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What If the National Debt Were Eliminated? Some Economic Consequences

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Summary

The public finance choices of the federal government over the past decade suggest that a major change in fiscal regimes has occurred. The large federal budget deficits of the 1980s and early 1990s have been replaced by budget surpluses beginning in 1998. These surpluses have made it possible to reduce the national debt absolutely for the first time in over 30 years. The publicly held debt has fallen from a peak of $3.773 trillion in FY1997 to an expected $3.409 trillion in FY2000. Projections made by both CBO (Congressional Budget Office) and OMB (Office of Management and Budget) are for continued surpluses over the next decade of such a magnitude that the publicly held national debt could be extinguished.

Surpluses on such a scale, if used to reduce the federal debt, would entail a number of consequences. First, the surpluses would increase the national saving rate. This should lower real interest rates, increase the capital stock, and over time lead to a higher potential standard of living. Second, the surpluses would lower future federal interest payments, freeing up future government revenues. Third, the surpluses could improve the current account of the international balance of payments, which would bolster the Treasury's strong dollar policy. Fourth, the surpluses would represent an intergenerational shift in real income from present generations to future generations.

If the publicly held debt were eliminated entirely, it could have ramifications for the US financial system because of the role that federal government securities play as a benchmark asset for our financial system. First, federal bonds play an important role in setting the interest rates of other assets and in forecasting and determining financial conditions. Thus, financial markets may work less efficiently if the national debt were eliminated. Second, since many investors have personal or institutional reasons for choosing to hold US government securities, if the debt were eliminated some investors could be forced to hold less desirable assets. Third, at present the Federal Reserve conducts monetary policy by buying and selling government securities. The conduct of monetary policy could be vastly altered if the national debt were eliminated, although the Federal Reserve believes that this problem should not be serious.

How important these consequences are depends on the feasibility of developing an effective alternative benchmark asset. This paper will be updated as events warrant.

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Introduction

The national debt[1] currently held by the public stands at $3.4 trillion, or about 35% of gross domestic product (GDP).[2] The publicly held debt decreased as a percentage of GDP from the end of World War II through most of the 1970s. As a percentage of GDP, it remained in the 20% range for much of the 1970s, when it began rising in the face of large and sustained budget deficits in the 1980s and early 1990s. In 1993, the debt peaked at 49.5% of GDP. In FY1998, the federal government began to run budget surpluses. Figure 1 shows budget deficits and the national debt as a percentage of GDP over the years 1960-1999 while Table 1 shows projected surpluses and national debt as a percentage of GDP extending out to FY2010. These projections are from the Congressional Budget Office (CBO).[3] CBO has made several sets of budget projections based on different assumptions about future spending patterns. The projections presented in Table 1 are based on the assumption that all discretionary spending will increase only at the rate of inflation and the benefit structure of entitlements will remain unchanged.[4]

The initial improvement in fiscal balance in the early 1990s is mostly attributable to the fact that while overall tax revenues increased, the growth in inflation adjusted government spending was cut.[5] The movement in the budget from deficit to surplus in the late 1990s occurred without a further change in fiscal stance

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[1] When this paper refers to "national debt," it is meant in the popular sense of "federal debt." Technically, "national debt" also includes the debt of states and municipalities.

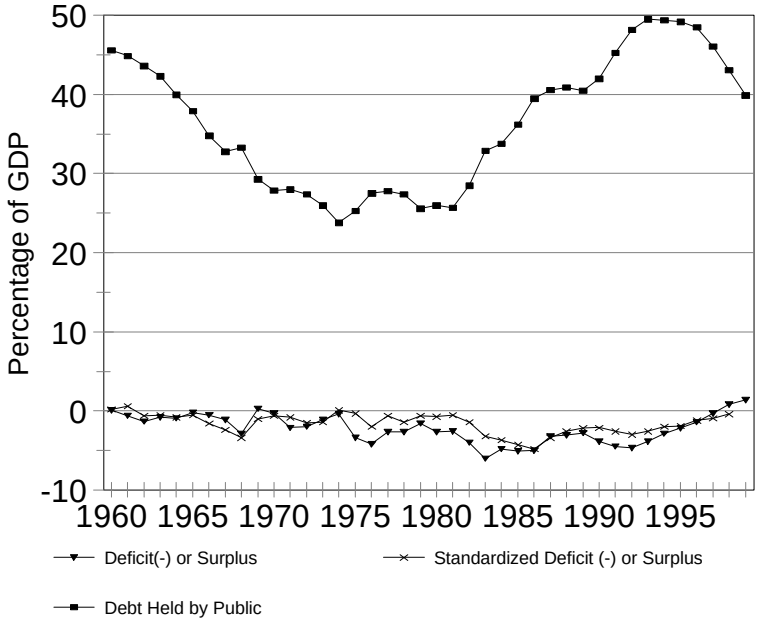
[2] The total national debt stands at approximately $5.6 trillion. Of this sum over $2 trillion is held within federal accounts, mainly the Social Security trust fund. The discussion in this paper unless otherwise specified concerns only that portion of the national debt that is held by the public and is marketable.

[3] Unless otherwise noted, all of the information from the CBO referred to in this report can be found in the publication *The Budget and Economic Outlook: Fiscal Years 2001-2010*, (Washington: July 2000).

[4] This set of assumptions is actually the most expansive in relation to future spending that the CBO makes. Notice that it does not account for any of the spending increases or tax cuts that have been proposed by the President, Congress, or by presidential candidates, which could reduce the surplus.

[5] Notably in the Budget Enforcement Act of 1990, the Omnibus Budget Reconciliation Act of 1993, and spending caps enacted throughout the 1990s.

