitive long-run budget projections are to changes in some of key economic and demographic assumptions.

The Long-Run Budget Projections

The 2014 Budget includes nearly \$1.8 trillion in net deficit reduction over the next 10 years. Combined with the more than \$2.5 trillion in savings from the discretionary spending limits enacted in the BCA and the revenue increases enacted in ATRA, this would generate more

than \$4.3 trillion in deficit reduction over the next decade. These savings would bring the Nation to the point where current non-interest expenditures are no longer adding to debt and where debt is decreasing as a share of the economy—a key metric of fiscal sustainability. The base case long-run projections begin with the 10-year estimates of revenues and outlays under 2014 Budget policies, which result in a primary surplus of 1.2 percent of GDP and an overall deficit of 1.7 percent of GDP in 2023. In the decade and a half beyond 2023, the fiscal position gradually deteriorates mainly because of the aging of the population and the high continuing cost of health care driving up outlays for Social Security, Medicare, and Medicaid as a share of GDP. Revenues also increase as a share of GDP, but more gradually, due to economic growth. By 2033, the deficit is projected to peak at 2.8 percent of GDP, but thereafter rising revenues and controlled spending along with stabilized entitlement growth cause the deficit to begin to fall rapidly—falling below 2 percent of GDP in 2045, and below 1 percent of GDP in 2051. The Budget reaches balance in 2055, when revenues and outlays are 21.5 percent of GDP, slightly higher than their levels during the budget surpluses of 1998-2001. The Federal Government is then projected to run surpluses over the remainder of the projection window, with publicly-held debt falling rapidly until it reaches zero in 2074 (see Chart 4-1). The 75-year fiscal gap disappears in the base case, becoming a fiscal surplus of 1.6 percent of GDP.

These projections are not intended to be a prediction of future legislative action, nor are they intended to reflect explicit policy proposals for the years beyond 2023; rather, they are a mechanical extrapolation of the Budget policies. Relative to last year's projections, the base case projections make two methodological changes, both of which are intended to provide a baseline forecast under the assumption that there are no future legislative changes in policy.

First, the projections allow revenues to rise as a share of GDP, as will occur automatically under current law as real household incomes grow. Allowing revenues to rise

Chart 4-1. Publicly Held Debt Under 2014 Budget Policy Extended

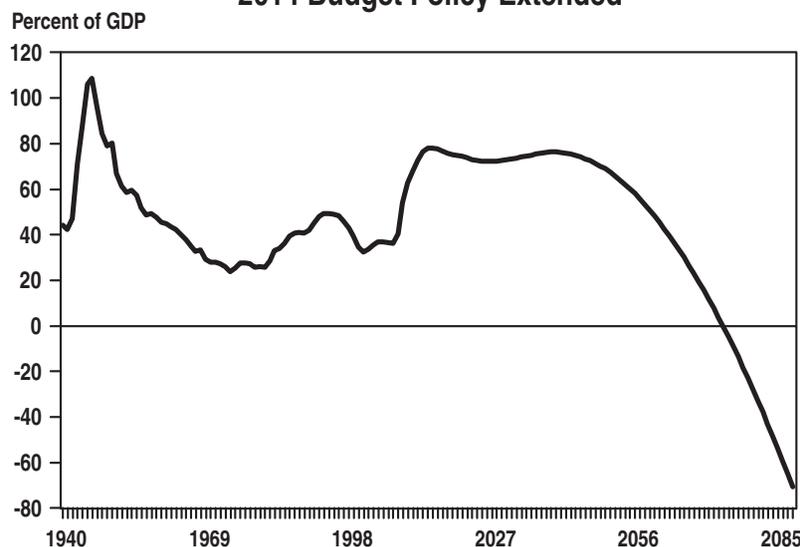


Table 4–1. LONG-RUN BUDGET PROJECTIONS
(Receipts, Outlays, Surplus or Deficit, and Debt as Percent of GDP)

	1980	1990	2000	2010	2020	2030	2040	2050	2060	2070	2080	2085
Receipts	19.0	18.0	20.6	15.1	19.4	20.1	20.5	21.2	21.9	22.7	23.4	23.8
Outlays:												
Discretionary	10.1	8.7	6.3	9.1	5.5	4.5	4.1	3.5	3.1	2.7	2.4	2.3
Mandatory:												
Social Security	4.3	4.3	4.1	4.9	5.3	6.2	6.4	6.2	6.2	6.1	6.2	6.3
Medicare	1.1	1.7	2.0	3.1	3.1	3.8	4.1	4.2	4.3	4.4	4.5	4.5
Medicaid	0.5	0.7	1.2	1.9	1.9	2.2	2.6	2.8	2.8	2.9	2.9	2.9
Other	3.7	3.2	2.4	3.7	3.2	3.0	2.7	2.6	2.4	2.3	2.1	2.1
Subtotal, mandatory	9.6	9.9	9.7	13.6	13.5	15.2	15.8	15.8	15.6	15.7	15.7	15.7
Net interest	1.9	3.2	2.3	1.4	2.7	2.9	3.1	2.8	2.0	0.6	-1.1	-2.2
Total outlays	21.7	21.9	18.2	24.1	21.6	22.7	22.9	22.1	20.7	19.1	17.0	15.8
Surplus (+) or deficit (-)	-2.7	-3.9	2.4	-9.0	-2.2	-2.6	-2.5	-0.9	1.2	3.6	6.4	8.0
Primary Surplus (+) or deficit (-)	-0.8	-0.6	4.7	-7.6	0.5	0.4	0.6	1.9	3.2	4.2	5.3	5.8
Federal debt (+) or asset (-) held by the public, end of period	26.1	42.1	34.7	62.9	74.9	72.9	76.1	68.5	47.3	13.9	-30.6	-57.1

Note: The figures shown in this table beyond 2020 are the product of a long-range forecasting model maintained by OMB. This model is separate from the models and capabilities that produce detailed programmatic estimates in the Budget. It was designed to produce long-range projections based on additional assumptions regarding growth in the economy, the long-range evolution of specific programs, and the demographic and economic forces affecting those programs. The model, its assumptions, and sensitivity testing of those assumptions are presented in this chapter.

is methodologically consistent with the approach for the projections of Social Security, Medicare, and other mandatory spending programs in that it projects the levels of revenues that would result under extrapolation of the Budget policies. Under that approach, revenues would rise as a share of GDP because household income is projected to rise in real terms. Real income growth will push households into higher tax brackets (which are indexed to inflation), resulting in taxes that gradually rise as a share of the economy.

Second, after 2023, the new projections increase discretionary spending to keep pace with inflation and population growth, rather than GDP growth. Growing these programs at the rate of inflation plus population growth reflects the growth rate that would be needed to maintain current services per capita. This growth rate is higher than the growth rate for these programs in the baselines assumed by the Office of Management and Budget (OMB) and the CBO in the absence of discretionary spending limits.

As shown in Table 4–2, other assumptions lead to substantially different projections. Under a scenario that instead assumes that future policymakers enact additional tax cuts and spending increases such that income tax revenues remain roughly flat as a share of the economy and discretionary spending grows with GDP, deficits and debt rise quickly throughout the 2020s and 2030s before the pace of increase slows around 2040. Deficits ultimately reach 5.6 percent of GDP and debt continues to rise gradually throughout the projection horizon. Under this alternative scenario, there is an overall fiscal gap of 0.7 percent of GDP over the 75-year projection horizon (see Chart 4–2 and Table 4–2). Importantly, however, this alternative scenario effectively assumes that Congress passes substantial new tax cuts in future years. Equivalently, it assumes that households with a given level of income – adjusted

for inflation – would pay significantly lower taxes in the future than they do today. Likewise, that scenario allows for significant increases in discretionary spending beyond what would be needed to support current services in per capita terms. In effect, the additional deficits forecast under this scenario are entirely a reflection of projected future Congressional action to reduce taxes and increase discretionary spending, rather than the result of continuation of current policies.

As noted, the base case is neither a prediction nor a recommendation but is instead a mechanical extrapolation. In particular, it would be unrealistic and undesirable for revenues to continue to increase and discretionary spending to continue to fall as a share of GDP over the long run even as the Federal Government ran large surpluses, paid off its entire debt, and began accumulating assets, as shown in Table 4–1. The purpose of the long-run forecast shown here is simply to provide an extension of budget policies against which to evaluate the nation's fiscal condition and potential changes in policy. That base forecast shows that under 2014 Budget policies, in the long run the budget does not run deficits or increase the debt. On the other hand, in an alternative scenario, holding down revenue growth and allowing discretionary spending to keep pace with GDP growth, there is a modest long-run fiscal gap, as shown in Table 4–2.

Key Drivers of Program Growth: Health Costs and Demographic Changes

Health Costs.—Health care costs have risen faster than inflation for decades. This rising cost trend has contributed to steady increases in the amounts spent on Medicare and Medicaid, while also making it more difficult for people to afford private health insurance. The ACA tackles both problems by extending health insur-

**Table 4–2. 75-YEAR FISCAL GAP (–)/SURPLUS (+)
UNDER ALTERNATIVE BUDGET SCENARIOS**
(Percent of GDP)

2014 Base Case	1.6
2014 Budget policies plus assumed future tax cuts and spending increases	–0.7
Health:	
Excess cost growth averages 0%	2.9
Excess cost growth averages 1%	0.8
Discretionary Outlays:	
Grow with inflation	2.0
Grow with GDP	0.5
Revenues:	
Income tax brackets are regularly increased	0.4
Productivity:	
Productivity grows by 0.25 percent per year faster than the base case	3.5
Productivity grows by 0.25 percent per year slower than the base case	–0.4
Population:	
Fertility:	
2.3 births per woman	2.4
1.7 births per woman	0.7
Immigration:	
1.3 million immigrants per year	2.2
0.8 million immigrants per year	1.0
Mortality:	
Female life expectancy 83.8; male life expectancy 80.1	2.0
Female life expectancy 89.8; male life expectancy 87.3	1.5

ance coverage to millions of Americans who currently lack insurance, while making reforms that will slow future growth in medical costs. When the law is fully implemented, Medicare spending per beneficiary will rise at rates substantially below those at which spending has grown for four decades. Even with these changes, however, overall health care costs are likely to continue to rise faster than inflation as the population ages.

The base case projections assume that the provisions of the ACA are fully implemented, limiting health care costs in the long run compared with prior law. The long-run Medicare assumptions for the years following the 10-year budget window are essentially the same as those in the latest Medicare Trustees' report (April 2012), except in cases where those projections exceed the target growth rate of 0.5 percentage points above growth in GDP per capita set by the Budget's proposal to strengthen the Independent Payment Advisory Board (IPAB).¹ Generally, this constraint helps to control excess cost growth in the two decades after the budget window, before excess cost growth dips below the proposed threshold. The Trustees' projections imply that average long-range annual growth in Medicare spending per enrollee is 0.4 percentage points per year faster than the projected growth rate in GDP per

¹ The ACA established an Independent Payment Advisory Board (IPAB) that is required to propose changes in Medicare should Medicare costs exceed target growth rates specified in law; such IPAB-proposed changes would take effect automatically, unless overridden by the Congress. The Budget includes a proposal that would strengthen IPAB by lowering the target growth rate applicable for 2020 onward from GDP + 1.0 percentage points to GDP + 0.5 percentage points.

capita, but the growth rate is less than 0.3 percentage points with the IPAB constraint imposed. This growth rate for Medicare is significantly smaller than previous projections prior to the passage of the ACA—a reduction the Trustees largely attribute to the ACA—but is higher than the projections in the 2013 Budget due to increased cost rates recommended by the Medicare Technical Review Panel and included in the 2012 Trustees' report.

