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Policy Note 2004/01

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Policy Note No. 04/01

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The projections are in and they are not pretty, in the opinion of most observers. According to the Congressional Budget Office (CBO), the federal budget deficit will grow to \$408 billion for 2004, while the next ten years will see \$1.4 trillion in red ink. Those are supposed to be the *optimistic* projections, because they assume highly unlikely scenarios in which Congress allows sunset provisions to phase-out recent tax cuts and chooses not to adopt new spending programs, such as the widely-discussed plan to provide prescription drug benefits. A more realistic projection that included extension of the tax cuts as well as likely spending "enhancements" would put the ten-year projected deficit closer to \$4 trillion. And that is interesting territory, to be sure. Some might remember President Clinton's 1999 State of the Union address, in which federal budget surpluses were projected as far as the eye could see—to total some \$4.5 trillion over the coming 15 years.

How could those projections made less than four years ago have been so far off, to the tune of some \$8 trillion?

Many want to blame President Bush's two large tax cut packages, but the reality is that legislation has played a relatively minor role in reversing the budget outlook—it amounts to at most 1/3 of the budget turn-around. The budgetary impact of the war on terrorism is even smaller. Even the economy's slowdown plays little role because the CBO projects recovery and real GDP growth of 3.8% for 2004, so impacts of the recession on budget projections don't amount to much more than a "blip".

The truth is that those projections of permanent surpluses made four years ago were based on highly implausible assumptions about continued growth of tax revenues. In 2000 federal government tax revenues reached almost 21% of GDP (equal to the post-war peak), while spending lagged behind at well under 18%. Tax revenue, in turn, was driven by those factors that generated growth of household and corporate income and wealth. Payroll tax receipts are highly stable, dipping somewhat in the past three years as workers lost their jobs—but payroll receipts will rise when (if?) employment recovers as CBO projects. Personal income tax revenue is, of course, cyclical and fell with the recession. Corporate income tax revenue has also fallen as the economy slowed, but the impact is much smaller.

Still, while withheld income taxes have fallen, most of the deterioration of tax

revenue since 2000 has been a decline of taxable capital gains, taxable dividends, and incomes received at the top of the income scale. Individual income tax revenue in 2003 was 13% below the 2000 level; as has been widely reported, this is the first time that federal tax receipts have fallen for three years in a row. According to the CBO's projections, individual income taxes will fall again in 2004. In truth, the rapid fall of tax revenue—especially of the non-withheld variety—puzzles most researchers. But it is likely that the huge surge of tax revenue over the course of the Clinton boom was something of a fluke, driven at least in part by Greenspan's "Irrational Exuberance". A similar thing happened at the level of state budgets, where capital gains tax revenue boomed and fueled state spending increases over the Clinton Boom. (Wray *Policy Note* 02/05) States are now trying to cope with the bust.

In conclusion, those projections of "black ink" as far as the eye could see were based on unsustainable growth of taxable income (and wealth) and hence tax revenue growth that would not and could not be achieved. I will return to a discussion of another aspect of the unsustainability of budget surpluses below. But first let us look at the question as to whether the new projections of red ink as far as the eye can see are any more plausible.

I think that if anything the "medium term" projection (2004-2008) of budget deficits made by most analysts will prove to have vastly underestimated the size of the actual deficits that will be accumulated. The CBO's projections show the deficit gradually declining from \$480 billion in 2004 to \$197 billion by 2008. As a percent of GDP, the deficit peaks at 4.3% in 2004 and declines to 1.4% in 2008. A far more plausible projection would show the deficit rising from around 5% in 2004 to 7% of GDP, and probably before 2008—in other words, the deficit should climb toward \$900 billion before recovery really takes hold.

Is that scary? Is it a problem? We can't answer that until we examine what a budget deficit means for a government that operates with a floating currency. I want to make sure that it is understood that the following analysis applies only to countries like the US, or Japan, or Canada, or Turkey—countries that issue their own floating currency. Unfortunately, economists are so used to thinking of the operation of non-sovereign currencies (say, the gold standard) that they cannot understand the economic possibilities of nations that operate with sovereign currencies. This is why they worry about "red ink" and raise concerns of solvency, default, crowding-out, currency depreciation, or "unsustainability" when budget deficits rise.

