
ECONOMIC AND BUDGET ANALYSES

2. ECONOMIC ASSUMPTIONS AND INTERACTIONS WITH THE BUDGET

This chapter presents the economic forecast on which the 2014 Budget projections are based.¹ When the President took office in January 2009, the economy was in the midst of an historic economic crisis. The first order of business for the new Administration was to arrest the rapid decline in economic activity that threatened to plunge the country into a second Great Depression. The President and the Congress took unprecedented actions to restore demand, stabilize financial markets, and put people back to work. These steps included passage of the American Recovery and Reinvestment Act (ARRA), signed by the President just 28 days after taking office. They also included the Financial Stability Plan, announced in February 2009, which encompassed wide-ranging measures to strengthen the banking system, increase consumer and business lending, and stem foreclosures and support the housing market. These and a host of other actions walked the economy back from the brink. The economy bottomed out in June 2009 and gradually started to recover in late 2009.² Further measures to aid the recovery were taken in December 2010, such as cutting payroll taxes and extending unemployment insurance. Over the past 14 quarters, through the fourth quarter of 2012, real Gross Domestic Product (GDP) has grown at an average annual rate of 2.1 percent, and since February 2010, 6.4 million jobs have been added in the private sector. Meanwhile, the unemployment rate has fallen from its October 2009 peak of 10.0 percent to 7.7 percent (as of February 2013).

At the start of this year, the American Taxpayer Relief Act of 2012 (ATRA) prevented income tax increases on the vast majority of taxpayers in 2013 and provided greater certainty for the years ahead. With this legislation, the recovery is projected to gain momentum in 2013 and to strengthen further in 2014. However, even with healthy economic growth, unemployment is expected to be higher than is consistent with full employment for several more years. The Administration is projecting unemployment to continue to decline over the next five years, stabilizing at 5.4 percent by 2018.

This chapter contains several sections:

- The first section of this chapter reviews recent economic performance.
- The second section discusses the Administration's economic projections.
- The third section compares the Administration's to

other forecasts and to the Administration's projection in last year's Budget.

- The fourth section describes how changes in economic variables result in changes in receipts, outlays, and the deficit.
- The fifth section presents information on forecast errors for growth, inflation, and interest rates and how these forecast errors compare to those in forecasts made by the Congressional Budget Office (CBO) and the private-sector Blue Chip Consensus forecast.
- The sixth section presents alternatives to the current Administration forecast—based on both more optimistic and less optimistic assumptions with respect to real economic growth and unemployment—and describes the resulting effects on the deficit.
- The seventh section shows a probabilistic range of budget outcomes based on past errors in projecting the deficit.
- The last section discusses the relationship between structural and cyclical deficits, showing how much of the actual deficit is related to the economic cycle (e.g., the recent recession) and how much would persist even if the economy were at full employment.

Recent Economic Performance

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

Housing Markets Begin to Show Strength.—The housing market has shown clear signs of recovery, after its collapse in 2007 and 2008 which was a major cause of the financial crisis and recession. In 2006-2007, housing prices peaked, and from 2007 through 2008, housing prices fell sharply according to all available measures.³

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

² The dating of U.S. business cycles is done by the National Bureau of Economic Research, a private institution that has supported economic research on business cycles and other topics for many decades.

³ There are several measures of national housing prices. Two respected measures that attempt to correct for variations in housing quality are the S&P/Case-Shiller Home Price Index and the Federal Housing Finance Agency (FHFA) Purchase-Only House Price Index. The Case-Shiller index peaked in 2006, while the FHFA index peaked in 2007.

During the downturn, as house prices fell, investment in housing plummeted, reducing the annualized rate of real GDP growth by an average of 1 percentage point per quarter. Housing prices started to rise again in 2012, with a modest gain of 4 percent over the year. Residential investment began to increase steadily in the second quarter of 2011, and rose by more than 14 percent during 2012.

In April 2009, housing starts fell to an annual rate of just 478,000 units, the lowest level ever recorded for this series, which dates from 1959. Housing starts rose modestly over the next two years, but increased 37 percent to over 950,000 units over the 12 months through December 2012. Typically, at least 1.5 million starts a year are needed to accommodate the needs of an expanding population and to replace older units, indicating potential for a substantial housing rebound. Although a large overhang of vacant homes must be reduced before a robust housing recovery can become firmly established, there are indications that this is gradually happening with reduced vacancies and fewer foreclosures. The Administration forecast assumes a continued recovery in housing activity that adds moderately to real GDP growth over the forecast horizon.

The Risk of an International Slowdown.—While the U.S. economy has returned to moderate growth, worldwide recovery is uneven. Europe continues to confront financial uncertainty stemming from the troubled financial condition of several countries in the Euro zone. After the Euro was established as the common currency for 17 European countries in 1999, interest rates in those countries moved close together as their inflation rates tended to converge. However, recent events have led markets to reassess the long-run solvency of some of the countries using the Euro, and the result has been a striking divergence in the interest rates charged on sovereign debt of the various countries. High interest rates on their debt make it difficult for the most threatened of these countries to address the pressing fiscal issues that have put some countries' long-run solvency at risk.

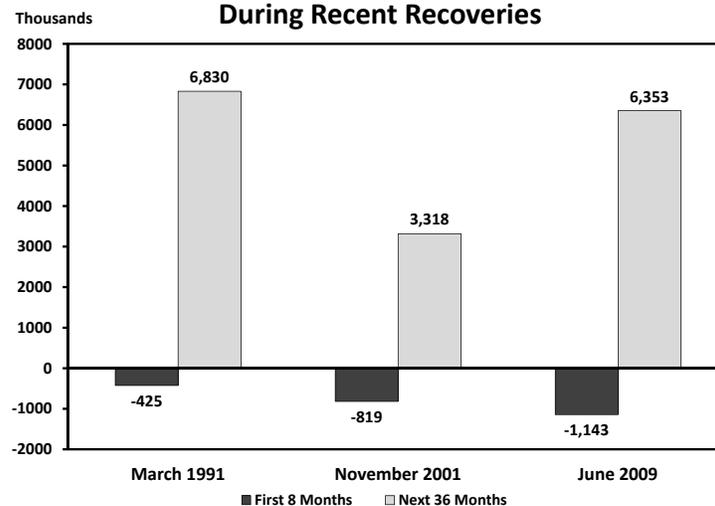
At the beginning of 2012, many private forecasters were expecting the recovery to accelerate over the course of the year. Instead, 2012 saw subpar growth due to unexpected headwinds. A persistent source of sluggishness has been the sovereign debt crisis in Europe, which has curbed global equity markets and will likely continue to weigh on confidence and the global recovery going forward. The European Union and European Central Bank have acted to confront these issues, and the affected governments have attempted to cut their budget deficits. Despite these actions, however, the European recovery remains at risk because of on-going structural adjustments and because the necessary austerity measures taken to address the fiscal crisis have in some cases limited demand and wages, resulting in social unrest. Several European countries have had slowing or negative growth in recent quarters, and there also has been a slowdown in growth in many emerging market economies.

Deleveraging has Slowed Consumption Growth.—Between the third quarter of 2007 and the first quarter of 2009, the real net worth of American households declined by \$16 trillion (24 percent) – the equivalent of more than one year's GDP. A precipitous decline in the stock market, along with falling house prices over this period, were the main reasons for the drop in household wealth. Since then, real household wealth, including financial assets, has risen substantially to near its previous peak, although total net worth remains below the prior peak level because housing prices have only recently started to recover.⁴

Americans reacted to this massive loss of wealth by saving more. The personal saving rate had been declining since the 1980s, and it reached a low point of 1.3 percent in the third quarter of 2005. It remained low, averaging only 2.2 percent through the end of 2007, but since then, as wealth has declined, the saving rate has increased to an average of 4.4 percent over the past three years. A sudden

⁴ Real wealth is computed by deflating household net worth from the Flow-of-Funds Accounts by the Chained Price Index for Personal Consumption Expenditures. Data are available through 2012:Q3.

**Chart 2-1. Private Job Gains and Losses
During Recent Recoveries**



increase in the desire to save implies a corresponding reduction in consumer demand, and a fall-off in consumption had a negative effect on the economy during the recession of 2008 and early 2009. During that period, real consumer spending fell at an annual rate of 2.3 percent. Since then, real consumer spending has recovered and now exceeds its previous peak level, although it has increased only 1.9 percent over the past four quarters. Continued growth in consumption is essential to a healthy recovery, and, as income also grows, increased consumption is compatible with a higher but stable saving rate.

Rebound in Business Investment.—Business fixed investment fell sharply during the 2008-2009 contraction. It rose rapidly in 2010 through 2012, but even after the substantial increases in business spending for structures, equipment and software over the past 10 quarters, real investment remains well below its pre-recession levels implying room for further growth. The cost of capital is low and American corporations at the end of 2012 held substantial levels of cash reserves, which could provide funding for future investments as the economy continues to recover. The main constraint on business investment

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

| | Actual | Projections | | | | | | | | | | | |
|--|--------|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
| Gross Domestic Product (GDP): | | | | | | | | | | | | | |
| Levels, dollar amounts in billions: | | | | | | | | | | | | | |
| Current dollars | 15,076 | 15,705 | 16,384 | 17,235 | 18,181 | 19,192 | 20,247 | 21,275 | 22,247 | 23,219 | 24,216 | 25,253 | 26,331 |
| Real, chained (2005) dollars | 13,299 | 13,600 | 13,907 | 14,358 | 14,864 | 15,399 | 15,943 | 16,441 | 16,873 | 17,283 | 17,692 | 18,104 | 18,526 |
| Chained price index (2005 = 100), annual average | 113.4 | 115.5 | 117.8 | 120.1 | 122.4 | 124.7 | 127.0 | 129.4 | 131.9 | 134.4 | 136.9 | 139.5 | 142.2 |
| Percent change, fourth quarter over fourth quarter: | | | | | | | | | | | | | |
| Current dollars | 4.0 | 4.1 | 4.5 | 5.4 | 5.6 | 5.6 | 5.5 | 4.9 | 4.4 | 4.4 | 4.3 | 4.3 | 4.3 |
| Real, chained (2005) dollars | 2.0 | 2.0 | 2.6 | 3.4 | 3.6 | 3.6 | 3.5 | 2.9 | 2.4 | 2.4 | 2.3 | 2.3 | 2.3 |
| Chained price index (2005 = 100) | 2.0 | 2.1 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 |
| Percent change, year over year: | | | | | | | | | | | | | |
| Current dollars | 4.0 | 4.2 | 4.3 | 5.2 | 5.5 | 5.6 | 5.5 | 5.1 | 4.6 | 4.4 | 4.3 | 4.3 | 4.3 |
| Real, chained (2005) dollars | 1.8 | 2.3 | 2.3 | 3.2 | 3.5 | 3.6 | 3.5 | 3.1 | 2.6 | 2.4 | 2.4 | 2.3 | 2.3 |
| Chained price index (2005 = 100) | 2.1 | 1.9 | 2.0 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 |
| Incomes, billions of current dollars: | | | | | | | | | | | | | |
| Domestic Corporate Profits | 1,388 | 1,511 | 1,566 | 1,743 | 1,833 | 1,939 | 1,950 | 1,855 | 1,742 | 1,658 | 1,504 | 1,422 | 1,328 |
| Employee Compensation | 8,295 | 8,591 | 8,903 | 9,353 | 9,891 | 10,460 | 11,070 | 11,671 | 12,253 | 12,841 | 13,456 | 14,065 | 14,708 |
| Wages and salaries | 6,661 | 6,902 | 7,182 | 7,549 | 7,970 | 8,438 | 8,945 | 9,435 | 9,911 | 10,387 | 10,879 | 11,364 | 11,885 |
| Other taxable income ² | 3,252 | 3,387 | 3,519 | 3,643 | 3,828 | 4,032 | 4,300 | 4,585 | 4,832 | 5,054 | 5,257 | 5,455 | 5,666 |
| Consumer Price Index (all urban):³ | | | | | | | | | | | | | |
| Level (1982-84 = 100), annual average | 224.9 | 229.6 | 234.5 | 239.7 | 244.9 | 250.3 | 255.8 | 261.5 | 267.2 | 273.1 | 279.1 | 285.2 | 291.5 |
| Percent change, fourth quarter over fourth quarter | 3.3 | 1.9 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 |
| Percent change, year over year | 3.1 | 2.1 | 2.1 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 |
| Unemployment rate, civilian, percent: | | | | | | | | | | | | | |
| Fourth quarter level | 8.7 | 7.9 | 7.5 | 7.0 | 6.5 | 6.0 | 5.6 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 |
| Annual average | 8.9 | 8.1 | 7.7 | 7.2 | 6.7 | 6.2 | 5.7 | 5.5 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 |
| Federal pay raises, January, percent: | | | | | | | | | | | | | |
| Military ⁴ | 1.4 | 1.6 | 1.7 | 1.0 | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Civilian ⁵ | 0.0 | 0.0 | 0.5 | 1.0 | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Interest rates, percent: | | | | | | | | | | | | | |
| 91-day Treasury bills ⁶ | 0.1 | 0.1 | 0.1 | 0.2 | 0.4 | 1.3 | 2.3 | 3.2 | 3.6 | 3.7 | 3.7 | 3.7 | 3.7 |
| 10-year Treasury notes | 2.8 | 1.8 | 2.0 | 2.6 | 3.1 | 3.7 | 4.1 | 4.4 | 4.6 | 4.8 | 5.0 | 5.0 | 5.0 |

N/A = Not Available

¹ Based on information available as of mid-November 2012.

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

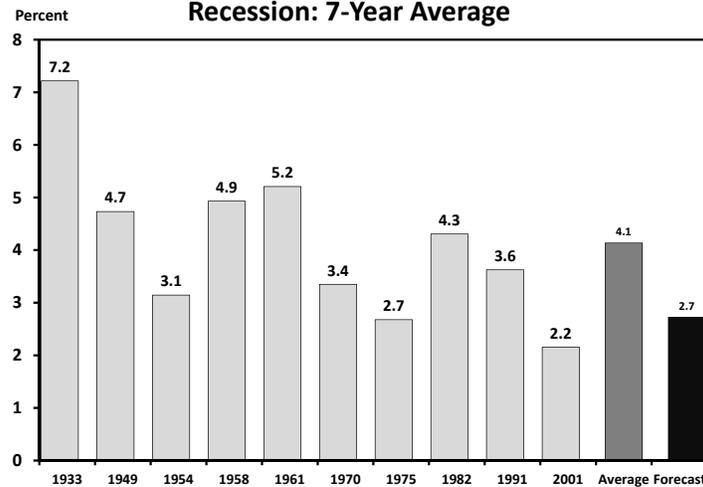
³ Seasonally adjusted CPI for all urban consumers.

⁴ Percentages apply to basic pay only; percentages to be proposed for years after 2014 have not yet been determined.

⁵ Overall average increase, including locality pay adjustments. Percentages to be proposed for years after 2014 have not yet been determined.

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

Chart 2-2. Real GDP Growth Following a Recession: 7-Year Average



is poor sales expectations, which have been dampened by the slow pace of recovery. However, if consumption picks up, businesses are in a good position to expand investment. Nevertheless, the pace of future growth could prove to be uneven, as investment tends to be volatile.

Steady Progress in the Labor Market.—The unemployment rate peaked in 2009. It has declined since then, but it remains well above its historical average of under 6 percent, and the rate of long-term unemployment (those out of work for more than 6 months) remains high. The high rate of unemployment has had devastating effects on American families, and the recovery will not be real for most Americans until the job market strengthens further. Historically, when the economy grows, so does employment, and there are signs that this pattern is repeating itself in the current recovery, albeit slowly. Private employment has grown for 36 straight months, although at a relatively modest rate. The positive job growth has far exceeded the job gains in the recovery following the 2001 recession, and is only slightly less than equivalent in comparison to the 1990s expansion (see Chart 2-1).

Economic Projections

The economic projections underlying the 2014 Budget estimates are summarized in Table 2-1. The assumptions are based on information available as of mid-November 2012. This section discusses the Administration's projections, and the next section compares these projections with those of the Federal Reserve's Open Market Committee (FOMC), the CBO, and the Blue Chip Consensus of private forecasters.

Real GDP.—The Administration projects the economic recovery that began in mid-2009 will continue with real GDP growing at an average annual rate of 2.9 percent over the next 10 years. At the beginning of 2013, the enactment of the American Taxpayer Relief Act removed much of the uncertainty about tax changes that existed when the Administration finalized its economic assumptions in November. However, the projected growth rate

in November was based on policy assumptions that were similar to ATRA in regard to tax extensions. The middle class tax cuts were made permanent, tax rates on regular income were raised for the wealthiest taxpayers; and rates were also raised on dividends and capital gains (relative to 2012 tax law). The temporary two percentage point payroll tax cut of 2011-12 expired. The effective increase in the payroll tax rate is expected to produce some fiscal drag during 2013, and as a result the Administration projects 2.6 percent GDP growth over the four quarters of the year, accelerating to 3.4 percent growth in 2014 when increased private demand is expected to play a larger role in supporting continued recovery. This economic forecast, as always, is based on the assumption that the Administration's budget proposals are enacted in full, including a proposal for infrastructure spending to boost the economy and lay a foundation for long-term growth, and that the sequester that took effect on March 1st of this year is avoided and the harmful, across-the-board cuts are reversed. The economy is expected to continue to grow at a pace of about 3.5 percent over the following three years. Real GDP growth is projected to return to its "potential" growth rate of 2.4 percent by 2019, and to grow at a steady 2.3 percent rate for the remaining four years of the forecast. The slight drop off in the last few years is due to demographic factors that lower the labor force participation rate as the baby boom generation retires.

As shown in Chart 2-2, the Administration's projections for real GDP growth over the first seven years of the expected recovery imply an average growth rate below the average for historical recoveries. Recent recoveries have been somewhat weaker than average, but the last two expansions were preceded by mild recessions with relatively little pent-up demand when conditions improved. Because of the depth of the recent recession, there is much more room for a rebound in spending and production than was true either in 1991 or 2001. On the other hand, lingering effects from the credit crisis and other special factors have limited the pace of the recovery until now.

BOX 2-1. SUPPLY-SIDE ANALYSIS OF LONG-TERM GROWTH

The growth rate of the economy over the long run is determined by the growth of its supply-side components, demographics, and technological change. The growth rate that characterizes the long-run trend in real U.S. GDP—or potential GDP—plays an important role in guiding the Administration’s long-run forecast. Through 2020, potential real GDP is projected to grow at a 2.4 percent annual rate, before slowing to 2.3 percent during the three years 2021–23, reflecting the increasing size of the retiring baby-boom cohorts.

Table 2-2 shows the Administration’s forecast for the contribution of each supply-side factor to the growth in potential real GDP: the working-age population, the rate of labor force participation, the employed share of the labor force, the ratio of nonfarm business employment to household employment, the length of the workweek, labor productivity, and the ratio of real GDP to nonfarm output. Each column in Table 2-2 shows the average annual growth rate for each factor over a specific period of time. The first column shows the long-run average growth rates between the business-cycle peak of 1953 and the business-cycle peak of 2007, with business-cycle peaks chosen as end points to remove the substantial fluctuations within cycles so as to reveal long-run trends. The second column shows average growth rates between the fourth quarter of 2007 and the third quarter of 2012, a period that includes the 2007–09 recession and the recovery so far. The third column shows the Administration’s projection for the entire 11-year forecast period, from the third quarter of 2012 to the fourth quarter of 2023. And the fourth column shows average projected growth rates between the fourth quarter of 2020 and the fourth quarter of 2023, that is, the last three years of the forecast interval when the economy is assumed to settle into steady-state growth.

Summing the growth rates of these components, real GDP is projected to rise at an average 2.8 percent a year over the projection period (line 8, column 3), somewhat faster than the 2.4 percent annual growth rate for potential real GDP (line 9, column 3). Actual GDP can and is expected to grow faster than potential GDP primarily because of the projected rise in the employment rate (line 3, column 3) as millions of currently unemployed workers find jobs. Real potential GDP (line 9, columns 3 and 4) is projected to grow more slowly than the long-term historical growth rate of 3.2 percent a year (line 9, column 1). The projected slowdown in real potential GDP growth primarily reflects the lower projected growth rate of the working-age population and the retirement of the baby-boom cohort.

Table 2-2. COMPONENTS OF ACTUAL AND POTENTIAL REAL GDP GROWTH, 1952–2023

| Component | Average Annual Growth rate ^a | | | |
|--|---|----------------------------|--------------------|--------------------|
| | History, peak-to-peak | Recent history, since peak | Forecast | Out-year forecast |
| | 1953:Q2 to 2007:Q4 ^b | 2007:Q4 to 2012:Q3 | 2012:Q3 to 2023:Q4 | 2020:Q4 to 2023:Q4 |
| 1 Civilian noninstitutional population aged 16+ | 1.4 | 1.2 | 1.0 | 1.0 |
| 2 Labor force participation rate | 0.2 | -0.8 | -0.1 | -0.4 |
| 3 Employed share of the labor force | -0.0 | -0.7 | 0.3 | 0.0 |
| 4 Ratio of nonfarm business employment to household employment | 0.0 | -0.7 | -0.0 | 0.0 |
| 5 Average weekly hours (nonfarm business) | -0.3 | -0.0 | -0.1 | -0.1 |
| 6 Output per hour (productivity, nonfarm business) | 2.1 | 1.6 | 2.2 | 2.2 |
| 7 Ratio of real GDP to nonfarm business output | -0.2 | 0.0 | -0.3 | -0.4 |
| 8 Sum: Actual real GDP | 3.2 | 0.5 | 2.8 | 2.3 |
| 9 Memo: Potential real GDP | 3.2 | 2.0 | 2.4 | 2.3 |

^a All contributions are in percentage points at an annual rate, forecast finalized in mid-November 2012.

^b 1953:Q2 and 2007:Q4 are business-cycle peaks.

Note: Population, labor force, and household employment have been adjusted for discontinuities in the population series. Nonfarm business employment, workweek, and productivity come from the Labor Productivity and Costs database maintained by the Bureau of Labor Statistics.

Source: Bureau of Labor Statistics, Current Population Survey, Labor Productivity and Costs; Bureau of Economic Analysis, National Income and Product Accounts; Department of the Treasury; Office of Management and Budget; CEA calculations.

The U.S. economy has enormous room for growth, although there are factors that could continue to limit that growth in the years ahead. On the positive side, the unemployment rate has fallen since the recession trough and further progress is expected in 2013-14, particularly if the President’s Budget proposals are adopted. The Federal Reserve’s recent directive states

that a “highly accommodative stance of monetary policy will remain appropriate for a considerable time.” However, financial markets here and in Europe have been troubled by weak economic growth and the sustainability of fiscal policy in some European countries. The drag from a European slowdown could hold back the U.S. economy.

Long-Term Growth.—The Administration’s forecast does not attempt to project cyclical developments beyond the next few years. The long-run projection for real economic growth and unemployment assumes that they will maintain trend values in the years following the return to full employment. Real GDP, reflecting the slower growth in productivity outside the nonfarm business sector, grows at a rate of 2.3 percent in the final years of the projection. That is markedly slower than the average growth rate of real GDP since 1947 of 3.2 percent per year. In the 21st Century, real GDP growth in the United States is likely to be permanently slower than it was in earlier eras because of a slowdown in labor force growth initially due to the retirement of the post-World War II baby boom generation, and later due to a decline in the growth of the working-age population.

Box 2-1 describes the components of long-term growth rates and how they relate to the Administration’s forecast in more detail.

Unemployment.—In February 2013, the overall unemployment rate was 7.7 percent. In line with the increased growth in the economy projected after 2013, the unemployment rate is expected to ease to 5.4 percent by 2018 and to remain at that level during the period of trend growth during the last few years of the forecast.

Inflation.—The Consumer Price Index for all urban consumers (CPI-U) rose by 1.7 percent for the 12 months ending in December 2012. Over the previous 12 months it had risen by 3.0 percent. The decrease in inflation in 2012 was due almost entirely to sharp movements in food and energy prices. The “core” CPI, excluding both food and energy, was up 1.9 percent through the 12 months ending in December, little changed from the 2.2 percent during 2011.

Weak demand continues to hold down prices for many goods and services, and continued high unemployment is expected to result in a relatively low inflation rate. As the economy recovers and the unemployment rate declines, the rate of inflation should remain near the Federal Reserve’s target of around 2 percent per year. With the recovery path assumed in the Administration forecast, the risk of outright deflation appears minimal. The Administration assumes that the rate of change in the CPI will average 2.2 percent and that the GDP price index will increase at a 1.9 percent annual rate in the long run.

Interest Rates.—Interest rates on Treasury securities fell sharply in late 2008, as both short-term and long-term rates declined to their lowest levels in decades. Since then Treasury rates have fluctuated, but they have not returned to the levels before the financial crisis, and at the end of 2012 long-term rates were especially low. In the first week of January, the yield on 10-year Treasuries was just 1.9 percent. Investors have sought the security of Treasury debt during the heightened financial uncertainty of the last few years, which has kept yields low. At the short end of the yield curve, the Federal Reserve is holding short-term rates near zero as it seeks to foster economic growth and lower unemployment. The Federal Reserve’s policy of purchasing long-term Treasury securities may also be helping to hold down long-term rates.

In the Administration projections, interest rates are expected to rise, but only gradually as financial concerns are alleviated and the economy recovers from recession. The 91-day Treasury bill rate is projected to remain near zero into 2015 consistent with the Federal Reserve’s announced intentions, and then to rise to 3.7 percent by 2017. The 10-year rate begins to rise in 2013 and reaches 5.0 percent by 2021. After adjusting for inflation, the projected real interest rates are close to their historical averages.

Income Shares.—The share of labor compensation in GDP was extremely low by historical standards in 2012. It is expected to remain low for the next few years falling to a low point of 54.3 percent of GDP in 2013-2014. As the economy grows faster in the middle years of the forecast period, and as employment increases as a result, compensation is projected to rise, reaching 55.9 percent of GDP in 2023. In the expansion that ended in 2007, labor compensation tended to lag behind the growth in productivity, and that has also been true for the surge in productivity growth in 2009-2010. The share of taxable wages, which is strongly affected by changes in health insurance costs, is expected to rise from 43.8 percent of GDP in 2013 to 45.1 percent in 2023. The share of domestic corporate profits is expected to decline from 12.4 percent of GDP in 2012 to 8.2 percent in 2023, which is close to its historical average.

Comparison with Other Forecasts

Table 2–3 compares the economic assumptions for the 2014 Budget with projections by CBO, the Blue Chip Consensus — an average of about 50 private-sector economic forecasts — and, for some variables, the Federal Reserve Open Market Committee. These other forecasts differ from the Administration’s projections, but the forecast differences are relatively small compared with the margin of error in all economic forecasts. Like the Administration, the other forecasts project that real GDP will continue to grow as the economy returns to a normal level of unemployment. The forecasts also agree that inflation will be low while outright deflation is avoided, and that interest rates will eventually rise to more normal levels.

There are some conceptual differences between the Administration forecast and the other economic forecasts. The Administration forecast assumes that the President’s Budget proposals will be enacted, and passage of those proposals will boost growth. The 50 or so private forecasters in the Blue Chip Consensus make differing policy assumptions, and some may not assume that the sequester will be successfully replaced with balanced deficit reduction or that the Congress will enact other policies the Administration has proposed to boost growth. CBO is required to assume that current law will continue in making its projections. As a result, their February projections assumed that the sequester would take place, as well as other fiscal tightening actions that would lower growth in 2013. Specifically, CBO stated that its 1.4 percent projection for real GDP growth this year could be as much

Table 2-3. COMPARISON OF ECONOMIC ASSUMPTIONS
(Calendar years)

| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|--------|-----------|-----------|-----------|--------|--------|--------|--------|--------|--------|--------|--------|
| Nominal GDP: | | | | | | | | | | | | |
| 2014 Budget | 15,705 | 16,384 | 17,235 | 18,181 | 19,192 | 20,247 | 21,275 | 22,247 | 23,219 | 24,216 | 25,253 | 26,331 |
| CBO | 15,692 | 16,149 | 16,863 | 17,913 | 19,087 | 20,224 | 21,178 | 22,129 | 23,099 | 24,093 | 25,117 | 26,180 |
| Blue Chip | 15,682 | 16,239 | 16,993 | 17,888 | 18,793 | 19,725 | 20,684 | 21,667 | 22,676 | 23,730 | 24,835 | 26,002 |
| Real GDP (year-over-year): | | | | | | | | | | | | |
| 2014 Budget | 2.3 | 2.3 | 3.2 | 3.5 | 3.6 | 3.5 | 3.1 | 2.6 | 2.4 | 2.4 | 2.3 | 2.3 |
| CBO | 2.3 | 1.4 | 2.6 | 4.1 | 4.4 | 3.8 | 2.6 | 2.4 | 2.3 | 2.2 | 2.2 | 2.2 |
| Blue Chip | 2.2 | 1.8 | 2.7 | 3.1 | 2.9 | 2.8 | 2.7 | 2.6 | 2.5 | 2.5 | 2.5 | 2.5 |
| Real GDP (fourth-quarter-over-fourth-quarter): | | | | | | | | | | | | |
| 2014 Budget | 2.0 | 2.6 | 3.4 | 3.6 | 3.6 | 3.5 | 2.9 | 2.4 | 2.4 | 2.3 | 2.3 | 2.3 |
| CBO | 1.9 | 1.4 | 3.4 | 4.4 | 4.3 | 3.2 | 2.5 | 2.4 | 2.2 | 2.2 | 2.2 | 2.2 |
| Blue Chip | 1.6 | 2.3 | 2.8 | 3.2 | 2.8 | 2.8 | 2.6 | 2.6 | 2.5 | 2.5 | 2.5 | 2.5 |
| Federal Reserve Central Tendency | | 2.3 - 2.8 | 2.9 - 3.4 | 2.9 - 3.7 | | | | | | | | |
| GDP Price Index:¹ | | | | | | | | | | | | |
| 2014 Budget | 1.9 | 2.0 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 |
| CBO | 1.8 | 1.5 | 1.8 | 2.0 | 2.1 | 2.1 | 2.1 | 2.0 | 2.1 | 2.0 | 2.0 | 2.0 |
| Blue Chip | 1.8 | 1.7 | 1.9 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 |
| Consumer Price Index (CPI-U):¹ | | | | | | | | | | | | |
| 2014 Budget | 2.1 | 2.1 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 |
| CBO | 2.1 | 1.6 | 1.9 | 2.1 | 2.1 | 2.2 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 |
| Blue Chip | 2.1 | 1.8 | 2.1 | 2.3 | 2.4 | 2.4 | 2.4 | 2.4 | 2.3 | 2.3 | 2.3 | 2.3 |
| Unemployment Rate:² | | | | | | | | | | | | |
| 2014 Budget | 8.1 | 7.7 | 7.2 | 6.7 | 6.2 | 5.7 | 5.5 | 5.4 | 5.4 | 5.4 | 5.4 | 5.4 |
| CBO | 8.1 | 7.9 | 7.8 | 7.1 | 6.3 | 5.6 | 5.5 | 5.5 | 5.4 | 5.4 | 5.3 | 5.3 |
| Blue Chip | 8.1 | 7.7 | 7.3 | 6.7 | 6.3 | 6.0 | 5.7 | 5.6 | 5.6 | 5.6 | 5.6 | 5.6 |
| Federal Reserve Central Tendency ³ | | 7.3 - 7.5 | 6.7 - 7.0 | 6.0 - 6.5 | | | | | | | | |
| Interest Rates:² | | | | | | | | | | | | |
| 91-Day Treasury Bills (discount basis): | | | | | | | | | | | | |
| 2014 Budget | 0.1 | 0.1 | 0.2 | 0.4 | 1.3 | 2.3 | 3.2 | 3.6 | 3.7 | 3.7 | 3.7 | 3.7 |
| CBO | 0.1 | 0.1 | 0.2 | 0.2 | 1.5 | 3.4 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Blue Chip | 0.1 | 0.1 | 0.2 | 0.9 | 2.1 | 3.0 | 3.3 | 3.5 | 3.6 | 3.6 | 3.6 | 3.6 |
| 10-Year Treasury Notes: | | | | | | | | | | | | |
| 2014 Budget | 1.8 | 2.0 | 2.6 | 3.1 | 3.7 | 4.1 | 4.4 | 4.6 | 4.8 | 5.0 | 5.0 | 5.0 |
| CBO | 1.8 | 2.1 | 2.7 | 3.5 | 4.3 | 5.0 | 5.2 | 5.2 | 5.2 | 5.2 | 5.2 | 5.2 |
| Blue Chip | 1.8 | 2.1 | 2.7 | 3.4 | 4.1 | 4.5 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 | 4.7 |

N/A = Not Available

Sources: Administration; CBO, The Budget and Economic Outlook: Fiscal Years 2013 to 2023; March 2013 Blue Chip Economic Indicators, Aspen Publishers, Inc.; Federal Reserve Open Market Committee, March 20, 2013.

¹ Year-over-year percent change.

² Annual averages, percent.

³ Average of 4th quarter values.

as 1-1/2 percentage points higher if the sequester, payroll tax increase, and other actions were not taken.

The Administration projections were completed in mid-November. The five-month lag between that date and the Budget release is due in part because the budget process requires lead time to complete the estimates for agency programs that are incorporated in the Budget. Forecasts made at different dates will differ if economic news between the two dates alters the economic outlook. The Blue Chip Consensus for 2013-2023 in this table was the latest available, from early March. The FOMC members'

central tendency of their forecasts are from March 2013. The CBO forecast is from its February 2013 report.

Real GDP Growth.— In 2013, the Administration expects more growth than the other forecasters, mainly because the forecast assumes that all of the Budget proposals will be enacted. Other forecasters make different assumptions. In 2014, the Administration expects growth to increase, while most other forecasters also look for an increase but to a lesser degree.

The Administration projects that real GDP will eventually recover much of the loss from the 2008-2009 recession.

This implies a few years of higher-than-normal growth as real GDP makes up the lost ground. The Blue Chip average shows only a very limited recovery in this sense. In the Blue Chip projections, real GDP growth exceeds its long-run average only briefly in the 11-year forecast period, and much of the loss of real GDP experienced during the recession is permanent. CBO anticipates a stronger recovery than Blue Chip that would return real GDP to nearly the same level as in the Administration forecast. In the long run, the real growth rates projected by the forecasters are similar, ranging between 2.3 and 2.5 percent.

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

Unemployment, Inflation, and Interest Rates.—The Administration forecasts unemployment falling steadily over the next few years to a level of 5.4 percent. The Blue Chip and CBO also show a decline in unemployment, but at a slower rate. By the end of the forecast, CBO and the Administration have about the same level of unemployment, while the Blue Chip has it declining to only 6.0 percent. The Administration's unemployment projection is within the range of the Federal Reserve forecast. Nevertheless, the CBO projection of unemployment is higher than the

Administration in 2013-2015, reflecting the different policy assumptions underlying the two forecasts. Over time the Administration projects a return to the average unemployment rate that prevailed in the 1990s and 2000s.

The Administration, CBO, and the Blue Chip Consensus anticipate a subdued rate of inflation over the next two years. In the medium term, inflation is projected to return to a rate of around two percent per year, which is consistent with the Federal Reserve's long-run policy goal for inflation. All forecasts all have interest rates increasing substantially in the long run to similar levels. However, the path of interest rate adjustment differs substantially, with the Blue Chip showing a rise in rates that begins before the other forecasters.

Changes in Economic Assumptions.—The 2014 Budget forecast reflects economic developments over the past year, but some of the forecast values are similar to those of the 2013 Budget, especially in the long run (see Table 2-4). The previous Budget anticipated more rapid growth in 2013-2017 than the current Budget, and assumed a slightly higher rate of potential GDP growth in the long run. The projection for the long-term unemployment rate has remained unchanged, but the forecast starts from a lower level, reflecting the sharper-than-expected decline in 2012. Projected interest rates are lower in the medium term, reflecting the additional actions by the Federal Reserve to keep rates low for an extended

Table 2-4. COMPARISON OF ECONOMIC ASSUMPTIONS IN THE 2013 AND 2014 BUDGETS

(Calendar years; dollar amounts in billions)

| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Nominal GDP: | | | | | | | | | | | |
| 2013 Budget Assumptions ¹ | 15,779 | 16,522 | 17,397 | 18,448 | 19,533 | 20,651 | 21,689 | 22,666 | 23,659 | 24,688 | 25,760 |
| 2014 Budget Assumptions | 15,705 | 16,384 | 17,235 | 18,181 | 19,192 | 20,247 | 21,275 | 22,247 | 23,219 | 24,216 | 25,253 |
| Real GDP (2005 dollars): | | | | | | | | | | | |
| 2013 Budget Assumptions ¹ | 13,687 | 14,097 | 14,606 | 15,211 | 15,821 | 16,431 | 16,952 | 17,403 | 17,844 | 18,290 | 18,748 |
| 2014 Budget Assumptions | 13,600 | 13,907 | 14,358 | 14,864 | 15,399 | 15,943 | 16,441 | 16,873 | 17,283 | 17,692 | 18,104 |
| Real GDP (percent change):² | | | | | | | | | | | |
| 2013 Budget Assumptions | 2.7 | 3.0 | 3.6 | 4.1 | 4.0 | 3.9 | 3.2 | 2.7 | 2.5 | 2.5 | 2.5 |
| 2014 Budget Assumptions | 2.3 | 2.3 | 3.2 | 3.5 | 3.6 | 3.5 | 3.1 | 2.6 | 2.4 | 2.4 | 2.3 |
| GDP Price Index (percent change):² | | | | | | | | | | | |
| 2013 Budget Assumptions | 1.7 | 1.7 | 1.6 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| 2014 Budget Assumptions | 1.9 | 2.0 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 |
| Consumer Price Index (all-urban; percent change):² | | | | | | | | | | | |
| 2013 Budget Assumptions | 2.2 | 1.9 | 2.0 | 2.0 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 |
| 2014 Budget Assumptions | 2.1 | 2.1 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 |
| Civilian Unemployment Rate (percent):³ | | | | | | | | | | | |
| 2013 Budget Assumptions | 8.9 | 8.6 | 8.1 | 7.3 | 6.5 | 5.8 | 5.5 | 5.4 | 5.4 | 5.4 | 5.4 |
| 2014 Budget Assumptions | 8.1 | 7.7 | 7.2 | 6.7 | 6.2 | 5.7 | 5.5 | 5.4 | 5.4 | 5.4 | 5.4 |
| 91-day Treasury bill rate (percent):³ | | | | | | | | | | | |
| 2013 Budget Assumptions | 0.1 | 0.2 | 1.4 | 2.7 | 3.9 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 |
| 2014 Budget Assumptions | 0.1 | 0.1 | 0.2 | 0.4 | 1.3 | 2.3 | 3.2 | 3.6 | 3.7 | 3.7 | 3.7 |
| 10-year Treasury note rate (percent):³ | | | | | | | | | | | |
| 2013 Budget Assumptions | 2.8 | 3.5 | 3.9 | 4.4 | 4.7 | 5.0 | 5.1 | 5.1 | 5.1 | 5.3 | 5.3 |
| 2014 Budget Assumptions | 1.8 | 2.0 | 2.6 | 3.1 | 3.7 | 4.1 | 4.4 | 4.6 | 4.8 | 5.0 | 5.0 |

¹ Adjusted for July 2012 NIPA revisions.