Figure 1. Historical Budget Deficits and Debt (as a percentage of GDP)



Source: CBO Budget and Economic Outlook

Table 1. Projected Budget Surpluses and Debt

(By Fiscal Year, in Billions of Dollars)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
On-Budget Surplus	84	102	126	143	154	169	222	260	288	332	377
As a % of GDP	0.9	1.0	1.2	1.3	1.3	1.4	1.7	1.9	2.0	2.2	2.4
Off-Budget Surplus	149	165	186	202	215	232	247	263	278	293	307
Total Surplus	232	268	312	345	369	402	469	523	565	625	685
Publicly Held Debt	3409	3158	2854	2522	2165	1774	1315	1081	989	887	830
As a % of GDP	34.9	30.7	26.4	22.3	18.3	14.3	10.2	8.0	7.0	6.0	5.4
Gross Debt	5617	5616	5596	5563	5513	5444	5331	5456	5737	6024	6370

Source: CBO, *Budget and Economic Outlook*, (Washington: June 2000)
Note: Gross Debt is the Sum of Publicly-Held Debt and Trust Fund Debt primarily because economic growth was consistently stronger than expected, which automatically increased tax revenues[6] and decreased some government expenditures[7] without any change in government policy, a phenomenon that economists call the "automatic stabilizer effect."[8] In addition, tax realizations were greater than expected, even after accounting for the automatic stabilizer effect.

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[6] For example, as incomes rise with economic growth, a stable income tax structure will bring in more tax revenues.

[7] For example, as fewer people are unemployed, less money is paid out in unemployment and welfare benefits.

[8] For example, one estimate of the automatic stabilizer effect is that in 1998 a decrease in the economic growth rate of 2.2 percentage points would have automatically shrunk the budget surplus from 0.9% of GDP to 0.1% of GDP, a shift of $63.5 billion. Source: Darrell Cohen and Glenn Follette, "The Automatic Fiscal Stabilizers: Quietly Doing Their Thing," *FRBNY Economic Policy Review*, April 2000, p.35.
Conversely, it is important to keep in mind that were the US economy to enter another period of recession, the budget surplus would automatically shrink if policy remained the same. CBO budget projections assume that the economy will grow by a constant amount every year. Thus, a deep, prolonged recession might tip the budget back into deficit and make our entire discussion of paying off the national debt moot.

Budget Surpluses and Debt Retirement

The retirement of the federal debt depends on the federal government continuing to run a budget surplus. The actual measurement of the federal surplus is a little complicated, and it is useful to review it in order to understand how debt retirement would occur.

As shown on Table 1, the projected surplus comes from both the on-budget and off-budget accounts. When people refer to the "surplus," typically they refer to the sum of the two. The off-budget accounts are associated with the Social Security trust fund and the Postal Service trust fund.[9] The reduction in the publicly held debt that took place in FY1998 was made possible by an off-budget surplus that was in excess of the on-budget deficit.[10] Beginning in FY1999, this was no longer the case. Both the on-budget and off-budget accounts yielded surpluses – and are forecast to continue yielding surpluses through at least 2010 – available to reduce the publicly held debt.[11] In its June 2000 estimates, the CBO estimates that the on-budget surplus for FY2000 will be $84 billion while the off-budget surplus will be $149 billion. Since the Social Security Amendments of 1983 (P.L. 98-21)**,** the off-budget accounts have continually run surpluses. Before 1999, these surpluses were borrowed from the trust funds to finance current unrelated spending. In return, the Treasury issued the trust funds non-marketable federal debt. In essence, this is an accounting maneuver that has no real effect on the economy. Now that the on-budget accounts are in surplus, the procedure will not change: the Treasury will continue to borrow the off-budget surplus and issue federal debt to the trust funds in its place. However, instead of using the off-budget surplus for current spending, it will use both the off-budget and on-budget surplus that remain after this year's congressional decisions to retire the publicly held debt. The on-budget surplus will reduce the gross federal debt, but the off-budget surplus will shift publicly held debt to the trust funds. The gross debt has

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[9] The size of the Postal Service surplus or deficit is dwarfed by Social Security when forecasting the off budget surpluses. There are other trust funds such as the Medicare trust fund that function in exactly the same way as the Social Security and Postal Service trust fund, but are on budget instead of off budget.

[10] More precisely, the cash income surplus of the trust funds was greater than the on-budget deficit. The total income of the trust funds comes from two sources: the cash income yielded by revenue from sources such as taxes and the accrued income from the interest on the portfolio of federal debt securities held by the trust funds as assets. The accrued interest on these securities is not, however, paid to the trust fund in cash by the Treasury. Rather, the Treasury pays the accrued interest by issuing the trust funds additional US Treasury bonds. Thus, only the cash portion of the off-budget surplus is available to reduce the publicly held debt.

[11] For a discussion of how publicly held debt is retired, see U.S. Library of Congress, Congressional Research Service, *Paying down the federal debt: a discussion of methods*, by James M. Bickley, CRS report RS20302 (Washington: July 11, 2000).

consequences for government finance, but when considering the impact of debt on the economy, publicly held debt is the relevant measure.[12]

Under the most expansive of CBO assumptions on fiscal spending, the federal government will continue to run budget surpluses in the near future. In this scenario, the entire publicly held federal debt could be retired by 2007.[13] Although Table 1 projects that there will still be a positive amount of debt held by the public in 2007, in practice, the debt will be considered completely retired because some investors will be unwilling to sell the outstanding debt that they hold back to the Treasury.

