# The Debt Crisis

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"Countries do not go bankrupt."--Walter Wriston, former head of Citibank

"There is a myth that floated around the banking community not many years ago that governments do not go bankrupt. I cannot imagine who dreamed that one up." --Gordon Tullock, 19901

**Introduction and Conclusions**

There is a ticking time bomb in the U.S. government's fiscal structure: growing government spending which, if unchanged by policy, will result in growing government debt. This is not the short-run problem that we hear so much about in the news about Congress's debt "super committee." It is the long-run problem that economists such as Laurence Kotlikoff of Boston University and Jagadeesh Gokhale of the Cato Institute, among others, have been writing about for years.

The problem is this. Three components of the federal government budget—Social Security, Medicare, and Medicaid—are highly likely to take an increasing share of Gross Domestic Product. Overall federal government spending, including interest on the debt, could hit over 40 percent of Gross Domestic Product by 2050. Overall federal revenues as a percent of GDP have almost always been within a narrow range. They have never gone over 21 percent of GDP and they have almost never gone below 17 percent of GDP. The result, if governments do not change policy, would be annual deficits of approximately 20 percent of GDP. This is unsustainable.

The question then becomes: what will change? This is hard to predict. But we give these predictions in decreasing order of certainty.

- First, federal government revenues are unlikely to go over 22 percent of GDP for more than a few years.
- Second, well before spending reaches 30 percent of GDP, the federal government will face a renewed, more-serious fiscal crisis.
- Third, likely cuts in the growth of Medicare and Medicaid spending would at best delay, but not prevent, this crisis.
- Fourth, the probability is, therefore, fairly high that the federal government will default on some or all of its debt.
- Fifth, outright default on the federal debt will occur despite any increasing inflation.

**How We Got Where We Got on Spending**

Federal government spending has been within a few percentage points of 20 percent of Gross Domestic Product (GDP) since about the start of the Korean War in 1950. What has changed dramatically, though, is the composition of federal spending. To

put it succinctly, federal government spending has moved dramatically away from guns toward butter.

In 1954, the first full year after the Korean War truce, defense spending was 13.89 percent of GDP, which made it 68 percent of all federal government spending. Defense spending as a percent of GDP didn't go under 10 percent until 1964 and then briefly went back above 10 percent in 1967 and 1968, the two most-intense years of the Vietnam War. Defense spending then fell throughout the 1970s to a low of 5.61 percent of GDP in 1979. Then President Carter, in 1980, competing with a fairly hawkish Republican field of candidates, raised defense spending to 6.02 percent of GDP in 1980 and newly elected Ronald Reagan raised defense spending to a high of 7.06 percent of GDP in 1986. From then until 2001, defense spending as a percent of GDP fell, reaching a low of 3.58 percent in 2001. By 2010, it was back up to 5.82 percent. While defense spending has remained fairly constant in real terms since 1950, it has declined substantially as a percent of GDP.

Instead, two other programs that began under President Johnson have accounted for a large part of the budget growth since his time in office. Those programs are Medicare and Medicaid. In 2009, federal government spending on Medicare and Medicaid totaled $749.3 billion, which was over 5.3 percent of GDP.

Also, both Presidents Johnson and Nixon added substantially to Social Security spending by raising Social Security benefits. Between 1967 and 1972, Congress and the President raised Social Security benefits by 72 percent (37 percent after adjusting for inflation). When Wilbur Cohen, Johnson's Secretary of Health, Education, and Welfare, proposed a 10 percent hike in Social Security benefits, Johnson replied, "Come on, Wilbur, you can do better than that!" President Nixon added to the problem by getting into a bidding war with Wilbur Mills, a powerful congressman who was jockeying for the 1972 Democratic presidential nomination. The net result under Nixon was a 20 percent increase in benefits.

Social Security spending as a percent of GDP is rising due to demographics (the elderly are living longer and the baby boomers are retiring) and to the fact that it has never been fully funded, but run on a pay-as-go basis. Rising Medicare spending is driven by one other factor: improved medical technology. We often hear it said that medical costs are rising. It is true that some medical costs are rising but many medical costs are falling. The problem isn't costs: it's expenditures. And the higher expenditures come about because medical professionals are able to do so much more to keep people alive, to cure or alleviate diseases, and to improve people's quality of life.

Health economist Burton Weisbrod, writing in 1991, put it well: "Fifty years ago, physicians were little more than diagnosticians." Now they can actually do something. Weisbrod cites many effective medical procedures including kidney dialysis, organ transplants, arthroscopic surgical techniques, CT scanners, and nuclear magnetic resonators. Projections of medical spending in the future are based, quite reasonably in our opinion, on the assumption that medical technology will improve and make many procedures and cures possible that are not possible today.

