

# EPI BRIEFING PAPER

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## BUDGETING FOR RECOVERY

### The Need to Increase the Federal Deficit to Revive a Weak Economy

BY JOSH BIVENS

**W**ith 8 million jobs lost since December 2007 and the unemployment rate at its highest level in 26 years, the need to address the profound weakness in the job market persists even as many economists are predicting that an end to the recession is near or even past.

A large hurdle standing in the way of strong action on jobs is the point of view that federal deficits must always be strictly avoided. While this belief may respond to our ingrained notions about thriftiness and “living within our means,” it is entirely wrong from the standpoint of basic economics. To abet a strong economy, sometimes the federal budget needs to have a surplus, sometimes it needs to be balanced, and sometimes it needs to be in deficit. When workers and plants are idle and offices are empty, and when investment funds are begging to be borrowed, this is the time for deficits. The federal government can foster economic recovery by incurring them. In fact, they are a pre-condition to a robust recovery. In short, the obstacle to strong action on creating jobs posed by deficits is strictly political, not economic.

This paper examines the relationships between federal deficits, interest rates, inflation, international indebted-

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ness, and generational equity. Its single most important point is that our conventional notions of thrift turn upside-down when the nation confronts a recession.

- As long as there are idle resources in labor and capital markets and interest rates controlled by the Federal Reserve are at or near zero, *none* of the negative outcomes feared from running larger deficits will come to pass. For the next year or two at least, the biggest threat regarding deficits is that they will not be large enough to support the public relief and investments needed to pull the economy into a sustained recovery and provide the 10 million-plus jobs necessary to restore the U.S. labor market to its pre-recession strength.
- Supporters of the American Recovery and Reinvestment Act (ARRA), enacted in February 2009, argue that it was necessary for pulling the economy out of its downward spiral. Critics of the Recovery Act argue that it contributes too much to rising federal deficits, and that these deficits will prove disastrous to the American economy. But the Recovery Act will have only a small impact on the overall budget deficit, even in the short run. In the longer run (over the next decade or more), when the economy will have presumably recovered and concerns about budget deficits may be legitimate, the Recovery Act has no effect at all.
- Deficits in the long run are driven almost entirely by spending on Medicare and Medicaid. Without these programs, the federal budget (excluding interest payments) would be in surplus indefinitely. Since the rise in Medicare and Medicaid spending is driven by the economy-wide rise in health costs, fundamental health reform that reduces the cost of health care is the key to long-run budget balance.
- The United States has not had to rely on foreigners to finance the rise in government deficits in the past year-and-a-half. Private domestic savings in the United States have expanded *faster* than government borrowing in the past year. In other words, there is no shortage of domestic residents willing to hold government debt right now.

## The arithmetic of budget deficits

In fiscal year 2009, which ended on September 30, the Congressional Budget Office (CBO) estimates that the federal deficit will total \$1.6 trillion, or 11.2% of GDP. In 2010, the deficit is forecast to total \$1.38 trillion, or 9.6% of GDP. These will be the two largest annual deficits on record since World War II.

### ***Budget deficits defined***

A deficit occurs when the federal government's spending exceeds its revenues in a given year. To finance the difference, the government borrows from the public by selling Treasury bonds, notes, and bills.

Federal spending is dominated by Social Security and other non-health-related entitlements, Medicare and Medicaid, defense spending, and interest payments on the federal debt (**Figure A**). All other spending (so-called non-defense domestic discretionary spending) accounts for only 15% of the overall budget.

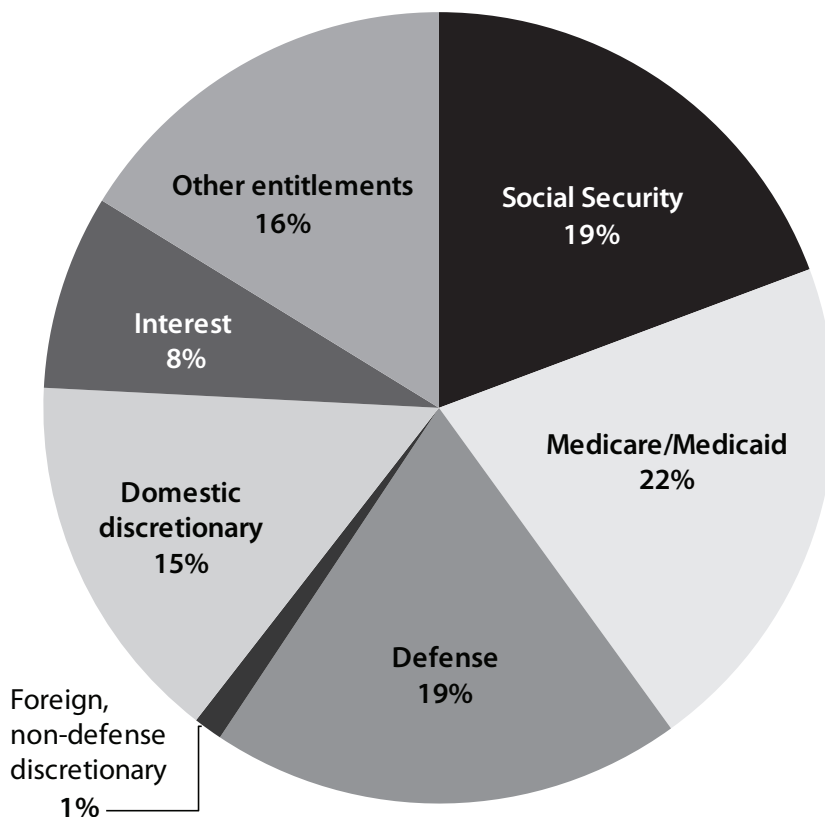
Federal revenues are dominated by federal income taxes and social insurance taxes, the bulk of which are the FICA taxes that fund Social Security and Medicare (**Figure B**). Payroll taxes have grown in importance in recent years and now provide more than a third of all federal government revenues.

### **Causes of current deficits**

On the most salient political question—*how much of these deficits are due to the policies of the Obama administration*—the answer is, very little. Auerbach and Gale (2009) and Irons, Edwards, and Turner (2009) have provided useful analyses of the deficit over the past decade, and the following section draws on them. It is important to note that changes in the budget deficit can occur for two reasons: policy changes and changes in economic conditions. Policy changes affect the

FIGURE A

Federal expenditures by type, 2008



SOURCE: CBO.

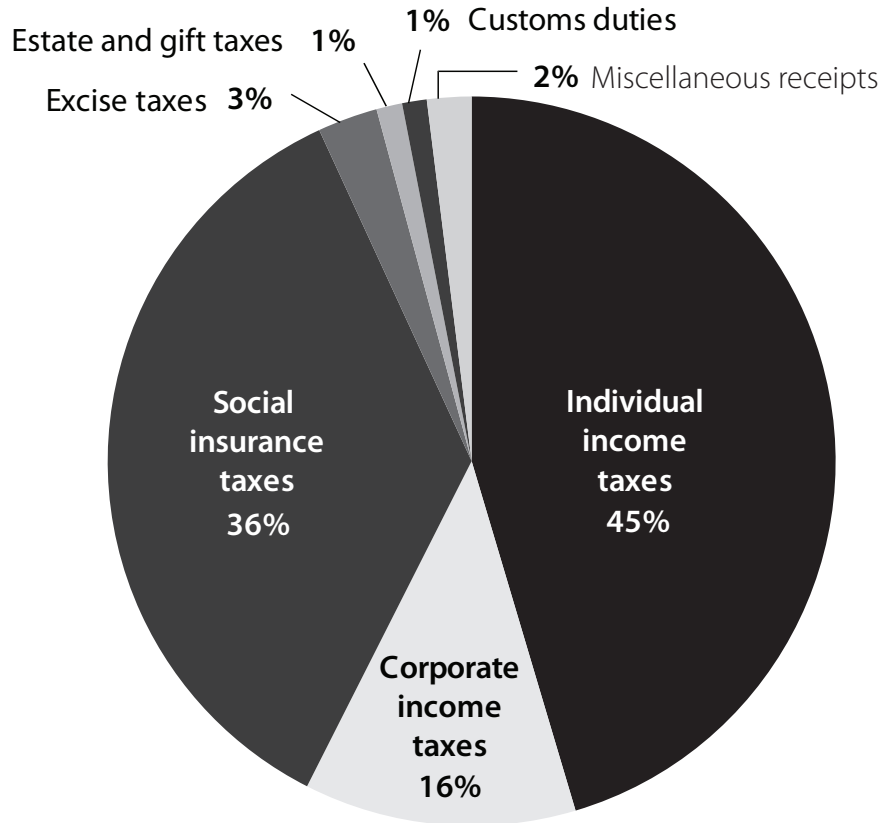
budget balance in obvious ways—cutting tax rates, for example, will increase the deficit. However, economic conditions can also affect the deficit. For example, as the economy slows or enters a recession, tax collections will mechanically fall and social spending may rise, tending to increase deficits. A key theme that emerges out of these reviews is that *most* of the deterioration in the budget balance that occurred between 2001 and 2008 is due to policy changes undertaken during the Bush administration and *not* changes in economic conditions. In 2009, by contrast, the deteriorating economy dominates in explaining the large increase in that year’s deficit.

### The economic expansion of 2001-07

The CBO forecast in 2001 that the federal budget balance would improve by roughly \$300 billion between 2001 and 2007 (the years of economic expansion in the last business cycle), reaching a surplus of \$573 billion in 2007. Instead, the budget was in constant deficit during those years, with the 2007 deficit reaching \$161 billion. While this deficit was small relative to the size of the economy (1.2% of GDP), it represented a \$736 billion *decline* relative to what the CBO forecast in 2001. Auerbach and Gale (2009) estimate that 98% of this decline can be explained by policy changes undertaken since 2001 and not by unexpectedly slow economic growth.

**FIGURE B**

**Federal revenue by source, 2008**



SOURCE: CBO.

The Center on Budget and Policy Priorities has identified the biggest specific policies behind the rise in deficits since 2001 (**Figure C**). The single biggest policy change was the string of tax cuts passed over this time, which explain almost *half* of the policy-driven declines in budget balance. Increased defense and security spending (including the wars in Iraq and Afghanistan) explains roughly a third of this increase, with the rest consumed by the new Medicare prescription drug benefit (created without a revenue source) and other miscellaneous policy changes.

