

BACKGROUND

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The Many Real Dangers of Soaring National Debt

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Abstract

Federal government debt has nearly doubled since President Barack Obama took office. Under existing policies federal debt is projected to increase another 50 percent over the next decade and then rise rapidly thereafter. As federal debt has soared, so have concerns about America's future. Used properly, debt can safely finance private and government investment in productive capital to support economic growth. But too much debt can ruin a family, a business, or a nation. There is still time, though not much, for substantial and effective course correction. Congress and the President will need a comprehensive approach to fixing the government's growing debt problem, such as is laid out in The Heritage Foundation's Saving the American Dream plan. Washington can preserve America's prosperity for the next generation—if it acts decisively and soon.

Federal government debt has nearly doubled since President Barack Obama took office. Recent progress toward reducing the annual budget deficit is welcome, yet federal debt is still projected to increase 50 percent over the next decade—and then rise rapidly thereafter—under existing policies.¹ As federal debt has soared, so have concerns about America's future. Used properly, debt can safely finance private and government investment in productive capital to support economic growth. But too much debt can ruin a family, a business, or a nation.

Recent and projected growth in U.S. government debt poses a serious hazard to the nation. At a minimum, high levels of government debt mean substantial government resources must go toward

KEY POINTS

- Debt can be a useful tool for government, businesses, and families, but too much debt can create serious economic difficulties, even threatening the enduring prosperity of a nation.
- After remaining fairly steady for decades the ratio of government debt to economic output has soared under President Obama, and is projected to continue to rise under pressure from entitlement spending.
- A heavy debt burden threatens an economy by pushing up market interest rates and diminishing investment in productive capacity.
- U.S. interest rates remain low—almost certainly because of extraordinary events temporarily suspending the normal interest rate effect. When these events pass, interest rates will likely rise well above historic levels.
- High debt ratios lead to slower economic growth. A higher real interest rate resulting from a high debt level translates into a significantly smaller stock of capital employed throughout the economy. This leads to slower wage growth and, thus, slower growth in the economy overall.

This paper, in its entirety, can be found at <http://report.heritage.org/bg2814>

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servicing debt—to pay interest. Further, theory indicates and a growing body of research suggests a consistent relationship between high levels of government debt relative to the size of the economy and abnormally high interest rates consistent with lower levels of domestic investment. This relationship appears to be currently suspended due to extraordinary efforts in monetary policy and extraordinary events in the global economy, but the traditional relationship between debt and investment and interest rates will almost certainly resume as these efforts and events subside.

Traditional interest rate and investment effects from high levels of government debt provide at least corroborating support for another body of research suggesting a negative causal relationship between high government debt ratios and low rates of economic growth. The clear implication is that the recent surge in, and the current trajectory of, federal debt pose a substantial threat to the economy and to federal finances. The President and Congress should take every opportunity to enact reforms to the main drivers of federal budget deficits, namely Social Security, Medicare, and Medicaid spending, so these programs better serve their intended beneficiaries at a cost that is affordable today and tomorrow. This is not a new call to action, but a call for urgency as the ill consequences from rising debt may well soon unfold.

The Consequences of Obama’s Debt-Based Fiscal Policies

President Obama’s high-debt policies will not only bequeath enormous financial burdens to future generations of taxpayers in the form of high levels of interest expense—projected by the Congressional Budget Office to approach a trillion dollars annually by 2023—but these policies will also significantly reduce personal incomes with which to pay these bills.

It gets worse: Current and projected increases in government debt, cutting into future economic growth rates, also mean slower future growth

of government revenues. Even as future interest expense rises as taxpayers are called upon to service all this debt, growth in government revenues will slow, leaving less available for other priorities, such as national security and economic security, education, and innovation-driving research.

Further, while both the Administration and the Congressional Budget Office forecast interest rates eventually returning to more normal levels as the economy returns to full employment, the forecasts appear to ignore the interest rate consequences of the recent and projected substantial increases in the ratio of U.S. government debt to the size of the economy. The higher interest rates the literature suggests are likely to follow from a high debt ratio are curiously missing from the government’s economic forecasts, meaning the government’s projected future annual interest expense is likely substantially understated. Even greater interest expenses and even slower economic growth and consequent slower government revenue growth is a deeply troubling combination.

Slower economic growth, higher interest expense, fewer resources for other priorities—these are the legacies of President Obama’s debt-based fiscal policies and of his and Congress’s refusal to deal with long-standing fiscal and programmatic flaws in Social Security, Medicare, and Medicaid. Yet there are well-vetted, bipartisan solutions to reduce the future burden of these programs materially, buying time for more thorough reforms to ensure they achieve their policy objectives at affordable cost.² President Obama and Congress need to cut spending across the budget to reduce current deficits, and they need to embark on a sustained program of reforms to ensure that the nation’s entitlement programs are effective and sustainable.

