FRBSF Weekly Letter

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Do Deficits Matter?

Congressional negotiators and the President have recently reached agreement on a package of spending cuts and revenue increases that are designed to reduce the federal budget deficit by $30 billion this year and $46 billion next year. Agreement was reached on November 20, the same date on which the revised version of the Gramm-Rudman-Hollings deficit reduction plan mandated $23 billion in automatic spending cuts to be split evenly between military and non-military spending.

The recent action by the government to take positive steps to reduce the budget deficit was prompted by financial market developments during October. The sharp drop in the stock market that month — including a record one-day crash that took more than 500 points off the Dow Jones Industrial Average — was interpreted by many as a no confidence vote by financial markets in the government's ability to address the deficit problem.

Implicit in this interpretation is the notion that financial market participants believe continued high deficits would be detrimental to the economy. This belief is consistent with the view of most economists that sustained budget deficits of the size the U.S. government has been running are undesirable.

However, an influential minority of economists disagree with the proposition that federal budget deficits matter that much for the economy. Indeed, looking back over the past few years, it might be difficult to identify the undesirable effects said to be caused by budget deficits. Certainly, the general economic performance of the U.S. economy over the last several years gives few indications of serious problems. The unemployment rate dipped below 6 percent in September for the first time since December 1979; the current economic expansion just became the longest peacetime expansion on record; and inflation has declined to a low level compared to the prior decade.

The difficulty in choosing between these two opposing views on the effects of budget deficits is discussed in this *Letter*, as the evidence supporting each view is inconclusive.

Deficits do matter

Most economists probably share the view that budget deficits do matter for the economy. They matter in part because they affect real interest rates (market interest rates corrected for expected inflation). According to this view, when the government switches from financing its expenditures with current taxes to a policy of debt financing, it must raise funds in the credit markets. This increased demand for credit on the part of the government will tend to put upward pressure on real interest rates. In addition, the reduction in current taxes increases disposable income, leading to a rise in spending by the private sector. This increase in the aggregate demand for goods and services results, in the short-run, in a rise in production and real GNP.

The rise in real income and real interest rates acts through two major channels to affect the private sector. First, as disposable income rises, households will increase both their consumption and their saving. The rise in savings implies an increase in the supply of credit, and this works to reduce (although not eliminate) the initial excess demand for credit created by greater government borrowing. Second, the rise in real rates of interest reduces private demands for credit as government borrowing crowds out private borrowing.

A higher real interest rate in the country running the budget deficit also leads to an appreciation in the value of the country's currency and therefore to a rise in imports relative to exports. This worsening of the trade balance increases the supply of imported goods and helps to meet the increased demand for goods and services induced by the tax cut. In this process, the need to finance the increase in net imports becomes synonymous with the increase in overseas borrowing.

By raising real interest rates, a shift to deficit financing of government expenditures leaves the economy with a lower stock of private capital

and, by increasing overseas borrowing, leaves the economy with a greater foreign debt. The economy must then divert resources in the future to pay interest on the larger foreign debt.

Not all changes in the budget deficit would be expected to affect real interest rates in this manner. For example, changes in both interest rates and the budget deficit might be caused by movements in the level of economic activity. A fall in income associated with a business cycle downturn would lower tax revenues and lead to a larger budget deficit while, at the same time, the income decline might lower real interest rates.

In this case, an increased budget deficit occurs together with lower real interest rates, but the deficit is not the cause of falling rates. Instead, both the deficit and interest rates are responding to the level of economic activity. Only changes in the deficit *not* due to cyclical influences, often measured by changes in the "high employment budget deficit", would be expected to cause real rates to rise and to crowd out private investment.

This simple story about the impact of deficit spending on the economy has several implications that can be used to test its accuracy. First, an increase in the government's high employment deficit should be associated with a rise in real rates of interest. Second, such deficits should also be associated with an appreciation of the currency. And third, they should be associated with a decline in net exports.