Along with the rules for Medicare, there are a number of reforms in the ACA that experts believe could produce significant savings relative to the historical trend and that would affect medical costs more broadly. One is an excise tax on the highest-cost insurance plans, which will encourage substitution of plans with lower costs, while raising take-home pay. There is also an array of delivery system reforms, including incentives for accountable care organizations and payment reform demonstrations that have the potential to re-orient the medical system toward providing higher quality care, not just more care, and thus reduce cost growth in the future.² Because of these broader reforms, Medicaid spending per beneficiary and private health spending per capita are also projected to slow, though not as much as Medicare.³

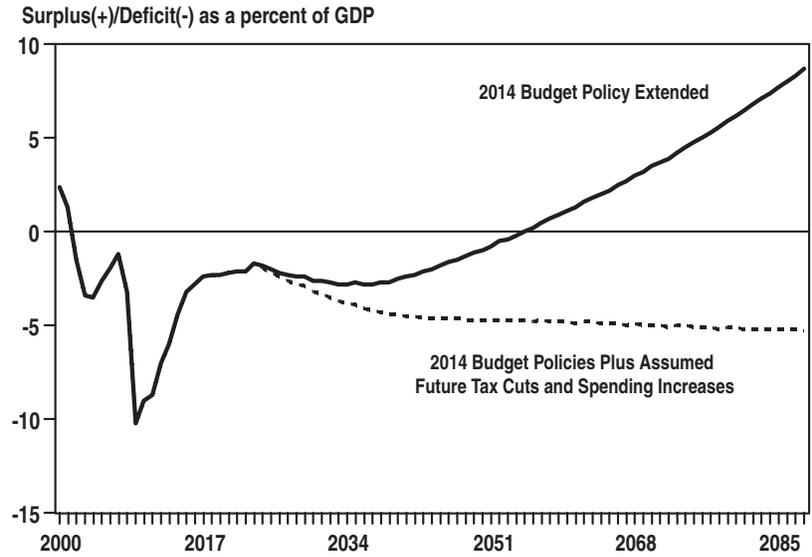
Elderly Population.—An aging population also poses a serious long-run budgetary challenge. Because of lower expected fertility and improved longevity, the Social Security actuaries project that under current law in which the normal retirement age rises to 67, the ratio of workers to Social Security beneficiaries will fall from around 2.8 currently to a level of 2.0 by the time most of the baby boomers have retired. From that point forward, the ratio of workers to beneficiaries is expected to continue to decline slowly due to increased longevity of retirees. With fewer workers to pay the taxes needed to support the retired population, budgetary pressures will steadily mount, and without reforms, trust fund exhaustion is projected by the Social Security Trustees to occur in 2033, after which time the Trustees project annual resources will be sufficient to pay about 75 percent of scheduled benefits.

Other Programs.—Though smaller in size and facing fewer long-run fiscal challenges, smaller mandatory programs are also included in the projections and contribute to the long-run fiscal picture. Other mandatory programs generally decline relative to the size of the economy. These include Federal pension benefits for Government workers. The shift in the 1980s from the traditional Federal pension benefit of the Civil Service Retirement System (CSRS) to the much smaller defined benefit pension plan of the Federal Employees Retirement System (FERS) is having a marked effect on Federal civilian pensions, which is expected to continue as FERS comes to dominate future pension projections. As a result, spending for Federal retirement is expected to permanently shrink

² Groups of providers meeting certain criteria can be recognized as accountable care organizations (ACOs), which allow them to coordinate care and manage chronic disease more easily thereby improving the quality of care for patients. ACOs can then share in any cost savings they achieve for Medicare if they meet quality standards.

³ The projections assume that growth in Medicaid spending per enrollee and private health spending per capita exceeds growth in GDP per capita by 0.7 percentage points.

Chart 4-2. Alternative Base Assumptions



relative to the size of the economy over the next 75 years. Most other entitlement programs are also expected to grow more slowly than GDP due mainly to falling poverty and population growth rates over the very long run.

The Fiscal Gap

The present value fiscal gap is one measure of the size of the adjustment needed to preserve fiscal sustainability in the long run.⁴ It is defined as the present value increase in taxes or reduction in non-interest expenditures over a finite time period required to keep the long-run ratio of Government debt-to-GDP at its current level if implemented immediately. The gap can be measured in

present value dollars or as a percentage of GDP. Since the fiscal gap is calculated over a finite time period, it may understate the adjustment needed to achieve permanent sustainability. If future publicly-held debt is projected to be lower than current debt, then there is a fiscal surplus rather than a fiscal gap. Table 4–2 shows present value fiscal gap or surplus calculations calculated over a 75-year horizon for the base case as well those under different assumptions. This value can be interpreted as the average level of deficit change needed each year from 2014 to 2088 to maintain the current level of debt held by the public as a percentage of GDP. Since the base case reaches balance, it has a fiscal surplus of 1.6 percent of GDP, which means that deficit reduction is not needed to maintain the current level of debt over 75 years.

⁴ Alan J. Auerbach, “The U.S. Fiscal Problem: Where We Are, How We Got Here, and Where We’re Going,” NBER: Macroeconomics Annual 1994, pp 141 – 175.

Chart 4-3. Alternative Health Care Costs

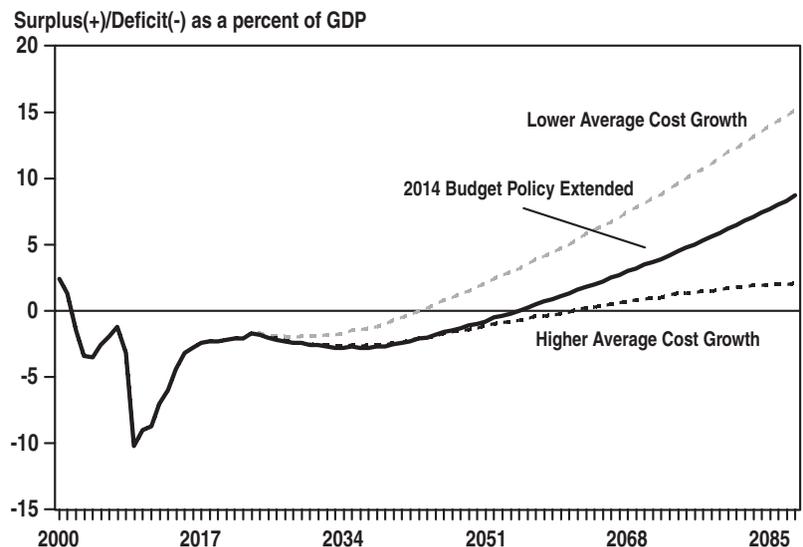
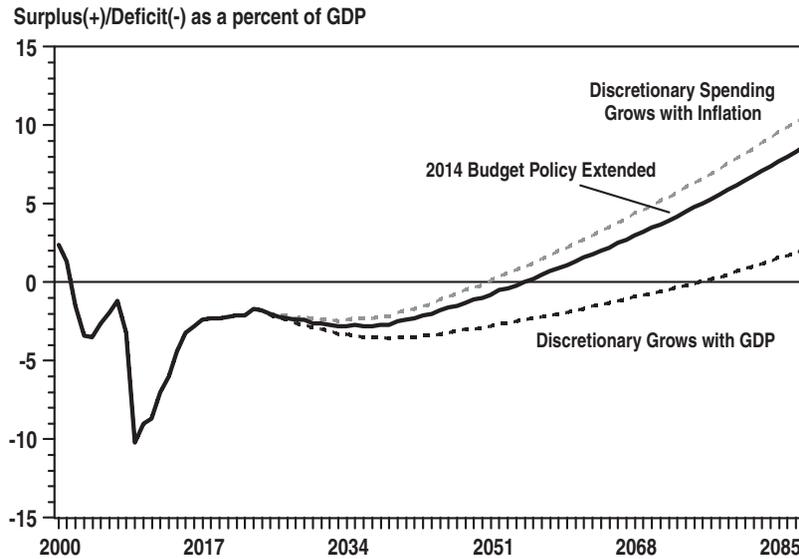


Chart 4-4. Alternative Discretionary Projections



Alternative Policy, Economic, and Technical Assumptions

The quantitative results discussed above are sensitive to changes in underlying policy, economic, and technical assumptions. Some of the most important of these assumptions and their effects on the budget outlook are discussed below. It is important to note that these paths are merely illustrative; they are not intended to represent the policy preferences of this Administration or the predicted actions of future Administrations and Congresses.

Health Spending.—The base projections for Medicare and Medicaid over the next 75 years assume an extension of current law and the policies in the 2014 Budget. The health cost alternatives illustrated in Chart 4–3 assume that medical costs rise more rapidly or more slowly than in the base case. The first alternative assumes that costs

per beneficiary rise at one percentage points per year above GDP per capita in the entire health sector, while the second alternative assumes zero growth above GDP per capita in the health sector. Table 4–2 shows the effect of these alternatives on the 75-year present value fiscal surplus, which falls from 1.6 percent of 75-year present value GDP in the base case to 0.8 percent of GDP in the high health cost growth scenario and rises to 2.9 percent of GDP in the low health cost growth scenario.

