

Unsustainable Fiscal Policy: Implications for Monetary Policy

By Renee Haltom and John A. Weinberg

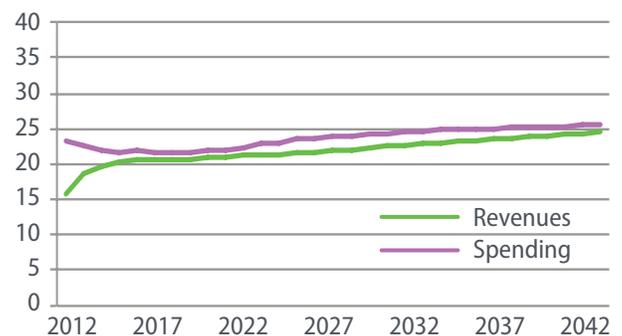
The debt of the U.S. government is at historically high levels, but how do we know whether debt levels are worrisome? This *Economic Brief* argues that the current fiscal position is not sustainable.¹ Though financial markets seem unconcerned, for the time being, about U.S. fiscal health, as evidenced by low rates on Treasury securities, lawmakers should not be complacent. Expectations are liable to change as large fiscal imbalances persist, with potentially devastating consequences for the U.S. economy and monetary policy.

The debt of the United States government that is held by the public reached its highest point since World War II in 2011, at 68 percent of gross domestic product (GDP).² This number is high by historical comparison, but even more important than its current value is the path it is likely to follow in the future. Several factors point to continued large demands on fiscal resources, most notably the aging population. As baby boomers exit the labor force, the number of people drawing age-related benefits from the government will rise quickly as a fraction of working-age individuals supporting them through taxes and Social Security contributions. This unprecedented demographic shift will increase demands on Social Security, Medicaid, and Medicare.

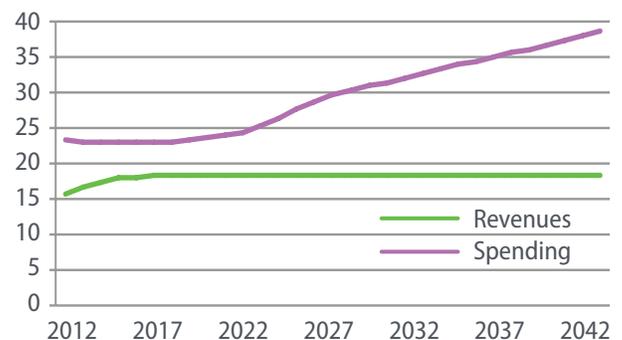
The nonpartisan Congressional Budget Office (CBO) provides a debt forecast under two scenarios: a “baseline” scenario that holds current laws constant and an “alternative” scenario that incorporates the effects of laws the CBO deems likely to pass.³ The budget outlooks under both scenarios are displayed in Figure 1.

Figure 1: Projected Budget Gaps as a Percent of GDP

CBO’s Extended Baseline Scenario (Current Laws)



CBO’s Extended Alternative Baseline Scenario (Expected Laws)

