

DEBT CRISIS IN AMERICA: WHAT IT MIGHT LOOK LIKE

The federal budget is on an unsustainable path. Publicly held debt as a share of the economy is over 70 percent, and total public debt exceeds 100 percent. As baby boomers retire and entitlement costs soar, this share will increase unabated in future years, absent reform.

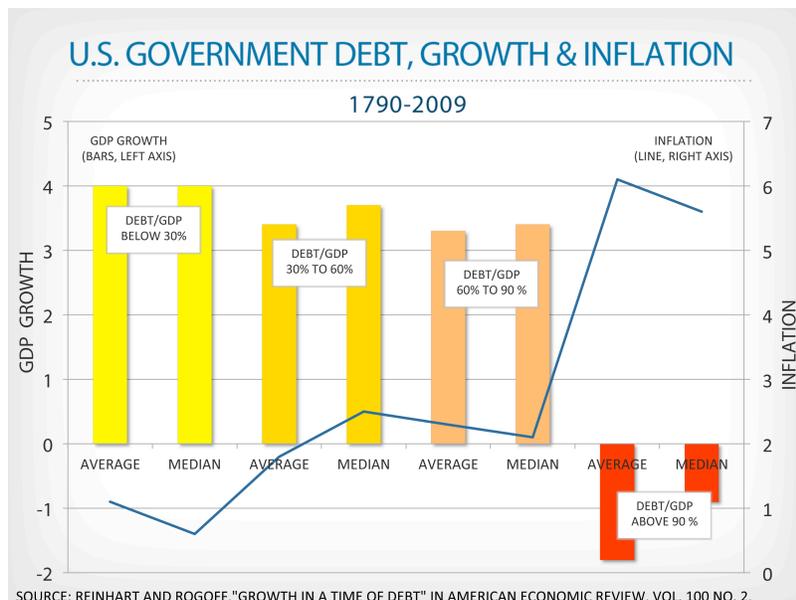
This level of debt is unsustainable because its growth exceeds that of the overall economy. As a result, debt-service costs absorb an increasing share of national income. The country must borrow an increasing amount each year—both to fund its current services and to make good on previous commitments.

This dynamic threatens to provoke a debt crisis—like the one that is playing out in troubled countries like Greece and Spain. A debt crisis in America would not only be devastating at the macroeconomic level, it would also inflict acute pain upon families and businesses.

Macro Impact of a Debt Crisis

In 2010, economists Ken Rogoff and Carmen Reinhart completed a landmark study that looked at the historical relationship between public debt and GDP growth and inflation in a variety of advanced and developing countries. The study used new data from 44 countries spanning roughly 200 years.

The authors found extensive empirical evidence that when *gross* public debt exceeds 90 percent of GDP, economic growth declines materially. Among the 20 advanced countries in the study, for instance, annual GDP growth averages 3 to 4 percent when debt is relatively moderate or low (i.e., under 60 percent of GDP). But annual growth dips to just 1.6 percent when debt is high (i.e., above 90 percent of GDP).¹ Note that this study focuses on *gross central government debt*, which is most akin to the concept of total public debt in the U.S.²



¹ Rogoff/Reinhart, page 25: "Growth in a Time of Debt," January 2010

² Total public debt in the U.S. includes the debt recorded in intra-governmental accounts like the Social Security Trust Fund. By contrast, debt held by the public—a net concept—measures the debt held by entities in the private economy and excludes the debt in these intra-governmental accounts.

The study also disaggregates the data to focus solely on the growth and inflation effects of debt levels in the United States throughout the country’s history (i.e., from 1790 to 2009). As the adjacent chart illustrates, average economic growth is dramatically lower when gross U.S. debt exceeds 90 percent of GDP. For the years in which gross debt has exceeded 90 percent of the economy, Rogoff and Reinhart found that median GDP growth has declined by nearly 1 percent on average. When gross debt is below 90 percent, median GDP growth tends to range between the robust levels of 3 to 4 percent a year.