Discretionary Spending.— The current base projection for discretionary spending assumes that after 2023, discretionary spending grows with inflation and population (see Chart 4–4). An alternative assumption would be to allow discretionary spending to keep pace with the economy and grow with GDP. Yet another possible assumption is to only allow discretionary spending to grow with inflation. As shown in Table 4–2, the 75-year fis-

Chart 4-5. Alternative Revenue Projections

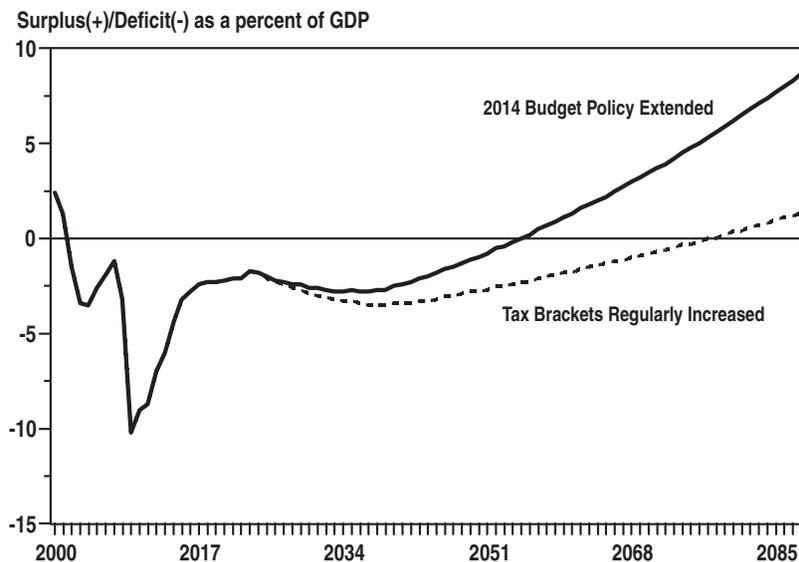
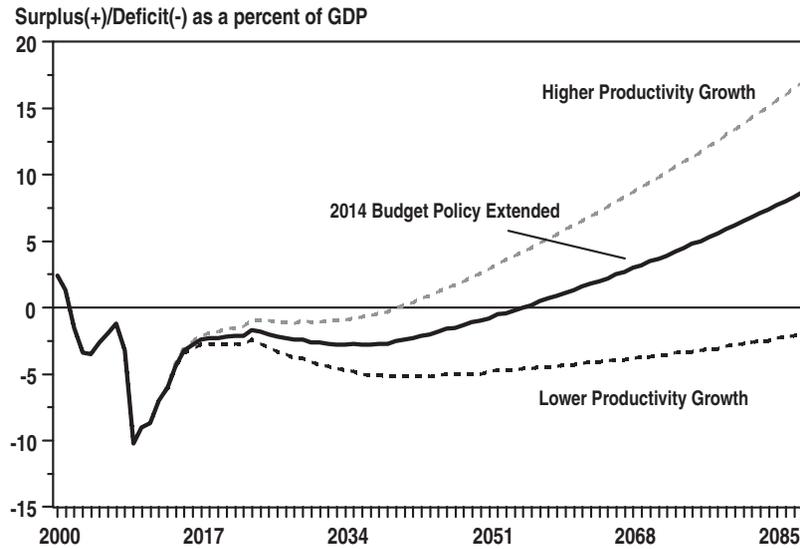


Chart 4-6. Alternative Productivity Assumptions



cal surplus falls from 1.6 percent of 75-year present value GDP in the base case to 0.5 percent of GDP in the growth with GDP scenario, and rises to 2.0 percent of GDP in the growth with inflation scenario.

Alternative Revenue Projections.—In the base projection, tax receipts rise gradually relative to GDP as real incomes rise. Chart 4–5 shows alternative receipts assumptions. Assuming that Congress will act to cut taxes to avoid the revenue increases associated with rising incomes would bring about higher deficits and publicly-held debt throughout the 75-year horizon. The 75-year fiscal surplus falls from 1.6 percent of 75-year present value GDP in the base case to 0.4 percent of GDP in the alternative scenario.

Productivity.—The rate of future productivity growth has a major effect on the long-run budget outlook (see Chart 4–6). It is also highly uncertain. Over the next few

decades, an increase in productivity growth would reduce projected budget deficits. Higher productivity growth adds directly to the growth of the major tax bases, while it has a smaller immediate effect on outlay growth. For much of the last century, output per hour in nonfarm business grew at an average rate of around 2.2 percent per year, despite long periods of sustained output growth at notably higher and lower rates than the long term average.

The base projections assume that output per hour in nonfarm business will increase at an average annual rate of around 2.3 percent per year, close to its long-run average and slightly below its average growth rate since 1995 of 2.5 percent. Overall, real GDP per hour worked will grow at an average annual rate of 1.7 percent per year. The difference is reconciled by the tendency of the sectors of the economy that are counted in GDP outside of

Chart 4-7. Alternative Fertility Assumptions

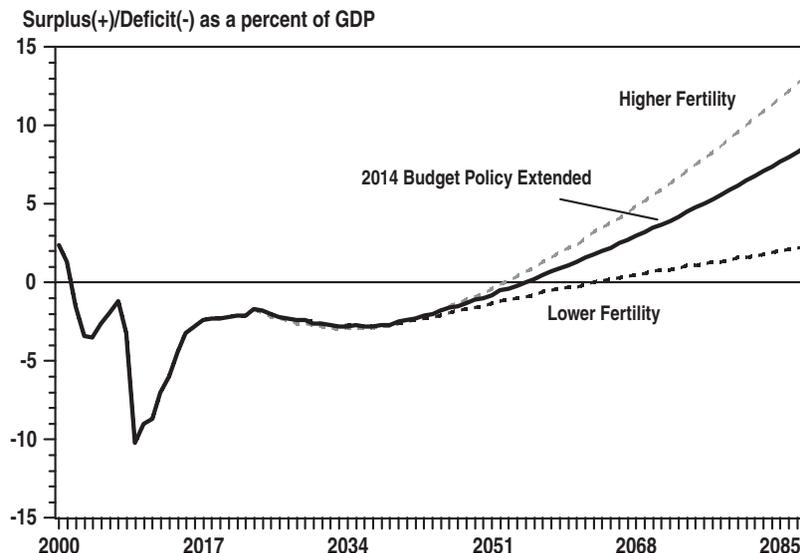
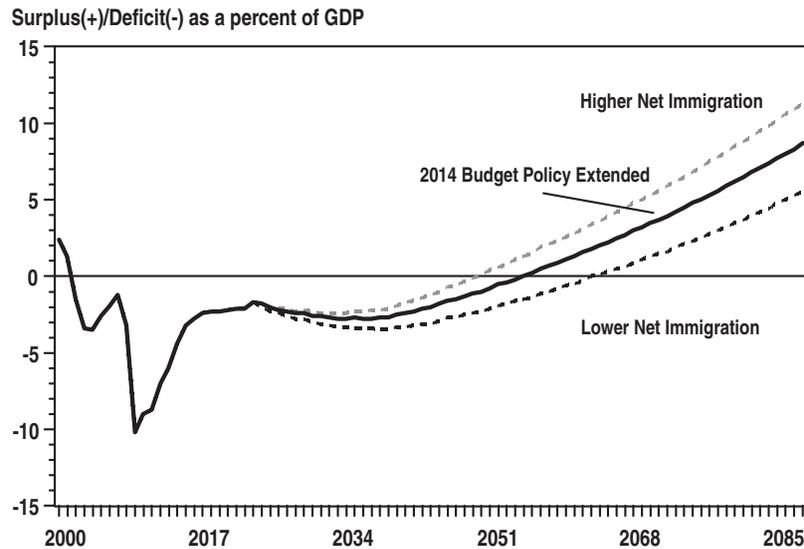


Chart 4-8. Alternative Immigration Assumptions



the nonfarm business sector to have lower productivity growth than those counted in the nonfarm business sector. The alternative scenarios highlight the effect of raising and lowering the projected productivity growth rate by 1/4 percentage point. The 75-year fiscal surplus rises from 1.6 percent of 75-year present value GDP in the base case to 3.5 percent of GDP in the faster productivity scenario, but falls to a fiscal gap of -0.4 percent of GDP in the slower productivity scenario.

Population.—The key assumptions for projecting long-run demographic developments are fertility, immigration, and mortality.

- The demographic projections assume that fertility will average about 2.0 total lifetime births per woman in the future, just slightly below the replacement rate needed to maintain a constant population in the absence of immigration (see Chart 4–7). The alternatives are those in the latest Social Security trustees’ report (1.7 and 2.3 births per woman). The 75-year fiscal surplus rises from 1.6 percent of 75-year present value GDP in the base case to 2.4 percent of GDP in the high fertility scenario, but falls to 0.7 percent of GDP in the low fertility scenario.
- The rate of net immigration is assumed to average around 1 million immigrants per year in the long run (see Chart 4–8). Higher net immigration relieves some of the downward pressure on population growth from low fertility and allows total population to expand throughout the projection period, although at a much slower rate than has prevailed historically. The alternatives are taken from the Social Security Trustees’ Report (1.3 million total immigrants per year in the high alternative and 0.8 million in the low alternative). The 75-year fiscal surplus rises from 1.6 percent of 75-year present value GDP in the base case to 2.2 percent of GDP in the faster net immigration scenario, but falls to 1.0 percent of GDP in the slower net immigration scenario.

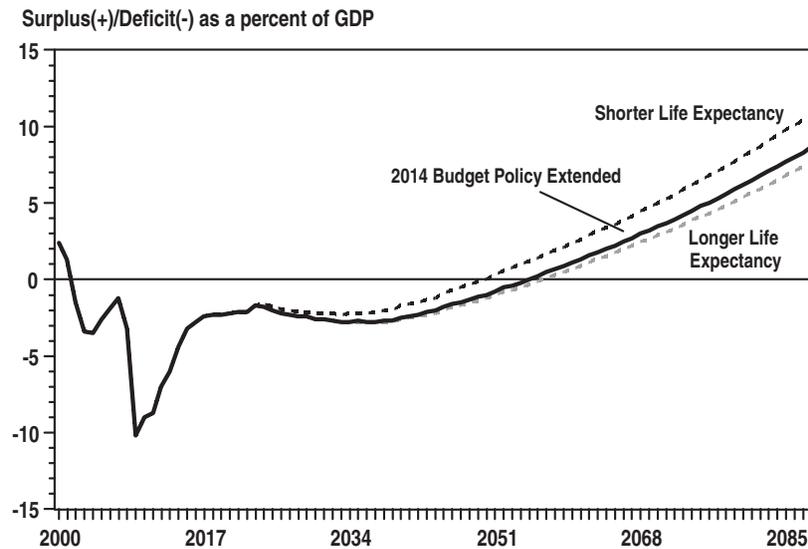
- Mortality is projected to decline as people live longer in the future (see Chart 4–9). These assumptions parallel those in the latest Social Security Trustees’ Report. The average life expectancy at birth for women is projected to rise from 80.6 years in 2012 to 86.7 years in 2088, and the average for men is expected to increase from 76.1 years in 2012 to 83.6 years in 2088. The variations show the high and low alternatives from the latest Trustees’ report, with average female and male life expectancy reaching 83.8 and 80.1 in the shorter life expectancy alternative and 89.8 and 87.3 in the longer life expectancy alternative. The 75-year fiscal surplus rises from 1.6 percent of 75-year present value GDP in the base case to 2.0 percent of GDP in the shorter life expectancy scenario, but falls to 1.5 percent of GDP in the longer life expectancy scenario.

The long-run budget outlook is highly uncertain. With pessimistic assumptions, the fiscal picture can quickly deteriorate back into deficits and rising debt. More optimistic assumptions imply an even earlier return to surpluses and declining debt. These projections highlight the need for policy awareness and potential action to address the main drivers of future budgetary costs.

Actuarial Projections for Social Security and Medicare

The Trustees for the Medicare Federal Hospital Insurance (HI) and Social Security trust funds issue annual reports that include projections of income and outgo for these funds over a 75-year period. These projections are based on different methods and assumptions than the long-run budget projections presented above. Even with these differences, the message is similar: the ACA is projected to curtail the projected growth in per capita health care costs, but even with this reform the retirement of the baby-boom generation

Chart 4-9. Alternative Mortality Assumptions



and continuing high medical costs will eventually exhaust the trust funds unless further action is taken.

