



Interest Payments on the Federal Debt: A Primer

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Summary

Of the three broad categories of federal spending, the only category that cannot be reduced by legislative action is net interest payments. Net interest payments accounted for about 7% of federal spending between 1962 and the late 1970s. With the high interest rates in the late 1970s and the large budget deficits in the 1980s, net interest payments eventually rose to 15% of federal spending. The low interest rates combined with budget discipline in the 1990s reduced net interest payments back down to 7% of federal outlays by 2003. Low interest rates kept net interest payments low to 2009. However, net interest payments are projected to increase dramatically over the next 10 years. This report will be updated annually.

Contents

| | |
|--|---|
| Federal Debt | 1 |
| Interest Payments on the Federal Debt..... | 3 |
| Determinants of Net Interest Payments..... | 4 |

Figures

| | |
|---|---|
| Figure 1. Total U.S. Federal Debt and Debt Held by the Public, FY1962-FY2020..... | 2 |
| Figure 2. Gross and Net Interest on Treasury Debt Securities, FY1962-FY2020 | 3 |
| Figure 3. Interest Rate, Net Interest Payments, and Debt Held by the Public, FY1967- FY2009..... | 5 |

Contacts

| | |
|----------------------------------|---|
| Author Contact Information | 6 |
|----------------------------------|---|

Federal spending is divided into three broad categories. First, discretionary spending is provided and controlled by the annual appropriations acts and includes such things as defense and education spending.¹ Discretionary spending currently accounts for about 35% of federal outlays. Second, direct or mandatory spending is provided and controlled by laws other than appropriation acts and includes spending for such programs as Social Security and Medicare.² Mandatory spending accounts for over half of federal outlays. Lastly, net interest payments are interest payments on federal debt held by the public and currently account for almost 5% of federal outlays. The Congressional Budget Office (CBO) in their baseline projection has net interest payments growing to almost 14% of federal outlays by FY2020.

In February 2010, President Obama created the bipartisan National Commission on Fiscal Responsibility and Reform. The Commission's task is to identify policies that will improve the fiscal situation in the medium term and achieve fiscal sustainability in the long term. The policies could involve changes to the growth of entitlement spending, increases in revenues, and decreases in other spending. The recommendations of the Commission could serve as a basis for legislation to reduce federal deficits by increasing taxes and reducing spending. The only category of federal spending that cannot be reduced by legislative action (barring default on the public debt) is net interest payments.

While Congress cannot affect current net interest payments, congressional actions on the budget will affect future interest payments. This report examines net interest payments and the mechanisms through which Congress can affect net interest payments.

Federal Debt

Federal debt is composed of debt issued by the Treasury (Treasury securities) and debt securities issued by other federal agencies (agency securities). At the end of 2009, total federal securities amounted to more than \$12 trillion, of which only \$23.5 billion (less than 0.2%) were agency securities. Federal debt is held either by the public (that is, private investors) or in government accounts. Currently, about 36% of federal debt is held in various government accounts. For example, the two Social Security trust funds currently hold about \$2.5 trillion in Treasury securities. The rest of the federal debt is held by the public (foreign and domestic), including individuals, pension funds, banks, and other investors.

