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Debt Amid the Great Recession:  
What the Evidence Shows

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# U.S. GOVERNMENT DEFICITS AND DEBT AMID THE GREAT RECESSION: WHAT THE EVIDENCE SHOWS

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*Abstract:* This paper examines three sets of major questions regarding the current U.S. government's fiscal deficit and outstanding debt, tied to the 2009 economic stimulus program, the American Recovery and Reinvestment Act (ARRA). First, I consider the claim that high levels of government borrowing drives up interest rates. These high rates then produce a heavy burden of government debt as well as heavy inflationary pressures. The evidence we review regarding each of these concerns demonstrates that none have emerged as serious matters since the enactment of the ARRA. Given this conclusion, the paper then questions why the ARRA did not then succeed in generating a strong economic recovery. I first consider the possible impact of 'Ricardian Equivalence,'—the position that government stimulus programs, by their nature, are self-defeating. After arguing against this position, I advance three reasons for the failure of the ARRA to achieve a strong recovery: 1) The ARRA relied too heavily on tax cuts as a means of bolstering private spending; 2) Household wealth declined dramatically during the recession, tied to the collapse of the financial bubble. This in turn weakened the willingness of households to increase spending; and 3) Credit markets were locked up, especially for smaller businesses, despite the highly expansionary monetary policy stance adopted by the Federal Reserve. Building on these findings, I then develop a series of policy proposals aimed at promoting both a strong recovery in the short term and at reducing any remaining structural deficit issues in the longer term. The short-term program focuses on extending loan guarantees, especially to small businesses; and taxing the excess reserves held by commercial banks. The longer-term agenda focuses on reducing government costs for health care and the military, and on increasing revenue through establishing taxes on financial market transactions.

# 1. INTRODUCTION

Wall Street hyper-speculation brought the global economy to its knees in 2008-09. To prevent a 1930s-level Depression at that time, economic policymakers throughout the world—including the U.S., the countries of the European Union, Japan, South Korea, China, India, and Brazil—all enacted extraordinary measures to counteract the crisis created by Wall Street. These included financial bailouts; monetary policies that pushed central bank controlled rates close to zero; and large-scale fiscal stimulus programs, financed by major expansions in central government fiscal deficits.

In the first major action of his presidency, Barack Obama signed into law the American Recovery and Reinvestment Act (ARRA) in February 2009. This fiscal stimulus program included \$787 billion in new spending initiatives and tax cuts to fight the recession. Unemployment stood at 8.2 percent at the time the ARRA was enacted, with the expectation at the time that conditions were likely to worsen, probably quickly and severely, before a recovery could take hold. The U.S. federal deficit reached \$1.4 trillion, or 10.0 percent of GDP in 2009, and 8.9 percent in 2010. The projected figure for 2011 is \$1.7 trillion, or 10.9 percent of GDP. Prior to that, the U.S. deficit averaged 2.0 percent of GDP under the full eight years (2001-08) of George W. Bush and 0.8 percent of GDP under Bill Clinton (1993-2000).

Among the 27 countries of the European Union, fiscal deficits for 2009 averaged 6.8 percent of GDP, up from a 1.8 percent average between 2001-07. The largest deficits for 2009 were those in Ireland (14.3 percent), Greece (13.6 percent), the UK (11.4 percent) and Spain (11.2 percent). France was also relatively high at 7.5 percent, while Germany was a low outlier at 3.3 percent. According to the EU Stability and Growth Pact agreed on in 1997, annual fiscal deficits were supposed to not exceed 3 percent of GDP other than in severe recessions.

Fiscal deficits of this magnitude emerged first as the normal result of the recession itself, with tax revenues falling along with incomes, business profits and asset prices, while government support payments rose for 'automatic stabilizers' such as unemployment insurance, Medicaid and other basic safety nets. But in addition, the ARRA and similar measures elsewhere deliberately added to the deficit for the purpose of bolstering government spending and aggregate demand, and thereby preventing the economy's floor from collapsing.

Roughly 18 months after these strong anti-recession measures were enacted, a wave of opposition to large-scale fiscal deficits emerged, with deficit hawks gaining strong momentum in the U.S. as well as Europe. One year further on, i.e. as of this writing, the deficit hawks have become the dominant voices in setting the economic policy agenda amid a fragile global recovery. Debates on macroeconomic policy focus around how much austerity to impose how quickly, given a perceived overarching imperative of dramatically reducing fiscal deficits. The idea of strengthening the recovery through further stimulus—aimed at creating a virtuous cycle of falling unemployment, improving business conditions, and falling deficits as a result of rising incomes and tax revenues—has faded into the background, at least in mainstream policymaking circles.

This paper focuses on the situation in the United States. Many parallels with conditions and debates in Europe should be evident. At the federal level in the U.S., Democrats and Republicans were consumed through the Spring and Summer of 2011 with the issue of whether, and under what terms, to authorize an increase in the legal ceiling for the amount of debt that the federal government could carry. The leading figures from both parties accepted the premise of the debate that reducing the deficit was the paramount economic policy

concern. This was despite the fact that the unemployment rate stood above 9 percent for more than two years after the 2008-09 recession had officially ended (i.e., according the National Bureau of Economic Research). By the U.S. Labor Department's broader indicator, including underemployed and discouraged workers, nearly 16 percent of all labor force participants were experiencing either unemployment, underemployment or were discouraged from seeking work. This amounts to 25 million people, a figure greater than the combined populations of New York, Los Angeles, Chicago and the other seven largest cities in the country. At the same time, state and local governments throughout the country were imposing major cuts on health, education and social services because of the severe drop in their tax revenues and the unwillingness of the federal government to expand revenue-sharing to make up the difference (Pollin and Thompson 2011).

We are clearly in the midst of a high-stakes debate about fiscal deficits and macroeconomic policy, in the U.S. and throughout the world. This paper examines three sets of major questions as they apply in the U.S. case specifically. Section 2 begins with a brief review of the long-term pattern of fiscal deficits in the United States. We then turn to considering the arguments that have been discussed most prominently since policymakers shifted the focus of the debate from counteracting recession and mass unemployment making austerity-level cuts in the government's deficit and debt.<sup>1</sup> They begin with the claim that high levels of government borrowing drives up interest rates. These high rates then produce a heavy burden of government debt as well as heavy inflationary pressures. The evidence we review regarding each of these concerns demonstrates that none have emerged as serious matters since the enactment of the ARRA.

Given this conclusion, in Section 3, I consider why the ARRA did not then succeed in generating a strong economic recovery. I first consider the possible impact of 'Ricardian Equivalence,'—the position advanced most prominently by Robert Barro that government stimulus programs, by their nature, are self-defeating. After arguing against this Barro position, I advance three reasons for the failure of the ARRA to achieve a strong recovery: 1) The ARRA relied too heavily on tax cuts as a means of bolstering private spending; 2) Household wealth declined dramatically during the recession, tied to the collapse of the financial bubble. This in turn weakened the willingness of households to increase spending; and 3) Credit markets were locked up, especially for smaller businesses, despite the highly expansionary monetary policy stance adopted by the Federal Reserve.

Building on these findings from Section 3, in Section 4 I develop a series of policy proposals aimed at promoting both a strong recovery in the short term and at reducing any remaining structural deficit issues in the longer term. The short-term program focuses on extending loan guarantees, especially to small businesses; and taxing the excess reserves held by commercial banks. The longer-term agenda focuses on reducing government costs for health care and the military, and on increasing revenue through establishing taxes on financial market transactions.

I offer some brief summary observations to conclude the paper.

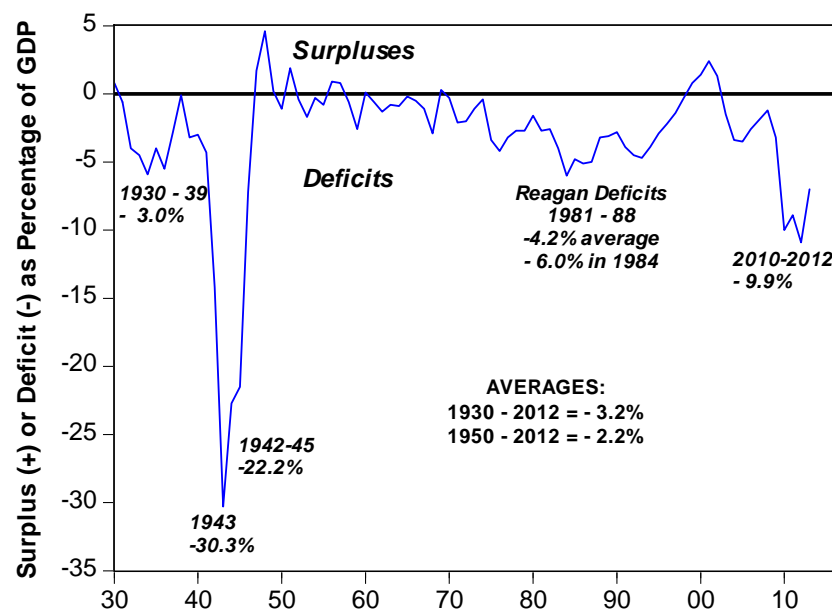
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<sup>1</sup> Pollin (2010a) discusses in some detail the arguments advanced most recently by deficit hawks. Parts of the current paper were published previously in this 2010 paper.