The Rise in U.S. Government Debt

For much of the post war period the ratio of U.S. government debt to the size of the economy averaged about 36 percent. While a lower debt ratio would

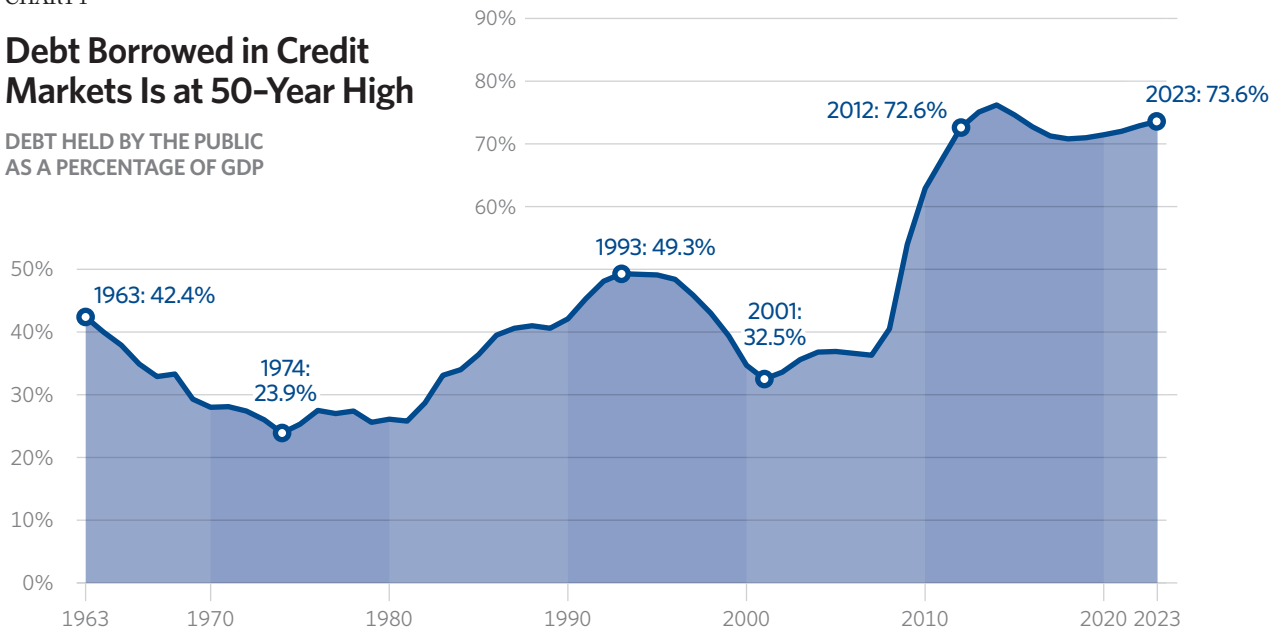
1. For the medium-term projection, see Congressional Budget Office, “Updated Budget Projections: Fiscal Years 2013 to 2023,” May 2013, <http://www.cbo.gov/sites/default/files/cbofiles/attachments/44172-Baseline2.pdf> (accessed June 7, 2013). For longer-range projections, see Congressional Budget Office, *The 2012 Long-Term Outlook*, June 2012, http://www.cbo.gov/sites/default/files/cbofiles/attachments/06-05-Long-Term_Budget_Outlook_2.pdf (accessed June 7, 2013).

2. J. D. Foster and Alison Acosta Fraser, “Six Bipartisan Entitlement Reforms to Solve the Real Fiscal Crisis: Only Presidential Leadership Is Needed,” Heritage Foundation *Background* No. 2748, November 30, 2012, <http://www.heritage.org/research/reports/2012/11/six-bipartisan-entitlement-reforms-to-solve-the-real-fiscal-crisis-only-presidential-leadership-is-needed>.

CHART 1

Debt Borrowed in Credit Markets Is at 50-Year High

DEBT HELD BY THE PUBLIC AS A PERCENTAGE OF GDP



Source: Office of Management and Budget, *Historical Tables, Budget of the U.S. Government, FY 2014*, Table 7.1, April 2013, <http://www.whitehouse.gov/omb/budget/Historicals> (accessed May 8, 2013), and Congressional Budget Office, "Updated Budget Projections: Fiscal Years 2013 to 2023," May 2013, <http://www.cbo.gov/publication/44172> (accessed May 15, 2013).

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have been preferable if brought about by spending restraint and a stronger economy, by international standards U.S. fiscal policy was reasonably prudent for long periods. Under President Obama, the debt ratio has shot up to exceed 75 percent in 2013.³ If this were an aberration, if the debt ratio were expected to return quickly to historical levels in the coming years, the recent rise in the debt ratio would be a mostly passing concern.