Of course, the mere fact that improved medical care is possible does not mean that people will buy it. But Medicare is structured so that people bear very little of the cost of various procedures and so many people will opt for expensive treatments: to put it bluntly, they are spending other people's money.

Medicaid spending is rising for the same reason: improved technology and an increased number of things that medical care can accomplish. And what brought it to such a high level in the 1980s and 1990s is that, in various budget deals from the mid to late 1980s, President Reagan's staff, negotiating with southern California Democratic congressman Henry Waxman, accepted expanded eligibility for Medicaid in the future in return for modest tightening in the present. This reflects budget director David Stockman's desire for achieving short-run spending restraint at the expense of long-run profligacy.

Dan Morgan, writing about this for the Washington Post in 1994, states:

> A former Republican staffer recalled a 1984 meeting when "[White House Budget Director David] Stockman came into a room with Waxman and agreed to give him stuff in the out [later] years" if Waxman would ease up on his demands for the year just ahead.

The net effect was a massive increase in Medicaid spending. Morgan writes:

> At the beginning of the 1980s, Medicaid was a no-frills government insurance program that mainly covered one-parent families and their children receiving Aid to Families with Dependent Children--welfare-- and Supplemental Security Income (SSI) for the elderly and disabled. Those with a Medicaid card still had to find a doctor, health maintenance organization, hospital or pharmacy to serve them--not always easy because Medicaid generally paid less than private insurers or Medicare, the federal program that insured the non-poor elderly and the disabled.
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> Today, Medicaid pays the medical bills of millions of children and women in working families, illegal immigrants seeking care in emergency rooms, single mothers making the transition from welfare rolls to work, AIDS sufferers and some elderly nursing home patients with middle-class spouses or children. It pays for more than four of 10 U.S. births, compared with one in six in 1981. In one state, Minnesota, the Medicaid program is so generous that it will pay the medical bills of young children in a family of four with an income of $ 39,462-- almost three times the federal poverty ceiling.

To put the $39,462 in perspective, it was above the median income in 1994 of $32,264.

Moreover, a huge component of Medicaid spending is for nursing home care for low- income elderly. And the number of elderly is growing in absolute terms and as a percent of the population.

**Projected Spending**

The numbers in the future are positively scary. Three years ago, the Congressional Budget Office, a relatively non-partisan scorer of government budgets, projected that Social Security spending in 2050 will be 6.1 percent of GDP, up from 4.3 percent in 2007; that Medicare spending in 2050 will be 8.9 percent of GDP, up from 2.7 percent in 2007; and that federal spending on Medicaid will be 3.1 percent of GDP in 2050, up from 1.4 percent in 2007. In other words, the CBO projects that these three programs alone—Social Security, Medicare, and the federal portion of Medicaid—will take 18.1 percent of GDP, up from "only" 8.4 percent of GDP in 2007. Their projections to 2082 are even scarier: the three programs are expected to take a total of 25.0 percent of GDP in that year (see Table 1). There is no point on dwelling on 2082. The reason is that what is projected for 2050 won't occur, for reasons that will become clear.

The Congressional Budget Office's most recent long-term outlook for 2011 does not update these precise numbers, but its graph for its alternative fiscal scenario on p. 80 depicts no significant deviation from these estimates.

**Taxes**

The most striking fact about federal government revenues of all kinds since 1950 is that, except in one year, they have never exceeded 20 percent of GDP (see Table 2). In that one year, 2000, revenues were 20.5 percent of GDP. In the sixty-two years from 1950 to 2011, federal revenues have averaged 17.7 percent of GDP. In recession years, revenues tend to be lower as a percent of GDP, mainly because a given percent decline in real GDP causes a greater percent decline in tax revenues. The other reason is that the federal government usually cuts taxes during recessions. In 2011, for example, not literally a recession year but definitely a low-growth year, federal revenues are 14.4 percent of GDP, which is the lowest they have been in over sixty years.

Why, given all the tax rate cuts and increases, have government revenues been within a relatively narrow range? One might think that an iron law of economics says that it's economically impossible for the federal government to take much more than 20 percent of GDP in revenues. Indeed, W. Kurt Hauser formulated such a law and called it, appropriately enough, "Hauser's Law."