## 2. INTEREST RATES, INFLATION AND DEBT BURDENS

Figure 1 plots the level of U.S. federal government deficits as a share of GDP from 1930 to the projected figure for 2012. It is clear from this figure that the experience following the 2008-09 financial crisis and Great Recession generated deficit levels of historic proportions. As we see, during World War II, the fiscal deficit did spike at 30.3 percent of GDP, and averaged 22.2 percent from 1942-45. Otherwise, the 2010-2012 deficits, at around 10 percent of GDP, are the highest levels over this full span, including the 1930s Depression. Ronald Reagan's term of office is well-known as having generated massive fiscal deficits, due to Reagan's policies of lowering taxes for the wealthy while dramatically increasing military spending. But as Figure 1 shows, the Reagan deficits peaked at 6.0 percent of GDP in 1983 and averaged 4.2 percent during his full eight-year term, 1981-90. There is validity to the characterization of our current period by the Harvard University historian Niall Ferguson (2010) as "world war finance without the war."

FIGURE 1. U.S. FISCAL SURPLUSES AND DEFICITS AS SHARE OF GDP 1930-2012



Source: *Economic Report of President, 2011*

Yet it is also the case that the huge increase in deficit spending during World War II did lead to the end of the mass unemployment crisis resulting from the 1930s Depression. Thus, U.S. unemployment averaged 17.0 percent between 1930-41. But with the expansion of federal deficit spending tied to the war effort, unemployment fell to 4.7 percent in 1942 and averaged 1.7 percent over 1943-45.

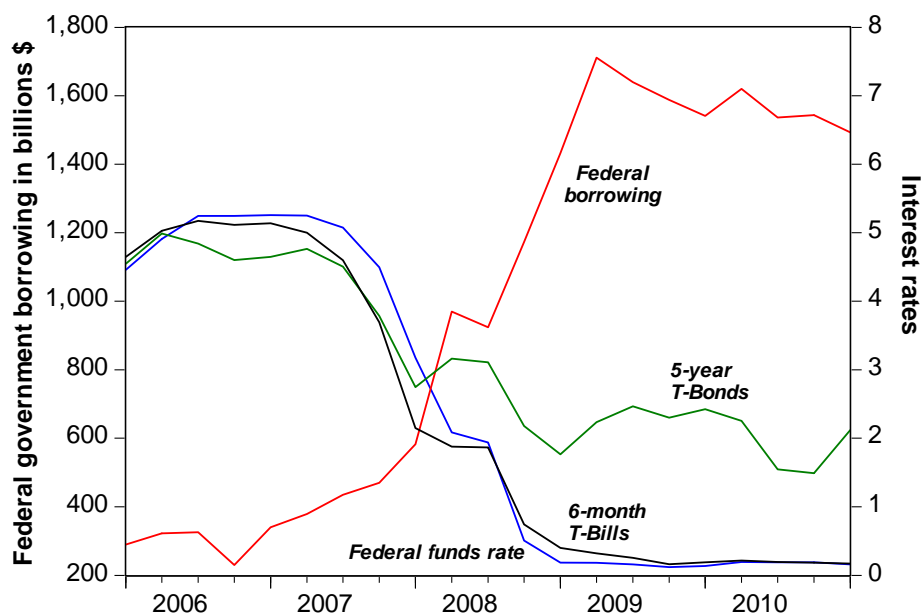
There has not been any comparable decline in unemployment since the federal deficits rose to the 10 percent of GDP level in 2010. Rather, unemployment was at 8.2 percent when the ARRA was enacted in February 2009, rose as high as 10.1 percent in October 2010, and remained at 9.2 percent as of June 2011. It is legitimate to consider what may have apparently rendered the level of deficit spending in 2009-11 ineffective at reducing mass unemployment; and, similarly, to examine the arguments as to why such deficits may be an ineffective and even dangerous policy tool.

## Government Borrowing and Bond Rates

Figure 2 plots the movements of government borrowing rates along with the level of fiscal deficits on a quarterly basis, beginning in 2006, the year before the financial crisis began. As the figure shows, the fiscal deficit was in the range of \$200 - \$300 billion in 2007, but then begins rising sharply in 2008. By the fourth quarter of 2008, the deficit is at \$1.2 trillion (expressed on an annualized basis). By the fourth quarter of 2009, it peaks at \$1.6 trillion. At the same time, as we see in Figure 2, U.S. Treasury borrowing rates did not rise at all, but rather fell sharply over this period. The rate on 5-year Treasuries was at 5.0 percent in the second quarter of 2006. By the end of 2009, this 5-year Treasury rate was 2.3 percent. This rate was still lower by the end of the first quarter of 2011, despite the fact that fiscal deficits by that point had been sustained in the range of 10 percent of GDP for 2 ½ years.

FIGURE 2. U.S. GOVERNMENT BORROWING AND INTEREST RATES ON TREASURIES AND IN FEDERAL FUNDS MARKET

*Quarterly data, 2006.1 – 2011.1*



*Sources: Economag, U.S. Office of Management and Budget*

Why have interest rates on government bonds remained so low despite the large deficits? Two factors are at play. The first is that financial market investors globally have been highly risk averse since the financial collapse, in a dramatic reversal of their mindset during the bubble years. Within that mindset, investors have been voting strongly in support of U.S. government bonds as the single safest store of their wealth. The European fiscal crisis that began in the Spring of 2010 provided yet another reminder that, however bad conditions are in the U.S. they can easily become worse someplace else. In addition, as we will discuss further below, Federal Reserve policy has been aggressively accommodative since the financial crisis began, and the primary tool for maintaining an accommodative stance has been to maintain low interest rates. The Fed has targeted both the traditional short-term federal funds rate as well as longer-term government bonds, through their two “quantitative easing” initiatives.

## *Inflation*

The fiscal deficits of 2009-11 did not exert any upward pressure on inflation, as observed either by the actual CPI inflation rate or by indicators of expectations of future inflation. The data in Table 1 shows the movements in the CPI inflation rate from the time the federal stimulus program began in March 2009 through June 2011. The table also shows comparable figures for the 28-month periods emerging out of the previous five recessions.

TABLE 1. AVERAGE MONTHLY INFLATION RATE AFTER FEBRUARY 2009 STIMULUS PROGRAM AND FIVE PREVIOUS CYCLICAL TROUGHS

	Mean	Standard Deviation
<i>2009.3 – 2011.6</i>	<i>2.3</i>	<i>2.8</i>
Average of first 28 months after cyclical troughs, 1970 - 2003	5.9	3.5
1970.11 – 1973.2	3.8	2.0
1975.3 – 1977.6	6.2	2.7
1980.7 – 1982.1	8.9	3.7
1991.3 – 1993.6	3.0	1.3
2001.11 – 2004.2	2.2	2.5

*Source: U.S. Bureau of Labor Statistic*

As the top row of Table 1 table shows, the inflation rate averaged only 2.3 percent between 2009.3 and 2011.6. It is also notable that the standard deviation on the average inflation rate during this period, at 2.8 percent, is larger than the mean. This shows that pressures for *deflation* have been roughly as strong as any inflationary forces in the economy over this period. This is despite the fact that food and oil commodity prices—the main sources of “headline inflation”—both spiked over this period.<sup>2</sup>

Moreover, as Table 1 shows, inflation over 2009.3 – 2011.6 has also been weak relative to the 28 months after cyclical trough months during the previous five expansionary periods. The most recent recovery of 2001.11 – 2004.2 was similar in the movement of the inflation rate. Otherwise, inflation rates were consistently higher in the previous recoveries, despite the fact that levels of deficit spending were far lower than the most recent years. Of course, special circumstances were associated with each of the previous recoveries, including the presence of inflationary pressures driven by oil price shocks both in the early 1970s and early 1980s. Still, as noted above, oil prices did also spike between 2009 – 2011. But the more general point is that the fiscal deficit since 2009.3 has clearly not pushed up the CPI inflation rate.