The 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 period. The estimates cover periods ranging in length from 25 to 75 years. These balance calculations show what it would take to achieve a positive trust fund balance at the end of a specified period of time, not what it would take to maintain a positive balance indefinitely. To maintain a positive balance forever requires a larger adjustment than is needed to maintain a positive balance over 75 years when the annual balance in the program is negative at the end of the 75-year projection period, as it is expected to be for Social Security and Medicare without future reforms.

Table 4-3 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. Data from the 2010 and the 2011 reports are shown along with the latest data from the 2012 reports. Even following the passage of the ACA in 2010, there is a continued imbalance in the long-run projections of the HI program due to demographic trends and continued high per-person costs. Additionally, following two years of significant ACA-related improvement, the 2012 Trustees' Report reflects an increase in the long-run deficit compared to 2011 due to the implementation of recommendations of the Medicare Technical Review Panel on long-term health care cost growth rates. While these projections still assume full implementation of the cost reductions under current law over the entire long-run projection period, the entire long-run cost growth calculation has been modified following the Panel's findings. In the 2011 Trustees' report, which was largely unchanged

from 2010, Medicare HI trust fund costs as a percentage of Medicare covered payroll were projected to rise from 3.8 percent to 5.0 percent between 2010 and 2080 and the HI trust fund imbalance was projected to be -0.7 percent in 2080. In the 2012 report, costs rise from 3.7 percent of Medicare taxable payroll in 2010 to 6.3 percent in 2080 and the imbalance in the HI trust fund in 2080 is -2.0 percent.

Medicare Funding Warning. Under the Medicare Modernization Act (MMA) of 2003, the Medicare Trustees must issue a "warning" when in two consecutive Trustees' reports they project that the share of Medicare funded by general revenues will exceed 45 percent in the current year or any of the subsequent six years. Such a warning was included in the 2012 Trustees Report. The MMA requires that the President submit legislation, within 15 days of submitting the Budget, which will reduce general revenue funding to 45 percent of overall Medicare outlays or lower in the immediate seven-fiscal-year window. In accordance with the Recommendations Clause of the Constitution and as the Executive Branch has noted in prior years, the Executive Branch considers this requirement to be advisory and not binding. However, the proposals in this Budget would further strengthen Medicare's finances and extend its solvency.

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. The 2012 Social Security trustees report projects that the trust fund will not return to cash surplus without further reforms. Even so, the program will continue to experience an overall surplus for some years because of the Trust Funds' interest earnings. Eventually, 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 from 13.8 percent of Social

Table 4-3. INTERMEDIATE ACTUARIAL PROJECTIONS FOR OASDI AND HI

	2012	2020	2030	2050	2080
	Percent of Payroll				
Medicare Hospital Insurance (HI)					
Income Rate					
2010 Trustees' Report	3.2	3.4	3.6	3.9	4.3
2011 Trustees' Report	3.2	3.5	3.6	3.9	4.3
2012 Trustees' Report	3.2	3.5	3.7	3.9	4.3
Cost Rate					
2010 Trustees' Report	3.6	3.5	4.3	5.0	4.9
2011 Trustees' Report	3.8	3.6	4.4	5.1	5.0
2012 Trustees' Report	3.7	3.6	4.7	5.8	6.3
Annual Balance					
2010 Trustees' Report	-0.4	-0.0	-0.7	-1.1	-0.7
2011 Trustees' Report	-0.6	-0.2	-0.8	-1.2	-0.7
2012 Trustees' Report	-0.5	-0.2	-1.0	-1.9	-2.0
Projection Interval:					
Actuarial Balance: 2010 Trustees' Report			25 years	50 years	75 years
Actuarial Balance: 2011 Trustees' Report			-0.3	-0.6	-0.7
Actuarial Balance: 2012 Trustees' Report			-0.5	-0.8	-0.8
Actuarial Balance: 2012 Trustees' Report			-0.7	-1.2	-1.4
	Percent of Payroll				
Old Age Survivors and Disability Insurance (OASDI)					
Income Rate					
2010 Trustees' Report	12.9	13.1	13.2	13.2	13.3
2011 Trustees' Report	12.9	13.1	13.2	13.2	13.3
2012 Trustees' Report	12.9	13.1	13.3	13.3	13.3
Cost Rate					
2010 Trustees' Report	12.8	14.2	16.4	16.3	17.3
2011 Trustees' Report	13.2	14.2	16.7	16.7	17.4
2012 Trustees' Report	13.8	14.4	17.0	17.1	17.6
Annual Balance					
2010 Trustees' Report	0.0	-1.1	-3.2	-3.1	-4.0
2011 Trustees' Report	-0.4	-1.1	-3.5	-3.4	-4.1
2012 Trustees' Report	-0.9	-1.3	-3.8	-3.8	-4.3
Projection Interval:					
Actuarial Balance: 2010 Trustees' Report			25 years	50 years	75 years
Actuarial Balance: 2011 Trustees' Report			-0.3	-1.5	-1.9
Actuarial Balance: 2011 Trustees' Report			-0.6	-1.8	-2.2
Actuarial Balance: 2012 Trustees' Report			-1.2	-2.3	-2.7

Security covered payroll in 2012 to 14.4 percent of payroll in 2020, 17.0 percent of payroll in 2030 and 17.6 percent of payroll in 2080. Revenues excluding interest are projected to rise only slightly from 12.9 percent of payroll today to 13.3 percent in 2080. Thus the annual balance is projected to decline from -0.9 percent of payroll in 2012 to -1.3 percent of payroll in 2020, -3.8 percent of payroll in 2030, and -4.3 percent of payroll in 2080. On a 75-year basis, the actuarial deficit is projected to be -2.7 percent of payroll. In the process, the Social Security trust fund, which was built up since 1983, would be drawn down and

eventually be exhausted in 2033. 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 would be paid after the trust funds are exhausted. However, benefits could still be partially funded from current revenues. The 2012 Trustees' report presents projections on this point. Beginning in 2033, 75 percent of projected Social Security scheduled benefits would be funded. This percentage would eventually decline to 73 percent by 2086.

TECHNICAL NOTE: SOURCES OF DATA AND METHODS OF ESTIMATING

The long-range budget projections are based on 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 2013-2023, the assumptions are drawn from the Administration’s economic projections used for the 2014 Budget. These budget assumptions reflect the President’s policy proposals. 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 2012 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—1.7 percent per year.

CPI inflation holds stable at 2.2 percent per year, the unemployment rate is constant at 5.4 percent, the yield on 10-year Treasury notes is steady at 5.0 percent, and the 91-day Treasury bill rate is 3.7 percent. Consistent with the demographic assumptions in the Trustees’ reports, U.S. population growth slows from around 1 percent per year to about two-thirds that rate by 2030, and slower rates of growth beyond that point. By the end of the projection period total population growth is nearly as low as 0.4 percent per year. Real GDP growth is projected to be less than its historical average of around 3.2 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, average real GDP

growth averages between 2.3 percent and 2.4 percent per year for the period following the end of the 10-year budget window in 2023.

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 is unrealistic, but it simplifies comparisons of alternative policies.

Budget Projections.—For the period through 2023, receipts follow the 2014 Budget’s policy projections. After 2023, total tax receipts rise gradually relative to GDP as real incomes also rise. Discretionary spending follows the path in the Budget over the next 10 years and grows at the rate of growth in inflation plus population afterwards. Other spending also aligns with the Budget through the budget horizon. Long-run Social Security spending is projected by the Social Security actuaries using this chapter’s long-range economic and demographic assumptions. Medicare benefits are projected based on a projection of beneficiary growth and excess health care cost growth from the 2012 Medicare Trustees’ report, as adjusted to account for the Budget’s IPAB proposal, and the general inflation assumptions described above. Medicaid outlays are based on the economic and demographic projections in the model. 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.

5. FEDERAL BORROWING AND DEBT

Debt is the largest legally and contractually binding obligation of the Federal Government. At the end of 2012, the Government owed \$11,281 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 \$232 billion of interest on this debt. At the same time, the Government also held financial assets, net of other liabilities, of \$999 billion. Therefore, debt net of financial assets was \$10,282 billion.

The \$11,281 billion debt held by the public at the end of 2012 represents an increase of \$1,153 billion over the level at the end of 2011. In 2012, the \$1,087 billion deficit and other financing transactions totaling \$66 billion caused the Government to increase its borrowing from the public by \$1,153 billion. Debt held by the public increased from 67.8 percent of Gross Domestic Product (GDP) at the end of 2011 to 72.6 percent of GDP at the end of 2012. Meanwhile, financial assets net of liabilities grew by \$41 billion in 2012. Debt held by the public net of financial assets increased from 61.4 percent of GDP at the end of 2011 to 66.1 percent of GDP at the end of 2012. The deficit is estimated to fall to \$973 billion in 2013, and then continue to decrease as a percent of GDP in subsequent years. Declining deficits and continued GDP growth are estimated to significantly reduce growth in debt as a percentage of GDP; debt held by the public is projected to reach 76.6 percent of GDP at the end of 2013 and 78.2 percent at the end of 2014 and 2015 and then to begin to decline gradually after 2015. Debt net of financial assets is expected to follow a similar path, increasing to 70.5 percent of GDP at the end of 2014 and then decreasing in each of the following years.

Trends in Debt Since World War II

Table 5–1 depicts trends in Federal debt held by the public from World War II to the present and estimates from the present through 2018. (It is supplemented for earlier years by Tables 7.1–7.3 in *Historical Tables*, which is published as a separate volume of the Budget.) Federal debt peaked at 108.7 percent of GDP in 1946, just after the end of the war. From then until the 1970s, Federal debt as a percentage of GDP decreased almost every year because of relatively small deficits, an expanding economy, and 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 80.2 percent of GDP to 25.3 percent, and from 53.3 percent of credit market debt to 18.4 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 after the middle of the decade. The growth of Federal debt accelerated at the beginning of the 1980s, due in large part to a deep recession, and the ratio of Federal debt to GDP grew sharply. It continued to grow throughout the 1980s as large tax cuts, enacted in 1981, and substantial increases in defense spending were only partially offset by reductions in domestic spending. The resulting deficits increased the debt to almost 50 percent of GDP by 1993. The ratio of Federal debt to credit market debt also rose, 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, from 1997 to 2001, as surpluses emerged. Debt fell from 49.3 percent of GDP in 1993 to 32.5 percent of GDP in 2001. Over that same period, debt fell from 26.4 percent of total credit market debt to 17.5 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 impressive progress in reducing the debt burden stopped and then reversed course beginning in 2002. A decline in the stock market, a recession, and the initially slow recovery from that recession all reduced tax receipts. The tax cuts of 2001 and 2003 had a similarly large and longer-lasting effect, as did the growing costs of the wars in Iraq and Afghanistan. Deficits ensued and debt began to rise, both in nominal terms and as a percentage of GDP. There was a small temporary improvement in 2006 and 2007 as economic growth led to a short-lived revival of receipt growth.