In the article referenced above, Hauser explains:

> Over this period there have been more than 30 major changes in the tax code including personal income tax rates, corporate tax rates, capital gains taxes, dividend taxes, investment tax credits, depreciation schedules, Social Security taxes, and the number of tax brackets among others. Yet during this period, federal government tax collections as a share of GDP have moved within a narrow band of just under 19% of GDP.
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> Why? Higher taxes discourage the "animal spirits" of entrepreneurship. When tax rates are raised, taxpayers are encouraged to shift, hide and underreport income. Taxpayers divert their effort from pro-growth productive investments to seeking tax shelters, tax havens and tax exempt investments. This behavior tends to dampen economic growth and job creation. Lower taxes increase the incentives to

work, produce, save and invest, thereby encouraging capital formation and jobs. Taxpayers have less incentive to shelter and shift income.

But Hauser's explanation is inadequate. It is true that higher marginal tax rates cause people to shelter and shift income. But for this effect to be strong enough to account for the near constancy of taxes as a share of GDP, the revenues from increased tax rates would actually have to be lower than the revenues from lower tax rates, and not just lower, but much lower. The reason is that higher marginal tax rates discourage growth, making the denominator, GDP, lower than otherwise. So, to keep the ratio relatively constant, the numerator must fall also. This would happen only if the U.S. economy were in the so-called prohibitive region of the Laffer Curve. (The prohibitive region of the Laffer Curve is the region within which an increase in tax rates leads to a reduction in tax revenues.) That is highly unlikely. Even Arthur Laffer did not believe that.

Moreover, if there were such an iron economic law, why would it apply only to the United States? Central governments in Western Europe routinely take 30 percent and even 40 percent of GDP.

There probably is an iron law that says that the U.S. federal government will not be able to take much more than 20 percent of GDP and is unlikely to take much less than 17 percent of GDP. But the place to look for this law is in politics, not economics.

Just as there is an economic equilibrium in any economy, there is also a political equilibrium. Various forces are arrayed in favor of higher taxes as a percent of GDP and various forces are arrayed against. In the short run, one force will be get more of its way for a while and push tax revenues below 17.7 percent of GDP. Then the other force will get its way and push revenues above 17.7 percent of GDP. We can see this pattern going on even in one administration, and, ironically, one that is still talked about by economists and historians as if it was entirely a tax-cutting regime. We're referring, of course, to Ronald Reagan's administration.

When Ronald Reagan came into office in January 1981, high inflation had been combining with tax brackets that were not indexed to inflation to drive federal government revenues to higher than normal levels. In 1981, for example, government revenues were at a relatively high 19.2 percent of GDP. In response to this, Reagan introduced his tax bill to cut marginal tax rates starting in late 1981 and continuing in stages until 1984. But as soon as the summer of 1982, Reagan reversed course and "successfully" pushed Congress to moderate and even reverse some of the tax cuts. Reagan also increased taxes substantially in 1983 and 198410.

Similarly, on the other end, a president who tries to increase taxes, as President Clinton did in 1993, sets in motion forces on the other side that try to moderate the tax increase. And, as with Reagan, we can see these forces over Clinton's eight years in office. A tax increase in 1993 was followed by a tax cut in 1997.

Why would this equilibrium percentage be so much lower in the United States than in Europe? We don't know. One guess is that it reflects the rich racial and ethnic

diversity of the United States. To put it bluntly, many white people see the benefits of the welfare state as going to people who "don't look like us." That moderates the degree to which they want higher taxes on themselves. Another guess is that it reflects the anti-tax, pro-freedom feeling that, although less and less articulated, is still strong in the American body politic. But whether or not either of these is the right explanation, we don't have to know exactly why an equilibrium exists to know that it does exist.

**The Likely Future**

For reasons given above, the relevant future political/economic fact that we are surest of is that tax revenues are unlikely to go above 22 percent of GDP. But by 2050, as noted, the CBO projects that three programs alone will take 18.1 percent of GDP. The CBO also projects that by 2050, other non-interest federal programs will take 7.6 percent of GDP, down from 9.9 percent of GDP in 2007. Under the CBO's "Alternate Fiscal Scenario" in which tax revenues are projected to reach 19.4 percent of GDP in 2050, interest on the federal debt alone is projected to reach 13.6 percent of GDP. The result: by 2050, under this scenario, federal spending is projected to reach 41.8 percent of GDP, which is roughly double the average of the last 60 years.