Evidence

The experience of the U.S. in the 1980s certainly seems consistent with the view that deficits matter. Realized real interest rates —market interest rates minus the actual rate of inflation — have been at very high levels during the past several years. The high levels may reflect the sharp decline in the rate of inflation during the 1980s if market rates incorporated expectations of a continuation of the high inflation rates of the late 1970s. However, most estimates indicate that market rates were quite high relative to expected inflation as well.

In addition, the rising deficits of the early 1980s were associated with an appreciation of the dollar. The value of the dollar rose by 37 percent from January 1980 to its peak in February 1985. Accompanying this appreciation was a shift from a trade surplus for the U.S. in 1982 to record trade deficits during the last three years.

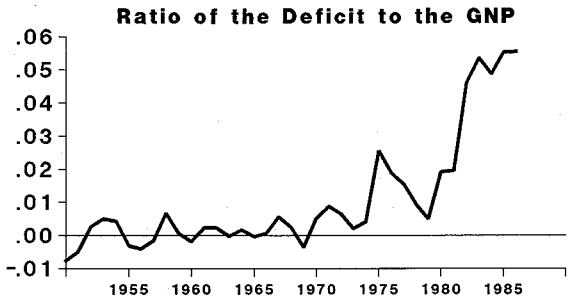
A single episode like that in the 1980s, however, is not sufficient to prove the case that budget deficits are responsible for high real interest rates, the dollar appreciation, and the trade deficit. Other factors, such as restrictive monetary policy or changes in tax policy, could be responsible. Blame could more convincingly be placed on the budget deficits if earlier periods with large high employment deficits also were associated with high real rates, a strong dollar, and a deterioration in the trade balance.

Unfortunately, the evidence from U.S. history is far from clear. In fact, many researchers have failed to find any association between budget deficits, real interest rates, and the value of the dollar in periods prior to the 1980s. The relevance of this evidence on earlier budget deficits is open to question, however.

Most previous deficits in the U.S. were associated either with wartime expenditures or with revenue declines during business cycle recessions. Wartime controls on the economy may alter the relationship between deficits and real interest rates that would normally occur in a peacetime setting, whereas interest rate movements during a recession are not being caused by the associated deficits and therefore cannot provide evidence on the impact of a shift in the cyclically adjusted deficit. In contrast to earlier deficits, the current situation is characterized by a large peacetime, high employment deficit.

The unusual behavior of the deficit in the 1980s is illustrated quite clearly in the chart, which shows the deficit as a fraction of GNP from 1950 to 1986. The recessions in 1975, 1980, and 1982 led to large increases in the deficit as federal tax revenues declined during each business downturn. Unlike the experience following the 1975 recession, the current deficit did not decline significantly as a fraction of GNP during the economic expansion following the 1982 recession. The decline during 1987 is usually attributed to a one-time windfall gain in tax revenues resulting from the Tax Reform Act of 1986.

Because the deficit experience of the last few years is so different from that of the previous thirty, the current deficit may matter even though earlier deficits did not.



Deficits don't matter

Given the weak historical evidence on the impact of deficits, some economists have argued that the choice between financing government expenditures by current taxes or by deficit financing really does not matter. Proponents of this view point out that there are theoretical grounds for expecting deficits not to matter.

They argue that when a government borrows, it is implicitly committing itself to raising taxes in the future when the borrowing must be repaid. Forward-looking households will realize that any tax cut today must lead to tax increases in the future. Households will simply save any tax cut in order to have the greater wealth in the future necessary to meet the higher expected level of taxes. Since household savings rises to the same extent as the government's credit needs increase, there is no upward pressure on real interest rates, and thus no effect on foreign exchange rates or the trade balance.

Under this view, the recent high real interest rates and the trade deficit must be due to factors other than the shift from tax to deficit financing of federal government expenditures. If this view were correct, a shift to debt financing should be associated with an increase in the private savings rate. Thus, the behavior of the savings rate provides a means of testing this view.

