



Myths about Budget Deficits

By John H. Makin

February always brings with it the president's proposals for taxing and spending in the coming fiscal year. The president's budget proposals are accompanied by congressional and administration estimates of the path deficits and government debt are expected to take in coming years. Last year, those projections, especially a three-year string of actual and projected deficits over a trillion dollars from 2009 through 2011, excited widespread comment and handwringing about runaway deficits and their allegedly damaging effects in the form of lower growth, higher inflation, and higher interest rates.

Nobody is happy about a sharp increase in government deficits and debt, which typically results from the extraordinary demands on government spending during a war or an economic crisis, such as the crisis that unfolded after the housing bubble burst in 2007. The financial crisis that followed the collapse of Lehman Brothers in September 2008 was particularly acute, and it elicited an unusually large increase in government spending to contain it.

In a sense, a spike in government budget deficits and debt is akin to an aggressive medical intervention, like chemotherapy to contain the spread of cancer. The process is very unpleasant, and the prognosis, somewhat uncertain. But ultimately, the outcome depends upon measures undertaken to help a patient regain and sustain strength after the damage caused by aggressive treatment. Returning to the sphere of economic policy, proposals to boost marginal tax rates at a time of elevated budget deficits are a bad idea. Higher rates will only

compound the drag on the economy tied to other burdens associated with larger budget deficits. Alternatively, increased congressional pressure on the Federal Reserve to accommodate additional debt finance can be harmful if the result is a rise in anticipated inflation. In short, problems associated with a rapid buildup of deficits and debt should not be compounded by ill-advised, ad hoc policies.

The most reliable way to reduce government budget deficits is to reduce government spending. The alternative—raising taxes—has an ambiguous impact since higher tax rates tend to slow growth and, thereby, to reduce the tax base. Alternatively, boosting inflation to boost the nominal tax base while reducing the real value of government debt is counterproductive given the resource misallocation and the rise in interest rates on outstanding debt that accompany higher inflation.

The most frequently cited negative byproducts of higher government deficits and debt include a rise in interest rates, higher inflation, and lower growth. In addition, a rise in U.S. budget deficits seems to occasion substantially more global outcry than a rise in budget deficits elsewhere, say in Europe or Japan.

The remorse and potentially bad policy proposals prompted by bigger budget deficits should be tempered by the fact that the collapse of the housing bubble and the attendant global financial crisis that followed required more government borrowing and spending to avoid an even more severe economic downturn than the one that has occurred. During the second half of 2009, for example, U.S. fiscal stimulus probably added about 2 percentage points to growth along with 2 percentage points added because of a normal cessation

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of an inventory sell-off. Given that actual growth averaged about 3 percent during that period, would it have been better to allow the -1 percent growth that probably would have resulted without the fiscal stimulus, which included over \$700 billion aimed at staunching the financial meltdown that followed the Lehman Brothers crisis?

Some may argue that it would have been better to do nothing and simply allow the system to work through the aftermath of the housing bubble on its own, but, given the economy's underlying weakness and the modest recovery that has occurred (albeit with the aid of substantial support from fiscal and monetary policy), the damage from the "do nothing" approach could have been substantially greater than the considerable damage actually suffered. In any case, the measures have been undertaken, and we face these questions: what are the likely consequences of the measures, and what policies are appropriate now?

Global Rise of Deficits and Debt

Global increases in deficits and debt have been sharp in 2009 and 2010. Fiscal deterioration in the United States has been sharper than global fiscal deterioration, although the decline started from a sounder fiscal base than that of other industrial countries. U.S. fiscal challenges, in the form of higher deficits, are projected to have peaked in 2009, although the challenges over the next two fiscal years may be substantial. Deficits will remain elevated, and the ratio of debt to gross domestic product (GDP) will continue to rise.