Although the publicly held debt under these projections could be effectively eliminated in 2007, there will be new budgetary pressures shortly thereafter that could result in new debt being accrued. It is estimated that Medicare will begin to use the Treasuries it holds to cover its deficits in 2010, as will Social Security in 2016.[14] These deficits are attributable to the retirement of the "baby boomers" and are forecast to continue for several decades. There will be no publicly held national debt after 2010 only if the national government could pay for the Treasuries that Medicare and Social Security cash in from the trust funds through tax revenues without generating new borrowing.[15]

Some Consequences of Debt Reduction

Debt Reduction May Increase the Rate of Capital Formation and the Productivity Growth Rate of the Economy

Why might it be in the public interest to reduce the national debt? After all, government resources are scarce, and to use budget surpluses to pay off the national debt means that those resources cannot be used for either higher spending or lower taxes. In the current context of full employment, most economists favor reducing the national debt because they believe it can increase the productive capacity of the

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[12] For a more comprehensive discussion of the composition of the federal debt, see CRS Report RS 20065, *Surpluses and federal debt*, by Philip D. Winters, Library of Congress, March 1, 1999.

[13] Very similar projections are made for the executive by the Office of Management and Budget (OMB). Its budget projections reach conclusions similar to CBO. For example see OMB publication *Mid-Session Review* (Washington: June 2000).

[14] Currently, the trust funds accrue interest on their portfolios of federal debt equal to the average interest rate the government pays on the publicly held portion of the national debt. Interestingly, should there be no public debt, the government will no longer know what rate of return to provide on the bonds it issues to the trust funds. Presumably, the government will alter the law to either have the return equal the return on alternative benchmarks, or it will simply fix the return, which would not harm market equilibrium since the trust funds have no direct effect on real financial markets.

[15] U.S. Dept. of Treasury, *A Summary of the 2000 Annual Reports*, Social Security and Medicare Board of Trustees (Washington: April 2000).

country, which would lead to a higher economic standard of living in the long run.[16] It is easiest to understand this by envisioning the "loan" market[17] as determined by supply and demand like the market for any other good.[18]

American borrowers (the demand side of the market) have two sources of funds to acquire loans: the current saving of American households and businesses and the saving of foreigners who are willing to invest in American "loans" (the supply side of the market). When the government runs surpluses and uses them to reduce the publicly held debt, it adds a third source to the pool of saving, thus pushing up the supply of funds available for "loans" and lowering real interest rates (which are loosely analogous to the price of "loans").[19] Thus, budget surpluses are expected to lower the real interest rate. As real interest rates fall, private investments that would have been unprofitable at a higher rate of interest now become profitable, and more private investments are made. Economists refer to this process as budget surpluses "crowding in" private investment. Since private investment adds to our nation's productive potential, potential GDP rises (assuming that the private investment has a higher rate of return than the government's use of the resources). Thus, reducing the government debt does not just affect businesses by making their loans less costly. It should yield broader benefits of economic growth and a rising standard of living.

Debt Reduction Ameliorates Future Tax Requirements

From the federal government's perspective, reducing the federal debt is desirable because it frees up future tax revenues that would have otherwise been devoted to interest payments to bond holders. Interest payments are reduced for two reasons. First, reducing the debt mean that there are fewer bond payments to make. Second, if reducing the debt makes interest rates fall, interest payments on the remaining debt would eventually become lower. For example, the Treasury Department estimates that a permanent fall in the interest rate of just one one-hundredth of a percent would save the federal government $300 million annually in interest payments.[20] This saved

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[16] However, in a recession many economists would favor a budget deficit because it would stimulate demand further and shorten the recession.

[17] In this context loans are referred to in the broadest sense of the term, meaning any investment a company might make whether it be issuing stocks, floating bonds, borrowing from a bank, or otherwise raising funds for capital.

[18] While the Federal Reserve controls nominal, short-term interest rates through monetary policy, economic theory holds that real, long-term interest rates are determined through supply and demand in the capital market. Thus, if the Federal Reserve chooses a nominal interest rate inconsistent with market equilibrium, markets will adjust (possibly painfully) in the long run through the price level to return to the real equilibrium level.

[19] Some economists believe that, on the contrary, a change in the government deficit will be offset by a corresponding change in private saving, leading to no effect on aggregate saving. If this were true, reducing the debt would not have the beneficial effects on the economy in following discussion. This theory is called Ricardian Equivalence.

[20] Yochi Dreazen and Gregory Zuckerman, "Treasury Announces Its Plans to Buy Back Debt of as much as $30 Billion, Above Expectations," *Wall Street Journal*, January 14, 2000,

tax revenue is assumed by CBO to be used towards further debt retirement, but could also be used for such purposes as new or increased spending[21] or tax reductions.

Debt Reduction May Reduce the Current Account Deficit

Reducing the national debt could also positively affect the current account deficit in the US international balance of payments. Currently $1,052 billion, or about one-third of the publicly held national debt, is held by foreigners.[22] The current account deficit can be measured as foreign capital inflows less domestic capital outflows. Since there is not currently enough national savings to meet national investment demand, the US has had a large and rising current account deficit for quite a few years. In March 2000, the current account deficit stood at $30.2 billion, an annual rate of 3.7% of GDP.

As the current account deficit is forecast to increase to a record 4% of GDP in 2000, a consensus is building among economists that a smaller current account deficit would pose less of a threat to the continuation of the current economic expansion.[23] A reduction in the federal debt would free up savings and cause interest rates to fall, making US assets less attractive to foreign investors and foreign assets more attractive to US investors, all else held constant. As a result, net capital inflows should fall and the current account deficit should improve, although probably not substantially.[24]

Treasury policy has been in favor of a strong dollar for several years. Many economists believe that the large current account deficit is the greatest threat to a

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[20] (...continued)
p.C19.

[21] Since interest payments are counted as a transfer, and transfers do not involve the use of current resources by government, if lower interest payments lead to higher government spending then the size of government as a percentage of GDP will grow without any change in the current fiscal stance. If one's goal is to keep the fraction of GDP consumed by the government stable, a case could be made that the appropriate response is to use the resources saved from lower interest payments to cut taxes.

[22] This sum can be divided into the $617 billion held by private foreign investors and the $435 billion held by foreign institutions such as central banks. Source: Table IFS-2, U.S. Treasury Dept., *U.S. Treasury Bulletin* (Washington: June 2000).