In a sovereign nation, the government imposes a tax denominated in the government's currency—say, the dollar. The citizens must obtain at least that many dollars so that they can meet their tax liabilities. The government also names exactly what it will accept in payment of taxes. Today in all sovereign nations, governments actually use banks to intermediate payments. Governments accept checks written by taxpayers on their bank accounts, then debit bank accounts at the central bank, which operates as an agent of the government. Governments buy goods and services by issuing a check on the treasury, or, increasingly, by crediting the seller's bank account. In either case, the seller's bank receives a credit to its reserve account at the central bank.

To summarize, we can say that government purchases lead to reserve credits to the banking system; tax payments lead to reserve debits. If the government's spending equals its tax revenue, then there is no net effect on reserves. If government spends more than it taxes (runs a deficit) this raises bank reserves. If government taxes more than it spends, then, the net effect is to debit reserves.

It is commonly believed that if government runs a deficit, it must “borrow” or “print money” to “finance” the deficit spending. This cannot apply to a sovereign nation. A sovereign nation spends by crediting bank accounts. Whether or how much the government collects as taxes is not relevant to its spending. The implication of a budget deficit, as we saw above, is that bank reserves increase. A sovereign government does not “borrow”. Of course, one might object that we do observe sovereign nations, like the US, issuing sovereign debt—bills and bonds. When the treasury sells bonds, bank reserves are debited by the same amount.

Essentially, then, bond sales merely substitute bonds for bank reserves—whether these sales are undertaken by the treasury, or by its agent, the central bank. Why is this done? The *economic* significance of bond sales by sovereign nations is to replace non-interest-earning reserves with interest-earning bonds. It is best to think of bond sales by a sovereign nation as an “interest rate maintenance operation” rather than as a borrowing operation, because the *purpose* is to provide an interest earning alternative to non-earning reserves.

All modern economies operate with a pyramid or hierarchical monetary system. Bank money leverages reserves, which are used for clearing accounts among banks and with the government sector, and for meeting cash withdrawals. Central bank actions are always defensive, offsetting undesired fiscal impacts on bank reserves, as well as accommodating any disturbances arising from the nongovernment sector. Fiscal operations potentially have huge impacts on the quantity of bank reserve.

For this reason, the treasury and central bank coordinate operations to drain the excess through new bond issues and open market sales.

The belief that the central bank can be independent from government misunderstands the interest rate setting procedure. If deficit spending by the treasury results in excess reserves, the central bank must drain them through an open market sale. If treasury operations leave banks short of reserves, the central bank must provide them through an open market purchase (or at the discount window). The alternative to coordinating central bank operations with those of the treasury is to leave the overnight rate fluctuating from near zero (in the case of excess reserves) to rising without limit (in the case of insufficient reserves).

Further, if the central bank is going to operate a clearing system, it cannot refuse to provide needed reserves. Is an *independent* central bank going to bounce treasury checks? Of course not—indeed, if it ever did, its “independence” would be eliminated immediately by the legislature of any sovereign nation. Rather than bouncing a treasury check because a member bank does not have sufficient reserves, the central bank will always clear the check by loaning reserves to the bank (called an “overdraft”). Similarly, operating procedures are adopted to ensure the treasury

always has “money in its bank account” at the central bank to “cover” its checks. These procedures are numerous and can be complex, but by design they ensure that

- a) the treasury can spend up to the amounts authorized by the legislature,
- b) undesired impacts on bank reserves are minimized,
- c) the central bank can hit its overnight interest rate targets, and
- d) treasury checks never bounce.

In conclusion, deficit spending by the treasury leads to a net credit of reserves for the banking system, regardless of the operating procedures chosen. These are drained through bond sales. If this were not done, excess reserves in the banking system would drive the overnight interest rate down—precisely the opposite prediction to that of most economists, who argue that deficits raise interest rates and crowd-out investment. None of this should be interpreted to mean that government should always spend as if “the sky is the limit”, nor to deny that government deficit spending might have undesired economic effects or might face political constraints. Government deficits might have an impact on the foreign exchange rate of the sovereign currency. It is also possible that government deficits might have an impact on the domestic value of the currency—that is, on the inflation rate. Such considerations should be taken into account when determining the desired level of government spending. But the usual arguments—that a big deficit will eventually lead to default, or to rising interest rates, or to inability to sell debt to “finance” the deficit—do not apply to sovereign nations. Government does not need to sell bonds to “finance” deficits—rather bond sales logically follow deficit spending, and are operationally undertaken to drain excess reserves. The usual questions about insolvency, or default, or “burdens” on future generations cannot apply to sovereign government deficit spending.