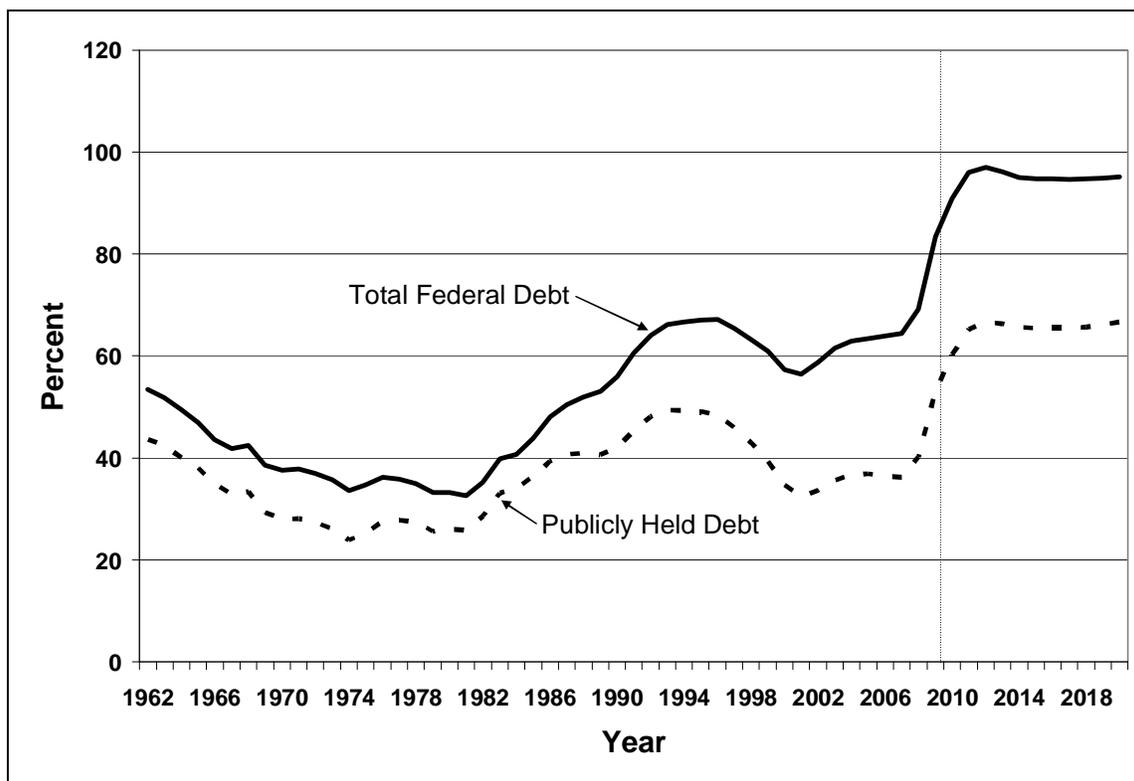
Figure 1 shows the level of total federal debt and debt held by the public since 1962 as a percentage of gross domestic product (GDP). Both measures of debt fell as a proportion of GDP between 1962 and the mid-1970s. Beginning in 1981, total federal debt began to climb as tax cuts, increases in defense spending, and a recession increased budget deficits. Total debt continued growing relative to GDP until the mid-1990s. As budget deficits gave way to budget surpluses after 1997, and as the economy expanded, federal debt fell as a percentage of GDP. The mild recession and the tax cuts in 2001 moved the federal budget back into deficit and federal debt consequently increased.

¹ For more information on discretionary spending see CRS Report RL34424, *Trends in Discretionary Spending*, by D. Andrew Austin and Mindy R. Levit.

² For more information on mandatory spending see CRS Report RL33074, *Mandatory Spending Since 1962*, by D. Andrew Austin and Mindy R. Levit.

Between 1962 and 1982, total federal debt and debt held by the public followed roughly parallel trends. After the mid-1980s, however, trends in total federal debt and debt held by the public began to diverge. This was mainly due to changes in the Social Security program enacted in 1983 which increased revenues and reduced the growth in benefit payments. As a result, the Social Security program began to run surpluses (surplus monies are invested in Treasury securities), increasing the share of federal debt held in government accounts. CBO's baseline projection indicates that total federal debt and debt held by the public will continue to diverge over the next 10 years.³

Figure I. Total U.S. Federal Debt and Debt Held by the Public, FY1962-FY2020
(as a percentage of GDP)



Source: OMB and CBO.