² Calendar year over calendar year.

³ Calendar year average.

period, and they are slightly lower in the long term as well. As in last year's projections, inflation is also projected to return to its long-run average consistent with Federal Reserve policy, now estimated at 0.1 percentage point higher than last year at 2.2 percent for the CPI-U and 1.9 percent for the GDP price index.

Sensitivity of the Budget to Economic Assumptions

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

to consumer price indices. Medicare and Medicaid outlays are affected directly by the price of medical services. Interest on the debt is linked to market interest rates and the size of the budget surplus or deficit, both of which in turn are influenced by economic conditions. Outlays for certain benefits such as unemployment compensation and the Supplemental Nutrition Assistance Program vary with the unemployment rate.

This sensitivity complicates budget planning because differences in economic assumptions lead to changes in the budget projections. Economic forecasting inherently entails uncertainty. It is therefore useful to examine the implications of possible changes in economic assumptions. Many of the budgetary effects of such changes are fairly predictable, and a set of general principles or "rules of thumb" embodying these relationships can aid in estimating how

Table 2-5. SENSITIVITY OF THE BUDGET TO ECONOMIC ASSUMPTIONS

(Fiscal years; in billions of dollars)

| Budget effect | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | Total of Effects, 2013-2023 |
|--|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|-----------------------------|
| Real Growth and Employment | | | | | | | | | | | | |
| Budgetary effects of 1 percent lower real GDP growth: | | | | | | | | | | | | |
| (1) For calendar year 2013 only, with real GDP recovery in 2014-15: | | | | | | | | | | | | |
| Receipts | -16.2 | -24.5 | -11.2 | -1.1 | 0.4 | 0.4 | 0.4 | 0.4 | 0.3 | 0.4 | 0.3 | -50.5 |
| Outlays | 4.0 | 9.4 | 4.7 | 0.8 | 1.2 | 2.0 | 2.4 | 2.6 | 2.7 | 2.8 | 2.9 | 35.6 |
| Increase in deficit (+) | 20.2 | 33.9 | 15.9 | 1.9 | 0.8 | 1.6 | 2.0 | 2.3 | 2.4 | 2.5 | 2.6 | 86.1 |
| (2) For calendar year 2013 only, with no subsequent recovery: | | | | | | | | | | | | |
| Receipts | -16.2 | -32.9 | -37.8 | -40.4 | -43.4 | -46.2 | -49.1 | -51.9 | -55.0 | -58.0 | -61.3 | -492.3 |
| Outlays | 4.0 | 11.4 | 13.0 | 15.3 | 19.3 | 24.5 | 29.5 | 33.7 | 37.8 | 42.1 | 46.6 | 277.2 |
| Increase in deficit (+) | 20.2 | 44.3 | 50.8 | 55.7 | 62.7 | 70.7 | 78.6 | 85.7 | 92.8 | 100.1 | 107.9 | 769.5 |
| (3) Sustained during 2013 - 2023, with no change in unemployment: | | | | | | | | | | | | |
| Receipts | -16.4 | -50.6 | -93.9 | -143.4 | -200.4 | -262.1 | -330.1 | -402.1 | -480.2 | -564.0 | -654.4 | -3,197.6 |
| Outlays | -0.3 | -0.7 | -0.9 | 0.1 | 4.9 | 14.8 | 28.0 | 41.7 | 57.1 | 75.6 | 97.0 | 317.2 |
| Increase in deficit (+) | 16.1 | 49.9 | 93.0 | 143.6 | 205.2 | 276.9 | 358.2 | 443.8 | 537.3 | 639.6 | 751.4 | 3,514.9 |
| Inflation and Interest Rates | | | | | | | | | | | | |
| Budgetary effects of 1 percentage point higher rate of: | | | | | | | | | | | | |
| (4) Inflation and interest rates during calendar year 2013 only: | | | | | | | | | | | | |
| Receipts | 21.3 | 41.5 | 41.6 | 41.1 | 44.5 | 47.8 | 50.9 | 53.9 | 57.1 | 60.3 | 63.4 | 523.4 |
| Outlays | 22.1 | 39.5 | 32.0 | 32.7 | 32.0 | 31.9 | 30.5 | 30.4 | 29.0 | 29.8 | 29.5 | 339.4 |
| Decrease in deficit (-) | 0.8 | -2.0 | -9.7 | -8.4 | -12.5 | -15.9 | -20.5 | -23.4 | -28.0 | -30.5 | -33.9 | -184.0 |
| (5) Inflation and interest rates, sustained during 2013 - 2023: | | | | | | | | | | | | |
| Receipts | 21.3 | 63.7 | 111.0 | 165.2 | 229.6 | 296.7 | 369.2 | 448.3 | 540.3 | 638.6 | 741.0 | 3,624.8 |
| Outlays | 19.8 | 68.0 | 111.8 | 155.3 | 196.2 | 236.2 | 278.4 | 321.4 | 363.8 | 411.8 | 454.4 | 2,617.1 |
| Decrease in deficit (-) | -1.5 | 4.3 | 0.8 | -9.9 | -33.4 | -60.5 | -90.8 | -126.8 | -176.5 | -226.8 | -286.6 | -1,007.6 |
| (6) Interest rates only, sustained during 2013 - 2023: | | | | | | | | | | | | |
| Receipts | 5.0 | 13.8 | 19.2 | 24.9 | 32.5 | 36.6 | 39.3 | 42.7 | 50.1 | 57.2 | 60.6 | 381.8 |
| Outlays | 11.0 | 41.5 | 64.5 | 83.3 | 101.3 | 119.1 | 135.2 | 151.0 | 164.0 | 177.3 | 188.9 | 1,237.2 |
| Increase in deficit (+) | 5.9 | 27.7 | 45.3 | 58.5 | 68.8 | 82.6 | 95.9 | 108.3 | 114.0 | 120.2 | 128.3 | 855.4 |
| (7) Inflation only, sustained during 2013 - 2023: | | | | | | | | | | | | |
| Receipts | 16.2 | 49.7 | 91.3 | 139.7 | 196.2 | 259.0 | 328.5 | 403.8 | 488.0 | 578.8 | 677.4 | 3,228.5 |
| Outlays | 8.8 | 26.8 | 48.0 | 73.3 | 97.2 | 120.9 | 149.0 | 178.8 | 211.2 | 249.7 | 285.3 | 1,449.0 |
| Decrease in deficit (-) | -7.4 | -22.9 | -43.4 | -66.4 | -99.0 | -138.1 | -179.5 | -224.9 | -276.9 | -329.1 | -392.0 | -1,779.5 |
| Interest Cost of Higher Federal Borrowing | | | | | | | | | | | | |
| (8) Outlay effect of \$100 billion increase in borrowing in 2013 | 0.1 | 0.2 | 0.3 | 0.9 | 2.0 | 3.2 | 4.0 | 4.4 | 4.6 | 4.8 | 5.0 | 29.5 |

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

changes in the economic assumptions would alter outlays, receipts, and the surplus or deficit. These rules of thumb should be understood as suggesting orders of magnitude; they do not account for potential secondary effects.

The rules of thumb show how the changes in economic variables affect Administration estimates for receipts and outlays, holding other factors constant. They are not a prediction of how receipts or outlays would actually turn out if the economic changes actually materialized. The rules of thumb are based on a fixed budget policy that is not always a good predictor of what might actually happen to the budget should the economic outlook change substantially. For example, unexpected downturns in real economic growth, and attendant job losses, usually give rise to legislative actions to stimulate the economy with additional countercyclical policies. Also, the rules of thumb do not reflect certain “technical” changes that often accompany the economic changes. For example, changes in capital gains realizations often accompany changes in the economic outlook. On the spending side of the budget, the rules of thumb do not capture changes in deposit insurance outlays, even though bank failures are generally associated with weak economic growth and rising unemployment.

Economic variables that affect the budget do not always change independently of one another. Output and employment tend to move together in the short run: a high rate of real GDP growth is generally associated with a declining rate of unemployment, while slow or negative growth is usually accompanied by rising unemployment, a relationship known as Okun’s Law. In the long run, however, changes in the average rate of growth of real GDP are mainly due to changes in the rates of growth of productivity and the labor force, and are not necessarily associated with changes in the average rate of unemployment. Expected inflation and interest rates are also closely interrelated: a higher expected rate of inflation increases nominal interest rates, while lower expected inflation reduces them.

Changes in real GDP growth or inflation have a much greater cumulative effect on the budget if they are sustained for several years than if they last for only one year. However, even temporary changes can have lasting effects if they permanently raise the level of the tax base or the level of Government spending. Moreover, temporary economic changes that affect the deficit or surplus change the level of the debt, affecting future interest payments. Highlights of the budgetary effects of these rules of thumb are shown in Table 2-5.

For real growth and employment:

- The first block shows the effect of a temporary reduction in real GDP growth by one percentage point sustained for one year, followed by a recovery of GDP to the base-case level (the Budget assumptions) over the ensuing two years. In this case, the unemployment rate is assumed to rise by one-half percentage point relative to the Budget assumptions by the end of the first year, then return to the base case rate over the ensuing two years. After real GDP and the unemploy-

ment rate have returned to their base case levels, most budget effects vanish except for persistent out-year interest costs associated with larger near-term deficits.

- The second block shows the effect of a reduction in real GDP growth by one percentage point sustained for one year, with no subsequent “catch up,” accompanying a permanent increase in the natural rate of unemployment (and of the actual unemployment rate) of one-half percentage point relative to the Budget assumptions. In this scenario, the level of GDP and taxable incomes are permanently lowered by the reduced growth rate in the first year. For that reason and because unemployment is permanently higher, the budget effects (including growing interest costs associated with larger deficits) continue to grow in each successive year.
- The budgetary effects are much larger if the growth rate of real GDP is permanently reduced by one percentage point even leaving the unemployment rate unchanged, as might result from a shock to productivity growth. These effects are shown in the third block. In this example, the cumulative increase in the budget deficit is many times larger than the effects in the first and second blocks.

For inflation and interest rates:

- The fourth block shows the effect of a one percentage point higher rate of inflation and one percentage point higher nominal interest rates maintained for the first year only. In subsequent years, the price level and nominal GDP would both be one percentage point higher than in the base case, but interest rates and future inflation rates are assumed to return to their base case levels. Receipts increase by somewhat more than outlays. This is partly due to the fact that outlays for annually appropriated spending are assumed to remain constant when projected inflation changes. Despite the apparent implication of these estimates, inflation cannot be relied upon to lower the budget deficit, mainly because policy-makers have traditionally prevented inflation from permanently eroding the real value of spending.
- In the fifth block, the rate of inflation and the level of nominal interest rates are higher by one percentage point in all years. As a result, the price level and nominal GDP rise by a cumulatively growing percentage above their base levels. In this case, again the effect on receipts is more than the effect on outlays. As in the previous case, these results assume that annually appropriated spending remains fixed under the discretionary spending limits. Over the time period covered by the budget, leaving the discretionary limits unchanged would significantly erode the real value of this category of spending.
- The effects of a one percentage point increase in interest rates alone are shown in the sixth block. The out-

Table 2-6. FORECAST ERRORS, JANUARY 1982-PRESENT

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

lay effect mainly reflects higher interest costs for Federal debt. The receipts portion of this rule-of-thumb is due to the Federal Reserve's deposit of earnings on its securities portfolio and the effect of interest rate changes on both individuals' income (and taxes) and financial corporations' profits (and taxes).

- The seventh block shows that a sustained one percentage point increase in CPI and GDP price index inflation decreases cumulative deficits substantially, due in part to the assumed erosion in the real value of appropriated spending. Note that the separate effects of higher inflation and higher interest rates shown in the sixth and seventh blocks do not sum to the effects for simultaneous changes in both shown in the fifth block. This is because the gains in budget receipts due to higher inflation result in higher debt service savings when interest rates are also assumed to be higher in the fifth block than when interest rates are assumed to be unchanged in the seventh block.
- The last entry in the table shows rules of thumb for the added interest cost associated with changes in the budget deficit, holding interest rates and other economic assumptions constant.

The effects of changes in economic assumptions in the opposite direction are approximately symmetric to those

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

Forecast Errors for Growth, Inflation, and Interest Rates

As can be seen in Table 2-5, the single most important variable that affects the accuracy of the budget projections is the forecast of the growth rate of real GDP. The rate of inflation and the level of interest rates also have substantial effects on the accuracy of projections. Table 2-6 shows errors in short- and long-term projections in past Administration forecasts, and compares these errors to those of CBO and the Blue Chip Consensus of private forecasts for real GDP, inflation and short-term interest rates.⁵

⁵ Two-year errors for real GDP and the GDP price index are the average annual errors in percentage points for year-over-year growth rates for the current year and budget year. For interest rates, the error is based on the average error for the level of the 91-day Treasury bill rate for the two-year and six-year period. Administration forecasts are from the budgets released starting in February 1982 (1983 Budget) and through February 2010 (2011 Budget), so that the last year included in the projections is 2011. The six-year forecasts are constructed similarly, but the last forecast used is from February 2006 (2007 Budget). CBO forecasts are from "The Budget and Economic Outlook" publications in January each year, and the Blue Chip forecasts are from their January projections.

Table 2-7. BUDGET EFFECTS OF ALTERNATIVE SCENARIOS
(Fiscal years; in billions of dollars)

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|------|------|------|------|------|------|------|------|------|------|------|
| Alternative Budget Deficit Projections: | | | | | | | | | | | |
| Administration Economic Assumptions | 973 | 744 | 576 | 528 | 487 | 475 | 498 | 503 | 501 | 519 | 439 |
| Percent of GDP | 6.0% | 4.4% | 3.2% | 2.8% | 2.4% | 2.3% | 2.3% | 2.2% | 2.1% | 2.1% | 1.7% |
| Alternative Scenario 1 | 992 | 787 | 640 | 624 | 633 | 663 | 711 | 732 | 742 | 768 | 696 |
| Percent of GDP | 6.2% | 4.7% | 3.6% | 3.4% | 3.3% | 3.3% | 3.3% | 3.3% | 3.2% | 3.2% | 2.8% |
| Alternative Scenario 2 | 978 | 744 | 567 | 523 | 504 | 501 | 506 | 481 | 443 | 424 | 304 |
| Percent of GDP | 6.1% | 4.4% | 3.2% | 2.8% | 2.5% | 2.4% | 2.3% | 2.1% | 1.8% | 1.7% | 1.1% |

Over both a two-year and six-year horizon, the average annual real GDP growth rate was very slightly overestimated by the Administration and slightly underestimated by the CBO and Blue Chip in the forecasts made since 1982. Overall, the differences between the three forecasters were minor. The mean absolute error in the annual average growth rate was about 1.5 percentage point per year for all forecasters for two-year projections, and was about one-third smaller for all three for the six-year projections. The greater accuracy in the six-year projections could reflect a tendency of real GDP to revert at least partly to trend, though the overall evidence on whether GDP growth is mean reverting is mixed. Another way to interpret the result is that it is hard to predict GDP around turning points in the business cycle, but somewhat easier to project the six-year growth rate based on assumptions about the labor force, productivity, and other factors that affect GDP.

Inflation, as measured by the GDP price index, was overestimated by all forecasters (with Blue Chip having the largest errors) for both the two-year and six-year projections, with larger errors for the six-year projections. This reflects the gradual disinflation over the 1980s and early 1990s, which was greater than most forecasters expected. Average errors for all three sets of forecasts since 1994 were close to zero (not shown).

The interest rate on the 91-day Treasury bill was also overestimated by all three forecasters, with errors larger for the six-year time horizon. Again this reflects the secular decline in interest rates over the past 30 years, reflecting lower inflation for most of the period, as well as a decline in real interest rates since 2000 resulting from weakness in the economy and Federal Reserve policy. The errors were somewhat less for the Administration than for CBO and the Blue Chip forecasts.

Alternative Scenarios

The rules of thumb described above can be used in combination to show the effect on the budget of alternative economic scenarios. Considering explicit alternative scenarios can also be useful in gauging some of the risks to the current budget projections. For example, the strength of the recovery over the next few years remains highly uncertain. Those possibilities are explored in the two alternative scenarios presented in this section and shown in Chart 2-3.

The first alternative scenario assumes that real GDP growth and unemployment beginning in 2012:Q4 follow the projections in the March 2013 Blue Chip forecast through the end of 2023, which includes their semi-annual long-run extension of the Blue Chip forecast. In this

Chart 2-3. Real GDP: Alternative Projections

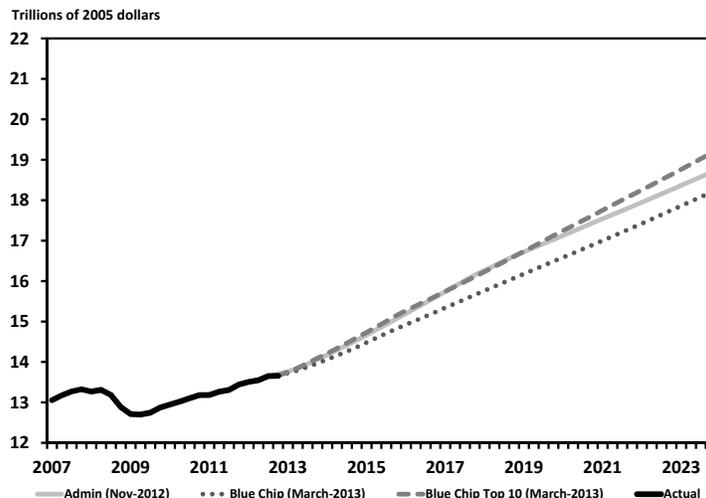
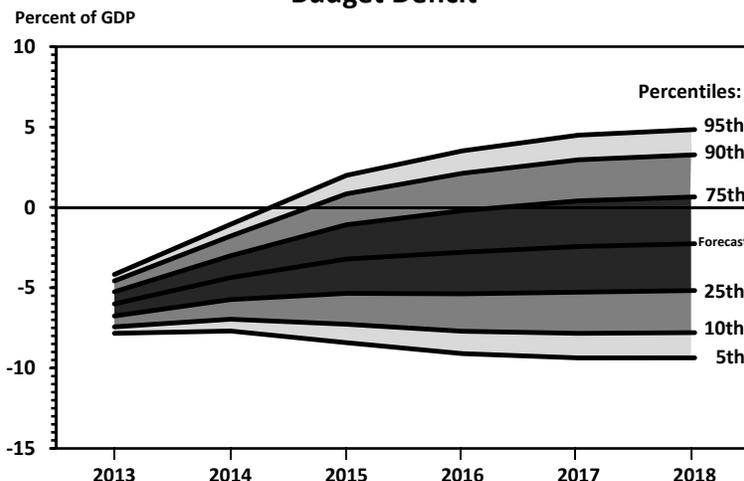


Chart 2-4. Range of Uncertainty for the Budget Deficit



case, after 2012, the level of GDP remains lower than the Administration's forecast throughout the projection period. This alternative includes a smaller real recovery from the loss of output during the 2008-2009 recession. Growth returns to normal, but without a substantial catch-up to make up for previous output losses.

The second alternative is the average of the highest 10 real GDP projections of the Blue Chip forecasters, also based on the March forecasts. This forecast is close to the Administration's forecast through 2017 with the high-10 Blue Chip growth exceeding the Administration's in the out years.

Table 2-7 shows the budget effects of these alternative scenarios compared with the Administration's economic forecast. Under the first alternative, budget deficits are significantly higher in each year compared to the Administration's forecast. In the second alternative, the deficit is close to the Administration's projection in the near term, but results in a lower deficit in the long run and cumulatively over 10 years.

Many other scenarios are possible, of course, but the point is that the most important influences on the budget projections beyond the next year or two are the rate at which GDP and employment recover from the recession.

Uncertainty and the Deficit Projections

The accuracy of budget projections depends not only on the accuracy of economic projections, but also on technical factors and the differences between proposed policy and enacted legislation. Chapter 29 provides detailed information on these factors for the budget year projections (Table 29-6), and also shows how the deficit projections compared to actual outcomes, on average, over a five-year window using historical data from 1982 to 2012 (Table 29-7). The error measures can be used to show a probabilistic range of uncertainty of what the range of deficit outcomes may be over the next five years relative to the Administration's deficit projection. Chart 2-4 shows this cone of uncertainty, which is constructed under the as-

sumption that future forecast errors would be governed by the normal distribution with a mean of zero and standard error equal to the root mean squared error, as a percent of GDP, of past forecasts. The deficit is projected to be 2.3 percent of GDP in 2018, but has a 90 percent chance of being within a range of a surplus of 4.8 percent of GDP and a deficit of 9.4 percent of GDP.

Structural and Cyclical Deficits

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

An alternative measure of the budget deficit is called the structural deficit. This measure provides a more useful perspective on the stance of fiscal policy than does the unadjusted unified budget deficit. The portion of the deficit traceable to the automatic effects of the business cycle is called the cyclical component. The remaining portion of the deficit is called the structural deficit. The structural deficit is a better gauge of the underlying stance of fiscal policy than the unadjusted unified deficit because it removes most of the effects of the business cycle. So, for example, the structural deficit would include fiscal policy changes such as the 2009 Recovery Act, but not the automatic changes in unemployment insurance or reduction in tax receipts that would have occurred without the Act.

Estimates of the structural deficit, shown in Table 2-8, are based on the historical relationship between changes in the unemployment rate and real GDP growth, as well as relationships of unemployment and real GDP growth with receipts and outlays. These estimated relationships

Table 2–8. THE STRUCTURAL BALANCE

(Fiscal years; in billions of dollars)

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|------|------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|------|
| Unadjusted surplus (–) or deficit | 161 | 459 | 1,413 | 1,293 | 1,300 | 1,087 | 973 | 744 | 576 | 528 | 487 | 475 | 498 | 503 | 501 | 519 | 439 |
| Cyclical component | –107 | –41 | 311 | 437 | 451 | 454 | 522 | 482 | 404 | 291 | 169 | 64 | 10 | –3 | 2 | –1 | 0 |
| Structural surplus (–) or deficit | 268 | 499 | 1,102 | 857 | 849 | 633 | 450 | 262 | 172 | 237 | 318 | 411 | 488 | 506 | 499 | 520 | 439 |

(Fiscal years; percent of Gross Domestic Product)

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|-------|------|-------|------|
| Unadjusted surplus (–) or deficit | 1.2% | 3.2% | 10.1% | 9.0% | 8.7% | 7.0% | 6.0% | 4.4% | 3.2% | 2.8% | 2.4% | 2.3% | 2.3% | 2.2% | 2.1% | 2.1% | 1.7% |
| Cyclical component | –0.8% | –0.3% | 2.2% | 3.0% | 3.0% | 2.9% | 3.2% | 2.8% | 2.3% | 1.5% | 0.8% | 0.3% | 0.0% | –0.0% | 0.0% | –0.0% | 0.0% |
| Structural surplus (–) or deficit | 1.9% | 3.5% | 7.9% | 6.0% | 5.7% | 4.1% | 2.8% | 1.5% | 1.0% | 1.3% | 1.6% | 2.0% | 2.2% | 2.2% | 2.1% | 2.1% | 1.7% |

NOTE: The NAIRU is assumed to be 5.4%.

take account of the major cyclical changes in the economy and their effects on the budget, but they do not reflect all the possible cyclical effects on the budget, because economists have not been able to identify the cyclical factor in some of these other effects. For example, the sharp decline in the stock market in 2008 pulled down capital gains-related receipts and increased the deficit in 2009 and beyond. Some of this decline is cyclical in nature, but economists have not identified the cyclical component of the stock market with any precision, and for that reason, all of the stock market's contribution to receipts is counted in the structural deficit.

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

There are also lags in the collection of tax revenue that can delay the impact of cyclical effects beyond the year in which they occur. The result is that even after the unemployment rate has fallen, receipts may remain cyclically

depressed for some time until these lagged effects have dissipated. The recent recession has added substantially to the estimated cyclical component of the deficit, but for all the reasons stated above, the cyclical component is probably understated. As the economy recovers, the cyclical deficit is projected to decline. After unemployment reaches 5.4 percent, the level assumed to be consistent with stable inflation, the estimated cyclical component vanishes, leaving only the structural deficit, although some lagged cyclical effects would arguably still be present.

Despite these limitations, the distinction between cyclical and structural deficits is helpful in understanding the path of fiscal policy. The large increase in the deficit in 2009 and 2010 is due to a combination of both components of the deficit. There is a large increase in the cyclical component because of the rise in unemployment. That is what would be expected considering the severity of the recent recession. Finally, there is a large increase in the structural deficit because of the policy measures taken to combat the recession. This reflects the Government's decision to make active use of fiscal policy to lessen the severity of the recession and to hasten economic recovery. Between 2014 and 2018, the cyclical component of the deficit is projected to decline sharply as the economy recovers at an above-trend rate of GDP growth. The structural deficit shrinks during 2012–2014, reflecting the measures of fiscal constraint that have been enacted combined with the Administration's policy proposals.

3. FINANCIAL STABILIZATION EFFORTS AND THEIR BUDGETARY EFFECTS

In response to the financial crisis of 2008, the U.S. Government took unprecedented and decisive action to mitigate damage to the U.S. economy and financial markets. The Department of the Treasury, the Board of Governors of the Federal Reserve System, the Federal Deposit Insurance Corporation, the National Credit Union Administration, the Office of the Comptroller of the Currency, the Securities and Exchange Commission, and the Commodity Futures Trading Commission worked cooperatively with the Administration to expand access to credit, strengthen financial institutions, restore confidence in U.S. financial markets, and stabilize the housing sector. In 2010, the President signed into law comprehensive Wall Street reform to ensure that the Government has the tools and authority to prevent another crisis of this magnitude, to resolve significant financial institution failures more effectively, and to protect consumers of financial products. In 2012, the Administration continued its work to operationalize these Wall Street reforms.

This chapter provides a summary of key Government programs supporting economic recovery and financial market reforms, followed by a report analyzing the cost and budgetary effects of the Treasury's Troubled Asset Relief Program (TARP), consistent with Sections 202 and 203 of the Emergency Economic Stabilization Act (EESA) of 2008 (P.L. 110-343), as amended. This report analyzes transactions as of December 31, 2012, and expected transactions as reflected in the Budget. The TARP costs discussed in the report and included in the Budget are the estimated net present value of the TARP investments, reflecting the actual and expected dividends, interest, and principal redemptions the Government receives against its investments; this credit reform treatment of TARP transactions is authorized by Section 123 of EESA.

The Treasury's authority to make new TARP commitments expired on October 3, 2010. However, Treasury continues to manage the outstanding TARP investments, and is authorized to expend additional TARP funds pursuant to obligations entered into prior to October 3, 2010. In July 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act (P.L. 111-203) reduced total TARP purchase authority to \$475 billion.

The Administration's current estimate of TARP's deficit cost for \$457.8 billion in cumulative obligations is \$47.5 billion (see Tables 3-1 and 3-7). This estimated direct impact of TARP on the deficit has been reduced by \$294 billion from the highest cost estimate, published in the Mid-Session Review of the 2010 Budget (2010 MSR), due to realized returns on TARP investments that exceeded expectations, and lower overall TARP obligations. The Treasury has received higher-than-expected repayments and redemptions from TARP recipients. Notably, a total of \$245 billion was invested in banking institutions, and

as of December 31, 2012, Treasury had recovered more than \$268 billion from these institutions through repayments, dividends, interest, and other income. Section 123 of EESA requires TARP costs to be estimated on a net present value basis adjusted to reflect a premium for market risk. As investments are liquidated, their actual costs (including any market risk effects) become known and are reflected in reestimates. It is likely that the total cost of TARP to taxpayers will eventually be lower than current estimates as the market risk premiums are returned, but the total cost will not be fully known until all TARP investments have been extinguished. (See Table 3-9 for an estimate of TARP subsidy costs stripped of the market-risk adjustment.) Additionally, Treasury has benefited from \$17.5 billion in non-TARP AIG receipts.

Progress in Implementation of Wall Street Reforms

On July 21, 2010, just over a year after the Administration delivered its financial reform proposal to Congress, the President signed into law the Dodd-Frank Wall Street Reform and Consumer Protection Act¹ (the "Wall Street Reform Act" or the "Act"). The Act embodies the Administration's critical objectives for achieving a more stable financial system, which include: helping prevent future financial crises in part by filling gaps in the U.S. regulatory regime; better protecting consumers of financial products and services; preventing unnecessary and harmful risk-taking that threatens the economy; and providing the Government with more effective tools to manage financial crises. Important milestones in the implementation of the Act include:

Orderly Liquidation Authority (OLA): The Act makes clear that no financial company will be considered "too big to fail" in the future, and that taxpayers will not be on the hook for the costs of those that do fail. Instead, the Federal Deposit Insurance Corporation (FDIC) now may unwind failing systemically-significant, nonbank financial institutions in an orderly manner to prevent widespread disruptions to U.S. financial stability. Through its new orderly liquidation authority under the Act, the FDIC serves as receiver of non-depository financial companies whose failure and resolution under otherwise applicable law is determined to pose a significant systemic risk to U.S. financial stability. After issuing a joint final rule in 2011 to implement resolution plan requirements or "living wills" for certain nonbank financial companies and bank holding companies, in July of 2012 the Federal Reserve and the FDIC received the first such plans from covered institutions. On June 12, 2012, the FDIC also approved a revised notice of proposed rulemaking (NPR) that outlines standards for determining if a company is predominantly engaged in financial activities and, thus, resolvable under

¹ P.L. 111-203.

OLA. Additionally, on June 22, 2012, the Treasury and the FDIC, in consultation with the Financial Stability Oversight Council (FSOC), published a joint final rule governing the calculation of the Maximum Obligation Limitation, which limits the aggregate amount of outstanding obligations that the FDIC may issue or incur in connection with the orderly liquidation of a non-depository financial company. The Act requires that all net costs of liquidation be recovered by assessing fees after the fact on large financial companies and certain non-bank financial companies so that taxpayers bear no losses from the exercise of OLA. According to Title II of the Act, certain FDIC implementation expenses associated with administering OLA are treated as expenses of the FSOC and are included in this Budget.

While the Budget includes an estimated cost to the Government that is based on the probability of default under this new orderly liquidation authority, the total costs of any liquidation will be, by law, recovered in full, so there is no cost to the taxpayer. The displayed cost from this authority of \$20 billion over the budget window is due to the fact that cost recovery occurs only over a period of years after liquidation expenses are incurred.

Monitoring Systemic Risk: The Act established the Financial Stability Oversight Council (FSOC) to identify, monitor, and respond to emerging threats to U.S. financial stability. The FSOC is also charged with facilitating information sharing and coordination among Federal and state agencies regarding domestic financial services policy development and identifying gaps in the U.S. regulatory regime that could pose risks to U.S. financial stability. The FSOC is chaired by the Secretary of the Treasury, with the heads of the Federal financial regulators and an independent insurance expert serving as voting members. The FSOC has held more than 25 meetings, with the initial focus on fulfilling statutory requirements established by the Wall Street Reform Act. The FSOC has moved quickly to identify key issues and firms posing risks to systemic stability, while emphasizing the importance of transparency and stakeholder collaboration throughout the process. As part of its macro-prudential mandate, the FSOC published a final rule and guidance in April 2012 describing how nonbank financial companies will be evaluated for designation for Federal Reserve supervision and enhanced prudential standards. In addition, on July 18, 2012, the FSOC designated eight systemically important financial market utilities that will be subject to enhanced risk management standards. On November 19, 2012, the FSOC published proposed recommendations for the SEC to implement structural reforms of money market mutual funds. The FSOC has also conducted studies and made recommendations on a number of topics, notably on the effective implementation of the Volcker Rule under the Wall Street Reform Act. The Volcker Rule was created to reduce risk-taking and increase stability in the banking sector by prohibiting Federally-insured banking institutions, subject to certain exceptions, from engaging in proprietary trading and investing in hedge funds and private equity firms. Going forward, the FSOC will continue to monitor emerging threats to financial stability and moni-

tor risks in the financial system including risks related to housing, commodity market volatility, the European financial markets, and the U.S. fiscal position.

The Act established the Financial Research Fund (FRF) to fund the FSOC, the Office of Financial Research (OFR), and certain OLA implementation expenses of the FDIC. The OFR, housed within the Treasury Department, was created to improve the quality of financial data available to policymakers and to facilitate more robust and sophisticated analysis of the financial system. The OFR is in the process of comprehensively cataloguing the data that are currently collected by U.S. financial regulators in order to identify deficiencies and redundancies in the existing regulatory framework, as well as enhancing the quality of the financial data infrastructure through the development of a global Legal Entity Identifier (LEI) for entities engaged in financial transactions. As specified in the Act, for the first two years after the date of the enactment, funding for the FRF was provided through transfers from the Federal Reserve; in 2014 and thereafter, the FRF will be fee-funded through assessments on bank holding companies with total consolidated assets of \$50 million or greater and nonbank financial companies supervised by the Federal Reserve.

Enhanced Consumer Financial Protection: The Wall Street Reform Act created a single independent regulator – the Consumer Financial Protection Bureau (CFPB) – whose sole mission is to look out for consumers in the increasingly complex financial marketplace. The CFPB is an independent bureau in the Federal Reserve System responsible for the regulation and enforcement of existing consumer financial products, services and laws, and issues and enforces new regulations on nonbank financial institutions (e.g., payday lenders and credit providers). On July 21, 2011, as designated by the Treasury Department, the authorities of seven regulatory agencies were transferred to the CFPB – one year after the agency was created by the Wall Street Reform Act. On January 4, 2012, Richard Cordray was appointed Director of the CFPB. The CFPB is authorized to supervise and enforce existing consumer financial protection regulations affecting a bank and its affiliates if the bank has assets of \$10 billion or more. Notable existing regulations include those issued under the Fair Credit Reporting Act, Truth in Lending Act, and the Real Estate Settlement Procedures Act. The CFPB is also authorized to issue new rules; enforce prohibitions against unfair, deceptive, or abusive practices; and improve disclosures about the features of consumer financial products and services. In 2012, the CFPB, working with other Federal banking regulators, acted under this authority in bringing four enforcement actions that benefited 5.75 million harmed individuals and resulted in approximately \$536 million in consumer refunds and penalties.

In addition, the CFPB is charged with supervising nonbank financial firms in specific markets regardless of size, such as mortgage lenders and servicers, consumer reporting agencies, debt collectors, private education lenders, and payday lenders. In 2012, the rules implementing many of these authorities were finalized. In July,

the CFPB adopted a rule to begin supervising larger consumer credit reporting agencies; in October, the CFPB adopted another rule allowing the agency to supervise large consumer debt collectors. This is the first time either of these types of businesses will be supervised at the Federal level. In addition, the CFPB proposed rules that will help consumers better understand mortgage costs and compare home loans. In 2012, the CFPB also released reports on student loans, credit scores, and reverse mortgages. In addition to handling consumer complaints about mortgages and credit cards, in 2012 the Bureau began accepting and responding to consumer complaints about credit reporting, private student loans, bank accounts and services, and consumer loans. The CFPB is funded through transfers from the Federal Reserve and, until the end of FY 2014, it has authority, in the event of a funding shortfall, to request that Congress appropriate additional discretionary funds. No such request is expected over the Budget horizon. The Budget reflects funding for the CFPB through these authorized transfers from the Federal Reserve, estimated at \$497 million in 2014.

Deposit and Share Insurance and their Coverage: The Wall Street Reform Act permanently increased the standard maximum deposit and share insurance amounts from \$100,000 to \$250,000, which applies to both the FDIC and the National Credit Union Administration, and requires the FDIC to base deposit insurance premiums on an insured depository institution's total assets less tangible equity instead of domestic insured deposits. To strengthen the insurance fund's resources, the Act requires the reserve ratio of the Deposit Insurance Fund (DIF) to reach at least 1.35 percent of total insured deposits by September 30, 2020. These changes are reflected in the Budget and their effects are discussed in greater detail in the Credit and Insurance chapter in this volume.

Increased Transparency in Financial Markets: As the regulators of U.S. financial markets, the Securities and Exchange Commission (SEC) and Commodity Futures Trading Commission (CFTC) are key components of the Administration's efforts to reform dangerous Wall Street trading practices that increase economic volatility and undermine market stability. Both agencies continue to work tirelessly to address many of the root causes of the crisis, to adapt their organizations to more effectively monitor ever-changing regulated industries and activities, and to implement enforcement strategies designed to both punish violators and deter wrongdoing. In 2012, the SEC brought new sophistication to core agency functions, began implementing complex and comprehensive Wall Street Reform Act mandates, advanced an investor-focused agenda, and improved the productivity of its 3,800 member staff.