Perhaps the best way to summarize changes in the global fiscal picture—as tied to changes in government debt that capture the impact of higher deficits over time—is to look at the change in the ratio of government debt to GDP between 2008 (precrisis) and 2010, the year by which the peak acceleration in deficits will begin to wane. In the United States, the debt-to-GDP ratio will have increased by 50 percent, from 40.8 percent in 2008 to about 62 percent in 2010.¹ In the euro area, the ratio of debt to GDP will have risen by 25 percent over the same period, from 69.3 percent in 2008 to 86.3 percent in 2010. In Japan, the ratio of debt to GDP will likely increase by 16.2 percent, from 172 percent in 2008 to 200 percent in 2010.²

Measures of deficits and debt vary from country to country, with some including gross government debt and others including alternative net debt figures that may be somewhat lower. Looking at the percent increase in the debt-to-GDP ratio corrects for some, although not all, of these problems and is perhaps the best way to encapsulate a cross-country comparison of rising debt burdens.

The figures reported above highlight the fact that the outlook for U.S. deficits and debt (the cumulative deficits) has deteriorated more sharply than in other countries but from a substantially lower base. The United States has the benefit of having started with a 40.8 percent debt-to-GDP ratio in 2008, so that although it experienced the most rapid increase in the ratio (nearly 50 percent),

the debt-to-GDP ratio in 2010 is still, at about 62 percent, substantially below the average ratio in other industrial countries. It is probably fair to say that the more rapid run-up in U.S. debt has pushed the U.S. debt-to-GDP ratio up to the lower end of the common range of debt-to-GDP ratios for industrial countries.

Of course, Japan's experience with a debt-to-GDP ratio rising to 200 percent is an outlier. It is worth noting that among advanced industrial countries, Japan has the highest ratio of debt to GDP by far and simultaneously has the lowest interest rates (about 1.3 percent on ten-year notes) and actual deflation (about 2.5 percent). Japan's growth is weaker than that of most advanced industrial countries, and its nagging deflation has meant growth-sapping real interest rates—the highest among advanced industrial countries. For example, although the nominal yield on Japanese ten-year notes is 1.3 percent, the real yield, calculated by adding the deflation rate of 2.5 percent to the 1.3 percent interest rate, is 3.8 percent. By comparison, the real yield on ten-year notes in the United States is a nominal yield of 3.7 percent less the year-over-year core inflation rate of about 1.4 percent, leaving a normal real yield of 2.3 percent.

The deterioration in the U.S. fiscal picture appears to be more persistent than in most other countries. Therefore, attention has focused on the U.S. case, especially given the coincident surge in the monetary base and the fears of inflation tied to the possibility that the United States might print money to finance the issuance of increased government debt. The large portion of U.S.

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debt held by foreigners has intensified market interest in the willingness of foreigners to continue holding debt despite the perceived risk of higher future U.S. inflation and the sharp rise in U.S. government debt outstanding.

A study of economic growth and inflation at different levels of government debt and external debt by Carmen M. Reinhart and Kenneth S. Rogoff suggests three broad conclusions.³ The study merits serious consideration since the dataset Reinhart and Rogoff employ includes 3,700 annual observations drawn from forty-four countries over a period of two hundred years. The findings are important because they suggest that the real harm from high deficits and debt arises above a threshold of a debt-to-GDP ratio of 90 percent—a level that is conceivable for the United States to reach some time in the next decade. Below the 90 percent debt-to-GDP threshold, rising government debt does not appear to penalize growth nor does it necessarily induce higher inflation for advanced industrial countries. Not surprisingly, emerging markets may experience more damaging results from a rapid run-up in debt when the proportion of debt held by foreigners is high.

Impact of Deficits on Interest Rates

The most frequently cited problem attributed to the spike in U.S. deficits and debt is the threat of higher interest rates. Early in November 2009, the Treasury Borrowing Advisory Committee, which comprises representatives from the dealer community and advises the Treasury on management of the public debt, issued a warning: under some scenarios, the yield on ten-year government bonds could rise to close to 10 percent over the next decade because of a rapid run-up in the ratio of debt to GDP and rising concerns over inflation. Needless to say, such an outcome would be highly undesirable, entailing a substantial increase in the cost of servicing an elevated stock of government debt and a potential drag on growth implied by a broad rise in interest rates.