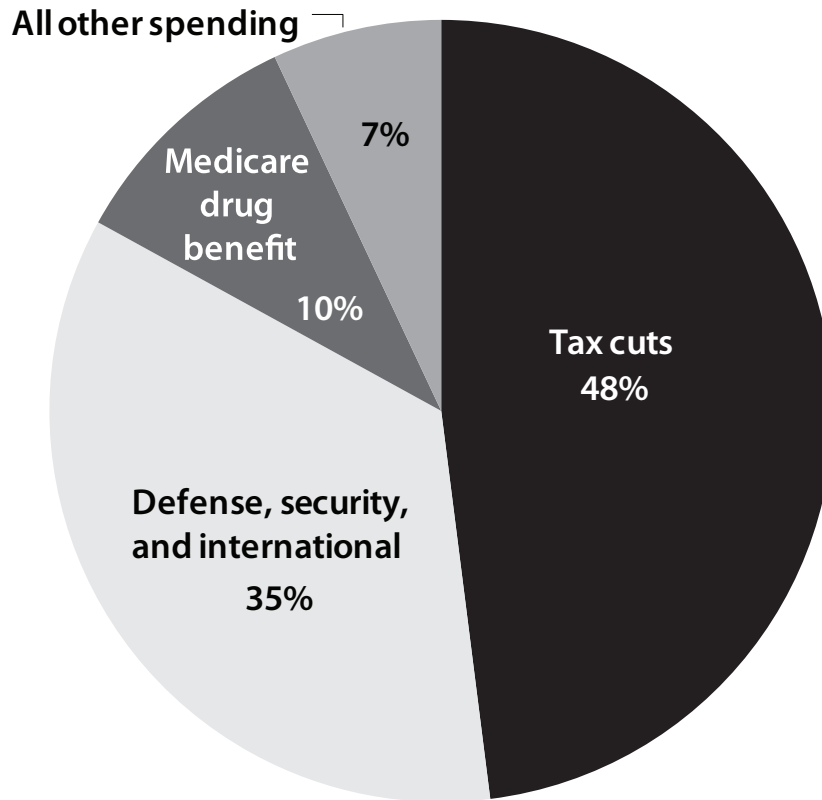
**2008: First year of recession**

In 2008 the deficit hit \$459 billion, a jump of \$298 billion from the year before. Roughly \$160 billion of this increase could be accounted for by the first stimulus package, which comprised roughly \$100 billion in tax cuts to households and \$60 billion in tax cuts for businesses. Many interventions that ended up in the Recovery Act (especially the infrastructure investments) were rejected by policy makers crafting this first stimulus package because they were not “timely” enough—the worry being that the recession would be over before infrastructure projects could get underway. Of course, if major infrastructure investments had been part of the early 2008 stimulus package, they would have been fully online and paying large dividends when the economy began its freefall later that year.

Even in this first full year of recession, less than a quarter (\$71 billion) of the \$298 billion increase in the deficit from 2007 to 2008 was attributed by the CBO to overall economic weakness. By the end of 2008 the difference between the actual deficit and the CBO’s 2001 forecast had climbed to \$1,091 billion, and even after a year of recession only \$83 billion could be laid to the decline in the economy.

FIGURE C

Contribution of policy changes to growth in deficit since 2001



SOURCE: Center on Budget and Policy Priorities.

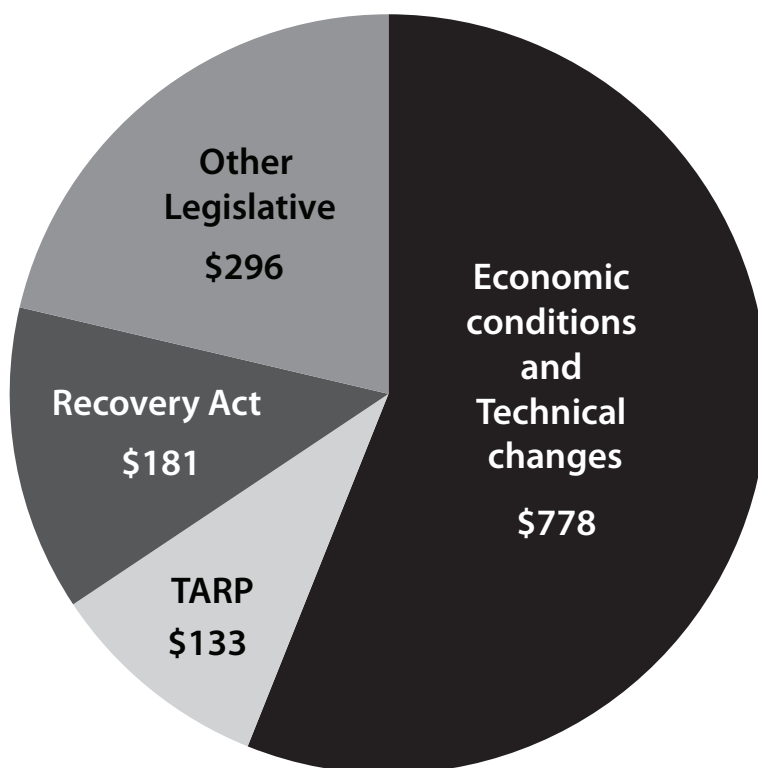
### 2009: The economy implodes

Between January 2008 and August 2009, the baseline CBO deficit projection rose by a staggering \$1,380 billion. Well over a half (\$778 billion) of this increase is forecast to stem from changing economic conditions and not from policy changes. Of the remaining \$600 billion, less than a third is attributable to ARRA spending. **Figure D** displays the main drivers of the change in the CBO baseline between these two dates.

While the imploding economy can explain the lion's share of the year-over-year increase in the deficit, it is important to remember that the \$2.3 trillion difference between the large surplus projected in 2001 by the CBO for 2009 and the large deficit that has come to pass this year is still mostly a function of policy changes undertaken over that time period; they contributed \$1.4 trillion to this change. While the economy is clearly having a huge impact on the deficit in 2009, the fiscal policy undertaken to address the worst downturn since the Great Depression and the loss in government revenue due to the downturn together total less than half the rise in the deficit stemming from policy actions undertaken during the Bush years. In short, policy makers could have fought the current recession just as aggressively through fiscal policy and yet maintained a deficit *half* as large as it is today *were it not for these policy changes*.

FIGURE D

Source of increase in projected budget deficits,  
January 2008 - August 2009 (billions)



SOURCE: CBO.

### The role of the Recovery Act in rising deficits

The rise in the deficit in 2009 caused by ARRA (\$181 billion) is less than a quarter of the decline caused by the worsening economy itself (just under \$800 billion). For the near term, then, anyone concerned about large deficits should support policies to boost the ailing economy to stem the mechanical hemorrhaging of tax revenue and the rise in safety net spending that has accompanied it.

Further, given that the Recovery Act is specifically designed to wind down quickly after 2011, ARRA is not an issue over the longer run in which concerns about the deficit have some merit.

### The impact of bailouts on the budget and the deficit

The federal government's rescue of insured and non-insured financial institutions and assets and its loans and support for automakers affect the budget, the deficit, and the debt in complicated ways.

For example, the CBO expects a large portion of the \$700 billion authorized for the Troubled Assets Relief Program (TARP) to be returned to taxpayers, and the agency includes only the expected net cost of these TARP loans (the portion the CBO deems unlikely to be paid back) in a given year's deficit. However, the full gross cost of the TARP interventions is reflected in the rise of the public *debt*. Disbursing this money forced greater debt to be taken on, and any payback will come from returns on private debt or equity now owned by the government.

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Conversely, the nationalization of Fannie Mae and Freddie Mac adds more to annual deficits than to the national debt. The government issued no new debt to acquire these companies; rather, it declared them insolvent and took them into conservatorship. Now that they are government entities, however, the cost of guaranteeing the liabilities of the bonds that Fannie and Freddie issue to finance their purchase of mortgages will add to the annual deficit.

These bailouts have provided valuable subsidies to those receiving them (the CBO, for example, has estimated that over a third of TARP outlays will be a pure subsidy to the financial institutions receiving them), and they have added significantly to the short-term budget deficit. Further, the benefits of these bailouts to the economy are less clear than those provided by the Recovery Act. But the bottom line for the deficit is that these interventions are not expected to be ongoing outlays of the federal government and should have little impact on the long-run budget.

## Federal debt defined and measured

The federal debt is the total amount owed on the accumulation of past budget deficits offset by past budget surpluses. At the end of fiscal year 2008, the federal debt owed to entities outside the federal government was valued at 41% of gross domestic product (GDP).<sup>1</sup> Expressing the outstanding federal debt held by the public as a share of overall GDP is a common convention that is useful because it indicates the burden a given dollar value of debt actually imposes on the overall economy. Generally, the way that the United States (as well as other advanced economies) has worked off the burden of debt in the post-World War II era is simply by having the overall economy grow faster than the debt. Only in the years between 1997 and 2000 was the actual value of the outstanding debt reduced, and even in that period most of the decline in the debt-to-GDP ratio was driven by economic growth, not the retiring of outstanding debt.

Over the past 45 years (the period tracked by the CBO) the debt-to-GDP ratio has varied greatly around its average of 36%. This average, however, masks lots of variation: between 1979 and 1995 it rose by more than 23 percentage points, from 26% to 49%. Then between 1995 and 2001 it fell by almost 16 percentage points (**Figure E**). In short, fluctuations in the debt-to-GDP ratio should not be cause for great alarm; policy changes and/or small changes in the rate of GDP growth can quickly reverse its trend.

Generally, sharp increases in the debt-to-GDP ratio are driven by wars and recessions, while (generally steadier) declines occur during economic expansions. An important exception to this pattern, however, occurred in the 1980s and early 1990s, a period of economic expansion that coincided with a sharp run-up in the debt-to-GDP ratio. This divergence from the general pattern was driven by large budget deficits that were driven by large tax cuts for affluent taxpayers and a sharp increase in defense spending.

Lastly, it is worth noting that the debt-to-GDP ratio in the United States remains well below that of many other industrialized countries, which have maintained higher debt levels for decades while still managing to close the gap between their living standards and those in the United States. (**Figure F**).

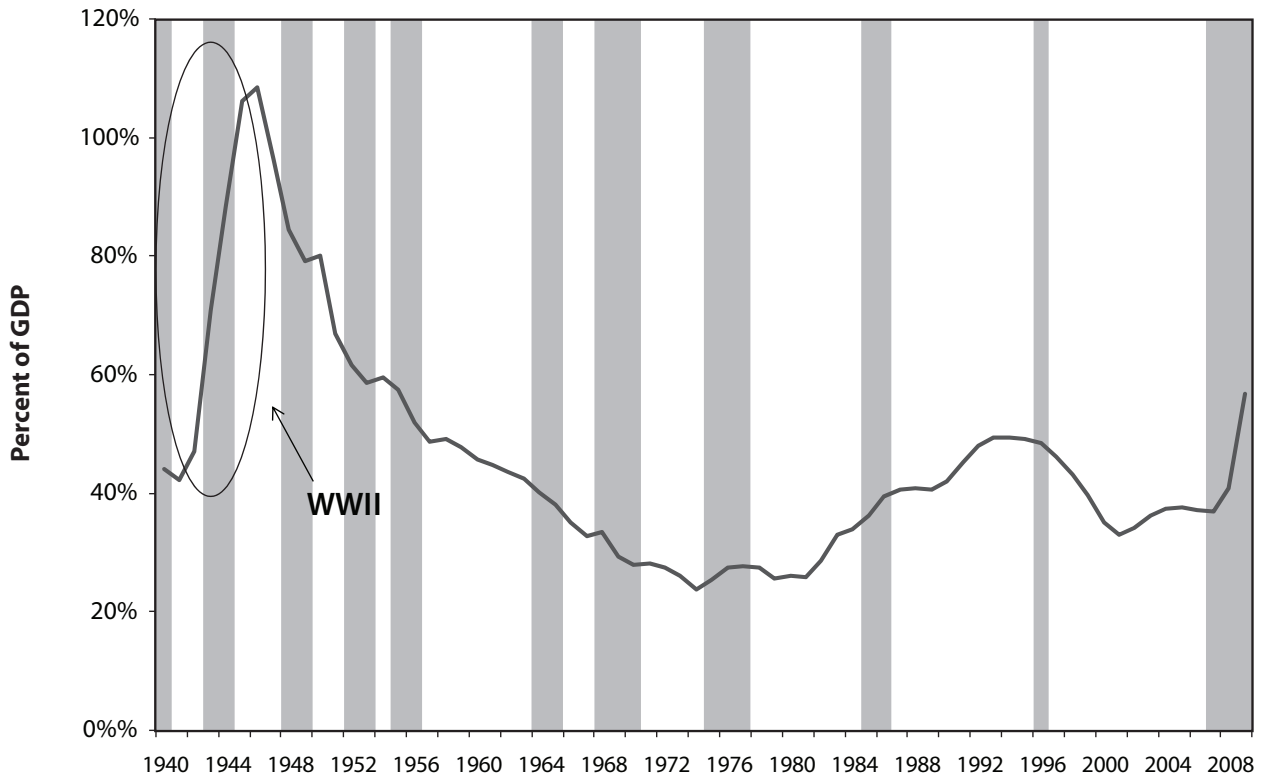
## Deficits and debt over the next 10 years

**Figure G** shows the CBO projections of debt-to-GDP ratios after: (1) extending policies of the Bush administration, (2) enacting policies proposed by the Obama administration, (3) enacting the Obama administration policies without the Recovery Act, and (4) enacting Obama policies without the costs of the Recovery Act and TARP. Both the Recovery Act and TARP lead to one-time increases in the debt-to-GDP ratio, but the longer-run trends are dominated by other factors. In each of the four scenarios, the debt-to-GDP ratio rises rapidly and by almost identical amounts (between 53.7% and 56.0%).