But couldn't the federal government turn things around by cutting discretionary spending substantially now and implementing changes in Social Security, Medicare, and Medicaid that would substantially reduce their rate of growth? Sure, they could. And the recent attempts by Republicans in Congress are a step in the right direction. Moreover, two Prime Ministers in Canada, Jean Chretien and Paul Martin, both of the welfare-statist Liberal Party, did just that between 1994 and 2006. They brought Canada's debt/GDP ratio down from almost 70 percent of GDP to below 30 percent. Chretien and Martin did have the advantage, though, of working in a Parliamentary system in which the executive and legislative branches are the same and so what the Prime Minister and his majority party say, goes.

But besides the absence of a Parliamentary system, the other main factor making budget reform unlikely is the incentives of politicians. Politicians tend to want to kick the can down the road because their time horizons are so short. So they like promising largesse to constituents and passing the costs on to future taxpayers.

Still, the spending increases in the three federal programs highlighted—Medicare, Medicaid, and Social Security—can't go on forever. As one of the authors' (Henderson) previous bosses, Herb Stein, put it, "Things that can't go on forever, don't."

Because these spending increases won't go on forever, they will stop. How will they stop? Of the answer to that, we are less sure. A reasonable guess is that eligibility for Medicaid will be tightened and Medicare and Social Security will be means- tested, all well before 2050.

But if these reforms are not made well before 2050, then a very likely outcome is a federal government default on the federal debt. The default could range from outright repudiation to partial repudiation.

**Why High Inflation Won't Do It**

Many people who might buy our argument so far will conclude that the government will "solve" the problem with high inflation. We do not claim that the government won't use high inflation. What we do say, though, is that high inflation won't get the government out of its fiscal bind.

To understand why, we must look at U.S. fiscal and monetary history. Economists refer to the revenue that government or its central bank generates through monetary expansion as seigniorage. Outside of America's two hyperinflations (during the Revolution and under the Confederacy during the Civil War), seigniorage in this country peaked during the Civil War under the Union, when it covered about 15 percent of the war's cost. By World War II, seigniorage was financing only a little over 6 percent of government outlays, which amounted to about 3 percent of Gross Domestic Product (GDP). By the Great Inflation of the 1970s, seigniorage was below two percent of federal expenditures or less than half a percent of GDP. This was partly a result of globalization, in which international competition disciplines central banks. And it also was the result of sophisticated financial systems, with fractional reserve banking, in which most of the money that people actually hold is created privately, by banks and other financial institutions, rather than by government. Consider how little of your own cash balances are in the form of government-issued Federal Reserve notes and Treasury coin, rather than in the form of privately created bank deposits and money market funds. Privately created money, even when its quantity expands, provides no income to government.

Consequently, seigniorage has become a trivial source of revenue, not just in the United States, but also throughout the developed world. Reid W. Click, in a study of ninety countries between 1971 and 1990, finds that average annual seigniorage exceeded 5.0 percent of GDP in only eight countries: Egypt, Poland, Malta, Nicaragua, Argentina, Chile, Yugoslavia, and Israel. Almost none of the developed countries could boast seigniorage amounting to more than 1.0 percent of GDP, despite the fact that the study incorporated the inflationary years of the 1970s. Joseph H. Haslag's smaller sample of sixty-seven countries over a longer period, 1965 to 1994, finds that seigniorage averaged about 2.0 percent of total output for the entire sample, ranging from as low as 0.25 percent to as high as 9.98 percent (for Ghana). And Stanley Fischer puts the average seigniorage of industrial countries between 1973 and 1978, a period of high inflation, at 1.1 percent of Gross National Product. Only in poor countries, such as Zimbabwe, with their primitive financial sectors, does inflation remain lucrative for governments.

The current financial crisis, moreover, has reinforced the trend toward lower seigniorage. Buried within the October 3, 2008 bailout bill, which set up the Troubled Asset Relief Program (TARP), was a provision permitting the Fed to pay interest on bank reserves, something other major central banks were doing already. Within days, the Fed implemented this new power, essentially converting bank reserves into more government debt. Fiat money traditionally pays no interest and, therefore, allows the government to purchase real resources without incurring any future tax liability. Federal Reserve notes will, of course, continue to earn no interest. But now, any seigniorage that government gains from creating bank reserves will be greatly reduced, depending entirely on the differential between market interest rates on the remaining government debt and the

interest rate on reserves. The lower is this differential, the less will be the seigniorage. Indeed, this new constraint on seigniorage becomes tighter as people replace the use of currency with bank debit cards and other forms of electronic fund transfers. In light of all these factors, even inflation well into the double digits can do little to alleviate the U.S. government's potential bankruptcy.

