Research Department
Federal Reserve
Bank of
San Francisco

January 28, 1983

FRB SF Weekly Letter

How Low Can Interest Rates Be Pushed?

The U.S. economy is in the worst recession in 40 years. While the broadest economic measure, real Gross National Product, hit its low point for this recession in the first quarter of 1982, there has been little sustained recovery since then. As a result of this anemic economic performance the unemployment rate rose throughout 1982 and stood at 10.8 percent in December, the highest level since 1941.

But in spite of the depressed state of the economy, there were some encouraging signs. These consisted largely of the sharp drop in interest rates since the middle of 1982 that subsequently spurred a strong recovery in the two previously most depressed industries—housing and automobiles. The economic forecasting fraternity is virtually unanimous in expecting 1983 to be better than 1982. What can the Federal Reserve do to aid an economic recovery?

Fed policy issues

The key policy issues now facing the Federal Reserve are two: whether interest rates have declined sufficiently to provide for a sustainable recovery in real output, and whether the recent surge in M1 has been sufficiently large to create concern about reigniting future inflation. With respect to the second issue, the unexpected collapse in the velocity of M1 in 1982 (some 5 percent below its originally forecasted value) and, more recently, the wave of interest rate deregulation has called into question the usefulness of M1 as a guide to policy, at least through the first half of 1983. With M1, the Federal Reserve's primary monetary guideline temporarily "out of order", the major focus of policy must be directed toward the broader monetary aggregates and/or interest rates. This *Weekly* will focus on interest rates.

In evaluating the effect of interest rates on the economy, one must consider not only the market rate but the real interest rate. This is the market interest rate adjusted for the expected rate of inflation. Long-term interest rates play a key role in influencing the economy, and they probably play a more significant role than short-term interest rates. But, in this *Weekly*, we will focus on short-term interest rates for two reasons. First, the Federal Reserve's instruments of monetary control, the discount rate and open market operations, have their major impact on short-term interest rates. The Federal Reserve has little or no direct impact on long-term interest rates, which are dependent primarily on the productivity of capital and long-run inflation expectations. Second, it is easier to measure real interest rates in the short-term market than in the long-term market because short-run inflation expectations are closely related to the most recent actual inflation rate, while long-run inflation expectations (over the next five to ten years) are not necessarily related to past inflation.

One reasonable measure of the real short-term interest rate is the difference between the market interest rate and the inflation rate. In Chart I, we compared the 3-month Treasury bill rate and the inflation rate (measured on a 12-month basis). Since September 1982, the Treasury bill rate has averaged close to 8 percent and the inflation rate 5½ percent, giving a risk-free real short-term interest rate of about 2½ percent. This is down substantially from the Treasury bill rate of as recent a month as June 1982 when it was 12½ percent. At that time, the inflation rate was about 6 percent and therefore the risk-free real short-term interest rate was about 6½ percent. Indeed, in the 1½ years through June 1982, the real Treasury bill rate had been extraordinarily high, in the 5-7 percent range, and was a major cause of the weakness in the economy in 1981 and 1982.

Alternative views

Should, then, the Federal Reserve attempt to push the real short-term interest rates down

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further to stimulate growth? There are two approaches to answering this question. The first is that, given the depths of the recession, we should allow real interest rates to become negative, that is, market interest rates should be pushed below the inflation rate to encourage a recovery. Once the economy had started to show a sustained recovery, the appropriate policy would be to raise the interest rate above the inflation rate to ensure that the growth in aggregate demand was not excessive, that is, did not reignite inflation.

Experience indicates that this flexible approach to interest rates is particularly important. In the 1974-75 recession, the Treasury bill rate fell below the inflation rate and the real interest rate was minus 2-3 percent. Following the 1974-75 recession, however, the Treasury-bill rate never rose above the inflation rate, and the real interest rate was kept close to zero for four years (mid-1975 to mid-1979) as the economy grew rapidly and added 11 million people to the employment roles. (The reluctance to raise the real interest rate in this expansion period was probably due to the unemployment rate, which remained well above 6 percent.)

The alternative approach argues that we cannot now let interest rates fall much below current levels because government deficits are more dangerous than they were in 1974-75. The recent deficits require a higher real interest rate to finance. In 1974-75, government deficits were largely induced by the business cycle. In that recession, the decline in tax receipts increased the deficit, while the subsequent economic expansion increased receipts and reduced the deficit. In 1982-83, the business cycle deficit has, superimposed on it, a structural deficit that will not disappear when the economy and tax receipts increase.

