
ECONOMIC AND BUDGET ANALYSES

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.

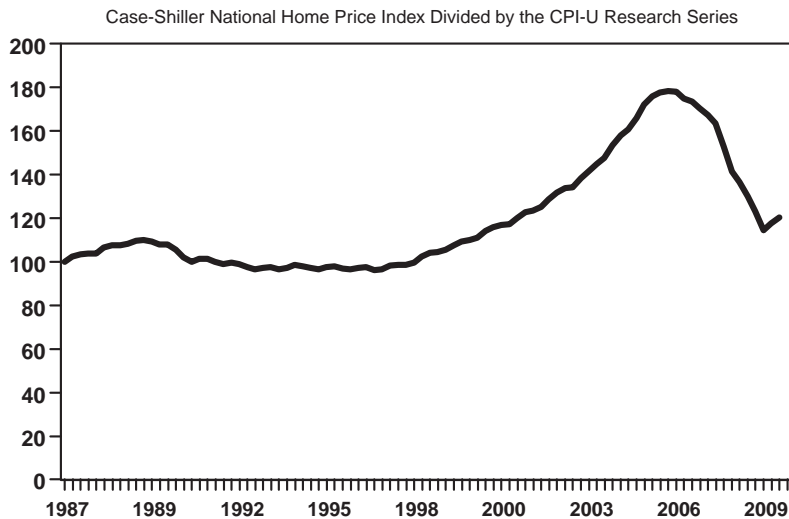
Recent Economic Performance

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.

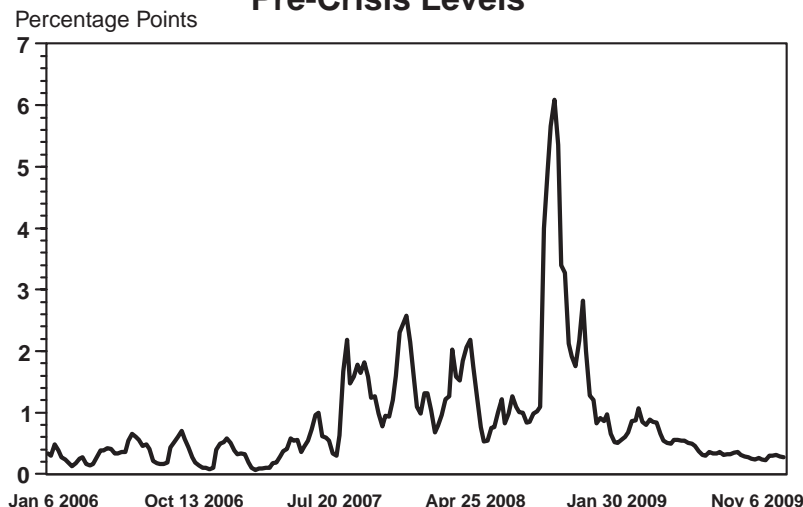
As banks and other investors lost confidence in the value of these high-risk mortgages and the securities based on them, banks became much less willing to lend to each

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-

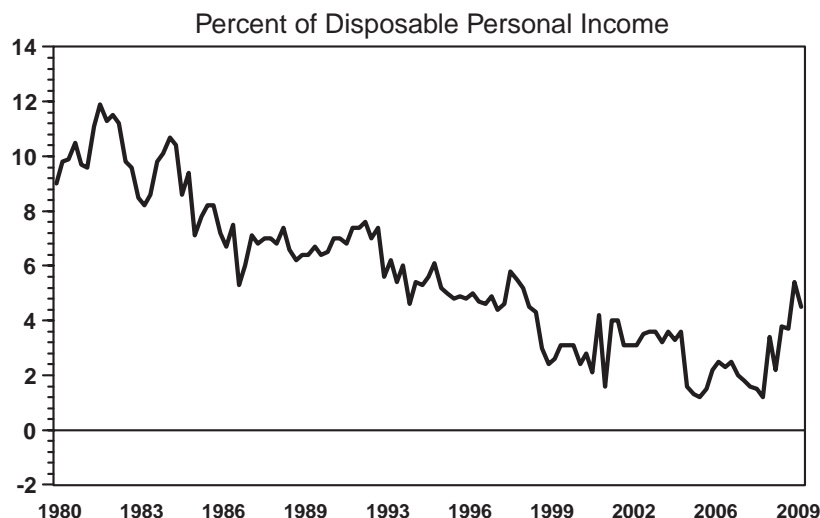
ment has had devastating effects on American families, and the recovery will not be real for most Americans until the job market also turns around. The good news is that historically, when the economy grows so does employment, although there is usually a lag of one to two quarters before unemployment 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