With regard to the Obama policies specifically, only about four of the projected 41 percentage-point change in the debt-to-GDP ratio from 2008 to 2019 are associated with the Recovery Act, and its entire effect is felt by 2012; it leaves

FIGURE E

Federal debt held by the public as share of GDP



SOURCE: OMB.

no imprint thereafter. In other words, the recovery package is not a significant factor in the future trajectory of federal debt.

It is important to note that the rise in the federal debt that is associated with the purchase of private-sector assets will be offset at least partially by the value of these new assets. The Office of Management and Budget (OMB) forecasts that this offset will be roughly 9 percentage points in 2019, almost a quarter of the gross increase in federal indebtedness, leaving the actual rise in federal indebtedness quite a bit less than even the publicly held federal debt numbers would indicate.

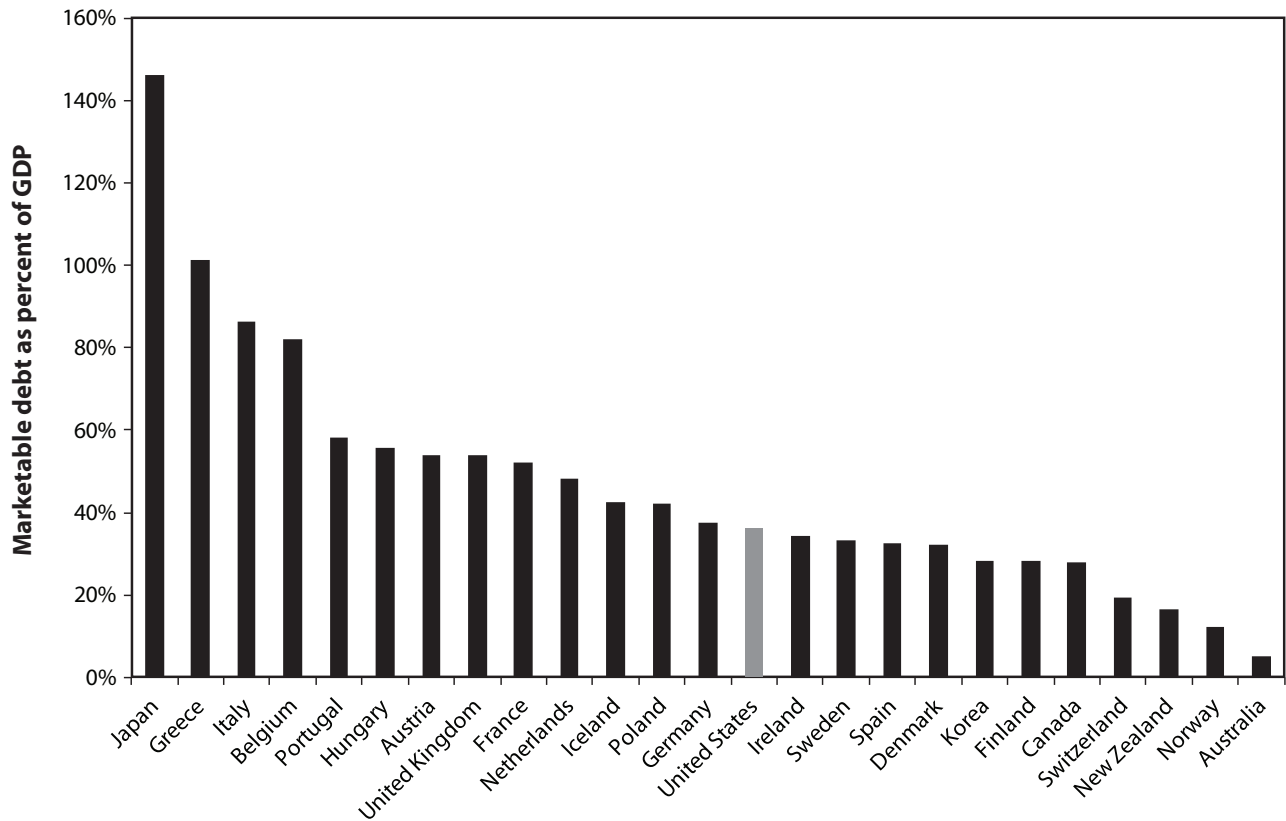
Nevertheless, these forecasts predict budget deficits by 2019 that leave little room for error on the part of future policy makers. Auerbach and Gale (2009) project that Obama administration budget proposals would lead to deficits in 2019 of 5.5% of GDP even if the economy is operating at full employment. This is too high a deficit for a full-employment economy to run with equanimity. As the next section will detail, economies at full employment should generally see small deficits that trend downward. Large and rising deficits during times of economic downturns are useful, but large deficits during times of full employment (when there are no idle resources) have the potential to drag down economic growth.

That said, it is important to note that the deficit in 2019 is smaller under this scenario than what would occur if current policy were allowed to continue (by extending the Bush tax cuts, for example). Under this “current policy extended” scenario, the deficit would reach 6.4% of GDP by 2019. Moreover, over a quarter of the projected deficit in 2019 that occurs under Obama administration policies (5.5% of GDP) is driven by keeping components of the Bush tax cuts and permanently lowering the alternative minimum tax, which is paid overwhelmingly by relatively affluent taxpayers. In total, two-thirds of the change in the deficit in 2019 relative to the current law scenario (where all tax cuts passed under



FIGURE F

Debt to GDP ratios, various countries, 2008



SOURCE: OECD.

the Bush administration sunset by 2011) policy is driven by reduced revenue rather than greater spending. Thus, as the economy recovers in coming years, controlling deficits will mean looking at revenues.

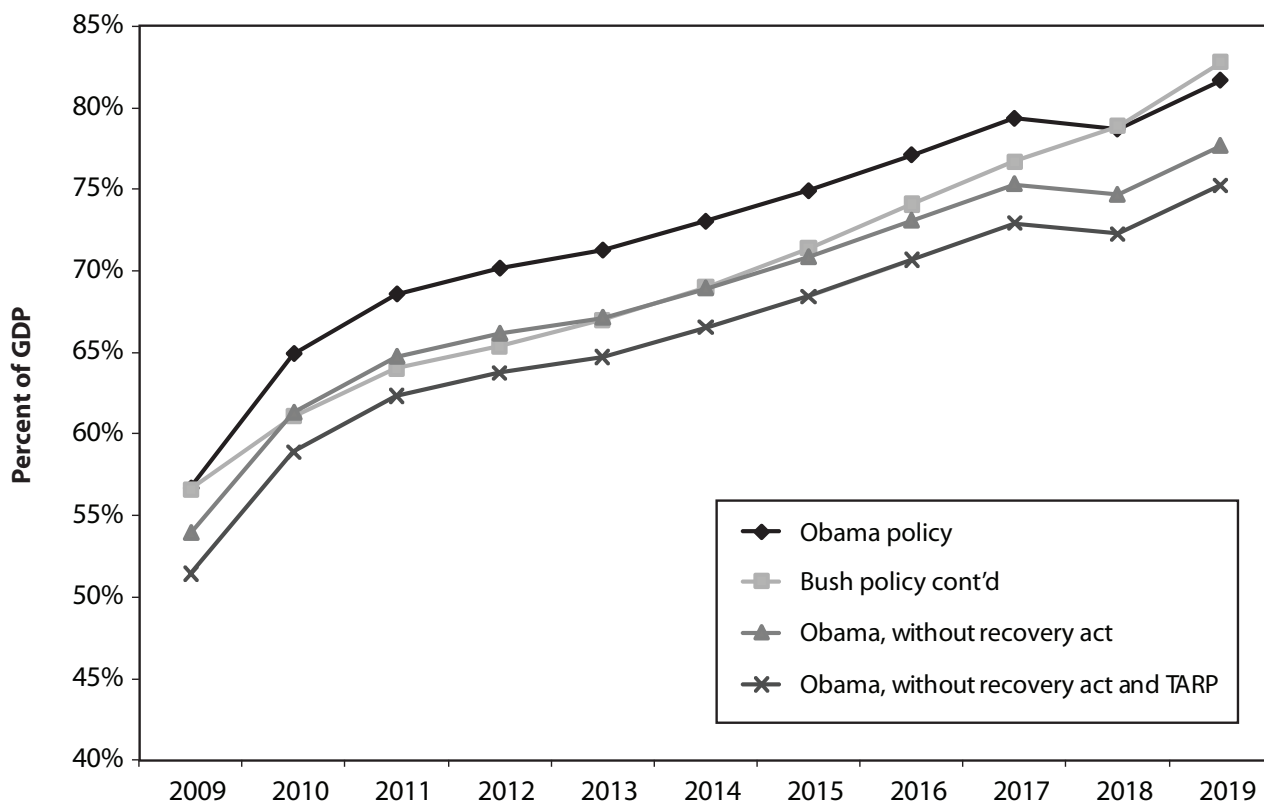
### Deficits and debt over the long term

Looking beyond the next decade, the CBO projects that, under current law, structural deficits (the mismatch between revenues and spending when the economy is otherwise healthy) are projected to rise to almost 10% of GDP in 2050 and then grow steadily higher. An economy at full employment should not run deficits like these seen currently in a depressed economy, so policy makers should strive to change this projection. Among other problems, deficits of this size would require interest payments on the federal debt by 2050 that consume almost a third of all federal spending. Currently, 8% of federal spending goes to service the debt. The difference between the current level of debt service and that which would prevail if the projections above came to pass would be roughly equal to having to finance an additional Pentagon by 2050. Clearly, this could crowd out other types of public spending that might be more valuable than debt service.