As a result of the most recent recession, which began in December 2007, and the massive financial and economic challenges it imposed on the Nation, the deficit began increasing rapidly in 2008. The deficit increased more substantially in 2009 as the Government continued to take aggressive steps to restore the health of the Nation's economy and financial markets. The deficit fell somewhat in 2010, increased only slightly in 2011, and fell in 2012. With the proposals in the Budget, the deficit is projected to fall in 2013, both in nominal terms and as a share of

Table 5-1. TRENDS IN FEDERAL 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 as a percent of: ³	
	Current dollars	FY 2012 dollars ¹	GDP	Credit market debt ²	Total outlays	GDP
1946	241.9	2,368.9	108.7	N/A	7.4	1.8
1950	219.0	1,745.4	80.2	53.3	11.4	1.8
1955	226.6	1,586.9	57.2	43.2	7.6	1.3
1960	236.8	1,472.4	45.6	33.7	8.5	1.5
1965	260.8	1,516.0	37.9	26.9	8.1	1.4
1970	283.2	1,368.9	28.0	20.8	7.9	1.5
1975	394.7	1,404.0	25.3	18.4	7.5	1.6
1980	711.9	1,751.3	26.1	18.6	10.6	2.3
1985	1,507.3	2,826.5	36.4	22.3	16.2	3.7
1990	2,411.6	3,873.0	42.1	22.6	16.2	3.5
1995	3,604.4	5,099.7	49.1	26.4	15.8	3.3
2000	3,409.8	4,441.4	34.7	19.0	13.0	2.4
2001	3,319.6	4,224.3	32.5	17.5	11.6	2.1
2002	3,540.4	4,432.1	33.6	17.4	8.9	1.7
2003	3,913.4	4,801.0	35.6	17.8	7.5	1.5
2004	4,295.5	5,139.5	36.8	17.4	7.3	1.4
2005	4,592.2	5,321.5	36.9	17.0	7.7	1.5
2006	4,829.0	5,412.0	36.6	16.4	8.9	1.8
2007	5,035.1	5,480.9	36.3	15.8	9.2	1.8
2008	5,803.1	6,173.6	40.5	17.1	8.7	1.8
2009	7,544.7	7,924.1	54.0	21.4	5.7	1.4
2010	9,018.9	9,377.3	62.9	24.8	6.6	1.6
2011	10,128.2	10,314.0	67.8	26.9	7.4	1.8
2012	11,281.1	11,281.1	72.6	28.7	6.6	1.5
2013 estimate	12,403.5	12,149.9	76.6	N/A	7.2	1.6
2014 estimate	13,295.9	12,781.7	78.2	N/A	7.1	1.6
2015 estimate	14,032.2	13,238.7	78.2	N/A	7.4	1.6
2016 estimate	14,714.1	13,624.0	77.7	N/A	8.3	1.8
2017 estimate	15,343.5	13,942.5	76.8	N/A	9.8	2.1
2018 estimate	15,954.1	14,227.7	75.9	N/A	11.5	2.4

N/A = Not available.

¹ Debt in current dollars deflated by the GDP chain-type price index with fiscal year 2012 equal to 100.² Total credit market debt owed by domestic nonfinancial sectors, modified in some years to be consistent with budget concepts for the measurement of Federal debt. 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).

the economy, and continue to fall as a percentage of GDP throughout the 10-year budget window before ending at 1.7 percent in 2023. Debt held by the public as a percent of GDP is estimated to grow to 76.6 percent at the end of 2013 and 78.2 percent at the end of 2014 and 2015 and

then to begin to decline slowly after 2015, reaching 73.0 percent of GDP in 2023. Debt net of financial assets as a percent of GDP is estimated to grow to 69.5 percent at the end of 2013 and 70.5 percent at the end of 2014 and then to decline thereafter.

Debt Held by the Public and Gross Federal Debt

The Federal Government issues debt securities for two principal purposes. First, it borrows from the public to finance the Federal deficit.¹ Second, it issues debt to Federal Government accounts, primarily trust funds, which 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.”²

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 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.³ 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.)

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

¹ 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.

² 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 5–4, but also the debt of the Government-Sponsored Enterprises listed in Table 22–9 at the end of Chapter 22, “Credit and Insurance,” and certain Government-guaranteed securities.

³ The Federal subsector of the national income and product accounts provides a measure of “net government saving” (based on current expenditures and current receipts) that can be used to analyze the effect of Federal fiscal policy on national saving within the framework of an integrated set of measures of aggregate U.S. economic activity. The Federal subsector and its differences from the budget are discussed in Chapter 28, “National Income and Product Accounts.”

spending. The interest on the debt that is credited to these funds accounts for the fact that some earmarked taxes and user charges 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 93 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. Table 4-1 in Chapter 4, “Long-Term Budget Outlook,” projects Social Security and Medicare outlays to the year 2085 relative to GDP. The excess of future Social Security and Medicare benefits relative to their dedicated income is

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.

Table 5-2. FEDERAL GOVERNMENT FINANCING AND DEBT
(In billions of dollars)

	Actual 2012	Estimate										
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Financing:												
Unified budget deficit	1,087.0	972.9	744.2	576.5	528.4	486.9	475.3	498.1	503.1	500.8	518.7	439.1
Other transactions affecting borrowing from the public:												
Changes in financial assets and liabilities: ¹												
Change in Treasury operating cash balance	27.4	-5.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Net disbursements of credit financing accounts:												
Direct loan accounts	85.7	144.2	138.2	153.3	143.5	132.8	124.0	119.0	118.2	119.6	119.1	120.0
Guaranteed loan accounts	12.3	15.1	16.7	12.0	12.0	11.0	12.7	13.3	9.1	4.8	0.4	-1.8
Troubled Asset Relief Program equity purchase accounts	-61.3	-3.2	-5.4	-4.0	-0.2	-0.1	-0.1	-0.1	-*	-*	-*	-*
Subtotal, net disbursements	36.7	156.1	149.6	161.2	155.3	143.7	136.6	132.1	127.3	124.4	119.5	118.2
Net purchases of non-Federal securities by the National Railroad Retirement Investment Trust ...	1.4	-1.1	-1.3	-1.3	-1.7	-1.1	-1.2	-1.2	-1.1	-1.4	-1.0	-0.3
Net change in other financial assets and liabilities ² ...	0.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Subtotal, changes in financial assets and liabilities	66.0	149.6	148.3	160.0	153.7	142.6	135.4	130.9	126.2	123.1	118.4	117.9
Seigniorage on coins .....	.....	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2
Total, other transactions affecting borrowing from the public	66.0	149.5	148.1	159.9	153.5	142.5	135.3	130.8	126.0	122.9	118.2	117.7
Total, requirement to borrow from the public (equals change in debt held by the public) ...	1,152.9	1,122.4	892.3	736.3	681.9	629.4	610.5	628.9	629.1	623.7	636.9	556.9
Changes in Debt Subject to Statutory Limitation:												
Change in debt held by the public	1,152.9	1,122.4	892.3	736.3	681.9	629.4	610.5	628.9	629.1	623.7	636.9	556.9
Change in debt held by Government accounts	133.8	75.9	105.3	164.6	196.9	220.5	209.1	139.6	129.8	124.4	93.6	94.1
Less: change in debt not subject to limit and other adjustments	-6.2	1.3	0.4	*	0.6	0.3	-*	-0.5	-1.4	-0.9	-0.8	0.1
Total, change in debt subject to statutory limitation	1,280.5	1,199.6	998.0	901.0	879.4	850.2	819.6	768.0	757.5	747.2	729.8	651.1
Debt Subject to Statutory Limitation, End of Year:												
Debt issued by Treasury	16,023.7	17,221.5	18,218.1	19,118.1	19,996.2	20,845.7	21,664.7	22,432.1	23,189.5	23,936.7	24,666.5	25,317.7
Less: Treasury debt not subject to limitation (-) ³	-8.1	-6.2	-4.8	-3.8	-2.5	-1.8	-1.2	-0.5	-0.5	-0.5	-0.5	-0.5
Agency debt subject to limitation	*	*	*	*	*	*	*	*	*	*	*	*
Adjustment for discount and premium ⁴	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4
Total, debt subject to statutory limitation ⁵	16,027.0	17,226.7	18,224.7	19,125.7	20,005.1	20,855.3	21,674.9	22,442.9	23,200.4	23,947.6	24,677.4	25,328.5
Debt Outstanding, End of Year:												
Gross Federal debt: ⁶												
Debt issued by Treasury	16,023.7	17,221.5	18,218.1	19,118.1	19,996.2	20,845.7	21,664.7	22,432.1	23,189.5	23,936.7	24,666.5	25,317.7
Debt issued by other agencies	27.2	27.7	28.7	29.7	30.4	30.8	31.4	32.5	34.0	34.8	35.6	35.5
Total, gross Federal debt	16,050.9	17,249.2	18,246.8	19,147.8	20,026.6	20,876.5	21,696.1	22,464.6	23,223.5	23,971.6	24,702.1	25,353.1
Held by:												
Debt held by Government accounts	4,769.8	4,845.7	4,951.0	5,115.6	5,312.5	5,533.0	5,742.1	5,881.6	6,011.5	6,135.9	6,229.5	6,323.6
Debt held by the public ⁷	11,281.1	12,403.5	13,295.9	14,032.2	14,714.1	15,343.5	15,954.1	16,583.0	17,212.1	17,835.7	18,472.7	19,029.5

*\$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 or held 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 Legislation enacted February 4, 2013, (P.L. 113-3) temporarily suspended the debt limit through May 18, 2013.

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 2012, the Federal Reserve Banks held \$1,645.3 billion of Federal securities and the rest of the public held \$9,635.8 billion. Debt held by the Federal Reserve Banks is not estimated for future years.

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 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 5–2 summarizes Federal borrowing and debt from 2012 through 2023.⁵ In 2012 the Government borrowed \$1,153 billion, increasing the debt held by the public from \$10,128 billion at the end of 2011 to \$11,281 billion at the end of 2012. The debt held by Government accounts increased \$134 billion, and gross Federal debt increased by \$1,287 billion to \$16,051 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 5–2 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 Interaction with the Budget,” in this volume.

The total or unified budget surplus consists of two parts: the on-budget surplus or deficit; and the surplus of the off-budget Federal entities, which have been excluded from the budget by law. Under present law, the off-budget Federal entities are the 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 5–2 (an

⁵ For projections of the debt beyond 2023, see Chapter 4, “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 12, “Coverage of the Budget.”

increase in the need to borrow is represented by a positive sign, like the deficit).