Notably, the study also finds that average inflation rates jump sharply higher when gross debt exceeds 90 percent of the economy in the U.S. Under such a high-debt scenario, inflation reaches, on average, nearly 6 percent a year—compared with the normal rate of around 2 to 3 percent when debt is at more moderate levels. Essentially, the Rogoff and Reinhart study finds that gross debt above 90 percent in the U.S. is associated with “stagflation”—a toxic mix of shrinking economic growth and rising inflation.³

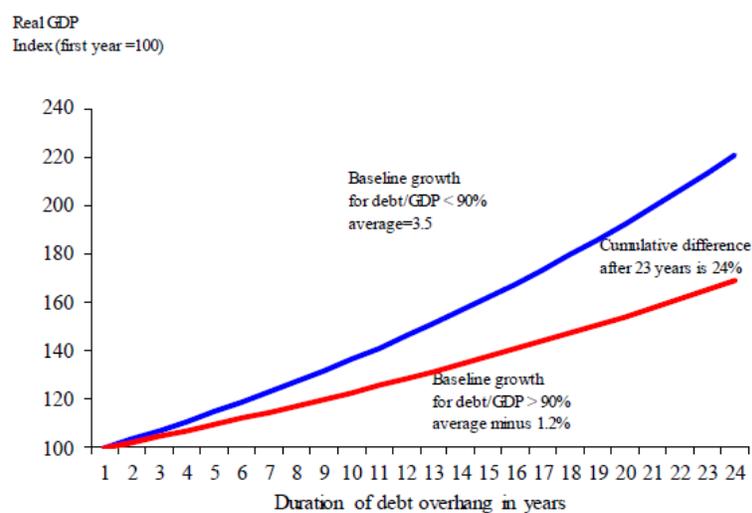
Reinhart and Rogoff completed a follow up study last year looking at the potential longer-term effects on growth from elevated levels of government debt. Relative to their 2010 study, they noted that their historical estimates relating higher debt with slower growth were likely “understated” when applied to future projections of a debt-saddled economy. In their 2012 paper, they studied 26 “debt overhang” episodes in advanced economies since 1800 when gross debt as a share of GDP exceeded 90 percent for at least five years. They found that debt levels above 90 percent are associated with an average growth rate that is 1.2 percentage points lower than periods with lower debt. **More importantly, they found that the**

average duration of these debt-overhang episodes was a whopping 23 years, “implying a massive cumulative output loss” in the wake of such an episode.⁴

For instance, if a country experiencing a debt overhang actually experienced growth that was 2.3 percent, as opposed to the 3.5 percent under more moderate levels of debt (i.e., 1.2 percent lower growth), real GDP would be 24 percent lower relative to the

baseline growth case at the end of 23 years (see chart). Even if growth was just 0.5 percentage points lower, real GDP would still be 11 percent lower after 23 years.

Figure 5. Real GDP and Debt Overhangs: Basic Calculus of Cumulative Effects



³ Note that the study does not find a correlation between high government debt and sharply higher inflation among all industrialized countries, just the United States.

⁴ Reinhart/ Rogoff, page 2, “Debt Overhangs: Past and Present” April 2012

Interestingly, Reinhart and Rogoff found that debt-overhang cases were not necessarily associated with a significant rise in government-borrowing rates. For example, in about 40 percent of the 26 debt-overhang case studies, interest rates were either lower or about the same as they were during moderate-debt-level years. This is important because some policymakers believe that U.S. debt levels are not problematic because interest rates are at historically low levels—an implicit signal that financial markets are not concerned about the country’s fiscal position. Reinhart and Rogoff note that “those waiting for financial markets to send the warning signal through higher interest rates that government policy will be detrimental to economic performance may be waiting a long time.” Their study “casts doubt in the view that soaring government debt is a non-issue simply because markets are presently happy to absorb it.”⁵

These analyses are important because the U.S. has quickly moved toward the “tipping point” threshold on debt in recent years. In fact, it may already be in the midst of a debt-overhang episode and on the verge of an actual “crisis” scenario in the coming years. The U.S. has already breached the critical 90 percent level on gross debt, and according to the Congressional Budget Office, it ended 2012 with gross debt in excess of 100 percent of GDP.