Deficits in the long run are driven almost entirely by spending on Medicare and Medicaid. Without the outlays (and revenues) generated by Medicare and Medicaid the federal budget (excluding interest) is almost in balance (deficits well under 2% of GDP) in 2050 (Figure H) and beyond. Furthermore, the rise in Medicare and Medicaid spending is driven by the economy-wide rise in health costs, and not by any factor specific to the federal health programs. And even though Medicare has been more successful than the private sector in reining in costs for the past quarter-century (since 1970, com-

FIGURE G

Debt-to-GDP ratio under four scenarios



SOURCE: CBO.

parable costs in private insurance have risen 48% faster than Medicare payments; see **Figure I**). However, even these slower-than-private-sector rates of cost growth in Medicare and Medicaid still put them on a path to dominate the federal budget in coming decades. Fundamental health reform that reduces the cost of health care is key to long-run budget balance.

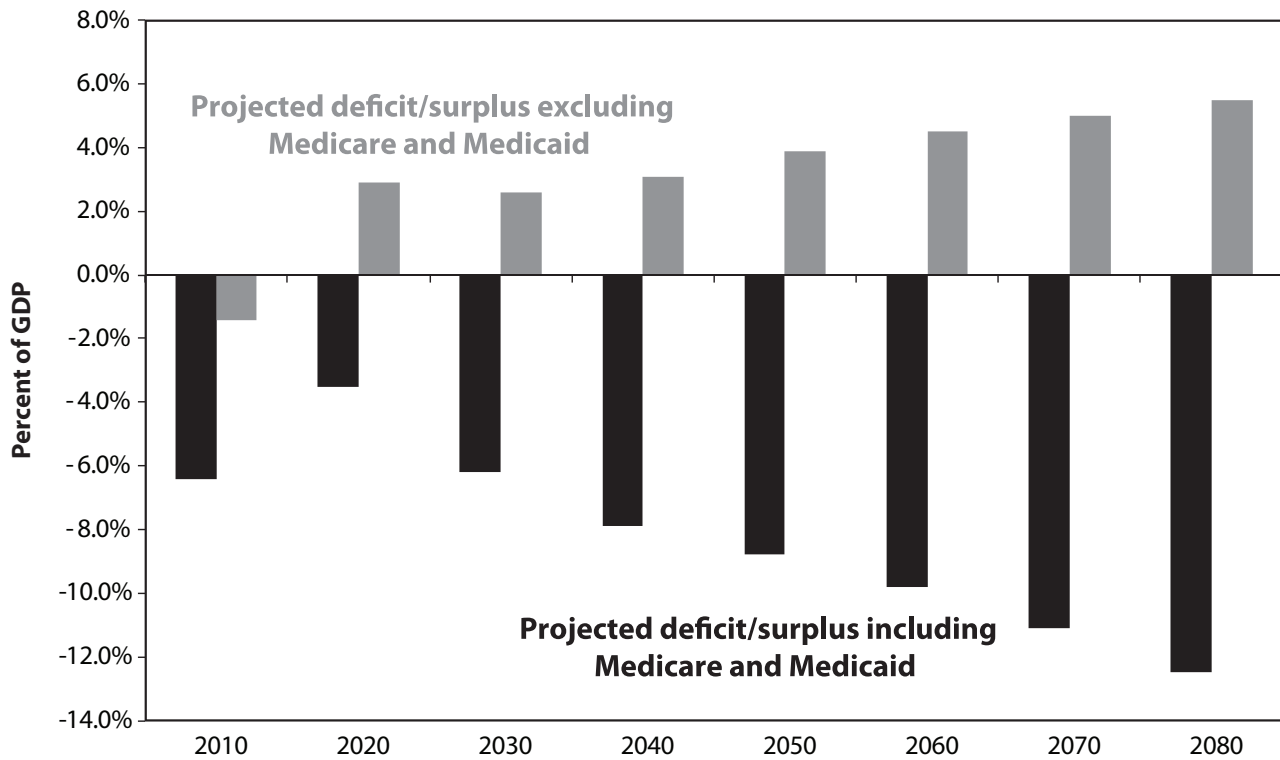
## The economics of budget deficits

This section enters more contested ground—the economics of how budget deficits affect the overall economy. Before going into some specifics about the relationship between budget deficits, interest rates, inflation, international indebtedness, and generational equity, it is worth presenting an overview of how increasing budget deficits affects economies that are healthy versus economies that are sick, and how the economics of budget deficits (or fiscal policy) interact with monetary policy—decisions made by the Federal Reserve regarding the money supply and interest rates.

Fiscal policy is conducted by Congress and the president in their design of the federal budget. A rising budget deficit (the result of either increased spending or lower taxes, or both) spurs economic activity whenever there is excess capacity in labor and capital markets—that is, when unemployment is high or capacity utilization low. The government is demanding more goods and services and transferring more income to households than it is collecting in revenue, thus causing overall spending in the economy to rise, all else equal. Conversely, a rising budget surplus (the result of either reduced spending or higher taxes, or both) reduces economic activity as the government removes more purchasing power from the economy through taxes than it pumps back in through spending and transfers.

FIGURE H

**Projected budget deficit or surplus,  
including and excluding Medicare and Medicaid**



NOTE: Interest payments on debt are excluded from both scenarios. Scenario without Medicare/Medicaid also excludes their associated revenues.

SOURCE: CBO.

Policy decisions that increase a budget deficit are generally labeled *expansionary* while those that reduce a deficit (or increase a surplus) are labeled *contractionary*.

Fiscal balance can rise or fall even with no explicit change in policy. A weakening economy causes tax revenues to fall and spending on safety net programs to rise even with no change in tax or spending policy. But fiscal *policy* generally refers to those changes in the debt and deficit that are the result of conscious policy decisions.

Monetary policy is conducted by the Federal Reserve primarily through its leverage over the discount rate and the federal funds rate. The discount rate is the interest rate the Fed charges to banks for short-term loans. The federal funds rate is the rate that banks charge each other for short-term loans of their own reserves held by the Fed.

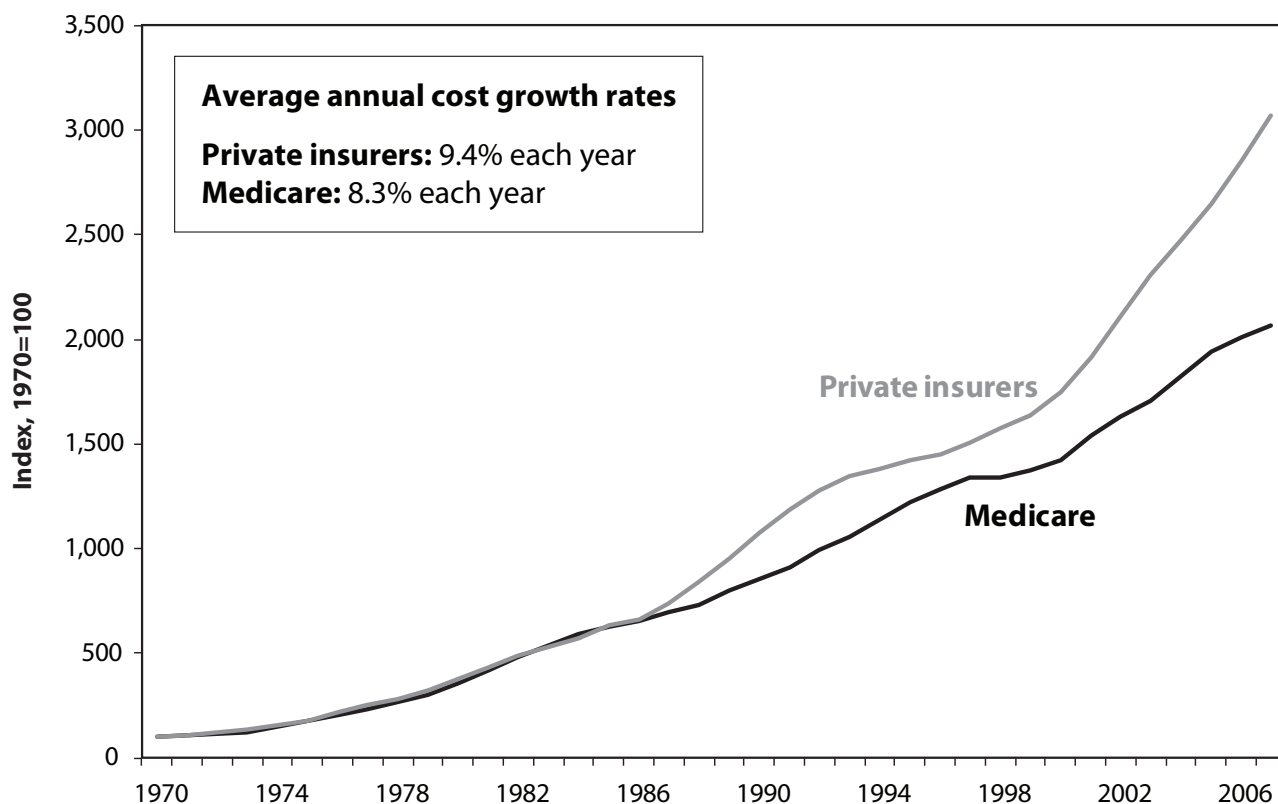
By moving these short-term rates, the Fed generally hopes to influence longer-term interest rates in markets for home mortgages, consumer durables, business lending, etc. Lower interest rates are meant to spur borrowing (and hence spending) in these markets, while higher rates are meant to tamp down borrowing and spending.

***Budget deficits in a healthy economy: rising interest rates and ‘crowding out’***

A healthy economy is defined as one in which both employment rates and capacity utilization rates (essentially the employment rate of machines and equipment) are high and stable. In other words, there isn't much unused capacity. For years, many economists assumed that economies could be kept healthy entirely through changes to monetary policy. If

**FIGURE I**

**Cumulative growth in per-enrollee payments for personal health care, Medicare, and private insurers, 1970-2007**



SOURCE: Center for Medicare and Medicaid Services.

the economy began to slow, the Federal Reserve could cut short-term interest rates and thereby boost demand for business investment and interest-sensitive consumer items like autos and household durables.

But the limitation of the Fed’s leverage to short-term interest rates reduces its capacity to influence spending or investment. The interest rates that matter most for businesses and consumers are those on debt that is longer term than overnight loans from the Fed, riskier than reserves at the Fed, and subject to erosion by inflation. And these interest rates can be affected by changes in the size of the budget deficit.

Take interest rates in the market for corporate debt, for example. Firms that wish to expand plant and equipment may decide to borrow (issue bonds) to finance this investment. These bonds are long term, with maturity dates of three, five, or 10 years or even longer. Further, they are risky, i.e., not immune from the risk of default. Finally, they are exposed to the risk that a burst of inflation will degrade their value.

Because of the commitment required and the risks involved in long-term instruments, real (inflation-adjusted) interest rates in the market for the long term are almost always substantially higher than the short-term rates controlled by the Fed. The Fed’s movement of short-term rates can influence these longer-term rates, but nevertheless the real interest rate for risky, longer-term debt is determined in active markets, not just through Fed policy.

In a healthy economy, interest rates play a key role in allowing a household’s extra savings to be translated into greater investment spending. The market where savings and investment meet is sometimes called the *loanable funds* market. The *savings* of private households and businesses are essentially the supply of loanable funds in the economy, while

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*investment* spending constitutes the demand for these funds. When savings (supply) exceeds investment (demand), then one expects interest rates (the price of loanable funds) to fall. Lower interest rates should then spur demand for interest-sensitive goods (homes, autos, consumer durables like furniture and large appliances), and this demand can keep the economy from entering a downward spiral.