Rather than returning to previous levels, under current policy the debt ratio is projected to rise steadily from around 2019 onward as the full weight of unaffordable entitlement programs falls on the American taxpayer and the American worker. The simple fact is that "America is on the verge of becoming a country in decline—economically stagnant and permanently debt-bound."⁴

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Rising Debt, Rising Interest Rates—the Theory

A general consensus exists on how, but not necessarily the extent to which, interest rates are normally affected by budget deficits and their resulting changes in the ratio of government debt to the size of the economy.⁵ In short, at moderate debt ratio levels,

3. Congressional Budget Office, "Updated Budget Projections: Fiscal Years 2013 to 2023."
4. Edwin J. Feulner, "Foreword," in Stuart M. Butler, Alison Acosta Fraser, and William W. Beach (eds.), *Saving the American Dream: The Heritage Plan to Fix the Debt, Cut Spending, and Restore Prosperity*, 2011, <http://www.savingthedream.org/>.
5. There are, of course, important exceptions, most notably in the current era the experience of Japan, which has driven up its debt ratio to astounding levels, yet without triggering the expected interest rate effects. The standard and highly plausible explanation is that the Japanese are astounding savers.

modest increases in the debt ratio can produce very modest increases in interest rates. More relevant to recent U.S. experience, rapid increases in the debt ratio, or substantial increases over an extended period, can produce substantial increases in interest rates. Before turning to empirical results, it is worthwhile to consider the mechanisms by which large budget deficits and rising debt ratios may push interest rates upward.

More relevant to recent U.S. experience, rapid increases in the debt ratio, or substantial increases over an extended period, can produce substantial increases in interest rates.

The two classic means by which interest rates respond to increasing government debt are inflation and crowding out. The inflation argument follows from observing the strong incentive of highly indebted governments to push up inflation and thereby reduce the price-level-adjusted value of their outstanding debt. In simplest terms, debt is issued at one price level. If government devalues the currency by half, for example, the value of outstanding debt in current dollar terms is cut in half.

Debt purchasers build their inflation expectations into the prices they are willing to offer. They may also include an extra interest rate premium as compensation for the possibility inflation may substantially exceed their expectations. Aware of the incentive facing high-debt countries, debt holders may then raise their inflation risk premium even before the onset of higher inflation. The more debt issued, the greater the risk the government will give in to the inflation surprise temptation, and thus the greater the risk premium. Rapid inflation is then an effective means of reducing a nation's practical debt burden only if the rise in inflation is unexpected. Of course, if and when inflation accelerates, interest rates will then increase further.

In recent years central banks have been both largely independent of national fiscal authorities and credibly opposed to high inflation, thus neutralizing this inflation surprise concern. However, if global bond buyers ever lost confidence in a central bank's independence, its resolve regarding price stability,

or its ability to contain inflation, then interest rates would likely jump substantially and very quickly.

The second traditional explanation for a debt-to-interest rates relationship, crowding out, observes how government debt competes with private borrowers for national saving: Government borrowing subtracts from domestic saving available to private borrowers who must then bid up the price of their borrowing which, of course, is the interest rate they pay. The trouble with the simple, conventional crowding out argument is it implicitly and incorrectly presumes the U.S. economy effectively operates in isolation, closed to foreign trade and foreign supplies of saving. To the contrary, when the federal government runs a budget deficit the United States is able to import saving from abroad as needed, thereby leaving domestic investment and interest rates largely unaffected and inoculating domestic investment and therefore economic growth.

Heavy government borrowing inflicts substantial, if less obvious, harm on Americans even if interest rates hold steady and private investment is unaffected. As foreign saving is imported to offset government dis-saving and thereby sustain domestic private investment, more of the income earned from domestic production must compensate foreign investors, leaving less domestic income available for Americans. The ability to import savings from abroad is economically beneficial on balance, but not cost-free.

The International Demand for Government Debt as a Portfolio Choice.

The availability of foreign savings may initially blunt the effects of government borrowing on interest rates, but the foreign appetite for any nation's debt is not unlimited. Citizens of one nation typically desire to hold the debt and other assets from another country, if only as a matter of prudent portfolio diversification. Wise investors typically diversify their holdings among domestic assets, and the same process holds true for purchasing foreign assets, whether bonds, equities, or land.

This portfolio effect is limited to an extent by the home country bias displayed by investors in most countries, and foreign demand is also often limited by the peculiarities of the issuing nation. For example, everything else held equal, the international demand for holding the debt of a small, emerging-market country is likely to be more than

proportionally less than the demand for holding the debt of a large, industrial nation. Likewise, the international demand for the debt of countries with bad economic policies will be less than the demand for debt in countries employing sound policies.

From the perspective of foreign demand for its debt, the U.S. benefits extraordinarily from its position in the global economy. With the largest economy, backed by a tradition of respect for the rule of law, extraordinarily deep and diverse financial markets, and a history of low inflation and relatively pro-growth economic policies, foreign demand for U.S. debt is plentiful. The United States also enjoys the extraordinary benefits of providing the world's primary reserve currency for international commerce, further increasing the demand for U.S. dollar assets such as federal debt.

These factors and more come into play in determining the appetite of foreign savers for U.S. debt, and this appetite is clearly robust. But, at some point as the debt ratio rises, resistance will appear, the appetite slaked, and U.S. interest rates will begin to rise just as though the conventional crowding-out effect were in full force.