Like a household or a business, a government’s leverage is best represented by the level of its debt in relation to its income. The U.S. government’s leverage—typically portrayed by economists as *publicly held debt* as a share of GDP—reached about 73 percent in 2012. If this was a temporary rise in the debt, it would not be as alarming. But because Federal spending has grown recently and nearly 80 million baby boomers are beginning to retire, the debt

continues to rise for the foreseeable future under current spending and tax policies. According to the CBO’s analysis of the President’s FY 2013 budget, the debt will reach over 80 percent of GDP in the near term before flat-lining at a still-large 76 percent by the end of the decade. In future decades, debt as a share of GDP will rise sharply higher than these levels as a result of out-of-control entitlement spending, particularly in Medicare. This large increase in debt is unsustainable because its growth exceeds that of the overall economy. As a result, debt service costs absorb an increasing share of national income and the country must borrow an increasing amount each year to both fund its ongoing services and make good on its previous debt commitments. For this reason, economists caution that government leverage in excess of about 60 percent of the economy is not sustainable for an extended period of time. **When debt is growing faster than a country’s economy indefinitely, that country accelerates over time to a crisis situation.**

⁵ Ibid., pages 3 and 23.

Another factor that could invite a crisis is U.S. reliance on foreign debt, which makes it vulnerable to interest-rate shocks. U.S. reliance on foreign creditors has increased dramatically over the past few decades. Foreigners now own roughly *half* of all publicly held U.S. debt, a sharp increase from a generation ago when foreigners owned just 5 percent of U.S. debt (see chart). This makes the U.S. vulnerable to a sudden shift in foreign-investor sentiment, particularly during a time of crisis. If foreign investors, for instance, begin to lose confidence in U.S. fiscal sustainability and long-term economic viability (including the level of inflation and the value of the dollar), the result could be a sizeable increase in interest rates as foreigners demand higher compensation to offset the perceived risk of holding U.S. debt. In recent years, foreigners have flocked to Treasury debt in a “flight to quality,” which helped to keep U.S. borrowing rates at record low levels. But these investment flows work both ways, as Europe’s debt crisis illustrates. As risk perceptions change, particularly with regard to sovereign credit, investors could seek to avoid U.S. debt, thereby helping to drive up interest rates. To put that risk in perspective, a sustained increase of just 1.0 percentage point on U.S. borrowing rates would cost in excess of \$100 billion per year over the medium term and would sum to nearly \$1 trillion (\$944 billion) over the course of a ten-year budget window.⁶

While foreigner creditors are a major holder of Treasury securities, the largest single holder is the Federal Reserve. As part of its quantitative easing (QE) efforts to lower interest rates, the Fed has accumulated a huge balance sheet of roughly \$3 trillion, with nearly \$2 trillion of those holdings consisting of Treasury securities.⁷ As part of this QE program, the Fed is adding \$85 billion a month to its balance sheet primarily through the purchase of Treasury securities, which if continued means the Fed’s balance sheet will grow by \$1 trillion annually.

When looking at the Federal government’s debt held by the public, over half is held by foreign creditors or is from the Fed “printing money” (acquiring Treasury securities through its QE program).

Governments that have a relatively high share of shorter-maturity debt outstanding are at a higher risk of a sudden rise in interest rates because more of their debt needs to be rolled over when rates are moving upward. That can exacerbate an already-precarious fiscal situation. During the financial crisis a few years back, Treasury issued a sizeable amount of relatively shorter-term debt in order to better manage its cash flow for emergency-spending needs and to take advantage of record-low short-term rates. Although Treasury has subsequently moved to increase the average maturity of its debt portfolio, it still has a sizeable amount of outstanding debt that will need to be rolled over in the next few years. For instance, the Treasury has roughly \$4.2 trillion in debt obligations coming due before the end of 2014. In other words, over one-third of the U.S. total marketable debt will be maturing over the next 24 months. That means a large chunk of Treasury’s outstanding debt needs to be rolled over in the next few years at a time when interest rates may be moving higher from all-time lows (due to both strengthening economic activity and concerns about U.S. debt). This dynamic, coupled