Investing in this regard has a specific meaning: building new plants and equipment or building new residential housing. Buying a share of stock on an exchange is not investing—it's just transferring ownership. Investment in this definition must be something that increases the physical capital stock of the economy.<sup>2</sup> The translation of greater savings into more investment demand (facilitated by falling interest rates) provided by the market for loanable funds is what theoretically keeps falling consumption (the flip-side of rising savings) from triggering a recession when households decide to start saving more.

### ***How budget deficits affect interest rates in a healthy economy***

An increase in the federal budget deficit means that the government increases its demand for loanable funds from its own citizens as well as international investors. In a healthy economy, this means that the government begins competing with private borrowers for a fixed supply of savings, and this competition drives up interest rates. This increase in interest rates may reduce private-sector investments in plants and equipment, and this decline in investment means that the overall economy has a smaller capital stock with which to work.

The size of a nation's capital stock is a key driver of productivity growth, and productivity growth defines how fast living standards can rise. The crowding out of private-sector investment that occurs when governments increase budget deficits in a healthy economy is the prime argument for a hawkish view against rising budget deficits when the economy is healthy.

### ***Budget deficits in a weak economy: shock absorbers that 'crowd in' investment***

However, this deficit hawkishness is profoundly destructive if practiced when an economy is sick. When employment and capacity utilization rates are low and falling even as the interest rates controlled by the Federal Reserve are at or near zero, there is no reason to fear that rising deficits will crowd out private investment. So long as there are idle resources in the economy, deficits will tend to increase *both* savings and investment in roughly equal measure, leading to no sustained upward pressure on rates.

The current recession became a catastrophe because American consumers rapidly pulled back on their consumption spending in the wake of the bursting housing bubble. The personal savings rate has jumped from essentially zero at the beginning of the recession to almost 7% today, representing an extraordinary pullback in consumer spending. Hatzius (2009) estimates that this spending pullback was even larger than the one that precipitated the Great Depression.

In the simple loanable funds scenario, the rise in savings enabled by this pullback in private spending by households should have led to a sharp decline in interest rates and a rise in investment by businesses, and this swap of increased business investment for reduced consumer spending should have kept the economy from entering a prolonged recession. However, instead the recession has led private businesses to sharply decrease their own investment spending even as interest rates have fallen. After all, when a large portion of existing plant and equipment is standing idle, building more does not make a lot of sense, even if the cost of financing is low.

This highlights a key problem with the naïve version of the loanable funds theory of investment—*both savings and investment depend on overall national income*. In a healthy economy with high and stable employment rates, national income is generally stable and the loanable funds model works relatively well at predicting what will happen to interest rates. However, when overall national income is changing rapidly (say because of a steep recession), the model becomes an unsuitable guide for predicting interest rate changes.

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The rapid increase in idle capacity since the recession began has dampened demand for business investment so severely that desired saving exceeds this demand for new investments even when the interest rates controlled by the Fed sit at zero—that is, even when borrowing is essentially free. At present, the economy needs these rates to be *negative* to bring investment demand in line with savings. Since the Fed cannot engineer negative interest rates through its conventional policy tools, it is essentially out of ammunition, making alternative policy responses—expansionary fiscal policy in particular—that much more necessary.

With the extra supply of loanable funds going begging in the private sector, critics of additional federal spending have no cause to worry about interest rate increases stemming from rising deficits.

In essence, by looking at only *one slice* (government, not private) of *one side* (the demand-side, not the supply-side) of the loanable funds markets that determine interest rates they miss the fact that the private sector is simultaneously reducing its own demand for loanable funds (business spending falls) as well as increasing the supply (private savings rising) of these funds. Both of these private influences on the loanable funds market have put severe *downward* pressure on interest rates.

Rather than crowding out private-sector investment through higher interest rates, government demand is only partially filling the gap caused by the private-sector pullback.

### ***How soon do we need to worry about rising interest rates?***

If the economy recovers and savings start to translate into investment spending at non-zero interest rates, all while labor and capital resources are near-fully utilized, then continuing to run large budget deficits could indeed start bidding up interest rates and crowding out private investment. In this case, deficits would add to overall economic activity but would instead displace private activity with public activity.

The economy is nowhere near this point. Private demand for loans has plummeted, and idle resources abound. Further, most economic studies of private investment decisions find that current GDP growth has a greater impact on investment than do interest rates. So, a stimulus package that adds to GDP will substantially *crowd in* private investment through this so-called “accelerator” effect (rising GDP leading to rising investment spending).

Moreover, economic recovery in and of itself provides its own moderating pressure on interest rates. As national income begins growing again, so too will total national savings, since they are a relatively stable fraction of national income. This increase in national savings will increase the supply of loanable funds, which will put downward pressure on interest rates.

The current economy will not experience sustained upward pressure on interest rates caused by fiscal deficits until it nears full employment. Almost all projections show that the economy is several years away from that goal.

The economics notwithstanding, opponents of stimulus and the country’s age-old community of deficit hawks will point to any uptick in interest rates or even any suggestion of one to generate fear that deficits are threatening to choke off growth (numerous news stories in summer 2009 raised alarms about rising long-term interest rates and the role of deficits). **Figure J** shows just how odd these fears are—since the fall of 2008 and throughout the enactment of Recovery Act spending, long-term rates have wobbled up and down within a range that is the lowest in the last half-century.

In regard to these short-term wobbles in interest rates, it is important to note that interest rates on government debt have many determinants besides the level of the federal deficit. The most important determinant over the past year has been the perceived level of risk of private alternatives to government debt as stores of wealth; the financial crisis and the widespread threat of bankruptcy in almost all major financial institutions made investors around the world afraid of almost all private debt instruments. They flocked to government bonds (this is sometimes labeled a “flight to safety”), thereby driving up their prices and driving down their interest rates. As fears of widespread financial institution bankruptcy abate, investors will likely be willing to exchange public for private debt instruments, and this switch would lead to an uptick in the interest rates on public debt. When that happens, it’s a sign not of a problem but rather a sign of economic recovery and stabilization.

**FIGURE J****Interest rates on 10-year Treasury securities**

SOURCE: Federal Reserve.

***Budget deficits and inflation***

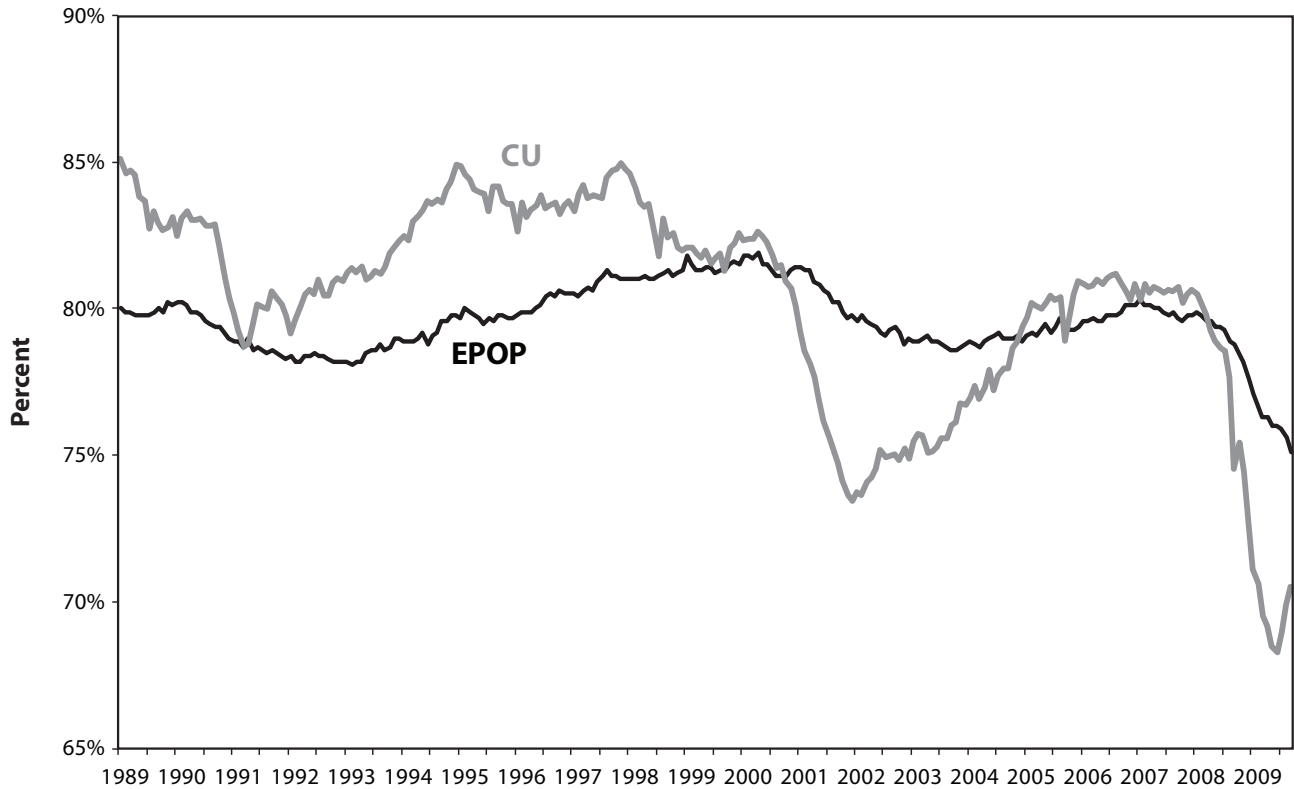
Deficits this year and next will not spur accelerating inflation. Moreover, deficits in these two years may save the economy from rapid disinflation or even deflation, which is a worse problem than inflation.

When an economy is operating at full employment, with no idle workers or plants, then a rise in the federal budget deficit could generate inflationary pressures. Specifically, if the government began demanding more goods and services, and if the Federal Reserve accommodated these demands by not raising interest rates, then the extra demand for output when no further output could be produced (remember, this is an example where all workers and factories are already fully employed) could lead to higher prices instead of more economic activity.

However, nothing about the current situation suggests that this worry is plausible. For one, workers and factories are idle in record numbers. Until the unemployment rate falls and the capacity utilization rate rises to levels that prevailed before the recession, there is no reason to think that federal budget deficits will cause prices, rather than overall economic activity, to increase. In fact, even the pre-recession capacity rates are weak markers of economic strength: the unemployment and capacity utilization rates were too high and too low, respectively, to indicate that the economy was at full employment in December 2007, when the recession began. Family income never recovered the level it attained in the prior business cycle (which ended in 2001), wage growth for typical workers was lackluster in the 2000s, and some measures of labor market strength (the employment-to-population ratio, for example) did not rise at all even during the expansion

FIGURE K

**Capacity utilization rate and employment-to-population ratio  
(ages 25 to 54), 1989-present**



SOURCE: BLS and Federal Reserve.

phase of the last business cycle (**Figure K** shows the capacity utilization rate and the employment-to-population ratio over the last 20-year period).

To forestall the risk of inflation brought on by too much demand relative to supply in the overall economy, the Federal Reserve can tamp down demand through interest rate increases. Unlike the zero-bound on interest rate cutting, there is no limit as to how high interest rates can be set by the Fed.