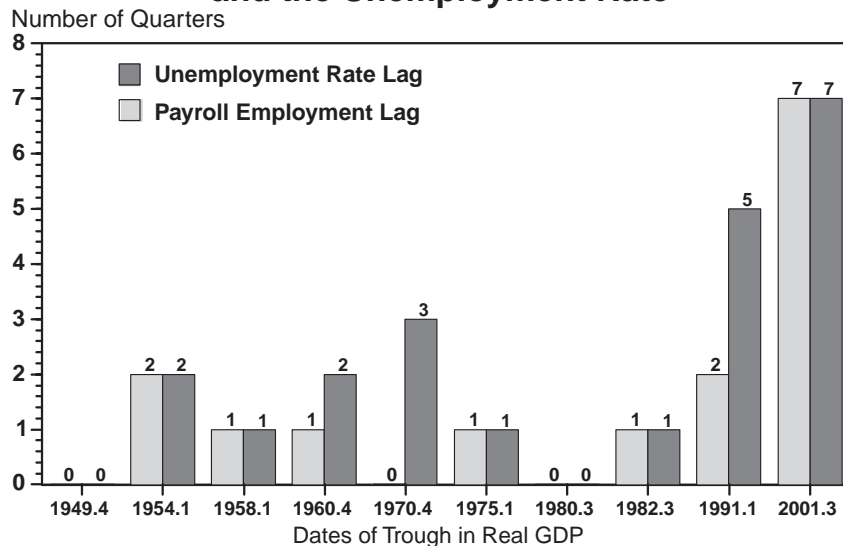


Table 2-1. ECONOMIC ASSUMPTIONS¹
(Calendar years; dollar amounts in billions)

	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

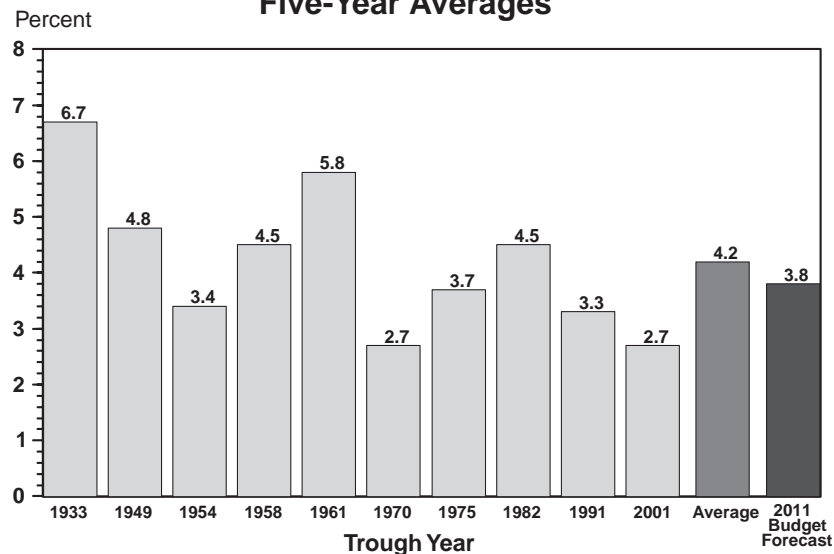
The economic projections underlying the 2011 Budget estimates are summarized in Table 2-1. The assumptions are based on information available as of mid-November 2009. This section discusses the Administration's projections and the next section compares the projections with those of the Blue Chip Consensus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

nomie 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

¹This 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 3-3. 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.