It is worth recalling that in today's highly fragile U.S. economy, even with very low interest rates and substantial excess reserves in the banking system, borrowing by households and businesses is virtually nonexistent outside of the mortgage sector. U.S. consumer credit fell by \$17.5 billion in November 2009—the largest drop in the history of that statistic. The outlook for a robust resumption of private borrowing at substantially higher real and

nominal interest rates may not be very bright if larger deficits can be expected to push future interest rates up. It is important to examine what the empirical evidence indicates regarding the likely impact of higher deficits and debt on future interest rates at a time when the economy may have recovered. Fortunately, the evidence strongly suggests that much of the impact may have occurred already, provided that the U.S. fiscal picture does not deteriorate substantially from here.

Empirical studies of the impact of higher deficits and debt on interest rates have been plagued by a fundamental problem in the past. Straightforward regression studies, even those that control for other variables, such as expected or actual inflation, typically suffer from what is called cycle bias. The cycle bias results in a finding that larger government deficits and associated increases in debt actually result in lower interest rates. This paradoxical result occurs because, in the United States, nonfederal government debt (currently about \$27 trillion) is nearly four times as large as federal government debt (currently about \$7.2 trillion). When the economy enters a recession, countercyclical fiscal policy boosts deficits and government debt while private debt falls. Given that the stock of private debt is so much larger than government debt, the drop in private borrowing in a recession overwhelms the impact on total borrowing of a rise in government deficits. Simultaneously, during a recession, the Fed cuts interest rates, reinforcing the cycle bias. Consequently, interest rates fall as budget deficits rise.

In 2009, the federal budget deficit was substantially larger than usual, but total borrowing has been dropping for nearly two years. The *Bank Credit Analyst* reports that from the end of 2007 to the middle of 2009, the issuance of nongovernment debt fell by about 17 percent of GDP while the issuance of government debt rose by about 12 percent of GDP, leaving a net reduction in the issuance of overall debt of approximately 5 percent of GDP.⁴ The sharp recession and financial collapse have depressed private borrowing even more than government borrowing has increased, so interest rates have remained low.

Still, the large and persistent rise in U.S. deficits has produced a sharp rise in the expected future ratio of debt to GDP; such a persistent increase in the supply of debt (foreseeable now) may have put upward pressure on interest rates, even controlling for other variables like inflation.

A paper written by Thomas Laubach when he was a senior economist at the Board of Governors of the Federal

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Reserve System has attempted to deal with the cycle bias problems tied to measuring how increasing deficits and debt affects Treasury yields.⁵ Laubach estimates the impact of changes in both deficits and debt expected five years forward on five-year forward ten-year Treasury yields. In other words, Laubach asks whether a run of deficits that will raise the future debt-to-GDP ratio will also boost the future expected interest rate on ten-year Treasury notes. Laubach's work is probably the best existing empirical work on measuring the impact on Treasury yields of changes in deficits and debt.

Laubach finds that a percentage point rise in the five-year forward debt-to-GDP ratio boosts five-year forward yields on ten-year notes an estimated three to four basis points. A percentage point rise in the deficit-to-GDP ratio increases expected note yields by about twenty-five basis points.

There is no inconsistency between the debt and deficit results. The rise in the expected debt-to-GDP ratios five years forward captures the impact on debt from five years of higher deficits. A \$500 billion rise in expected debt five years from now is roughly equivalent to a \$100 billion annual rise in deficits. The measured impact of a \$100 billion rise in expected deficits five years forward, therefore, ought to be close to the measured impact of five-year forward increases in debt with some slippage, plus or minus, from a nonlinear path of annual deficits.

Have Soaring Deficits Boosted Rates?

The behavior of U.S. interest rates since the crisis of October 2008 and the sharply higher government spending that followed is broadly consistent with Laubach's findings on the impact of enlarged, expected future deficits and debt upon forward rates on ten-year notes.

A 20–25 percentage-point rise in the debt-to-GDP ratio after the 2008 fiscal year probably added about fifty to seventy basis points to longer-term yields as a reflection of the implied rise in forward ten-year rates. That effect appears to have arisen largely after the rebound from the March 2009 negative spike in interest rates tied to the initiation of Treasury purchases by the Federal Reserve.