In 2012, the SEC's Enforcement Division filed 734 enforcement actions—the second highest number ever in a single year. The agency also continued to hold accountable those whose actions contributed to the financial crisis, and has now charged 154 entities and individuals, including 65 CEOs, CFOs, and senior corporate officers, and obtained nearly \$2.7 billion in monetary relief. The enforcement program also ferreted out insider trading, filing

cases against financial professionals, hedge fund managers, and corporate insiders, many with direct ties to some of the nation's largest companies, and worked to ensure the integrity of our financial markets. The SEC's strong performance is due in large part to the Enforcement Division's strategic reforms – including an expansion of in-house expertise, flatter management structure, streamlined processes, increased use of information technology, and enhanced market intelligence capabilities – that are now bearing fruit. As a result, the SEC stands ready to address increasingly sophisticated misconduct in the rapidly growing and complex financial markets.

The Wall Street Reform Act tasked the SEC with writing a large number of new rules. In addition to managing the complexity and interrelatedness of the mandated rules, the SEC has worked to provide certainty to financial markets and participants by finalizing rules as quickly as possible without compromising the agency's ability to review, evaluate, and make changes to reflect the large number of public comments received on its proposed rulemakings. As of February 2013, the SEC had proposed or adopted more than 80 percent of the rules required by the Act. For example, the SEC has proposed or adopted substantially all the rules needed to create a new regulatory system to bring greater efficiency and transparency to the derivatives market. Additionally, the SEC announced that more than 1,400 new advisers to major hedge funds and other private funds had registered with the agency and begun reporting information that the SEC will share with the Financial Stability Oversight Commission.

The Commission also began work on the rulemaking required under the Jumpstart Our Business Startups Act (JOBS Act), including proposing rules to eliminate the prohibition against general solicitation and general advertising in certain securities offerings, and provided related guidance on submitting draft registration statements to companies. The agency also approved rules submitted by the Financial Industry Regulatory Authority (FINRA) and U.S. exchanges that will limit investors' exposure to unusual volatility in individual securities and the broader U.S. stock market. One initiative prevents trades in individual exchange-listed stocks from occurring outside of a specified price band, while another updates the circuit breakers that, when triggered, halt trading in all exchange-listed securities throughout the U.S. markets. In addition, the agency took important steps to upgrade its institutional capabilities for regulating today's electronic marketplace by adopting rules that expand available information about the most active traders in the market and will enhance the ability of the agency to surveil the markets and enforce trading rules. The agency also implemented a new system, MIDAS, to collect and analyze market data offered by the exchanges to their customers.

In addition to its longstanding responsibility to ensure fair, open, and efficient future markets, the Wall Street Reform Act authorized the CFTC to regulate the swaps marketplace through oversight of swap dealers and open trading and clearing of standardized derivatives on regulated platforms. Despite its constrained funding due to

congressional appropriations that in recent years have been significantly below the Administration's request, the CFTC has adapted its mission to include these new responsibilities, the CFTC has drafted numerous rules required to implement the Act. Through September 30, 2012, CFTC issued 64 proposed rules and finalized 40 final rules and orders, including most of the foundational requirements for substantive swap market reform. Registration of data repositories, swap execution facilities, swap dealers and other swap intermediaries began in 2012 and is expected to be essentially complete in 2013. Central clearing for swaps is underway and real-time reporting of swaps trade data will commence imminently. The CFTC has actively consulted with other Federal financial regulators, as well as international counterparts, to ensure harmonization of new rules. Additionally, the CFTC has demonstrated a commitment to public transparency in its adoption of Wall Street Reform Act implementing regulations, requesting and incorporating input from the public during the earliest stages of rule development, publishing a wide variety of materials and disclosures on its website, and conducting many Commission reviews of proposed and final rules in open forums.

While devoting significant resources to timely and thorough implementation of new Wall Street Reform Act authorities, the CFTC has continued its market surveillance and enforcement activities in the historically-regulated futures and options markets. The Commission continued to increase the annual number of enforcement actions, filing 102 cases in 2012 and opening 350 new investigations. In addition, the Commission obtained orders imposing more than \$931 million in sanctions, including more than \$475 million in civil monetary penalties and over \$456 million in restitution and disgorgement.

In a landmark case in June 2012, the Commission filed charges against Barclays PLC and two affiliates for attempted manipulation and false reporting concerning global benchmark interest rates. The charges were simultaneously settled pursuant to an Order requiring Barclays to pay \$200 million, then the largest fine ever imposed by the CFTC, and requiring Barclays to implement a number of measures to ensure the integrity of the bank's benchmark submissions.

The Commission filed numerous charges related to protection of customer funds 2012. In response to these actions, and other high-profile cases, the Commission has published a rule, and held a public meeting to receive input on, enhancing protection of customers and customer funds held by futures commission merchants and Derivatives Clearing Organizations (DCOs). The Commission is also seeking resources in order to conduct periodic reviews of these entities to ensure compliance with Commission regulations related to segregation and protection of customer funds.

The CFTC conducts systematic examinations of Designated Contract Markets (DCOs), and Designated Self-Regulatory Organizations (and soon, swap data repositories and swap execution facilities) to provide assurance to the public and other regulators of the market participants' ongoing compliance with the core principles

of the Commodities Exchange Act. Resource constraints have severely limited the Commission's ability to conduct annual examinations of even the most significant entities, compromising the Commission's effectiveness in protecting the public interest. Designation by the FSOC of two DCOs as systemically important mandates that the Commission perform annual examinations of these entities, an activity that the Commission cannot adequately perform given current staffing levels.

The next two years will be critical for the SEC and the CFTC as the agencies continue to identify and pursue wrongdoing in the markets and to operationalize the mandates of the Wall Street Reform Act. On top of its traditional market oversight and investor protection responsibilities, the SEC will fully implement the following new authorities in 2013 and 2014: oversight and examination of new security-based swap clearing agencies, dealers, and data repositories; oversight and examination of private fund advisers managing thousands of pooled investment vehicles that will be newly registered with the SEC; reviewing disclosures of asset-backed securities issuers; registration of municipal advisers; and enhanced supervision of credit rating agencies. In addition, the SEC will continue the work of strengthening its core programs and operations, including detecting and pursuing securities fraudsters, reviewing public company disclosures and financial statements, inspecting the activities of investment advisers, investment companies, broker-dealers, and other registered entities, and maintaining fair and efficient markets. Building on its 2009 reorganization and recommendations from consultants and auditors, the SEC will focus its efforts on increasing coverage of registered investment advisory firms by adding new positions to the examination program; enhancing disclosure reviews of large or financially significant companies; and leveraging technology to streamline operations and bolster program effectiveness. All of these responsibilities are essential to restoring investor confidence and trust in financial institutions and markets in the wake of the 2008 financial crisis. In support of the SEC's mission, the President's Budget provides \$1,674 million in new resources in 2014. The Budget also projects that the SEC will obligate \$50 million from its mandatory Reserve Fund for investments in information technology systems and other necessary improvements.

In 2014, CFTC will have fully integrated the swaps market into its span of responsibilities, including market, trade practice, financial and risk surveillance; routine examinations of significant entities and "for cause" examinations as needed on an expanded population of entities; and both punitive and deterrence-based enforcement actions. The President's Budget provides significant increases for the CFTC in 2014 in support of base regulatory work as well as Wall Street Reform Act implementation. For CFTC, \$315 million is provided, an increase of \$7 million over the 2013 President's Budget (\$109 million or 50 percent over 2012 levels). Additionally, the Administration supports legislation authorizing the CFTC to collect user fees to fund its activities. Such legislation would bring the

CFTC into line with other Federal financial regulators, which are funded in whole or in part through user fees.

Streamlined Insurance Sector Regulation: The Federal Insurance Office (FIO), housed within the Treasury Department, was established by the Wall Street Reform Act to “monitor all aspects of the insurance industry, including identifying issues or gaps in the regulation of insurers that could contribute to” systemic risk. The FIO was created, in part, to streamline what is currently a decentralized regulatory regime. On October 17, 2011, the FIO announced that it was seeking public comment for its first mandatory report under the Act on how to modernize and improve the country’s insurance regulatory system. The FIO will also play a role in support of FSOC; it will advise the Secretary on international issues related to insurance investment risk and regulation, and it will assist the Secretary in administering Treasury’s Terrorism Risk Insurance Program. In November 2011, Treasury launched a fifteen-member Federal Advisory Committee on Insurance to offer recommendations to the FIO on issues related to the FIO’s responsibilities. The Advisory Committee demonstrated its responsiveness in November 2012, holding a public meeting soon after Hurricane Sandy struck the East Coast of the U.S. to discuss the future of flood insurance. On June 27, 2012, the FIO published a notice requesting views from interested parties on the office’s mandated report on the global reinsurance market. The vision for the FIO is that it will also provide the Federal Government with the ability to immediately estimate exposures related to catastrophic events, such as the September 11th terrorist attacks or Hurricane Katrina. The FIO is funded with discretionary resources through the Treasury’s Departmental Offices (DO) request, and the Budget includes funding for this office.

International Financial Reform. The financial crisis was an international event not limited to U.S. markets, corporations, and consumers. In addition to its demonstrated commitment to achieving meaningful financial reform at home, the Administration continues to ensure coordination of financial reform principles across the globe. At the G-20 Summit in Pittsburgh in September 2009, President Obama and other G-20 leaders established the G-20 as the premier forum for international economic cooperation. Over the course of Summits held in London (April 2009), Pittsburgh (September 2009), Toronto (June 2010), Seoul (November 2010), and Cannes (November 2011), and Los Cabos (June 2012), the Administration and G-20 leaders have committed to an ambitious agenda for financial regulatory reform. Their reform commitments have extended the scope of regulation, will improve transparency and disclosure, and will strengthen banks through increased and higher quality capital and introduction of a leverage ratio that will limit the amount banks may lend relative to their capital reserves. In June 2012, the Federal banking regulators invited comment on three joint proposed rules that would revise and replace the agencies’ current capital rules. The proposals would implement certain aspects of Basel

II and Basel III capital reforms. Together, the U.S. and its global allies are building effective resolution regimes, including cross-border resolution frameworks, and are developing higher prudential standards for systemically important financial institutions to reflect the greater risk those institutions pose to financial system stability. To facilitate bilateral discussions and cooperation, the FDIC is negotiating memoranda of understanding with certain foreign counterparts that will provide a basis for international information sharing and cooperation relating to cross-border resolution planning and implementation. The Treasury Department, working together with other agencies, has ensured that these commitments are fully consistent with our domestic financial reform agenda.

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

Federal Reserve Programs

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

The second set of tools involved the provision of liquidity directly to borrowers and investors in key credit markets. The Commercial Paper Funding Facility (CPFF), Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility (AMLF), Money Market Investor

Funding Facility (MMIFF), and the Term Asset-Backed Securities Loan Facility (TALF) fall into this category. As a third set of instruments, the Federal Reserve expanded its traditional tool of open market operations to support the functioning of credit markets through the purchase of longer-term secondary market securities for the Federal Reserve's System Open Market Account portfolio. In light of improved functioning of financial markets, many of the new programs have expired or been closed including the MMIFF (October 30, 2009), AMLF (February 1, 2010), and CPFF (February 1, 2010).

To address the frozen consumer and commercial credit markets, the Federal Reserve announced on November 25, 2008, that in conjunction with the Treasury Department it would lend up to \$200 billion to holders of newly issued AAA-rated asset-backed securities through the TALF. The program was expanded as part of the Administration's Financial Stability Plan and launched in March 2009. The program supported the issuance of asset-backed securities collateralized by student loans, auto loans, credit card loans, Small Business Administration guaranteed loans, commercial mortgage loans, and certain other loans. As part of the program, Treasury provided through TARP authorities protection to the Federal Reserve by originally covering the first \$20 billion in losses on all TALF loans. However, in July 2010, Treasury, in consultation with the Federal Reserve, reduced its loss-coverage to \$4.3 billion, which represented approximately 10 percent of the total \$43 billion outstanding in the facility when the program was closed to new lending on June 30, 2010. Borrowers have continued to repay their loans early at a rapid pace, in part because interest rates on TALF loans were designed to be higher than market rates in more-normal conditions. In June 2012, Treasury, in consultation with the Federal Reserve, further reduced its loss-coverage to \$1.4 billion. Finally, Treasury and the Federal Reserve announced in January 2013 that Treasury's commitment of TARP funds to provide credit protection was no longer necessary due to the fact that the accumulated fees collected through TALF exceeded the total principal amount of outstanding TALF loans. As of January 15, 2013, Treasury had recognized a gain of \$424 million on TALF, with additional gains expected in the future.

To support mortgage lending and housing markets, the Federal Reserve began purchasing up to \$175 billion of Government-Sponsored Enterprise (GSE) debt and up to \$1.25 trillion of GSE mortgage-backed securities (MBS) beginning in December 2008. The Federal Reserve completed its purchase of \$1.25 trillion in GSE MBS in March 2010, and purchased \$172.1 billion of GSE debt as of December 2011. Purchasing GSE debt and MBS provided liquidity to the mortgage market, which facilitated the issuance of new mortgage loans to homebuyers at affordable interest rates. The Federal Reserve also purchased \$300 billion in longer-term Treasury securities in 2009 to improve interest rate conditions in mortgage and other private credit markets.

To support a stronger paced economic recovery in November 2010 the Federal Reserve announced plans

to purchase up to \$600 billion of additional long-term Treasury securities as part of its "quantitative easing two" program. The purchases were extended over an eight-month period and, ultimately, the program concluded in June 2011. Starting in September 2011, the Federal Open Market Committee (FOMC) announced "operation twist" which planned to extend the average maturity of the Fed's portfolio by replacing \$400 billion in short-term bonds with longer-term bonds, thereby keeping long-term interest rates low with less chance of increasing inflation. In a June 2012 FOMC meeting, the program was extended though the end of calendar year 2012. In a significant shift away from the Federal Reserve's time-limited approach to monetary policy, on December 12, 2012, the FOMC announced that the Federal Reserve would continue to purchase MBS and longer-term Treasury securities every month to keep interest rates low until specified thresholds are met. The FOMC indicated that this extraordinary support would continue until either unemployment drops below 6.5 percent, or inflation exceeds 2.5 percent.

Earnings resulting from the expansion of the Federal Reserve's balance sheet through the purchase of GSE debt, GSE MBS, and long-term Treasury securities have, over the last several years increased the surplus the Federal Reserve deposits in the Treasury, reducing the budget deficit, though various factors in 2012 led to a slight decline in year-over-year deposits. In 2012, Treasury received \$82 billion from the Federal Reserve, which represents a less than 1 percent decrease below 2011 deposits. The Budget projects Treasury will receive \$82.9 billion and \$92.0 billion from the Federal Reserve in 2013 and 2014, respectively.

Federal Deposit Insurance Corporation (FDIC) Programs

Using its existing authority, the FDIC created the Temporary Liquidity Guarantee Program (TLGP) in October 2008, to help restore confidence in the banking sector and prevent large scale deposit flight. There were two components to the TLGP: the Debt Guarantee Program and the Transaction Account Guarantee Program (TAG). The Debt Guarantee Program (DGP) allowed participating institutions (banks and their holding companies and affiliates) to issue FDIC-guaranteed senior secured debt. Therefore, if a participating institution defaulted on its debt, the FDIC would make required principal and interest payments to holders of senior unsecured debt. The FDIC charged additional fees and surcharges for any participating institutions that voluntarily opted into this program. Originally, the guarantee was limited to unsecured debt issued between October 14, 2008, and June 30, 2009, and the FDIC debt guarantee coverage extended through June 30, 2012. On March 17, 2009, the FDIC extended coverage to debt issued through October 31, 2009, and extended the guarantee through December 31, 2012. The FDIC also levied a surcharge on debt issued between April 1, 2009, and October 31, 2009, which was transferred to the Deposit Insurance Fund. On October 23, 2009, the FDIC adopted

a final rule reaffirming that the FDIC would not guarantee any debt issued after October 31, 2009. The rule also established a limited, six-month emergency guarantee facility upon expiration of the program; however, this facility was never utilized. As of December 31, 2012, there was no debt outstanding in the senior unsecured debt guarantee program.

TAG, the second component of the TLGP, extended an unlimited FDIC guarantee to participating insured depository institutions on non-interest bearing transaction account deposits, which included low-interest negotiable order of withdrawal (NOW) accounts and Interest on Lawyers Trust Accounts (IOLTAs). The FDIC charged additional premiums for any banks that voluntarily opted into this program. This guarantee helped to facilitate economic recovery by, among other things, promoting business confidence in the banks that held their payroll deposits. The original Transaction Account Guarantee expired on December 31, 2010.

The Wall Street Reform Act provided two additional years of unlimited insurance for non-interest bearing transaction accounts—starting on December 31, 2010, and ending on December 31, 2012. The Permanent Federal Deposit Insurance Coverage for Interest on Lawyers Trust Accounts Act (P.L. 111-343) enacted on December 29, 2010, extended the two years of unlimited coverage to IOLTAs as well, though not to NOW accounts. The coverage extended through the Act was provided to all insured institutions and there were no separate fees associated with this coverage.

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

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

National Credit Union Administration (NCUA) Programs

The NCUA has continued to take aggressive actions, as well as implement new policies, in response to dislocations in financial markets in order to maintain member and investor confidence, limit losses, and promote recovery in the credit union system. These actions have included raising the deposit insurance coverage to \$250,000 in 2009, providing liquidity loans to member credit unions totaling \$24 billion, and stabilizing five credit unions through conservatorship. NCUA has also executed multiple programs amidst the economic crises to ensure liquidity and ultimately the continued safety and soundness of the credit union system, including the Corporate System Resolution Program under the Temporary Corporate Credit Union Stabilization Fund.

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

Housing Market Programs under the Housing and Economic Recovery Act

To avoid a possible collapse of the housing finance market and further risks to the broader financial market, the Federal Housing Finance Agency (FHFA) placed the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac) into conservatorship on September 6, 2008. On the following day, the U.S. Treasury launched three new programs to provide temporary financial support to these housing Government-Sponsored Entities (GSEs) and to stabilize the housing market under the broad authority provided in the Housing and Economic Recovery Act (HERA) of 2008 (P.L. 110–289). First, the Treasury Department provided capital to the GSEs through Senior Preferred Stock Purchase Agreements (PSPAs) to ensure that the GSEs maintain a positive net position (i.e., assets are greater than or equal to liabilities). On December 24, 2009, Treasury announced that the funding commitments in the purchase agreements would be modified to the greater of \$200 billion or \$200 billion plus cumulative net worth deficits experienced during calendar years 2010 through 2012, less any surplus remaining as of December 31, 2012. Second, the Treasury established a line of credit for Fannie Mae, Freddie Mac, and the Federal Home Loan Banks to ensure they have adequate funding on a short-term, as-needed basis. This line of credit was never used. The Treasury also initiated purchases of GSE guaranteed mortgage-backed securities (MBS) in the open market (separate from the Federal Reserve’s MBS purchase program discussed above), with the goal of increasing liquidity in the secondary mortgage market. In December 2009, the Treasury initiated two additional purchase programs under HERA authority to support housing assistance provided through new and existing State and local Housing Financing Agencies (HFAs) revenue bonds. Treasury’s authority to enter new obligations under the GSE PSPA agreement, MBS purchase, and HFA support programs expired on December 31, 2009. However, Treasury’s existing commitments continue to support any needed capital infusions through PSPAs, and new and existing HFA housing bond issuances, and Treasury will continue to collect proceeds from the sale or repayment of the securities that it owns.

As of December 31, 2012, Treasury has provided \$187.5 billion to Fannie Mae and Freddie Mac under the PSPAs. The PSPAs also require that the GSEs pay quarterly dividends to Treasury. Prior to calendar year 2013, the quarterly dividend amount was based on an annual rate of 10 percent of the redemption value of Treasury’s senior preferred stock. Amendments to the PSPAs effected on August 17th, 2012, replace the 10 percent dividend with an amount equivalent to the GSE’s positive net worth above a capital reserve amount. The capital reserve amount for each company is initially set at \$3.0 billion for calendar year 2013, and declines by \$600 mil-

lion at the beginning of each calendar year thereafter until it reaches zero. GSEs have paid \$55.2 billion in dividends as of December 31, 2012. The Budget estimates additional net dividend receipts of \$183.3 billion from January 1, 2013 through 2023. The cumulative budgetary impact of the PSPA agreements from the first PSPA purchase through 2023 is estimated to be savings of \$51 billion. The Temporary Payroll Tax Cut Continuation Act of 2011 signed into law on December 23, 2011, required that the GSEs increase their fees by an average of at least 0.10 percentage points above the average guarantee fee imposed in 2011. Revenues generated by this fee increase are remitted directly to the Treasury for deficit reduction and are not included in the PSPA amounts. The Budget estimates resulting deficit reductions from this fee of \$21 billion from 2012 through 2023. In addition, significant assistance has been provided to the mortgage market through the Federal Housing Administration, through Federal Reserve Bank purchases of GSE MBS (as described above), and through the Department of the Treasury (as described below). A more detailed analysis of these housing assistance programs and the future of the GSEs is provided in the "Credit and Insurance" chapter of this volume.

Treasury Programs

Small Business Lending Programs. To increase the availability and affordability of credit to help small businesses drive economic recovery and create jobs, the Small Business Jobs Act of 2010 (P.L. 111-240) created two new programs proposed by the Administration that are being administered by the Department of the Treasury: the State Small Business Credit Initiative (SSBCI), which provides capital through grants to State programs that support lending to small businesses, and the Small Business Lending Fund (SBLF), which was authorized to provide up to \$30 billion in capital to qualified community banks and other targeted lenders with assets of less than \$10 billion to encourage their lending to small businesses.

The SSBCI authorizes Treasury to disburse \$1.5 billion to new and existing State programs such as Capital Access Programs (CAPs) and Other Credit Support Programs (OCSPs) that will leverage private financing to spur up to \$15 billion in new lending to small businesses and small manufacturers. For every dollar of Federal funding, SSBCI requires at least \$10 in private lending. A total of 53 States and territories (out of a possible 56) applied to take part in the SSBCI. A total of 5 municipalities in the three States that did not apply (Wyoming, North Dakota, and Alaska) submitted their applications directly to SSBCI by the statutory deadline of September 27, 2011, for a total of 58 applications received by the program. Through 2012, SSBCI approved funding for 47 States, the District of Columbia, five U.S. territories and four municipalities. SSBCI estimates that approximately \$1.46 billion will be disbursed by the end of September 2014, with \$1.1 billion disbursed by the end of September 2013. (Note: SSBCI funds States in three equal tranches. States, territories, and municipalities must prove that they have disbursed at least 80 percent of prior funds be-

fore receiving the remaining tranches.) Treasury expects to disburse nearly all of the \$1.5 billion funds. While it is still too early to measure the success of the SSBCI program, initial reports are promising, with 54 Participating States, territories, and municipalities reporting using SSBCI funds to support loans and investments. SSBCI receives quarterly reports from Participating States showing the gross amount of funds used and more detailed annual reports on a transaction level basis. Annual reports for the period ending December 31, 2012, are due March 31, 2013 and will represent the first full year of activity for most Participating States. SSBCI uses the reports to assess performance and provide tailored technical assistance, including assessment and communication across states of "best practices" to maximize the effectiveness of funding. In 2013 and 2014 Treasury will provide more intensive technical assistance.

The SBLF authorized Treasury to lend up to \$30 billion of capital to eligible financial institutions (those having less than \$10 billion in assets) and participating institutions are required to pay dividends based on the volume growth of their small business lending portfolio. Providing this low-cost capital to lenders is designed to increase their loans to small businesses. The application period closed in June 2011 and all awards were made by September 27, 2011, the statutory end of the funding phase of the program. Treasury received 933 applications totaling \$11.8 billion. Of these, 332 institutions were approved for over \$4.0 billion, with some institutions screened out due in part to stringent credit requirements aimed at protecting taxpayer dollars and avoiding lending to institutions that were likely to default on their SBLF obligations. Banks ineligible for the program included: (1) institutions listed on the regulator's problem bank list with expected CAMELS score greater than 4; and (2) TARP Capital Purchase Program (CPP) participants with more than one missed CPP dividend payment. As of September 30, 2012, SBLF participants had increased their small business lending by \$7.4 billion over the baseline with 78 percent of SBLF participants increasing small business lending by 10 percent or more. SBLF is expected to create a positive return for taxpayers given the prudent lending standards established by the program. For more information on SSBCI and SBLF, please see the "Credit and Insurance" chapter, in this volume.

Troubled Asset Relief Program (TARP). The 2008 EESA authorized the Treasury to purchase or guarantee troubled assets and other financial instruments to restore liquidity and stability to the financial system of the United States while protecting taxpayers. Treasury has used its authority under EESA to provide capital to and restore confidence in U.S. financial institutions, to restart markets critical to financing American households and businesses, and to address housing market problems and the foreclosure crisis. Under EESA, the Secretary's authority was originally limited to \$700 billion in obligations at any one time, as measured by the total purchase price paid for assets and guaranteed amounts outstanding. The Helping Families Save Their Homes Act of 2009 (P.L. 111-22) reduced total TARP purchase authority by

\$1.3 billion, and in July 2010, the Wall Street Reform Act further reduced total TARP purchase authority to a maximum of \$475 billion in cumulative obligations.

On December 9, 2009, and as authorized by EESA, the Secretary of the Treasury certified to Congress that an extension of TARP purchase authority until October 3, 2010, was necessary “to assist American families and stabilize financial markets because it will, among other things, enable us to continue to implement programs that address housing markets and needs of small businesses, and to maintain the capacity to respond to unforeseen threats.” On October 3, 2010, the Treasury’s authority to make new TARP commitments expired. The Treasury continues to manage existing investments and is authorized to expend previously committed TARP funds pursuant to obligations entered into prior to October 3, 2010.

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

Section 202 of EESA requires the Office of Management and Budget (OMB) to report the estimated cost of TARP assets purchased and guarantees issued pursuant to EESA. The most recent report was issued August 31, 2012.² Consistent with the requirement to analyze transactions occurring no less than thirty days before publication, the 2014 Budget data presented in this report reflect revised subsidy costs for the TARP programs using actual performance and updated market information through December 31, 2012. For information on subsequent TARP program developments, please consult the Treasury Department’s Troubled Asset Relief Program Monthly 105(a) Reports.

² See “OMB Report under the Economic Stabilization Act, Section 202,” August 31, 2012. http://www.whitehouse.gov/sites/default/files/omb/reports/tarp_report_august_2012.pdf

TARP Market Impact

Although challenges in the economy remain, TARP’s support to the banking sector through the Capital Purchase Program (CPP), Targeted Investment Program (TIP), Asset Guarantee Program, and the Community Development Capital Initiative (CDCI) helped stabilize the financial system and strengthen the financial position of the Nation’s banking institutions. Net income of insured financial institutions for the quarter ending September 30, 2012, was \$37.6 billion, which marked the highest quarterly net income reported by the industry since the third quarter (calendar year) of 2006.³ This growth in earnings is attributable to financial institutions reducing the loan loss provisions on their balance sheets based on improved forecasts of their asset quality and higher revenues in the form of non-interest income and gains on asset sales. As of September 30, 2012, total provisions for loan losses for all insured depository institutions declined year over year for a 12th consecutive quarter, falling to \$14.8 billion from \$18.6 billion in the prior year. This continued reduction in loan loss reserves points to improving credit and market conditions.

The on-going healing of the banking sector, coupled with the TARP programs aimed at reviving the credit markets, have facilitated the improved flow of credit in both the commercial and consumer markets. Together, the Term Asset Backed Securities Loan Facility (TALF) and the Public Private Investment Program (PPIP) helped to improve the overall credit climate for businesses, as evidenced by the declining cost of long-term investment grade borrowing, which has fallen from a peak of roughly 570 basis points over benchmark Treasury securities at the height of the crisis to just 160 basis points over Treasuries as of December 31, 2012.⁴ However, additional progress is needed to increase small businesses’ access to credit, and enable the economy to achieve its full potential.

Emergency loans to General Motors and Chrysler via the TARP Automotive Industry Financing Program (AIFP) spurred the resurgence of the U.S. auto manufacturing industry. The Administration’s assistance to both GM and Chrysler was conditioned on the requirement that stakeholders make difficult, but necessary restructuring and reorganization decisions in order for these companies to emerge from bankruptcy and achieve long-term viability. Although AIFP is still estimated to result in a net cost to taxpayers, the Government has been able to recover much more from auto companies than originally estimated, and far sooner, while reinvigorating one of America’s critical industries. New Chrysler has posted eleven consecutive quarters of operating profit and has announced more than \$8.9 billion in investments in plants and technology since emerging from bankruptcy in 2009.⁵ The story has

³ Federal Deposit Insurance Corporation, *Quarterly Banking Profile*, September 2012. <http://www2.fdic.gov/qbp/2012sep/qbp.pdf>

⁴ Spreads for the cost of long-term investment grade borrowing are based upon 10-year Treasury yield and FINRA/Bloomberg Investment Grade U.S. Corporate Bond Index yield.

⁵ Chrysler, *Third Quarter 2012 Financial Results Webcast*, October, 30, 2012 http://www.chryslergroupllc.com/Investor/presentations/QAWebcasts/ChryslerDocuments/Q3_2012_Presentation.pdf

been similar for New GM—and the industry as a whole. In January 2012, GM announced that it had regained its spot as the world's largest global seller of automobiles and as of November 2012, auto sales are the highest they have been in more than four years. The auto industry is leading a resurgence in American manufacturing that translates to the creation of more American jobs, with nearly 250,000 jobs created in the American auto industry over the past three years.

Although the housing market is still recovering, the Administration's housing programs implemented through the TARP have helped stabilize the market and kept millions of borrowers in their homes. As of December 31, 2012, more than 1.1 million borrowers have received permanent modifications through the Home Affordable Modification Program (HAMP), which amounts to an estimated \$17.3 billion in realized monthly mortgage payment savings for these homeowners. In addition to helping these borrowers, the Administration's TARP housing programs have been a catalyst to private sector mortgage modifications. Since April 2009, HAMP, FHA, and the private sector HOPE Now alliance have initiated more than 6.2 million mortgage modifications, which is nearly double the number of foreclosure completions that were executed in the same period. The Administration has continued to respond to the evolving housing crisis by implementing programs that provide mortgage relief to unemployed homeowners and those with negative home equity. Furthermore, through the HFA Hardest Hit Fund, the Administration has allocated \$7.6 billion to eligible States to implement innovative housing programs to bring stability to local housing markets and meet the unique needs of their communities.

Deficit Impact

Over four years after the first TARP dollars were disbursed, the TARP has not only helped to stabilize financial markets and set the foundation for economic recovery, but it has done so at a much lower cost than originally estimated. As of December 31, 2012, total repayments and income on TARP investments were approximately \$387 billion, which is 93 percent of the \$418 billion in total disbursements to date. The projected total lifetime deficit impact of TARP programmatic costs, reflecting recent activity and revised subsidy estimates based on market data as of December 31, 2012, is now estimated at \$47.5 billion (see Table 3–1).⁶

Compared to the 2013 MSR estimate of \$68 billion, the estimated deficit impact of TARP decreased by \$20.5 billion. This decrease was largely attributable to the higher valuation of the AIG and GM common stock sold via public offering or held by Treasury as well as lower expected costs associated with TARP's support of the FHA Refinance Program. In 2012, Treasury sold its remaining AIG common stock holdings via 5 public offerings at prices ranging from \$29.00 to \$32.50, representing a weighted average share price increase of \$2.36 from the May 31st valuation. Additionally, GM's share price increased

by \$6.63 (or 30 percent), relative to the share prices used to formulate the May 31st valuation.⁷

There has been a notable reduction in TARP's projected deficit impact from the \$341 billion estimate published in the 2010 MSR (see graph below). The Budget reflects a total TARP deficit impact of \$47.5 billion, a \$294 billion reduction from the 2010 MSR and a \$309 billion reduction from the Congressional Budget Office's March 2009 estimate of \$356 billion.

A description of the TARP programs, followed by a detailed analysis of the programmatic changes to the TARP and the cost estimates since the publication of the 2013 MSR, is provided below.

Description of Assets Purchased Through the TARP, by Program

Capital Purchase Program (CPP). Pursuant to EESA, the Treasury created the CPP in October 2008 to restore confidence throughout the financial system by ensuring that the Nation's banking institutions have a sufficient capital cushion against potential future losses and to support lending to creditworthy borrowers. All eligible CPP recipients completed funding by December 31, 2009, and Treasury purchased \$204.9 billion in preferred stock in 707 financial institutions under the CPP program. As of December 31, 2012, Treasury had received approximately \$194 billion in principal repayments (i.e., redemptions of common and preferred stock, CDCI conversions, and refinances to SBLF) and \$26.5 billion in revenues from dividends, interest, warrants, gains/other interest and fees. Total redemptions and income now exceed Treasury's initial investment by \$15.5 billion. As of December 31, 2012, \$7.4 billion remained outstanding under the program.

Community Development Capital Initiative (CDCI). The CDCI program invests lower-cost capital in Community Development Financial Institutions (CDFIs), which operate in markets underserved by traditional financial institutions. In February 2010, Treasury released program terms for the CDCI program, under which participating institutions received capital investments of up to 5 percent of risk-weighted assets and pay dividends to Treasury of as low as 2 percent per annum. The dividend rate increases to 9 percent after eight years. CDFI credit unions were able to apply to TARP for subordinated debt at rates equivalent to those offered to CDFI banks and thrifts. These institutions could apply for capital investments of up to 3.5 percent of total assets — an amount approximately equivalent to the 5 percent of risk-weighted assets available under the CDCI program to banks and thrifts. TARP capital of \$570 million has been committed to this program. As of December 31, 2012, approximately \$530 million remained outstanding under the program.

Capital Assistance Program and Other Programs (CAP). In 2009, Treasury worked with federal banking regulators to develop a comprehensive "stress test" known as the Supervisory Capital Assessment Program (SCAP) to assess the health of the nation's 19 largest bank holding companies. In conjunction with SCAP, Treasury

⁶ Note, including proceeds from Treasury's non-TARP holdings in AIG, the total deficit impact is estimated at \$30 billion.

⁷ The 2014 Budget valuation used the December 31, 2012 share price of \$28.83 for Treasury's GM common stock.

announced that it would provide capital under TARP through the Capital Assistance Program (CAP) to institutions that participated in the stress tests as well as others. Only one TARP institution (Ally Financial) required additional funds under the stress tests, but received them through the Automotive Industry Financing Program, not CAP. CAP closed on November 9, 2009, without making any investments and did not incur any losses to taxpayers. Following the release of the stress test results, banks were able to raise hundreds of billions of dollars in private capital.

American International Group (AIG) Investments. The Federal Reserve Bank of New York (FRBNY) and the Treasury provided financial support to AIG in order to mitigate broader systemic risks that would have resulted from the disorderly failure of the company. To prevent the company from entering bankruptcy and to resolve the liquidity issues it faced, the FRBNY provided an \$85 billion line of credit to AIG in September 2008 and received preferred shares that entitled it to 79.8 percent of the voting rights of AIG's common stock. After TARP was enacted, the Treasury and FRBNY continued to work to facilitate AIG's execution of its plan to sell certain of its businesses in an orderly manner, promote market stability, and protect the interests of the U.S. Government and taxpayers. As of December 31, 2008, when purchases ended, the Treasury had purchased \$40 billion in preferred shares from AIG through TARP, which were subsequently converted into common stock. In April 2009, Treasury also extended a \$29.8 billion line of credit, of which AIG drew down \$27.8 billion, in exchange for additional preferred stock. The remaining \$2 billion obligation was subsequently canceled.

AIG executed a recapitalization plan with FRBNY, Treasury, and the AIG Credit Facility Trust in mid-January 2011 that allowed for the acceleration of the Government's exit from AIG. Following the restructuring and AIG's ensuing public offering in May of 2011, the Treasury had a 77 percent ownership (or 1.45 billion shares) stake in AIG, which represented a 15 percentage point reduction from Treasury's 92 percent ownership stake in January 2011. Throughout 2012, Treasury completed public offerings to further reduce its AIG ownership stake. In December 2012, Treasury sold its remaining balance of AIG common in a public offering that reduced Treasury's AIG common stock position to zero. With this final sale, the Treasury and the FRBNY have fully recovered all funds committed to stabilize AIG during the financial crisis and realized an additional \$22.7 billion positive return.⁸ In March 2013, Treasury sold its remaining 2.7 million warrants for \$25.2 million and has fully exited its investment in AIG. A summary of the deal terms and recent transactions is provided below:

- On March 7, 2012, Treasury announced an agreement with AIG that provided for the repayment of

the government's remaining \$8.5 billion preferred equity investment in the AIG-owned entity AIA Aurora LLC (AIA SPV) from the following sources: (1) \$5.6 billion in proceeds from AIG's sale of ordinary shares of AIA (2) \$1.6 billion in proceeds from the FRBNY's final disposition of Maiden Lane II LLC securities announced on February 28, 2012 and (3) \$1.6 billion in escrowed cash proceeds resulting from AIG's sale of its American Life Insurance Co. (ALICO) subsidiary to MetLife, Inc.