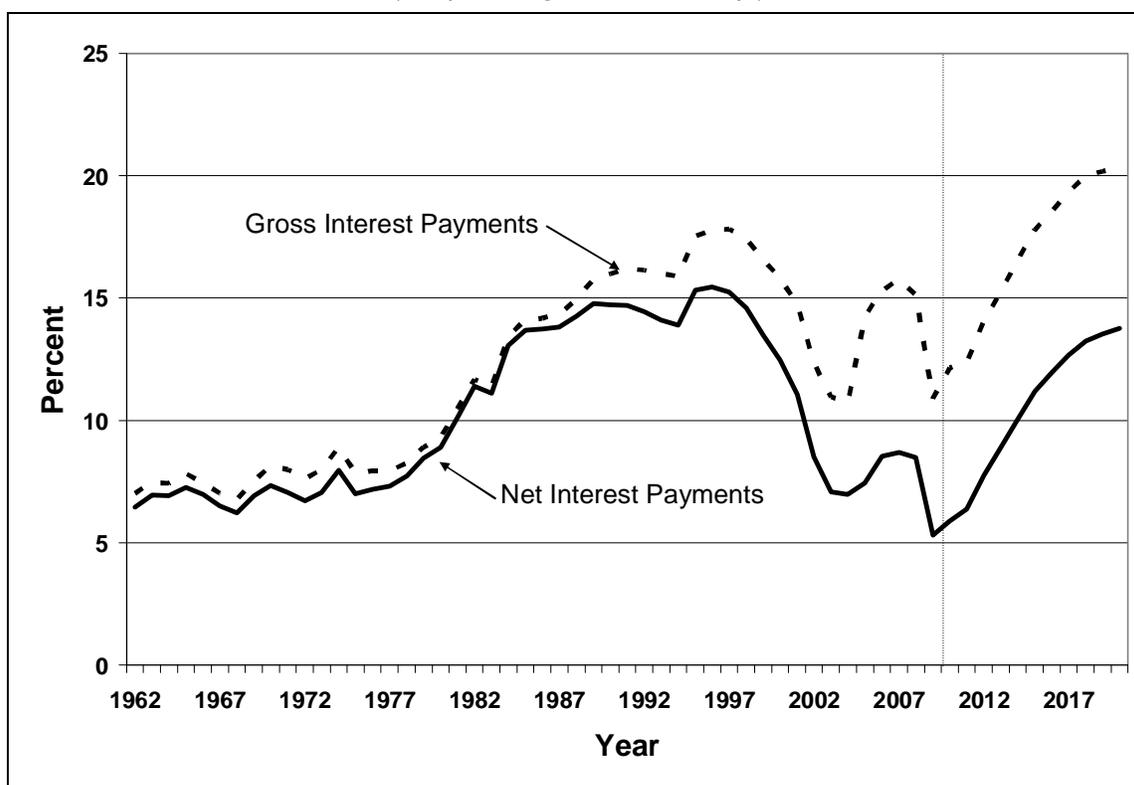
³ CBO's baseline projection starts with Congress's most recent budgetary decisions and then assumes that no policy changes will be made over the projection period. For entitlement programs CBO assumes that current laws will continue unchanged and by law assumes that discretionary spending will grow at the rate of inflation throughout the projection period. For revenues, CBO assumes that the provisions in the 2001 and 2003 tax cuts will expire on schedule, and that more individuals will be subject to the alternative minimum tax (AMT). Furthermore, the baseline projection does not include the budgetary effects of any new stimulus legislation. CBO's baseline is not intended to be a prediction of future budgetary outcomes. See CBO, *The Budget and Economic Outlook: Fiscal Years 2010 to 2020*, January 2010.

Interest Payments on the Federal Debt

In FY2009, total or gross interest on Treasury debt securities amounted to about \$383 billion—about 11% of federal outlays. However, not all of this flowed from the Treasury to the public—about \$200 billion was credited to government accounts such as the Social Security trust funds. The interest payments on the Treasury securities held in government accounts do not represent funds or real resources available for spending. Rather these interest payments are merely a bookkeeping entry transferring funds from one government account to another.⁴

The upper line in **Figure 2** shows the evolution of gross interest payments since 1962. Gross interest payments remained at about 7% to 8% of outlays until the late 1970s. After 1978, interest payments rapidly increased to reach almost 18% of outlays by 1997. After 1997, gross interest payments fell as a percentage of outlays as interest rates fell and the federal budget moved from deficit to surplus. When federal budget deficits reappeared in 2002, gross interest payments began rising.

Figure 2. Gross and Net Interest on Treasury Debt Securities, FY1962-FY2020
(as a percentage of federal outlays)



Source: OMB and CBO.