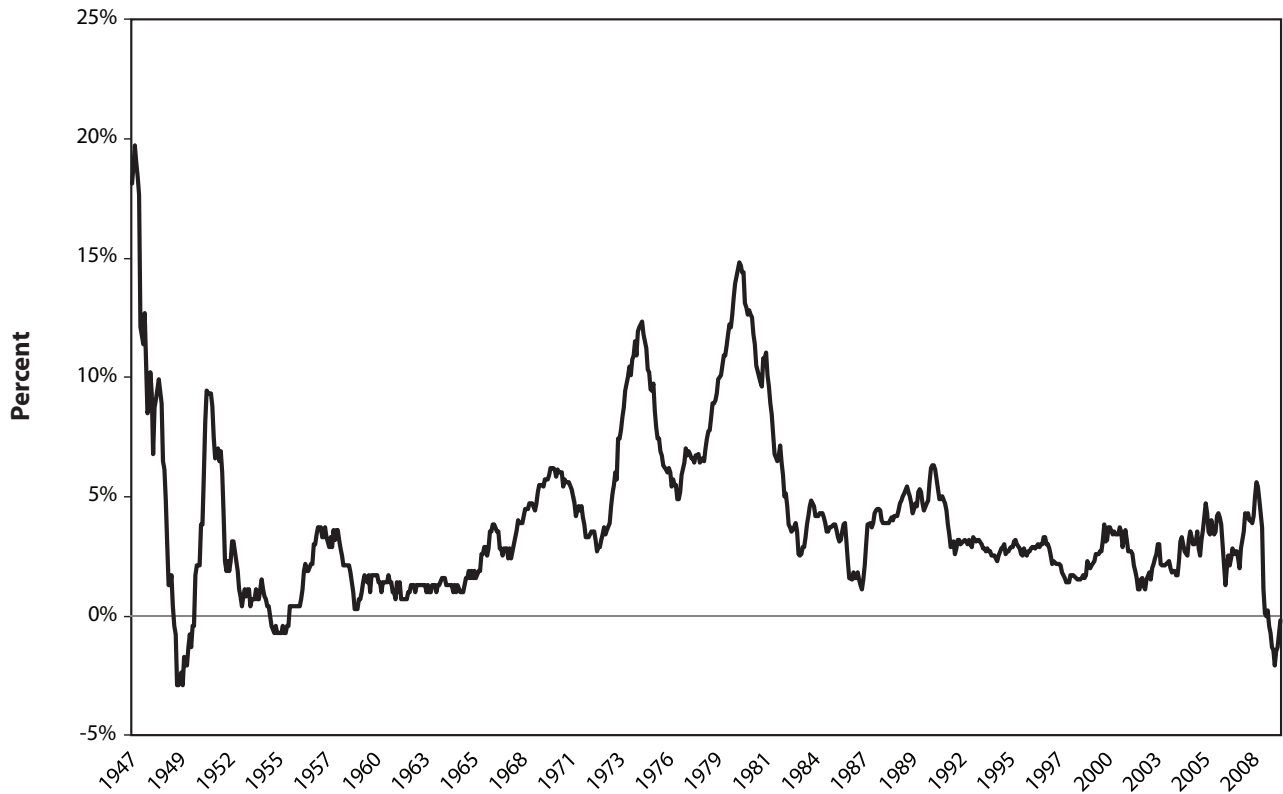
### ***A bigger danger than inflation: deflation***

The real danger with worries about inflation is that they will distract from legitimate concerns about disinflation, or even deflation. In 2009 there were eight outright declines in the year-over-year consumer price index (**Figure L**). The last time this happened was in 1955, on the heels of a recession that saw the single-largest half-year economic contraction since the Great Depression. The first quarter of 2009 marked the end of the second-largest half-year contraction since the Depression.

Deflation is dangerous for three reasons. First, as prices fall consumers put off purchases of big-ticket items. If you think a refrigerator will be cheaper in six months, why buy it today? Deferred consumption spending is just what the economy does not need today.

Second, falling prices lead to rising real (that is, inflation-adjusted) interest rates. If the interest rate I owe on my mortgage is fixed at 5%, and inflation is 5%, then I'm paying 0% *real* (inflation-adjusted) interest on my loan. If instead



**FIGURE L****Year-over-year change in consumer price index, 1947 to present**

SOURCE: BLS.

I have a mortgage with a 5% rate and prices are falling by 5%, then my mortgage is actually costing 10% in terms of the purchasing power relative to other goods and services I am surrendering to service the loan.

Rising real interest rates are something else that the economy does not need right now. They may be attractive to savers, but they squeeze borrowers. Given that borrowing is a key source of financing for much business investment and that tens of millions of American households are now net debtors, higher rates would threaten to choke off new spending.

Currently the nominal rate controlled by the Fed is stuck at zero. But the economy needs real rates that are substantially less than zero right now to spur borrowing and spending. That is, households and businesses are so reluctant to borrow and spend, and so determined to save, that only negative interest rates (which would make borrowing attractive and saving a bad bargain) will convince them to do otherwise. Deflation pushes real rates up and, since the Fed is at the zero bound on nominal rates, it can't do anything about deflation driving real rates up and possibly choking off demand for borrowing and spending.

Third, falling prices lead to a rise in the effective burden of many kinds of debt. Much debt (say mortgages) is denominated in fixed dollars. When inflation leads to a rise in the overall price level (including wages and salaries, which are just one kind of price in the economy), fixed-dollar debts become smaller relative to other prices (including salaries). Conversely, deflation in overall prices (including wages and salaries) will increase the burden of fixed debt and will lead to a crowding out of other types of spending. Again, the economy needs spending right now, so crowding out of spending through the debt-deflation effect is dangerous.

Given the dangers posed by deflation, the small possibility that aggressive recession-fighting policies (like another stimulus package, for example) may generate a bit of inflation is worth the risk. In fact, there are reasons why moderate inflation in the next three to five years could be a good thing for the U.S. economy. For one, a problem in the economy

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at the moment is that both households and firms remain stuck under prior debt. As inflation erodes the effective burden of debt, balance sheets improve. For another, researchers at the Federal Reserve have estimated that the U.S. economy needs real interest rates of roughly *minus* 5% to bring the economy back to full employment. Given that nominal rates cannot go below zero, moderate inflation is needed to pull down real rates close to this level. Since it is *expectations about future inflation* as much as current inflation rates that determine real interest rates, instilling economic expectations about moderate inflation in the next few years could be a great benefit to the U.S. economy.

### **Budget deficits and “generational fairness”**

A common question asked in the past year regarding deficits is whether or not they have any direct link to conceptions of “generational fairness.” The short answer to this question is simply ‘no’. The longer answer is that to assess the effect of taking on debt today for living standards tomorrow, one must know the *health* of the economy when this debt was incurred as well as to what use the debt was put.

The textbook economic argument that government deficits can make our kids poorer is the straightforward case made before about the effect of rising deficits in a healthy economy. To recap, in a full-employment economy, rising deficits mean that the government competes with private borrowers for available savings in the market for loanable funds. This competition causes interest rates to rise and crowds out private investments. Since investments yield a larger capital stock for the economy, and since a larger capital stock leads to higher productivity, this crowding out carries the potential to hurt future generations by bequeathing to them a smaller capital stock and slower productivity growth. Because productivity provides the ceiling on how fast living standards can rise, budget deficits in a full-employment economy carry the potential to make our children poorer.

However, when resources are sitting idle there is no one to crowd out. Government debt incurred when the economy is in a severe recession is unlikely to spur interest rate increases and is likely to crowd in private investment by giving firms a reason (i.e., more consumers with spending power) to invest. Our children will be richer as a result of expansionary fiscal policy.

Yet even if the public debt did crowd out private investment, it’s far from clear that our children will be poorer in the future. If the increase in public debt funded productive public investments (universal pre-kindergarten, for example, or mass transit systems that cut down greenhouse gas emissions and reduce the cost of commuting to work), then replacing private investment with public investment can create a more productive capital stock for our children. In any case, the new government borrowing over the past year and for the near future is not competing with private investors for scarce savings.

### **Today’s deficits and tomorrow’s taxes**

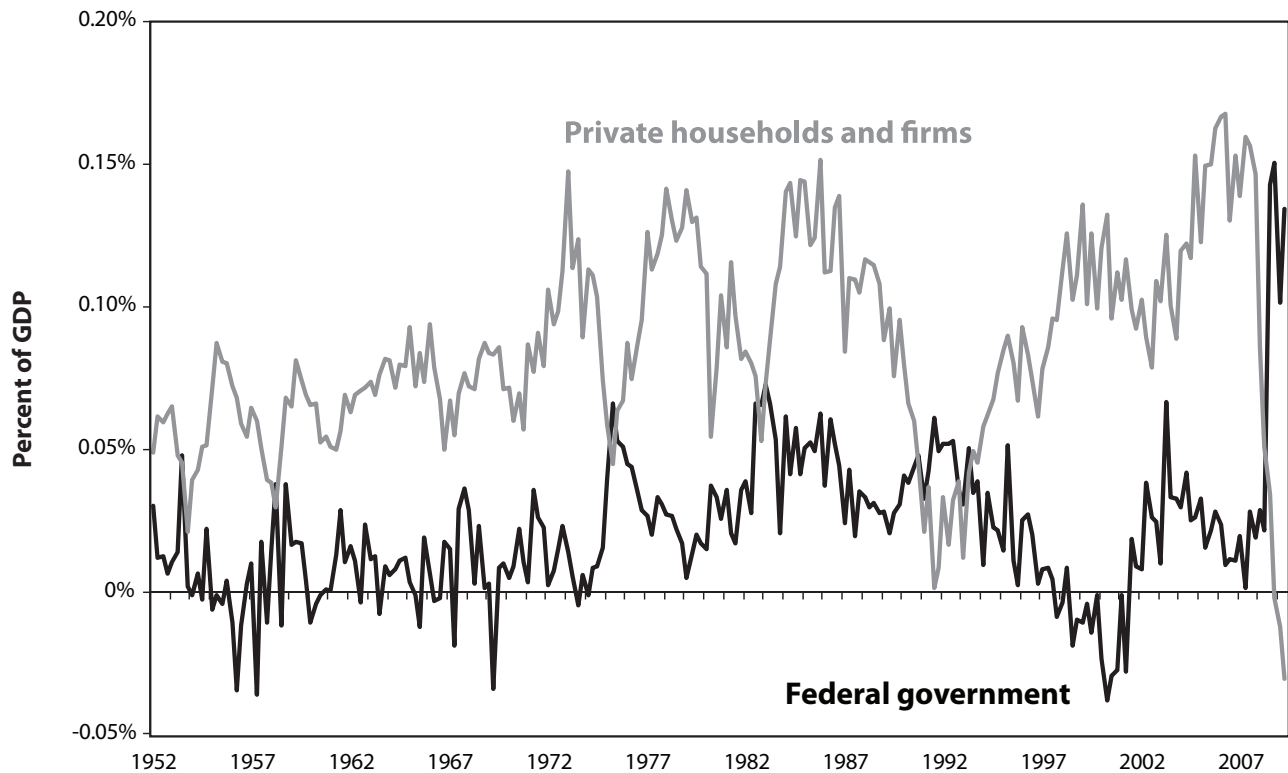
Another angle of the generational fairness argument, besides the one that we’re spending our children’s inheritance, is that our spending will burden our children with taxes. It is true indeed that today’s children will pay taxes as adults to service this debt. Yet they will also inherit the Treasury bonds and receive the interest payments financed by these higher taxes. And the increase in taxes on tomorrow’s generation needed to finance this debt will be exactly offset by the increase in interest income that these taxes pay for. Of course, not everyone will own Treasury bills—they are a form of wealth that is held disproportionately by a select slice of households—yet everyone will have to pay taxes to finance paying off Treasury bill holders. If we find this objectionable, however, this is a strictly *intra*-generational issue.