In 2012 the deficit was \$1,087 billion while these other factors—primarily the change in the Treasury operating cash balance and the net activity of credit financing accounts—increased the need to borrow by \$66 billion. As a result, the Government borrowed \$1,153 billion from the public. The other factors are estimated to increase borrowing by \$150 billion in 2013 and \$148 billion in 2014. In 2015–2023, these other factors are expected to increase borrowing by annual amounts ranging from \$118 billion to \$160 billion.

As a result of the Government’s extraordinary efforts to stabilize the Nation’s credit markets that began in 2008, the other factors have had significantly increased effects on borrowing from the public in recent years. In the 20 years between 1988 and 2007, the cumulative deficit was \$2,956 billion, the increase in debt held by the public was \$3,145 billion, and other factors added a total of \$190 billion of borrowing, 6 percent of total borrowing over this period. By contrast, the other factors resulted in more than 40 percent of the total increase in borrowing from the public for 2008, nearly 20 percent of the increase for 2009, and over 12 percent of the increase for 2010. In 2011, the other factors reduced borrowing by about 17 percent. In 2012, with the financial stabilization activities largely winding down, the impacts of the other factors returned to historical levels, accounting for 6 percent of the increase in borrowing.

Three specific factors presented in Table 5–2 are especially important.

Change in Treasury operating cash balance.—In 2012, the cash balance increased by \$27 billion, to \$85 billion. In the preceding three years, 2008–2011, changes in the cash balance were largely driven by fluctuations in the temporary Supplementary Financing Program (SFP). Under the SFP, Treasury issued short-term debt and deposited the cash proceeds with the Federal Reserve for use by the Federal Reserve in its actions to stabilize the financial markets. The cash balance increased by a record \$296 billion in 2008, primarily as a result of the creation of the SFP. In 2009, the cash balance decreased by \$96 billion, due to a \$135 billion reduction in the SFP balance offset by a \$38 billion increase in the non-SFP cash balance. In 2010, the cash balance increased by \$35 billion, to \$310 billion, due nearly entirely to an increase in the SFP balance. In 2011, the cash balance decreased by \$252 billion to \$58 billion, due largely to reducing the SFP balance from \$200 billion to zero as the Federal Government neared the debt ceiling. In the 10 years preceding 2008, changes in the cash balance had been much smaller, ranging from a decrease of \$26 billion in 2003 to an increase of \$23 billion in 2007. The operating cash balance is projected to fall by \$5 billion, to \$80 billion at the end of 2013. Changes in the operating cash balance, while occasionally large, are inherently limited over time. 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. In particular, they receive payment from the 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. The financing accounts also pay any downward reestimate of costs to budgetary receipt accounts. 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.

The impact of the net financing disbursements on borrowing increased significantly in 2009, largely as a result of Government actions to address the Nation’s financial and economic challenges including through the Troubled Asset Relief Program (TARP), purchases of mortgage-backed securities issued or guaranteed by the Government-Sponsored Enterprises (GSEs), and the Temporary Student Loan Purchase Program. Net financ-

⁸ The FCRA (sec. 505(b)) requires that the financing accounts be non-budgetary. As explained in Chapter 12, “Coverage of the Budget,” they are non-budgetary in concept because they do not measure cost. For additional discussion of credit programs, see Chapter 22, “Credit and Insurance,” and Chapter 11, “Budget Concepts.”

ing disbursements increased from \$33 billion in 2008 to a record \$406 billion in 2009. With the wind-down of the financial stabilization activities, borrowing due to financing accounts has decreased significantly, falling to \$153 billion in 2010, \$58 billion in 2011, and \$37 billion in 2012. In 2013 credit financing accounts are projected to increase borrowing by \$156 billion. After 2013, the credit financing accounts are expected to increase borrowing by amounts ranging from \$118 billion to \$161 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 2012, there was a net upward reestimate of \$12 billion, due largely to upward reestimates in the TARP, Federal Direct Student Loan, and Federal Housing Administration (FHA) Mutual Mortgage Insurance programs, partly offset by downward reestimates for guaranteed student loans. In 2013, there is a net upward reestimate of \$1 billion. Large upward reestimates in the FHA housing programs are mostly offset by large downward reestimates in the TARP and direct student loan programs.

Net purchases of non-Federal securities by the National Railroad Retirement Investment Trust (NRRIT).—This trust fund was established by the Railroad Retirement and Survivors’ Improvement Act of 2001. In 2003, most of the assets in the Railroad Retirement Board trust funds were transferred to the NRRIT trust fund, which invests its assets primarily in private stocks and bonds. The Act required special treatment of the purchase or sale of non-Federal assets by this trust fund, treating such purchases as a means of financing rather than 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 factors and, with the opposite sign, in NRRIT’s net outlays in the deficit, for no net impact on borrowing from the public. The increased borrowing associated with the initial transfer expanded publicly held debt by \$20 billion in 2003. Net transactions in subsequent years have been much smaller. In 2012, net increases, including purchases and gains, were \$1 billion. Net redemptions of roughly \$1 billion annually are projected for 2013 and subsequent years.⁹

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 92 percent of the total Federal debt held by Government accounts at the end of 2012. In 2012, the total trust fund surplus was \$90 billion, and trust funds invested \$121 billion in Federal securities. Investment may differ somewhat from the surplus due to changes in the amount of cash assets not currently invested. The remainder of debt issued to Government accounts is owned by a number of special funds and revol-

⁹ The budget treatment of this fund is further discussed in Chapter 11, “Budget Concepts.”

Table 5-3. DEBT HELD BY THE PUBLIC NET OF FINANCIAL ASSETS AND LIABILITIES

(Dollar amounts in billions)

	Actual 2012	Estimate										
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Debt Held by the Public:												
Debt held by the public	11,281.1	12,403.5	13,295.9	14,032.2	14,714.1	15,343.5	15,954.1	16,583.0	17,212.1	17,835.7	18,472.7	19,029.5
As a percent of GDP	72.6%	76.6%	78.2%	78.2%	77.7%	76.8%	75.9%	75.3%	74.9%	74.4%	73.9%	73.0%
Financial Assets Net of Liabilities:												
Treasury operating cash balance	85.4	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
Credit financing account balances:												
Direct loan accounts	803.2	947.5	1,085.7	1,239.0	1,382.6	1,515.3	1,639.3	1,758.3	1,876.5	1,996.1	2,115.2	2,235.2
Guaranteed loan accounts	-9.8	5.3	22.0	34.0	46.0	57.0	69.7	83.0	92.1	96.9	97.3	95.5
TARP equity purchase accounts	13.6	10.3	5.0	1.0	0.8	0.7	0.6	0.5	0.5	0.4	0.4	0.4
Subtotal, credit financing account balances	807.0	963.1	1,112.7	1,273.9	1,429.3	1,573.0	1,709.6	1,841.8	1,969.1	2,093.5	2,212.9	2,331.2
Government-sponsored enterprise preferred stock	109.2	109.2	109.2	109.2	109.2	109.2	109.2	109.2	109.2	109.2	109.2	109.2
Non-Federal securities held by NRRIT	22.9	21.8	20.4	19.2	17.5	16.4	15.2	14.0	12.9	11.5	10.5	10.1
Other assets net of liabilities	-25.3	-25.3	-25.3	-25.3	-25.3	-25.3	-25.3	-25.3	-25.3	-25.3	-25.3	-25.3
Total, financial assets net of liabilities	999.1	1,148.8	1,297.0	1,457.0	1,610.7	1,753.3	1,888.7	2,019.6	2,145.8	2,268.9	2,387.3	2,505.2
Debt Held by the Public Net of Financial Assets and Liabilities:												
Debt held by the public net of financial assets	10,282.0	11,254.8	11,998.9	12,575.2	13,103.4	13,590.2	14,065.3	14,563.3	15,066.3	15,566.9	16,085.4	16,524.3
As a percent of GDP	66.1%	69.5%	70.5%	70.1%	69.2%	68.0%	66.9%	66.2%	65.6%	65.0%	64.4%	63.4%

ing funds. The debt held in major accounts and the annual investments are shown in Table 5-5.

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 must 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 U.S. 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 loans. Similarly, when the National Railroad Retirement Investment Trust 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 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 net of financial assets than they do the debt held by the public.

The magnitude and the significance of the Government's financial assets increased greatly from the later part of 2008 through 2010, as a result of Government actions, such as implementation of TARP, to address the challenges facing the Nation's financial markets and economy.¹⁰ In 2011, as some of these activities continued to wind down, the Government's net financial assets decreased from \$1,125 billion to \$958 billion. In 2012, net financial assets increased by \$41 billion, to \$999 billion.

Table 5-3 presents debt held by the public net of the Government's financial assets and liabilities, or "net debt." 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

¹⁰ For more information on these activities, see Chapter 3, "Financial Stabilization Efforts and Their Budgetary Effects."

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. GSE preferred stock is measured at market value.

At the end of 2012, debt held by the public was \$11,281 billion, or 72.6 percent of GDP. The Government held \$999 billion in net financial assets, including a cash balance of \$85 billion, net credit financing account balances of \$807 billion,¹¹ and other assets and liabilities that aggregated to a net asset of \$107 billion. Therefore, debt net of financial assets was \$10,282 billion, or 66.1 percent of GDP. As shown in Table 5–3, the value of the Government's net financial assets is projected to increase to \$1,149 billion in 2013, due to increases in the net balances of credit financing accounts. While debt held by the public is expected to increase from 72.6 percent to 76.6 percent of GDP during 2013, net debt is expected to increase from 66.1 percent to 69.5 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. A unique and important asset is the Government's sovereign power to tax. 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). The relationship of assets, liabilities, and other measures in the financial statements to budget measures is analyzed in Chapter 30, "Budget and Financial Reporting," in this volume.

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

¹¹ Consistent with the presentation in the *Monthly Treasury Statement of Receipts and Outlays of the United States Government (Monthly Treasury Statement)*, Table 5-3 presents the net financial assets associated with direct and guaranteed loans in the financing accounts created under the Federal Credit Reform Act of 1990. Therefore, the figures differ by relatively small amounts from the figures in Chapter 30, "Budget and Financial Reporting," which reflect all loans made or guaranteed by the Federal Government, including loans originated prior to implementation of the FCRA.

during the year. Treasury marketable debt is sold at public auctions on a regular schedule and can be bought and sold on the secondary market. Treasury also sells to the public a relatively small amount of nonmarketable securities, such as savings bonds and State and Local Government Series securities (SLUGs).¹² Treasury nonmarketable debt cannot be bought or sold on the secondary market.

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.

Historically, the average maturity of outstanding debt issued by Treasury has been about five years. The average maturity of outstanding debt was 65 months at the end of 2012.

Traditionally, Treasury has issued securities with a fixed interest rate. In 2012, Treasury began to develop a floating rate securities program to complement its existing suite of securities and to support Treasury's 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. The initial offerings of floating rate securities are expected to have a maturity of two years. In February 2013, Treasury estimated that the first floating rate securities auction was about a year away.