What of inflationary expectations? We obtain a measure of the extent of this in financial markets through the spread between the short- and long-term Treasury rates. This spread widens when inflation expectations rise, since the market participants incorporate a premium into long-term rates to cover the expected erosion in the

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<sup>2</sup> Thus, the average price of gasoline at the pump in the U.S. rose by 115 percent, from \$1.84 to \$3.96 between January 2009 and May 2011.

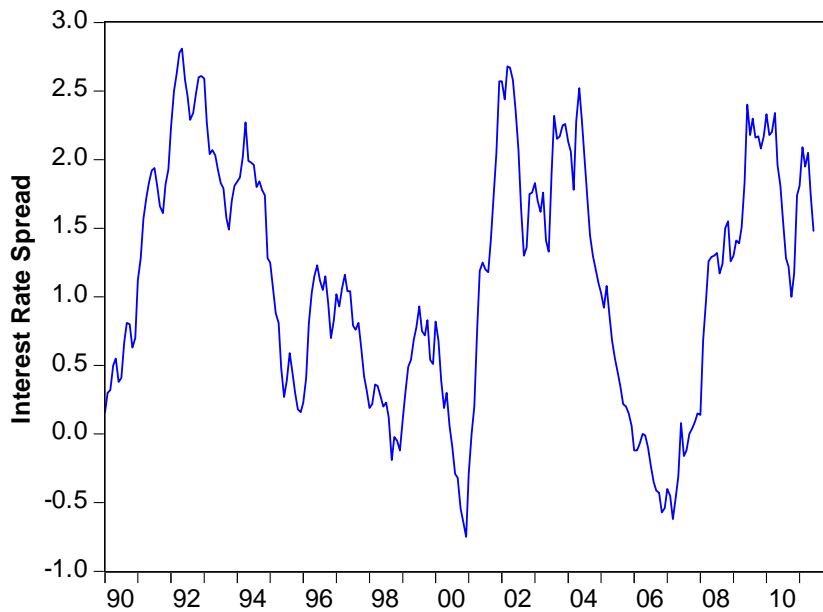
real value of the dollar. There is effectively no default risk associated with U.S. Treasury debt of any maturity; and as such, comparing Treasuries of alternative maturities provides a clear measure of inflationary expectations independent of perceptions of default risk.

In Figure 2 cited above, with monthly data for 2006 – 2011, we could see that the spread between 6-month Treasury bills and 5-year Treasury did begin widening in 2008. For 2006-07, there was almost no difference between the two Treasury rates. By contrast, the spread from 2008 – 2011 averaged 1.6 percentage points. This suggests that the fiscal deficits did create some inflationary expectations, even though the actual inflation rate did not rise.

However, we obtain a clearer sense of this rise in inflation expectations through observing the movement in the Treasury rate spread over a longer time period. Figure 3 plots the movement in the spread from 1990.1 to 2011.6. Here we see that the most recent rise in the spread from 2008 – 11 was more modest than over two previous periods when the spread rose, 1992-94 and 2002-05. More generally, what the pattern of the spread since 1990 onward shows is that the most recent rise in the spread was relatively mild by historical standards. This is despite the fact that the fiscal deficit rose so sharply and that media reports about the inflationary impact of the rising deficit were widespread.

FIGURE 3. U.S. TREASURY RATE SPREAD: 5-YEAR TREASURY BONDS AND 6-MONTH TREASURY BILL RATES

*Monthly figures, 1990.1 – 2011.6*



*Source: Economagic*

Overall, considering both the evidence on actual inflation rates as well as inflationary expectations, it is clear that the impact of the most recent rise in the fiscal deficit on inflation has been modest. Why has this been so? Why haven't inflationary pressures emerged? In fact, there is no coherent argument as to why government borrowing per se should generate inflationary pressures or an inflation premium. If government borrowing leads to significant increases in the utilization of labor, materials and capital stock, this could



potentially be inflationary. But this kind of demand-pull inflation has not occurred, with unemployment having averaged above 9 percent from early 2009 through mid- 2011.

Another potential channel for inflation premiums to emerge would be through the fiscal policy leading to excessive debt monetization, which can increase liquidity. This is of course a variation on the traditional monetarist arguments about ‘too much money chasing too few goods.’ As we will see, the Federal Reserve has indeed pursued an extremely accommodating monetary policy, in correspondence with the expansionary fiscal policy. But again, this also has clearly not created significant inflationary pressures.

### *Debt Burden*

Probably the main focus in the debate on the fiscal deficit is that it is creating a massive and unsustainable burden on government finances. This argument is frequently focused on the government debt/GDP ratio. As we see in the top panel of Figure 4 (page 8), the federal debt held by the public did rise sharply in 2010, from 36.2 percent of GDP in 2008 to 53.5 percent in 2010.<sup>3</sup> The projected debt/GDP ratios for 2011 and 2012 are higher still, at 62.2 and 72.0 percent respectively. At the same time, as is clear from the figure, the U.S. operated with a debt/GDP ratio above 50 percent from the WWII spike in borrowing in 1943 until 1956. The federal debt/GDP ratio hit a peak over 100 percent in 1945-46.

The federal debt/GDP ratio rose sharply in the early 1980s under President Reagan, after having fallen steadily since the World War II peak. The figure for 1982 was 25.8 percent, and rose to a high of 49.1 percent in 1996. But there is a still more crucial feature that distinguishes the rising federal debt/GDP ratio of the 1980s relative to the current period. That is, the interest rate on the debt in the 1980s was much higher, with the 5-year Treasury averaging 10.4 percent for the full decade, as opposed to 2.0 percent in 2009 through the first half of 2011.

This difference in interest rate levels creates an entirely different scenario in terms of assessing the real burden of the federal debt. The most directly relevant measure of the federal debt burden is the interest payments that the government must make to service the debt at any given time, not the stock of debt considered independently of interest obligations. As we see in the lower panel of Figure 4, interest payments as of 2010 were at near historic lows from the mid 1950s onward, at 5.7 percent of total federal outlays. The average ratio of federal interest payments/outlays between 1960 – 2010 was 9.9 percent.

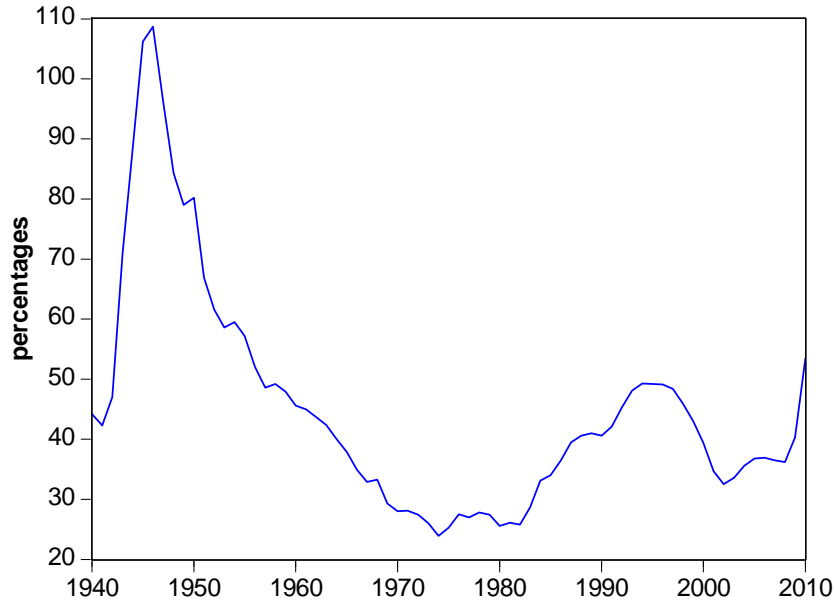
Moreover, even with the huge expansion of the fiscal deficit in 2009, the interest burdens on the federal debt will continue to be low moving forward, given that low federal borrowing rates have been maintained from 2009 onward. Thus, considering that the U.S. borrowed \$1.4 trillion in 2009, annual interest payments on this borrowing will be about \$31 billion, if we assume, reasonably, that the rate on 5-year Treasuries represents the