⁴ In essence, the interest payments are used to purchase more Treasury securities. While not representing real resources available for current spending, the government will eventually have to find real resources (by raising taxes or reducing spending) for the redemption of these securities, under current law.

Net interest payments are the component of gross interest payments that involves a transfer of funds or real resources from the government to the public. The lower line in **Figure 2** shows the evolution of net interest payments since 1962. For the most part, net interest payments followed the same basic trend as gross interest payments. However, the gap between gross and net interest payments widened after the mid-1980s.⁵ As with gross interest payments, net interest payments fell as a percentage of federal outlays when federal debt declined in the late-1990s. Net interest payments began to increase in 2004 but leveled out because of falling interest rates. Additionally, net interest payments fell dramatically in 2009 due to very low interest rates. Large budget deficits in 2009 and 2010, however, will lead to rising net interest payments for the next five to six years.⁶ CBO projects that, under plausible scenarios, net interest payments could continue rising indefinitely.⁷

Determinants of Net Interest Payments

The primary determinants of net interest payments are (1) the interest rate or yield on U.S. Treasury securities, and (2) the level of debt held by the public. **Figure 3** shows the evolution of net interest payments, debt held by the public, and the interest rate since 1967. The interest rate is the yield on five-year constant maturity U.S. Treasury bonds. Both net interest payments and debt held by the public are expressed as a percentage of GDP, and are indexed so that the value in 1967 is equal to one.⁸

Net interest payments increased rapidly beginning in 1977 at about the same time that interest rates increased dramatically (see **Figure 3**). Net interest payments continued to increase after interest rates fell in the early 1980s because of the increase in debt held by the public. The increase in debt held by the public was due to the large budget deficits in the first years of the Reagan Administration and counteracted the effect of falling interest rates on net interest payments. As both interest rates and debt held by the public fell after 1997, net interest payments fell as a percentage of GDP and as a proportion of federal outlays.

The government can, to some extent, control the effective interest rate paid on its debt by varying the maturity of its securities. The federal government issues both short-term and long-term debt. The yield on Treasury securities varies with the maturity of the securities. Typically, short-term securities have a lower yield than longer-term securities, and the yield curve, therefore, is upward sloping.⁹ Occasionally, the yield curve will invert with longer-term securities having a lower yield than short-term securities, but this happens neither often nor for extended periods.

⁵ The widening of this gap is due, in part, to the increases in the Social Security trust fund resulting from the 1983 amendments to the Social Security Act. These amendments led to increasing revenues to the Social Security program, and reduced the growth in benefits.

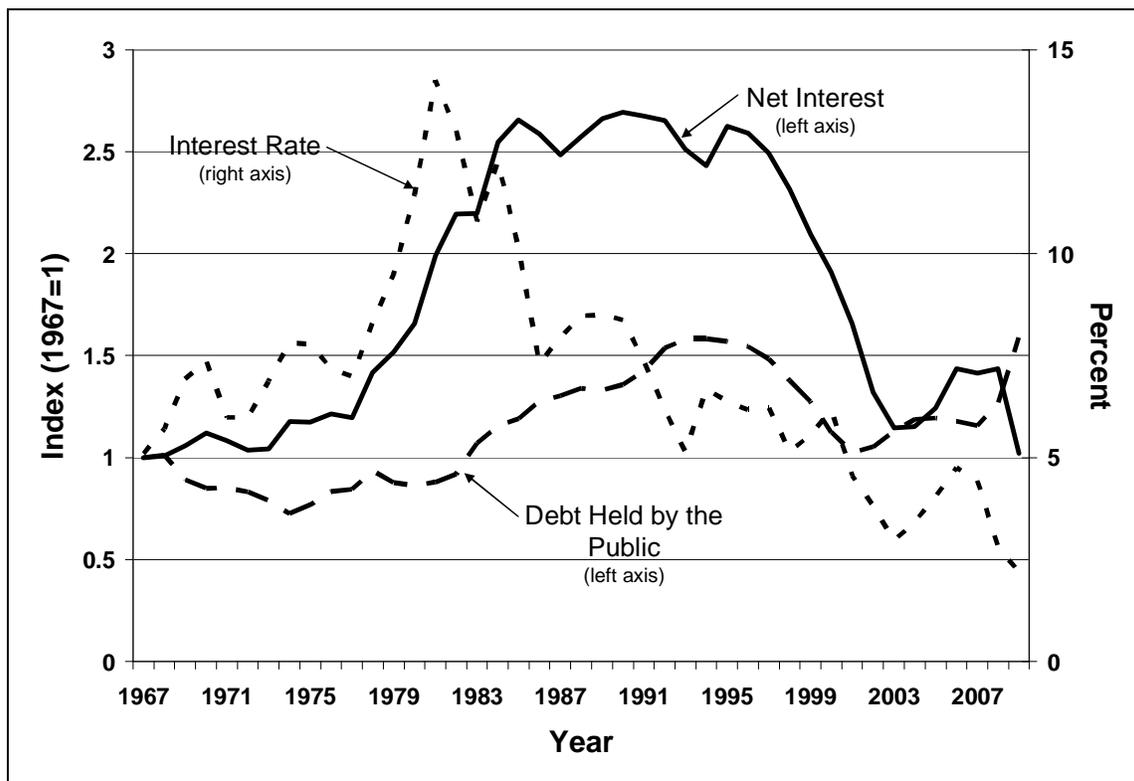
⁶ CBO projects that the deficit will be more than \$1,300 billion in 2010 and \$980 billion in 2011. See CBO, *Budget and Economic Outlook*, January 2010.