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

¹² Under the State and Local Government Series 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 5–4. AGENCY DEBT
(In millions of dollars)

	2012 Actual		2013 Estimate		2014 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	–10	19	*	19	.....	19
Architect of the Capitol	–6	128	–7	121	–7	114
National Archives	–15	151	–17	134	–18	116
Tennessee Valley Authority:						
Bonds and notes	–556	24,098	1,116	25,214	420	25,634
Lease/leaseback obligations	916	2,198	–456	1,742	668	2,409
Prepayment obligations	–105	611	–101	510	–101	410
Total, borrowing from the public	223	27,204	536	27,740	962	28,703
Borrowing from other funds:						
Tennessee Valley Authority ¹	–1	5	.....	5	.....	5
Total, borrowing from other funds	–1	5	.....	5	.....	5
Total, agency borrowing	222	27,209	536	27,745	962	28,707
Memorandum:						
Tennessee Valley Authority bonds and notes, total	–557	24,103	1,116	25,219	420	25,639

* \$500,000 or less.

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

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.¹³ 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 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. The liquidity of 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 “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 reduce the need for marketable borrowing. In 2012, there was net disinvestment in nonmarketables, necessitating additional marketable borrowing to finance the redemption of nonmarketable debt.¹⁴

¹³ Noncompetitive bids cannot exceed \$5 million.

¹⁴ 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.

Agency Debt

A few Federal agencies, shown in Table 5–4, 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 existing borrowing. Agency debt increased from \$27.0 billion at the end of 2011 to \$27.2 billion at the end of 2012, due to increases in debt issued by TVA, slightly offset by decreases in debt issued by other agencies. Agency debt is less than one-quarter of one percent of Federal debt held by the public. As a result of new borrowing by TVA, agency debt is estimated to increase by \$0.5 billion in 2013 and by \$1.0 billion in 2014.

The predominant agency borrower is TVA, which had borrowed \$26.9 billion from the public as of the end of 2012, or 99 percent of the total debt of all agencies. TVA sells debt primarily to finance capital expenditures.

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/leaseback obligations and prepayment obligations. Under the lease/leaseback obligations method, TVA signs contracts to lease some facilities and equipment to private investors and simultaneously leases them back. It receives a lump sum for leasing out its assets, and then leases them back at fixed annual payments for a set number of years. TVA retains substantially all of the economic benefits and risks related to ownership of the assets.¹⁵

¹⁵ 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.

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.

The Office of Management and Budget 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.¹⁶ The budget presentation is consistent with the reporting of these obligations as liabilities on TVA's balance sheet under generally accepted accounting principles. Table 5–4 presents these alternative financing methods separately from TVA bonds and notes to distinguish between the types of borrowing. Obligations for lease/leasebacks were \$2.2 billion at the end of 2012 and are estimated to fall to \$1.7 billion at the end of 2013 and then increase to \$2.4 billion at the end of 2014. Obligations for prepayments were \$0.6 billion at the end of 2012 and are estimated to be \$0.5 billion at the end of 2013 and \$0.4 billion at the end of 2014.

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.

A number of Federal agencies borrow from the Bureau of the Public Debt (BPD) or the Federal Financing Bank (FFB), both within the Department of the Treasury. Agency borrowing from the FFB or the BPD is not included in gross Federal debt. It would be double counting to add together (a) the agency borrowing from the BPD or

FFB and (b) the Treasury borrowing from the public that is needed to provide the BPD 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 current needs in order to meet future obligations. These cash surpluses are generally invested in Treasury debt.

New investment by trust funds and other Government accounts was \$134 billion in 2012. Investment by Government accounts is estimated to be \$76 billion in 2013 and \$105 billion in 2014, as shown in Table 5–5. The holdings of Federal securities by Government accounts are estimated to increase to \$4,951 billion by the end of 2014, 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 and Supplementary Medical Insurance trust funds; and four Federal employee retirement funds. These Federal employee retirement funds include the Military Retirement Fund and the Civil Service Retirement and Disability Fund (CSRDF), which are trust funds, and the uniformed services Medicare-Eligible Retiree Health Care Fund (MERHCF) and Postal Service Retiree Health Benefits Fund (PSRHBF), which are special funds. At the end of 2014, these Social Security, Medicare, and Federal employee retirement funds are estimated to own 93 percent of the total debt held by Government accounts. During 2012–2014, the Social Security OASI fund has a large surplus and is estimated to invest a total of \$212 billion, 67 percent of total net investment by Government accounts. Over this period, the Military Retirement Fund is projected to invest \$146 billion, 46 percent of the total. Some Government accounts reduce their investments in Federal securities during 2012–2014. During these years, the Social Security DI fund disinvests \$96 billion, or 30 percent of the total net investment and the Medicare Hospital Insurance trust fund disinvests \$61 billion, or 19 percent of the total.

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 were 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 5–5 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 \$21.6 billion at the end of 2012.

¹⁶ This budgetary treatment differs from the treatment in the *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 the National Railroad Retirement Investment Trust and treatment of the Federal debt held by the Securities Investor Protection Corporation.

Table 5-5. DEBT HELD BY GOVERNMENT ACCOUNTS¹
(In millions of dollars)

Description	Investment or Disinvestment (-)			Holdings, End of 2014 Estimate
	2012 Actual	2013 Estimate	2014 Estimate	
Investment in Treasury debt:				
Defense: Host nation support fund for relocation	-24	195	-152	859
Energy:				
Nuclear waste disposal fund ¹	2,051	2,650	2,650	33,520
Uranium enrichment decontamination fund	-351	-116	-116	3,790
Health and Human Services:				
Federal hospital insurance trust fund	-17,647	-28,369	-14,884	185,039
Federal supplementary medical insurance trust fund	-1,122	-1,448	-1,216	66,660
Vaccine injury compensation fund	86	93	146	3,433
Child enrollment contingency fund	2	-100	-97	1,899
Homeland Security:				
Aquatic resources trust fund	60	-197	-95	1,650
Oil spill liability trust fund	329	867	540	3,960
Housing and Urban Development:				
Federal Housing Administration mutual mortgage fund	-1,383	-2,774	13,166	13,166
Guarantees of mortgage-backed securities	-16	5,642	19	7,778
Interior:				
Abandoned mine reclamation fund	44	19	-69	2,702
Environmental improvement and restoration fund	40	17	1	1,288
Justice: Assets forfeiture fund	1,689	-2,462	659	2,290
Labor:				
Unemployment trust fund	4,642	4,327	2,000	27,000
Pension Benefit Guaranty Corporation ¹	365	1,207	1,580	18,643
State: Foreign service retirement and disability trust fund	496	516	522	17,931
Transportation:				
Airport and airway trust fund	1,784	-26	277	10,676
Transportation trust fund	-6,332	-2,870	-300	6,800
Aviation insurance revolving fund	188	-34	109	1,893
Treasury:				
Exchange stabilization fund	-41	70	250	23,000
Treasury forfeiture fund	46	185	144	1,960
Comptroller of the Currency assessment fund	188	-59	.....	1,300
Veterans Affairs:				
National service life insurance trust fund	-629	-697	-706	5,509
Veterans special life insurance fund	-28	-55	-67	1,831
Corps of Engineers: Harbor maintenance trust fund	684	433	250	7,569
Other Defense-Civil:				
Military retirement trust fund	50,399	47,369	48,603	472,411
Medicare-eligible retiree health care fund	14,372	9,175	5,684	190,972
Education benefits fund	-117	22	-132	1,781
Environmental Protection Agency:				
Leaking underground storage tank trust fund	-2,191	76	80	1,415
Hazardous substance trust fund	-259	539	-294	3,495
International Assistance Programs: Overseas Private Investment Corporation	131	77	34	5,353
Office of Personnel Management:				
Civil service retirement and disability trust fund	22,742	15,721	11,513	853,789
Postal Service retiree health benefits fund	1,640	7,323	7,228	59,898
Employees life insurance fund	1,572	272	1,321	42,843
Employees health benefits fund	2,067	302	265	21,828
Social Security Administration:				
Federal old-age and survivors insurance trust fund ²	94,166	65,317	52,493	2,704,507
Federal disability insurance trust fund ²	-29,621	-32,902	-33,421	66,022

Table 5-5. DEBT HELD BY GOVERNMENT ACCOUNTS¹—Continued
(In millions of dollars)

Description	Investment or Disinvestment (-)			Holdings, End of 2014 Estimate
	2012 Actual	2013 Estimate	2014 Estimate	
District of Columbia: Federal pension fund	-15	18	20	3,681
Farm Credit System Insurance Corporation:				
Farm Credit System Insurance fund	-117	246	199	3,540
Federal Communications Commission:				
Universal service fund	726	178	-289	6,430
Federal Deposit Insurance Corporation:				
Deposit insurance fund	1,573	-12,976	6,638	30,160
Senior unsecured debt guarantee fund	-6,198	-1,104	.....	.....
FSLIC resolution fund	50	43	4	3,471
National Credit Union Administration:				
Share insurance fund	-435	302	219	10,818
Central liquidity facility	-155	-1,750	9	201
Postal Service funds ²	776	-*	.....	2,590
Railroad Retirement Board trust funds	193	-8	-189	2,138
Securities Investor Protection Corporation ³	176	227	102	1,936
United States Enrichment Corporation fund	5	10	10	1,618
Other Federal funds	-1,717	-25	245	6,178
Other trust funds	-88	429	334	3,789
Unrealized discount ¹	-1,031	.....	.....	-2,038
Total, investment in Treasury debt¹	133,763	75,891	105,287	4,950,971
Investment in agency debt:				
Railroad Retirement Board:				
National Railroad Retirement Investment Trust	-1	.....	.....	5
Total, investment in agency debt¹	-1	.....	.....	5
Total, investment in Federal debt¹	133,762	75,891	105,287	4,950,976
Memorandum:				
Investment by Federal funds (on-budget)	12,668	6,048	38,399	436,184
Investment by Federal funds (off-budget)	776	-*	.....	2,590
Investment by trust funds (on-budget)	56,804	37,429	47,816	1,743,711
Investment by trust funds (off-budget)	64,545	32,415	19,072	2,770,529
Unrealized discount ¹	-1,031	.....	.....	-2,038

* \$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 2012 the debt figures would be \$21.3 billion higher for the Nuclear waste disposal fund and \$0.2 billion higher for PBGC than recorded in this table.

² Off-budget Federal entity.

³ Amounts on calendar-year basis.

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 5-5 it is shown as a separate item at the end of the table and not distributed by account. The amount was \$2.0 billion at the end of 2012.

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.¹⁷ The Federal Reserve’s holdings of Treasury securities have fluctuated

¹⁷ For further detail on the monetary policy activities of the Federal Reserve and the treatment of the Federal Reserve in the Budget, see Chapter 12, “Coverage of the Budget.”

significantly in recent years, due largely to the Federal Reserve's financial stabilization activities.¹⁸ Federal Reserve holdings fell from \$780 billion (15 percent of debt held by the public) at the end of 2007 to \$491 billion (8 percent of debt held by the public) at the end of 2008, and then increased to \$1,665 billion (16 percent of debt held by the public) at the end of 2011. Federal Reserve holdings declined slightly to \$1,645 billion (15 percent of debt held by the public) at the end of 2012. The historical holdings of the Federal Reserve are presented in Table 7.1 in the *Historical Tables* volume of the Budget. 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 5–2 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. It issued \$14 billion of securities to the CSRDF on November 15, 2004, in exchange for an equal amount of regular Treasury securities. The FFB securities have the same interest rates and maturities as the regular Treasury securities for which they were exchanged. The securities mature on dates from June 30, 2009, through June 30, 2019. At the end of 2012, \$7 billion of these securities remained outstanding.