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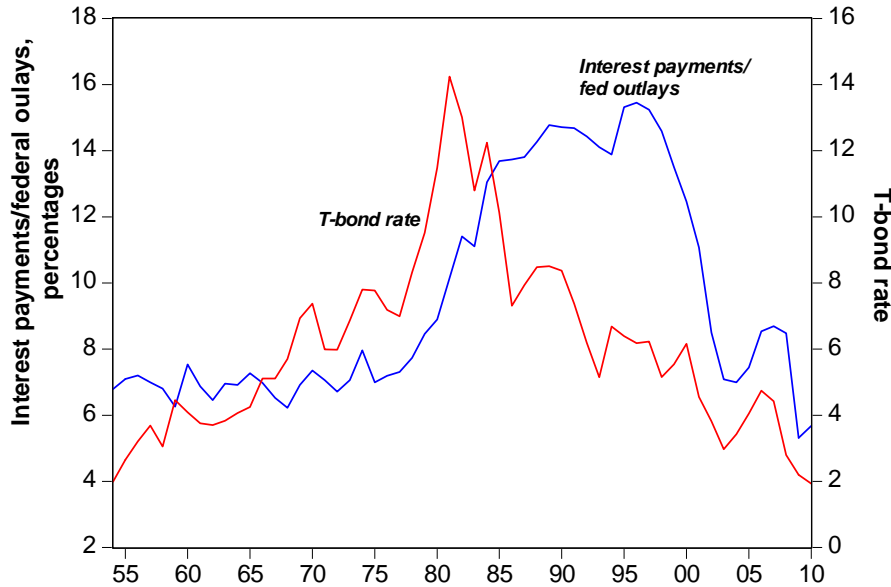
<sup>3</sup> Total U.S. government debt is typically measured as “gross debt” or “debt held by the public.” Gross debt includes debt owned by the federal government itself. By definition, the share of the gross debt owed by the government to itself does not constitute a burden on the federal government. As described by the U.S. Treasury website, the debt held by the public includes “all federal debt held by individuals, corporations, state or local governments, foreign governments, and other entities outside the United States Government less Federal Financing Bank securities. Types of securities held by the public include, but are not limited to, Treasury Bills, Notes, Bonds, TIPS, United States Savings Bonds, and State and Local Government Series securities,” ([www.treasurydirect.gov/govt/resources/faq/faq\\_publicdebt.htm](http://www.treasurydirect.gov/govt/resources/faq/faq_publicdebt.htm)). For the purposes of this paper, we focus on the debt owed to the public as the relevant measure of the federal government’s outstanding debt.

FIGURE 4. U.S. GOVERNMENT DEBT AND INTEREST BURDENS

A) PUBLICLY HELD FEDERAL DEBT / GDP



B) INTEREST PAYMENTS/FEDERAL OUTLAYS AND 5-YEAR TREASURY RATES



Sources: NIPA, *Economagic*

average rate for all government borrowing at all maturities in 2009.<sup>4</sup> Overall interest payments for 2010—including the servicing costs for all the debt accrued prior to 2009—were \$196 billion. This means that \$164 billion of the \$196 billion total in interest payments were from government debts accrued prior to 2009. It also means that the share of interest payments from government borrowing in 2009 alone amounted to 16.3 percent of all interest payments in 2010.

<sup>4</sup> The average maturity on U.S. government bonds was 49 months in 2009 and 57 months in 2010.

Let's now consider alternative scenarios for government interest payments, assuming different levels of prevailing interest rates. For example, if the U.S. had borrowed in 2009 at the average rate that prevailed in the 1980s of 10.4 percent, the additional interest payments in 2010 would have been \$146 billion. This would have represented fully 47 percent of total interest payments that year of \$310 billion, including the \$164 billion accrued from borrowing before 2009. Even if we assume that interest payments were at the average for the previous five business cycles of 7.7 percent the interest payments in 2010 would be \$108 billion, representing 40 percent of the overall interest payments that year of \$272 billion (including the \$164 billion accrued prior to 2009).

These differences would only be compounded in 2011 and 2012. As such, because federal borrowing rates have remained historically low since the financial crisis and recession began, the actual government debt burden for 2010-2012 will also remain near historic lows in those years. This central point has received virtually no comment in the debates in the United States over the fiscal deficit.

### 3. WHY THE STIMULUS DIDN'T END THE RECESSION

If the fiscal expansion did not cause either interest rates or inflationary pressures to increase, or for the government's debt burden to rise significantly, then why didn't the economy respond more positively to the large-scale injection of fiscal stimulus?

One possible explanation, coming from the New Classical macro tradition, is straightforward. The Obama stimulus failed because it was never capable of succeeding. This is due to what Robert Barro first termed "Ricardian equivalence," the argument that households and businesses view the government deficits as creating increased future tax liabilities for themselves. As such, they anticipate these future tax burdens in their present behavior, by reducing their present levels of spending, more or less by the amount that their future tax burden will rise. The rise in deficit-financed government spending will therefore be matched by an equivalent reduction in private-sector spending—that is, the multiplier effects of a government debt-financed stimulus program will be zero. Barro argues that it is much more plausible to assume that the multiplier is zero as opposed to some significant positive number. In the zero multiplier case, as Barro writes, "the real GDP is given, and a rise in government purchases requires an equal fall in the total of other parts of GDP—consumption, investment and net exports," (2009, p. 2).

Barro's notion of Ricardian equivalence has always rested on an implausible set of behavioral assumptions, including that businesses and households operate with perfect foresight within the context of perfectly functioning financial markets. This is how they are able to accurately calculate their future tax burdens associated with current fiscal deficits. His model also assumes that the households and businesses will always choose to save more money now to cover these future tax burdens rather than, at least in some substantial number of cases, spend more now and worry about the future later.<sup>5</sup>

But aside from his theoretical work, Barro has also produced evidence supporting his theoretical conclusion that government spending multipliers would be zero, though only under peacetime conditions (1981).

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<sup>5</sup> Neither Barro nor others operating within the New Classical analytic framework have attempted to ground their strong behavioral assumptions in research on behavior, either within behavioral economics, social psychology or allied fields. In fact, there exists by now a substantial literature showing that most people make economic decisions—including socially crucial decisions such as investing in long-lived capital stock—on the basis of limited, or even inaccurate information as well as through limited, or even myopic reasoning processes. See Akerlof and Shiller (2009) for a good survey of this literature.

Significantly, as he acknowledges, his own research finds that multipliers could be much larger during war-time, as high as 0.8, because, as he proposed, the temporary nature of much of military spending means that consumer demand would not fall significantly in this situation. Barro also adds that, during wars, conscription creates a forced increase in labor supply, which in turn expands output.

But Barro's conclusion of a zero multiplier in peacetime represents an extreme position among a wide range of estimates in the literature. For example, a 2002 survey paper by Hemming, Kell and Mahfouz of the IMF reported estimates for the case of the U.S. that range between zero and 2.0.<sup>6</sup> Their primary explanation as to why the multiplier estimates range widely is that the impact of the government's deficit spending will vary, depending on conditions in the economy when the spending injection occurs. In fact, this conclusion is fully consistent with that reached by Barro himself through his acknowledging that multipliers will vary widely under war- and peacetime conditions. Hemming et al. argue that the conditions under which a government stimulus will generate a relatively large multiplier will include the following: significant excess capacity; liquidity-constrained households; government spending is not substituting for private spending; the government is not facing financing constraints; and there is an accompanying monetary expansion with limited inflationary consequences.

Conditions in the U.S. economy when the stimulus program was enacted in February 2009 corresponded well with the conditions that Hemming et al. identify as being conducive to a large multiplier. With unemployment at 8.2 percent and industrial capacity utilization at 70.2 percent as of February 2009, the economy was clearly operating with considerable excess capacity. Households were also clearly liquidity constrained, due to stagnant or falling incomes, high unemployment and heavy debt obligations. The financial crisis brought a sharp increase in risk aversion by private investors and corresponding drop in private investment, so the rise in government spending would not be substituting for private spending.<sup>7</sup> Extremely low Treasury bond rates and a relatively low debt-servicing burden also meant that the federal government did not face major financing constraints. Inflation was negligible and monetary policy was highly accommodating, with the federal funds rate close to zero.

But given such favorable conditions for a strong federal spending multiplier, why then, 28 months after the stimulus bill was enacted as of this writing, has unemployment remained stuck at above 9 percent and the recovery remains fragile?

One factor is that 24 percent of the overall \$787 billion measure was in the form of tax cuts for businesses and households. As Blinder and Zandi (2010) note in their econometric assessment of the stimulus program, these measures were not effective at inducing increased spending, because households also had to repay debts and businesses, in a risk-averse mode, were reluctant to spend for new investment projects. These circumstances would imply that a substantially larger proportion of the overall stimulus should have financed direct government spending initiatives, where a dollar targeted to be spent is most likely to get spent. About 22 percent of the overall stimulus was channeled directly to state and local governments for revenue sharing, to prevent layoffs in the areas of education, health care, and public safety that would have occurred otherwise due to their tax revenue shortfalls. This component of the stimulus was quite successful in achieving exactly

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<sup>6</sup> Freedman et al. (2009) of the IMF Research Department provides a more recent, if less detailed, survey on the evidence regarding multiplier effects. The basic findings of this updated research are consistent with those from Hemming et al. (2002).