Rising Debt, Rising Interest Rates—the Developing Consensus

The relationship between interest rates and government debt issuance is not a simple one. It depends on the country, the circumstances in credit markets around the world, the country's economic policies, and, of course, the amount of debt outstanding relative to the size of the economy. Yet for all these complexities, one abiding factor stands out: When debt gets high enough or rises fast enough, markets notice and interest rates rise. As David Greenlaw, James Hamilton, Peter Hooper, and Frederic Mishkin observed earlier this year, interest rate “problems can arrive quickly and dramatically once the debt loads and current-account deficits get sufficiently high.”⁶ Despite its rising debt and confusing political mechanics, the United States is

still regarded as a relatively safe bet by credit market participants—for now.

For all the complexities of interest rates and government debt issuance, one abiding factor stands out: When debt gets high enough or rises fast enough, markets notice and interest rates rise.

Early in the 2000s researchers published three studies marking something of a point of departure for empirical analysis of the effects of fiscal policy on interest rates. As one paper noted in describing the difficulties:

[T]he effects of fiscal policy on interest rates have proven difficult to pin down statistically. The issues include the appropriate definition of deficits and debt, whether deficits or debt should be the variable of interest, the difficulty of distinguishing expected and unexpected changes, and the potential endogeneity of many of the key explanatory variables.⁷

The importance of these three studies was, first, that they took different approaches to estimating the relationship. Second, rather than attempting to estimate the relationship between interest rates and current deficits or debt ratios, these studies examined the effects of *expected future* deficits and debt levels on a forward-looking measure of long-term interest rates, in effect aligning expected future fiscal policy with market-based future interest rate effects. Third, despite their different approaches, the three studies produced similar results.

In 2003, Thomas Laubach considered the effects of *projected* fiscal policies on *longer-horizon* interest rates.⁸ This approach offers an advantage in that many factors affect interest rates, especially in the

6. David Greenlaw, James D. Hamilton, Peter Hooper, and Frederic S. Mishkin, “Crunch Time: Fiscal Crises and the Role of Monetary Policy,” U.S. Monetary Policy Forum, February 22, 2013, http://dss.ucsd.edu/~jhamilto/USMPF13_final.pdf (accessed June 7, 2013).

7. William G. Gale and Peter R. Orszag, “Budget Deficits, National Saving, and Interest Rates,” Brookings Institution and the Tax Policy Center, September 2004, <http://www.brookings.edu/~media/research/files/papers/2004/9/budgetdeficit%20gale/20040910orszagale> (accessed June 7, 2013).

8. Thomas Laubach, “New Evidence on the Interest Rate Effects of Budget Deficits and Debt,” Federal Reserve Board Finance and Economics Discussion Series, 2003, <http://www.federalreserve.gov/pubs/feds/2003/200312/revision/200312pap.pdf> (accessed June 7, 2013).

short run, so isolating the near-term effects of fiscal policy can be difficult. Often, however, these near-term effects are also transitory. Examples of temporary fiscal events include automatic fiscal policy stabilizers operating in a recession, or a temporary surge of spending as occurred after the terrorist attacks of 9/11 resulting in a surge in homeland security spending. Levels of government debt expected to prevail several years into the future are presumably unlikely to be significantly affected by such transitory fiscal events.

Using official government forecasts of budget deficits and debt, and taking advantage of information embedded in the interest rate yield curve, Laubach examined whether a consistent relationship exists between government forecasts of future debt levels relative to gross domestic product (GDP) and future interest rates. The analysis revealed a statistically significant relationship:

- A one percentage point increase in the projected *deficit-to-GDP ratio* would be expected to raise long-term interest rates by between 24 and 40 basis points; and
- A one percentage point increase in the *debt-to-GDP ratio* would be expected to raise future interest rates by about four or five basis points.⁹

To put this latter result into the current context, the debt-to-GDP ratio for the United States from 2000 to 2009 averaged just under 38 percent, and is projected to average nearly 73 percent from 2013 to 2023.¹⁰ Laubach's results thus suggest long-term interest rates will be between 1.4 percentage points and 1.8 percentage points higher than they would otherwise be because of the recent run-up in publicly held debt.

In 2004 Eric Engen and R. Glenn Hubbard examined a number of possible relationships between interest rates and government debt, once again

relying on Congressional Budget Office (CBO) projections of deficits and debt.¹¹ They found an increase in the projected deficit equal to one percentage point of GDP raises long-term interest rates by between 18 and 28 basis points. They also found that a one percentage point increase in the debt-to-GDP ratio increased long-term interest rates by between 2.8 and 3.3 basis points.

The work of William Gale and Peter Orszag completes the trio of studies. Gale and Orszag reported a statistically significant relationship between an increase in government debt of 1 percent of GDP, sustained for five years, and a rise in the real long-term interest rate by nearly five basis points. Gale and Orszag found a substantial 25 to 35 basis point effect arising from an increase in the projected unified budget deficit of 1 percent of GDP. What do these results mean for future interest rates under President Obama's fiscal policies?