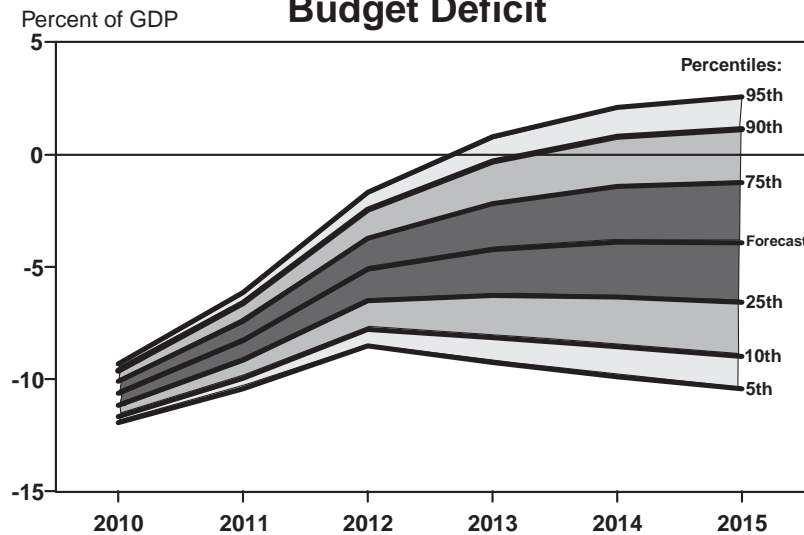
Uncertainty and the Deficit Projections

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

⁶The 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 BUDGET¹
(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

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

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-

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-

pensation 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.

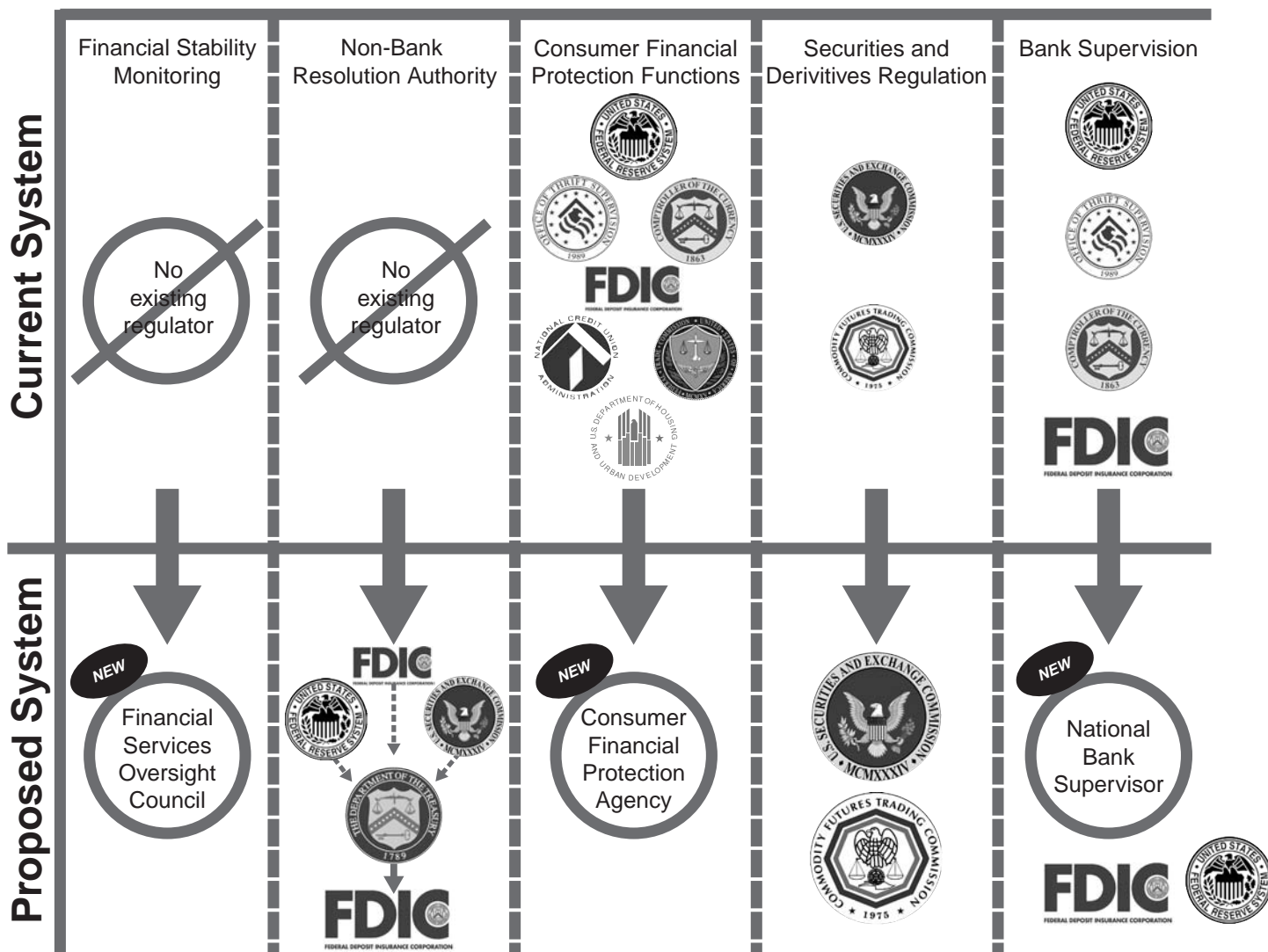
The Administration’s proposal employs lessons learned from the present crisis to reform and repair financial regulation on a number of fronts:

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.

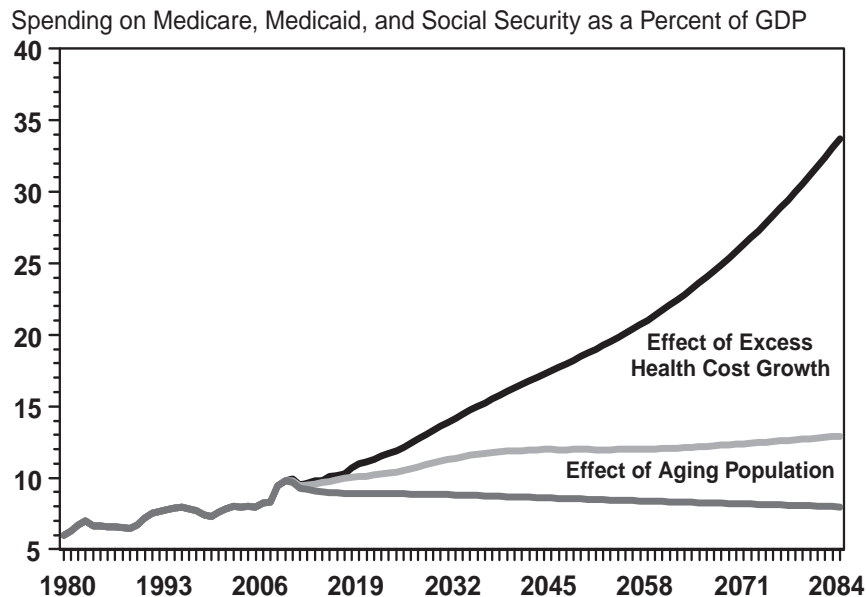
Sources of Increased Spending for Medicare, Medicaid, and Social Security.—The most important single factor driving the long-run budget outlook is the growth of health care expenditures. For decades, health care spending has outpaced the growth in total output (detailed national health expenditure data 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.