### **Budget deficits and foreign indebtedness**

Heard often over the past year is some variant of “who is paying for all of this stimulus?” The answer is, we are. The government is borrowing what the U.S. private sector is saving.

FIGURE M

**Borrowing by the federal government and the private sector, as percent of GDP, 1952-present**



SOURCE: Federal Reserve.

Private domestic savings in the United States have expanded *faster* than government borrowing in the past year. **Figure M**, which charts borrowing as a share of GDP for the last half century, shows private-sector borrowing to be at a historic low—in fact, it’s negative, meaning that people are saving—while federal government borrowing is at a historic high. There is no shortage of people willing to hold government debt; rather, the problem is the shortage of people who want to incur debt in order to undertake spending. The problem that the stimulus package is trying to solve is that American households and businesses are *saving too much relative to investment demand*. In this situation, the deficits associated with the Recovery Act will find ready domestic financing in the near term.

**A real concern for generational fairness: the trade deficit**

While domestic savings have been sufficient to finance new government borrowing over the past year, the outstanding stock of government bonds issued to cover past deficits is tradeable in global financial markets, and currently about half of this stock is held by foreigners. Interest payments on debt held by foreign investors leak out of the domestic economy and reduce national income.

However, the problem of international indebtedness is not a problem of the budget deficit, and those worried that deficits today mean foregone claims to income tomorrow need to focus on the another deficit: the trade deficit.

To illustrate this issue, take as an example the case where a government runs a large budget deficit but exactly balances its trade flows (the United States in 1991 had a budget deficit of 4.5% of GDP and a trade deficit of 0.45%, not far from

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this case), and assume that the entire federal budget deficit is financed by domestic residents. Taxes to service the addition to debt will fall on domestic residents, but they'll also receive the interest payments made with these higher taxes. In short, there is no effect on international indebtedness (the debt is wholly owned by domestic residents) and no effect on generational equity (in every generation the net effect of higher taxes and increased interest income will completely cancel out).

Now, take as an example a country with a balanced federal budget, or even a surplus, and a large trade deficit—the United States in the late 1990s, for example. In this case, because the country is importing more than it is exporting and because imports (like every other economic good or service) must be paid for, the difference between imports and exports must be made up by transferring ownership of U.S.-based assets to foreign investors. These assets can be the stock of currently outstanding Treasury bills (i.e., the debt of the federal government), equity stakes or debt of private companies, or a mix of the two. But, in this case, because something of value *today* was enjoyed by U.S. residents (the excess of imports over exports), these residents have given up claims on income generated *tomorrow* (the return to the assets whose ownership was transferred abroad).

In short, running a trade deficit (unlike a budget deficit) means that current generations are supporting their living standards at the expense of future generations. For those troubled by generational equity, it is the trade deficit, not the budget deficit, that should be the target.

### **Are budget deficits and trade deficits related?**

In the early 1980s, a concurrent increase in both the trade and federal budget deficits led to much talk about the “twin deficits” of the U.S. economy. A simple story of causality was formulated which held that large federal budget deficits lead directly to large trade deficits. The theory behind this story was that budget deficits in an economy with no idle resources lead to a rise in interest rates as governments compete with private borrowers for loanable funds. These higher interest rates make dollar-denominated assets a better investment than assets denominated in other currencies, and foreign investors will hence shift more of their purchases toward these dollar-denominated assets. This subsequently bids up the price for dollars, causing the value of the U.S. dollar to rise. A rising dollar makes U.S. exports more expensive on global markets and makes foreign imports into the U.S. market cheap. As we export less and import more as a result, the trade deficit rises.

This story, however, is not persuasive as an explanation of why the United States has been running sustained trade deficits for almost the past two decades. Between 1996 and 2001, the federal budget balance as a share of GDP actually improved by almost 2 percentage points (it rose from deficit to surplus) while the trade deficit deteriorated by more than 2 percentage points (**Figure N**). And since the beginning of 2006 the federal budget deficit has grown by over 5 percentage points of GDP while the trade balance improved by almost 4 percentage points.

So, since the early and mid-1990s the movement of trade and federal budget deficits do not coincide nearly enough to make much of a causal link between budget deficits and trade deficits.<sup>3</sup> It's past time to retire the twin deficits story.

### ***The role of borrowing in causing the recession and implications for deficits***

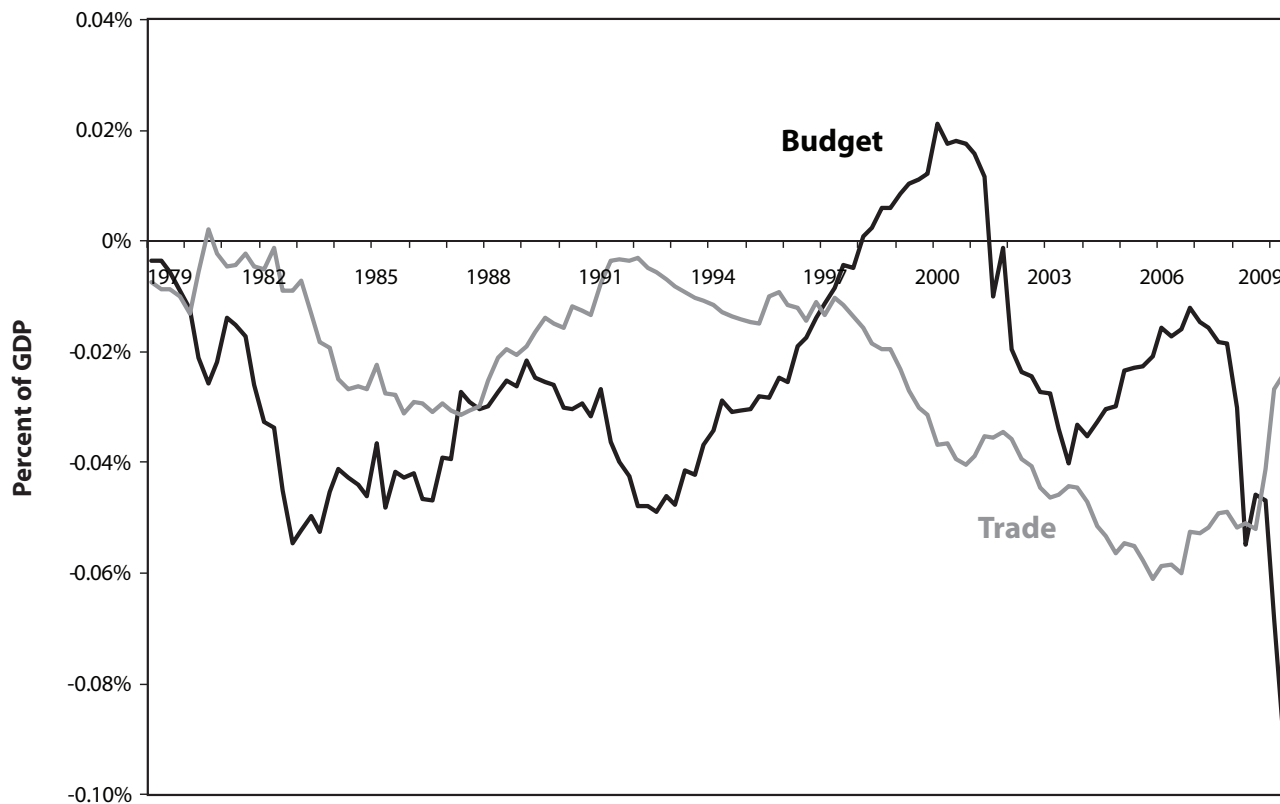
While excessive private-sector borrowing (and lending, it needs to be remembered) played a role in generating the recession, it does not follow that boosting public debt is the wrong thing to do in response.

The problem facing the U.S. economy right now is deficient private demand: spending on consumption goods, investment goods, and foreign spending on U.S. exports all cratered in the past year, fallout from the bursting housing bubble and the resulting global economic slowdown. As households and businesses pull back on spending, private demand for goods and services is insufficient to sustain the number of jobs the economy had before the recession. The result has been the massive job loss of the past year-and-a-half.

When private-sector demand growth (either consumption spending, business investment, or exports) is too weak to sustain employment, public demand can and should be increased through expansionary fiscal policy. Expansionary fiscal policy is, by definition, *increasing* government borrowing, either by cutting taxes or increasing government spending,

FIGURE N

Trade and federal budget deficits as percent of GDP, 1979-present



SOURCE: Bureau of Economic Analysis.

or both. This increase in borrowing injects demand into the economy (either directly through government spending or indirectly by raising private purchasing power through tax cuts and/or transfer payments) and helps offset the employment loss caused by the pullback in private demand.

When the federal government undertakes expansionary fiscal policy during a recession, it is borrowing at precisely the time when it is not competing with households and businesses for loanable funds (and both household and business demands for new borrowing have plummeted in recent years, as seen earlier in Figure M). A rough rule of thumb is that the federal government should try to offset what the private sector is doing in regards to building up or running down debt. When private-sector borrowing is rising rapidly, federal government borrowing should decline. Growing private-sector borrowing generally means private spending is increasing, so demand from the government is less necessary to sustain a full-employment economy. Falling private-sector borrowing generally means that private spending is contracting, so demand from the government is necessary to forestall (or shorten) an economic slowdown.