In January of 2007, the CBO projected the federal government would run an annual surplus of about 1 percent of GDP over the five-year period from 2013 to 2017.¹² In May 2013, the CBO projected the government will run a deficit averaging 3.8 percent of GDP over those same years.¹³ Applying the Gale and Orszag results to the total 4.8 percentage

TABLE 1

**Summary of Reported Results
 (in basis points)**

| | Laubach | Engen-Hubbard | Gale-Orszag |
|-----------------------|---------|---------------|-------------|
| 1 percent increase in | | | |
| Deficit-to-GDP | 24-40 | 18-28 | 25-35 |
| Debt-to-GDP | 4-5 | 2.8-3.3 | 5 |

Source: Heritage Foundation calculations.

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9. A basis point is equal to 1/100 of a percentage point. So, 50 basis points are equal to half a percentage point.
 10. Congressional Budget Office, "Updated Budget Projections: Fiscal Years 2013 to 2023."
 11. Eric M. Engen and R. Glenn Hubbard, "Federal Government Debt and Interest Rates," *NBER Macroeconomics Annual 2004*, Vol. 19 (April 2005), <http://www.nber.org/chapters/c6669.pdf> (accessed June 7, 2013).
 12. Congressional Budget Office, *The Budget and Economic Outlook: Fiscal Years 2008 to 2017*, January 2007, <http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/77xx/doc7731/01-24-budgetoutlook.pdf> (accessed June 7, 2013).
 13. *Ibid.*, and Congressional Budget Office, "Updated Budget Projections: Fiscal Years 2013 to 2023."

point swing in the average projected deficit implies that if the economy were today at full employment, long-term interest rates would be between 1.2 percentage points and 1.7 percentage points higher as a result of President Obama's projected budget deficits.

Using different techniques and approaches, three studies produced similar results. This congruence does not guarantee the results are correct, nor is correct that they will hold for the future as they did in the past, nor that future research will not refine the results and bring additional elements into the analysis. Nevertheless, the similarity in results across the three studies is noteworthy and assuring.

Prospects for Higher U.S. Interest Rates

The ratio of publicly held federal government debt to GDP varied between 23.9 percent and 49.3 percent from 1960 through 2008, averaging about 36.3 percent. By 2012, in President Obama's first term, that ratio had shot up to 72.5 percent. While a higher interest rate on U.S. Treasury securities would be expected from such an increase in the debt ratio under normal circumstances, the initially relatively low debt ratio, and the fact that the United States consistently runs sizable trade deficits, may mitigate the extent of the increase.

Greenlaw, Hamilton, Hooper, and Mishkin explored these issues in detail.¹⁴ They constructed a data set using annual data on 20 advanced countries covering the period from 2000 to 2011. Examining multiple countries simultaneously yields a far more robust data set, but also implicitly imposes an assumption that national interest rates respond similarly across countries to a given change in their debt ratios. Years ago this assumption would cause concern as global financial markets were much less integrated and the prominence of the U.S. economy was unique in the global economy. In 2013, financial markets are generally more integrated while the U.S. economy remains unique in size and consequence, but less so, and so any loss of U.S. focus may be a small price to pay for such an improvement in the scope of data.

A second important aspect of the study conducted by Greenlaw and his co-authors is that they explicitly included the possibility that a nation's current account deficit could influence the domestic interest rate.¹⁵ As discussed above, the ability of a country to import modest amounts of savings from abroad should normally blunt domestic interest rate effects from budget deficits and rising debt. It is also true, however, that as the need for foreign savings to fund domestic budget deficits increases beyond a certain point, foreign buyers of domestic government bonds are likely to raise their interest rate demands more quickly than would domestic buyers. Further, foreign bond buyers are also likely to be more sensitive to changing economic and fiscal circumstances than are domestic purchasers of domestic government debt, and so may require even higher interest rates than would domestic savers if domestic creditworthiness deteriorated suddenly.

In a simple linear relationship between debt and interest rates, the authors found results very similar to those of the three studies described above: If publicly held debt increases by 1 percent of GDP, borrowing costs would increase by about 4.5 basis points if the country was running a balance in its international trade accounts.¹⁶ But if the country was running an average current account deficit equal to 2.5 percent of GDP, domestic interest rates would increase by 23 basis points for every point of increase in the debt-to-GDP ratio. The essential result was reported as:

Equation 1.

$$\text{Interest Rate}_t = 0.045 * (\text{Debt/GDP})_{t-1} \quad (2.30)$$

$$- 0.184 * (\text{Current Account Deficit/GDP})_t \quad (5.16)$$

$$R^2 = 0.69$$

These results raise the question as to why the current account plays such a significant role. Perhaps foreign investors already hold their desired portfolios of domestic assets, and thus inducing prospective

14. Greenlaw, Hamilton, Hooper, and Mishkin, "Crunch Time."

15. The variable used by the authors is the past five-year average of the ratio of the current account to GDP.

16. These results derive from the equation listed below. The presentation of this equation is a simplified version of that appearing in the original paper; however, all the essentials are preserved. Values appearing under the coefficients are reported t-statistics.

foreign bond buyers to finance an increase in domestic government debt requires a relatively large increase in interest rates. Alternatively, perhaps foreign bond buyers observing an increase in domestic debt and the current account tend to worry more about the country's economy from a macroeconomic perspective and so demand a higher interest rate.