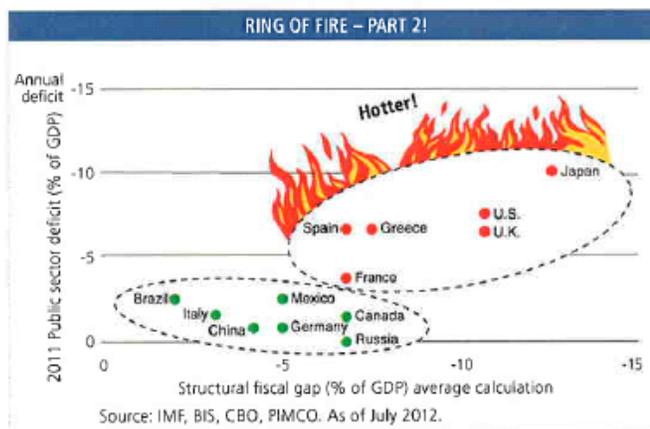
⁶ OMB, FY 2013 budget, Table 3-1: Sensitivity of the Budget to Economic Assumptions

⁷ Federal Reserve, Factors Affecting Reserve Balances, Table H.4.1., January 31, 2013.

with the increased reliance on foreign creditors, puts the U.S. at a greater risk of a liquidity event should risk perceptions about its fiscal position change abruptly in credit markets.

Because the U.S. economy is viewed as the strongest and most stable in the world, the Treasury is able to borrow at extraordinarily low interest rates. With financial crises and Europe's troubles, there has been a "flight to quality," which has pushed interest rates lower. In addition, the Fed's quantitative-easing program has put downward pressure on interest rates. As a result, despite the fact that debt as a share of the economy has doubled in the past five years, the federal government's interest expense on the national debt has declined due to the dramatic decline in interest rates. From 2007 to 2012, debt held by the public doubled from 36 percent to 72 percent. Despite this huge growth in the debt, the interest expense on this debt *declined* during this same period, falling from 1.7 percent of the economy in 2007 to 1.4 percent in 2012. Today's interest rates are below the averages of the 1980s and 1990s, when the economy was much stronger and the debt as a share of the economy was much lower.⁸

There are a variety of ways to show how dire the fiscal position is. Bill Gross, the well-known bond-fund manager at PIMCO, recently estimated the U.S. "fiscal gap," comparing it to other countries using fresh data from the International Monetary Fund, the Bank of International Settlements, and the CBO. The fiscal-gap calculation represents the amount of a country's deficit that must be closed (via tax hikes, spending cuts, or some combination of the two) to keep its debt-to-GDP ratio under control. It includes the unfunded liabilities from Social Security, Medicare, and Medicaid. Gross estimates that the U.S. has an annual fiscal gap of about 11 percent of GDP. According to his calculations, the U.S. would need to cut spending or raise taxes by that amount over the next five to ten years to keep overall debt-to-GDP levels below a potential crisis level. (A fiscal gap of 11 percent of GDP represents about \$1.6 trillion per year.) In these terms, the U.S. is in a worse fiscal position (in terms of unfunded liabilities and overall "fiscal gap") than the troubled European economies of Spain and Greece. Gross



characterizes the countries with both large annual deficits and a large fiscal gap as being in a danger zone—or, a "ring of fire" (see chart). In fact, Gross says that if the U.S. continues on this path and does not start to close this gap, the country "will begin to resemble Greece before the turn of the next decade. . . . [T]he inevitable result will be that our debt/GDP ratio will continue to rise, the Fed would print money to pay for the deficiency, inflation would follow and the dollar would inevitable decline. Bonds would be burned to a crisp and stocks would certainly be singed; only gold and real assets would thrive within the 'Ring of Fire.'"⁹

⁸ See CBO letter to Chairman Ryan:

http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/120xx/doc12081/ryan_letter_interest_rates_2-24-2011.pdf