<sup>7</sup> Real private fixed investment fell by 23.5 percent between 2007 – 09. The 2010 figure is only 1.9 percent higher than 2009 (*Economic Report of the President 2011*, Table B-19).

its aim of preventing layoffs. Blinder and Zandi estimate the state and local government spending multiplier as having been 1.41, five times larger than that for corporate tax cuts.

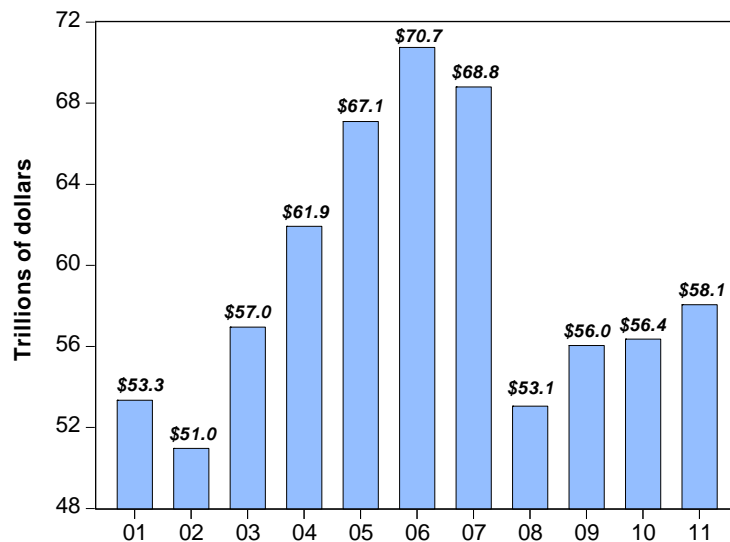
But there were also two larger factors, indeed major headwinds, weakening the multiplier effects of the stimulus program. These were the collapse of household wealth and the equally severe drop in borrowing and lending to support productive investments.

### *Household wealth effects*

Figure 5 shows the movements of real household wealth in the U.S. between 2001 and the second quarter of 2011. As the figure makes clear, household wealth rose sharply between 2002-06, from \$51.0 to \$70.7 trillion, in step with the inflating financial bubble. But household wealth then collapsed along with the bubble—falling by \$17.6 trillion from 2006 – 08 to \$53.1 trillion, a nearly 25 percent decline in just two years. Even with household wealth having recovery as of mid-2011, it was still, at \$58.1 trillion, 17.8 percent below the 2006 peak. Research examining the wealth effect on consumption (e.g. Federal Reserve researchers Maki and Columbo 2001) generally finds that households will reduce their spending by between 3 and 5 cents for every dollar of wealth that they lose, i.e. a wealth effect of between 3 – 5 percent in total spending relative to the change in household wealth.

FIGURE 5. REAL U.S. HOUSEHOLD NET WORTH, 2001 – 2011Q2

*In trillions, nominal net worth adjusted by CPI-U*



*Source: Balance sheets of the U.S. Economy*

This does assume, as is likely under the recent circumstances, the households see this loss of wealth as a long-term change in their financial situation. Thus, even taking the lower-end 3 percent estimate as the size of the wealth effect, the loss of \$17.6 trillion in household wealth would imply a roughly \$525 billion reduction in household spending. This figure is two-thirds the total amount of the two-year stimulus package of \$787 billion.

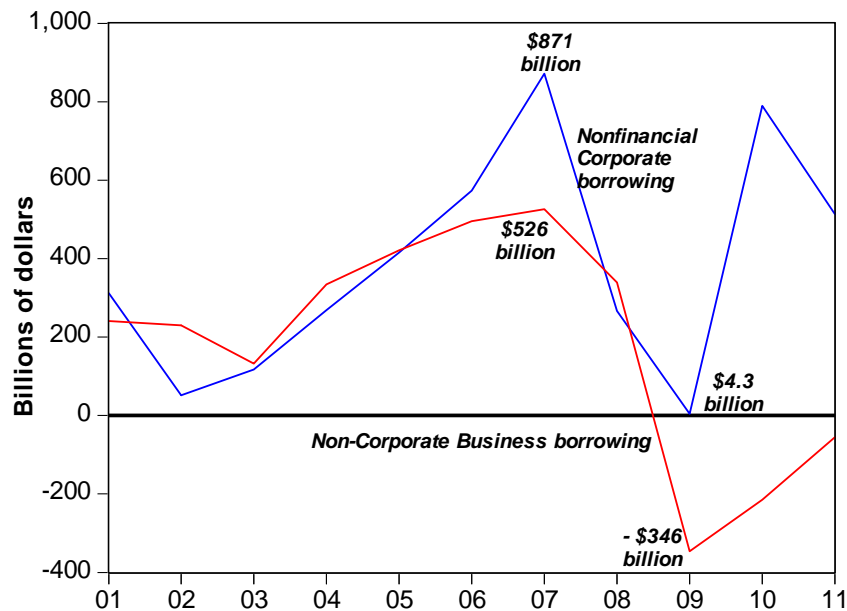
### *Credit market breakdown*

Figure 6 shows the dramatic contraction in business borrowing and lending resulting from the 2008-09 financial crisis and recession. As we see, for non-financial corporations, borrowing fell from \$871 to \$4.3 billion

between 2007-09. Corporate borrowing did then recover fairly strongly in 2010-2011. However, the pattern is much more severe for non-corporate businesses, which includes most smaller businesses. For these firms, borrowing fell from \$526 billion in 2007 to negative \$346 billion in 2009. That is, in 2009, non-corporate businesses did no net borrowing, but rather paid back \$346 billion in outstanding loans. This means that, over 2009, smaller businesses made repayments at a level of more than 2 percent of total U.S. GDP rather than borrowing to inject new spending into the economy. Non-corporate businesses in the aggregate then continued this basic pattern through the first quarter of 2011, undertaking no net borrowing.

FIGURE 6. REAL U.S. NONFINANCIAL CORPORATE AND NON-CORPORATE BUSINESS BORROWING, 2001 – 2011Q1

*In billions, nominal borrowing adjusted by PPI*



*Source: Flow of Funds Accounts of Federal Reserve System*

This collapse of net borrowing and lending, especially with respect to smaller non-corporate businesses, reflects an ongoing high level of risk aversion by both borrowers and lenders with respect to new productive investments, as opposed to pure financial engineering.<sup>8</sup> This risk aversion is a result of both demand and credit constraints emerging out of the recession. Of course, businesses are reluctant to borrow and invest when they observe weak conditions in their target markets. That is precisely why accelerator effects in models of business investment behavior—in which the rate of new business investment is a function of changes in overall sales or economy-wide spending—have consistently performed strongly in econometric studies.<sup>9</sup>

<sup>8</sup> For example, Smithers (2011) writes that “In recent years, the U.S. stock market has risen and fallen exactly in line with corporate buying.” This observation is consistent with the careful research on the role of corporate buybacks during the 2000-01 dot.com bubble by Evans (2003).

<sup>9</sup> Rapach and Wohar (2007) show that accelerator models performed most robustly until the bubble dynamics emerged strongly starting with the 1990s dot.com bubble, at which point stock prices become the most robust variable explaining investment behavior. Nevertheless, other than the impact of bubble dynamics on investment, their paper shows the consistent strong performance of accelerator models.

At the same time, there is strong evidence that a high proportion of small businesses have been willing to borrow to expand their operations even under the weak recovery conditions, but that they have been denied credit or see the costs of borrowing as still too high relative to the levels of market risk. Thus, a Summer 2011 survey by the Pepperdine University Business School (Center for Applied Research 2011) found that 1) surveyed bankers reported that they were rejecting 60 percent of their loan applications; 2) 54 percent of business owners reported not being successful in obtaining financing over the previous six months; and 95 percent of business owners report wanting to execute a growth strategy, but only 53 percent state that they have the needed capital resources to execute that strategy.