Greenlaw and his co-authors then examined the possibility of nonlinear relationships or tipping points between debt and interest rates. The results of this second formulation turn out to have substantially greater predictive power than the simple relationship.

The results from the search for tipping points suggest a fairly complex relationship among the debt ratio, the current account, and domestic interest rates. In a clear indication of a nonlinear relationship, the results now display an insignificant relationship between the debt ratio and interest rates, but a strong relationship between the square of the debt share and interest rates.

Equation 2.

$$\begin{aligned} \text{Interest Rate}_t &= 0.0029 * (\text{Debt/GDP})_{t-1} && (0.30) \\ &+ 0.245 * (\text{Current Account Deficit/GDP})_t && (4.29) \\ &+ 0.000203 * (\text{Debt/GDP})_{t-1}^2 && (4.81) \\ &+ 0.00793 * (\text{Current Account Deficit/GDP})_t^2 && (2.98) \\ &- 0.0063 * (\text{Debt/GDP})_{t-1} && \\ &\quad * (\text{Current Account Deficit/GDP})_t && (10.18) \\ R^2 &= 0.82 \end{aligned}$$

To explore the richness of these results, suppose the normal interest rate on 10-year Treasury bonds would be 4.5 percent in the absence of federal government debt consistent with a market expectation of 2 percent inflation and a 2.5 percent real (inflation-adjusted) rate of interest.

Case 1. A country runs a balance in its trade accounts and its debt ratio is about the U.S. pre-2008

average of 40 percent (roughly the modern historical U.S. average). In this case, domestic interest rates are estimated to be elevated by over 40 basis points to more than 4.9 percent, or approximately the rate typically shown in long-term forecasts. This interest rate effect is also the same order of magnitude but slightly larger in absolute terms than the simple formulation result noted above.

Case 2. A country runs a balance in its trade accounts but the initial debt ratio is 75 percent (roughly the current U.S. average). In this case, domestic interest rates are estimated to be elevated by nearly 140 basis points to nearly 5.9 percent.¹⁷ In short, the recent increase in the U.S. debt ratio would be expected to increase interest rates by one full percentage point if one ignores the current account effect.

Case 3. A country runs a current account deficit of 2.5 percent of GDP and an initial debt ratio of 40 percent. In this case, domestic interest rates are estimated to be elevated by over 50 basis points to more than 5 percent. Comparing this result with Case 1 demonstrates that the effect of running a substantial current account deficit is to increase the interest rate effect of government borrowing. This suggests the portfolio effect discussed above is in operation.

Case 4. A country runs a current account deficit of 2.5 percent of GDP and an initial debt ratio of 75 percent. In this case, domestic interest rates are estimated to be elevated by nearly two full percentage points to 6.5 percent. This case brings out the most negative effects of the interactions of the debt ratio and the current account. If the country is importing substantial savings from abroad and has a relatively high debt ratio, the effect on interest rates is about four times greater than would be the case with a lower, more traditional U.S. debt ratio.

In summary, the ability to borrow from abroad at moderate levels of debt likely reduces borrowing costs as expected, but the advantages of being able to borrow abroad rapidly dissipate as foreign bond buyers respond more quickly by demanding higher interest rates as either the debt share or the current account deficit increases.

17. Greenlaw et al. report slightly different quantitative results from this simulation because they include the effects on interest rates from the level of the debt ratio. However, the coefficient on this variable is not statistically significant, and so it was dropped from the simulation, producing the results found here.

TABLE 2

10-Year Treasury interest rate under various debt ratios and current account deficits

| | Ratio of Government Debt to GDP | | |
|---|---------------------------------|------|------|
| | | 40% | 75% |
| Ratio of Current Account Deficit to GDP | 0.0% | 4.9% | 5.9% |
| Deficit to GDP | 2.5% | 5.0% | 6.5% |

Note: Assumes the interest rate on a 10-year Treasury bond would be 4.5 percent if the current account deficit were zero and there was no federal debt outstanding.

Source: Heritage Foundation calculations.

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In light of these results, the implications of the recent jump in U.S. government debt levels are particularly worrisome. In 2008, federal debt as a share of GDP stood at 40.5 percent, while the previous five-year average ratio of the current account deficit to GDP stood at 5.4 percent. Equation 2 suggests that under normal market circumstances the U.S. government interest rate would then be nearly 80 basis points higher than it would be otherwise. For example, if the normal average interest rate on a 10-year Treasury bond was 4.5 percent in the absence of government debt, the normal rate in 2008 would have been 5.3 percent.

By 2012 the debt share had jumped to 72.5 percent while the current account deficit value had fallen to 3.6 percent. In combination, these factors would be expected to drive up the interest rate on the 10-year Treasury bond by *an additional* 140 basis points. So, instead of a hypothetical zero-debt interest rate of 4.5 percent, or a 2008 interest rate of 5.3 percent, the interest rate on the 10-year Treasury bond would be expected to reach 6.7 percent.