[23] For a more detailed explanation of the current account, see U.S. Library of Congress, Congressional Research Service, *America's growing current account deficit: its cause and what it means for the economy*, by Gail E. Makinen, CRS Report RL30534 (Washington: Apr. 19, 2000).

[24] Atypically, in the current economic expansion, the current account deficit and the budget deficit have been moving in opposite directions. For a more detailed discussion, see U.S. Library of Congress, Congressional Research Service, *Why the Budget Deficit and the Trade Deficit Haven't Been Moving Together,* by Gail Makinen, CRS report 97-985E (Washington: April 19, 2000).

strong dollar.[25] Thus, reducing the national debt could incidentally support the strong dollar policy.

Debt Reduction May Alter the Generational Distribution of Fiscal Policy

Economists have become interested in recent years in the subject of generational accounting,[26] which compares the implicit burden of fiscal policy on different age groups. The concept behind generational accounting is to compare what each generation can expect to pay in taxes compared to what they can expect to receive in benefits. Primarily because of the long-term exhaustion of Social Security projected by the trust fund, projected growth in Medicare spending, and the national debt, the implicit future tax burden of the young is much greater than the old.[27]

Because the "baby boom" has skewed the nation's population distribution, net benefits vary greatly from generation to generation. While the "baby boomers" have worked, from the late 1960s through the next couple of decades, the government has greatly expanded the benefits that it offers to the elderly. These benefits have been affordable because there have been so many more workers than retirees. But once the "baby boomers" begin to retire, the ratio of workers to retirees will plummet from 3.4 today to 1.9 in 2037.[28] If these government programs are to continue at their current level at that time – and many of the programs are mandatory – a greater lifetime tax burden is implied for today's young. One estimate is that to neutralize the imbalance of current policy, either discretionary spending would have to be cut by 19.6% or taxes would have to be increased 11.4% annually.[29] This is more of an equity issue

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[25] A large current account deficit implies that at current relative prices, we demand more foreign products than foreigners demand American products. This implies that in the future the relative price of foreign goods could rise, or the dollar could fall.

[26] A good non-technical introduction to the subject is Laurence Kotlikoff, *Generational Accounting*, Free Press, 1992.

[27] In Kotlikoff's and Auerbach's opinion the national debt is the smallest of the three problems, and retiring it will still leave substantial generational imbalance.

[28] *A Summary of the 2000 Annual Reports, Op. Cit.*

[29] Jagadeesh Gokhale, *et al.*, "Generational Accounts for the United States: An Update," *The American Economic Review*, May 2000, p.293. The projections assume that the growth of government spending rises at the rate of population and productivity growth.

than an economic issue,[30] and is thus a matter of ethical judgement whether or not this burden on the young is unfair.

But reducing the national debt alleviates this burden.[31] By accumulating a national debt, in effect today's taxpayers enjoy a higher standard of living – either through lower taxes or higher government services – than would have been available were there no budget deficits. The result of this higher standard of living today is a lower (potential) standard of living in the future, because the "crowding out" effect means that the future capital stock, and with it the future productive capacity of the economy, is smaller than it would have been had we never accumulated a national debt. In effect, we have transferred the consumption of future generations to the present generation.[32] By reducing the national debt, we are redirecting that transfer from the present generation back to the future. Instead of using the surplus to consume now, we are paying off the debt, which will lead to a greater capital stock and productive capacity in the future and with it a higher standard of living.[33]

Other Interpretations

Some economists disagree with the desirability of debt reduction and believe that there are important issues that take precedence over debt reduction. There are two (mutually exclusive) viewpoints about measures that could be pursued instead of debt reduction. Each of these approaches are said to lead to a higher productive capacity for the economy than the "crowding in" effect that debt reduction would accomplish according to their proponents.

The first alternative holds that the government should be viewed as a company: if the government can make "profitable" investments in areas such as education or infrastructure, then it is justified in borrowing money, just as would a company.

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[30] Generational accounting is an economic issue in so far as to generate the necessary revenue to meet currently implied obligations, there must be a large increase in taxes, either now or in the future. If the tax increase were to begin now, then it would be a smaller tax spread over a longer period, and there would be less of a loss in economic welfare associated with it than if the tax increase were not levied until the Social Security and Medicare programs are theoretically exhausted. If the tax increase was postponed until the programs' exhaustion, then the loss of economic welfare would be much larger. On the other hand, if the imbalance were corrected by cutting benefits, there would be no aggregate economic effect (regardless of whether the benefit cut is postponed) because it would simply alter the composition of transfers.

[31] For a more detailed discussion, see U.S. Library of Congress, Congressional Research Service, *The National Debt: Who Bears Its Burden*, Gail Makinen, CRS report RL30520 (Washington: April 2000).

[32] There is no reason to think that the transfer would be at a one-to-one ratio.

[33] The interest payments that will need to be made on the national debt held by US citizens are not considered to be a burden to future generations in the aggregate although they transfer wealth from tax payers to bond holders. On the other hand, the interest payments on the national debt held by foreigners, which is about one third of the total publicly held debt, is a burden to future generations because it will be a transfer of resources from the United States to abroad.

These profitable investments would presumably increase the economy's productive capacity enough to offset the "crowding in" effect on private investment that would be lost if the debt were not reduced, leaving the economy better off on balance.[34]

The second view holds that low economic growth results not from a dearth of public investment, but rather from the burden of excessive government intervention. In this view, current tax rates place an enormous burden on businesses and create disincentives to work and save. If the surplus were used for tax reduction, they argue it would generate a large supply-side surge in economic growth because businesses would have more resources free for investment and workers would have incentives to produce more. These gains in efficiency from lowering taxes would presumably exceed the gains forgone from the "crowding in" that debt reduction would make possible, and the result would be a net rise in the standard of living.