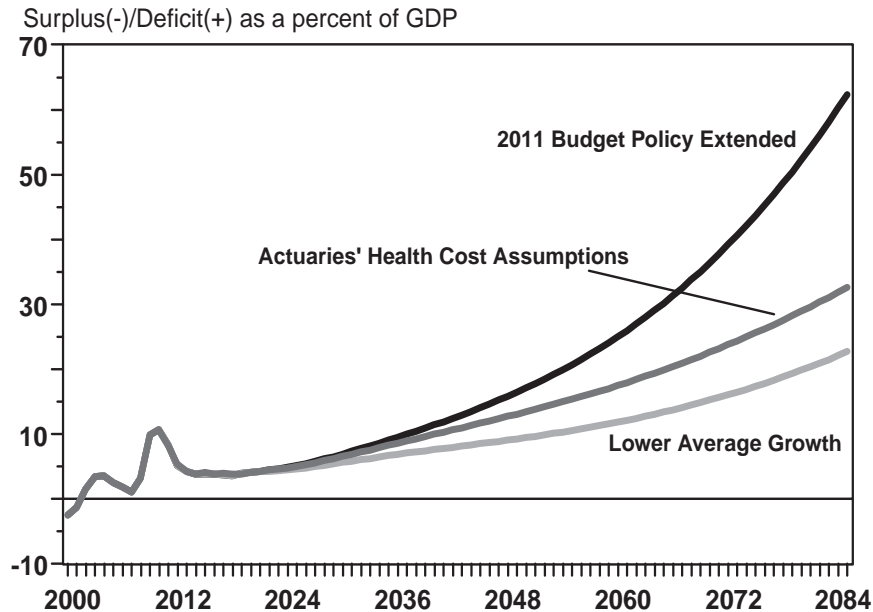
The projections assume that the Alternative Minimum Tax (AMT) will be effectively indexed, so the AMT does not raise the ratio of receipts to GDP. Some Federal tax-

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

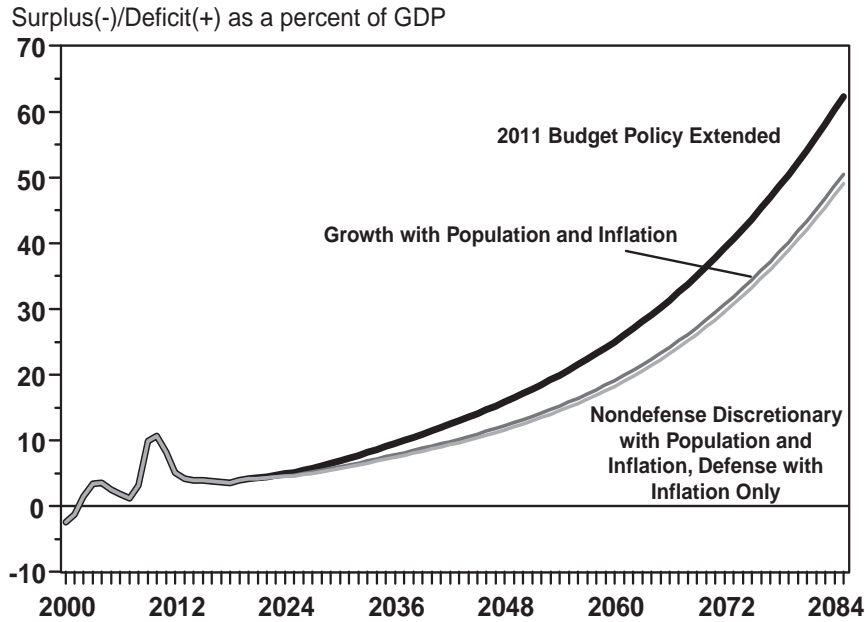


Chart 5-2 shows budget outcomes under the base assumptions and under two other scenarios. In the first, per capita health care costs grow at the rates assumed in the 2009 Medicare Trustees' Report. Specifically, this alternative assumes that the excess growth of health care costs above growth in GDP 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