As Greenlaw and his co-authors are careful to observe, results such as these should not be used with the expectation of making precise forecasts. This is perhaps especially true when extrapolating

results to the United States from a data set containing countries large and small. Even so, the analysis captures “a clear feature of the data: that problems can arrive quickly and dramatically once debt loads and current account deficits get sufficiently high.” The authors also note their “results imply that a country can quickly move from the group [of countries] without problems to the group [of countries] that faces insurmountable problems if its debt rises significantly above 80% of GDP.”

The ability to borrow from abroad at moderate levels of debt likely reduces borrowing costs as expected, but the advantages of being able to borrow abroad rapidly dissipate as foreign bond buyers respond more quickly by demanding higher interest rates as either the debt share or the current account deficit increases.

A growing body of evidence suggests a rather common-sense result—small deficits and small increases in debt have similarly small effects on interest rates; while large deficits and larger jumps in debt have especially large effects on interest rates, and these results may be magnified if a country runs a sizable current account deficit.

Rising Debt and Slowing Economies

The traditional “crowding out” argument is that rising government debt subtracts from the pool of savings available for private investment, thus slowing the growth in labor productivity and wages. Higher interest rates associated with higher debt ratios are the market price signals confirming the crowding out mechanism is at work. As noted above, this simple argument may be weakened when a nation can import savings from abroad, at least until the point that foreign investors’ demand for a nation’s debt is essentially satisfied.

A growing body of evidence supports this conjecture as described by The Heritage Foundation’s Salim Furth, from whom this discussion substantially

draws.¹⁸ Manmohan Kumar and Jaejoon Woo found that high-debt advanced economies grew an average 1.3 percentage points slower than low-debt countries (below 30 percent of GDP).¹⁹ Stephen Cecchetti, Madhusudan Mohanty, and Fabrizio Zampolli used a different methodology and found that public debt in 18 advanced countries nearly doubled as a share of GDP over the past three decades.²⁰ They also found that this would have about the same deleterious effects on economic growth as Kumar and Woo suggest.

Unfortunately, the message of the relationship between relatively high debt ratios and slower economic growth has been clouded by revelations of substantial methodological flaws in perhaps the best-known modern work in this area—“Growth in a Time of Debt,” by Carmen Reinhart and Kenneth Rogoff.²¹ Subsequent work by Reinhart and Rogoff corrected the flaws and reaffirmed the fundamental conclusion regarding the dangers of excessive debt.²² As noted by Furth,

In the end, all of [the] corrections and critiques show that countries with debt above 90 percent of GDP grow on average 2.0 percent less per year than low-debt countries and 1.0 percent less per year than countries with debt levels between 60 percent and 90 percent of GDP.²³

The facts are that the U.S. government debt ratio has risen dramatically in recent years, is projected to remain highly elevated in the near term, and is then projected to grow rapidly beginning late in the decade. Simple reason suggests why this increase in debt would constrain policymakers’ choices in terms of allocating future resources, and theory suggests why it would be expected to increase interest

rates substantially and why this increase in interest rates would likely put a severe damper on prospects for economic growth. The empirical evidence strongly supports these latter conjectures.

The recent run-up in government debt is likely to push real (inflation-adjusted) interest rates far above historical experience once credit and financial markets fully recover. The overall economy should likewise recover toward full employment in the years ahead, and then grow at a moderate pace thereafter consistent with growth in the labor supply and advances in technology. The upshot of the literature on debt, interest rates, and economic growth is that future economic growth is likely to be hampered markedly by recent and projected increases in government debt.

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If the Effects of High Debt Are So Dire, Why Are Interest Rates So Low?

The literature accords with basic theory in suggesting a high and rapidly rising debt ratio should increase interest rates and weaken the economy. Yet interest rates remain near historic lows, and the economy, while disappointing, is growing. Is this time truly different, or are other factors in play delaying the inevitable?

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18. For further discussion of these three papers, see Salim Furth, “High Debt Is a Real Drag,” Heritage Foundation *Issue Brief* No. 3859, February 22, 2013, <http://www.heritage.org/research/reports/2013/02/how-a-high-national-debt-impacts-the-economy>.
 19. Manmohan Kumar and Jaejoon Woo, “Public Debt and Growth,” IMF *Working Paper* No. 10/174, July 2010, pp. 1–47, <http://ssrn.com/abstract=1653188> (accessed June 7, 2013).
 20. Stephen Cecchetti, Madhusudan Mohanty, and Fabrizio Zampolli, “The Real Effects of Debt,” Bank for International Settlements *Working Paper* No. 352, September 2011, <http://www.bis.org/publ/work352.pdf> (accessed June 7, 2013).
 21. Carmen Reinhart and Kenneth Rogoff, “Growth in a Time of Debt,” *American Economic Review*, Vol. 100 (May 2010), pp. 573–578, http://scholar.harvard.edu/files/rogoff/files/growth_in_a_time_of_debt_aer.pdf (accessed June 7, 2013).
 22. Thomas Herndon, Michael Ash, and Robert Pollin, “Does High Public Debt Consistently Stifle Economic Growth? A Critique of Reinhart and Rogoff,” Political Economy Research Institute *Working Paper* No. 322, April 15, 2013, http://www.peri.umass.edu/fileadmin/pdf/working_papers/working_papers_301-350/WP322.pdf (accessed June 7, 2013).
 23. Salim Furth, “Debt and Growth in a Time of Controversy,” Heritage Foundation *Issue Brief* No. 3926, May 1, 2013, http://thf_media.s3.amazonaws.com/2013/pdf/ib3926.pdf.