Some Consequences of Debt Elimination

While most economists view debt reduction favorably, an interesting problem is raised if the national debt were to be eliminated entirely. That problem is related to the unique and essential role that government bonds play in the functioning of the financial system. This section will explore the effects on the financial system if the debt were eliminated entirely and could no longer play this unique role. These issues are not relevant when considering reducing the debt from its current state. However, since the publicly held national debt could be effectively eliminated as early as 2007, these issues could become relevant in a few years.

The Role of US Treasuries as a Benchmark Asset

Economic theory suggests that the return on any asset can be divided into two components. Part of the return is equal to the rate that could be earned on a riskless investment, what economists refer to as a "safe asset." This rate will be positive because people will not forgo consumption today unless they are offered in return a greater amount of consumption tomorrow, which is what a positive rate of interest accomplishes. The other component of the rate of return is the risk premium. Some assets are riskier than others; in other words their market value is subject to greater fluctuations than the safe asset.[35] The more risky an asset is in relation to the safe asset, the greater the risk premium that must be paid to induce individuals to bear that risk. In the US financial system, Treasuries are viewed as safe assets, and therefore

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[34] This theory is consistent with the explanation described above if the return on government investment is higher than the return on private investment. Most economists reject the proposal to maintain the national debt because they reject this statement.

Some economists have theorized that there is a complementary effect of government investment. For example, the value of investment in infrastructure should not be judged by the return on the infrastructure itself, but also by the higher return that the private sector achieves because it enjoys the benefits of the improved infrastructure.

[35] The riskiness is not solely default risk, but includes other risks such as volatility and liquidity, the latter of which is defined below.

are referred to as benchmark assets. The reason that other assets, such as stock in Microsoft or a General Motors bond, have higher rates of return than a US government bond is because their returns are less certain.

The fact that Treasuries serve as benchmarks means that not only would individuals and institutions that held government bonds be adversely affected, all financial markets might become less efficient if the national debt were eliminated. Because government securities play the role of a benchmark asset, they send an important signal to financial markets of both the riskless rate of return and the risk premium of any individual asset. If the riskless asset no longer existed, investors could have a harder time properly pricing all financial assets, leading to greater uncertainty in financial markets. The interest rates on federal debt securities are also important in the forecasting of economic phenomena such as inflation, growth rates, and the effect of monetary policy.[36] These forecasts help both investors and institutions such as the Treasury and the Federal Reserve make decisions. Thus, financial markets would likely operate less efficiently overall if a riskless benchmark asset no longer existed.

The 1998 financial crisis sparked by the Russian debt default illustrates the role that US Treasuries play in our financial markets. The reaction of many investors to the Russian default was a "flight to quality" where they sold riskier assets and bought US Treasuries (and other safer assets). Since risky assets were now viewed relatively less desirable than Treasuries, at the height of the "flight to quality" the risk premium increased from 0.74 percentage points to 1.28 percentage points.[37]

Effect on Household and Institutional Investors

The complete elimination of the federal debt could radically change the investment decisions of many investors. For example, the US Savings Bond Program is a popular way for risk-averse savers of modest means to receive a safe and reliable return. The retirement of the national debt would imply the elimination of this program. With US Saving Bonds no longer available, households could be forced to place their limited savings in either riskier assets, or safe assets with lower returns. Before retiring the national debt, the government might wish to consider whether it wants to end the role it currently plays in encouraging and facilitating saving through the Savings Bond Program for families whose other investment options are limited.

Not only do many conservative investors prefer to hold federal debt, but it is also preferred by banks, pension funds, insurance companies, state and local governments, and any other institution that wishes to balance its portfolio with lower risk assets. For example, because banks have very small capital accounts, the risk of insolvency looms if the value of the assets that they hold suddenly shrinks. Government bonds

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[36] For example, the "shape" of the yield curve (the difference between the yield on short-term and long-term securities) has been used as an indicator of the expected rate of inflation, as have inflation-indexed Treasuries (see p.12).

[37] The risk premium is between Treasuries and investment grade corporate securities. Data from Michael Fleming, "The Benchmark US Treasury Market...," *FRBNY Economic Policy Review*, p.132, April 2000

reduce this risk and this is why they are an important part of a bank's portfolio of assets. If the customers of some of these institutions viewed them as less stable and dependable because of the elimination of the national debt, it could reduce their ability to function as efficient intermediaries between savers and investors.

Since government bonds are so important in setting the rate of return of all assets, they are also often involved in derivative securities that allow companies to reduce their exposure to certain kinds of risk. For example, companies can offset exposure to changes in interest rates or in exchange rates by "swapping" income from assets that are risky under certain conditions for other assets that would be safe in those same conditions.[38] This process is often referred to as hedging, and if government bonds did not exist, hedging might become more difficult, implying that companies would face more risks. Because many people are risk-averse, hedging performs a useful economic function: it allows businesses and investors to diversify away from the risks specific to their business operations and investment portfolios.

As both of these arguments show, the absence of a riskless asset would not merely mean an isolated inconvenience to certain investors, it would imply a decrease in efficiency in financial markets that would raise the volatility and costs of financial intermediation. Because of the crucial role that economists believe financial markets play in ensuring the overall well-being of the economy, a decrease in the efficiency of financial markets would harm overall economic welfare.

The Federal Reserve's Execution of Monetary Policy

The Federal Reserve (Fed), in the pursuit of goals such as price stability and low unemployment, attempts to control the overall flow of money and credit to the economy. It does not attempt to allocate credit among industries and various sectors and regions of the economy. The major tool used by the Federal Reserve in the control of money and credit is open market operations. This involves the purchase and sale of US government securities.[39]

To minimize changes in the structure of relative market interest rates which could affect the allocation of credit, open market operations are almost exclusively confined to federal debt securities that have a short time until maturity. This sector of the market is broad, deep, and resilient, meaning that Fed purchases and sales will have their primary effect on the volume of credit, and have very little direct effect on *relative* interest rates that determine the allocation of credit.