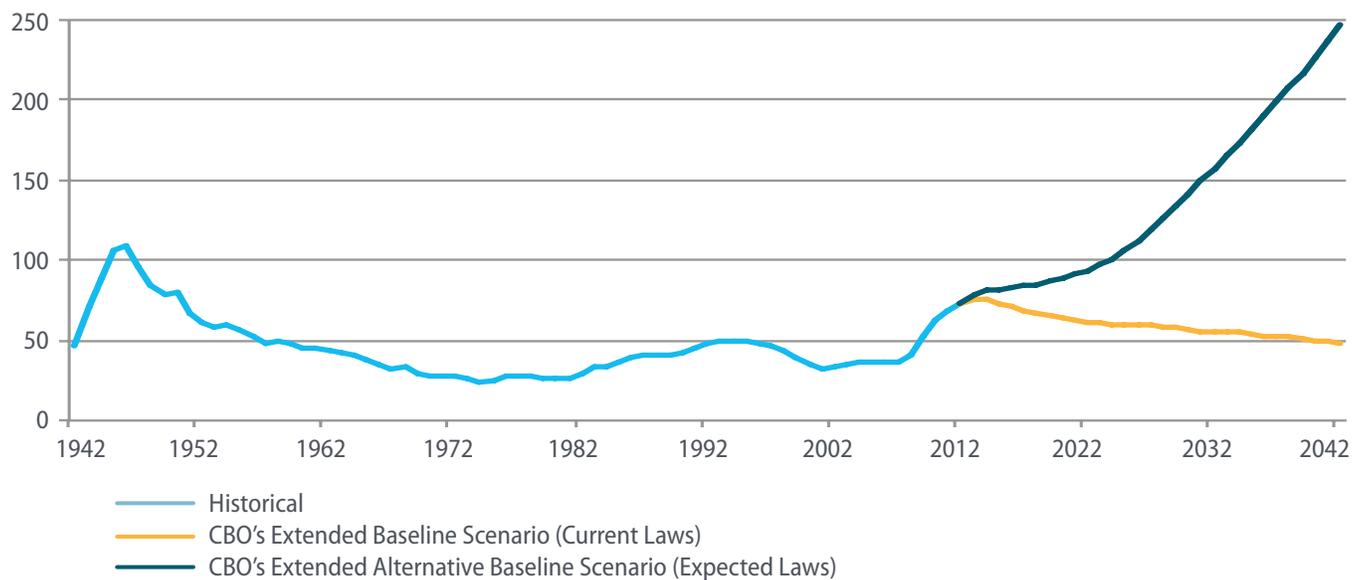


Source: Source: Congressional Budget Office’s 2012 Long-Term Budget Outlook, June 5, 2012.

The baseline scenario reflecting current laws presents the more optimistic view of the future path of fiscal policy. Tax revenues are projected to reach much higher levels than in recent history. Meanwhile, expenditures on everything from national defense to most domestic programs are projected to fall to their lowest percentages of GDP since World War II. This scenario assumes spending growth only for Social Security, interest on debt, and major health care programs, including Medicare, Medicaid, the Children’s Health Insurance Program, and health insurance subsidies under the Affordable Care Act. Revenues would exceed noninterest spending under this scenario, but the federal government would continue to run net deficits when factoring in interest payments on debt. Under this scenario, the CBO argues that deficits would be small enough relative to the size of the economy for debt held by the public to decline slowly over time. Debt held by the public would rise to 76 percent of GDP in 2014, declining gradually thereafter and falling below 50 percent of GDP by 2040, a level still greater than it was from 1957 through 2008. (See Figure 2.)

The alternative scenario—the one the CBO considers more likely because it reflects the policies that have prevailed in recent years—presents a more alarming picture of growth in federal debt. In this scenario, revenues do not rise much from where they are today, yet spending grows rapidly. This is because of law changes the CBO deems likely to take place to sustain current policies that are otherwise scheduled to change under current laws, including an extension of the tax cuts that were enacted in 2001 and extended in 2010. The CBO also assumes that other tax laws eventually will be changed to keep tax revenues close to their long-run average of 18.5 percent of GDP, rather than rising to historically high levels as they do in the baseline scenario. In addition, Medicare payments are not assumed to decrease as current law dictates; restraints on Medicare costs and health insurance subsidies will be relaxed; the automatic spending reductions required by the Budget Control Act of 2011 will not occur; and spending on non-entitlement programs will equal its average level during the past two decades rather than declining significantly as in the baseline scenario. Under these conditions, federal

Figure 2: Federal Debt Held by the Public as a Percent of GDP



Note: Projections begin with 2012. After 2042, debt held by the public as a percent of GDP exceeds 250 percent under the extended alternative baseline scenario and continues falling gradually under the extended baseline scenario.
Source: Congressional Budget Office's 2012 Long-Term Budget Outlook, June 5, 2012.

debt held by the public would rise sharply after 2011, exceeding its historical record of 109 percent of GDP by 2026. It would surpass 200 percent of GDP—nearly triple today's share of GDP—by the end of the 2030s, exceeding 250 percent of GDP after 2042.