Additional slippage on the outlook for deficits and debt would boost rates further. An additional \$100 billion

deficit per year, which would translate into a \$500 billion rise in debt five years from now, would add another ten to fifteen basis points to yields on Treasuries. While the increase in Treasury yields is undesirable and discourages private borrowing, it is hardly catastrophic, as some analysts have suggested. The reality is that buyers of Treasury notes can foresee the impact of higher deficits on the stock of outstanding debt in the future. In effect, that impact is already in the price.

Viewed another way, were it possible to undertake measures to accelerate growth or cut spending to substantially reduce expected future deficits and debt, Treasury yields could be expected to come back down and thereby enhance the prospects for a higher level of private-sector borrowing and spending.

A rise in expected future inflation more than accounts for the increase in higher yields on Treasury notes expected to prevail five years forward. Since March 2009, the market measure of five-year inflation expected to prevail five years from now has risen by about seventy basis points, thereby capturing most of the projected increase in ten-year notes reported based on the Laubach study. The Federal Reserve's inflation-fighting credibility is important in containing the rise in future interest rates. Were Congress to press forward with measures, such as Government Accountability Office audits, that imply potential additional political pressure on the Federal Reserve to accommodate higher government borrowing, the likely result would be to push interest rates up even further. The tendency for higher inflation rates to depress growth is a further argument against measures to compromise Federal Reserve independence at a time when government borrowing needs are high. Such efforts are simply counterproductive.

The Right Way to Manage Deficits

For reasons that may or may not constitute a sound policy response to the trauma of a housing bubble collapse and a financial crisis, higher government spending—along with weaker growth—has sharply elevated deficits and debt worldwide. The rise in government debt in the United States, while starting from a lower base than elsewhere, has been sharper and has brought U.S. debt to a point in which substantial further fiscal deterioration

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could trigger the problems—higher inflation and lower growth—shown over time and across countries to result from sharp increases in debt above a 90 percent debt-to-GDP ratio. A hopeful corollary arising from empirical investigation of the impact of sharp debt increases on interest rates is that substantial progress in reducing deficits, especially by containing government spending over the next several years, could actually help to lower interest rates, given that the prospective increases in debt have already been reflected in those rates.

Currently, the outlook for containment of government spending is not particularly optimistic. Plans to increase spending on health care would probably add to estimated future deficits, as would enhanced measures to extend unemployment benefits and, thereby, slow the progress toward full employment. Taxes on pollution or carbon taxes would likely produce a desirable reduction in pollution. Yet it might be better to reduce emissions by auctioning off permits to emit pollutants and using the proceeds of such permit sales to reduce the budget deficit. Whether the period during which the country is trying to recover from a deep recession is the best time to increase production costs is another matter that involves difficult tradeoffs.

November's midterm congressional elections will offer voters an opportunity to render a judgment on the desirability of policies pursued over the past two years. If a large number of incumbent representatives and senators

are voted out, part of the implicit mandate for the new Congress would be to undertake constructive measures to slow the growth of federal debt.

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Notes

1. This estimate is based on Congressional Budget Office projections published in August 2009 and may be revised as new figures appear in conjunction with discussions of next year's budget.
2. These figures are drawn from various sources, including the International Monetary Fund, JPMorgan, the *Bank Credit Analyst*, and other discussions of the fiscal consequences of the global financial crisis.
3. Carmen M. Reinhart and Kenneth S. Rogoff, "Growth in a Time of Debt" (Papers and Proceedings, American Economic Review, 2010).
4. *Bank Credit Analyst* 61, no. 7 (January 2010).
5. Thomas Laubach, "New Evidence on the Interest Rate Effects of Budget Deficits and Debt" (Working Paper 2003-12, Finance and Economics Discussion Series, Federal Reserve Board, Washington, DC, May 2007 [revised version]), available at www.federalreserve.gov/pubs/FEDS/2003/200312/revision/200312pap.pdf (accessed January 25, 2010).