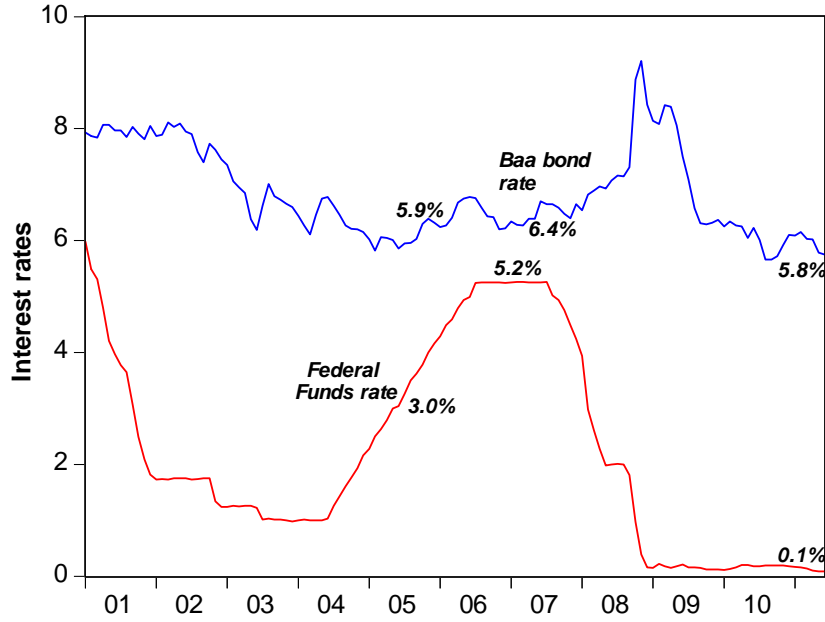
In addition to businesses getting their loan applications turned down outright, borrowing rates for average businesses have remained relatively high through the recession, even while commercial banks have been able to borrow on the federal funds market at near-zero rates since the beginning of 2009. We can see this in Figure 7 (page 14), which shows the monthly movements of the federal funds rate and the Baa corporate borrowing rate from 2001 – 2011.<sup>6</sup> The Baa rate applies corporations that are perceived as sufficiently low-enough as risk to receive an investment-grade bond rating, while still being at the high-risk end of investment-grade firms. The rates that would apply to non-corporate businesses would generally be higher than the Baa rate, as they would be perceived as more risky than an average corporation. As Figure 7 shows, the Baa rate did fall in correspondence with the Federal Reserve maintaining the federal funds rate at close to zero since 2009.<sup>1</sup> However, the decline of the Baa rate is relatively modest, especially given the Fed's extremely accommodating policy stance. That is, the Baa rate as of 2011.<sup>6</sup> was 5.75 percent, roughly equal to the Baa rate of 5.86 percent that prevailed in mid-2005 when the federal funds rate was 3.04. Even when the Fed set the federal funds rate as high as 5.25, the Baa rate averaged about 6.4 percent.

This is all while commercial banks and other depository institutions, with the capacity to borrow on the federal funds market at near-zero rates, have accumulated reserves to an unprecedented extent. As we see in the lower panel of Figure 7, between 2001 and 2007, commercial banks held between \$17 - \$20 billion in total cash reserves. The commercial banks then increased their cash reserves from \$20.8 to \$860 billion between 2007 – 08, an \$840 billion increase. By the first quarter of 2011, bank reserves had increased still further to an astronomical \$1.4 trillion, nearly 10 percent of U.S. GDP. Of course, banks need to maintain a reasonable supply of cash reserves as a cushion against future economic downturns. One of the main causes of the 2008-09 crisis and other recent financial crises was that banks' cash reserves were far too low. But increasing reserves by \$1.4 trillion is certainly a new form of financial market excess.

For an aggressive monetary policy to be effective in promoting affordable credit throughout the economy, it is obviously necessary that such cheap rates be available to commercial banks. Non-financial businesses, especially smaller businesses, also need low rates accessible to them, but Federal Reserve policies have failed to accomplish this.

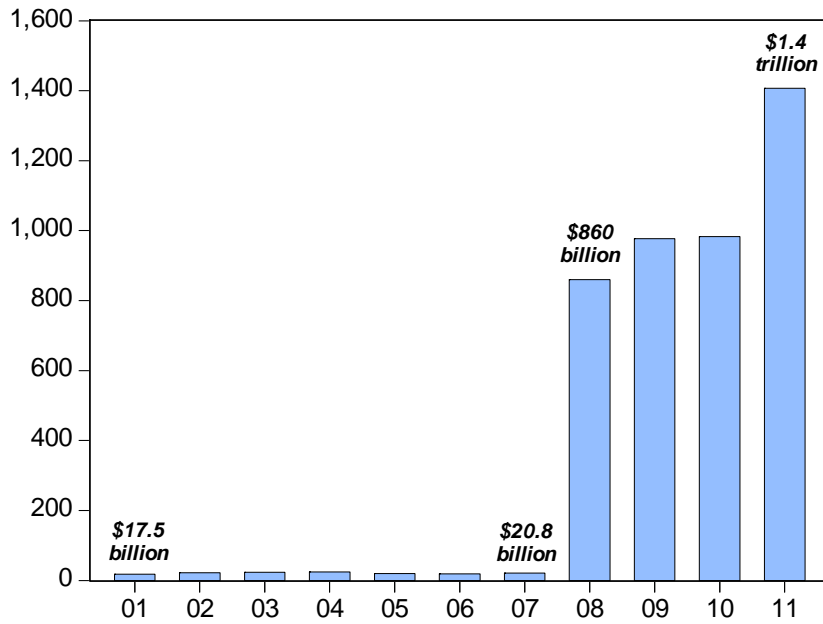
FIGURE 7. IMPACT OF FEDERAL RESERVE MONETARY POLICY, 2001 – 2011

A) INTEREST RATES FOR BANKS AND NON-FINANCIAL BUSINESSES



B) RESERVE HOLDINGS BY COMMERCIAL BANKS, 2001 – 2011Q1

Billions of dollars



Sources: *Economagic*; *Flow of Funds Accounts of Federal Reserve*



## 4. POLICY ALTERNATIVES: WHERE THE EVIDENCE LEADS

The foregoing analysis as to the inability of the ARRA program to bring down mass unemployment also helps establish a framework for designing policies that could be effective in advancing a strong recovery in the short run. This discussion can then also help frame a viable longer-run approach to managing the government's structural fiscal deficit.

### *Learning to Pull on a String*

Operating in concert with the ARRA stimulus program, U.S. monetary policy has certainly been expansionary according to the standard measure of forcing down the Federal Funds rate and keeping it near zero for 2 ½ years as of this writing. However, conducting an effective expansionary Federal Reserve policy must entail more than simply keeping the federal funds rate close to zero. The real aim of expansionary monetary policy must be to produce conditions in credit markets that will encourage household spending and business investments which, in turn, can generate millions of decent jobs. Indeed, the more apt term here should be “credit market policy” as opposed to “monetary policy.” In any case, the situation since the fiscal stimulus program was enacted is that, despite the federal funds rate being held at close to zero for 2 ½ years, the ongoing tight credit conditions have stood as a huge barrier to the success of the fiscal stimulus.

But conditions in credit markets since the recession began are hardly unique relative to previous recessions and the 1930s Depression itself. Indeed, they represent just the current variation on the classic problem with monetary policy in recessions of reaching a “liquidity trap” and trying to “push on a string.” This is when banks would rather sit on cash hoards than risk making bad loans and when businesses are not willing to accept the risk of new productive investments, even if costs of capital are low. These problems can appear as insurmountable from a policy perspective as long as one defines the limits of monetary/credit market policies as the power of the Federal Reserve to move the federal funds rate up or down. Within that limited range of possibilities, it is obvious that the federal funds cannot go below zero. However, the government, including especially the Federal Reserve, does also have the power to introduce other tools as needed, as Chair Bernanke himself has demonstrated since the onset of the financial crisis and recession. Among other actions during that period, Bernanke dramatically expanded the Fed's lending facilities to include mortgage brokers, money market funds and insurance companies. The Fed also began purchasing commercial paper directly in this period. The Fed also undertook two rounds of “quantitative easing,” i.e. purchasing long-term Treasuries rather than short-term T-bills, to bring down the spread between the long- and short-term interest rates. But the Fed clearly needs to move beyond these measures, to enable U.S. policy to ‘pull on a string,’ firmly and persistently.