- On March 8, 2012, Treasury sold approximately 207 million shares of AIG common stock through a public offering at \$29.00 per share, netting \$6.0 billion in proceeds for taxpayers. As part of the offering, AIG agreed to purchase approximately 103.5 million shares at \$29.00 per share, representing \$3.0 billion of Treasury's expected proceeds from the sale. Approximately two-thirds of the proceeds are attributable to shares received as a result of the TARP assistance to AIG, while the remaining one-third is attributable to the shares transferred to the Treasury from the FRBNY.
- On March 22, 2012, AIG made the final \$1.5 billion payment to Treasury to retire Treasury's preferred interest in the AIG-owned entity AIA Aurora LLC (AIA SPV) — a special purpose vehicle that holds ordinary shares in AIA Group Limited (AIA), more than one year ahead of schedule. With this payment, Treasury's preferred equity investment related to AIG has been repaid in full.
- On May 10, 2012 Treasury sold approximately 188.5 million shares of AIG common stock through a public offering at \$30.50 per share, netting \$5.75 billion in proceeds for taxpayers.
- On August 8, 2012 Treasury sold approximately 188.5 million shares of AIG common stock through a public offering at \$30.50 per share, for an additional \$5.75 billion in proceeds.
- On September 14, 2012 Treasury sold approximately 636.9 million shares of AIG common stock through a public offering at \$32.50 per share, netting \$20.7 billion in proceeds for taxpayers.
- On December 14, 2012 Treasury sold its entire remaining position of approximately 234 million shares of AIG common stock through a public offering at \$32.50 per share, netting \$7.6 billion in proceeds for taxpayers.

Targeted Investment Program (TIP). The goal of the TIP was to stabilize the financial system by making investments in institutions that are critical to the functioning of the financial system. Investments made through the TIP sought to avoid significant market disruptions resulting from the deterioration of one financial institution that could threaten other financial institutions and impair broader financial markets, and thereby pose a threat to the overall economy. Under the TIP, the

⁸ Treasury's investment in AIG common shares consisted of shares acquired in exchange for preferred stock purchased with TARP funds (TARP shares) and shares received from the trust created by the FRBNY for the benefit of Treasury as a result of its loan to AIG (non-TARP shares).

Treasury purchased \$20 billion in preferred stock from Citigroup and \$20 billion in preferred stock from Bank of America. The Treasury also received stock warrants from each company. Both Citigroup and Bank of America repaid their TIP investments in full in December 2009, along with dividend payments of approximately \$3.0 billion. In March 2010, Treasury sold all of its Bank of America warrants for \$1.2 billion, and in January 2011, the Treasury sold Citigroup warrants acquired through the TIP for \$190.4 million. The TIP is closed and has no remaining assets.

Asset Guarantee Program (AGP). The TARP created the AGP to provide Government assurances for assets held by financial institutions that were critical to the functioning of the nation's financial system. In January 2009, the Treasury, the Federal Reserve, and the FDIC negotiated a potential loss-sharing arrangement under the AGP on up to \$118 billion of financial instruments owned by Bank of America. In May 2009, Bank of America announced its intention to terminate negotiations with respect to the loss-sharing arrangement. In September 2009, the Treasury, the Federal Reserve, the FDIC, and Bank of America entered into a termination agreement pursuant to which Bank of America agreed to pay a termination fee of \$425 million to the Government parties. Of this amount, \$276 million was paid to the TARP in 2009 for the value Bank of America received from the announcement of the government's willingness to guarantee and share losses on the pool of assets.

The Treasury, the Federal Reserve and the FDIC entered into a final agreement for a loss-sharing arrangement with Citigroup on January 15, 2009. Under the agreement, the Treasury guaranteed up to \$5 billion of potential losses incurred on a \$301 billion portfolio of financial assets held by Citigroup. The agreement was terminated, effective December 23, 2009. The U.S. Government parties did not pay any losses under the agreement, and retained \$5.2 billion of the \$7 billion in trust preferred securities that were part of the initial agreement with Citigroup.⁹ TARP retained \$2.2 billion of the trust preferred securities, as well as warrants for common stock shares that were issued by Citigroup as consideration for the guarantee. Treasury sold the trust preferred securities on September 30, 2010, and the warrants on January 25, 2011. On December 28, 2012, Treasury received \$800 million in additional Citigroup trust preferred securities from the FDIC as contemplated by the agreements entered into by Treasury and the FDIC. The AGP program will generate a positive return to the taxpayers from the preferred securities and other considerations.

Automotive Industry Financing Program (AIFP). In December 2008, the Treasury established the AIFP to prevent a disruption of the domestic automotive industry, in order to mitigate a systemic threat to the Nation's economy and a potential loss of thousands of jobs. Through TARP, the Treasury originally committed \$84.8 billion through loans and equity investments to partici-

pating domestic automotive manufacturers, auto finance companies, and auto parts manufacturers and suppliers. As of December 31, 2012, Treasury had recouped nearly 58 percent of its investments in GM and had fully exited its Chrysler Group LLC investments. Below is a summary of the securities TARP received in exchange for the assistance provided to automotive manufacturers and recent transactions:

- Treasury received 60.8 percent of the common equity and \$2.1 billion in preferred stock in "New GM" when the sale of assets from the old GM to the new GM took place on July 10, 2009. In April 2010, GM fully repaid its \$7 billion loan, ahead of its publicly stated goal to repay the entire loan by June 2010. As part of New GM's initial public offering (IPO) in November 2010, Treasury sold nearly 359 million shares of New GM common stock at \$33.00 per share, and subsequently sold an additional 53.7 million shares in December 2010 at the same price. In total, TARP raised \$13.5 billion in net proceeds from the New GM IPO and reduced its ownership stake by nearly half, to approximately 32 percent. New GM also repurchased \$2.1 billion in preferred stock from TARP in December 2010. In December 2012, GM purchased 200 million shares of GM common stock from Treasury at \$27.50 per share (a 10 percent premium) for proceeds of \$5.5 billion and Treasury also announced its intent to fully exit its investment in GM within the next 12-15 months. As of December 31, 2012, TARP had recouped \$29.5 billion of the \$51.03 billion in aid extended to GM.
- Treasury also received a \$7.1 billion debt security and a 9.9 percent share of the equity in the newly formed, post-bankruptcy Chrysler Group LLC (New Chrysler). As part of the bankruptcy proceedings, New Chrysler also assumed \$500 million of debt from TARP's original \$4 billion loan to Chrysler Holding (Old Chrysler). Therefore, TARP held a \$3.5 billion loan with Old Chrysler in addition to investments in New Chrysler. In April 2010, TARP received a \$1.9 billion repayment of its investments in Old Chrysler. This repayment, while less than the amount Treasury invested, was significantly more than the Administration had previously estimated to recover. As part of the repayment agreement, Treasury agreed to write off the \$1.6 billion balance remaining under the \$3.5 billion TARP loan to Old Chrysler. On May 24, 2011, six years ahead of schedule, Chrysler Group LLC repaid the remaining \$5.1 billion in TARP loans and terminated the remaining \$2.1 billion TARP loan commitment. Finally, on June 2, 2011, Treasury reached an agreement to sell to Fiat Treasury's 6 percent fully diluted equity interest in New Chrysler and Treasury's interest in an agreement with the UAW retiree trust for \$560 million. The closing of this transaction in July 2011 marked Treasury's full exit from its TARP investments in Chrysler. In total, Chrysler repaid \$11.1

⁹ Trust Preferred Securities (TruPS) are financial instruments that have the following features: they are taxed like debt; counted as equity by regulators; are generally longer term; have early redemption features; make quarterly fixed interest payments; and mature at face value.

billion¹⁰ of the \$12.4 billion in aid provide by the U.S. Government, which far exceeded expectations when the program was first unveiled in December 2008.

- Treasury has also purchased investments totaling \$16.3 billion in Ally Financial (formerly GMAC). On December 30, 2010, Treasury converted \$5.5 billion of its \$11.4 billion in convertible preferred stock in Ally Financial into common stock. On March 2, 2011, Treasury sold all of its trust preferred securities for approximately \$2.7 billion. In May 2012, Ally Financial began exploring strategic alternatives for its international businesses in a manner that Ally believes will maximize value for its shareholders and Residential Capital, its mortgage subsidiary, filed for Chapter 11 bankruptcy. As of December 31, 2012, Treasury had recouped \$5.8 billion of its \$16.3 billion in Ally-related investments, including \$3.1 billion in dividends and interest.

Both the Auto Supplier Support Program (ASSP) and the Auto Warranty Commitment Program (AWCP) have closed and, in aggregate, these investments did not result in losses. The Government originally committed \$5 billion in loans to ASSP, ensuring the auto suppliers received compensation for products and services purchased by automakers. Through the AWCP, the Government extended support to protect consumer warranties on purchased GM and Chrysler vehicles while the companies worked through their restructuring plans. Treasury no longer holds warranties under the AWCP.

Credit Market Programs. The Credit Market programs are designed to facilitate lending that supports consumers and small businesses, through the Term Asset-Backed Securities Loan Facility (TALF), the CDCI discussed previously, and the Small Business Administration's guaranteed loan program (SBA 7(a)).

TALF: The TALF was a joint initiative with the Federal Reserve that provides financing (TALF loans) to private investors to help facilitate the restoration of efficient and robust secondary markets for various types of credit. The Treasury provided protection to the Federal Reserve through a loan to the TALF's special purpose vehicle (SPV), which was originally available to purchase up to \$20 billion in assets that would be acquired in the event of default on Federal Reserve financing. The Treasury has disbursed \$0.1 billion of this amount to the TALF SPV to implement the program, representing a notional amount used to establish the SPV. Treasury's total TALF purchases were designed to be dependent on actual TALF loan defaults, and to date none has occurred. In July 2010, Treasury, in consultation with the Federal Reserve, reduced the maximum amount of assets Treasury would acquire to \$4.3 billion, or 10 percent of the total \$43 billion outstanding in the facility when the program was closed to new lending on June 30, 2010. In June 2012, Treasury, in consultation with the Federal Reserve, further reduced its loss-coverage to \$1.4 billion. Finally, Treasury and

the Federal Reserve announced in January 2013 that Treasury's commitment of TARP funds to provide credit protection was no longer necessary due to the fact that the accumulated fees collected through TALF exceeded the total principal amount of TALF loans outstanding. As of January 15, 2013, Treasury had recognized a cash gain of \$424 million on TALF, with additional gains expected in the future.

SBA 7(a): In March 2009, Treasury and the Small Business Administration announced a Treasury program to purchase SBA-guaranteed securities ("pooled certificates") to re-start the secondary market in these loans. Treasury subsequently developed a pilot program to purchase SBA-guaranteed securities, and purchased 31 securities with an aggregate face value of approximately \$368 million. Treasury reduced its commitment to the Small Business 7(a) program from \$1 billion to \$370 million, as demand for the program waned due to significantly improved secondary market conditions for these securities following the original announcement of the program. In January 2012, Treasury completed the final disposition of its SBA 7(a) securities portfolio. The SBA 7(a) program received total proceeds of \$376 million, representing a gain of approximately \$8 million to taxpayers.

Public Private Investment Program (PPIP). The Treasury announced the Legacy Securities Public-Private Investment Partnership (PPIP) on March 23, 2009 to help restart the market for legacy mortgage-backed securities, thereby helping financial institutions begin to remove these assets from their balance sheets and allowing for a general increase in credit availability to consumers and small businesses. Under the program, Public-Private Investment Funds (PPIFs) are established by private sector fund managers for the purchase of eligible legacy securities from banks, insurance companies, mutual funds, pension funds, and other eligible sellers as defined under EESA. PPIP closed for new funding on June 30, 2010 and the PPIFs can no longer deploy capital and make new investments as of December 2012 although they may continue to manage these investments for up to five additional years following the termination of their investment period. As of December 31, 2012, \$18.6 billion of the \$21.9 billion in funds originally committed to PPIP had been disbursed and \$15.0 billion had been repaid. Additionally, five of the nine PPIFs had completely wound down, returning their funds to Treasury and their private investors at a profit.

TARP Housing Programs. To mitigate foreclosures and preserve homeownership, in February 2009 the Administration announced a comprehensive housing program utilizing up to \$50 billion in funding through the TARP. The Government-Sponsored Entities (GSEs) Fannie Mae and Freddie Mac participated in the Administration's program both as the Treasury Department's financial agents for Treasury's contracts with servicers, and by implementing similar policies for their own mortgage portfolios.¹¹ These housing programs are focused on creating sustainably affordable mortgages

¹⁰ Chrysler repayments of \$11.1 billion include \$560 million in proceeds from the sale of Treasury's 6 percent fully diluted equity interest in Chrysler to Fiat and Treasury's interest in an agreement with the UAW retiree trust that were executed on July 21, 2011.

¹¹ For additional information on MHA programs, visit: <http://www.makinghomeaffordable.gov/>.

for responsible homeowners who are making a good faith effort to make their mortgage payments, while mitigating the spillover effects of foreclosures on neighborhoods, communities, the financial system and the economy. Following the enactment of the Wall Street Reform Act, Treasury reduced its commitments to the TARP Housing programs to \$45.6 billion. These programs fall into three initiatives:

1. Making Home Affordable (MHA);
2. Housing Finance Agency (HFA) Hardest-Hit Fund (HHF); and
3. Federal Housing Administration (FHA) Refinance Program.¹²

The MHA initiative includes among its components the Home Affordable Modification Program (HAMP), FHA-HAMP, the Second Lien Modification Program (2MP), and the second lien extinguishment portion of the FHA-Refinance Program, and Rural Development-HAMP.¹³ Under MHA programs, the Treasury contracts with servicers to modify loans in accordance with the program's guidelines, and to make incentive payments to the borrowers, servicers, and investors for those modification or other foreclosure alternatives. As of December 31, 2012, 78 non-GSE mortgage servicers had signed up to participate in the HAMP. Over 1.5 million MHA homeowner assistance actions, including over 1.1 million HAMP permanent modifications, were initiated as of the end of December 2012. Through HAMP, homeowners have saved approximately \$17.3 billion in reduced mortgage payments. Program implementation has continually improved since its inception in February 2009. As of December 2012, 87 percent of homeowners who started a trial modification after June 1, 2010, had converted to permanent modifications within an average of 3.5 months – a higher conversion rate and shorter time to convert than earlier in the program. In addition to providing responsible homeowners with sustainable mortgages, the MHA initiative has also, for the first time, made significant progress in offering consumer protections for homeowners and standardizing the mortgage modification process across the servicing industry, which has contributed to over 6 million Government and private sector modifications and loss mitigation actions occurring since April 2009. In January 2012, the Administration extended the deadline to apply for MHA programs until December 31, 2013. Additionally, in June 2012, the Administration expanded MHA eligibility to include (1) homeowners who are applying for a modification on a home that is not their primary residence, but the property is currently rented or the homeowner intends to rent it, (2) homeowners who previously did

not qualify for HAMP because their mortgage debt-to-income ratio was 31.0 percent or lower, and (3) homeowners who previously received a HAMP permanent modification, but defaulted on their payments, therefore losing good standing.

Treasury also offers other forms of incentives to encourage mortgage loan modifications, or prevent foreclosure under the HAMP, as part of its MHA program. For example, Treasury provides payments to servicers and investors to protect against declining home prices as part of encouraging mortgage modifications in communities that have experienced continued home price depreciation. When a mortgage modification is not possible, Treasury contracts with servicers to provide incentives that encourage borrower short sales (sales for less than the value of the mortgage in satisfaction of the mortgage) or deeds-in-lieu (when the homeowner voluntarily transfers ownership of the property to the servicer in full satisfaction of the total amount due on the mortgage) via the Home Affordable Foreclosure Alternatives Program (HAFA), in order to provide a means for borrowers to avoid foreclosure. Since the inception of the program, over 101,000 HAFA transactions have been completed.

As part of its ongoing effort to continuously refine the targeting of mortgage assistance to address the sector's greatest needs, the Administration created several programs that will give a greater number of responsible borrowers an opportunity to remain in their homes and reduce costly foreclosures. Major programs announced since December 31, 2009, include:

Home Affordable Unemployment Program (part of HAMP): Unemployed borrowers that meet eligibility criteria will receive temporary mortgage payment assistance while they look for a new job. In an effort to keep more unemployed borrowers in their homes and allow them an opportunity to find new employment, Treasury extended the minimum period for which unemployed borrowers receive temporary payment assistance from 3 months to 12 months in July 2011. In response to the Administration's efforts, 12-month forbearance is becoming an industry standard, with Fannie Mae and Freddie Mac now applying it to mortgages they own and Wells Fargo and Bank of America now offering it as their default approach for unemployed borrowers.

Principal Reduction Alternative (PRA, part of HAMP): Servicers who have signed up for this program are required to consider an alternative mortgage modification that emphasizes principal relief for borrowers who owe more than their home is worth. Under the alternative approach, if the servicer reduces borrower loan principal using this program, investors will receive incentive payments based on a percentage of each dollar of loan principal written off. Borrowers and investors will receive principal reduction and the incentives, respectively, through a pay-for-success structure. In February 2012, Treasury issued guidance that tripled the amount of financial incentives under PRA for investors who agree to reduce principal for eligible underwater homeowners. There have been nearly 114,000 PRA trial modifications initiated as

¹² This program has also been referred to as the FHA Short Refinance Program or Option in other reporting. The FHA Refinance Program is not a Treasury program, but is supported through the TARP with \$1 billion to cover a share of any losses on FHA Refinance loans.

¹³ For additional information on MHA programs, visit: <http://www.makinghomeaffordable.gov/>.

of December 31, 2012, with the median principal amount reduced for active permanent modifications of \$72,900.

HFA Hardest-Hit Fund (HHF): The \$7.6 billion HHF provides the eligible entities of Housing Finance Agencies from 18 states and the District of Columbia with funding to design and implement innovative programs to prevent foreclosures and bring stability to local housing markets. The Administration targeted areas hardest hit by unemployment and home price declines through the program. Approximately 70 percent of the HHF funds are dedicated to programs that help unemployed borrowers stay in their homes, while the remaining 30 percent of HHF funds facilitate principal write-downs for borrowers who owe more than their home is worth. The flexibility of the HHF funds has allowed States to design and tailor innovative programs to meet the unique needs of their community. For example, Nevada recently implemented a principal reduction program that leverages refinances under the Home Affordable Refinance Program (HARP) while California recently implemented a program that uses principal reduction in conjunction with a modification or recast.

FHA Refinance Program: This program, which is administered by the Federal Housing Administration and supported by TARP, was initiated in September 2010 and allows eligible borrowers who are current on their mortgage but owe more than their home is worth, to re-finance into an FHA-guaranteed loan if the lender writes off at least 10 percent of the existing loan. Nearly \$3.0 billion in TARP funds allocated under the MHA are available to provide incentive payments to extinguish second lien mortgages to facilitate refinancing the first liens into an FHA-insured mortgage, and an additional \$8.1 billion was originally committed to cover a share of any losses on the loans and administrative expenses. In January 2012, the Administration extended the FHA Refinance Program until December 31, 2014. In 2013, Treasury's commitment to cover a share of any losses under the FHA Refinance Program was reduced from \$8.1 billion to \$1.0 billion.

Method for Estimating the Cost of TARP Transactions

Exercising its authority under EESA, the Treasury has purchased financial instruments with varying terms and conditions. Consistent with the provisions of Section 123 of EESA, the costs of equity purchases, loans, guarantees, and loss sharing under the FHA Refinance program through the TARP are reflected on a net present value basis, as determined under the Federal Credit Reform Act (FCRA) of 1990 (2 U.S.C. 661 et seq.), with an EESA-required adjustment to the discount rate for market risks. The budgetary cost of these transactions is reflected as the net present value of estimated cash flows to and from the Government, excluding administrative costs. Costs for the incentive payments under TARP Housing programs, other than loss sharing under the FHA Refinance program, involve financial instruments

without any provision for future returns, and are recorded on a cash basis.¹⁴

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

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

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

In the case of the TALF, the New York Federal Reserve created an SPV to purchase and manage assets received in connection with any TALF loans. The Federal Reserve

¹⁴ Section 123 of the EESA provides the Administration the authority to record TARP equity purchases pursuant to the FCRA, with required adjustments to the discount rate for market risks. The Making Home Affordable programs and HFA Hardest Hit Fund involve the purchase of financial instruments which have no provision for repayment or other return on investment, and do not constitute direct loans or guarantees under FCRA. Therefore these purchases are recorded on a cash basis. Administrative expenses are recorded for all of TARP under the Office of Financial Stability and the Special Inspector General for TARP on a cash basis, consistent with other Federal administrative costs.

Table 3–1. CHANGE IN PROGRAMMATIC COSTS OF TROUBLED ASSET RELIEF ACTIONS (EXCLUDING DEBT SERVICE)
(In billions of dollars)

| TARP Actions | 2013 MSR | | 2014 Budget | | Change from 2013 MSR to 2014 Budget | |
|--|-------------------------------|----------------------------------|-------------------------------|----------------------------------|-------------------------------------|----------------------------------|
| | TARP Obligations ¹ | Estimated Cost (+) / Savings (-) | TARP Obligations ¹ | Estimated Cost (+) / Savings (-) | TARP Obligations ¹ | Estimated Cost (+) / Savings (-) |
| Equity Purchases | 337.1 | 17.5 | 336.8 | 10.2 | -0.3 | -7.3 |
| Structured & direct loans and asset-backed security purchases | 82.4 | 19.1 | 77.5 | 17.4 | -5.0 | -1.6 |
| Guarantees of troubled asset purchases ² | 5.0 | -3.6 | 5.0 | -3.8 | ..... | -0.2 |
| TARP Housing Programs ³ | 45.6 | 45.6 | 38.5 | 37.6 | -7.1 | -8.0 |
| Total programmatic costs⁴ | 470.1 | 78.6 | 457.8 | 61.5 | -12.3 | -17.1 |
| Memorandum: | | | | | | |
| Deficit impact before administrative costs and interest effects | | 68.0 | | ⁵ 47.5 | | -20.5 |

¹ TARP obligations are net of cancellations.

² The total assets supported by the Asset Guarantee Program were \$301 billion.

³ TARP obligations under the FHA Refinance Letter of Credit provide first loss coverage of eligible FHA insured mortgages.

⁴ Total programmatic costs of the TARP exclude interest on reestimates.

⁵ The total deficit impact of TARP includes \$18.1 billion in subsidy cost for TARP investments in AIG. Including proceeds from Treasury's non-TARP holdings in AIG, the net cost to the Government of AIG is \$0.5 billion.

acquires assets either when a TALF participant defaults on the Federal Reserve financing or chooses to turn over the securing assets in lieu of the scheduled repayment at the end of the term. The SPV has committed, for a fee, to purchase all assets securing a TALF loan that are received by the New York Federal Reserve at a price equal to the TALF loan amount at the time of acquisition, plus accrued but unpaid interest. The Treasury made an initial allotment to the SPV of \$0.1 billion to fund the SPV, and committed to purchase subordinated debt issued by the SPV to finance asset purchases; no further purchases by Treasury were made. The Treasury receives fees and interest income on the entire outstanding TALF facility, and amounts collected in the SPV.

Guarantees. Cost estimates for guarantees reflect the net present value of estimated claim payments by the Government, net of income from fees, recoveries on defaults, or other sources. Under EESA, asset guarantees provided through TARP must be structured such that fees and other income must completely offset estimated losses at the time of commitment. In TARP's Asset Guarantee Program, fees were paid in the form of preferred stock and termination fees. The value of preferred stock is modeled using the same methodology discussed for other equity purchase programs below. Claim payments were modeled consistent with the terms of the guarantee contract, and reflected historical performance data on similar assets and estimates of future economic conditions such as unemployment rates, gross domestic product, and home price appreciation. However, the AGP was terminated with no claim payments made by the Treasury. The budget reflects actual and estimated collections from preferred stock proceeds.

Equity Purchases. Preferred stock cash flow projections reflect the risk of losses associated with adverse events, likely failure of an institution, or increases in market interest rates. Estimated cash flows vary depending on: 1) current interest rates, which affect the insti-

tion's decision to repay the preferred stock; and 2) the strength of a financial institution's assets. The model also estimates the values and projects the cash flows of warrants using an option-pricing approach based on the current stock price and its volatility. Common equity is valued at market prices as of a fixed date, such as December 31, 2012, for the 2014 Budget. For the purposes of this calculation, common equity is assumed to be sold to the public as soon as is practicable and advisable.

FHA Refinance Program. Under this program, the cost estimates reflect the present value of estimated claim payments made from the letter of credit (LOC) provider to the lenders of FHA-guaranteed loans, adjusted for market risks. Treasury signed a LOC with Citigroup, originally committing \$8.1 billion of TARP funds to cover a portion of default claims of FHA Refinance mortgages, plus administrative expenses. Following changes to the FHA program fee structure anticipated to start in 2013, the LOC is planned to be reduced from a \$8.1 billion commitment to a \$1.0 billion commitment. Through the LOC agreement, Treasury is committed to make claim payments to private lenders to cover a portion of defaulted debt obligations of non-Federal borrowers. Therefore, the program costs are estimated according to the principles of FCRA, with a risk adjustment to the discount rate as prescribed by EESA. The model projects TARP claim payments based on projected FHA Refinance volumes and net claim rates. The full commitment was obligated at the point the LOC contract was signed, and outlays of subsidy are recorded as the underlying FHA Refinance loans are made.

Other TARP Housing. Foreclosure mitigation incentive payments occur when the Government makes incentive payments to borrowers and servicers for certain actions such as: successful modifications of first and second liens, on-schedule borrower payments on those modified loans, protection against further declines in home prices, completing a short sale, or receiving a deed in lieu of foreclosure. The method for estimating these cash flows includes forecasting the total eligible loans, the timing of the loans

Table 3–2. TROUBLED ASSET RELIEF PROGRAM CURRENT VALUE ¹
(In billions of dollars)

| | Actual | | | | Estimate | | | | | | | | | | |
|---|--------------|--------------|--------------|-------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
| Financing Account Balances: | | | | | | | | | | | | | | | |
| Troubled Asset Relief Program Equity Purchase Financing Account | 105.4 | 76.9 | 74.9 | 13.6 | 10.3 | 5.0 | 1.0 | 0.8 | 0.7 | 0.6 | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 |
| Troubled Asset Relief Program Direct Loan Financing Account | 23.9 | 42.7 | 28.5 | 17.9 | 7.8 | 1.6 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| Troubled Assets Insurance Financing Fund Guaranteed Loan Financing Account | 0.6 | 2.4 | 0.8 | 0.8 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Troubled Assets Relief Program FHA Refinance Letter of Credit Financing Account ..... | ..... | ..... | –* | –* | –0.1 | –0.1 | –0.1 | –0.1 | –0.1 | –* | –* | –* | –* | –* | –* |
| Total Financing Account Balances | 129.9 | 122.0 | 104.1 | 32.2 | 18.0 | 6.5 | 1.7 | 1.5 | 1.5 | 1.4 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |

* \$50 million or less.

¹ Current value as reflected in the 2014 Budget. Amounts exclude HAMP activities that are reflected on a cash basis.

entering into the program, loan characteristics, the overall participation rate in the program, the re-default rate, home price appreciation, and the size of the incentive payments. For the HFA Hardest-Hit Fund (HHF), the Government provides a cash infusion, similar to a grant, to the eligible entities of state Housing Financing Agencies (HFAs) to design and implement innovative programs to prevent foreclosures and bring stability to local housing markets. The estimated cash flows for the HHF are based on the plans submitted by the HFAs and approved by Treasury, which detail program design and anticipated activity.

TARP Program Costs and Current Value of Assets

This section provides the special analysis required under Sections 202 and 203 of EESA, including estimates of the cost to taxpayers and the budgetary effects of TARP transactions as reflected in the Budget.¹⁵ This section explains the changes in TARP costs, including whether such changes are due to actual performance, or changes in future expectations. The analysis also includes an estimate of what the budgetary effects would have been had all TARP transactions been reflected on a cash basis, and also shows the estimated cost for transactions using the standard methodology required under the FCRA, without the adjustment to the discount rate for market risks prescribed by EESA. It also includes a comparison of the cost estimates with previous estimates provided by OMB and the Congressional Budget Office (CBO).

Table 3–1, above, summarizes the current and anticipated activity under TARP, and the estimated lifetime budgetary cost reflected in the Budget, compared to estimates from the 2013 MSR. The direct impact of TARP on the deficit, including interest on reestimates, and the risk-adjustment to the discount rate required under EESA, is projected to be \$47.5 billion, down \$20.5 billion from \$68 billion as projected in the 2013 MSR. The subsidy cost represents the lifetime net present value cost of TARP obligations from the date of disbursement. The

subsidy cost for TARP excluding interest on reestimates is now estimated to be \$61.5 billion.¹⁶ The final subsidy cost of TARP is likely to be lower than the current estimate, because projected cashflows are discounted using a risk adjustment to the discount rate as required by EESA. This requirement adds a premium to current estimates of TARP costs on top of market and other risks already reflected in cash flows with the public. Over time, the risk premium added to TARP costs is essentially returned to the General Fund via downward subsidy reestimates. TARP's overall cost to taxpayers will not be fully known until all TARP investments are extinguished.

Current Value of Assets. The current value of future cash flows related to TARP transactions can also be measured by the balances in the program's non-budgetary credit financing accounts. Under the FCRA budgetary accounting structure, the net debt or cash balances in non-budgetary credit financing accounts at the end of each fiscal year reflect the present value of anticipated cashflows to and from the public.¹⁷ So, the net debt or cash balances reflect the expected present value of the asset or liability. Future collections from the public—such as proceeds from stock sales, or payments of principal and interest—are financial assets, just as future payments to the public are financial liabilities. The current year reestimates effectively true-up the net debt or cash balance in the financing account, with updated estimates of the present value of these financial assets or liabilities. For example, if an asset is valued at \$100 million and the net debt in the financing account is \$90 million, there will be a downward reestimate, returning the \$10 million in excess subsidy to the General Fund. Accordingly, the net debt balance in the financing account after the reestimate will be \$100 million—equal to the reestimated value of the asset. The larger the subsidy cost for a given loan disbursed or equity purchased, the lower the estimated

¹⁶ With the exception of the Making Home Affordable and HFA Hardest-Hit Fund programs, all the other TARP investments are reflected on a present value basis pursuant to the FCRA and the EESA.

¹⁷ For example, to finance a loan disbursement to a borrower, a direct loan financing account receives the subsidy cost from the program account, and borrows the difference between the face value of the loan and the subsidy cost from the Treasury. As loan and interest payments from the public are received, the value is realized and these amounts are used to repay the financing account's debt to Treasury.

¹⁵ The analysis does not assume the effects on net TARP costs of a recoupment proposal authorized under Section 134 of EESA.

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

| | Actual | | | | Estimate | |
|--|--------------|--------------|-------------|-------------|-------------|-------------|
| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
| Troubled Asset Relief Program Equity Purchases | 229.6 | 119.0 | 88.2 | 33.8 | 18.4 | 9.3 |
| Troubled Asset Relief Program Direct Loans | 60.5 | 15.7 | 11.5 | 6.6 | 1.1 | 0.9 |
| Troubled Assets Insurance Financing Fund Guaranteed Assets | 251.4 | ..... | ..... | ..... | ..... | ..... |
| FHA Refinance Letter of Credit ..... | ..... | ..... | 0.1 | 0.3 | 5.5 | 5.5 |
| Total Face Value of TARP Outstanding | 541.5 | 134.7 | 99.8 | 40.7 | 25.1 | 15.7 |

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

value of the cash flows from the public and asset value to the Government.¹⁸

Table 3–2 shows the actual balances of TARP financing accounts as of the end of 2012, and projected balances for each subsequent year through 2023.¹⁹ Based on actual net balances in financing accounts at the end of 2009, the value of TARP assets totaled \$129.9 billion. By the end of 2012, total TARP net asset value decreased to \$32.2 billion, reflecting the realization of the value of TARP assets as repayments, primarily from large banks, exceeded amounts TARP paid for financial assets. Estimates in 2013 and beyond reflect estimated TARP net asset values over time as of December 31, 2012, and all other anticipated transactions. The overall balance of the financing accounts is estimated to continue to fall significantly over the next few years, as TARP investments wind down, from \$18 billion at the end of 2013, to \$6.5 billion in 2014, and \$1.7 billion in 2015 as the assets and loans acquired under the TARP program wind down.

The value of TARP equity purchases reached \$76.9 billion in 2010, and fell \$2 billion in 2011 reflecting the 2011 downward reestimate, final AIG funding, and repayments from large financial institutions. The value of the TARP equity portfolio is anticipated to continue declining as participants repurchase stock and assets are sold. The value of TARP direct loans is expected to decrease to \$7.8 billion in 2013, gradually declining to \$0.9 billion by 2015 as loans are repaid and warrants and other assets are sold. The \$0.8 billion value under the Asset Guarantee Program (AGP) in 2012 reflects the estimated value of the expected receipt of trust preferred shares from the FDIC following termination of the guarantee on Citigroup assets which was subsequently sold in February 2013 for \$894 million²⁰. The FHA Refinance program reflects net cash balances, showing the reserves set aside to cover

¹⁸ As an extreme example, a direct loan program with 100 percent subsidy cost would require budget authority for the full amount of the loan. The financing account would receive the entire amount of a loan disbursement from the budgetary program account, and would not have to borrow from the Treasury. In this case, the loan would be estimated to have a zero asset value.

¹⁹ Reestimates for TARP are calculated using actual data through September 30, 2012, and updated projections of future activity. Thus, the full impacts of TARP reestimates are reflected in the 2013 financing account balances.

²⁰ Transactions that occurred after December 31, 2012 are described for narrative continuity, but are not included in the reestimate of TARP program costs contained in the 2014 Budget.

TARP's share of default claims for FHA Refinance mortgages over the 10-year letter of credit facility. These cash balances fall as claims are paid and as the TARP coverage expires.

Where Table 3–2 displays the estimated value of TARP investments, guarantees, and loss share agreements over time, Table 3–3 shows the estimated face value of outstanding TARP investments at the end of each year through 2013. For equity investments, the par value of Treasury's remaining investment is reflected. The outstanding amount of equity investments and direct loans decreased in 2012, as Treasury continued to wind down its equity investments and receive repayments on outstanding loans. Under FCRA, the total outstanding reflects the full face value of loans supported by a Federal guarantee, any portion of which may be guaranteed. TARP's liability under the Asset Guarantee Program was only a fraction of the face value of the underlying loans (see Table 3–6), and was extinguished with the termination of the Citibank guarantee in 2009. Likewise, the full face value of FHA Refinance mortgages supported by the letter of credit facility far exceeds TARP's liability, which is capped at \$1.0 billion (including \$100 million set aside for administrative fees). The TARP coverage ratio or share of default losses was 15.17 percent in 2012 and is estimated to be 9.82 percent in 2013 for covered FHA Short Refinancing loans. The overall outstanding face value of mortgages supported by the FHA Refinance Letter of Credit is projected to reach \$5.5 billion in 2013. Currently it is not anticipated that additional guarantees will require TARP loss coverage after 2013, though a reserve is maintained to support the program through December 31, 2014.²¹ The face value of TARP FHA Refinance Letter of Credit instruments in table 3–3 does not include new FHA Refinancing guarantees expected to be provided after 2013 that do not need TARP loss coverage.

Estimate of the Deficit, Debt Held by the Public, and Gross Federal Debt, Based on the EESA Methodology

The estimates of the deficit and debt in the Budget reflect the impact of TARP as estimated under FCRA and Section 123 of EESA. The deficit estimates include the

²¹ Changes to the FHA program fee structure anticipated to start in 2013 are sufficient to cover anticipated losses. As a result, TARP first-loss coverage is not anticipated on FHA Short Refi loans after the revised fee structure is implemented.