The two scenarios represent optimistic and pessimistic alternatives from a range of possible outcomes, showing that the evolution of the federal government's fiscal position depends largely on policy decisions that have yet to be made. Given the demands on fiscal resources coming from the aging population under existing laws, achieving a path toward fiscal balance will involve very difficult tradeoffs for fiscal policymakers.

When Is Fiscal Policy Unsustainable?

How do we know when high debt levels are a problem? Economists look to a simple framework known as the government's intertemporal budget constraint (IBC). A budget constraint is a basic accounting identity that says an entity must pay for everything that it purchases, while "intertemporal" simply means "over time." The government's IBC says that the value of its outstanding debt must equal the present value of its expected future surpluses (that is, what financial markets believe the surpluses will be, calculated in today's dollars). The main lesson to draw from the IBC is that the sustainability of government finances hinges crucially on financial markets expecting that the government can and will raise adequate future surpluses given its debt.

A budget that is widely out of balance—the expected path for debt is much larger than the likely path of future surpluses—is often described as "unsustainable." That characterization reflects the expectation that financial markets will force an adjustment in fiscal policy before such debt levels could be reached. For example, investors may demand a higher interest rate on government debt to compensate for the apparent risk that the government may not be able to repay its loans, causing a sudden and sharp increase in the government's financing costs that forces it to immediately produce a credible plan for reducing future deficits and therefore debt.

Because financial market expectations are not constant, neither the IBC framework nor experience provide a quick answer to precisely what debt level is "sustainable." The budget apparently can remain modestly out of balance for a long time. For example, debt levels grew slowly and steadily from 1970 to 1997 with no obvious concern from financial markets about the sources of future surpluses. This is less likely to occur when the imbalance between outstanding debt and the capacity for producing future surpluses is very large, as in the CBO's alternative scenario. The larger the debt grows, the larger future surpluses must be to satisfy the IBC equation, yet future surpluses have an upper limit: spending cannot drop to zero—indeed, it is projected to grow historically high even under the CBO's most optimistic scenario—and tax revenues have both political and economic upper bounds. With debt levels predicted to grow much larger than GDP within two decades, many years of higher taxes would be required to produce enough surpluses to resolve the resulting imbalance. There is some level of debt that is high enough—although we don't know how high that is—that generating the required amount of future surpluses required would be infeasible.

What we do know is that painful economic consequences can result from hitting that debt level. Economists have called that point the "fiscal limit," the point at which financial markets refuse to lend further to the government, and the government's existing spending promises therefore cannot be funded. At least one of two events must occur at the fiscal limit: the government reduces its debt levels by defaulting, or the central bank takes action to reduce real debt levels.

The primary way a central bank can reduce the government's real debt burden is by creating surprise inflation.⁴ Inflation allows all borrowers, the government included, to repay loans issued in nominal terms with cheaper dollars than the ones they borrowed. Roughly 90 percent of the federal government's debt is issued in nominal terms at prices that reflect the market's expectations for inflation over the life of the loan. A significant unanticipated

jump in inflation therefore would produce a large transfer of wealth in the government's favor from its lenders. Historically, some central banks—though never the Federal Reserve—have produced inflation for the sole purpose of eroding the value of the government's debt.

Since inflation today is low and stable, and the Fed remains committed to its price stability objectives and operates independently from fiscal policy, the Fed's policies generally have little direct impact on the government's debt burden. This could change, however, if financial markets began to view hitting the fiscal limit as a possibility. That situation would inevitably invite monetary policymakers to intervene since inflation presents one possible source of revenue.