This will entail both carrots and sticks. The carrots would be measures to substantially reduce the level of risk being faced by both borrowers and lenders. This can be done through the government's existing loan guarantee program. In 2009, the total level of loans guaranteed by the Federal government was about \$340 billion.<sup>10</sup> The two largest categories were subsidized mortgage and student loans. About \$50 billion went to business loans, through the Small Business Administration and Export-Import Bank. In the current climate, the federal government should roughly double its overall loan guarantee program—that is, inject another \$300 billion in guaranteed loans into the credit market, and shift the focus of the new guarantee programs to

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<sup>10</sup> Data on federal loan guarantee programs are provided in Office of Management and Budget (2011).

business. Overall guarantees would therefore be about \$600 billion, with a \$300 billion increase from 2009. For this initiative to be effective at reducing risk and encouraging new investment, the terms on the guaranteed loans will have to be generous—that is very large guarantees, in the range of 90 percent; low or no fees on the loans; and low interest rates for borrowers.

The sticks would be for the federal government to tax the excess reserves now held by banks. This should create a strong disincentive for banks to continue holding somewhere around \$1.4 trillion—again, nearly 10 percent of GDP—in excess reserves. It is difficult to know in advance what the appropriate tax rate should be for this purpose—probably in the range of 1-2 percent. But any such initiative should also allow Congress to operate with flexibility, to adjust the rate as needed for channeling excess reserves into job-generating investments. For starters, the Fed needs to stop paying interest on bank reserves. It currently pays 0.25 percent on these accounts.

One crucial feature of this combination of policies is that its impact on the federal deficit will be negligible. Loan guarantees are contingent liabilities for the federal government. Expanding the existing level of guarantees would entail some modest increase in administrative costs. Beyond this, the government would incur costs only as a result of defaults on the guaranteed loans. If we assumed the default rate remained at roughly the 2007 level for the expanded program, this would add about \$9 billion, or 0.3 percent, to the federal budget. Even if, implausibly, the default rate on the new loans doubled relative to the 2007 levels, this would still increase the federal budget by only 0.6 percent. A significant share of this budgetary expense could be covered by the revenues generated by the excess reserve tax.<sup>11</sup>

### *Maintaining Fiscal Stimulus until the Recession is Over*

Considered on their own, even well-executed measures to pull on the credit string will not succeed if the federal government follows through on the austerity approach being proposed at the federal level as well as actively implemented at the state and local levels. Indeed, we would end up with the mirror image of our current situation: expansionary credit policies with contractionary fiscal policies instead of expansionary fiscal policies but tight credit conditions.

Thus, until a strong recovery has taken hold, it is crucial for the federal government to maintain an expansionary fiscal stance. This first entails reversing the cuts at the state and local government levels that have been implemented since the beginning of 2011. For the 2012 fiscal year, this would mean approximately \$80 billion in additional federal revenue-sharing support for state and local governments. The federal government must also continue to finance unemployment insurance, without the delays and political posturing that have now emerge chronically as extensions are debated. We cannot calculate how much this will cost until we know how successful other measures are at bringing down unemployment. But the government should be prepared for expenditures in the range of \$30 billion.<sup>12</sup>

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<sup>11</sup> If we assume \$300 billion in new loan guarantees which carry a 90 percent guarantee, then allow for a default rate of 3.5 percent, the net government liability is \$9.5 billion (i.e. \$300 billion x .90 x .035). We adjust the calculations based on an increase in either the default rate or the extent of the guarantee.

<sup>12</sup> See Howell and Azizoglu (2011) for a discussion of the operations of the unemployment insurance program during the Great Recession.

The ARRA program made a \$100 billion commitment over two years for investment in traditional transportation, water and energy-related infrastructure projects, and this level of spending needs to be maintained, through the recession and beyond. Assessments of the long-term infrastructure investment needs for the U.S. economy are in the range of \$70 - \$130 billion per year over the next 20 years (Heintz, Pollin and Garrett-Peltier 2009). Federal clean energy spending also needs to continue, at least in the \$50 billion per year range. In particular, the federal government should undertake a three-year \$150 billion program to retrofit public buildings throughout the country. This will generate 800,000 new jobs per year. The investments will pay for themselves in 3-4 years through gains in energy efficiency (Pollin, Heintz, and Garrett-Peltier 2009).

### *The Long-Run Policy Agenda*

It will be helpful to begin with a straightforward point. That is, if the economy can manage to enter into a sustained recovery rather than being pushed into a double-dip recession, the growing economy will itself generate major reductions in the deficit. This is because when unemployment rises in a double-dip recession, the government is faced with huge extra spending burdens through unemployment insurance, food stamps, Medicaid, and related social safety net commitments. Conversely, when people are newly employed, they can support themselves and pay more taxes. For example, Blanchard and Perotti (2002) found that for the U.S. economy, a one percent increase in GDP will produce a combined improvement in the government's fiscal situation of about 2.1 percent, including both increases in tax revenues and reductions in government transfer payments. Let us assume for the moment that Blanchard and Perotti's estimates hold up as a recovery is sustained, including to the point where unemployment has fallen significantly. Under such circumstances, it follows that, without any increases in tax rates or cuts in spending programs, the U.S. fiscal deficit could probably be cut by \$500 – 600 billion, if unemployment could be driven down to around 4 percent.

I have argued elsewhere that, within a 3-year time period, reaching a goal of four percent unemployment is realistic (Pollin 2010b). Still, the economic landscape is too cluttered with landmines to count on the attainment of near-full employment to close the long-term deficit gap by itself. It is therefore useful to consider the deficit forecasts over the next decade developed by the Congressional Budget Office (CBO) as a less optimistic framework for addressing the long-run fiscal situation.

In its June 2011 Long Term Budget Outlook report (CBO 2011), the CBO developed two sets of budget projections, an “extended baseline scenario,” and an “alternative fiscal scenario.” All such exercises are necessarily conducted through making a large number of assumptions about the prospects for economic growth, employment, government spending programs, tax policies are related matters. The CBO does acknowledge the extent to which its forecasts depend on various combinations of assumptions. That is precisely why they present their “baseline” and “alternative” scenarios, in which the baseline case includes more favorable assumptions about the factors affecting the fiscal budget. Thus, for 2021, the CBO projects the fiscal deficit at 3.1 percent of GDP under the baseline case and 7.5 percent with the alternative scenario. For our discussion, it would be a detour to sort through the range of assumptions driving each scenario to their respective deficit forecasts. But it will be helpful for our discussion to operate with a reference point derived from the two CBO cases. Let us therefore set as this reference point the midpoint between their two deficit projections, which would be a fiscal deficit at 5.3 percent of GDP in 2021.

As an initial observation, a fiscal deficit at 5.3 percent of GDP is obviously a huge decline from the deficits at roughly 10 percent of for 2010 and 2011. But deficits in the range of 5 percent of GDP are still well above the

average figure of around 2 percent of GDP over the post World War II era. But are long-term deficits at roughly five percent of GDP necessarily a problem? To answer this, it will be useful to briefly review some basic distinctions between cyclical and structural deficits, i.e. deficits that emerge through recessions versus those that occur over the course of a full business cycle. It is also helpful to distinguish deficits used to finance the government's ongoing operations versus those devoted to productivity-enhancing capital investments.<sup>13</sup>

If the economy is operating at or near full employment, there is no longer any need to finance current expenditures through deficit spending. Indeed, over the course of the business cycle, the government's operating budget should be held in approximate balance. Running large structural deficits on operating budgets will likely be regressive, with government interest payments, funded by tax revenues coming primarily from the middle class, operating as transfer payments to wealthy bondholders and institutional investors, whether they be in New York, Tokyo, London or Beijing.

In an approximate full employment economy, the legitimate basis for maintaining a fiscal deficit is to finance long-term projects that will enhance the economy's long-run productivity—such as infrastructure projects or investments to build a clean-energy economy. The appropriate level of deficit spending of this type should roughly correspond to the economy's growth rate of productivity (appropriately defined—i.e. investments that move the economy off of carbon-emitting fossil fuels raise economy's net rate of production of *goods*). The productivity increases, and corresponding rise of per capita GDP, would then generate the revenue increases to cover the added interest expenses in the government's budget. Based on this principle, we should aim to maintain a structural deficit in the range of 2-3 percent of GDP, as opposed to a roughly 5 percent mid-point figure we derive from the alternative CBO scenarios.<sup>14</sup>

This level of long-term deficit reduction could be achieved through a combination of three major steps: cuts for the health care industry and the military as well as a tax on Wall Street speculative trading. We consider them in turn.

**Health care.** The U.S. government spent about \$800 billion in 2010 on Medicare and Medicaid, which amounted to 5.6 percent of GDP. Even in its baseline case, the CBO projects this figure to rise to nearly \$1.6 trillion or 6.8 percent of GDP by 2020. As was noted regularly during the recently concluded health care debates, the U.S. spends in total—including private spending as well as Medicare and Medicaid—about twice as much per capita as other highly developed countries such as Canada, Japan and those in Western Europe on health care. This is while these other countries deliver universal health care coverage, longer life expectancies and generally more healthy populations. The problem with the U.S. health care system is that we spend far beyond other countries for drugs, expensive procedures, and especially insurance and administration. We also devote less attention to prevention.<sup>15</sup>

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<sup>13</sup> A classic analysis of these issues is Eisner (1986).