Table 3–4. TROUBLED ASSET RELIEF PROGRAM EFFECTS ON THE DEFICIT AND DEBT¹
(Dollars in billions)

| | Actual | | | | Estimate | | | | | | | | | | |
|---|--------------|---------------|--------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
| Deficit Effect: | | | | | | | | | | | | | | | |
| Programmatic and administrative expenses: | | | | | | | | | | | | | | | |
| Programmatic expenses: | | | | | | | | | | | | | | | |
| Equity purchases | 115.3 | 8.4 | 19.1 | 1.0 | * | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Direct loans and purchases of asset-backed securities ... | 36.9 | -0.9 | -0.3 | -0.1 | * | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Guarantees of troubled asset purchases | -1.0 | -1.4 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| TARP housing programs | * | 0.5 | 1.9 | 3.1 | 13.1 | 7.8 | 6.2 | 3.1 | 1.6 | 0.3 | * | * | ..... | ..... | ..... |
| Reestimates of credit subsidy costs ..... | ..... | -116.5 | -58.5 | 20.3 | -12.5 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Subtotal, programmatic expenses | 151.2 | -109.9 | -37.7 | 24.3 | 0.6 | 7.8 | 6.2 | 3.1 | 1.6 | 0.3 | * | * | ..... | ..... | ..... |
| Administrative expenses | 0.1 | 0.2 | 0.4 | 0.3 | 0.4 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | * | * | * | * |
| Special Inspector General for TARP | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |
| Subtotal, programmatic & administrative expenses | 151.3 | -109.6 | -37.3 | 24.6 | 1.1 | 8.0 | 6.5 | 3.3 | 1.7 | 0.4 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Interest effects: | | | | | | | | | | | | | | | |
| Interest transactions with credit financing accounts ² | -2.8 | -4.7 | -3.0 | -1.6 | -3.8 | -1.7 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -* | -* | -* | -* |
| Debt service ³ | 2.8 | 4.7 | 3.0 | 1.9 | 1.1 | 0.4 | 0.1 | 0.5 | 1.1 | 1.7 | 2.0 | 2.2 | 2.3 | 2.4 | 2.5 |
| Subtotal, interest effects | * | * | * | 0.2 | -2.8 | -1.3 | * | 0.5 | 1.0 | 1.6 | 2.0 | 2.1 | 2.3 | 2.4 | 2.5 |
| Total deficit impact | 151.3 | -109.6 | -37.3 | 24.9 | -1.7 | 6.7 | 6.5 | 3.7 | 2.8 | 2.0 | 2.1 | 2.2 | 2.4 | 2.5 | 2.6 |
| Other TARP transactions affecting borrowing from the public | | | | | | | | | | | | | | | |
| — net disbursements of credit financing accounts: | | | | | | | | | | | | | | | |
| Troubled Asset Relief Program Equity Purchase Financing Account | 105.4 | -28.5 | -2.0 | -61.3 | -3.2 | -5.4 | -4.0 | -0.2 | -0.1 | -0.1 | -0.1 | -* | -* | -* | -* |
| Troubled Asset Relief Program Direct Loan Financing Account | 23.9 | 18.8 | -14.2 | -10.6 | -10.1 | -6.2 | -0.8 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Troubled Assets Insurance Financing Fund Guaranteed Loan Financing Account | 0.6 | 1.8 | -1.6 | -* | -0.8 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Troubled Assets Relief Program FHA Refinance Letter of Credit Financing Account ..... | ..... | ..... | -* | -* | -0.1 | * | * | * | * | * | * | * | * | * | * |
| Total, other transactions affecting borrowing from the public | 129.9 | -7.9 | -17.8 | -71.9 | -14.2 | -11.5 | -4.8 | -0.2 | -* | -* | -0.1 | -* | -* | -* | -* |
| Change in debt held by the public | 281.2 | -117.5 | -55.1 | -47.0 | -15.9 | -4.8 | 1.8 | 3.6 | 2.7 | 2.0 | 2.0 | 2.2 | 2.3 | 2.4 | 2.5 |
| Debt held by the public | 281.2 | 163.6 | 108.5 | 61.5 | 45.6 | 40.8 | 42.6 | 46.1 | 48.8 | 50.8 | 52.8 | 55.0 | 57.3 | 59.7 | 62.3 |
| As a percent of GDP | 2.0% | 1.1% | 0.7% | 0.4% | 0.3% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% |
| Debt held by the public net of financial assets: | | | | | | | | | | | | | | | |
| Debt held by the public | 281.2 | 163.6 | 108.5 | 61.5 | 45.6 | 40.8 | 42.6 | 46.1 | 48.8 | 50.8 | 52.8 | 55.0 | 57.3 | 59.7 | 62.3 |
| Less financial assets net of liabilities — credit financing account balances: | | | | | | | | | | | | | | | |
| Troubled Assets Relief Program Equity Purchase Financing Account | 105.4 | 76.9 | 74.9 | 13.6 | 10.3 | 5.0 | 1.0 | 0.8 | 0.7 | 0.6 | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 |
| Troubled Asset Relief Program Direct Loan Financing Account | 23.9 | 42.7 | 28.5 | 17.9 | 7.8 | 1.6 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| Troubled Assets Insurance Financing Fund Guaranteed Loan Financing Account | 0.6 | 2.4 | 0.8 | 0.8 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Troubled Assets Relief Program FHA Refinance Letter of Credit Financing Account ..... | ..... | ..... | -* | -* | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -* | -* | -* | -* | -* | -* |
| Total, financial assets net of liabilities | 129.9 | 122.0 | 104.1 | 32.2 | 18.0 | 6.5 | 1.7 | 1.5 | 1.5 | 1.4 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| Debt held by the public net of financial assets | 151.3 | 41.6 | 4.4 | 29.3 | 27.6 | 34.3 | 40.9 | 44.6 | 47.3 | 49.4 | 51.4 | 53.7 | 56.0 | 58.5 | 61.0 |
| As a percent of GDP | 1.1% | 0.3% | 0.0% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% |

* \$50 million or less.

¹ Table reflects the deficit effects of the TARP program, including administrative costs and interest effects.

² Projected Treasury interest transactions with credit financing accounts are based on the market-risk adjusted rates. Actual credit financing account interest transactions reflect the appropriate Treasury rates under the FCRA.

³ Includes estimated debt service effects of all TARP transactions that affect borrowing from the public.

Table 3-5. TROUBLED ASSET RELIEF PROGRAM EFFECTS ON THE DEFICIT AND DEBT CALCULATED ON A CASH BASIS¹
(Dollars in billions)

| | Actual | | | | Estimate | | | | | | | | | | | | |
|--|--------------|---------------|--------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--|--|
| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | | |
| Deficit Effect: | | | | | | | | | | | | | | | | | |
| Programmatic and administrative expenses: | | | | | | | | | | | | | | | | | |
| Programmatic expenses: | | | | | | | | | | | | | | | | | |
| Equity purchases | 217.6 | -121.9 | -36.8 | -47.2 | -14.1 | -6.5 | -4.4 | -0.3 | -0.1 | -0.1 | -0.2 | -0.1 | -0.1 | -* | -* | | |
| Direct loans and purchases of asset-backed securities ... | 61.1 | -1.0 | -21.3 | -5.0 | -15.4 | -6.8 | -0.5 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |  |  |
| Guarantees of troubled asset purchases | -0.5 | -0.3 | -2.3 | -* | -1.0 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |  |  |
| TARP housing programs | * | 0.5 | 1.9 | 3.1 | 13.0 | 7.8 | 6.3 | 3.1 | 1.6 | 0.3 | * | * | ..... | ..... | ..... |  |  |
| Subtotal, programmatic expenses | 278.3 | -122.6 | -58.6 | -49.2 | -17.4 | -5.5 | 1.4 | 2.8 | 1.5 | 0.2 | -0.2 | -0.1 | -0.1 | -* | -* | | |
| Administrative expenses | 0.1 | 0.2 | 0.4 | 0.3 | 0.4 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | * | * | * | * | | |
| Special Inspector General for TARP | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | | |
| Subtotal, programmatic & administrative expenses | 278.3 | -122.3 | -58.1 | -48.9 | -17.0 | -5.2 | 1.6 | 3.0 | 1.6 | 0.3 | -0.1 | * | * | * | 0.1 | | |
| Debt service ² | 2.8 | 4.7 | 3.0 | 1.9 | 1.1 | 0.4 | 0.1 | 0.5 | 1.1 | 1.7 | 2.0 | 2.2 | 2.3 | 2.4 | 2.5 | | |
| Total deficit impact | 281.2 | -117.5 | -55.1 | -47.0 | -15.9 | -4.8 | 1.8 | 3.6 | 2.7 | 2.0 | 2.0 | 2.2 | 2.3 | 2.4 | 2.5 | | |
| Change in debt held by the public | 281.2 | -117.5 | -55.1 | -47.0 | -15.9 | -4.8 | 1.8 | 3.6 | 2.7 | 2.0 | 2.0 | 2.2 | 2.3 | 2.4 | 2.5 | | |
| Debt held by the public | 281.2 | 163.6 | 108.5 | 61.5 | 45.6 | 40.8 | 42.6 | 46.1 | 48.8 | 50.8 | 52.8 | 55.0 | 57.3 | 59.7 | 62.3 | | |
| As a percent of GDP | 2.0% | 1.1% | 0.7% | 0.4% | 0.3% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | | |
| Debt Held by the Public Net of Financial Assets: | | | | | | | | | | | | | | | | | |
| Debt held by the public | 281.2 | 163.6 | 108.5 | 61.5 | 45.6 | 40.8 | 42.6 | 46.1 | 48.8 | 50.8 | 52.8 | 55.0 | 57.3 | 59.7 | 62.3 | | |
| Less financial assets net of liabilities — credit financing account balances: | | | | | | | | | | | | | | | | | |
| Troubled Asset Relief Program Equity Purchase Financing Account | 105.4 | 76.9 | 74.9 | 13.6 | 10.3 | 5.0 | 1.0 | 0.8 | 0.7 | 0.6 | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 | | |
| Troubled Asset Relief Program Direct Loan Financing Account | 23.9 | 42.7 | 28.5 | 17.9 | 7.8 | 1.6 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | | |
| Troubled Assets Insurance Financing Fund Guaranteed Loan Financing Account | 0.6 | 2.4 | 0.8 | 0.8 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |  |  |
| FHA Refinance Letter of Credit Financing Account ..... | ..... | ..... | -* | -* | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -* | -* | -* | -* | -* | -* | | |
| Total, financial assets net of liabilities | 129.9 | 122.0 | 104.1 | 32.2 | 18.0 | 6.5 | 1.7 | 1.5 | 1.5 | 1.4 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | | |
| Debt held by the public net of financial assets | 151.3 | 41.6 | 4.4 | 29.3 | 27.6 | 34.3 | 40.9 | 44.6 | 47.3 | 49.4 | 51.4 | 53.7 | 56.0 | 58.5 | 61.0 | | |
| As a percent of GDP | 1.1% | 0.3% | 0.0% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | 0.2% | | |

* \$50 million or less.

¹ Table reflects deficit effect of budgetary costs, substituting estimates calculated on a cash basis for estimates calculated under FCRA and Sec. 123 of EESA.

² Includes estimated debt service effects of all TARP transactions affecting borrowing from the public.

budgetary costs for each program under TARP, administrative expenses, certain indirect interest effects of credit programs, and the debt service cost to finance the program. Direct activity under the TARP is expected to increase the 2013 deficit by \$1.1 billion. This reflects estimated TARP housing outlays of \$13.1 billion, offset by \$12.5 billion in downward reestimates of subsidy costs, including interest on reestimates. The estimates of U.S. Treasury debt attributable to TARP include both borrowing to finance the deficit impacts of TARP activity and the cash flows to and from the Government, reflected as a means of financing in the TARP financing accounts. Estimated debt due to TARP at the end of 2013 is \$45.6 billion. Even as the TARP program is winding down, the debt due to TARP increases annually starting in 2015, with additional borrowing to finance TARP housing programs and debt service on TARP costs.

Debt held by the public net of financial assets reflects the cumulative amount of money the Federal Government has borrowed from the public for the program and not re-

paid, minus the current value of financial assets acquired with the proceeds of this debt, such as loan assets, or equity held by the Government. While debt held by the public is one useful measure for examining the impact of TARP, it provides incomplete information on the program's effect on the Government's financial condition. Debt held by the public net of financial assets provides a more complete picture of the U.S. Government's financial position because it reflects the net change in the government's balance sheet due to the program.

Debt net of financial assets due to the TARP program is estimated to be \$27.6 billion as of the end of 2013. This is \$12 billion lower than the projected 2013 debt held net of financial assets reflected in the 2013 MSR. However, debt net of financial assets is anticipated to increase annually starting in 2014, due to the realization of the value of TARP assets, as investments continue to wind down and debt is incurred to finance TARP housing costs and debt service.

In 2013, Table 3–4 shows total TARP activity including interest effects reducing the deficit by \$1.7 billion. However, the \$3.8 billion in interest transactions with financing accounts is primarily due to the risk-adjustment to the discount rate required under EESA. Actual financing account interest transactions are estimated to be roughly \$1.9 billion, which suggests an overall deficit effect of TARP in 2013 of \$0.2 billion. Under the FCRA, the financing account earns and pays interest on its Treasury borrowings at the same rate used to discount cash flows for the credit subsidy cost. Section 123 of EESA requires an adjustment to the discount rate used to value TARP subsidy costs, to account for market risks.

However, actual cash flows as of September 30, 2012, already reflect the effect of any incurred market risks to that point, and therefore actual financing account interest transactions reflect the FCRA Treasury interest rates present in these years, with no additional risk adjustment.²² Future cash flows reflect a risk adjusted discount rate and the corresponding financing account interest rate, consistent with the EESA requirement. For on-going TARP credit programs, the risk adjusted discount rates on future cash flows result in subsidy costs that are higher than subsidy costs estimated under FCRA.

Estimates on a Cash Basis

The value to the Federal Government of the assets acquired through TARP is the same whether the costs of acquiring the assets are recorded in the budget on a cash basis, or a credit basis. As noted above, the budget records the cost of equity purchases, direct loans, and guarantees as the net present value cost to the Government, discounted at the rate required under the FCRA and adjusted for market risks as required under Section 123 of EESA. Therefore, the net present value cost of the assets is reflected on-budget, and the gross value of these assets is reflected in the financing accounts.²³ If these purchases were instead presented in the Budget on a cash basis, the Budget would reflect outlays for each disbursement (whether a purchase, a loan disbursement, or a default claim payment), and offsetting collections as cash is received from the public, with no obvious indication of whether the outflows and inflows leave the Government in a better or worse financial position, or what the net value of the transaction is.

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

Estimates of the deficit and debt under TARP transactions calculated on a cash basis are reflected in Table 3–5,

²² As TARP transactions wind down, the final lifetime cost estimates under the requirements of Section 123 of EESA will reflect no adjustment to the discount rate for market risks, as these risks have already been realized in the actual cash flows. Therefore, the final subsidy cost for TARP transactions will equal the cost per FCRA, where the net present value costs are estimated by discounting cashflows using Treasury rates.

²³ For the Making Home Affordable programs and the HFA Hardest Hit Fund, Treasury's purchase of financial instruments does not result in the acquisition of an asset with potential for future cash flows, and therefore are recorded on a cash basis.

for comparison to those estimates in Table 3–4 reported above in which TARP transactions are calculated consistently with FCRA and Section 123 of EESA.

If TARP transactions were reported on a cash basis, the annual budgetary effect would include the full amount of government disbursements for activities such as equity purchases and direct loans, offset by cash inflows from dividend payments, redemptions, and loan repayments occurring in each year. For loan guarantees, the deficit would show fees, claim payouts, or other cash transactions associated with the guarantee as they occurred. Updates to estimates of future performance would impact the deficit in the year that they occur, and there would not be credit reestimates.

Under cash reporting, TARP would decrease the deficit in 2013 by an estimated \$15.9 billion, so the 2013 deficit would be \$14.2 billion lower if TARP were reflected on a cash basis than the estimate in the Budget. The deficit would be lower because repayments and proceeds of sales that are now included in non-budgetary financing accounts for TARP would be reflected as offsetting receipts when they occur. Under FCRA, the marginal change in the present value attributable to better-than-expected future inflows from the public would be recognized up front in a downward reestimate, in contrast with a cash-based treatment that would show the annual marginal changes in cash flows. However, the impact of TARP on the Federal debt, and on debt held net of financial assets, is the same on a cash basis as under FCRA.

Portion of the Deficit Attributable to TARP, and the Extent to Which the Deficit Impact is Due to a Reestimate

Table 3–4 shows the portion of the deficit attributable to TARP transactions. The largest changes in the overall TARP effects on the deficit are the result of reestimates of TARP activity outstanding as of September 30, 2012, and December 31, 2012. The specific effects are as follows:

- TARP reestimates and interest on reestimates will decrease the deficit by \$12.5 billion in 2013, including \$9.1 billion in decreased subsidy costs for TARP programs, and \$3.4 billion in interest on reestimates.
- Outlays for the TARP Housing Programs are estimated at \$13.1 billion in 2013, which includes payments under the MHA program, Hardest Hit Fund, and subsidy costs for the FHA Refinance program. Outlays for TARP Housing Program are estimated to increase peak in 2013, and then decline gradually through 2020.
- Administrative outlays for TARP are estimated at \$0.4 billion in 2013, and expected to decrease annually thereafter as TARP winds down through 2023. Costs for the Special Inspector General for TARP are estimated at \$48 million in 2014, and are expected to remain relatively stable through 2023.
- Interest transactions with credit financing accounts include interest paid to Treasury on borrowing by the financing accounts, offset by interest paid by

Table 3-6. TROUBLED ASSET RELIEF PROGRAM REESTIMATES
(Dollars in billions)

| TARP Program and Cohort Year | Original subsidy rate | Current reestimate rate | Current reestimate amount | Net lifetime reestimate amount, excluding interest | TARP disbursements as of 12/31/2012 ¹ |
|---|-----------------------|-------------------------|---------------------------|--|--|
| Equity Programs: | | | | | |
| Automotive Industry Financing Program (Equity) | | | | | |
| 2009 | 54.52% | 40.14% | -0.4 | -3.2 | 12.5 |
| 2010 | 30.25% | 3.99% | -0.1 | -0.8 | 3.8 |
| Capital Purchase Program | | | | | |
| 2009 | 26.99% | -6.35% | -1.8 | -65.0 | 204.6 |
| 2010 | 5.77% | 11.90% | * | * | 0.3 |
| AIG Investments | | | | | |
| 2009 | 82.78% | 22.89% | -7.1 | -37.8 | 67.8 |
| Legacy Securities Public-Private Investment Program | | | | | |
| 2009 | 34.62% | -20.41% | * | -0.3 | 0.7 |
| 2010 | 22.97% | -42.16% | 0.4 | -3.2 | 5.5 |
| Targeted Investment Program | | | | | |
| 2009 | 48.85% | -8.47% | * | -23.2 | 40.0 |
| Community Development Capital Initiative | | | | | |
| 2010 | 48.06% | 25.09% | -* | -0.1 | 0.6 |
| Subtotal equity program reestimates | | | -9.0 | -133.7 | 335.8 |
| Structured and Direct Loan Programs: | | | | | |
| Automotive Industry Financing Program (AIFP) | | | | | |
| 2009 | 58.75% | 23.97% | -3.0 | -19.3 | 63.4 |
| Legacy Securities Public Private Investment Program | | | | | |
| 2009 | -2.52% | -0.29% | -* | * | 1.4 |
| 2010 | -10.85% | 2.63% | -0.1 | 1.4 | 11.0 |
| Small Business Lending Initiative 7(a) purchases | | | | | |
| 2010 | 0.48% | -1.35% | -* | -* | 0.4 |
| Term-Asset Backed Securities Loan Facility ² | | | | | |
| 2009 | -104.23% | -501.79% | -0.1 | -0.4 | 0.1 |
| Subtotal direct loan program reestimates | | | -3.3 | -18.2 | 76.2 |
| Guarantee Programs: | | | | | |
| Asset Guarantee Program ³ | | | | | |
| 2009 | -0.25% | -1.16% | -0.2 | -1.3 | 301.0 |
| FHA Refinance Letter of Credit | | | | | |
| 2011 | 1.26% | 0.96% | -* | -* | 0.1 |
| 2012 | 4.00% | 3.95% | -* | -* | 0.2 |
| Subtotal guarantee program reestimates | | | -0.2 | -1.3 | 301.3 |
| Total TARP Reestimates | | | -12.5 | -153.3 | 713.4 |

* \$50 million or less.

¹ Disbursements do not reflect cancelled or closed out facilities.

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

³ Disbursement amount reflects the face value of guarantees of assets supported by the guarantee. The TARP obligation for this program was \$5 billion, the maximum contingent liability while the guarantee was in force.

Treasury on the financing accounts' uninvested balances. Although the financing accounts are non-budgetary, Treasury payments to these accounts and receipt of interest from them are budgetary transactions and therefore affect net outlays and the deficit. For TARP financing accounts, projected interest transactions are based on the market risk adjusted rates used to discount the cash flows. The projected net financing account interest paid to Treasury at market risk adjusted rates is \$3.8 billion in 2013

and declines over time as the financing accounts repay borrowing from Treasury through investment sale proceeds and repayments on TARP equity purchases and direct loans.

The full impact of TARP on the deficit includes the estimated cost of Treasury borrowing from the public – debt service – for the outlays listed above. Debt service is estimated at \$1.1 billion for 2013 (as shown in Table

Table 3–7. DETAILED TARP PROGRAM LEVELS AND COSTS
(In billions of dollars)

| Program | May 31 st Valuation | | 2014 Budget | |
|--|--------------------------------|---------------|------------------|---------------|
| | TARP Obligations | Subsidy Costs | TARP Obligations | Subsidy Costs |
| Equity Purchases | | | | |
| Capital Purchase Program | 204.9 | -7.4 | 204.9 | -7.7 |
| AIG Investments | 67.8 | 21.9 | 67.8 | 18.1 |
| Targeted Investment Program | 40.0 | -3.6 | 40.0 | -3.6 |
| Automotive Industry Financing Program (AIFP) | 16.3 | 5.8 | 16.3 | 5.3 |
| Public-Private Investment Program - Equity | 7.5 | -2.3 | 7.2 | -2.0 |
| Community Development Capital Initiative | 0.6 | 0.1 | 0.6 | 0.2 |
| Subtotal equity purchases | 337.1 | 14.6 | 336.8 | 10.2 |
| Direct Loan Programs | | | | |
| Automotive Industry Financing Program (AIFP) | 63.4 | 19.6 | 63.4 | 17.7 |
| Term Asset-Backed Securities Loan Facility (TALF) | 4.3 | -0.4 | 0.1 | -0.5 |
| Public-Private Investment Program - Debt | 14.4 | -0.3 | 13.6 | 0.2 |
| Small Business 7(a) Program | 0.4 | * | 0.4 | * |
| Subtotal direct loan programs | 82.4 | 18.9 | 77.5 | 17.4 |
| Guarantee Programs under Section 102 | | | | |
| Asset Guarantee Program ¹ | 5.0 | -3.7 | 5.0 | -3.8 |
| Subtotal asset guarantees | 5.0 | -3.7 | 5.0 | -3.8 |
| TARP Housing Programs | | | | |
| Making Home Affordable (MHA) Programs | 29.9 | 29.9 | 29.9 | 29.9 |
| Hardest Hit Fund | 7.6 | 7.6 | 7.6 | 7.6 |
| Subtotal non-credit programs | 37.5 | 37.5 | 37.5 | 37.5 |
| FHA Refinance Letter of Credit ² | 8.1 | 8.1 | 1.0 | 0.1 |
| Subtotal TARP housing programs | 45.6 | 45.6 | 38.5 | 37.6 |
| Totals | 470.1 | 75.4 | 457.8 | 61.5 |
| Memorandum: | | | | |
| Interest on reestimates ³ | | -11.9 | | -13.9 |
| Deficit impact before administrative costs and interest effects | | 63.5 | | 47.5 |

* \$50 million or less

¹ The total assets supported by the Asset Guarantee Program were \$301 billion.

² TARP obligations under the FHA Refinance Letter of Credit provide first loss coverage of eligible FHA insured mortgages.

³ Total programmatic costs of the TARP exclude interest on reestimates of \$11.9 billion in "May 31st Valuation" and \$13.9 billion in "2014 Budget." Interest on reestimates is an adjustment that accounts for the time between the original subsidy costs and current estimates; such adjustments impact the deficit but are not direct programmatic costs.

3–4), and then expected to increase to \$2.5 billion by 2023, largely due to outlays for TARP housing programs. Total debt service will continue over time after the TARP winds down, due to the financing of past TARP costs.

Analysis of TARP Reestimates. The costs of outstanding TARP assistance are reestimated annually by updating cash flows for actual experience and new assumptions, and adjusting for any changes by either recording additional subsidy costs (an upward technical and economic reestimate) or by reducing subsidy costs (a downward reestimate). The reestimated dollar amounts to be recorded in 2013 reflect TARP disbursements through December 31, 2012, while reestimated subsidy rates reflect the full lifetime costs, including anticipated future disbursements. As noted above, the total decrease in the deficit attributable to TARP reestimates in 2013 is \$12.5 billion, reflecting a \$9.1 billion net downward reestimate

of the subsidy cost and \$3.4 billion in net downward interest on the reestimates. Detailed information on upward and downward reestimates to program costs are reflected in Table 3–6.

The current reestimate reflects a significant decrease in estimated TARP costs from the 2013 Budget. This decrease was due in large part improved market conditions and significant progress winding down TARP investments over the past year, most notably the higher valuations of AIG common stock and realized sale proceeds, and higher valuation of GM common stock.

Differences Between Current and Previous OMB Estimates

As shown in Table 3–7, the Budget reflects a total TARP deficit impact of \$47.5 billion before administra-

Table 3–8. COMPARISON OF OMB AND CBO TARP COSTS
(In billions of dollars)

| Program | Estimates of Deficit Impact | |
|--|--------------------------------|-------------------|
| | CBO Cost Estimate ¹ | OMB Cost Estimate |
| Capital Purchase Program | –18 | –15 |
| Targeted Investment Program | –8 | –4 |
| AIG Assistance | 14 | 15 |
| Automotive Industry Financing Program | 20 | 20 |
| Term Asset-Backed Securities Loan Facility | * | –1 |
| Other Programs ² | –1 | –6 |
| TARP Housing Programs | 16 | 38 |
| Total | 24 | 47 |

* Amounts round to less than \$1 billion.

¹ CBO estimates from October 2012, available online at http://www.cbo.gov/sites/default/files/cbofiles/attachments/TARP10-2012_0.pdf

² “Other Programs” reflects an aggregate cost for PPIP (debt and equity purchases), CDCI, AGP, and small business programs.

tive costs and interest effects. This is a decrease of \$20.5 billion from the 2013 MSR projection of \$68.0 billion and \$16.0 billion from the May 31st valuation of \$63.5 billion. The estimates included in MSR do not include updates to estimated subsidy rates or market valuations, such as for common stock held by Treasury. While the May 31st valuation is not reflected in the deficit, it is more comparable to budget estimates because it includes adjustments to reflect recent market performance, and is presented in Table 3–7 as for comparison to 2014 Budget estimates.

The estimated TARP deficit impact reflected in 3–7 differs from the subsidy cost of \$61.5 billion in the Budget because the deficit impact reflects a \$13.9 billion cumulative downward adjustment for interest on reestimates. These adjustments account for the time between when the subsidy cost was originally estimated and the time when the reestimate is booked.

Differences Between OMB and CBO Estimates

Table 3–8 compares the subsidy cost for TARP reflected in MSR against the costs estimated by the Congressional Budget Office in its “Report on the Troubled Asset Relief Program – October 2012.” ²⁴

CBO estimates the total cost of TARP at \$24 billion, based on estimated lifetime TARP obligations of \$431 billion. The Budget reflects current estimates of roughly \$457.8 billion in program obligations, and \$61.5 billion in programmatic costs, excluding interest on reestimates. Differences in the estimated cost of the TARP Housing programs, which stem from divergent demand and participation rate assumptions, are the main difference between OMB and CBO cost estimates. The CBO projects \$16 billion in total TARP Housing expenditures, while the Budget reflects a \$37.6 billion estimate. CBO and OMB cost estimates for the Capital Purchase Program are \$10 billion apart because of different assumptions for the remaining institutions with investments in the

program. Similarly, CBO and OMB cost estimates for the Automotive Industry Financing Program are \$3 billion apart due to different assumptions for the future performance of equity investments in the program.

Differences Between EESA and FCRA Cost Estimates

EESA directs that for asset purchases and guarantees under TARP, the cost shall be determined pursuant to the FCRA, except that the discount rate shall be adjusted for market risks. EESA’s directive to adjust the FCRA discount rate for market risks effectively assumes higher losses on these transactions than those estimated under FCRA guidelines, which require that Treasury rates be used to discount expected cashflows. In implementing this requirement of EESA, the market risk adjustment is intended to capture the cost of the extra return on investment that a private investor would seek in compensation for uncertainty surrounding risks of default and other losses reflected in the cashflows. ²⁵

Table 3–9 compares the subsidy costs and subsidy rates of TARP programs discounted at the Treasury rate adjusted for market risk (EESA), and discounted at the unadjusted Treasury rate (FCRA) using 2014 Budget estimated cashflows with the public. Now that the bulk of TARP financial assets have wound down, removing the market risk adjustment from the discount rate for TARP direct, guaranteed, and equity programs (excluding housing programs) decreases subsidy costs by only 1.6 percent (\$0.4 billion). Programs that have fully wound down reflect no difference between the EESA and FCRA estimates, as there are no future cashflows which would be discounted using a risk-adjusted rate under EESA. Treasury holdings within the AIFP program include a significant amount of common stock, the value of which is based on the closing December 31, 2012, share price. The share price of common stock is inherently adjusted

²⁴ United States. Congressional Budget Office. Report on the Troubled Asset Relief Program – October 2012. Washington: CBO, 2012. http://www.cbo.gov/sites/default/files/cbofiles/attachments/TARP10-2012_0.pdf

²⁵ For example, if there were a 100 percent default expectation on a loan, and losses given default were projected at 100 percent, the market risk adjustment to the discount rate would be zero. This reflects the fact that there are no unexpected losses if losses are expected to be 100 percent of the face value of the loan.

Table 3–9. COMPARISON OF EESA AND FCRA TARP SUBSIDY COSTS
(In billions of dollars)

| Program | TARP Obligations | Subsidy Cost | |
|--|------------------|--------------|-------------|
| | | EESA | FCRA |
| Capital Purchase Program | 204.9 | -7.7 | -7.9 |
| Targeted Investment Program | 40.0 | -3.6 | -3.6 |
| Asset Guarantee Program ¹ | 5.0 | -3.8 | -3.8 |
| Community Development Capital Initiative | 0.6 | 0.2 | 0.2 |
| Term Asset-Backed Securities Loan Facility | 0.1 | -0.5 | -0.5 |
| Small Business 7(a) Program | 0.4 | -* | -* |
| Public Private Investment Program ² | 20.8 | -1.8 | -1.9 |
| ALG Investments | 67.8 | 18.1 | 18.1 |
| Automotive Industry Financing Program ² | 79.7 | 23.0 | 23.0 |
| Subtotal TARP equity and direct loans | 424.5 | 23.8 | 23.4 |
| TARP Housing Programs | | | |
| Making Home Affordable Programs ³ | 29.9 | 29.9 | 29.9 |
| Hardest Hit Fund ³ | 7.6 | 7.6 | 7.6 |
| Subtotal Non-Credit Programs | 37.5 | 37.5 | 37.5 |
| FHA Refinance Letter of Credit ⁴ | 1.0 | 0.1 | 0.1 |
| Subtotal TARP Housing | 38.5 | 37.6 | 37.6 |
| Total ⁵ | 457.8 | 61.5 | 61.0 |

* \$50 million or less

¹ The total assets supported by the Asset Guarantee Program were \$301 billion.

² Rates for PPIP and AIFP reflect weighted average subsidy costs across various instruments.

³ TARP Making Home Affordable Programs and Hardest Hit Fund involve financial instruments without any provision for income or other returns, and are recorded on a cash basis. The table reflects 100 percent subsidy cost for these programs.

⁴ TARP obligations under the FHA Refinance Letter of Credit provide first loss coverage of eligible FHA insured mortgages.

⁵ Total subsidy costs do not include interest effects or administrative costs. Costs at EESA and FCRA discount rates are the same for common stock programs and for programs that are closed or awaiting a closing reestimate.

for market risk and, therefore, there is no additional market risk adjustment necessary for the EESA directive. As a result, there is no difference in the cost of AIFP between values calculated using the Treasury and risk adjusted rate. The non-credit TARP Housing programs are reflected on a cash basis and, therefore, costs are not discounted, which is why there is no difference in the subsidy cost estimate. Using December 31, 2012, valuations, TARP investments discounted at a risk adjusted rate will cost an estimated \$61.5 billion, which suggests a net subsidy rate of 13.4 percent. TARP investments discounted under FCRA are estimated to have a lifetime cost of \$61 billion, or a net subsidy rate of 13.3 percent.

TARP OVERSIGHT AND ACCOUNTABILITY

Ensuring effective internal controls and monitoring of TARP programs and funds to protect taxpayer investments remains a top priority of TARP staff and those offices charged with TARP oversight and accountability. The Treasury has implemented a comprehensive set of assessments geared toward identifying risks, evaluating their potential impact, and prioritizing resource assignments to manage risks based on a combined top-down and bottom-up assessment of risk. The Internal Control Review organization within the Office of Financial Stability (OFS) utilizes the assessments to ensure appropriate coverage of high-impact areas. A Senior Assessment Team and the

Internal Control Program Office guide OFS efforts to meet all applicable requirements for a sound system of internal controls, and to review and respond to all recommendations made by the four TARP oversight bodies—the Special Inspector General for TARP (SIGTARP), the Government Accountability Office (GAO), the Financial Stability Oversight Board, and the Congressional Oversight Panel (terminated April 3, 2011). The soundness of Treasury's TARP compliance monitoring, internal control, and risk management policies and processes are reflected in the clean opinions issued by GAO after its audit of TARP financial statements for 2009, 2010, 2011, and 2012 and the associated internal control over financial reporting.

The Treasury has issued regulations governing executive compensation and conflicts of interest related to TARP program administration and participation. Compliance with these rules is monitored on an ongoing basis, and reviews of participant conduct and program administration are conducted as appropriate. In executing its responsibility for monitoring compliance with executive compensation requirements, the Treasury has also created an Office of the Special Master for TARP to review TARP participant compliance with applicable legal and regulatory authority, and to recommend action to the Secretary when compensation is found to be awarded in a manner or amount deemed contrary to the public interest.

Special Inspector General for TARP (SIGTARP)

Section 121 of EESA created the Special Inspector General for the Troubled Asset Relief Program (SIGTARP) to prevent fraud, waste, and abuse in the administration of TARP programs through audits and investigations of

the purchase, management, and sales of TARP assets. SIGTARP is required to submit quarterly reports to Congress, and as of its latest report released on October 25, 2012, it has issued 19 reports and led over 150 investigations since its inception.

4. LONG TERM BUDGET OUTLOOK

The horizon for the detailed estimates of receipts and outlays in the President's Budget is 10 years. This 10-year horizon balances consideration of the future impacts of budget decisions made today and a practical limit on the construction of detailed budget projections for years in the future.

Decisions made today can have important repercussions beyond the 10-year horizon. It is important to anticipate budgetary requirements beyond the 10-year horizon, and the effects of changes in policy on those requirements, despite the uncertainty surrounding the assumptions needed for such estimates. Long-run budget projections can be useful in drawing attention to potential problems that could become unmanageable if allowed to grow.

To this end, the budget projections in this chapter extend the 2014 Budget for 75 years through 2088. Because of the uncertainties involved in making long-run projections, results are presented for a base case and for several alternative scenarios.

Recent legislation has led to significant improvements in the Nation's long-term fiscal health. First, the passage of the Affordable Care Act (ACA) in 2010 enacted cost-reduction mechanisms in the health sector that will reduce deficits by more than \$1 trillion over the first two decades, according to the Congressional Budget Office (CBO), and have the potential to significantly reduce the trajectory of health spending, and future budget deficits, over the long run. Second, the Budget Control Act of 2011 (BCA) reduced the long-term path of discretionary spending by placing such spending under tight limits through 2021. Most recently, enactment of the American Taxpayer Relief Act of 2012 this past January increased income tax rates on the highest-income taxpayers, increasing tax receipts above prior projections.

The 2014 Budget includes further initiatives that would help control future deficits. The projections in this chapter include several methodological changes that highlight the fact that simply extending current laws and the Budget's policies puts the country on a course to balance the budget, with the publicly held debt falling relative to the economy even sooner. While additional reforms may be required to ensure that programs like Medicare Part A and Social Security, which are financed from dedicated revenue sources, remain self-sustaining, overall budgetary resources would be sufficient to support future spending over the long term if Budget policies and assumptions are carried forward. Nonetheless, there is considerable uncertainty in the Administration's long-term projections, and future challenges will require policy responses that have yet to be formulated.

When the current Administration took office, the budget deficit was rising sharply because of the declining

economy and measures taken to revive it. Revenues had fallen, as a share of GDP, to their lowest level since 1950. Spending on countercyclical programs like unemployment insurance had also risen sharply. The measures taken by the Administration to revive economic growth are helping to increase revenues, and the tax increases on high-income taxpayers will boost revenues further. Meanwhile, as noted above, measures like the ACA and the BCA along with the proposals in this Budget will constrain future spending and help narrow the deficit. By the end of the 10-year period, the primary budget—receipts and non-interest spending—is estimated to be in surplus with the debt-to-GDP ratio declining. Beyond the 10-year horizon, however, demographic pressures and continued high costs for health care are likely to begin gradually pushing up the deficit and the ratio of debt to GDP for an additional 15 years before the easing of baby boom retirements, continued control in Government discretionary spending and health costs, and gradually rising revenues due to growing household income turn the country on a course toward reducing the debt-to-GDP ratio and balancing the budget in 2055.

The key to long-range fiscal sustainability is balancing the Government's commitments for major health and retirement programs—Medicare, Medicaid and Social Security—with sufficient tax receipts along with control in discretionary and non-entitlement spending, while allowing for additional entitlement reforms as appropriate.

- Medicare's growth has generally exceeded that of other Federal spending for decades, tracking the rapid growth in overall health care costs. The ACA is curtailing this cost growth, but Medicare spending is still projected to reach higher levels relative to the economy and the rest of the budget than those that prevail today, due both to rising health costs and the aging population.
- Medicaid's growth has, like Medicare, generally tracked the growth in overall health costs, and therefore historically exceeded that of other Federal spending. Medicaid assistance will expand further beginning in 2014 because of broadened coverage provided by the ACA. However, the ACA's reforms are also expected to reduce Medicaid per beneficiary spending growth in the long-run projections, as Medicare cost containment spills over into the rest of the health sector.
- Outlays for Social Security benefits will rise as a share of the economy as the population ages, putting pressure on the long-term budget.
- Discretionary spending for both defense and nondefense programs will continue to shrink relative to

the economy as discretionary spending limits hold this form of spending to growth rates lower than inflation. It is unlikely that the growth in discretionary spending will continuously remain lower than inflation over the very long term, so after the end of the 10-year budget window, the projections allow for growth with inflation and population growth to effectively hold discretionary spending constant on a real per capita basis.

- Without any further changes in tax law, revenues will gradually rise as a share of the economy over the 75-year horizon, as individuals' real incomes rise into higher tax brackets (which are indexed for inflation). Without future legislative action to cut taxes, revenues will continue to gradually rise as a share of the economy.

Future budget outcomes depend on a host of unknowns—changing economic conditions, unforeseen international developments, unexpected demographic shifts, the unpredictable forces of technological advance, and evolving political preferences, to name a few reasons that the budget outcomes could change for reasons other than the inevitability of future legislated changes. These uncertainties make even short-run budget forecasting quite difficult, and the uncertainties increase the further into the future projections are extended. A full treatment of all the relevant risks is beyond the scope of this chapter, but the chapter does show how sensitive long-run budget projections are to changes in some of key economic and demographic assumptions.