Now that we understand what government deficits are, let’s return to those projections about Clinton-era black ink as far as the eye could see, that rapidly morphed into Bush-era projections of red ink as far as the eye can see.

As discussed, the budget surpluses achieved at the end of the 1990s were (probably) fueled by the New Economy boom and the other processes that generated huge increases of tax revenue. I argued these revenue “windfalls” were unlikely to be sustained, but there is another reason to believe that budget surpluses could not be sustained. As we have just seen a budget surplus means the government is debiting more bank accounts than it credits. Another way of stating that is to say that the government is reducing the nongovernment sector’s net wealth held in the form of claims on government. When there is a budget surplus, the nongovernment sector essentially pays the excess taxes by surrendering its government bonds. This is why there was all that talk back in 2000 about the private sector running out of government bonds—and questions about how the federal government could continue to run surpluses once all the outstanding government bonds were retired, that is, turned back to the government. If we project that the government will run \$4.5 trillion in surpluses, we must be saying that it will be destroying \$4.5 trillion of private sector net wealth. A budget surplus and retiring of government debt

identically means a nongovernment sector deficit and reduction of wealth.

And that is exactly what was going on at the end of the 1990s boom—the private sector was running huge deficits—spending more than its income by an amount equal to six percent of GDP—and its net wealth was falling. That could not go on forever. The inevitable retrenchment of private sector spending threw the economy into a tailspin. The federal budget has now turned around by more than 6% of GDP. That has allowed the American private sector to move toward a balanced budget—its deficit spending is now less than one percent of GDP. It is the opening up of a budget deficit that has allowed improvement of private sector balances. However, we know that in the past a recovery usually doesn't really take hold until private sector budgets improve a lot more than that. It usually takes a private sector surplus of about 3% to 6% of GDP before firms are ready to start hiring and households are ready to spend. That means the budget deficit needs to rise to a minimum of 7 or 8% of GDP to allow a domestic private sector surplus of about 3% in the presence of a trade deficit of 4 or 5% of GDP. The federal budget deficit could be smaller if the private sector begins to spend robustly on a sustained basis before a 3% surplus is achieved; but the budget deficit might have to be larger if the rest of the world's economy remains depressed, causing our trade deficit to rise.

An annual budget deficit of \$800 billion adds exactly the same amount of net “outside” wealth to private portfolios in the form of claims on government—reserves, cash, and bonds. This helps to restore these portfolios, which had deteriorated due to the Clinton-era budget surpluses, and as well due to the collapse of equity prices and rapid growth of private sector debt that has occurred since 1995. When portfolios have recovered sufficiently, the private sector will begin to spend, and robust growth will resume.

In short, this is why I say that the budget deficit is likely to rise to a higher level than what most pundits forecast, and also why I say that this is nothing to fear. We will not see a sustained and robust recovery, with significant job creation, until the budget deficit rises to 7 or 8% of GDP. For the longer term, the budget deficit will likely average somewhere between 3% and 5% of GDP, depending on the net desired saving position of the nongovernment sector (including both the domestic private sector and the foreign sector). Given a strong likelihood that the US will sustain current account deficits in the range of 4% of GDP, a budget deficit of 5% would allow the domestic nongovernment sector to run a budget surplus of 1% of GDP. This would be less than half the longer run norm common in the past four decades. If the current account deficit persisted, and the domestic nongovernment sector's balance returned to “normal”, this would imply a persistent budget deficit of some six or seven percent of GDP. This is why it is critically important to understand the nature of government budget deficits of sovereign nations operating with floating currencies. Otherwise, misguided policy-makers will fight the persistent deficits with policies that will raise unemployment and slow economic growth. ♦

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