⁹ PIMCO Investment Outlook, October 2012

If such a debt crisis were to materialize, Gross warns:

[T]he U.S. would no longer be in the catbird's seat of global finance and there would be damage aplenty, not just to the U.S. but to the global financial system itself, a system which for 40 years has depended on the U.S. economy as the world's consummate consumer and the dollar as the world's global medium of exchange. If the fiscal gap isn't closed even ever so gradually over the next few years, then rating services, dollar reserve holding nations and bond managers embarrassed into being reborn as vigilantes may together force a resolution that ends in tears. It would be a scenario for the storybooks, that's for sure, but one which in this instance, investors would want to forget. The damage would likely be beyond repair.¹⁰

At the macroeconomic level, the risk is that the U.S. could eventually reach a "tipping point" on its debt levels, precipitating a sudden change in investor sentiment and behavior. If, for instance, market psychology changes, and foreign investors suddenly begin to lower their demand for U.S. debt—or even move out of dollar-denominated assets more generally—interest rates could spike to a dangerous level, forcing the U.S. to make immediate and painful fiscal adjustments (like the austerity programs that have provoked riots in Greece and Spain). **Facing the inability to borrow at a reasonable rate in the market, the U.S. would have to slash government spending and raise taxes to narrow its large fiscal gap.** In such a crisis, the Federal Reserve may also face rising pressure to step in and "monetize" the government's debt—essentially printing money to buy up the public debt that private investors refuse to finance. Len Burman, former director of the Tax Policy Center, writes in a recent paper that this would amount to "a catastrophic budget failure" that would be "disastrous" for the U.S. and global economy.¹¹ Importantly, because this would fundamentally be a crisis of U.S. federal finances, the government would be unable to borrow money to support the private economy, as it did during the recent financial crisis. **If the U.S. was forced to address such a situation internally without the benefit of cheap foreign credit, meaning by cutting domestic spending and raising taxes to close the budget gap, Burman estimates that the economy could shrink by 25 or 30 percent, a contraction that would rival the economic decline of the Great Depression.**¹²

U.S. Treasury bonds are the lynchpin of global debt markets, held as safe and highly liquid assets by virtually all financial institutions worldwide. A U.S. debt crisis would lead to sharp declines in the price of these bonds, causing a deterioration in the balance sheet of large financial institutions that would be orders of magnitude more disruptive than the subprime crisis. Burman and his colleagues write that "it could easily take the nation a generation or longer to recover from (such a) disaster."¹³

¹⁰ Ibid.

¹¹ Burman, et al. "Catastrophic Budget Failure" presented at Joint TPC-USC Conference, January 15, 2010

¹² Ibid.

¹³ Ibid.

Micro Impact of a U.S. Debt Crisis

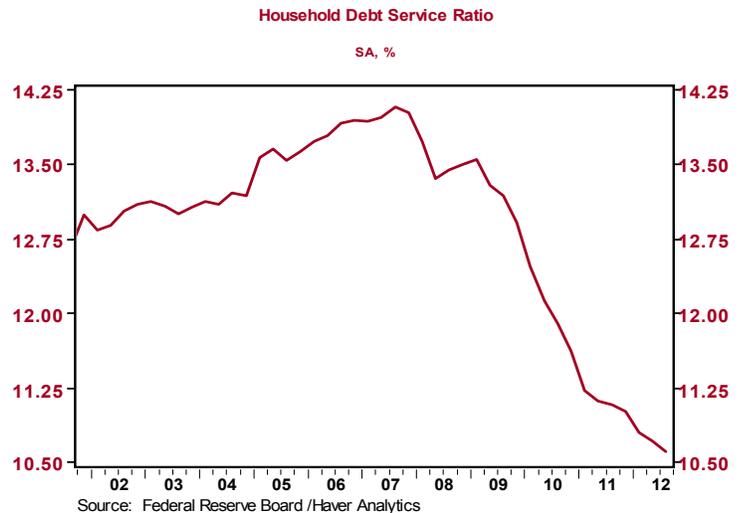
The 2008 financial crisis initially appeared to be a problem for a couple of big Wall Street banks, but it quickly grew into a recession that dragged down the entire U.S. economy. Over four years later, the economy is still functioning at subpar levels, and the unemployment rate recently ticked back up to 7.9 percent. During this crisis, the federal government has been able to borrow huge sums of money to provide and augment government services, despite plummeting revenue collection.