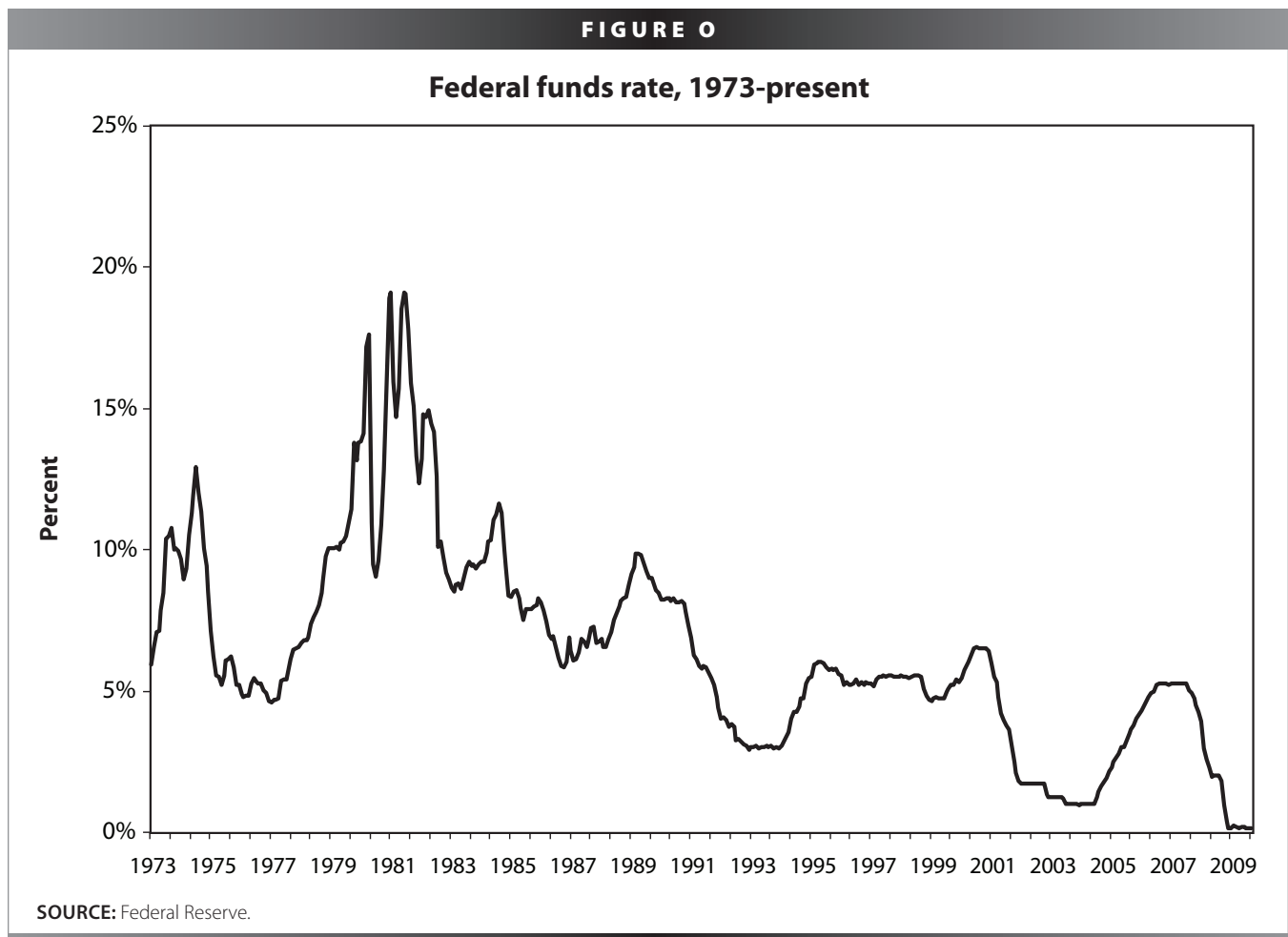
When the private sector began excessive borrowing during the housing bubble of the early and mid-2000s, the government should not have responded with the 2001 and 2003 tax cuts that massively increased deficits (that these tax cuts were regressive and poorly designed even for short-run purposes are extra reasons why they should not have been passed). However, just because this rough rule of thumb was not followed under the Bush administration doesn't mean that it should be thrown out the window. As private-sector borrowing and spending plummeted over the past year-and-a-half, it was good policy for the government to step up its borrowing and spending to avert (or at least shorten) the resulting recession and rise in unemployment.

Of course, there are many other tools besides government borrowing and saving that can be used to target economic stability. For example, when the private sector (mostly banks and other financial institutions, but private households too) borrowed too much and became over-leveraged during the 2000s expansion, the fault of policy makers was both failing to stem the growth of private-sector borrowing and failing to offset it with borrowing and spending policies. For example, caps on leverage at financial institutions would have inhibited risky lending, and households could have been clearly warned by policy makers about the imminent danger of a collapse in housing prices.

In any case, regardless of what causes a recession, even if it is excessive borrowing, it is almost always proper for fiscal policy to become *more* expansionary during the downturn.

### **Recovering from earlier recessions without ‘stimulus packages’**

The quickest lever than can be pulled when fighting recessions is the Fed’s lowering of the short-term interest rates it controls; fiscal policy demands full congressional debate and presidential support and hence takes longer to implement. But the impact of lowered rates has a long lag time (12-18 months), even in a healthy economy. And in today’s particularly weak economy interest rate cuts even to zero have had little effect, since one of the primary transmission mechanisms through which cuts usually spur economic activity is increased home sales and home building (the other key transmission mechanism is rising business investment). After the deflation of the housing bubble, the housing sector is unlikely to be an engine of growth anytime soon, regardless of what happens to interest rates.

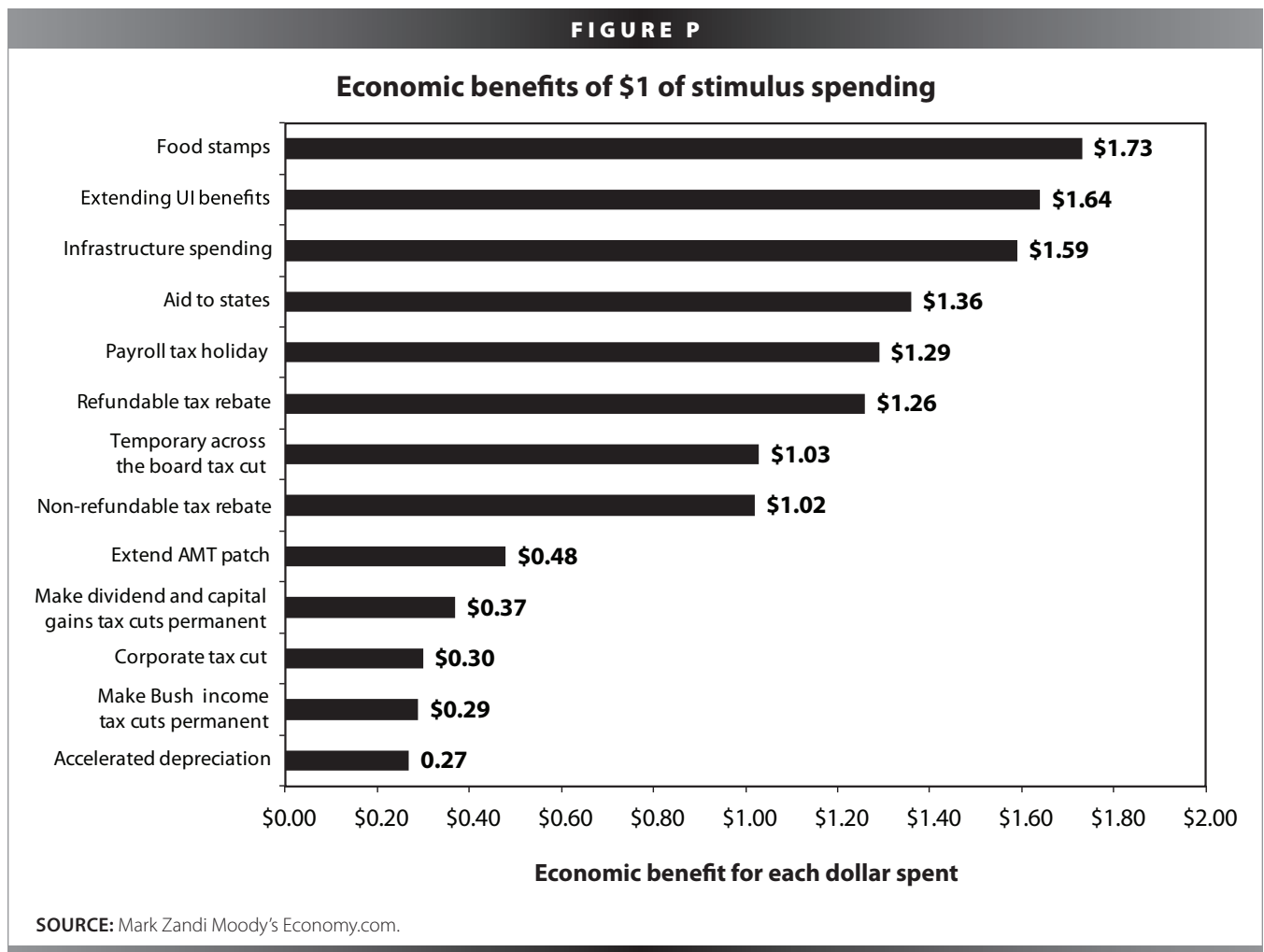


This situation is in stark contrast to the early 1980s and early 1990s recessions, both of which were caused at least in part by the Fed *raising* interest rates. Given that the economy entered these recessions with relatively high and rising interest rates, the Fed had lots of room to cut rates to try to spur recovery (in the early 1980s, the federal funds rate reached 20%). This time, the economy has entered the recession with rates already pressed down to zero (**Figure O**).

### Accidental stimuli

However, though there were no explicit stimulus policies in these earlier period, policy-driven increases in federal deficits amounted to de facto stimulus packages during both the 1980s and 2000s recessions. In both cases they took the form of large, regressive tax cuts and increased military spending. And in both cases the policies were advocated before recessions hit—they were ideologically driven tax cuts that happened to coincide with recessions, or accidental stimuli that provided economic stimulus nevertheless. The 1981 and 2001 tax cuts reduced federal revenues by an amount equal to 3.6% and 1.4% of GDP, respectively, in the two years after their enactment. This is a substantial fiscal impulse—the Recovery Act will add roughly 1.4% to the economy in 2009.

The tax cuts of the early 1980s and 2000s created slightly smaller deficits during the recession and immediate aftermath than will likely be created by ARRA. Further, neither of these tax cut packages were constructed in a good way if short-run recovery was the goal. For stimulus spending to be most effective, government should spend money directly on



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public investments and relief, or enact tax cuts and transfers directed to the households that are the most cash-strapped and therefore the most likely to spend the money quickly. (**Figure P** uses data from Moody's Economy.com to illustrate the economic stimulus created from \$1 of government spending in various areas.) Neither the 1980s nor the 2000s tax cuts followed this rule. Further, the tax cuts in the 1980s were enacted while the Federal Reserve was raising interest rates, and so much of the beneficial impact of tax cuts was neutralized by the Fed.

Finally, because the 1980s and 2000s tax cuts were poorly designed as stimulus, they did little for the economy but still continued to add to federal budget deficits well after the recession was over—in other words, they were not temporary responses to a crisis. By contrast, the Recovery Act's direct draw on revenues will have almost entirely wound down by the end of 2011. This may be too short a lifespan for the stimulus package, since labor markets may still be slack by the end of 2011. The CBO projects that unemployment at the end of 2011 will be 9.1%, nearly twice the 4.9% rate that prevailed before the recession.

## Conclusion

Worries about deficit spending, misplaced when the economy is weak, usually peak at precisely the wrong time.

In 2001 the Congressional Budget Office projected that in fiscal year 2008 the federal government would have a \$635 billion surplus. Instead it had a \$459 billion deficit. The \$1 trillion-plus difference between projection and reality was almost entirely the result of policy decisions to enact tax cuts, fight two wars, and provide a Medicare prescription drug benefit. Yet at no time were there any serious calls, as there are today during the worst financial crisis in most of our lifetimes, to impanel a deficit commission to look at the budget problem.

The Obama administration is not doing anything radical in using policy-driven increases in the deficit to fight the recession. When the economy is weak and capacity is sitting idle, hawkish opposition to deficits holds the nation's prosperity hostage to ideology that has no grounding in basic, common-sense economics. Besides not being particularly radical, enacting large policy-driven increases in the deficit as the economy enters recession is common—both the Reagan and the second Bush administrations undertook large expansionary fiscal policy changes. The true danger that current stimulus policies pose to the economy in coming years is that they will be too small to fund the public relief and investments that are necessary to ensure a sustained recovery.

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## Endnotes

1. Much federal debt is actually owed to the government itself—most notably in the form of the Social Security Trust Fund.
2. Spending to augment human capital is also a productive investment, but in the macroeconomic statistical aggregates only investments in physical capital are measured and tracked.
3. Blecker (1991) noted that the simple twin deficits story was almost surely wrong even in the early 1980s, a time when the simple correlations held together.