The Housing and Economic Recovery Act of 2008 created a new type of debt not subject to limit. This debt, termed “Hope Bonds,” has been issued by Treasury to the FFB for the HOPE for Homeowners program. The outstanding balance of Hope Bonds was \$493 million at the end of 2012 and is projected to fall to \$45 million at the end of 2013 and then to increase by very small amounts annually in subsequent years.

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 \$486 million at the end of 2012 and is projected to gradually decline over time.

The sole agency debt currently subject to the general limit, \$209,000 at the end of 2012, is certain debentures issued by the Federal Housing Administration.¹⁹

¹⁸ For more information on the financial stabilization activities of the Federal Reserve, see Chapter 3, “Financial Stabilization Efforts and Their Budgetary Effects.”

¹⁹ At the end of 2012, there were also \$18 million of FHA debentures

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 \$11.4 billion at the end of 2012 compared with the total unamortized discount (less premium) of \$42.5 billion on all Treasury securities.

Changes in the debt limit.—The statutory debt limit has been changed many times. Since 1960, Congress has passed 80 separate acts to raise the limit, revise the definition, extend the duration of a temporary increase, or temporarily suspend the limit.²⁰

The Budget Control Act of 2011 created a framework for increasing the debt limit under the terms of that act. The act allowed for a total increase in the debt limit of \$2.1 trillion, which came in three tranches based on the President's submission of a series of written certifications that such increases are necessary because the debt subject to limit is within \$100 billion of the current limit. The certification triggering the first two increases was submitted immediately following the Act's enactment in August 2011. Consequently, the debt limit was first increased by \$400 billion, from \$14,294 billion to \$14,694 billion, effective August 2, 2011, and then by an additional \$500 billion, from \$14,694 billion to \$15,194 billion, effective after the close of business on September 21, 2011. The Act also provided for a third increase of \$1,200 billion, to \$16,394 billion, scheduled to occur 15 calendar days after the President submitted certification to Congress that the debt subject to limit was within \$100 billion of the \$15,194 billion limit (unless Congress enacted a joint resolution of disapproval).²¹ The certification for the third increase was submitted on January 12, 2012, and the increase took effect after the close of business on January 27.

The \$16,394 billion ceiling was reached on December 31, 2012. The No Budget, No Pay Act of 2013 temporarily suspends the debt limit from February 4, 2013, through May 18, 2013. On May 19, 2013, the debt limit will be

not subject to limit.

²⁰ The Acts and the statutory limits since 1940 are listed in *Historical Tables, Budget of the United States Government, Fiscal Year 2014*, Table 7.3.

²¹ Under the Act, if the constitutional amendment voted on pursuant to Title II of the Act (“Balanced Budget Amendment”) had been submitted to the States for ratification, the increase would have been \$1,500 billion. If legislation from the Joint Select Committee on Deficit Reduction had been enacted pursuant to Title IV of the Act, which achieved an amount of deficit reduction greater than \$1,200 billion, the increase would have been equal to that amount, but not greater than \$1,500 billion.

raised by an amount equivalent to the debt that was issued during that period in order to fund commitments requiring payment before May 19.

At many times in the past several decades, including 2013, 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 administrative actions to meet the Government's obligation to pay its bills and invest its trust funds while remaining below the statutory limit. One such measure is the partial or full disinvestment of the Government Securities Investment Fund (G-Fund). This fund is one component of the Thrift Savings Plan (TSP), a defined contribution pension plan for Federal employees. 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 2012, the TSP G-Fund had an outstanding balance of \$154 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.²² 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 \$23 billion at the end of 2012.

As the debt nears the limit, including in 2013, Treasury has also suspended acceptance of subscriptions to State and Local Government Series securities to reduce unanticipated fluctuations in the level of the debt.

In addition to these steps, Treasury has previously exchanged regular Treasury securities with borrowing by the FFB, which, as explained above, is not subject to the debt limit. This measure was most recently taken in November 2004.

In 2011, Treasury also allowed the cash balance in the temporary Supplementary Financing Program to decline from \$200 billion to zero by not rolling over the bills as they matured. Because Treasury does not currently have any plans to resume the SFP, this action is not anticipated to be an available administrative action in the future.

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. Without an increase, Treasury would be unable to make timely interest payments or redeem maturing 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. In addition, the Federal Government would be forced to delay or discontinue payments on its broad range of obligations, 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, and other obligations.

The debt subject to limit is estimated to increase to \$17,227 billion by the end of 2013 and to \$18,225 billion by the end of 2014.

Federal funds financing and the change in debt subject to limit.—The change in debt held by the public, as shown in Table 5–2, and the change in debt 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 5–2. The change in debt held by Government accounts results in 17 percent of the estimated total increase in debt subject to limit from 2013 through 2023.

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.²³

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

²² Both the CSRDF and the PSRHBF are administered by the Office of Personnel Management.

²³ For further discussion of the trust funds and Federal funds groups, see Chapter 27, "Trust Funds and Federal Funds."

Table 5-6. FEDERAL FUNDS FINANCING AND CHANGE IN DEBT SUBJECT TO STATUTORY LIMIT
(In billions of dollars)

Description	Actual 2012	Estimate										
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Change in Gross Federal Debt:												
Federal funds deficit (+)	1,176.8	1,040.6	821.2	694.6	679.3	663.5	642.7	591.0	581.8	585.0	567.5	487.3
Other transactions affecting borrowing from the public— Federal funds ¹	64.5	150.6	149.5	161.1	155.2	143.6	136.5	132.0	127.1	124.3	119.3	118.1
Increase (+) or decrease (–) in Federal debt held by Federal funds	13.4	6.0	38.4	46.5	46.0	43.9	41.6	46.7	51.1	40.2	44.8	45.9
Adjustments for trust fund surplus/deficit not invested/ disinvested in Federal securities ²	32.9	1.1	–11.5	–1.3	–1.7	–1.1	–1.2	–1.2	–1.1	–1.4	–1.0	–0.3
Change in unrealized discount on Federal debt held by Government accounts	–1.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total financing requirements	1,286.7	1,198.3	997.6	901.0	878.8	849.9	819.6	768.5	758.9	748.1	730.5	651.0
Change in Debt Subject to Limit:												
Change in gross Federal debt	1,286.7	1,198.3	997.6	901.0	878.8	849.9	819.6	768.5	758.9	748.1	730.5	651.0
Less: increase (+) or decrease (–) in Federal debt not subject to limit	–1.1	–1.3	–0.4	–*	–0.6	–0.3	*	0.5	1.4	0.9	0.8	–0.1
Less: change in adjustment for discount and premium ³	7.3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total, change in debt subject to limit	1,280.5	1,199.6	998.0	901.0	879.4	850.2	819.6	768.0	757.5	747.2	729.8	651.1
Memorandum:												
Debt subject to statutory limit ⁴	16,027.0	17,226.7	18,224.7	19,125.7	20,005.1	20,855.3	21,674.9	22,442.9	23,200.4	23,947.6	24,677.4	25,328.5

* \$50 million or less.

¹ Includes Federal fund transactions that correspond to those presented in Table 5-2, 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 Legislation enacted February 4, 2013, (P.L. 113-3) temporarily suspended the debt limit through May 18, 2013.

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 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 5-6 derives the change in debt subject to limit. In 2012 the Federal funds deficit was \$1,177 billion, and other factors increased financing requirements by \$65 billion. The change in the Treasury operating cash balance increased financing requirements by \$27 billion, the net financing disbursements of credit financing accounts increased financing requirements by \$37 billion, and other factors increased financing requirements by \$1 billion. In addition, special funds and revolving funds, which are part of the Federal funds group, invested a net of \$13 billion in Treasury securities. A \$33 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 the National Railroad Retirement Investment Trust's investments in non-Federal securities). As a net result of all these factors, \$1,287 billion in financing was required, increasing gross Federal debt by that amount. Since Federal debt not subject to limit decreased by \$1 billion and the adjustment

for discount and premium changed by \$7 billion, the debt subject to limit increased by \$1,280 billion, while debt held by the public increased by \$1,153 billion.

Debt subject to limit is estimated to increase by \$1,200 billion in 2013 and by \$998 billion in 2014. 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 5-6. While debt held by the public increases by \$4,673 billion from the end of 2012 through 2018, debt subject to limit increases by \$5,648 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 1970 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 residents.

Foreign holdings of Federal debt are presented in Table 5-7. At the end of 2012, foreign holdings of Treasury debt were \$5,475 billion, which was 49 percent of the total debt held by the public.²⁴ Foreign central banks and foreign official institutions owned 72 percent of the foreign holdings

²⁴ The debt calculated by the Bureau of Economic Analysis, Department of Commerce, is different, though similar in size, because of a different method of valuing securities.

Table 5-7. FOREIGN HOLDINGS OF FEDERAL DEBT
(Dollar amounts in billions)

Fiscal Year	Debt held by the public			Change in debt held by the public	
	Total	Foreign ¹	Percentage foreign	Total ²	Foreign ¹
1965	260.8	12.3	4.7	3.9	0.3
1970	283.2	14.0	5.0	5.1	3.8
1975	394.7	66.0	16.7	51.0	9.2
1980	711.9	121.7	17.1	71.6	1.4
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
2006	4,829.0	2,025.3	41.9	236.8	95.7
2007	5,035.1	2,235.3	44.4	206.2	210.0
2008	5,803.1	2,802.4	48.3	767.9	567.1
2009	7,544.7	3,570.6	47.3	1,741.7	768.2
2010	9,018.9	4,324.2	47.9	1,474.2	753.6
2011	10,128.2	4,912.2	48.5	1,109.3	588.0
2012	11,281.1	5,475.4	48.5	1,152.9	563.2

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, and annual June benchmark revisions for 2002-2010.

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.

of Federal debt; private investors owned nearly all the rest. At the end of 2012, the nations holding the largest shares of U.S. Federal debt were China and Japan, which each held 21 percent of all foreign holdings. 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 from 34 percent at the end of 2002 to 42 percent at the end of 2004 and to 48 percent at the end of 2008. Since 2008, foreign holdings have remained relatively stable as a percentage of Federal debt. Foreign holdings were 49 percent at the end of 2012. The increase in foreign holdings was about 49 percent of total Federal borrowing from the public in 2012 and 52 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 capi-

tal 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, including the substantial Government efforts to support the credit markets during the recent financial turmoil, are discussed in Chapter 22, "Credit and Insurance," in this volume. Detailed data are presented in tables at the end of that chapter.