Assuming that revenues from explicit taxes remain capped at 20 percent of GDP, whether for structural or political reasons, and that politicians will have little incentive to cut spending, seigniorage would have to come up with the difference. Given that 10 percent inflation during the 1970s generated revenue amounting to 0.5 percent of GDP in the U.S., a straight-line extrapolation suggests that covering the growing fiscal shortfall would require more than a tripling of the price level, year after year after year. Within three years the dollar would be worth only about 2.5 percent of its original value. Such continual triple-digit inflation would be unprecedented, the highest the United States has ever experienced outside of its two hyperinflations. Moreover, seigniorage itself faces its own Laffer curve (known as the Bailey curve, after the economist Martin Bailey). In order to avoid higher taxes on their real cash balances, people spend money faster as inflation rises, thereby exacerbating the price increases. Higher rates of inflation thus generate proportionally ever-smaller revenue increases. Once we also acknowledge that the CBO's projections are probably too optimistic, we can see why our estimate that financing the explosion in Social Security, Medicare, and Medicaid payments will necessitate a 246 percent annual inflation is probably too low. How likely is it that governments in the any developed country will be willing or even able to unleash such appalling currency depreciation? Recall how politically unpalatable the mere double-digit inflation of the 1970s was. The bottom line is that inflation's implicit tax on real cash balances will no more be able to resolve the escalating budgetary problems of the U.S. government than would an excise tax on chewing gum.

Of course, it is not literally impossible that the Federal Reserve could unleash the "Zimbabwe option" and repudiate the national debt indirectly through hyperinflation, rather than have the Treasury repudiate it directly. But our guess is that, faced with the alternatives of seeing both the dollar and the debt become worthless or defaulting on the debt while saving the dollar, the U.S. government will choose the latter. Treasury securities are second-order claims to central-bank- issued dollars. Although both may be ultimately backed by the power of taxation, that in no way prevents government from discriminating between the priority of the claims. After the American Revolution, the United States repudiated its paper money and yet after postponing interest payments for a few years eventually honored its debt (in gold). It is true that fiat money, as opposed to a gold standard, makes it harder to separate the fate of a government's money from that of its debt. But Russia in 1998 is just one recent example of a government choosing partial debt repudiation over a complete collapse of its fiat currency.

Admittedly, seigniorage is not the only way governments have benefited from inflation. Inflation also erodes the real value of government debt, and if the inflation is not fully anticipated, the interest the government pays will not fully compensate for the erosion. This happened during the Great Inflation of the 1970s, when investors in long-term Treasury securities earned negative real rates of return, generating for the

government maybe one percent of GDP, or about twice as much implicit revenue as came from seigniorage. But today's investors are far savvier and less likely to get caught off guard by anything less than hyperinflation. To be clear, we are not denying that a Treasury default might be accompanied by some inflation. Inflationary expectations, along with the fact that part of the monetary base is now de facto government debt, can link the fates of government debt and government money. This is all the more reason for the United States to try to break the link between U.S. currency and debt. We still may end up with the worst of both worlds: outright Treasury default coupled with serious inflation. We are simply denying that such inflation will forestall default.

How might such a Treasury default unfold? The financial structure of the U.S. government currently has a nominal firewall between Treasury debt and the government's unfunded liabilities, provided by the trust funds of Social Security, Medicare, and other, smaller federal insurance programs. These give investors the illusion that the shaky fiscal status of social insurance has no direct effect on the government's formal debt. But according to the latest intermediate projections of the trustees, the Hospital Insurance (HI-Medicare Part A) trust fund will be out of money in 2024, whereas the Social Security (OASDI) trust funds will be empty by 2036. Although other parts of Medicare are already funded from general revenues, when HI and OASDI need to dip into general revenues, the firewall is gone. If investors respond by requiring a risk premium on Treasuries, the unwinding could move very fast, much like the sudden collapse of the Soviet Union, or the more recent fiscal crisis in Greece. Politicians will be unable to react fast enough to close the gap, and, for the U.S. government, unlike Greece's, there is no one left to bail it out.

There is one piece of good news here. For years, many believers in smaller government have advocated a balanced budget amendment to the U.S. Constitution to rein in federal spending. One of the big problems with such an amendment, from the viewpoint of its advocates, is that putting "teeth" in such an amendment is difficult. If the Congress and the President fail to balance the budget, what penalty would they face? And who would enforce a penalty? But a U.S. government default on the federal debt would make it much more difficult for the federal government to borrow again. In short, a default would be a balanced budget amendment with teeth.