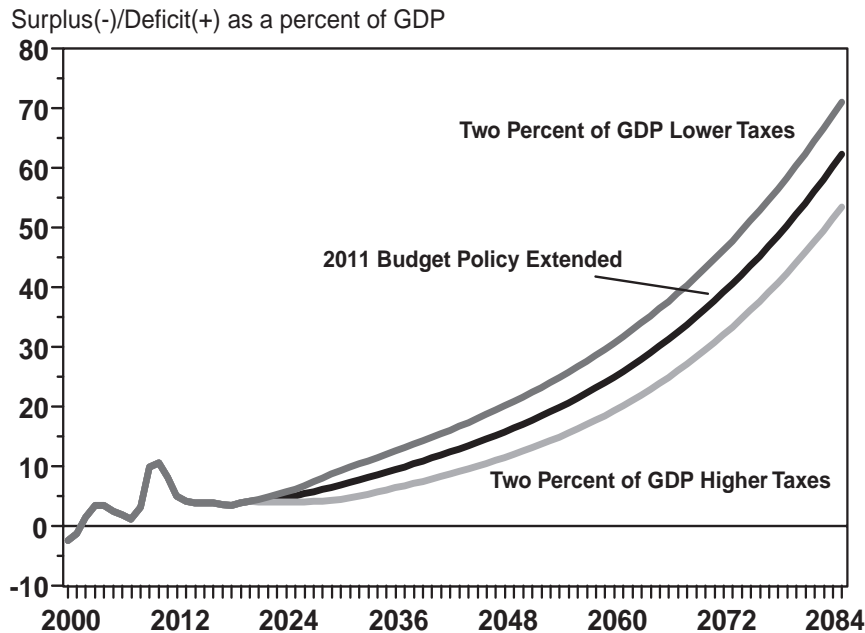
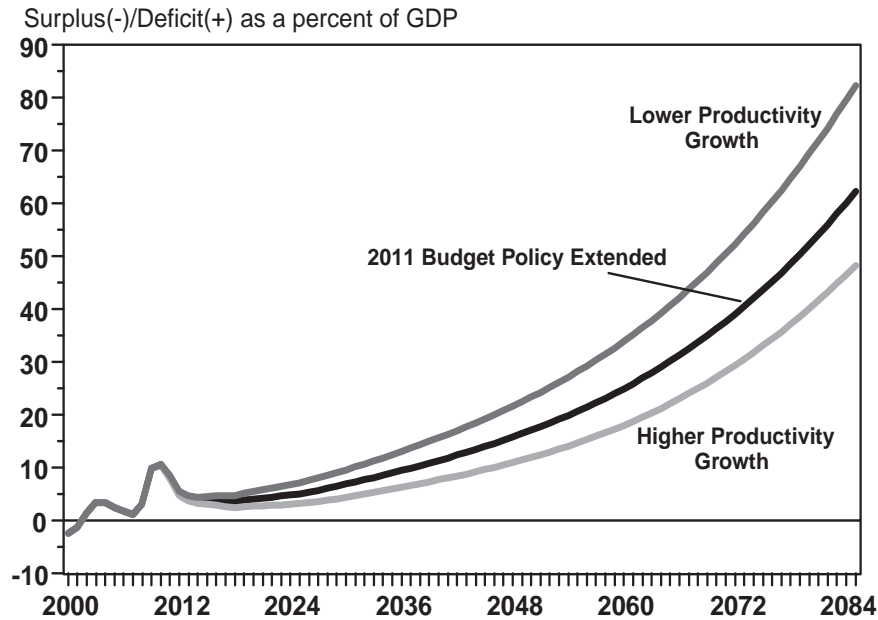


Chart 5-5. Alternative Productivity Assumptions



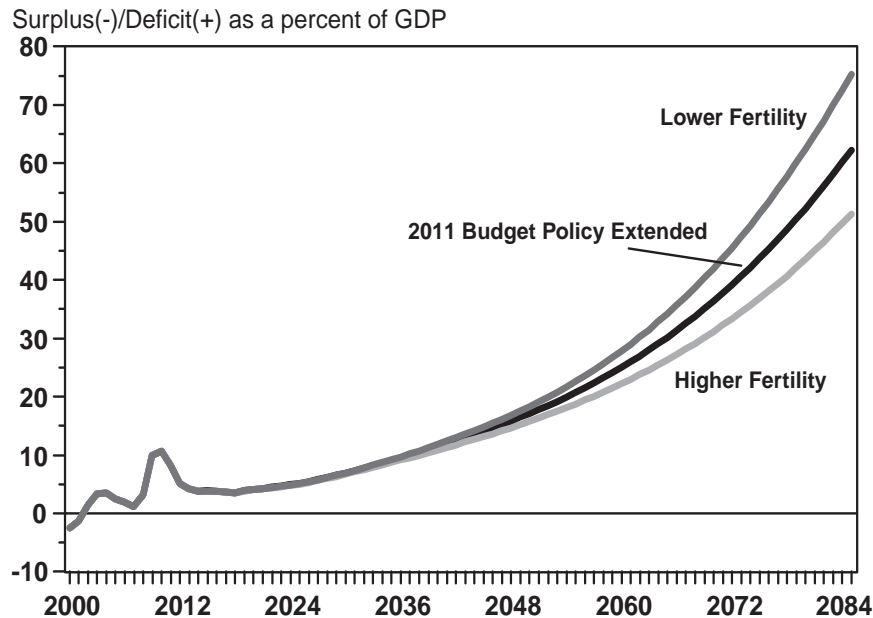
capita terms. Yet another possible assumption is to allow nondefense discretionary spending to grow with inflation plus population, but to increase defense spending only for inflation.