The elimination of the national debt would eliminate this ideal market for the conduct of open market operations, and there is good reason to question whether any

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[38] For a more detailed example, see Michael Fleming, *Op. Cit.*, p.130.

[39] The Federal Reserve has no control over the creation and redemption of federal bonds. When it purchases them, it does so on the market like any other investor. The Treasury Department controls the creation and redemption of federal bonds.

other asset could adequately take its place.[40] Since the markets for other financial assets are so much smaller in comparison, the sheer size of Federal Reserve activity could inadvertently distort the relative interest rates of some assets compared to others, affecting individual companies or sectors of the economy. As a result, open market operations could inadvertently allocate credit in the pursuit of a goal such as price stability. Nonetheless, since other central banks have demonstrated that other assets can be successfully used to conduct monetary policy, while this change could fundamentally alter the Fed's role politically, it may not be of great economic importance.[41] For example, a basket of commercial paper might minimize distortional effects on credit markets. But such a change could also lead to the Fed's portfolio being more volatile (and therefore more risky), and it could lead to the Fed's portfolio yielding a higher rate of return. Since the Fed's goal is not profit maximization, it may not find this trade-off to be desirable. For its part, the Fed does not believe this problem to be serious, as Federal Reserve Governor Laurence Meyer outlined in a recent speech:

> "The key point is that declining Treasury debt does not pose any insurmountable long-term problem for the Federal Reserve. There would, of course, be transitional issues as monetary policy operations adapted. But we [can ?] surely maintain the effectiveness of our monetary policy operations. So a decision about whether or not to hold on to the surpluses and ultimately retire the government debt should not be affected by any concern that this option might undermine the effectiveness of monetary policy."[42]

Second, since the behavior of the Treasury benchmark can play a vital informational role for the Fed in conducting monetary policy, it would be hampered in its effectiveness by the absence of national debt. For example, by comparing returns on the series of inflation-indexed Treasury bonds to the returns on non-indexed Treasury bonds, analysts can gain valuable evidence of inflationary expectations.[43]

Role of Liquidity in the Treasuries Market

One unique characteristic of the federal bond market that makes it less risky than other markets is its high degree of liquidity, a term that refers to an asset being so prevalent that it can always be bought and sold easily and inexpensively. Thus, not

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[40] See the appendix on alternative benchmarks.

[41] The Federal Reserve Act already permits a broad range of assets to be used in open market operations, but in practice the Federal Reserve has not used them for the reasons discussed above. See Section 14 of the Federal Reserve Act for a list of permissible assets.

[42] Remarks by Federal Reserve Governor Laurence H. Meyer Before the 16th Annual Policy Conference, National Association for Business Economics, February 23, 2000.

[43] For more detailed information, see Brian Sack, "Deriving Inflation Expectations from Nominal and Inflation-Indexed Treasury Yields," *Finance and Economics Discussion Series*, Federal Reserve Board of Governors, June 2000.

only are Treasuries safer than other assets because the possibility of default is slighter, they are safer because investors know if they ever have to buy or sell quickly, they will not suffer a large loss in the transaction. Another characteristic of a highly liquid asset is very low transaction costs, which reinforces the ability to buy and sell quickly without a loss. This cannot be said with as much confidence of any other domestic asset. So while the issues posed above have been framed as problems that will emerge if the publicly held debt is eliminated entirely, in reality these problems would emerge whenever the federal bond market became sufficiently thin that a high degree of liquidity could no longer be maintained.

Of course, there is no sharp distinction between liquid and illiquid, but a continuum of degrees of liquidity. It is difficult to estimate when the Treasuries market would become too thin to be useful as a benchmark asset.[44] Many Treasuries with long-term maturities have already suffered from illiquidity as their supply dwindles.[45] To promote liquidity in the remaining Treasuries, the Treasury has instituted a policy whereby it is now issuing bonds with a much narrower range of maturities. By eliminating Treasuries with odd maturities as quickly as possible, it hopes to maintain liquidity in the Treasuries with the most popular maturities for as long as possible.

Conclusion

Debt reduction is supported by many economists including the Chairman of the Federal Reserve, Alan Greenspan,[46] and the Treasury Secretary, Lawrence Summers,[47] and they have urged that it be continued. As the debt has been reduced, the government has done a good job of maintaining liquidity so far. But before the national debt shrinks to the point where liquidity in the Treasuries market is lost, research is needed into the issue of how important national debt is as a benchmark asset to the efficient functioning of our financial system. If it is determined that the costs of losing the benchmark asset exceed the benefits of the full elimination of the national debt, then the federal government might wish to consider either maintaining the Treasury Market at some adequate level or to ensure that an alternative smoothly takes it place, either through direct action or through indirect and regulatory encouragement. The latter implies a large shift from the current role of the federal

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[44] A look at Treasuries markets today will reveal how valuable liquidity is to investors. For example, there are two federal bonds issued at different times that have the same maturity date (Nov 2001). All other things being equal, the yield to maturity on these two bonds should be the same. Yet one issue was 13 times smaller than the other, and as a result the smaller issue is less liquid and the yield to maturity is 0.03% higher and the transaction fee is 26/32 of a dollar greater than on the larger issue. The bonds in question are priced on June 13, 2000 as reported by *The Wall Street Journal*, p.C19 and the US Treasury, *Public Debt Operations Report*, (Washington: June 2000).

[45] Gregory Zuckerman, "Pared Treasury Supply Poses Risks," *Wall Street Journal*, 1/27/00, p.C1.

[46] In testimony before the Special Committee on Aging, U.S. Senate, March 27, 2000.