A debt crisis would weaken the economy and limit the ability of the federal government to respond, inflicting acute pain upon families and businesses.

Market concern about the U.S.'s fiscal position would initially be manifested in higher borrowing rates on U.S. government debt. **Nearly all consumer-borrowing rates are linked in some respect to longer-term Treasury rates, so that rise in interest rates would increase the economy-wide cost of credit in the U.S. As Treasury rates increased, rates on mortgages, credit cards, and car loans would soon follow.**

This would most likely come as a shock to most Americans who have grown accustomed to building up a great deal of debt in a climate of historically low interest rates. Despite the recent increase in saving rates, households are still heavily leveraged. They have \$12.9 trillion in debt—or roughly 108 percent of their total disposable income. But because of these historically low interest rates, households' debt-service ratio (the share of debt payments as a percentage of disposable personal income) have dipped to a 20-year low of just over 10 percent (see chart). This has lulled consumers into a false sense of security with regard to the financial burden of paying off their debt should interest rates rise significantly.

Roughly three-quarters of household debt is home mortgages while the rest is credit-card debt, auto loans, and margin debt. It turns out that roughly *half* of all that debt is in the form of variable-interest-rate loans, meaning that a sudden increase in Treasury bond rates would lead to higher borrowing costs for consumers relatively quickly. According to the current level and composition of household debt, estimates suggest that an interest-rate increase of just 1 percentage point would lead to over \$400 in yearly interest payments for the average family.¹⁴ Given that a serious debt crisis could lead to a sharp increase in Treasury rates, the added interest costs for the typical family could easily exceed \$1,000 per year or more. To a new homebuyer, a 1-percentage-point increase in mortgage rates (which are currently at their



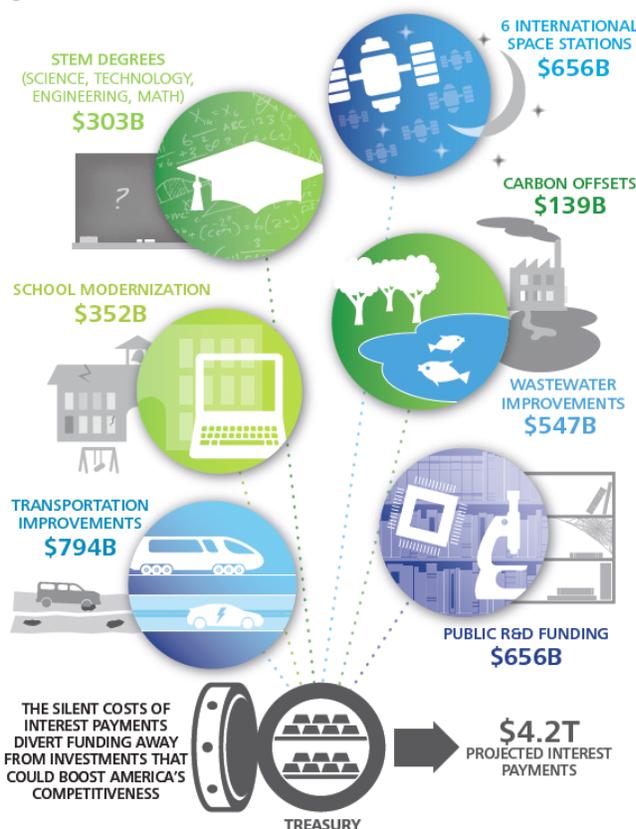
¹⁴ Center for American Progress: "Payment Due: The Effects of Higher Interest Rates on Consumers and the Economy" September 20, 2004

lowest rate on record) adds as much as 19 percent to the total cost of a home.¹⁵ As household-borrowing costs spiked, growth in overall consumer spending, which accounts for nearly 70 percent of GDP, would decline.