One explanation for the U.S. experience may be that the expected relationship between government debt and interest rates truly has broken down. Perhaps government debt and national saving no longer matter to domestic investment levels and interest rates.

Far more likely, the traditional relationship has been temporarily superseded by other forces. The Federal Reserve has embarked on a most extraordinary policy of purchasing \$85 billion a month in long-term government and agency bonds with the specific intent of pushing down long-term interest rates. Perhaps the Fed is having a substantial effect, sufficient to push down long-term interest rates, sufficient even to thwart the upward interest rate pressures from rising debt.

Another explanation could be the persistent high level of uncertainty in global financial markets, arising first from the financial crisis late in the last decade and now continuing through the travails of the euro bloc. These developments have heightened the safe haven aspect of certain countries, such as the United States and Germany, which, despite low returns and their own economic troubles, nevertheless lure vast sums of foreign capital from riskier locales thus pushing down U.S. and German interest rates. While far from ideal, the U.S. is perhaps nevertheless benefitting from being “the least dirty shirt in the laundry.”

If this safe haven theory or the Federal Reserve-based theory applies, it means the traditional debt-to-interest rate effect has not been negated but only temporarily suspended. It also means interest rates will rise substantially when and as the safe haven and Federal Revenue effects dissipate, and then will continue to rise substantially as the traditional debt-to-interest rate effect takes hold in light of the substantial increase in the U.S. debt share.

A Nation at Risk, a Clock Ticking

The U.S. economy is recovering from the Great Global Recession, but President Obama’s massive deficits, soaring debt, and tepid support for reforms to render America’s entitlement programs affordable pose a grave economic threat. The threat is not theoretical; it is not suppositional. The threat is real and must be faced squarely, and soon. The simple

fact is that under current policy, “America is on the verge of becoming a country in decline—economically stagnant and permanently debt-bound.”²⁴

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Economic forecasts beyond the next few quarters, whether by government or private forecasters, tend to show the economy moving toward normal levels of production and employment over some reasonable period, with interest rates likewise returning to normal levels. However, recent history both in the U.S. and abroad underscores how quickly events can turn when market psychology is upended. Rather than increasing steadily, interest rates are more likely to surge in stages, hammering the economy anew each time.

Nor is the future likely to unfold undisturbed. In addition to geopolitical tensions, Europe has yet to resolve its internal monetary contradictions surrounding the euro. While European leaders have masterfully danced from crisis to crisis, they have yet to settle on policies rendering the euro a viable currency or their economies strong, viable competitors internationally.

At home, perhaps the Federal Reserve has badly misjudged as it aggressively pursues its policy of quantitative easing through “extraordinary measures” and will have to raise interest rates quickly to prevent inflation. Or perhaps the recent extended period of high unemployment has degraded worker skills in ways only now implied, or perhaps business investment in new facilities or research and development has been inadequate to sustain normal growth rates.

The point is not that any or all of these possibilities are likely, but that they and others may transpire, and thanks to the rapid increase in U.S. government debt, the federal government is poorly positioned to respond and the U.S. economy is poorly positioned to overcome their effects.

24. Butler, Fraser, and Beach (eds.), *Saving the American Dream*, p. 1.

The current period of low interest rates despite rising debt is beguiling policymakers and the nation alike about the risks stemming from America's irresponsible fiscal policy, lulling them into complacency. Not merely the calm before the storm, economic conditions brought about by developments abroad and monetary policy at home have effectively anesthetized financial markets against the effects of U.S. fiscal profligacy. The anesthesia, however, will prove temporary. Interest rates will almost certainly rise past the normal levels now forecast, the economy will suffer—all largely due to the budget deficits now being incurred and to the inaction so far to address the even greater, entitlement-driven deficits in the years immediately ahead.

America's decline is far from inevitable. There is still time for a substantial and effective course

correction. Congress, working with President Obama, can begin to right the ship quickly with six well-vetted, bipartisan proposals, starting the process of reforming Social Security and Medicare so they better serve their constituencies today while remaining affordable tomorrow.²⁵ Enacting all six proposals, however, would still leave the task only partly completed. To finish the job, Congress and the President will need a more comprehensive approach, such as is laid out in The Heritage Foundation's *Saving the American Dream* plan.²⁶ There is still time, but not much, to ensure America's prosperity for the next generation.

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25. Foster and Fraser, "Six Bipartisan Entitlement Reforms to Solve the Real Fiscal Crisis."

26. Butler, Fraser, and Beach (eds.), *Saving the American Dream*.