<sup>14</sup> As Eisner (1986) made clear, we do need to recognize major ambiguities lurking amid these simple principles. For one, do we include educational spending—a major component of combined federal, state, and local government budgets—as part of current operations or (human) capital investments? What about capital expenditures for the military or health care equipment? There is also the huge matter of when the economy is actually operating at full employment—not just the rate at which inflation is likely to accelerate given existing institutional arrangements (i.e. the NAIRU)?

<sup>15</sup> Starr (1982) remains a classic reference on the development of the private-sector dominated U.S. medical system.

The Obama health care reform bill—the Patient Protection and Affordable Care Act—that became law in April 2010 aimed at controlling these costs—‘bending the health care cost curve downward’ was the often-stated goal that time. This law does have several worthy features, including the expansion of Medicare as well as subsidies for private health insurance. But it is a matter of spirited debate whether it will succeed in bending downward the cost curve. The CBO projections, including its baseline case, are pessimistic. However, the 2010 Medicare Trustees Report offers a much more favorable assessment, concluding that “The financial outlook for the Medicare program is substantially improved as a result of the far-reaching changes in the Patient Protection and Affordable Care Act,” (2010 Medicare Trustees Report, p. 8).

As of 2020, the Medicare Trustees estimate that the health care reform bill will generate a reduction in savings amounting to about 0.6 percent of GDP—that is, nearly \$90 billion a year in today’s economy. Projecting further into 2080, the Trustees estimate that the impact of the Obama reforms as reducing Medicaid costs massively, by more than 40 percent relative to GDP.

This is not the place to adjudicate between the CBO and Medicare Trustee forecasting models. But these differences do underscore the highly tentative nature of any such projections. The Medicare Trustee findings do also highlight another point—that transforming the U.S. health care system so that it comes more closely into line with the other advanced economies can, almost by itself, bring the federal government’s structural deficit close to its historical level of around 2 percent of GDP.

However, let’s allow that because of the power of the private health insurance and drug companies, the idea of bringing the U.S. health care system fully in line with other advanced economies is unrealistic. It should nevertheless be reasonable to expect that we could achieve at least half the level of available savings through health care reform measures. These would include the recent Obama measures and any additional initiatives aimed especially at establishing controls on the drug and insurance industries. It is reasonable to expect that such savings could reduce the government’s annual structural deficit by about \$150 billion.

**Military budget.** The U.S. military budget rose from 3 percent of GDP at the end of the Clinton presidency to 4.3 percent at the end of Bush. Under the Obama administration’s budget for 2011, military spending will total \$712 billion, which is 4.7 percent of projected GDP for the year. If the U.S. returned to the 2000 level of military spending relative to GDP, that alone would yield \$285 billion in budgetary savings—that is, more than half the amount needed to bring the structural deficit within the historic range of 2 percent of GDP. Of course, as with health care, it may not be politically realistic to achieve that level of savings within the military budget. But even within the range of what Washington insiders consider realistic, the Pentagon should be able to target around \$140 billion in annual savings.<sup>16</sup> This would still maintain a military budget at nearly \$600 billion, or 4 percent of GDP.

**Financial trading tax.** This would be a small sales tax on all financial transactions. The point of the tax would be to raise costs for short-term speculative traders while having a negligible impact on longer time-horizon ‘trade and hold’ market participants. Variations of this proposal have floated through Congress for nearly 25 years. After the 1987 Wall Street crash, the idea of such a tax was endorsed by then Democratic House Speaker Jim Wright and then Republican Treasury Secretary Nicholas Brady. The most recent proposal was introduced by Sen. Tom Harkin and Rep. Peter DeFazio in August 2011.

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<sup>16</sup> See Pemberton and Korb (2011) on debate around U.S. military budget.

In its various incarnations, the tax rate proposed most frequently has been 0.5 percent for all stock sales. A viable tax structure could begin from this figure, along with a sliding scale on all other financial transactions. For example, the tax on a 50-year bond would be set as equal to the 0.5 percent rate on stocks, with the tax rates falling proportionally on bonds of shorter maturity (e.g. the tax rate on a 40-year bond would be 0.4 percent). Working within this framework, Dean Baker and I, along with colleagues, have estimated that this tax would raise approximately \$350 billion per year if speculative trading did not decline at all after the tax was imposed (Pollin, Baker, and Schaberg 2003, Baker, Pollin, McArthur and Sherman 2009). But even if trading declined by 50 percent as a result of the tax, the government would still raise about \$175 billion annually. And it would do so through discouraging the type of hyper-speculation on Wall Street that created the crisis in the first place.

Overall then, if we take high-end figures for revenues for a financial transaction along with savings from health care and military spending cost controls, we can get well above the roughly \$450 billion needed to bring the structural deficit within two percent of GDP. But we can still achieve around \$450 billion in total deficit reduction through much more modest assumptions about the generating revenue from a financial transaction tax and cost savings for health care and the military. Additional measures could also be beneficial. One would be to raise taxes on the most affluent households, especially given that the richest one percent of households received fully 52 percent of the economy's total income gains from 1993-2008.

Could cuts in military and health care spending themselves create unemployment, just as the economy is rebounding from the recession? This is possible, if the recovery remains weak over the next 2-3 years. However, the most effective way to address this concern is not to maintain wasteful levels of military and health-care spending, but rather accelerate the transition to a clean-energy economy. Per dollar of spending, clean energy investments generate about 50 percent more jobs in the U.S. than military spending and three times more jobs than spending within the fossil fuels industry. This includes employment opportunities across all job categories and levels of educational credentials.<sup>17</sup>

## 5. CONCLUSION

In the immediate aftermath of the 2008-09 Wall Street-induced financial crisis and Great Recession, governments throughout the world pursued strongly expansionary macroeconomic policies to fight mass unemployment and promote a strong recovery. However, only 2 ½ years after these policies were enacted, a giant about-face has occurred in mainstream policymaking circles. This newly dominant approach asserts that reducing government indebtedness needs to be set as the overarching priority of macroeconomic policy, in the U.S. and elsewhere. The deficit hawks advancing this position see austerity conditions as the bitter medicine that governments and populations will have to swallow in order to fight the overarching problem of excessive government debt.

As of this writing, the mainstream debate in the U.S. between Democratic and Republican policymakers and their economic advisors is over how best to reduce the government's debt in both the short- and long-terms. Both sides appear to agree that reducing government debt should indeed be the overarching policy concern. However, as I have aimed to show here, the primary specific concerns in this mainstream debate—over rising

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<sup>17</sup> See Pollin and Garrett-Peltier (2009).

interest rates and inflation, as well as an excessive government debt burden caused by the ARRA program—are all unsupported by evidence. As one fundamental case in point, there is basically no recognition in these discussions over the fact that federal government interest payments are at near historic lows and will remain so at least over the short run.

Beyond this, I show that there are straightforward reasons as to why the ARRA did not stimulate a strong recovery in the period since its enactment. The major factors are bound up with the severity of the financial crisis and recession itself. The collapse of the financial bubble led to the collapse of household wealth as well as to the subsequent lock up of credit markets for smaller businesses.

Working through these explanations then enabled us to achieve some new clarity as to the types of measures that could be implemented under current conditions, 2 ½ years after the ARRA became law. We need to keep the floor on household spending as firm as possible through continued large fiscal deficits, and we to enact policies capable of pulling on a string. That is, we need to move the \$1.4 trillion lying idle as private bank reserves into the spending stream, financing productive investments and promoting an abundance of good job opportunities. Considering the U.S. fiscal position over the long-term, the situation can only be enhanced through cutting out increasing the efficiency of the health care system, cutting the military budget, and generating a large amount of revenue through taxing financial transactions.

The specific measures I have sketched here to achieve these ends are by no means intended up-or-down, all or nothing proposals. They rather aim to demonstrate that we are far from having exhausted the available policy tools for pulling the economy out of the ditch in which it remains stuck. At the same time, at least in the short-run, the austerity policies advocated by deficit hawks will certainly bring more unemployment, as well as painful cuts in social programs vital to people's well being. This is all while the deficit hawks offer no coherent arguments as to why this inevitable short-term pain is bound to produce long-term gains for the overwhelming majority of the population.

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