[47] In a speech before the Senate Finance Committee, July, 28, 1998, *Treasury News* RR2606.

government and any other entities[48] involved in the transition. It also implies a large shift in the Federal Reserve's means for conducting monetary policy.

Arguments in favor of further debt reduction include the beneficial "crowding in" effect, a decrease in future interest payments that the government must pay, a possible reduction in the current account deficit, and a more equitable generational balance in government fiscal policy. All of these effects mean that the elimination of the debt should place us in a better economic situation to deal with Social Security and Medicare demands when the "baby boom" generation retires.

The benefits of the "crowding in" argument are questioned by some observers, who feel that higher economic growth could be achieved by either using the surpluses for higher public investment or to lower taxes instead, respectively.

There are also potential problems that the economy might face if the publicly held debt were eliminated entirely. These issues do not pose a near term problem, when we are reducing the debt from a relatively high base. The issues include the useful role that government debt serves as a benchmark asset for the financial system, the valuable role that government debt serves for individuals and institutions with conservative investing needs, and the role that government debt plays in the Federal Reserve's conduct of monetary policy.

While there are private sector candidates for benchmark alternatives to national debt[49], they all have drawbacks and may not serve this role as efficiently as national debt. The more efficiently that an alternative asset can function in the benchmark role, the less persuasive this argument against eliminating the government debt becomes.

Economic forecasting is said to be one part art and two parts science, and although the debt is projected to be paid off by 2007 under some current forecasts, a major turn of events in the economy or in government fiscal policy, most notably the potential for Social Security redesign or one of the large tax cut proposals that have been suggested, could result in the debt never being eliminated. Nonetheless, planning ahead would ensure a smooth transition if the government is in a position to pay off the national debt.

Epilogue: Suppose the Surplus Continues after the National Debt Is Retired

As noted in the introduction, the critical role in reducing the national debt is played by the budget surplus. The CBO projections run to only 2010. Suppose that the publicly held debt were eliminated and the surplus as a fraction of GDP continued unchanged. What economic effects might this have? The "crowding in" effect would continue, as interest rates would remain low and companies would respond by purchasing more capital, net foreign capital would remain lower, and the current

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[48] See the appendix on alternative benchmarks.

[49] Please see the appendix.

account would remain improved. As the capital stock and capital/labor ratio would continue to rise, productivity should also rise, leading to a higher economic standard of living in the long run. The Federal Reserve would continue to need other assets to conduct monetary policy. The generational balance would continue to shift in favor of future generations at the expense of current generations.

The major difference between debt reduction and this scenario is that since the government would have no fiscal liabilities, although they would still have unfunded obligations to the trust funds, it would need an asset in which to store the surplus. One possibility would be to invest the surpluses into private sector assets, whose return would generate government revenues.[50] Offset against the economic benefits of the policy would be the political sensitivities involved. Should the goal of the government's investment policy then be to maximize profitability, or should it use its influence to promote public policies, for example protecting the environment, supporting worker and consumer rights, promoting foreign policy interests, or some other end? Should certain industries be favored over others, for example industries with financial difficulties, infant industries, or industries in depressed regions of the nation? How would investment goals be chosen? What trade-off should be made between political goals and economic efficiency? And if the government were to favor certain types of assets over others, for example bonds because they are less volatile than equities and do not carry voting rights, the structure of financial markets could be fundamentally altered. If political influence were deemed a problem to be avoided, Congress might consider creating a quasi-independent agency structured like the Thrift Savings Plan for federal employees.

However, there is a good reason to think that this scenario will not come to pass. First, it is based on the assumption that new spending and tax cut proposals by the Administration, Congress, and in the presidential campaigns are not enacted into law. Second, the CBO projections underlying Table 1 assume that there is no major overhaul in the structure of the Social Security program. Currently, Social Security can only hold surpluses in the form of federal debt. Some of the proposals to overhaul Social Security would have the projected off-budget surpluses invested in the assets of private corporations, which would be held by the Social Security Administration or in individual investment accounts by citizens or some combination of the two. Were such a change to take place, some of the projected off-budget surpluses would no longer be available to pay down the publicly held debt. This could alter the arithmetic on the debt elimination as larger on-budget surpluses would be required to pay off the publicly held debt at the currently forecast rate. Since the Trustees of the Social Security trust fund forecast the trust fund to be exhausted in 2037 if unaltered, a major redesign is a real possibility.

If Medicare and Social Security were not altered, there would still be large fiscal obligations for the Treasury beginning in 2016 when the Social Security trust fund moves into deficit and 2010 when the Medicare trust fund moves into deficit. As the two trust funds run down their assets, the Treasury will be obliged to provide current revenues in exchange for the government securities from their trust funds. The

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[50] To give the Treasury the authority to do so would require a change in federal law 31 USC 3302(a) which mandates how the Treasury may hold revenues.

retirement of these securities would represent a burden on top of all existing government mandatory and discretionary spending. To pay for this obligation, the Treasury will need to either raise taxes, cut spending, borrow if there is an on-budget deficit, or run down the surplus if there is an on-budget surplus. Using the option to borrow would turn trust-fund government debt back into publicly held government debt.

Appendix : Alternative Benchmarks

Economists believe that as a general rule, if the demand for some good exists, then someone will come along and supply that good. The possibility that the federal debt may be eliminated has led to speculation that some other asset might be developed to supplant Treasuries as a benchmark risk-free asset. There have been periods in the past when federal debt did not function as a benchmark security, however financial markets were much smaller and less sophisticated than they are now. If some other asset could be developed that worked just as well as Treasuries have worked, then the previous discussion of this drawback to debt elimination becomes moot. However, there are reasons to think that no other asset could function as efficiently as Treasuries.