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

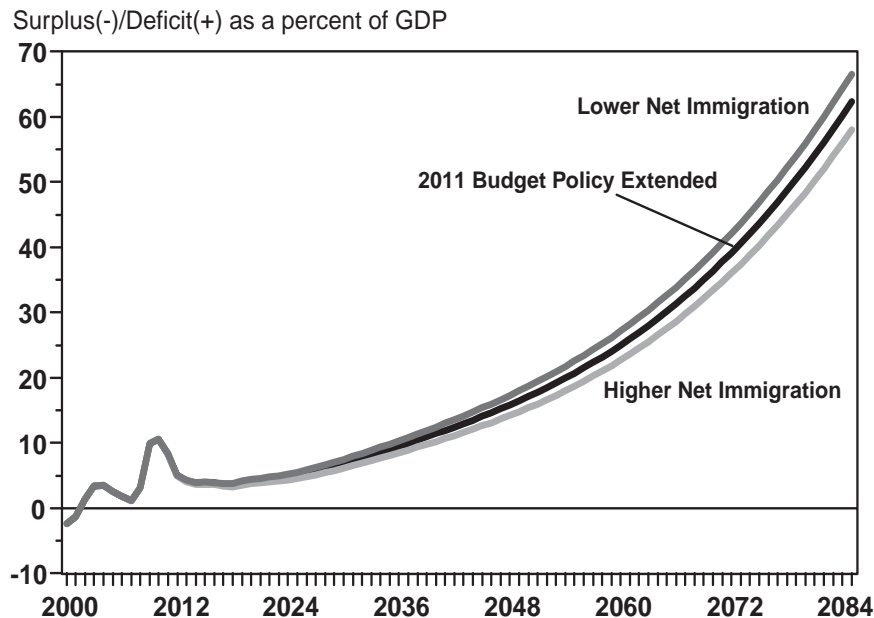
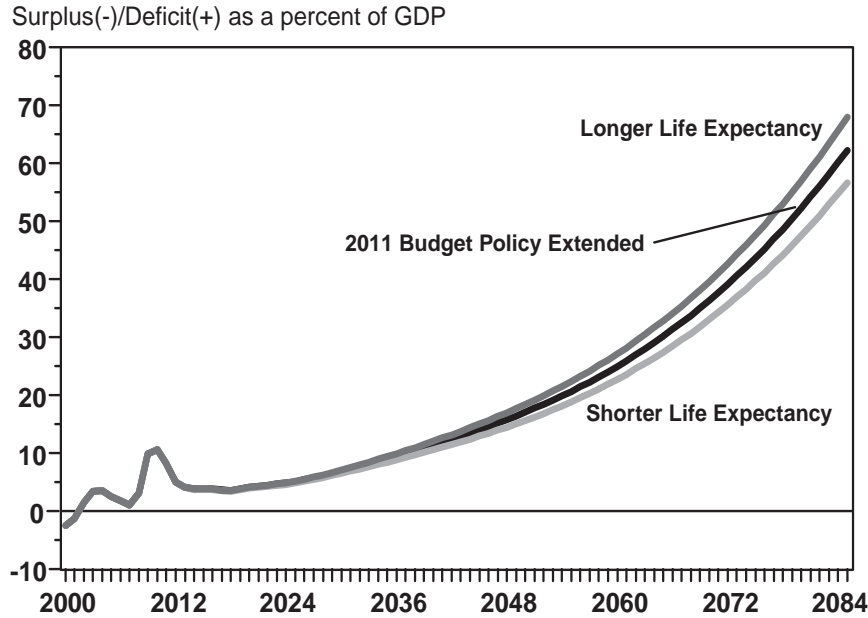


Chart 5-8. Alternative Mortality Assumptions



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 un-amortized 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

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

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.

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.