The Long-Run Budget Projections

The 2014 Budget includes nearly \$1.8 trillion in net deficit reduction over the next 10 years. Combined with the more than \$2.5 trillion in savings from the discretionary spending limits enacted in the BCA and the revenue increases enacted in ATRA, this would generate more

than \$4.3 trillion in deficit reduction over the next decade. These savings would bring the Nation to the point where current non-interest expenditures are no longer adding to debt and where debt is decreasing as a share of the economy—a key metric of fiscal sustainability. The base case long-run projections begin with the 10-year estimates of revenues and outlays under 2014 Budget policies, which result in a primary surplus of 1.2 percent of GDP and an overall deficit of 1.7 percent of GDP in 2023. In the decade and a half beyond 2023, the fiscal position gradually deteriorates mainly because of the aging of the population and the high continuing cost of health care driving up outlays for Social Security, Medicare, and Medicaid as a share of GDP. Revenues also increase as a share of GDP, but more gradually, due to economic growth. By 2033, the deficit is projected to peak at 2.8 percent of GDP, but thereafter rising revenues and controlled spending along with stabilized entitlement growth cause the deficit to begin to fall rapidly—falling below 2 percent of GDP in 2045, and below 1 percent of GDP in 2051. The Budget reaches balance in 2055, when revenues and outlays are 21.5 percent of GDP, slightly higher than their levels during the budget surpluses of 1998-2001. The Federal Government is then projected to run surpluses over the remainder of the projection window, with publicly-held debt falling rapidly until it reaches zero in 2074 (see Chart 4-1). The 75-year fiscal gap disappears in the base case, becoming a fiscal surplus of 1.6 percent of GDP.

These projections are not intended to be a prediction of future legislative action, nor are they intended to reflect explicit policy proposals for the years beyond 2023; rather, they are a mechanical extrapolation of the Budget policies. Relative to last year's projections, the base case projections make two methodological changes, both of which are intended to provide a baseline forecast under the assumption that there are no future legislative changes in policy.

First, the projections allow revenues to rise as a share of GDP, as will occur automatically under current law as real household incomes grow. Allowing revenues to rise

Chart 4-1. Publicly Held Debt Under 2014 Budget Policy Extended

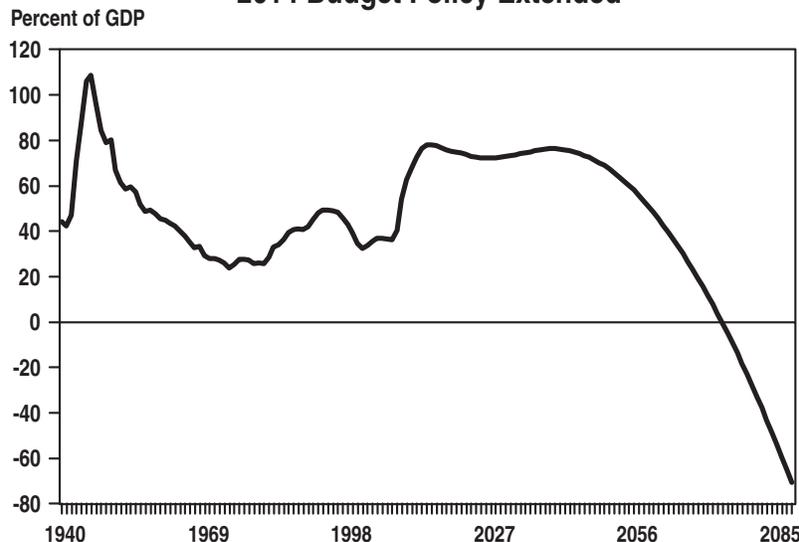


Table 4–1. LONG-RUN BUDGET PROJECTIONS
(Receipts, Outlays, Surplus or Deficit, and Debt as Percent of GDP)

| | 1980 | 1990 | 2000 | 2010 | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | 2085 |
|---|------|------|------|------|------|------|------|------|------|------|-------|-------|
| Receipts | 19.0 | 18.0 | 20.6 | 15.1 | 19.4 | 20.1 | 20.5 | 21.2 | 21.9 | 22.7 | 23.4 | 23.8 |
| Outlays: | | | | | | | | | | | | |
| Discretionary | 10.1 | 8.7 | 6.3 | 9.1 | 5.5 | 4.5 | 4.1 | 3.5 | 3.1 | 2.7 | 2.4 | 2.3 |
| Mandatory: | | | | | | | | | | | | |
| Social Security | 4.3 | 4.3 | 4.1 | 4.9 | 5.3 | 6.2 | 6.4 | 6.2 | 6.2 | 6.1 | 6.2 | 6.3 |
| Medicare | 1.1 | 1.7 | 2.0 | 3.1 | 3.1 | 3.8 | 4.1 | 4.2 | 4.3 | 4.4 | 4.5 | 4.5 |
| Medicaid | 0.5 | 0.7 | 1.2 | 1.9 | 1.9 | 2.2 | 2.6 | 2.8 | 2.8 | 2.9 | 2.9 | 2.9 |
| Other | 3.7 | 3.2 | 2.4 | 3.7 | 3.2 | 3.0 | 2.7 | 2.6 | 2.4 | 2.3 | 2.1 | 2.1 |
| Subtotal, mandatory | 9.6 | 9.9 | 9.7 | 13.6 | 13.5 | 15.2 | 15.8 | 15.8 | 15.6 | 15.7 | 15.7 | 15.7 |
| Net interest | 1.9 | 3.2 | 2.3 | 1.4 | 2.7 | 2.9 | 3.1 | 2.8 | 2.0 | 0.6 | -1.1 | -2.2 |
| Total outlays | 21.7 | 21.9 | 18.2 | 24.1 | 21.6 | 22.7 | 22.9 | 22.1 | 20.7 | 19.1 | 17.0 | 15.8 |
| Surplus (+) or deficit (-) | -2.7 | -3.9 | 2.4 | -9.0 | -2.2 | -2.6 | -2.5 | -0.9 | 1.2 | 3.6 | 6.4 | 8.0 |
| Primary Surplus (+) or deficit (-) | -0.8 | -0.6 | 4.7 | -7.6 | 0.5 | 0.4 | 0.6 | 1.9 | 3.2 | 4.2 | 5.3 | 5.8 |
| Federal debt (+) or asset (-) held by the public, end of period | 26.1 | 42.1 | 34.7 | 62.9 | 74.9 | 72.9 | 76.1 | 68.5 | 47.3 | 13.9 | -30.6 | -57.1 |

Note: The figures shown in this table beyond 2020 are the product of a long-range forecasting model maintained by OMB. This model is separate from the models and capabilities that produce detailed programmatic estimates in the Budget. It was designed to produce long-range projections based on additional assumptions regarding growth in the economy, the long-range evolution of specific programs, and the demographic and economic forces affecting those programs. The model, its assumptions, and sensitivity testing of those assumptions are presented in this chapter.

is methodologically consistent with the approach for the projections of Social Security, Medicare, and other mandatory spending programs in that it projects the levels of revenues that would result under extrapolation of the Budget policies. Under that approach, revenues would rise as a share of GDP because household income is projected to rise in real terms. Real income growth will push households into higher tax brackets (which are indexed to inflation), resulting in taxes that gradually rise as a share of the economy.

Second, after 2023, the new projections increase discretionary spending to keep pace with inflation and population growth, rather than GDP growth. Growing these programs at the rate of inflation plus population growth reflects the growth rate that would be needed to maintain current services per capita. This growth rate is higher than the growth rate for these programs in the baselines assumed by the Office of Management and Budget (OMB) and the CBO in the absence of discretionary spending limits.

As shown in Table 4–2, other assumptions lead to substantially different projections. Under a scenario that instead assumes that future policymakers enact additional tax cuts and spending increases such that income tax revenues remain roughly flat as a share of the economy and discretionary spending grows with GDP, deficits and debt rise quickly throughout the 2020s and 2030s before the pace of increase slows around 2040. Deficits ultimately reach 5.6 percent of GDP and debt continues to rise gradually throughout the projection horizon. Under this alternative scenario, there is an overall fiscal gap of 0.7 percent of GDP over the 75-year projection horizon (see Chart 4–2 and Table 4–2). Importantly, however, this alternative scenario effectively assumes that Congress passes substantial new tax cuts in future years. Equivalently, it assumes that households with a given level of income – adjusted

for inflation – would pay significantly lower taxes in the future than they do today. Likewise, that scenario allows for significant increases in discretionary spending beyond what would be needed to support current services in per capita terms. In effect, the additional deficits forecast under this scenario are entirely a reflection of projected future Congressional action to reduce taxes and increase discretionary spending, rather than the result of continuation of current policies.

As noted, the base case is neither a prediction nor a recommendation but is instead a mechanical extrapolation. In particular, it would be unrealistic and undesirable for revenues to continue to increase and discretionary spending to continue to fall as a share of GDP over the long run even as the Federal Government ran large surpluses, paid off its entire debt, and began accumulating assets, as shown in Table 4–1. The purpose of the long-run forecast shown here is simply to provide an extension of budget policies against which to evaluate the nation's fiscal condition and potential changes in policy. That base forecast shows that under 2014 Budget policies, in the long run the budget does not run deficits or increase the debt. On the other hand, in an alternative scenario, holding down revenue growth and allowing discretionary spending to keep pace with GDP growth, there is a modest long-run fiscal gap, as shown in Table 4–2.

Key Drivers of Program Growth: Health Costs and Demographic Changes

Health Costs.—Health care costs have risen faster than inflation for decades. This rising cost trend has contributed to steady increases in the amounts spent on Medicare and Medicaid, while also making it more difficult for people to afford private health insurance. The ACA tackles both problems by extending health insur-

**Table 4–2. 75-YEAR FISCAL GAP (–)/SURPLUS (+)
UNDER ALTERNATIVE BUDGET SCENARIOS**
(Percent of GDP)

| | |
|--|------|
| 2014 Base Case | 1.6 |
| 2014 Budget policies plus assumed future tax cuts and spending increases | –0.7 |
| Health: | |
| Excess cost growth averages 0% | 2.9 |
| Excess cost growth averages 1% | 0.8 |
| Discretionary Outlays: | |
| Grow with inflation | 2.0 |
| Grow with GDP | 0.5 |
| Revenues: | |
| Income tax brackets are regularly increased | 0.4 |
| Productivity: | |
| Productivity grows by 0.25 percent per year faster than the base case | 3.5 |
| Productivity grows by 0.25 percent per year slower than the base case | –0.4 |
| Population: | |
| Fertility: | |
| 2.3 births per woman | 2.4 |
| 1.7 births per woman | 0.7 |
| Immigration: | |
| 1.3 million immigrants per year | 2.2 |
| 0.8 million immigrants per year | 1.0 |
| Mortality: | |
| Female life expectancy 83.8; male life expectancy 80.1 | 2.0 |
| Female life expectancy 89.8; male life expectancy 87.3 | 1.5 |

ance coverage to millions of Americans who currently lack insurance, while making reforms that will slow future growth in medical costs. When the law is fully implemented, Medicare spending per beneficiary will rise at rates substantially below those at which spending has grown for four decades. Even with these changes, however, overall health care costs are likely to continue to rise faster than inflation as the population ages.

The base case projections assume that the provisions of the ACA are fully implemented, limiting health care costs in the long run compared with prior law. The long-run Medicare assumptions for the years following the 10-year budget window are essentially the same as those in the latest Medicare Trustees' report (April 2012), except in cases where those projections exceed the target growth rate of 0.5 percentage points above growth in GDP per capita set by the Budget's proposal to strengthen the Independent Payment Advisory Board (IPAB).¹ Generally, this constraint helps to control excess cost growth in the two decades after the budget window, before excess cost growth dips below the proposed threshold. The Trustees' projections imply that average long-range annual growth in Medicare spending per enrollee is 0.4 percentage points per year faster than the projected growth rate in GDP per

¹ The ACA established an Independent Payment Advisory Board (IPAB) that is required to propose changes in Medicare should Medicare costs exceed target growth rates specified in law; such IPAB-proposed changes would take effect automatically, unless overridden by the Congress. The Budget includes a proposal that would strengthen IPAB by lowering the target growth rate applicable for 2020 onward from GDP + 1.0 percentage points to GDP + 0.5 percentage points.

capita, but the growth rate is less than 0.3 percentage points with the IPAB constraint imposed. This growth rate for Medicare is significantly smaller than previous projections prior to the passage of the ACA—a reduction the Trustees largely attribute to the ACA—but is higher than the projections in the 2013 Budget due to increased cost rates recommended by the Medicare Technical Review Panel and included in the 2012 Trustees' report.

Along with the rules for Medicare, there are a number of reforms in the ACA that experts believe could produce significant savings relative to the historical trend and that would affect medical costs more broadly. One is an excise tax on the highest-cost insurance plans, which will encourage substitution of plans with lower costs, while raising take-home pay. There is also an array of delivery system reforms, including incentives for accountable care organizations and payment reform demonstrations that have the potential to re-orient the medical system toward providing higher quality care, not just more care, and thus reduce cost growth in the future.² Because of these broader reforms, Medicaid spending per beneficiary and private health spending per capita are also projected to slow, though not as much as Medicare.³

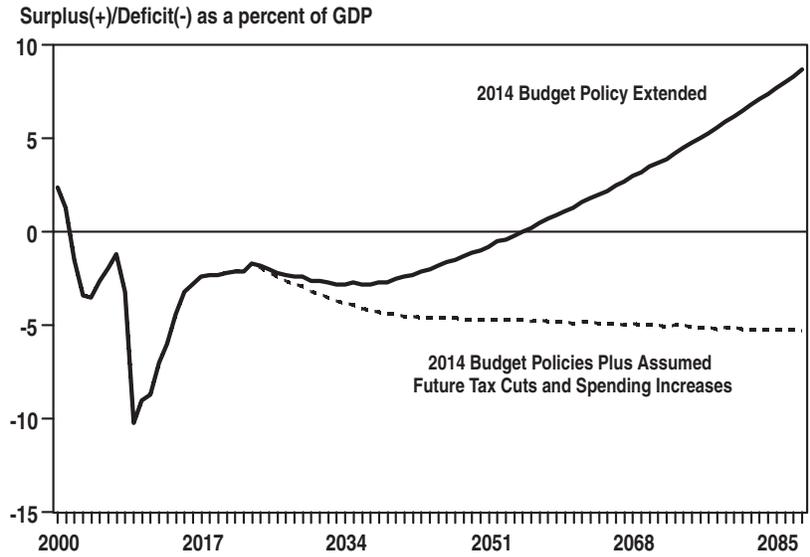
Elderly Population.—An aging population also poses a serious long-run budgetary challenge. Because of lower expected fertility and improved longevity, the Social Security actuaries project that under current law in which the normal retirement age rises to 67, the ratio of workers to Social Security beneficiaries will fall from around 2.8 currently to a level of 2.0 by the time most of the baby boomers have retired. From that point forward, the ratio of workers to beneficiaries is expected to continue to decline slowly due to increased longevity of retirees. With fewer workers to pay the taxes needed to support the retired population, budgetary pressures will steadily mount, and without reforms, trust fund exhaustion is projected by the Social Security Trustees to occur in 2033, after which time the Trustees project annual resources will be sufficient to pay about 75 percent of scheduled benefits.

Other Programs.—Though smaller in size and facing fewer long-run fiscal challenges, smaller mandatory programs are also included in the projections and contribute to the long-run fiscal picture. Other mandatory programs generally decline relative to the size of the economy. These include Federal pension benefits for Government workers. The shift in the 1980s from the traditional Federal pension benefit of the Civil Service Retirement System (CSRS) to the much smaller defined benefit pension plan of the Federal Employees Retirement System (FERS) is having a marked effect on Federal civilian pensions, which is expected to continue as FERS comes to dominate future pension projections. As a result, spending for Federal retirement is expected to permanently shrink

² Groups of providers meeting certain criteria can be recognized as accountable care organizations (ACOs), which allow them to coordinate care and manage chronic disease more easily thereby improving the quality of care for patients. ACOs can then share in any cost savings they achieve for Medicare if they meet quality standards.

³ The projections assume that growth in Medicaid spending per enrollee and private health spending per capita exceeds growth in GDP per capita by 0.7 percentage points.

Chart 4-2. Alternative Base Assumptions



relative to the size of the economy over the next 75 years. Most other entitlement programs are also expected to grow more slowly than GDP due mainly to falling poverty and population growth rates over the very long run.

The Fiscal Gap

The present value fiscal gap is one measure of the size of the adjustment needed to preserve fiscal sustainability in the long run.⁴ It is defined as the present value increase in taxes or reduction in non-interest expenditures over a finite time period required to keep the long-run ratio of Government debt-to-GDP at its current level if implemented immediately. The gap can be measured in

⁴ Alan J. Auerbach, “The U.S. Fiscal Problem: Where We Are, How We Got Here, and Where We’re Going,” NBER: Macroeconomics Annual 1994, pp 141 – 175.

present value dollars or as a percentage of GDP. Since the fiscal gap is calculated over a finite time period, it may understate the adjustment needed to achieve permanent sustainability. If future publicly-held debt is projected to be lower than current debt, then there is a fiscal surplus rather than a fiscal gap. Table 4–2 shows present value fiscal gap or surplus calculations calculated over a 75-year horizon for the base case as well those under different assumptions. This value can be interpreted as the average level of deficit change needed each year from 2014 to 2088 to maintain the current level of debt held by the public as a percentage of GDP. Since the base case reaches balance, it has a fiscal surplus of 1.6 percent of GDP, which means that deficit reduction is not needed to maintain the current level of debt over 75 years.

Chart 4-3. Alternative Health Care Costs

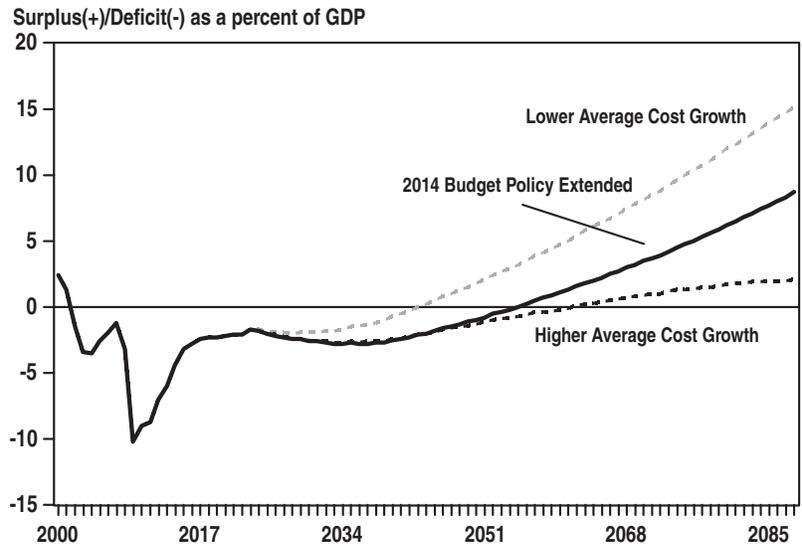
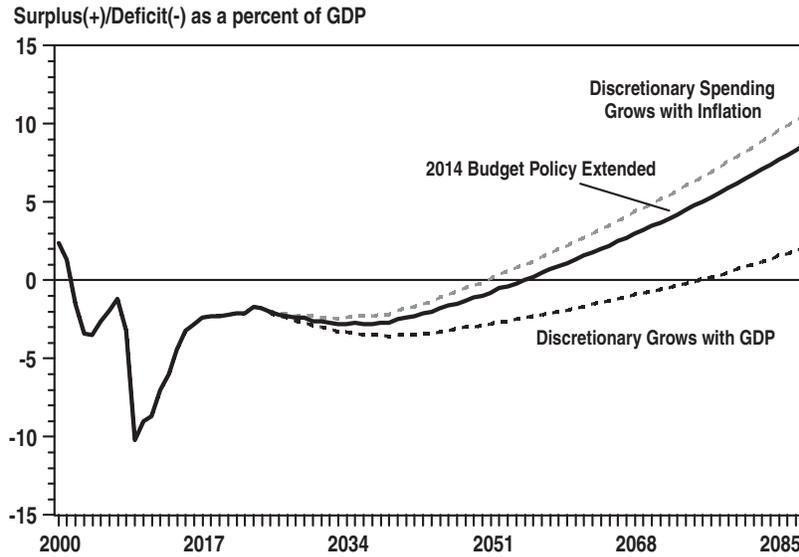


Chart 4-4. Alternative Discretionary Projections



Alternative Policy, Economic, and Technical Assumptions

The quantitative results discussed above are sensitive to changes in underlying policy, economic, and technical assumptions. Some of the most important of these assumptions and their effects on the budget outlook are discussed below. It is important to note that these paths are merely illustrative; they are not intended to represent the policy preferences of this Administration or the predicted actions of future Administrations and Congresses.

Health Spending.—The base projections for Medicare and Medicaid over the next 75 years assume an extension of current law and the policies in the 2014 Budget. The health cost alternatives illustrated in Chart 4-3 assume that medical costs rise more rapidly or more slowly than in the base case. The first alternative assumes that costs

per beneficiary rise at one percentage points per year above GDP per capita in the entire health sector, while the second alternative assumes zero growth above GDP per capita in the health sector. Table 4-2 shows the effect of these alternatives on the 75-year present value fiscal surplus, which falls from 1.6 percent of 75-year present value GDP in the base case to 0.8 percent of GDP in the high health cost growth scenario and rises to 2.9 percent of GDP in the low health cost growth scenario.

Discretionary Spending.— The current base projection for discretionary spending assumes that after 2023, discretionary spending grows with inflation and population (see Chart 4-4). An alternative assumption would be to allow discretionary spending to keep pace with the economy and grow with GDP. Yet another possible assumption is to only allow discretionary spending to grow with inflation. As shown in Table 4-2, the 75-year fis-

Chart 4-5. Alternative Revenue Projections

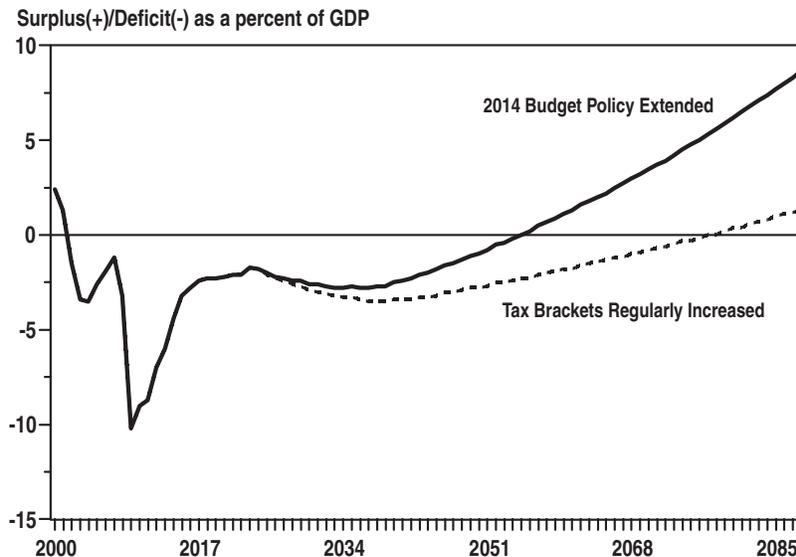
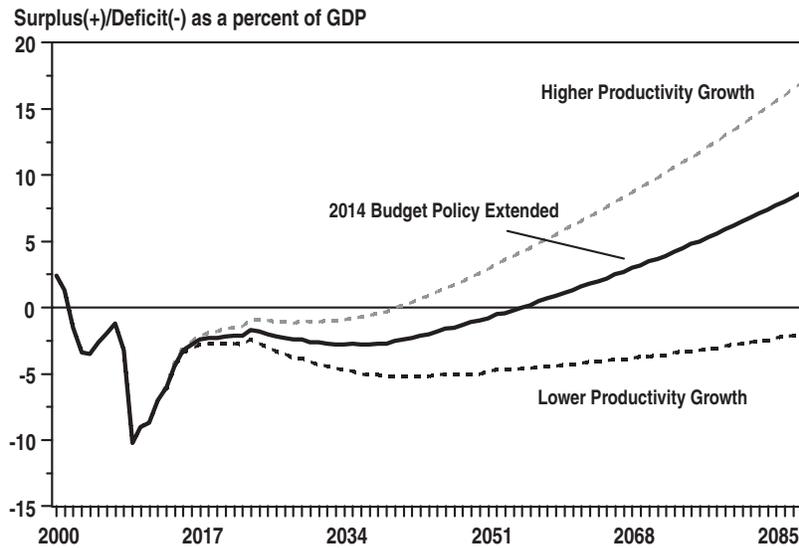


Chart 4-6. Alternative Productivity Assumptions



cal surplus falls from 1.6 percent of 75-year present value GDP in the base case to 0.5 percent of GDP in the growth with GDP scenario, and rises to 2.0 percent of GDP in the growth with inflation scenario.

Alternative Revenue Projections.—In the base projection, tax receipts rise gradually relative to GDP as real incomes rise. Chart 4–5 shows alternative receipts assumptions. Assuming that Congress will act to cut taxes to avoid the revenue increases associated with rising incomes would bring about higher deficits and publicly-held debt throughout the 75-year horizon. The 75-year fiscal surplus falls from 1.6 percent of 75-year present value GDP in the base case to 0.4 percent of GDP in the alternative scenario.

Productivity.—The rate of future productivity growth has a major effect on the long-run budget outlook (see Chart 4–6). It is also highly uncertain. Over the next few

decades, an increase in productivity growth would reduce projected budget deficits. Higher productivity growth adds directly to the growth of the major tax bases, while it has a smaller immediate effect on outlay growth. For much of the last century, output per hour in nonfarm business grew at an average rate of around 2.2 percent per year, despite long periods of sustained output growth at notably higher and lower rates than the long term average.

The base projections assume that output per hour in nonfarm business will increase at an average annual rate of around 2.3 percent per year, close to its long-run average and slightly below its average growth rate since 1995 of 2.5 percent. Overall, real GDP per hour worked will grow at an average annual rate of 1.7 percent per year. The difference is reconciled by the tendency of the sectors of the economy that are counted in GDP outside of

Chart 4-7. Alternative Fertility Assumptions

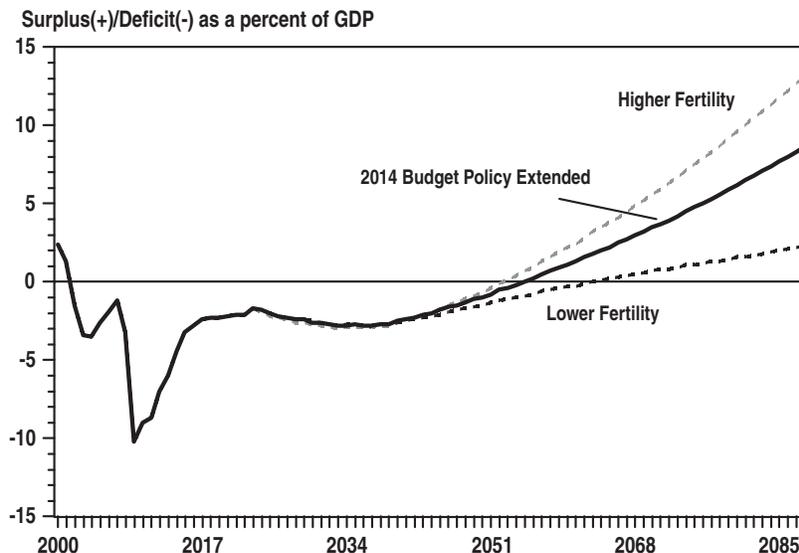
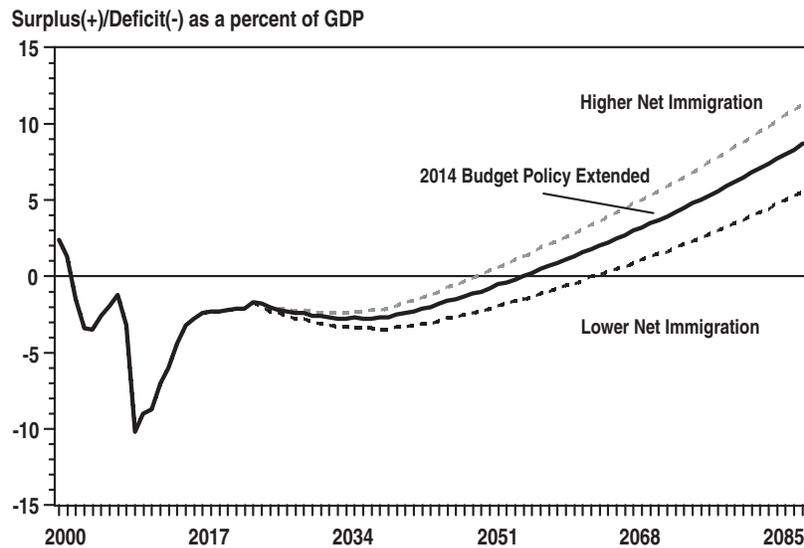


Chart 4-8. Alternative Immigration Assumptions



the nonfarm business sector to have lower productivity growth than those counted in the nonfarm business sector. The alternative scenarios highlight the effect of raising and lowering the projected productivity growth rate by 1/4 percentage point. The 75-year fiscal surplus rises from 1.6 percent of 75-year present value GDP in the base case to 3.5 percent of GDP in the faster productivity scenario, but falls to a fiscal gap of -0.4 percent of GDP in the slower productivity scenario.

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

- The demographic projections assume that fertility will average about 2.0 total lifetime births per woman in the future, just slightly below the replacement rate needed to maintain a constant population in the absence of immigration (see Chart 4–7). The alternatives are those in the latest Social Security trustees’ report (1.7 and 2.3 births per woman). The 75-year fiscal surplus rises from 1.6 percent of 75-year present value GDP in the base case to 2.4 percent of GDP in the high fertility scenario, but falls to 0.7 percent of GDP in the low fertility scenario.
- The rate of net immigration is assumed to average around 1 million immigrants per year in the long run (see Chart 4–8). Higher net immigration relieves some of the downward pressure on population growth from low fertility and allows total population to expand throughout the projection period, although at a much slower rate than has prevailed historically. The alternatives are taken from the Social Security Trustees’ Report (1.3 million total immigrants per year in the high alternative and 0.8 million in the low alternative). The 75-year fiscal surplus rises from 1.6 percent of 75-year present value GDP in the base case to 2.2 percent of GDP in the faster net immigration scenario, but falls to 1.0 percent of GDP in the slower net immigration scenario.

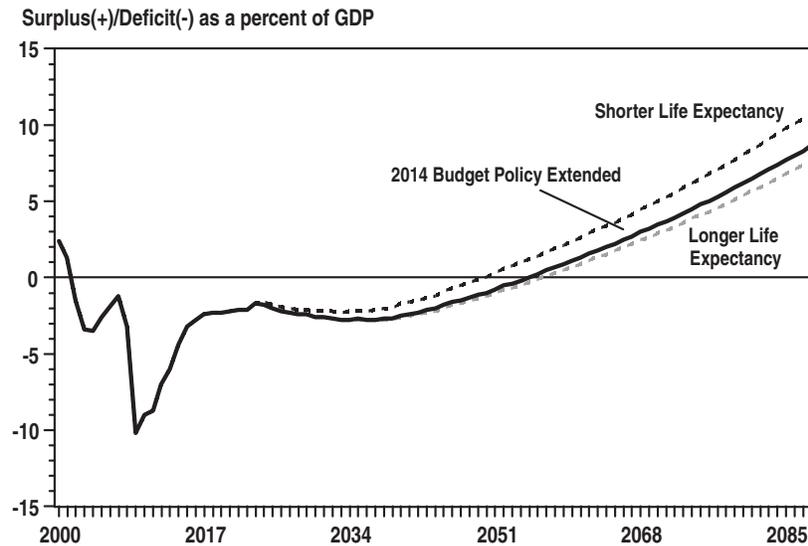
- Mortality is projected to decline as people live longer in the future (see Chart 4–9). These assumptions parallel those in the latest Social Security Trustees’ Report. The average life expectancy at birth for women is projected to rise from 80.6 years in 2012 to 86.7 years in 2088, and the average for men is expected to increase from 76.1 years in 2012 to 83.6 years in 2088. The variations show the high and low alternatives from the latest Trustees’ report, with average female and male life expectancy reaching 83.8 and 80.1 in the shorter life expectancy alternative and 89.8 and 87.3 in the longer life expectancy alternative. The 75-year fiscal surplus rises from 1.6 percent of 75-year present value GDP in the base case to 2.0 percent of GDP in the shorter life expectancy scenario, but falls to 1.5 percent of GDP in the longer life expectancy scenario.

The long-run budget outlook is highly uncertain. With pessimistic assumptions, the fiscal picture can quickly deteriorate back into deficits and rising debt. More optimistic assumptions imply an even earlier return to surpluses and declining debt. These projections highlight the need for policy awareness and potential action to address the main drivers of future budgetary costs.

Actuarial Projections for Social Security and Medicare

The Trustees for the Medicare Federal Hospital Insurance (HI) and Social Security trust funds issue annual reports that include projections of income and outgo for these funds over a 75-year period. These projections are based on different methods and assumptions than the long-run budget projections presented above. Even with these differences, the message is similar: the ACA is projected to curtail the projected growth in per capita health care costs, but even with this reform the retirement of the baby-boom generation

Chart 4-9. Alternative Mortality Assumptions



and continuing high medical costs will eventually exhaust the trust funds unless further action is taken.

The Trustees' reports feature the actuarial balance of the trust funds as a summary measure of their financial status. For each trust fund, the balance is calculated as the change in receipts or program benefits (expressed as a percentage of taxable payroll) that would be needed to preserve a small positive balance in the trust fund at the end of a specified time period. The estimates cover periods ranging in length from 25 to 75 years. These balance calculations show what it would take to achieve a positive trust fund balance at the end of a specified period of time, not what it would take to maintain a positive balance indefinitely. To maintain a positive balance forever requires a larger adjustment than is needed to maintain a positive balance over 75 years when the annual balance in the program is negative at the end of the 75-year projection period, as it is expected to be for Social Security and Medicare without future reforms.

Table 4-3 shows the projected income rate, cost rate, and annual balance for the Medicare HI and combined OASDI Trust Funds at selected dates under the Trustees' intermediate assumptions. Data from the 2010 and the 2011 reports are shown along with the latest data from the 2012 reports. Even following the passage of the ACA in 2010, there is a continued imbalance in the long-run projections of the HI program due to demographic trends and continued high per-person costs. Additionally, following two years of significant ACA-related improvement, the 2012 Trustees' Report reflects an increase in the long-run deficit compared to 2011 due to the implementation of recommendations of the Medicare Technical Review Panel on long-term health care cost growth rates. While these projections still assume full implementation of the cost reductions under current law over the entire long-run projection period, the entire long-run cost growth calculation has been modified following the Panel's findings. In the 2011 Trustees' report, which was largely unchanged

from 2010, Medicare HI trust fund costs as a percentage of Medicare covered payroll were projected to rise from 3.8 percent to 5.0 percent between 2010 and 2080 and the HI trust fund imbalance was projected to be -0.7 percent in 2080. In the 2012 report, costs rise from 3.7 percent of Medicare taxable payroll in 2010 to 6.3 percent in 2080 and the imbalance in the HI trust fund in 2080 is -2.0 percent.

Medicare Funding Warning. Under the Medicare Modernization Act (MMA) of 2003, the Medicare Trustees must issue a "warning" when in two consecutive Trustees' reports they project that the share of Medicare funded by general revenues will exceed 45 percent in the current year or any of the subsequent six years. Such a warning was included in the 2012 Trustees Report. The MMA requires that the President submit legislation, within 15 days of submitting the Budget, which will reduce general revenue funding to 45 percent of overall Medicare outlays or lower in the immediate seven-fiscal-year window. In accordance with the Recommendations Clause of the Constitution and as the Executive Branch has noted in prior years, the Executive Branch considers this requirement to be advisory and not binding. However, the proposals in this Budget would further strengthen Medicare's finances and extend its solvency.