Foreign national debt, while risk-free in its home country, would not be risk-free for US investors because of exchange rate uncertainty. Corporate bonds or corporate paper would not serve well as benchmark assets because it is doubtful that any one corporation could issue enough bonds to create a liquid market,[51] no corporation is free of volatility, and no corporation is completely free of default risk.[52] However, it is conceivable that some financial firm might market a security, say, consisting of a basket of corporate bonds, that might become accepted as a benchmark asset over time.

"Interest Rate Swap" Derivatives

It is also possible that an existing derivative such as interest rate swaps could serve as a benchmark asset, or a derivative could be created to fill that role. Interest rate swaps allow an investor worried about the riskiness surrounding an asset with a fixed interest rate to "swap" for a variable interest rate, or vice versa. Theoretically, it should be possible for investors to take opposite positions in derivative markets such as swaps, thus creating a risk-free portfolio with a risk-free return.[53] Of all the alternative candidates, only interest rate swaps do not imply any risk of moral hazard and/or political interference. However, in reality there are problems that keep this portfolio from being risk-free. First, there is a risk that one side of a contract will default and renege on its obligation. Second, the size of the markets are smaller, and therefore less liquid, than the federal debt market at this point. For example, daily turnover in the swaps market is estimated at about $22 billion a day, compared to $183 billion for Treasuries.[54] Finally, pricing derivatives is less straightforward than it seems since derivatives are so complex and are not so closely regulated as other

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[51] Ford Motor Company appears to believe otherwise as it began to issue "Global Landmark Securities" in 1999 that were designed with the intention of serving as a new benchmark. Source: Fleming, *Op. Cit.*, p.140

[52] For example, a company as large and old as Chrysler was insolvent in the late 1970s.

[53] For a more detailed discussion of derivatives, see U.S. Library of Congress, Congressional Research Service, *Derivatives: risk and regulation*, by Mark Jickling, CRS report RS20077 (Washington: Feb. 17, 1999).

[54] Federal Reserve Bank of New York, *Foreign Exchange and Interest Rate Derivatives Markets Survey*, September 29, 1998, p.1.

assets. All three of these problems become more acute in times of crisis such as the 1998 financial crisis.

GSE Securities

Government-sponsored enterprises (GSE)[55] such as Fannie Mae and Freddie Mac have been assertively marketing themselves as the natural heirs to the risk-free asset. Between 1998 and 1999 Fannie Mae, Freddie Mac, and others of these agencies began issuing securities with names such as "Benchmark Notes" in huge batches that looked similar to Treasuries.[56] In 1999, the agency debt market stood at $1.4 trillion, compared to $3.6 trillion for publicly held federal debt. However, these securities have not taken on all of the aspects of the highly liquid market for Treasuries. For example, daily turnover for GSE securities is only $7.9 billion, compared to $183 billion for Treasuries. Yet if current trends continue, outstanding GSE securities could be larger than the national debt by 2005.[57]

One economic drawback of using GSE securities– or the securities of any other corporation– is that for the benchmark asset to function properly, it should reflect only risks inherent to the economy overall. GSE securities, on the other hand, include risks specific to their corporations. For example, Fannie Mae and Freddie Mac are exposed uniquely and specifically to housing sector risks, which are very different than risks to the overall economy and cannot be completely diversified away.

Political-economy questions have been raised as to why it might not be desirable for GSE debt to serve as a benchmark. Because GSEs are (now) private, profitable companies that were created by the federal government, investors believe there to be an implicit guarantee by the federal government that GSEs would never be allowed to go bankrupt. At first glance, this may seem to make them the ideal candidate to create a risk-free asset. But like the cause of the savings and loan crisis, this creates a problem of moral hazard: since GSEs know they do not have to worry about bankruptcy, they may be tempted to take on excessive risks in search of large profits. Historically, the federal government has tried to minimize this risk by keeping close oversight of GSEs and by limiting their activities to the narrow mandate for which they were created. In recent years, some observers have feared that the GSEs have entered markets far beyond their mandate.[58] Clearly, the creation of an asset specifically to satisfy the demand for a benchmark goes far beyond their original mandate to securitize specific loan markets, and would further muddy the waters surrounding the implicit government guarantee the markets believe that they enjoy. This might make the moral hazard problem more acute. Therefore, investors could

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[55] For an explanation of these organizations, see U.S. Library of Congress, Congressional Research Service, *The quasi government: hybrid organizations with both government and private sector legal characteristics.*, by Ronald C. Moe, CRS report RL30533 (Washington: Apr. 15, 2000).

[56] Fleming, *Op. Cit.*, p.139

[57] All figures quoted in this paragraph from Fleming, *ibid.*

[58] For example see "Homesick Blues", *The Economist*, April 15, 2000, p.79.

assume that GSEs would never be allowed to fail, and that would allow GSEs to take on even more risks.

Maintenance of the Treasuries Market After the National Debt Is Retired

A final option would be for the federal government to create debt solely to serve as a risk-free benchmark asset and invest the proceeds at a profit in private securities. This way the default risk would be avoided, problems highlighted above would be avoided, and liquidity could be assured.[59] It would also save the US government the logistical costs of re-establishing the national bond market as it may have to do at some point after 2016 when it is forecast that the Treasury will have to find additional revenues to cover the Social Security Trust Fund's deficits. If not carefully designed, such a system could face political vulnerabilities such as a desire to allocate credit for political purposes at the cost of profit maximization, however. Given the necessary market size to create a liquid risk-free asset, the government could take sizable ownership positions in large portions of the private economy, making these political pressures very hard to avoid. This policy would not alter the aggregate national savings rate, but it could alter the complexion of financial markets if: 1)the makeup of the government portfolio altered the relative price of individual assets or classes of assets (for example, stocks vs. bonds), or 2)the presence of a benchmark lowered the costs and risks of investment (compared to financial markets in the absence of a benchmark), thus altering individual investors' behavior.

[59] The yields on the investments would also be a considerable source of additional government revenue.