Higher borrowing costs would also be a serious impediment for businesses. The corporate sector has roughly \$11.5 trillion in loans that will mature over the next five years.¹⁶ A sharp rise in interest rates over this period would lead to lower business investment as companies faced a much higher hurdle for profitability on potential expansion plans. Businesses would be doubly squeezed because their funding costs would rise just as demand for their products (particularly consumer-durables bought on credit like cars, home furnishings, etc.) would slip. The inevitable result would be less business expansion and higher unemployment. As Harvard Business School professors Richard Vietor and Matthew Weinzierl write, “Capital markets will visit the sins of the public sector upon the private one. If the cost of borrowing rises for the U.S. government, it will rise for private-sector borrowers as well.”¹⁷

Even absent a spike in interest rates, federal borrowing is poised to affect individuals and businesses indirectly as the country will have to forego spending on programs that support the economy such as basic research, infrastructure, weather reporting, passport services, patent and trademarks, and the operation of the air-traffic-control system. In a study last year entitled

Figure 5. The silent toll of interest on US debt: Investments left undone



“The Untold Story of America’s Debt,” Deloitte LLP, a tax, audit and consulting firm, discusses the ways in which debt will hamper U.S. competitiveness. Deloitte estimates that the U.S. is poised to spend at least \$4.2 trillion on interest payments alone over the next decade, according to current spending patterns. In order to fund this bill, Deloitte argues that “a great variety of meaningful investments will almost certainly be left undone simply because interest payments will push them out of the budget. This is the silent cost of prior debts that, unless explicitly recognized, crucially leads policymakers to underestimate the effect that prior deficits have already had on this decades planned expenditures.”¹⁸ The chart below illustrates the “silent cost” of interest payments by highlighting the many investments that would be less expensive than the estimated interest payments over the next decade.

¹⁵ *New York Times*, “Interest Rates Have Nowhere to Go but Up,” April 10, 2010

¹⁶ “The Untold Story of America’s Debt,” Deloitte LLP, June 2012

¹⁷ *Ibid*, page 10

¹⁸ *Ibid*, page 10

They include modernizing every school in America, building 80,000 miles of highways, tripling R&D funding, and paying for all costs associated with science, technology, engineering, and math (STEM) degrees in the country.

Deloitte also illustrates what debt and interest payments might mean for the average taxpayer since the buildup in debt will likely mean higher taxes or benefit reductions in future. If current federal interest payments were allotted to taxpayers (including those who file but pay no income tax), they would equal about \$255 *per month*. Under Deloitte’s alternative scenario—in which growth is slightly lower than expected, interest rates are slightly

higher than expected, and current tax and spending policies are extended—that amount is expected to jump to \$424 per month for each taxpayer over the next decade.¹⁹

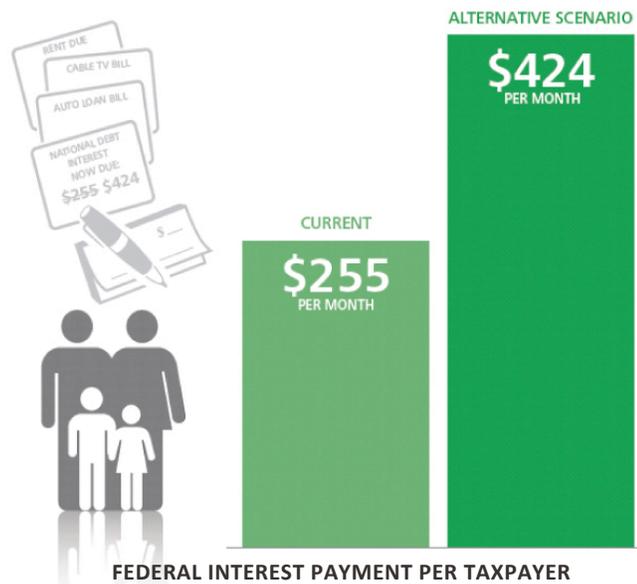
Probably the greatest impact would be on those who depend on the federal government for assistance. The federal budget is dominated by programs that provide transfer payments to individuals. While defense spending dominated the federal budget for most of its history, Social Security at over \$700 billion this year is the largest program in the budget. Most of this spending on direct assistance to