As a result of reforms legislated in 1983, Social Security had been running a cash surplus with taxes exceeding costs up until 2009. This surplus in the Social Security trust fund helped to hold down the unified budget deficit. The cash surplus ended in 2009. The 2012 Social Security trustees report projects that the trust fund will not return to cash surplus without further reforms. Even so, the program will continue to experience an overall surplus for some years because of the Trust Funds' interest earnings. Eventually, however, Social Security will begin to draw on its trust fund balances to cover current expenditures. Over time, as the ratio of workers to retirees falls, costs are projected to rise further from 13.8 percent of Social

Table 4-3. INTERMEDIATE ACTUARIAL PROJECTIONS FOR OASDI AND HI

| | 2012 | 2020 | 2030 | 2050 | 2080 |
|---|--------------------|------|----------|----------|----------|
| | Percent of Payroll | | | | |
| Medicare Hospital Insurance (HI) | | | | | |
| Income Rate | | | | | |
| 2010 Trustees' Report | 3.2 | 3.4 | 3.6 | 3.9 | 4.3 |
| 2011 Trustees' Report | 3.2 | 3.5 | 3.6 | 3.9 | 4.3 |
| 2012 Trustees' Report | 3.2 | 3.5 | 3.7 | 3.9 | 4.3 |
| Cost Rate | | | | | |
| 2010 Trustees' Report | 3.6 | 3.5 | 4.3 | 5.0 | 4.9 |
| 2011 Trustees' Report | 3.8 | 3.6 | 4.4 | 5.1 | 5.0 |
| 2012 Trustees' Report | 3.7 | 3.6 | 4.7 | 5.8 | 6.3 |
| Annual Balance | | | | | |
| 2010 Trustees' Report | -0.4 | -0.0 | -0.7 | -1.1 | -0.7 |
| 2011 Trustees' Report | -0.6 | -0.2 | -0.8 | -1.2 | -0.7 |
| 2012 Trustees' Report | -0.5 | -0.2 | -1.0 | -1.9 | -2.0 |
| Projection Interval: | | | 25 years | 50 years | 75 years |
| Actuarial Balance: 2010 Trustees' Report | | | -0.3 | -0.6 | -0.7 |
| Actuarial Balance: 2011 Trustees' Report | | | -0.5 | -0.8 | -0.8 |
| Actuarial Balance: 2012 Trustees' Report | | | -0.7 | -1.2 | -1.4 |
| | Percent of Payroll | | | | |
| Old Age Survivors and Disability Insurance (OASDI) | | | | | |
| Income Rate | | | | | |
| 2010 Trustees' Report | 12.9 | 13.1 | 13.2 | 13.2 | 13.3 |
| 2011 Trustees' Report | 12.9 | 13.1 | 13.2 | 13.2 | 13.3 |
| 2012 Trustees' Report | 12.9 | 13.1 | 13.3 | 13.3 | 13.3 |
| Cost Rate | | | | | |
| 2010 Trustees' Report | 12.8 | 14.2 | 16.4 | 16.3 | 17.3 |
| 2011 Trustees' Report | 13.2 | 14.2 | 16.7 | 16.7 | 17.4 |
| 2012 Trustees' Report | 13.8 | 14.4 | 17.0 | 17.1 | 17.6 |
| Annual Balance | | | | | |
| 2010 Trustees' Report | 0.0 | -1.1 | -3.2 | -3.1 | -4.0 |
| 2011 Trustees' Report | -0.4 | -1.1 | -3.5 | -3.4 | -4.1 |
| 2012 Trustees' Report | -0.9 | -1.3 | -3.8 | -3.8 | -4.3 |
| Projection Interval: | | | 25 years | 50 years | 75 years |
| Actuarial Balance: 2010 Trustees' Report | | | -0.3 | -1.5 | -1.9 |
| Actuarial Balance: 2011 Trustees' Report | | | -0.6 | -1.8 | -2.2 |
| Actuarial Balance: 2012 Trustees' Report | | | -1.2 | -2.3 | -2.7 |

Security covered payroll in 2012 to 14.4 percent of payroll in 2020, 17.0 percent of payroll in 2030 and 17.6 percent of payroll in 2080. Revenues excluding interest are projected to rise only slightly from 12.9 percent of payroll today to 13.3 percent in 2080. Thus the annual balance is projected to decline from -0.9 percent of payroll in 2012 to -1.3 percent of payroll in 2020, -3.8 percent of payroll in 2030, and -4.3 percent of payroll in 2080. On a 75-year basis, the actuarial deficit is projected to be -2.7 percent of payroll. In the process, the Social Security trust fund, which was built up since 1983, would be drawn down and

eventually be exhausted in 2033. These projections assume that benefits would continue to be paid in full despite the projected exhaustion of the trust fund to show the long-run implications of current benefit formulas. Under current law, not all scheduled benefits would be paid after the trust funds are exhausted. However, benefits could still be partially funded from current revenues. The 2012 Trustees' report presents projections on this point. Beginning in 2033, 75 percent of projected Social Security scheduled benefits would be funded. This percentage would eventually decline to 73 percent by 2086.

TECHNICAL NOTE: SOURCES OF DATA AND METHODS OF ESTIMATING

The long-range budget projections are based on demographic and economic assumptions. A simplified model of

the Federal budget, developed at OMB, is used to compute the budgetary implications of these assumptions.

Demographic and Economic Assumptions.—For the years 2013-2023, the assumptions are drawn from the Administration’s economic projections used for the 2014 Budget. These budget assumptions reflect the President’s policy proposals. The economic assumptions are extended beyond this interval by holding inflation, interest rates, and the unemployment rate constant at the levels assumed in the final year of the budget forecast. Population growth and labor force growth are extended using the intermediate assumptions from the 2012 Social Security Trustees’ report. The projected rate of growth for real GDP is built up from the labor force assumptions and an assumed rate of productivity growth. Productivity growth, measured as real GDP per hour, is assumed to equal its average rate of growth in the Budget’s economic assumptions—1.7 percent per year.

CPI inflation holds stable at 2.2 percent per year, the unemployment rate is constant at 5.4 percent, the yield on 10-year Treasury notes is steady at 5.0 percent, and the 91-day Treasury bill rate is 3.7 percent. Consistent with the demographic assumptions in the Trustees’ reports, U.S. population growth slows from around 1 percent per year to about two-thirds that rate by 2030, and slower rates of growth beyond that point. By the end of the projection period total population growth is nearly as low as 0.4 percent per year. Real GDP growth is projected to be less than its historical average of around 3.2 percent per year because the slowdown in population growth and the increase in the population over age 65 reduce labor supply growth. In these projections, average real GDP

growth averages between 2.3 percent and 2.4 percent per year for the period following the end of the 10-year budget window in 2023.

The economic and demographic projections described above are set by assumption and do not automatically change in response to changes in the budget outlook. This is unrealistic, but it simplifies comparisons of alternative policies.

Budget Projections.—For the period through 2023, receipts follow the 2014 Budget’s policy projections. After 2023, total tax receipts rise gradually relative to GDP as real incomes also rise. Discretionary spending follows the path in the Budget over the next 10 years and grows at the rate of growth in inflation plus population afterwards. Other spending also aligns with the Budget through the budget horizon. Long-run Social Security spending is projected by the Social Security actuaries using this chapter’s long-range economic and demographic assumptions. Medicare benefits are projected based on a projection of beneficiary growth and excess health care cost growth from the 2012 Medicare Trustees’ report, as adjusted to account for the Budget’s IPAB proposal, and the general inflation assumptions described above. Medicaid outlays are based on the economic and demographic projections in the model. Other entitlement programs are projected based on rules of thumb linking program spending to elements of the economic and demographic projections such as the poverty rate.

5. FEDERAL BORROWING AND DEBT

Debt is the largest legally and contractually binding obligation of the Federal Government. At the end of 2012, the Government owed \$11,281 billion of principal to the individuals and institutions who had loaned it the money to fund past deficits. During that year, the Government paid the public approximately \$232 billion of interest on this debt. At the same time, the Government also held financial assets, net of other liabilities, of \$999 billion. Therefore, debt net of financial assets was \$10,282 billion.

The \$11,281 billion debt held by the public at the end of 2012 represents an increase of \$1,153 billion over the level at the end of 2011. In 2012, the \$1,087 billion deficit and other financing transactions totaling \$66 billion caused the Government to increase its borrowing from the public by \$1,153 billion. Debt held by the public increased from 67.8 percent of Gross Domestic Product (GDP) at the end of 2011 to 72.6 percent of GDP at the end of 2012. Meanwhile, financial assets net of liabilities grew by \$41 billion in 2012. Debt held by the public net of financial assets increased from 61.4 percent of GDP at the end of 2011 to 66.1 percent of GDP at the end of 2012. The deficit is estimated to fall to \$973 billion in 2013, and then continue to decrease as a percent of GDP in subsequent years. Declining deficits and continued GDP growth are estimated to significantly reduce growth in debt as a percentage of GDP; debt held by the public is projected to reach 76.6 percent of GDP at the end of 2013 and 78.2 percent at the end of 2014 and 2015 and then to begin to decline gradually after 2015. Debt net of financial assets is expected to follow a similar path, increasing to 70.5 percent of GDP at the end of 2014 and then decreasing in each of the following years.

Trends in Debt Since World War II

Table 5–1 depicts trends in Federal debt held by the public from World War II to the present and estimates from the present through 2018. (It is supplemented for earlier years by Tables 7.1–7.3 in *Historical Tables*, which is published as a separate volume of the Budget.) Federal debt peaked at 108.7 percent of GDP in 1946, just after the end of the war. From then until the 1970s, Federal debt as a percentage of GDP decreased almost every year because of relatively small deficits, an expanding economy, and inflation. With households borrowing large amounts to buy homes and consumer durables, and with businesses borrowing large amounts to buy plant and equipment, Federal debt also decreased almost every year as a percentage of total credit market debt outstanding. The cumulative effect was impressive. From 1950 to 1975, debt held by the public declined from 80.2 percent of GDP to 25.3 percent, and from 53.3 percent of credit market debt to 18.4 percent. Despite rising interest rates, interest outlays became a smaller share of the budget and were roughly stable as a percentage of GDP.

Federal debt relative to GDP is a function of the Nation's fiscal policy as well as overall economic conditions. During the 1970s, large budget deficits emerged as spending grew faster than receipts and as the economy was disrupted by oil shocks and rising inflation. The nominal amount of Federal debt more than doubled, and Federal debt relative to GDP and credit market debt stopped declining after the middle of the decade. The growth of Federal debt accelerated at the beginning of the 1980s, due in large part to a deep recession, and the ratio of Federal debt to GDP grew sharply. It continued to grow throughout the 1980s as large tax cuts, enacted in 1981, and substantial increases in defense spending were only partially offset by reductions in domestic spending. The resulting deficits increased the debt to almost 50 percent of GDP by 1993. The ratio of Federal debt to credit market debt also rose, though to a lesser extent. Interest outlays on debt held by the public, calculated as a percentage of either total Federal outlays or GDP, increased as well.

The growth of Federal debt held by the public was slowing by the mid-1990s. In addition to a growing economy, three major budget agreements were enacted in the 1990s, implementing spending cuts and revenue increases and significantly reducing deficits. The debt declined markedly relative to both GDP and total credit market debt, from 1997 to 2001, as surpluses emerged. Debt fell from 49.3 percent of GDP in 1993 to 32.5 percent of GDP in 2001. Over that same period, debt fell from 26.4 percent of total credit market debt to 17.5 percent. Interest as a share of outlays peaked at 16.5 percent in 1989 and then fell to 8.9 percent by 2002; interest as a percentage of GDP fell by a similar proportion.

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

As a result of the most recent recession, which began in December 2007, and the massive financial and economic challenges it imposed on the Nation, the deficit began increasing rapidly in 2008. The deficit increased more substantially in 2009 as the Government continued to take aggressive steps to restore the health of the Nation's economy and financial markets. The deficit fell somewhat in 2010, increased only slightly in 2011, and fell in 2012. With the proposals in the Budget, the deficit is projected to fall in 2013, both in nominal terms and as a share of

Table 5–1. TRENDS IN FEDERAL DEBT HELD BY THE PUBLIC
(Dollar amounts in billions)

| Fiscal Year | Debt held by the public: | | Debt held by the public as a percent of: | | Interest on the debt held by the public as a percent of: ³ | |
|---------------------|--------------------------|------------------------------|--|---------------------------------|---|-----|
| | Current dollars | FY 2012 dollars ¹ | GDP | Credit market debt ² | Total outlays | GDP |
| 1946 | 241.9 | 2,368.9 | 108.7 | N/A | 7.4 | 1.8 |
| 1950 | 219.0 | 1,745.4 | 80.2 | 53.3 | 11.4 | 1.8 |
| 1955 | 226.6 | 1,586.9 | 57.2 | 43.2 | 7.6 | 1.3 |
| 1960 | 236.8 | 1,472.4 | 45.6 | 33.7 | 8.5 | 1.5 |
| 1965 | 260.8 | 1,516.0 | 37.9 | 26.9 | 8.1 | 1.4 |
| 1970 | 283.2 | 1,368.9 | 28.0 | 20.8 | 7.9 | 1.5 |
| 1975 | 394.7 | 1,404.0 | 25.3 | 18.4 | 7.5 | 1.6 |
| 1980 | 711.9 | 1,751.3 | 26.1 | 18.6 | 10.6 | 2.3 |
| 1985 | 1,507.3 | 2,826.5 | 36.4 | 22.3 | 16.2 | 3.7 |
| 1990 | 2,411.6 | 3,873.0 | 42.1 | 22.6 | 16.2 | 3.5 |
| 1995 | 3,604.4 | 5,099.7 | 49.1 | 26.4 | 15.8 | 3.3 |
| 2000 | 3,409.8 | 4,441.4 | 34.7 | 19.0 | 13.0 | 2.4 |
| 2001 | 3,319.6 | 4,224.3 | 32.5 | 17.5 | 11.6 | 2.1 |
| 2002 | 3,540.4 | 4,432.1 | 33.6 | 17.4 | 8.9 | 1.7 |
| 2003 | 3,913.4 | 4,801.0 | 35.6 | 17.8 | 7.5 | 1.5 |
| 2004 | 4,295.5 | 5,139.5 | 36.8 | 17.4 | 7.3 | 1.4 |
| 2005 | 4,592.2 | 5,321.5 | 36.9 | 17.0 | 7.7 | 1.5 |
| 2006 | 4,829.0 | 5,412.0 | 36.6 | 16.4 | 8.9 | 1.8 |
| 2007 | 5,035.1 | 5,480.9 | 36.3 | 15.8 | 9.2 | 1.8 |
| 2008 | 5,803.1 | 6,173.6 | 40.5 | 17.1 | 8.7 | 1.8 |
| 2009 | 7,544.7 | 7,924.1 | 54.0 | 21.4 | 5.7 | 1.4 |
| 2010 | 9,018.9 | 9,377.3 | 62.9 | 24.8 | 6.6 | 1.6 |
| 2011 | 10,128.2 | 10,314.0 | 67.8 | 26.9 | 7.4 | 1.8 |
| 2012 | 11,281.1 | 11,281.1 | 72.6 | 28.7 | 6.6 | 1.5 |
| 2013 estimate | 12,403.5 | 12,149.9 | 76.6 | N/A | 7.2 | 1.6 |
| 2014 estimate | 13,295.9 | 12,781.7 | 78.2 | N/A | 7.1 | 1.6 |
| 2015 estimate | 14,032.2 | 13,238.7 | 78.2 | N/A | 7.4 | 1.6 |
| 2016 estimate | 14,714.1 | 13,624.0 | 77.7 | N/A | 8.3 | 1.8 |
| 2017 estimate | 15,343.5 | 13,942.5 | 76.8 | N/A | 9.8 | 2.1 |
| 2018 estimate | 15,954.1 | 14,227.7 | 75.9 | N/A | 11.5 | 2.4 |

N/A = Not available.

¹ Debt in current dollars deflated by the GDP chain-type price index with fiscal year 2012 equal to 100.

² Total credit market debt owed by domestic nonfinancial sectors, modified in some years to be consistent with budget concepts for the measurement of Federal debt. Financial sectors are omitted to avoid double counting, since financial intermediaries borrow in the credit market primarily in order to finance lending in the credit market. Source: Federal Reserve Board flow of funds accounts. Projections are not available.

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

the economy, and continue to fall as a percentage of GDP throughout the 10-year budget window before ending at 1.7 percent in 2023. Debt held by the public as a percent of GDP is estimated to grow to 76.6 percent at the end of 2013 and 78.2 percent at the end of 2014 and 2015 and

then to begin to decline slowly after 2015, reaching 73.0 percent of GDP in 2023. Debt net of financial assets as a percent of GDP is estimated to grow to 69.5 percent at the end of 2013 and 70.5 percent at the end of 2014 and then to decline thereafter.

Debt Held by the Public and Gross Federal Debt

The Federal Government issues debt securities for two principal purposes. First, it borrows from the public to finance the Federal deficit.¹ Second, it issues debt to Federal Government accounts, primarily trust funds, which accumulate surpluses. By law, trust fund surpluses must generally be invested in Federal securities. The gross Federal debt is defined to consist of both the debt held by the public and the debt held by Government accounts. Nearly all the Federal debt has been issued by the Treasury and is sometimes called “public debt,” but a small portion has been issued by other Government agencies and is called “agency debt.”²

Borrowing from the public, whether by the Treasury or by some other Federal agency, is important because it represents the Federal demand on credit markets. Regardless of whether the proceeds are used for tangible or intangible investments or to finance current consumption, the Federal demand on credit markets has to be financed out of the saving of households and businesses, the State and local sector, or the rest of the world. Federal borrowing thereby competes with the borrowing of other sectors of the economy for financial resources in the credit market. Borrowing from the public thus affects the size and composition of assets held by the private sector and the amount of saving imported from abroad. It also increases the amount of future resources required to pay interest to the public on Federal debt. Borrowing from the public is therefore an important concern of Federal fiscal policy.³ Borrowing from the public, however, is an incomplete measure of the Federal impact on credit markets. Different types of Federal activities can affect the credit markets in different ways. For example, under its direct loan programs, the Government uses borrowed funds to acquire financial assets that might otherwise require financing in the credit markets directly. (For more information on other ways in which Federal activities impact the credit market, see the discussion at the end of this chapter.)

Issuing debt securities to Government accounts performs an essential function in accounting for the operation of these funds. The balances of debt represent the cumulative surpluses of these funds due to the excess of their tax receipts, interest receipts, and other collections over their

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

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

Furthermore, the debt held by Government accounts does not represent the estimated amount of the account’s obligations or responsibilities to make future payments to the public. For example, if the account records the transactions of a social insurance program, the debt that it holds does not necessarily represent the actuarial present value of estimated future benefits (or future benefits less taxes) for the current participants in the program; nor does it necessarily represent the actuarial present value of estimated future benefits (or future benefits less taxes) for the current participants plus the estimated future participants over some stated time period. The future transactions of Federal social insurance and employee retirement programs, which own 93 percent of the debt held by Government accounts, are important in their own right and need to be analyzed separately. This can be done through information published in the actuarial and financial reports for these programs.⁴

This Budget uses a variety of information sources to analyze the condition of Social Security and Medicare, the Government’s two largest social insurance programs. Table 4-1 in Chapter 4, “Long-Term Budget Outlook,” projects Social Security and Medicare outlays to the year 2085 relative to GDP. The excess of future Social Security and Medicare benefits relative to their dedicated income is

¹ For the purposes of the Budget, “debt held by the public” is defined as debt held by investors outside of the Federal Government, both domestic and foreign, including U.S. State and local governments and foreign governments. It also includes debt held by the Federal Reserve.

² The term “agency debt” is defined more narrowly in the budget than customarily in the securities market, where it includes not only the debt of the Federal agencies listed in Table 5-4, but also the debt of the Government-Sponsored Enterprises listed in Table 22-9 at the end of Chapter 22, “Credit and Insurance,” and certain Government-guaranteed securities.

³ The Federal subsector of the national income and product accounts provides a measure of “net government saving” (based on current expenditures and current receipts) that can be used to analyze the effect of Federal fiscal policy on national saving within the framework of an integrated set of measures of aggregate U.S. economic activity. The Federal subsector and its differences from the budget are discussed in Chapter 28, “National Income and Product Accounts.”

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

Table 5-2. FEDERAL GOVERNMENT FINANCING AND DEBT
(In billions of dollars)

| | Actual 2012 | Estimate | | | | | | | | | | |
|---|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
| Financing: | | | | | | | | | | | | |
| Unified budget deficit | 1,087.0 | 972.9 | 744.2 | 576.5 | 528.4 | 486.9 | 475.3 | 498.1 | 503.1 | 500.8 | 518.7 | 439.1 |
| Other transactions affecting borrowing from the public: | | | | | | | | | | | | |
| Changes in financial assets and liabilities: ¹ | | | | | | | | | | | | |
| Change in Treasury operating cash balance | 27.4 | -5.4 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Net disbursements of credit financing accounts: | | | | | | | | | | | | |
| Direct loan accounts | 85.7 | 144.2 | 138.2 | 153.3 | 143.5 | 132.8 | 124.0 | 119.0 | 118.2 | 119.6 | 119.1 | 120.0 |
| Guaranteed loan accounts | 12.3 | 15.1 | 16.7 | 12.0 | 12.0 | 11.0 | 12.7 | 13.3 | 9.1 | 4.8 | 0.4 | -1.8 |
| Troubled Asset Relief Program equity purchase accounts | -61.3 | -3.2 | -5.4 | -4.0 | -0.2 | -0.1 | -0.1 | -0.1 | -* | -* | -* | -* |
| Subtotal, net disbursements | 36.7 | 156.1 | 149.6 | 161.2 | 155.3 | 143.7 | 136.6 | 132.1 | 127.3 | 124.4 | 119.5 | 118.2 |
| Net purchases of non-Federal securities by the National Railroad Retirement Investment Trust ... | 1.4 | -1.1 | -1.3 | -1.3 | -1.7 | -1.1 | -1.2 | -1.2 | -1.1 | -1.4 | -1.0 | -0.3 |
| Net change in other financial assets and liabilities ² ... | 0.5 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Subtotal, changes in financial assets and liabilities | 66.0 | 149.6 | 148.3 | 160.0 | 153.7 | 142.6 | 135.4 | 130.9 | 126.2 | 123.1 | 118.4 | 117.9 |
| Seigniorage on coins ..... | ..... | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 | -0.2 |
| Total, other transactions affecting borrowing from the public | 66.0 | 149.5 | 148.1 | 159.9 | 153.5 | 142.5 | 135.3 | 130.8 | 126.0 | 122.9 | 118.2 | 117.7 |
| Total, requirement to borrow from the public (equals change in debt held by the public) ... | 1,152.9 | 1,122.4 | 892.3 | 736.3 | 681.9 | 629.4 | 610.5 | 628.9 | 629.1 | 623.7 | 636.9 | 556.9 |
| Changes in Debt Subject to Statutory Limitation: | | | | | | | | | | | | |
| Change in debt held by the public | 1,152.9 | 1,122.4 | 892.3 | 736.3 | 681.9 | 629.4 | 610.5 | 628.9 | 629.1 | 623.7 | 636.9 | 556.9 |
| Change in debt held by Government accounts | 133.8 | 75.9 | 105.3 | 164.6 | 196.9 | 220.5 | 209.1 | 139.6 | 129.8 | 124.4 | 93.6 | 94.1 |
| Less: change in debt not subject to limit and other adjustments | -6.2 | 1.3 | 0.4 | * | 0.6 | 0.3 | -* | -0.5 | -1.4 | -0.9 | -0.8 | 0.1 |
| Total, change in debt subject to statutory limitation | 1,280.5 | 1,199.6 | 998.0 | 901.0 | 879.4 | 850.2 | 819.6 | 768.0 | 757.5 | 747.2 | 729.8 | 651.1 |
| Debt Subject to Statutory Limitation, End of Year: | | | | | | | | | | | | |
| Debt issued by Treasury | 16,023.7 | 17,221.5 | 18,218.1 | 19,118.1 | 19,996.2 | 20,845.7 | 21,664.7 | 22,432.1 | 23,189.5 | 23,936.7 | 24,666.5 | 25,317.7 |
| Less: Treasury debt not subject to limitation (-) ³ | -8.1 | -6.2 | -4.8 | -3.8 | -2.5 | -1.8 | -1.2 | -0.5 | -0.5 | -0.5 | -0.5 | -0.5 |
| Agency debt subject to limitation | * | * | * | * | * | * | * | * | * | * | * | * |
| Adjustment for discount and premium ⁴ | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 | 11.4 |
| Total, debt subject to statutory limitation ⁵ | 16,027.0 | 17,226.7 | 18,224.7 | 19,125.7 | 20,005.1 | 20,855.3 | 21,674.9 | 22,442.9 | 23,200.4 | 23,947.6 | 24,677.4 | 25,328.5 |
| Debt Outstanding, End of Year: | | | | | | | | | | | | |
| Gross Federal debt: ⁶ | | | | | | | | | | | | |
| Debt issued by Treasury | 16,023.7 | 17,221.5 | 18,218.1 | 19,118.1 | 19,996.2 | 20,845.7 | 21,664.7 | 22,432.1 | 23,189.5 | 23,936.7 | 24,666.5 | 25,317.7 |
| Debt issued by other agencies | 27.2 | 27.7 | 28.7 | 29.7 | 30.4 | 30.8 | 31.4 | 32.5 | 34.0 | 34.8 | 35.6 | 35.5 |
| Total, gross Federal debt | 16,050.9 | 17,249.2 | 18,246.8 | 19,147.8 | 20,026.6 | 20,876.5 | 21,696.1 | 22,464.6 | 23,223.5 | 23,971.6 | 24,702.1 | 25,353.1 |
| Held by: | | | | | | | | | | | | |
| Debt held by Government accounts | 4,769.8 | 4,845.7 | 4,951.0 | 5,115.6 | 5,312.5 | 5,533.0 | 5,742.1 | 5,881.6 | 6,011.5 | 6,135.9 | 6,229.5 | 6,323.6 |
| Debt held by the public ⁷ | 11,281.1 | 12,403.5 | 13,295.9 | 14,032.2 | 14,714.1 | 15,343.5 | 15,954.1 | 16,583.0 | 17,212.1 | 17,835.7 | 18,472.7 | 19,029.5 |

*\$50 million or less.

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

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

³ Consists primarily of debt issued by or held by the Federal Financing Bank.

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

⁵ Legislation enacted February 4, 2013, (P.L. 113-3) temporarily suspended the debt limit through May 18, 2013.

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

⁷ At the end of 2012, the Federal Reserve Banks held \$1,645.3 billion of Federal securities and the rest of the public held \$9,635.8 billion. Debt held by the Federal Reserve Banks is not estimated for future years.

very different in concept and much larger in size than the amount of Treasury securities that these programs hold.

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

Government Deficits or Surpluses and the Change in Debt

Table 5–2 summarizes Federal borrowing and debt from 2012 through 2023.⁵ In 2012 the Government borrowed \$1,153 billion, increasing the debt held by the public from \$10,128 billion at the end of 2011 to \$11,281 billion at the end of 2012. The debt held by Government accounts increased \$134 billion, and gross Federal debt increased by \$1,287 billion to \$16,051 billion.

Debt held by the public.—The Federal Government primarily finances deficits by borrowing from the public, and it primarily uses surpluses to repay debt held by the public.⁶ Table 5–2 shows the relationship between the Federal deficit or surplus and the change in debt held by the public. The borrowing or debt repayment depends on the Government’s expenditure programs and tax laws, on the economic conditions that influence tax receipts and outlays, and on debt management policy. The sensitivity of the budget to economic conditions is analyzed in Chapter 2, “Economic Assumptions and Interaction with the Budget,” in this volume.

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

Over the long run, it is a good approximation to say that “the deficit is financed by borrowing from the public” or “the surplus is used to repay debt held by the public.” However, the Government’s need to borrow in any given year has always depended on several other factors besides the unified budget surplus or deficit, such as the change in the Treasury operating cash balance. These other factors—“other transactions affecting borrowing from the public”—can either increase or decrease the Government’s need to borrow and can vary considerably in size from year to year. The other transactions affecting borrowing from the public are presented in Table 5–2 (an

⁵ For projections of the debt beyond 2023, see Chapter 4, “Long-Term Budget Outlook.”

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

⁷ For further explanation of the off-budget Federal entities, see Chapter 12, “Coverage of the Budget.”

increase in the need to borrow is represented by a positive sign, like the deficit).

In 2012 the deficit was \$1,087 billion while these other factors—primarily the change in the Treasury operating cash balance and the net activity of credit financing accounts—increased the need to borrow by \$66 billion. As a result, the Government borrowed \$1,153 billion from the public. The other factors are estimated to increase borrowing by \$150 billion in 2013 and \$148 billion in 2014. In 2015–2023, these other factors are expected to increase borrowing by annual amounts ranging from \$118 billion to \$160 billion.

As a result of the Government’s extraordinary efforts to stabilize the Nation’s credit markets that began in 2008, the other factors have had significantly increased effects on borrowing from the public in recent years. In the 20 years between 1988 and 2007, the cumulative deficit was \$2,956 billion, the increase in debt held by the public was \$3,145 billion, and other factors added a total of \$190 billion of borrowing, 6 percent of total borrowing over this period. By contrast, the other factors resulted in more than 40 percent of the total increase in borrowing from the public for 2008, nearly 20 percent of the increase for 2009, and over 12 percent of the increase for 2010. In 2011, the other factors reduced borrowing by about 17 percent. In 2012, with the financial stabilization activities largely winding down, the impacts of the other factors returned to historical levels, accounting for 6 percent of the increase in borrowing.

Three specific factors presented in Table 5–2 are especially important.

Change in Treasury operating cash balance.—In 2012, the cash balance increased by \$27 billion, to \$85 billion. In the preceding three years, 2008–2011, changes in the cash balance were largely driven by fluctuations in the temporary Supplementary Financing Program (SFP). Under the SFP, Treasury issued short-term debt and deposited the cash proceeds with the Federal Reserve for use by the Federal Reserve in its actions to stabilize the financial markets. The cash balance increased by a record \$296 billion in 2008, primarily as a result of the creation of the SFP. In 2009, the cash balance decreased by \$96 billion, due to a \$135 billion reduction in the SFP balance offset by a \$38 billion increase in the non-SFP cash balance. In 2010, the cash balance increased by \$35 billion, to \$310 billion, due nearly entirely to an increase in the SFP balance. In 2011, the cash balance decreased by \$252 billion to \$58 billion, due largely to reducing the SFP balance from \$200 billion to zero as the Federal Government neared the debt ceiling. In the 10 years preceding 2008, changes in the cash balance had been much smaller, ranging from a decrease of \$26 billion in 2003 to an increase of \$23 billion in 2007. The operating cash balance is projected to fall by \$5 billion, to \$80 billion at the end of 2013. Changes in the operating cash balance, while occasionally large, are inherently limited over time. Decreases in cash—a means of financing the Government—are limited by the amount of past accumulations, which themselves required financing when they were built up. Increases are limited because it is generally more efficient to repay debt.

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

In addition to the transactions with the public, the financing accounts include several types of intragovernmental transactions. In particular, they receive payment from the credit program accounts for the subsidy costs of new direct loans and loan guarantees and for any upward reestimate of the costs of outstanding direct and guaranteed loans. The financing accounts also pay any downward reestimate of costs to budgetary receipt accounts. The total net collections and gross disbursements of the financing accounts, consisting of transactions with both the public and the budgetary accounts, are called “net financing disbursements.” They occur in the same way as the “outlays” of a budgetary account, even though they do not represent budgetary costs, and therefore affect the requirement for borrowing from the public in the same way as the deficit.

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

The impact of the net financing disbursements on borrowing increased significantly in 2009, largely as a result of Government actions to address the Nation’s financial and economic challenges including through the Troubled Asset Relief Program (TARP), purchases of mortgage-backed securities issued or guaranteed by the Government-Sponsored Enterprises (GSEs), and the Temporary Student Loan Purchase Program. Net financ-

⁸ The FCRA (sec. 505(b)) requires that the financing accounts be non-budgetary. As explained in Chapter 12, “Coverage of the Budget,” they are non-budgetary in concept because they do not measure cost. For additional discussion of credit programs, see Chapter 22, “Credit and Insurance,” and Chapter 11, “Budget Concepts.”

ing disbursements increased from \$33 billion in 2008 to a record \$406 billion in 2009. With the wind-down of the financial stabilization activities, borrowing due to financing accounts has decreased significantly, falling to \$153 billion in 2010, \$58 billion in 2011, and \$37 billion in 2012. In 2013 credit financing accounts are projected to increase borrowing by \$156 billion. After 2013, the credit financing accounts are expected to increase borrowing by amounts ranging from \$118 billion to \$161 billion over the next 10 years.

In some years, large net upward or downward reestimates in the cost of outstanding direct and guaranteed loans may cause large swings in the net financing disbursements. In 2012, there was a net upward reestimate of \$12 billion, due largely to upward reestimates in the TARP, Federal Direct Student Loan, and Federal Housing Administration (FHA) Mutual Mortgage Insurance programs, partly offset by downward reestimates for guaranteed student loans. In 2013, there is a net upward reestimate of \$1 billion. Large upward reestimates in the FHA housing programs are mostly offset by large downward reestimates in the TARP and direct student loan programs.

Net purchases of non-Federal securities by the National Railroad Retirement Investment Trust (NRRIT).—This trust fund was established by the Railroad Retirement and Survivors’ Improvement Act of 2001. In 2003, most of the assets in the Railroad Retirement Board trust funds were transferred to the NRRIT trust fund, which invests its assets primarily in private stocks and bonds. The Act required special treatment of the purchase or sale of non-Federal assets by this trust fund, treating such purchases as a means of financing rather than outlays. Therefore, the increased need to borrow from the public to finance NRRIT’s purchases of non-Federal assets is part of the “other transactions affecting borrowing from the public” rather than included as an increase in the deficit. While net purchases and redemptions affect borrowing from the public, unrealized gains and losses on NRRIT’s portfolio are included in both the other factors and, with the opposite sign, in NRRIT’s net outlays in the deficit, for no net impact on borrowing from the public. The increased borrowing associated with the initial transfer expanded publicly held debt by \$20 billion in 2003. Net transactions in subsequent years have been much smaller. In 2012, net increases, including purchases and gains, were \$1 billion. Net redemptions of roughly \$1 billion annually are projected for 2013 and subsequent years.⁹

Debt held by Government accounts.—The amount of Federal debt issued to Government accounts depends largely on the surpluses of the trust funds, both on-budget and off-budget, which owned 92 percent of the total Federal debt held by Government accounts at the end of 2012. In 2012, the total trust fund surplus was \$90 billion, and trust funds invested \$121 billion in Federal securities. Investment may differ somewhat from the surplus due to changes in the amount of cash assets not currently invested. The remainder of debt issued to Government accounts is owned by a number of special funds and revolv-

⁹ The budget treatment of this fund is further discussed in Chapter 11, “Budget Concepts.”

Table 5-3. DEBT HELD BY THE PUBLIC NET OF FINANCIAL ASSETS AND LIABILITIES
(Dollar amounts in billions)

| | Actual 2012 | Estimate | | | | | | | | | | |
|---|----------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
| Debt Held by the Public: | | | | | | | | | | | | |
| Debt held by the public | 11,281.1 | 12,403.5 | 13,295.9 | 14,032.2 | 14,714.1 | 15,343.5 | 15,954.1 | 16,583.0 | 17,212.1 | 17,835.7 | 18,472.7 | 19,029.5 |
| As a percent of GDP | 72.6% | 76.6% | 78.2% | 78.2% | 77.7% | 76.8% | 75.9% | 75.3% | 74.9% | 74.4% | 73.9% | 73.0% |
| Financial Assets Net of Liabilities: | | | | | | | | | | | | |
| Treasury operating cash balance | 85.4 | 80.0 | 80.0 | 80.0 | 80.0 | 80.0 | 80.0 | 80.0 | 80.0 | 80.0 | 80.0 | 80.0 |
| Credit financing account balances: | | | | | | | | | | | | |
| Direct loan accounts | 803.2 | 947.5 | 1,085.7 | 1,239.0 | 1,382.6 | 1,515.3 | 1,639.3 | 1,758.3 | 1,876.5 | 1,996.1 | 2,115.2 | 2,235.2 |
| Guaranteed loan accounts | -9.8 | 5.3 | 22.0 | 34.0 | 46.0 | 57.0 | 69.7 | 83.0 | 92.1 | 96.9 | 97.3 | 95.5 |
| TARP equity purchase accounts | 13.6 | 10.3 | 5.0 | 1.0 | 0.8 | 0.7 | 0.6 | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 |
| Subtotal, credit financing account balances | 807.0 | 963.1 | 1,112.7 | 1,273.9 | 1,429.3 | 1,573.0 | 1,709.6 | 1,841.8 | 1,969.1 | 2,093.5 | 2,212.9 | 2,331.2 |
| Government-sponsored enterprise preferred stock | 109.2 | 109.2 | 109.2 | 109.2 | 109.2 | 109.2 | 109.2 | 109.2 | 109.2 | 109.2 | 109.2 | 109.2 |
| Non-Federal securities held by NRRIT | 22.9 | 21.8 | 20.4 | 19.2 | 17.5 | 16.4 | 15.2 | 14.0 | 12.9 | 11.5 | 10.5 | 10.1 |
| Other assets net of liabilities | -25.3 | -25.3 | -25.3 | -25.3 | -25.3 | -25.3 | -25.3 | -25.3 | -25.3 | -25.3 | -25.3 | -25.3 |
| Total, financial assets net of liabilities | 999.1 | 1,148.8 | 1,297.0 | 1,457.0 | 1,610.7 | 1,753.3 | 1,888.7 | 2,019.6 | 2,145.8 | 2,268.9 | 2,387.3 | 2,505.2 |
| Debt Held by the Public Net of Financial Assets and Liabilities: | | | | | | | | | | | | |
| Debt held by the public net of financial assets | 10,282.0 | 11,254.8 | 11,998.9 | 12,575.2 | 13,103.4 | 13,590.2 | 14,065.3 | 14,563.3 | 15,066.3 | 15,566.9 | 16,085.4 | 16,524.3 |
| As a percent of GDP | 66.1% | 69.5% | 70.5% | 70.1% | 69.2% | 68.0% | 66.9% | 66.2% | 65.6% | 65.0% | 64.4% | 63.4% |

ing funds. The debt held in major accounts and the annual investments are shown in Table 5-5.

Debt Held by the Public Net of Financial Assets and Liabilities

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

One transaction that can increase both borrowing and assets is an increase to the Treasury operating cash balance. When the Government borrows to increase the Treasury operating cash balance, that cash balance also represents an asset that is available to the Federal Government. Looking at both sides of this transaction—the borrowing to obtain the cash and the asset of the cash holdings—provides much more complete information about the Government's financial condition than looking at only the borrowing from the public. Another example of a transaction that simultaneously increases borrowing from the public and Federal assets is Government borrowing to issue direct loans to the public. When the direct loan is made, the Government is also acquiring an

asset in the form of future payments of principal and interest, net of the Government's expected losses on the loans. Similarly, when the National Railroad Retirement Investment Trust increases its holdings of non-Federal securities, the borrowing to purchase those securities is offset by the value of the asset holdings.

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

The magnitude and the significance of the Government's financial assets increased greatly from the later part of 2008 through 2010, as a result of Government actions, such as implementation of TARP, to address the challenges facing the Nation's financial markets and economy.¹⁰ In 2011, as some of these activities continued to wind down, the Government's net financial assets decreased from \$1,125 billion to \$958 billion. In 2012, net financial assets increased by \$41 billion, to \$999 billion.

Table 5-3 presents debt held by the public net of the Government's financial assets and liabilities, or "net debt." Treasury debt is presented in the Budget at book value, with no adjustments for the change in economic value that results from fluctuations in interest rates. The balances of credit financing accounts are based on projections of future cash flows. For direct loan financing accounts, the balance generally represents the net present value of anticipated future inflows such as principal and

¹⁰ For more information on these activities, see Chapter 3, "Financial Stabilization Efforts and Their Budgetary Effects."

interest payments from borrowers. For guaranteed loan financing accounts, the balance generally represents the net present value of anticipated future outflows, such as default claim payments net of recoveries and other collections, such as program fees. NRRIT's holdings of non-Federal securities are marked to market on a monthly basis. GSE preferred stock is measured at market value.