Evidence

The experience of the U.S. during the last few years seems strongly at odds with the view that deficits don't matter. Instead of rising, the ratio of net private savings to GNP has fallen from an average level of just over 8 percent during 1971-1980 to 7.5 percent during 1981-1986. As a result of the private sector's failure to increase its saving, the sum of private saving and the (dis)saving of the government sector — net national savings — has declined from 7 percent of GNP in the 1971-1980 period to just over 3 percent of GNP in 1981-1986.

However, the historical evidence on the relationship between saving and deficit financing is mixed. In addition, the proponents of the view that deficits don't matter are really referring to the effects of a shift from tax to deficit financing of a fixed level of government expenditures, and total federal government expenditures as a fraction of GNP have risen during the Reagan presidency.

High real interest rates and the trade deficit may reflect the rise in government expenditures and not the method by which they are financed. That is, by purchasing more of total income, the government leaves less for private consumption and investment. Real interest rates must then rise and the dollar appreciate in order to crowd out private spending. This must occur no matter what method is used to finance the increased government expenditures. Thus, the 1980s may not constitute evidence that the method used to finance expenditures matters.

Conclusions

Do deficits matter? Most economists would probably view the high real rates, strong dollar, and trade deficits of the early 1980s as evidence of the direct effects of the federal budget deficit. However, in periods prior to the 1980s, researchers generally have failed to find any strong relationship between deficit spending, real interest rates, and trade deficits. The supporting evidence for the opposing view that deficits don't matter also is weak. A skeptic therefore is unlikely to be swayed from his or her view, whether that view is that deficits do matter or that deficits do not matter.

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BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT

(Dollar amounts in millions)

Selected Assets and Liabilities Large Commercial Banks	Amount Outstanding 12/23/87	Change from 12/16/87	Change from 12/24/86 Dollar	Change from 12/24/86 Percent[7]
Loans, Leases and Investments[1] [2]	207,931	162	− 2,775	− 1.3
Loans and Leases[1] [6]	183,939	123	− 5,914	− 3.1
Commercial and Industrial	52,324	570	− 2,503	− 4.5
Real estate	72,644	− 49	5,325	7.9
Loans to Individuals	37,574	387	− 4,627	− 10.9
Leases	5,437	11	− 155	− 2.7
U.S. Treasury and Agency Securities[2]	16,676	61	3,316	24.8
Other Securities[2]	7,316	− 22	− 179	− 2.3
Total Deposits	208,339	− 1,398	− 5,364	− 2.5
Demand Deposits	53,624	− 1,206	− 5,968	− 10.0
Demand Deposits Adjusted[3]	36,416	− 290	− 3,673	− 9.1
Other Transaction Balances[4]	20,193	− 71	1,110	5.8
Total Non-Transaction Balances[6]	134,522	− 121	− 506	− 0.3
Money Market Deposit Accounts—Total	43,471	− 677	− 3,227	− 6.9
Time Deposits in Amounts of $100,000 or more	31,838	314	− 875	− 2.6
Other Liabilities for Borrowed Money[5]	19,405	− 1,812	− 7,271	− 27.2

Two Week Averages of Daily Figures	Period ended 12/14/87	Period ended 11/30/87
Reserve Position, All Reporting Banks		
Excess Reserves (+)/Deficiency (−)	114	105
Borrowings	4	9
Net free reserves (+)/Net borrowed(−)	110	96

1 Includes loss reserves, unearned income, excludes interbank loans
2 Excludes trading account securities
3 Excludes U.S. government and depository institution deposits and cash items
4 ATS, NOW, Super NOW and savings accounts with telephone transfers
5 Includes borrowing via FRB, TT&L notes, Fed Funds, RPs and other sources
6 Includes items not shown separately
7 Annualized percent change