In fact, economic research suggests that high debt levels ultimately could overwhelm a central bank's efforts to keep prices stable, an effect discussed next.

Sources of Fiscal Inflation

Economists Thomas Sargent and Neil Wallace devised a model in 1981 showing that the central bank may not have control over inflation in times of fiscal crisis.⁵ This stems from the idea that the government cannot issue unlimited amounts of debt: the public has a limited demand, based on its private portfolio preferences, to hold government debt as a percent of GDP. Sargent and Wallace, now at New York University and Pennsylvania State University, respectively, modeled a scenario in which the government reaches that limit on debt yet continues to run budget deficits. If the government is to avoid default, the central bank would have no choice but to produce inflation to reduce debt levels and satisfy the IBC. In this scenario, monetary policymakers uncharacteristically would focus on stabilizing debt, while inflation would be determined by deficit policy.⁶

One could argue that we should not be concerned about this scenario occurring in the United States due to the way monetary policy is conducted. The Fed typically "moves first" by establishing the expectation that it will keep inflation low and stable. As a result of this consistent stance in opposition to inflation, financial markets arguably view the Fed as unlikely

to step in to reduce debt levels through inflation, as evidenced by current anchored inflation expectations in the face of growing debt. The Fed's credibility is bolstered by the operational independence it has been granted by Congress that insulates it from political pressures.

In practice, however, a central bank's credibility cannot constrain fiscal policy in any meaningful sense. It cannot stop fiscal policymakers from running budget deficits that continually expand the debt. As a result, whether high debt levels would lead to inflation depends critically on whether the public believes fiscal authorities will balance the IBC or instead leave fiscal imbalances to be addressed by inflation. Central banks often are called upon to intervene when the economy is facing severe challenges, as would likely be the case if a fiscal crisis arose in which markets forced the government to either default on its debt or enact some combination of severe spending cuts and tax increases. The first prospect, default, would wreak havoc on financial markets, and the second on economic activity. Thus, fiscal crisis almost certainly would jeopardize the Fed's mandate, leaving the Fed with a difficult tradeoff: the economic pain associated with fiscal crisis or the longer-term costs of central bank intervention to reduce debt levels. Even the most conservative central banker might feel compelled to intervene in hopes of limiting a panic before it could grow more severe.⁷ Knowing that the central bank faces these incentives, the market's inflation expectations are liable to shift suddenly when debt levels are very large. Economist Eric Leeper at Indiana University argues that simply being near the fiscal limit is enough to enable an equilibrium in which markets expect the central bank to accommodate the debt with inflation in the future.⁸ The public's expectation of higher inflation can push actual inflation higher before the central bank decides to create a single dollar.

The lesson from this literature is that when the public expects fiscal authorities to take action to satisfy the budget constraint while they still can, inflation need not rise. This is perhaps the situation the United States is in today: debt projections under the CBO's more likely scenario exceed historical records

for most developed countries, yet markets appear perfectly willing to purchase government debt at low interest rates, indicating that markets believe fiscal imbalances will be resolved through fiscal policy rather than through inflation. However, as long as there is uncertainty over the feasibility of generating sufficient future surpluses, policymakers cannot be sure that market expectations will not shift unexpectedly to produce inflation.

Encouraging Sustainable Policy

The Fed's best contribution to avoiding a fiscal crisis is to maintain its commitment to monetary policy objectives. Credibility may help maintain the expectation that the central bank will not readily step in to erode the debt through inflation. However, credibility may not be sufficient. When the expected path for fiscal policy does not by itself achieve balance in the IBC over time, the price level is the only other factor that can adjust to provide it. Fiscal policy that does not contain the debt may lead to inflation even if the central bank has the best intentions.