At the end of 2012, debt held by the public was \$11,281 billion, or 72.6 percent of GDP. The Government held \$999 billion in net financial assets, including a cash balance of \$85 billion, net credit financing account balances of \$807 billion,¹¹ and other assets and liabilities that aggregated to a net asset of \$107 billion. Therefore, debt net of financial assets was \$10,282 billion, or 66.1 percent of GDP. As shown in Table 5–3, the value of the Government's net financial assets is projected to increase to \$1,149 billion in 2013, due to increases in the net balances of credit financing accounts. While debt held by the public is expected to increase from 72.6 percent to 76.6 percent of GDP during 2013, net debt is expected to increase from 66.1 percent to 69.5 percent of GDP.

Debt securities and other financial assets and liabilities do not encompass all the assets and liabilities of the Federal Government. For example, accounts payable occur in the normal course of buying goods and services; Social Security benefits are due and payable as of the end of the month but, according to statute, are paid during the next month; and Federal employee salaries are paid after they have been earned. Like debt securities sold in the credit market, these liabilities have their own distinctive effects on the economy. The Federal Government also has significant holdings of non-financial assets, such as land, mineral deposits, buildings, and equipment. A unique and important asset is the Government's sovereign power to tax. The different types of assets and liabilities are reported annually in the financial statements of Federal agencies and in the *Financial Report of the United States Government*, prepared by the Treasury Department in coordination with the Office of Management and Budget (OMB). The relationship of assets, liabilities, and other measures in the financial statements to budget measures is analyzed in Chapter 30, "Budget and Financial Reporting," in this volume.

Treasury Debt

Nearly all Federal debt is issued by the Department of the Treasury. Treasury meets most of the Federal Government's financing needs by issuing marketable securities to the public. These financing needs include both the change in debt held by the public and the refinancing—or rollover—of any outstanding debt that matures

¹¹ Consistent with the presentation in the *Monthly Treasury Statement of Receipts and Outlays of the United States Government (Monthly Treasury Statement)*, Table 5-3 presents the net financial assets associated with direct and guaranteed loans in the financing accounts created under the Federal Credit Reform Act of 1990. Therefore, the figures differ by relatively small amounts from the figures in Chapter 30, "Budget and Financial Reporting," which reflect all loans made or guaranteed by the Federal Government, including loans originated prior to implementation of the FCRA.

during the year. Treasury marketable debt is sold at public auctions on a regular schedule and can be bought and sold on the secondary market. Treasury also sells to the public a relatively small amount of nonmarketable securities, such as savings bonds and State and Local Government Series securities (SLUGs).¹² Treasury nonmarketable debt cannot be bought or sold on the secondary market.

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

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

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

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

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

Historically, the average maturity of outstanding debt issued by Treasury has been about five years. The average maturity of outstanding debt was 65 months at the end of 2012.

Traditionally, Treasury has issued securities with a fixed interest rate. In 2012, Treasury began to develop a floating rate securities program to complement its existing suite of securities and to support Treasury's broader debt management objectives. Floating rate securities have a fixed par value but bear interest rates that fluctuate based on movements in a specified benchmark market interest rate. The initial offerings of floating rate securities are expected to have a maturity of two years. In February 2013, Treasury estimated that the first floating rate securities auction was about a year away.

In addition to quarterly announcements about the overall auction calendar, Treasury publicly announces in advance the auction of each security. Individuals can participate directly in Treasury auctions or can purchase securities through brokers, dealers, and other financial institutions. Treasury accepts two types of auction bids—competitive and noncompetitive. In a competitive bid, the bidder specifies the yield. A significant portion of competitive bids are submitted by primary dealers, which

¹² Under the State and Local Government Series program, the Treasury offers special low-yield securities to State and local governments and other entities for temporary investment of proceeds of tax-exempt bonds.

Table 5–4. AGENCY DEBT
(In millions of dollars)

| | 2012 Actual | | 2013 Estimate | | 2014 Estimate | |
|---|----------------------------|-----------------------|----------------------------|-----------------------|----------------------------|-----------------------|
| | Borrowing/ Repayment(-) | Debt, End-of- Year | Borrowing/ Repayment(-) | Debt, End-of- Year | Borrowing/ Repayment(-) | Debt, End-of- Year |
| Borrowing from the public: | | | | | | |
| Housing and Urban Development: | | | | | | |
| Federal Housing Administration | -10 | 19 | * | 19 | ..... | 19 |
| Architect of the Capitol | -6 | 128 | -7 | 121 | -7 | 114 |
| National Archives | -15 | 151 | -17 | 134 | -18 | 116 |
| Tennessee Valley Authority: | | | | | | |
| Bonds and notes | -556 | 24,098 | 1,116 | 25,214 | 420 | 25,634 |
| Lease/leaseback obligations | 916 | 2,198 | -456 | 1,742 | 668 | 2,409 |
| Prepayment obligations | -105 | 611 | -101 | 510 | -101 | 410 |
| Total, borrowing from the public | 223 | 27,204 | 536 | 27,740 | 962 | 28,703 |
| Borrowing from other funds: | | | | | | |
| Tennessee Valley Authority ¹ | -1 | 5 | ..... | 5 | ..... | 5 |
| Total, borrowing from other funds | -1 | 5 | ..... | 5 | ..... | 5 |
| Total, agency borrowing | 222 | 27,209 | 536 | 27,745 | 962 | 28,707 |
| Memorandum: | | | | | | |
| Tennessee Valley Authority bonds and notes, total | -557 | 24,103 | 1,116 | 25,219 | 420 | 25,639 |

* \$500,000 or less.

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

are banks and securities brokerages that have been designated to trade in Treasury securities with the Federal Reserve System. In a noncompetitive bid, the bidder agrees to accept the yield determined by the auction.¹³ At the close of the auction, Treasury accepts all eligible noncompetitive bids and then accepts competitive bids in ascending order beginning with the lowest yield bid until the offering amount is reached. All winning bidders receive the highest accepted yield bid.

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

Whereas Treasury issuance of marketable debt is based on the Government’s financing needs, Treasury’s issuance of nonmarketable debt is based on the public’s demand for the specific types of investments. Increases in outstanding balances of nonmarketable debt reduce the need for marketable borrowing. In 2012, there was net disinvestment in nonmarketables, necessitating additional marketable borrowing to finance the redemption of nonmarketable debt.¹⁴

¹³ Noncompetitive bids cannot exceed \$5 million.

¹⁴ Detail on the marketable and nonmarketable securities issued by Treasury is found in the *Monthly Statement of the Public Debt*, published on a monthly basis by the Department of the Treasury.

Agency Debt

A few Federal agencies, shown in Table 5–4, sell or have sold debt securities to the public and, at times, to other Government accounts. Currently, new debt is issued only by the Tennessee Valley Authority (TVA) and the Federal Housing Administration; the remaining agencies are repaying existing borrowing. Agency debt increased from \$27.0 billion at the end of 2011 to \$27.2 billion at the end of 2012, due to increases in debt issued by TVA, slightly offset by decreases in debt issued by other agencies. Agency debt is less than one-quarter of one percent of Federal debt held by the public. As a result of new borrowing by TVA, agency debt is estimated to increase by \$0.5 billion in 2013 and by \$1.0 billion in 2014.

The predominant agency borrower is TVA, which had borrowed \$26.9 billion from the public as of the end of 2012, or 99 percent of the total debt of all agencies. TVA sells debt primarily to finance capital expenditures.

TVA has traditionally financed its capital construction by selling bonds and notes to the public. Since 2000, it has also employed two types of alternative financing methods, lease/leaseback obligations and prepayment obligations. Under the lease/leaseback obligations method, TVA signs contracts to lease some facilities and equipment to private investors and simultaneously leases them back. It receives a lump sum for leasing out its assets, and then leases them back at fixed annual payments for a set number of years. TVA retains substantially all of the economic benefits and risks related to ownership of the assets.¹⁵

¹⁵ This arrangement is at least as governmental as a “lease-purchase without substantial private risk.” For further detail on the current budgetary treatment of lease-purchase without substantial private risk, see OMB Circular No. A–11, Appendix B.

Under the prepayment obligations method, TVA's power distributors may prepay a portion of the price of the power they plan to purchase in the future. In return, they obtain a discount on a specific quantity of the future power they buy from TVA. The quantity varies, depending on TVA's estimated cost of borrowing.

The Office of Management and Budget determined that each of these alternative financing methods is a means of financing the acquisition of assets owned and used by the Government, or of refinancing debt previously incurred to finance such assets. They are equivalent in concept to other forms of borrowing from the public, although under different terms and conditions. The budget therefore records the upfront cash proceeds from these methods as borrowing from the public, not offsetting collections.¹⁶ The budget presentation is consistent with the reporting of these obligations as liabilities on TVA's balance sheet under generally accepted accounting principles. Table 5-4 presents these alternative financing methods separately from TVA bonds and notes to distinguish between the types of borrowing. Obligations for lease/leasebacks were \$2.2 billion at the end of 2012 and are estimated to fall to \$1.7 billion at the end of 2013 and then increase to \$2.4 billion at the end of 2014. Obligations for prepayments were \$0.6 billion at the end of 2012 and are estimated to be \$0.5 billion at the end of 2013 and \$0.4 billion at the end of 2014.

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

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

A number of Federal agencies borrow from the Bureau of the Public Debt (BPD) or the Federal Financing Bank (FFB), both within the Department of the Treasury. Agency borrowing from the FFB or the BPD is not included in gross Federal debt. It would be double counting to add together (a) the agency borrowing from the BPD or

FFB and (b) the Treasury borrowing from the public that is needed to provide the BPD or FFB with the funds to lend to the agencies.

Debt Held by Government Accounts

Trust funds, and some special funds and public enterprise revolving funds, accumulate cash in excess of current needs in order to meet future obligations. These cash surpluses are generally invested in Treasury debt.

New investment by trust funds and other Government accounts was \$134 billion in 2012. Investment by Government accounts is estimated to be \$76 billion in 2013 and \$105 billion in 2014, as shown in Table 5-5. The holdings of Federal securities by Government accounts are estimated to increase to \$4,951 billion by the end of 2014, or 27 percent of the gross Federal debt. The percentage is estimated to decrease gradually over the next 10 years.

The Government account holdings of Federal securities are concentrated among a few funds: the Social Security Old-Age and Survivors Insurance (OASI) and Disability Insurance (DI) trust funds; the Medicare Hospital Insurance and Supplementary Medical Insurance trust funds; and four Federal employee retirement funds. These Federal employee retirement funds include the Military Retirement Fund and the Civil Service Retirement and Disability Fund (CSRDF), which are trust funds, and the uniformed services Medicare-Eligible Retiree Health Care Fund (MERHCF) and Postal Service Retiree Health Benefits Fund (PSRHBF), which are special funds. At the end of 2014, these Social Security, Medicare, and Federal employee retirement funds are estimated to own 93 percent of the total debt held by Government accounts. During 2012-2014, the Social Security OASI fund has a large surplus and is estimated to invest a total of \$212 billion, 67 percent of total net investment by Government accounts. Over this period, the Military Retirement Fund is projected to invest \$146 billion, 46 percent of the total. Some Government accounts reduce their investments in Federal securities during 2012-2014. During these years, the Social Security DI fund disinvests \$96 billion, or 30 percent of the total net investment and the Medicare Hospital Insurance trust fund disinvests \$61 billion, or 19 percent of the total.

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

First, Treasury issues zero-coupon bonds to a very few Government accounts. Because the purchase price is a small fraction of par value and the amounts are large, the holdings are recorded in Table 5-5 at par value less unamortized discount. The only two Government accounts that held zero-coupon bonds during the period of this table are the Nuclear Waste Disposal Fund in the Department of Energy and the Pension Benefit Guaranty Corporation (PBGC). The total unamortized discount on zero-coupon bonds was \$21.6 billion at the end of 2012.

¹⁶ This budgetary treatment differs from the treatment in the *Monthly Treasury Statement* Table 6 Schedule C, and the *Combined Statement of Receipts, Outlays, and Balances of the United States Government* Schedule 3, both published by the Department of the Treasury. These two schedules, which present debt issued by agencies other than Treasury, exclude the TVA alternative financing arrangements. This difference in treatment is one factor causing minor differences between debt figures reported in the Budget and debt figures reported by Treasury. The other factors are adjustments for the timing of the reporting of Federal debt held by the National Railroad Retirement Investment Trust and treatment of the Federal debt held by the Securities Investor Protection Corporation.

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

| Description | Investment or Disinvestment (-) | | | Holdings, End of 2014 Estimate |
|--|---------------------------------|---------------|---------------|--------------------------------|
| | 2012 Actual | 2013 Estimate | 2014 Estimate | |
| Investment in Treasury debt: | | | | |
| Defense: Host nation support fund for relocation | -24 | 195 | -152 | 859 |
| Energy: | | | | |
| Nuclear waste disposal fund ¹ | 2,051 | 2,650 | 2,650 | 33,520 |
| Uranium enrichment decontamination fund | -351 | -116 | -116 | 3,790 |
| Health and Human Services: | | | | |
| Federal hospital insurance trust fund | -17,647 | -28,369 | -14,884 | 185,039 |
| Federal supplementary medical insurance trust fund | -1,122 | -1,448 | -1,216 | 66,660 |
| Vaccine injury compensation fund | 86 | 93 | 146 | 3,433 |
| Child enrollment contingency fund | 2 | -100 | -97 | 1,899 |
| Homeland Security: | | | | |
| Aquatic resources trust fund | 60 | -197 | -95 | 1,650 |
| Oil spill liability trust fund | 329 | 867 | 540 | 3,960 |
| Housing and Urban Development: | | | | |
| Federal Housing Administration mutual mortgage fund | -1,383 | -2,774 | 13,166 | 13,166 |
| Guarantees of mortgage-backed securities | -16 | 5,642 | 19 | 7,778 |
| Interior: | | | | |
| Abandoned mine reclamation fund | 44 | 19 | -69 | 2,702 |
| Environmental improvement and restoration fund | 40 | 17 | 1 | 1,288 |
| Justice: Assets forfeiture fund | 1,689 | -2,462 | 659 | 2,290 |
| Labor: | | | | |
| Unemployment trust fund | 4,642 | 4,327 | 2,000 | 27,000 |
| Pension Benefit Guaranty Corporation ¹ | 365 | 1,207 | 1,580 | 18,643 |
| State: Foreign service retirement and disability trust fund | 496 | 516 | 522 | 17,931 |
| Transportation: | | | | |
| Airport and airway trust fund | 1,784 | -26 | 277 | 10,676 |
| Transportation trust fund | -6,332 | -2,870 | -300 | 6,800 |
| Aviation insurance revolving fund | 188 | -34 | 109 | 1,893 |
| Treasury: | | | | |
| Exchange stabilization fund | -41 | 70 | 250 | 23,000 |
| Treasury forfeiture fund | 46 | 185 | 144 | 1,960 |
| Comptroller of the Currency assessment fund | 188 | -59 | ..... | 1,300 |
| Veterans Affairs: | | | | |
| National service life insurance trust fund | -629 | -697 | -706 | 5,509 |
| Veterans special life insurance fund | -28 | -55 | -67 | 1,831 |
| Corps of Engineers: Harbor maintenance trust fund | 684 | 433 | 250 | 7,569 |
| Other Defense-Civil: | | | | |
| Military retirement trust fund | 50,399 | 47,369 | 48,603 | 472,411 |
| Medicare-eligible retiree health care fund | 14,372 | 9,175 | 5,684 | 190,972 |
| Education benefits fund | -117 | 22 | -132 | 1,781 |
| Environmental Protection Agency: | | | | |
| Leaking underground storage tank trust fund | -2,191 | 76 | 80 | 1,415 |
| Hazardous substance trust fund | -259 | 539 | -294 | 3,495 |
| International Assistance Programs: Overseas Private Investment Corporation | 131 | 77 | 34 | 5,353 |
| Office of Personnel Management: | | | | |
| Civil service retirement and disability trust fund | 22,742 | 15,721 | 11,513 | 853,789 |
| Postal Service retiree health benefits fund | 1,640 | 7,323 | 7,228 | 59,898 |
| Employees life insurance fund | 1,572 | 272 | 1,321 | 42,843 |
| Employees health benefits fund | 2,067 | 302 | 265 | 21,828 |
| Social Security Administration: | | | | |
| Federal old-age and survivors insurance trust fund ² | 94,166 | 65,317 | 52,493 | 2,704,507 |
| Federal disability insurance trust fund ² | -29,621 | -32,902 | -33,421 | 66,022 |

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

| Description | Investment or Disinvestment (-) | | | Holdings, End of 2014 Estimate |
|---|---------------------------------|---------------|----------------|--------------------------------|
| | 2012 Actual | 2013 Estimate | 2014 Estimate | |
| District of Columbia: Federal pension fund | -15 | 18 | 20 | 3,681 |
| Farm Credit System Insurance Corporation: | | | | |
| Farm Credit System Insurance fund | -117 | 246 | 199 | 3,540 |
| Federal Communications Commission: | | | | |
| Universal service fund | 726 | 178 | -289 | 6,430 |
| Federal Deposit Insurance Corporation: | | | | |
| Deposit insurance fund | 1,573 | -12,976 | 6,638 | 30,160 |
| Senior unsecured debt guarantee fund | -6,198 | -1,104 | ..... | ..... |
| FSLIC resolution fund | 50 | 43 | 4 | 3,471 |
| National Credit Union Administration: | | | | |
| Share insurance fund | -435 | 302 | 219 | 10,818 |
| Central liquidity facility | -155 | -1,750 | 9 | 201 |
| Postal Service funds ² | 776 | -* | ..... | 2,590 |
| Railroad Retirement Board trust funds | 193 | -8 | -189 | 2,138 |
| Securities Investor Protection Corporation ³ | 176 | 227 | 102 | 1,936 |
| United States Enrichment Corporation fund | 5 | 10 | 10 | 1,618 |
| Other Federal funds | -1,717 | -25 | 245 | 6,178 |
| Other trust funds | -88 | 429 | 334 | 3,789 |
| Unrealized discount ¹ | -1,031 | ..... | ..... | -2,038 |
| Total, investment in Treasury debt¹ | 133,763 | 75,891 | 105,287 | 4,950,971 |
| Investment in agency debt: | | | | |
| Railroad Retirement Board: | | | | |
| National Railroad Retirement Investment Trust | -1 | ..... | ..... | 5 |
| Total, investment in agency debt¹ | -1 | ..... | ..... | 5 |
| Total, investment in Federal debt¹ | 133,762 | 75,891 | 105,287 | 4,950,976 |
| Memorandum: | | | | |
| Investment by Federal funds (on-budget) | 12,668 | 6,048 | 38,399 | 436,184 |
| Investment by Federal funds (off-budget) | 776 | -* | ..... | 2,590 |
| Investment by trust funds (on-budget) | 56,804 | 37,429 | 47,816 | 1,743,711 |
| Investment by trust funds (off-budget) | 64,545 | 32,415 | 19,072 | 2,770,529 |
| Unrealized discount ¹ | -1,031 | ..... | ..... | -2,038 |

* \$500 thousand or less.

¹ Debt held by Government accounts is measured at face value except for the Treasury zero-coupon bonds held by the Nuclear waste disposal fund and the Pension Benefit Guaranty Corporation (PBGC), which are recorded at market or redemption price; and the unrealized discount on Government account series, which is not distributed by account. Changes are not estimated in the unrealized discount. If recorded at face value, at the end of 2012 the debt figures would be \$21.3 billion higher for the Nuclear waste disposal fund and \$0.2 billion higher for PBGC than recorded in this table.

² Off-budget Federal entity.

³ Amounts on calendar-year basis.

Second, Treasury subtracts the unrealized discount on other Government account series securities in calculating “net Federal securities held as investments of Government accounts.” Unlike the discount recorded for zero-coupon bonds and debt held by the public, the unrealized discount is the discount at the time of issue and is not amortized over the term of the security. In Table 5-5 it is shown as a separate item at the end of the table and not distributed by account. The amount was \$2.0 billion at the end of 2012.

Debt Held by the Federal Reserve

The Federal Reserve acquires marketable Treasury securities as part of its exercise of monetary policy. For purposes of the Budget and reporting by the Department of the Treasury, the transactions of the Federal Reserve are considered to be non-budgetary, and accordingly the Federal Reserve’s holdings of Treasury securities are included as part of debt held by the public.¹⁷ The Federal Reserve’s holdings of Treasury securities have fluctuated

¹⁷ For further detail on the monetary policy activities of the Federal Reserve and the treatment of the Federal Reserve in the Budget, see Chapter 12, “Coverage of the Budget.”

significantly in recent years, due largely to the Federal Reserve's financial stabilization activities.¹⁸ Federal Reserve holdings fell from \$780 billion (15 percent of debt held by the public) at the end of 2007 to \$491 billion (8 percent of debt held by the public) at the end of 2008, and then increased to \$1,665 billion (16 percent of debt held by the public) at the end of 2011. Federal Reserve holdings declined slightly to \$1,645 billion (15 percent of debt held by the public) at the end of 2012. The historical holdings of the Federal Reserve are presented in Table 7.1 in the *Historical Tables* volume of the Budget. The Budget does not project Federal Reserve holdings for future years.

Limitations on Federal Debt

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

The third part of Table 5–2 compares total Treasury debt with the amount of Federal debt that is subject to the limit. Nearly all Treasury debt is subject to the debt limit.

A large portion of the Treasury debt not subject to the general statutory limit was issued by the Federal Financing Bank. The FFB is authorized to have outstanding up to \$15 billion of publicly issued debt. It issued \$14 billion of securities to the CSRDF on November 15, 2004, in exchange for an equal amount of regular Treasury securities. The FFB securities have the same interest rates and maturities as the regular Treasury securities for which they were exchanged. The securities mature on dates from June 30, 2009, through June 30, 2019. At the end of 2012, \$7 billion of these securities remained outstanding.

The Housing and Economic Recovery Act of 2008 created a new type of debt not subject to limit. This debt, termed “Hope Bonds,” has been issued by Treasury to the FFB for the HOPE for Homeowners program. The outstanding balance of Hope Bonds was \$493 million at the end of 2012 and is projected to fall to \$45 million at the end of 2013 and then to increase by very small amounts annually in subsequent years.

The other Treasury debt not subject to the general limit consists almost entirely of silver certificates and other currencies no longer being issued. It was \$486 million at the end of 2012 and is projected to gradually decline over time.

The sole agency debt currently subject to the general limit, \$209,000 at the end of 2012, is certain debentures issued by the Federal Housing Administration.¹⁹

¹⁸ For more information on the financial stabilization activities of the Federal Reserve, see Chapter 3, “Financial Stabilization Efforts and Their Budgetary Effects.”

¹⁹ At the end of 2012, there were also \$18 million of FHA debentures

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

The comparison between Treasury debt and debt subject to limit also includes an adjustment for measurement differences in the treatment of discounts and premiums. As explained earlier in this chapter, debt securities may be sold at a discount or premium, and the measurement of debt may take this into account rather than recording the face value of the securities. However, the measurement differs between gross Federal debt (and its components) and the statutory definition of debt subject to limit. An adjustment is needed to derive debt subject to limit (as defined by law) from Treasury debt. The amount of the adjustment was \$11.4 billion at the end of 2012 compared with the total unamortized discount (less premium) of \$42.5 billion on all Treasury securities.

Changes in the debt limit.—The statutory debt limit has been changed many times. Since 1960, Congress has passed 80 separate acts to raise the limit, revise the definition, extend the duration of a temporary increase, or temporarily suspend the limit.²⁰

The Budget Control Act of 2011 created a framework for increasing the debt limit under the terms of that act. The act allowed for a total increase in the debt limit of \$2.1 trillion, which came in three tranches based on the President's submission of a series of written certifications that such increases are necessary because the debt subject to limit is within \$100 billion of the current limit. The certification triggering the first two increases was submitted immediately following the Act's enactment in August 2011. Consequently, the debt limit was first increased by \$400 billion, from \$14,294 billion to \$14,694 billion, effective August 2, 2011, and then by an additional \$500 billion, from \$14,694 billion to \$15,194 billion, effective after the close of business on September 21, 2011. The Act also provided for a third increase of \$1,200 billion, to \$16,394 billion, scheduled to occur 15 calendar days after the President submitted certification to Congress that the debt subject to limit was within \$100 billion of the \$15,194 billion limit (unless Congress enacted a joint resolution of disapproval).²¹ The certification for the third increase was submitted on January 12, 2012, and the increase took effect after the close of business on January 27.

The \$16,394 billion ceiling was reached on December 31, 2012. The No Budget, No Pay Act of 2013 temporarily suspends the debt limit from February 4, 2013, through May 18, 2013. On May 19, 2013, the debt limit will be

not subject to limit.

²⁰ The Acts and the statutory limits since 1940 are listed in *Historical Tables, Budget of the United States Government, Fiscal Year 2014*, Table 7.3.

²¹ Under the Act, if the constitutional amendment voted on pursuant to Title II of the Act (“Balanced Budget Amendment”) had been submitted to the States for ratification, the increase would have been \$1,500 billion. If legislation from the Joint Select Committee on Deficit Reduction had been enacted pursuant to Title IV of the Act, which achieved an amount of deficit reduction greater than \$1,200 billion, the increase would have been equal to that amount, but not greater than \$1,500 billion.

raised by an amount equivalent to the debt that was issued during that period in order to fund commitments requiring payment before May 19.

At many times in the past several decades, including 2013, the Government has reached the statutory debt limit before an increase has been enacted. When this has occurred, it has been necessary for the Department of the Treasury to take administrative actions to meet the Government's obligation to pay its bills and invest its trust funds while remaining below the statutory limit. One such measure is the partial or full disinvestment of the Government Securities Investment Fund (G-Fund). This fund is one component of the Thrift Savings Plan (TSP), a defined contribution pension plan for Federal employees. The Treasury Secretary has statutory authority to suspend investment of the G-Fund in Treasury securities as needed to prevent the debt from exceeding the debt limit. Treasury determines each day the amount of investments that would allow the fund to be invested as fully as possible without exceeding the debt limit. At the end of 2012, the TSP G-Fund had an outstanding balance of \$154 billion. The Secretary is also authorized to suspend investments in the CSRDF and to declare a debt issuance suspension period, which allows him or her to redeem a limited amount of securities held by the CSRDF. The Postal Accountability and Enhancement Act of 2006 provides that investments in the Postal Service Retiree Health Benefits Fund shall be made in the same manner as investments in the CSRDF.²² Therefore, Treasury is able to take similar administrative actions with the PSRHF. The law requires that when any such actions are taken with the G-Fund, the CSRDF, or the PSRHF, the Secretary is required to make the fund whole after the debt limit has been raised by restoring the forgone interest and investing the fund fully. Another measure for staying below the debt limit is disinvestment of the Exchange Stabilization Fund. The outstanding balance in the Exchange Stabilization Fund was \$23 billion at the end of 2012.

As the debt nears the limit, including in 2013, Treasury has also suspended acceptance of subscriptions to State and Local Government Series securities to reduce unanticipated fluctuations in the level of the debt.

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

In 2011, Treasury also allowed the cash balance in the temporary Supplementary Financing Program to decline from \$200 billion to zero by not rolling over the bills as they matured. Because Treasury does not currently have any plans to resume the SFP, this action is not anticipated to be an available administrative action in the future.

The debt limit has always been increased prior to the exhaustion of Treasury's limited available administrative actions to continue to finance Government operations when the statutory ceiling has been reached. Failure

to enact a debt limit increase before these actions were exhausted would have significant and long-term negative consequences. Without an increase, Treasury would be unable to make timely interest payments or redeem maturing securities. Investors would cease to view U.S. Treasury securities as free of credit risk and Treasury's interest costs would increase. Because interest rates throughout the economy are benchmarked to the Treasury rates, interest rates for State and local governments, businesses, and individuals would also rise. Foreign investors would likely shift out of dollar-denominated assets, driving down the value of the dollar and further increasing interest rates on non-Federal, as well as Treasury, debt. In addition, the Federal Government would be forced to delay or discontinue payments on its broad range of obligations, including Social Security and other payments to individuals, Medicaid and other grant payments to States, individual and corporate tax refunds, Federal employee salaries, payments to vendors and contractors, and other obligations.

The debt subject to limit is estimated to increase to \$17,227 billion by the end of 2013 and to \$18,225 billion by the end of 2014.

Federal funds financing and the change in debt subject to limit.—The change in debt held by the public, as shown in Table 5–2, and the change in debt net of financial assets are determined primarily by the total Government deficit or surplus. The debt subject to limit, however, includes not only debt held by the public but also debt held by Government accounts. The change in debt subject to limit is therefore determined both by the factors that determine the total Government deficit or surplus and by the factors that determine the change in debt held by Government accounts. The effect of debt held by Government accounts on the total debt subject to limit can be seen in the second part of Table 5–2. The change in debt held by Government accounts results in 17 percent of the estimated total increase in debt subject to limit from 2013 through 2023.

The budget is composed of two groups of funds, Federal funds and trust funds. The Federal funds, in the main, are derived from tax receipts and borrowing and are used for the general purposes of the Government. The trust funds, on the other hand, are financed by taxes or other receipts dedicated by law for specified purposes, such as for paying Social Security benefits or making grants to State governments for highway construction.²³

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

²² Both the CSRDF and the PSRHF are administered by the Office of Personnel Management.

²³ For further discussion of the trust funds and Federal funds groups, see Chapter 27, "Trust Funds and Federal Funds."

Table 5-6. FEDERAL FUNDS FINANCING AND CHANGE IN DEBT SUBJECT TO STATUTORY LIMIT
(In billions of dollars)

| Description | Actual 2012 | Estimate | | | | | | | | | | |
|--|----------------|----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
| Change in Gross Federal Debt: | | | | | | | | | | | | |
| Federal funds deficit (+) | 1,176.8 | 1,040.6 | 821.2 | 694.6 | 679.3 | 663.5 | 642.7 | 591.0 | 581.8 | 585.0 | 567.5 | 487.3 |
| Other transactions affecting borrowing from the public— Federal funds ¹ | 64.5 | 150.6 | 149.5 | 161.1 | 155.2 | 143.6 | 136.5 | 132.0 | 127.1 | 124.3 | 119.3 | 118.1 |
| Increase (+) or decrease (–) in Federal debt held by Federal funds | 13.4 | 6.0 | 38.4 | 46.5 | 46.0 | 43.9 | 41.6 | 46.7 | 51.1 | 40.2 | 44.8 | 45.9 |
| Adjustments for trust fund surplus/deficit not invested/ disinvested in Federal securities ² | 32.9 | 1.1 | –11.5 | –1.3 | –1.7 | –1.1 | –1.2 | –1.2 | –1.1 | –1.4 | –1.0 | –0.3 |
| Change in unrealized discount on Federal debt held by Government accounts | –1.0 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Total financing requirements | 1,286.7 | 1,198.3 | 997.6 | 901.0 | 878.8 | 849.9 | 819.6 | 768.5 | 758.9 | 748.1 | 730.5 | 651.0 |
| Change in Debt Subject to Limit: | | | | | | | | | | | | |
| Change in gross Federal debt | 1,286.7 | 1,198.3 | 997.6 | 901.0 | 878.8 | 849.9 | 819.6 | 768.5 | 758.9 | 748.1 | 730.5 | 651.0 |
| Less: increase (+) or decrease (–) in Federal debt not subject to limit | –1.1 | –1.3 | –0.4 | –* | –0.6 | –0.3 | * | 0.5 | 1.4 | 0.9 | 0.8 | –0.1 |
| Less: change in adjustment for discount and premium ³ | 7.3 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Total, change in debt subject to limit | 1,280.5 | 1,199.6 | 998.0 | 901.0 | 879.4 | 850.2 | 819.6 | 768.0 | 757.5 | 747.2 | 729.8 | 651.1 |
| Memorandum: | | | | | | | | | | | | |
| Debt subject to statutory limit ⁴ | 16,027.0 | 17,226.7 | 18,224.7 | 19,125.7 | 20,005.1 | 20,855.3 | 21,674.9 | 22,442.9 | 23,200.4 | 23,947.6 | 24,677.4 | 25,328.5 |

* \$50 million or less.

¹ Includes Federal fund transactions that correspond to those presented in Table 5-2, but that are for Federal funds alone with respect to the public and trust funds.

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

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

⁴ Legislation enacted February 4, 2013, (P.L. 113-3) temporarily suspended the debt limit through May 18, 2013.

surplus and the trust fund surplus. Trust fund surpluses are almost entirely invested in securities subject to the debt limit, and trust funds hold most of the debt held by Government accounts. The trust fund surplus reduces the total budget deficit or increases the total budget surplus, decreasing the need to borrow from the public or increasing the ability to repay borrowing from the public. When the trust fund surplus is invested in Federal securities, the debt held by Government accounts increases, offsetting the decrease in debt held by the public by an equal amount. Thus, there is no net effect on gross Federal debt.

Table 5-6 derives the change in debt subject to limit. In 2012 the Federal funds deficit was \$1,177 billion, and other factors increased financing requirements by \$65 billion. The change in the Treasury operating cash balance increased financing requirements by \$27 billion, the net financing disbursements of credit financing accounts increased financing requirements by \$37 billion, and other factors increased financing requirements by \$1 billion. In addition, special funds and revolving funds, which are part of the Federal funds group, invested a net of \$13 billion in Treasury securities. A \$33 billion adjustment is also made for the difference between the trust fund surplus or deficit and the trust funds' investment or disinvestment in Federal securities (including the changes in the National Railroad Retirement Investment Trust's investments in non-Federal securities). As a net result of all these factors, \$1,287 billion in financing was required, increasing gross Federal debt by that amount. Since Federal debt not subject to limit decreased by \$1 billion and the adjustment

for discount and premium changed by \$7 billion, the debt subject to limit increased by \$1,280 billion, while debt held by the public increased by \$1,153 billion.

Debt subject to limit is estimated to increase by \$1,200 billion in 2013 and by \$998 billion in 2014. The projected increases in the debt subject to limit are caused by the continued Federal funds deficit, supplemented by the other factors shown in Table 5-6. While debt held by the public increases by \$4,673 billion from the end of 2012 through 2018, debt subject to limit increases by \$5,648 billion.

Foreign Holdings of Federal Debt

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

Foreign holdings of Federal debt are presented in Table 5-7. At the end of 2012, foreign holdings of Treasury debt were \$5,475 billion, which was 49 percent of the total debt held by the public.²⁴ Foreign central banks and foreign official institutions owned 72 percent of the foreign holdings

²⁴ The debt calculated by the Bureau of Economic Analysis, Department of Commerce, is different, though similar in size, because of a different method of valuing securities.

Table 5-7. FOREIGN HOLDINGS OF FEDERAL DEBT
(Dollar amounts in billions)

| Fiscal Year | Debt held by the public | | | Change in debt held by the public | |
|-------------|-------------------------|----------------------|--------------------|-----------------------------------|----------------------|
| | Total | Foreign ¹ | Percentage foreign | Total ² | Foreign ¹ |
| 1965 | 260.8 | 12.3 | 4.7 | 3.9 | 0.3 |
| 1970 | 283.2 | 14.0 | 5.0 | 5.1 | 3.8 |
| 1975 | 394.7 | 66.0 | 16.7 | 51.0 | 9.2 |
| 1980 | 711.9 | 121.7 | 17.1 | 71.6 | 1.4 |
| 1985 | 1,507.3 | 222.9 | 14.8 | 200.3 | 47.3 |
| 1990 | 2,411.6 | 463.8 | 19.2 | 220.8 | 72.0 |
| 1995 | 3,604.4 | 820.4 | 22.8 | 171.3 | 138.4 |
| 2000 | 3,409.8 | 1,038.8 | 30.5 | -222.6 | -242.6 |
| 2005 | 4,592.2 | 1,929.6 | 42.0 | 296.7 | 135.1 |
| 2006 | 4,829.0 | 2,025.3 | 41.9 | 236.8 | 95.7 |
| 2007 | 5,035.1 | 2,235.3 | 44.4 | 206.2 | 210.0 |
| 2008 | 5,803.1 | 2,802.4 | 48.3 | 767.9 | 567.1 |
| 2009 | 7,544.7 | 3,570.6 | 47.3 | 1,741.7 | 768.2 |
| 2010 | 9,018.9 | 4,324.2 | 47.9 | 1,474.2 | 753.6 |
| 2011 | 10,128.2 | 4,912.2 | 48.5 | 1,109.3 | 588.0 |
| 2012 | 11,281.1 | 5,475.4 | 48.5 | 1,152.9 | 563.2 |

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

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

of Federal debt; private investors owned nearly all the rest. At the end of 2012, the nations holding the largest shares of U.S. Federal debt were China and Japan, which each held 21 percent of all foreign holdings. All of the foreign holdings of Federal debt are denominated in dollars.

Although the amount of foreign holdings of Federal debt has grown greatly over this period, the proportion that foreign entities and individuals own, after increasing abruptly in the very early 1970s, remained about 15–20 percent until the mid-1990s. During 1995–97, however, growth in foreign holdings accelerated, reaching 33 percent by the end of 1997. Foreign holdings of Federal debt resumed growth in the following decade, increasing from 34 percent at the end of 2002 to 42 percent at the end of 2004 and to 48 percent at the end of 2008. Since 2008, foreign holdings have remained relatively stable as a percentage of Federal debt. Foreign holdings were 49 percent at the end of 2012. The increase in foreign holdings was about 49 percent of total Federal borrowing from the public in 2012 and 52 percent over the last five years.

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

tal inflow includes deposits in U.S. financial intermediaries that themselves buy Federal debt.

Federal, Federally Guaranteed, and Other Federally Assisted Borrowing

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

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