⁷ See CBO, *The Long-term Budget Outlook*, June 2010.

⁸ The index is created by dividing the value in each year by the value in 1967. This is done so that both series fit on the same graph.

⁹ The yield curve is the relationship of the yield on securities and the maturity of those securities.

Figure 3. Interest Rate, Net Interest Payments, and Debt Held by the Public, FY1967-FY2009



Source: OMB and Federal Reserve Board.

A primary goal of debt management is to obtain the lowest borrowing cost over time.¹⁰ Over the past 30 years, the mean maturity of marketable Treasury securities held by private investors has varied between about three years and six years. Since 2000, the range has narrowed to between five and six years. However, this apparent stability masks changes in the types of securities issued. In 2001, for example, the Treasury stopped issuing 30-year bonds.¹¹ Although shorter-term Treasury securities tend to have lower yields than longer-term securities, they also are more volatile. Consequently, the financing costs of short-term securities can change dramatically over fairly short periods. This volatility and uncertainty complicate efforts to obtain the lowest borrowing costs over time.

Congressional actions affecting the budget deficit will affect federal debt, which, in turn, affects future net interest payments. Budget deficits and federal debt can also affect the interest rates on Treasury securities.¹² Increasing federal debt will increase the supply of Treasury securities. This will tend to push down the price and increase the yield of these securities.¹³ Recent studies have estimated that increasing debt held by the public by one percent of GDP will increase future

¹⁰ See CRS Report RL34682, *Federal Debt Management: Concepts, Options, and Policies (1945-2008)*, by James M. Bickley.

¹¹ Treasury began issuing 30-year bonds again in February 2006.

¹² The strength of the economy, inflation expectations, and the actions of the Federal Reserve Board also have an important effect on interest rates.

¹³ There is an inverse relationship between the price of a bond and the yield of the bond.

interest rates by two to six basis points (0.02 to 0.06 percentage points).¹⁴ Thus budget deficits increase federal debt and future interest rates, which in turn increase future net interest payments.

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¹⁴ See Eric Engen and R. Glenn Hubbard, *Federal Government Debts and Interest Rates*, National Bureau of Economic Research, Working Paper no. 10681, August 2004; William G. Gale and Peter R. Orszag, "Budget Deficits, National Saving, and Interest Rates," *Brookings Papers on Economic Activity*, vol. 2004, no. 2 (2004), pp. 101-187; and Thomas Laubach, *New Evidence on the Interest Rate Effects of Budget Deficits and Debt*, Board of Governors of the Federal Reserve System, Finance and Economics Discussion paper no. 2003-13, May 2003.