Even if inflation were to spike, it might not be effective at reducing debt levels. Most government debt is priced in nominal terms, so while inflation erodes the value of existing nominal debt, it increases the financing costs for newly issued debt. This effect would be greater for governments, such as the United States, that have a short average maturity of government debt and therefore need to reissue it often. Economists Michael Krause and Stéphane Moyen, both at the Deutsche Bundesbank, calculated in a 2011 study that, for a temporary spike, inflation rates not seen even in the worst days of the inflationary 1970s would be required to reduce only the added debt that accrued during the financial crisis by just 3 percent to 8 percent.⁹

For these and other reasons, the solution to current fiscal imbalances must ultimately come from fiscal authorities. Making these difficult decisions in a planned manner before a crisis arises almost certainly would entail fewer costs than if the decisions were forced by financial markets or by other events. These events include the so-called "fiscal cliff" that is scheduled to arise later this year as dramatic deficit

reductions come into place under current law and as the result of automatic budget cuts built into the agreement to raise the federal debt ceiling in 2011 as a way to provide incentive to Congress to produce debt-reduction legislation.

For the time being, markets appear to believe that fiscal policymakers will put future debt, spending, and tax levels on a more sustainable path. If they are correct, our nation will not have to experience the significant economic challenges of a world in which those expectations have changed.

Renee Haltom is a writer in the Bank's Research Department, and John A. Weinberg is a senior vice president and director of research at the Federal Reserve Bank of Richmond.

Endnotes

- ¹ For a more in-depth analysis of this topic, see the Federal Reserve Bank of Richmond's *2011 Annual Report*.
- ² There are two common ways to measure the federal government's debt burden. Debt held by the public, used in this *Economic Brief*, reflects government borrowing from private financial markets. Total federal debt, the second common measure, comprises debt held by the public (private investors, including the Federal Reserve) and debt held by U.S. government accounts. The two measures have different implications. Debt held by the public can affect the current economy by crowding out private borrowing. In contrast, debt held by U.S. government accounts reflects internal transactions that are not traded in capital markets. However, that debt is nonetheless a legal liability of the federal government and a burden on taxpayers, which is why total debt is also used as a measure of the government's overall debt burden. We focus on debt held by the public because that is the measure for which long-term projections are readily available.
- ³ See "2012 Long-Term Budget Outlook," Congressional Budget Office, June 5, 2012.
- ⁴ The other way is through "seigniorage," the revenue that governments effectively receive when central banks create money. In the United States, seigniorage comes from the interest the Fed earns on the Treasury securities it purchases to expand the money supply. The Fed retains only the interest revenue that it requires to fund operations and turns the rest over to the Treasury each fiscal year. However, the level of seigniorage remitted annually amounts to slightly more than 1 percent of fiscal revenues in most years, so it does not significantly affect the debt level.
- ⁵ See Thomas J. Sargent and Neil Wallace, "Some Unpleasant Monetarist Arithmetic," *Federal Reserve Bank of Minneapolis Quarterly Review*, Fall 1981, vol. 5, no. 3, pp. 1-17.
- ⁶ Sargent and Wallace label this outcome the "unpleasant monetarist arithmetic" of chronic fiscal deficits.

⁷ For more on this topic, see Jeffrey Lacker, "Understanding the Interventionist Impulse of the Modern Central Bank," Speech to the Cato Institute 29th Annual Monetary Conference, Washington D.C., November 16, 2011.

⁸ See Eric M. Leeper, "Monetary Science, Fiscal Alchemy," Paper presented at the Kansas City Fed Economic Policy Symposium at Jackson Hole, August 2010.

⁹ See Michael U. Krause and Stéphane Moyen, "Public Debt and Changing Inflation Targets," Deutsche Bundesbank, April 29, 2011.

This article may be photocopied or reprinted in its entirety. Please credit the authors, source, and the Federal Reserve Bank of Richmond and include the italicized statement below.

Views expressed in this article are those of the authors and not necessarily those of the Federal Reserve Bank of Richmond or the Federal Reserve System.