individuals is mandatory spending and not subject to annual approval each year. This spending automatically rises during recessions, and Congress frequently augments it. For example, during the recent recession, unemployment assistance grew by more than four-fold, rising from \$32 billion in FY 2007 to \$152 billion in FY 2010.

At \$2 trillion annually, this mandatory-spending category amounts to 60 percent of federal spending. When discretionary programs such as education and job training (\$100 billion annually), housing (\$40 billion annually), and veterans’ health care are added (\$60 billion), the federal budget is dominated by programs that provide assistance to individuals.

Programs such as deposit insurance both protect individual savings and prevent bank runs. When the economy is strong, funding for deposit insurance is offset by premiums. But during recessions—particularly those provoked by a financial crisis—spending on deposit insurance soars as the federal government steps in to take over financial institutions and protect depositors. Using the most recent financial crisis as an example, deposit insurance was generating net income to the federal government in 2007 (-\$1.7 billion). But in the first year of the crisis, deposit insurance spending surged to a net +\$28 billion.

U.S. INTEREST PAYMENTS FOR INDIVIDUALS OVER DECADE



¹⁹ Ibid, page 15

During the crisis, the federal government was able to borrow funds to provide assistance to these individuals and meet other responsibilities. In a debt crisis, not only would the crisis weaken the economy, it also would curtail the ability of the government to borrow funds and finance spending for those who depend on it for assistance. One need not look to Europe to find examples of forced austerity. There are examples in the United States, where municipalities have gone bankrupt and have been unable to provide basic services. In Central Falls, Rhode Island, for instance, pensions have been slashed by up to 55 percent for retirees. Stockton, California has seen crime rates skyrocket as the city has been forced to lay off 25 percent of their police force in the face of increasing pension costs.

A debt crisis would limit the federal government's ability to rollover debt—much less to increase debt to finance existing benefits. While Greece and Spain have experienced a debt crisis, an economy in a deep recession, the imposition of austerity programs, and civil unrest, they have had the European Union and the IMF provide financing to buy them time. If the U.S. encountered a debt crisis, it's unclear whether other countries would provide interim financing. Even if other countries wanted to assist the U.S., they might not have the capacity to do so. The Greek economy, for example, amounts to about \$300 billion annually—compared with a \$16 trillion U.S. economy. In other words, the federal-budget deficit for the first two months of this year amounted to \$292 billion, enough debt to finance the entire Greek economy for a year.

Public finance is critical to national security. In a debt crisis, the federal government's ability to finance its military could be compromised. Though defense spending has been declining as a share of the federal budget, the U.S. was also engaged in war during the financial crisis. As the federal government was responding to the financial crisis, President Obama also ordered the surge in operations for the War in Afghanistan on December 1, 2009. Though the cost of the surge of \$35 billion was relatively small, history shows that a country's ability to finance its military is critical to success on the battlefield. In *The Ascent of Money*, Niall Ferguson attributes Wellington's victory over Napoleon to the British's ability to borrow funds.²⁰

If the U.S. is to retain its role in the world, it must change its fiscal course – and that means curbing its out-of-control spending, particularly on entitlement programs. There is a growing need for policy makers to reassure credit markets that the U.S. is engaged in charting a course back to sustainable deficit and debt levels reasonably soon. The sovereign debt crisis in Europe, as well as the forced austerity in some financially troubled U.S. states, provides a cautionary tale that it is always best to take action to shore up budget deficits before market forces demand it. A debt crisis in America would not only imperil the U.S. and global economy, it would also inflict immediate and acute pain on the American consumer and those who depend on government assistance.

²⁰ Ferguson, Niall, *The Ascent of Money*, page 80.