Role of deficits

To understand this consideration, it is useful to review the history of government spending and structural deficits (Chart 2). The government spending share of GNP moved gradually from about 17 percent to 21 percent between 1955 and 1979. From 1979-1983, it rose from 21 percent to 25 percent. The most recent rise is partly due to the relatively weak economy. However, even if GNP grew strongly between now and 1985 the spending share is expected to decline only modestly. The reason is that in spite of public perceptions to the contrary, the Reagan administration did not reduce the trend in government spending; it only changed the mix of spending. Thus, with the continued rise in the ratio of government spending to GNP, the cost to the economy of financing government has continued to rise.

There are only three ways in which increased government spending can be financed: first, by higher tax receipts; second, by the increased issuance of government bonds, which the public can be induced to hold only with higher real interest rates; and third, by printing money, which increases the inflation rate. Cutting taxes without cutting government spending does not reduce the cost of the government, it merely redistributes it from one source of financing to another.

In the 1960 s, the rise in the trend of government spending was financed by tax revenues generated by a rapidly growing real economy. In the period from 1960-69, we had the longest continuous period of economic expansion in our history (real growth averaged 4.3 percent per year) and this generated tax receipts that financed the growth in government spending even when tax rates were reduced.

In the 1970s, the continued growth in government spending as a share of GNP was financed by a higher inflation rate. Real GNP did not grow very rapidly (averaging 2.9 percent per year), but nominal income, because of inflation, grew at an average rate of 10 percent per year, which pushed most people into higher tax brackets. This form of "inflation tax" financed the increased government spending.

In the 1980s the Reagan administration has cut tax rates sufficiently to stop "bracket

Chart 1

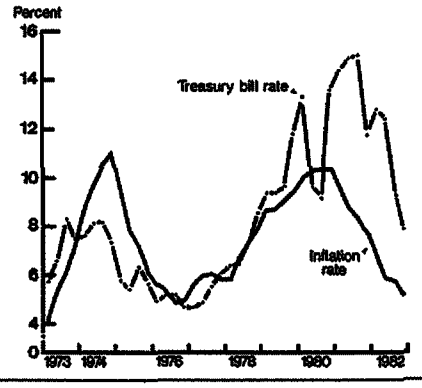
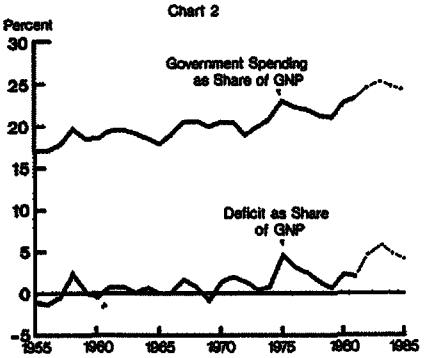


Chart 2



creep" (and thus tax receipts as a percentage of GNP will stabilize around 20 percent in 1984, down modestly from 20.5 percent in 1980). The Federal Reserve has cut the inflation rate from over 10 percent in 1980 to 5 percent in 1982. If these gains are not to be reversed, the only method left of financing the continued rise in government spending as a share of GNP is to increase the government issuing of bonds. This is the primary source of what has been called the structural deficits. In the Reagan administration, it looks as if the deficits will average close to 5 percent of GNP, the highest in our history outside of a major war.

Deficits and savings

To focus more closely on the effects of deficits on interest rates and financial markets, we must look at deficits as a share of net private savings of the economy. Net private savings equals gross private savings less depreciation allowances to maintain the existing capital stock. In the 1960s, the deficit averaged about 10 percent of net private savings, leaving 90 percent available for private use. In the 1970s, the deficits varied from year to year, but averaged just over 20 percent of net private savings. In 1982, deficits consumed 80 percent of net private savings.

Most analysts do not expect things to change significantly in the years ahead. In 1983, the cash deficit will consume between 70 and 90 percent of net savings. The range depends upon whether the tax incentives for savings substantially increase savings or not. By 1985, the deficit is not expected to decline significantly, but the economy is assumed to grow rapidly, reducing the deficit's share of net private savings to between 60 and 70 percent.

Conclusion

This country has had no experience with deficits of this size, and therefore, no clear idea of how high real interest rates must go to finance them. In the 1960s the Treasury bill rate was approximately 1 to 1½ percent above the inflation rate, which suggests that a real interest rate of 1-1½ percent was necessary to finance the much lower deficits that accrued in those years without inflation financing. The current real Treasury bill rate of 2½ percent may be about as low as that interest rate can go and still finance the much larger deficits that are currently being produced without inflation financing.

While this analysis is rather speculative, one thing is clear, further reductions in short-term interest rates would require the Federal Reserve to increase the rate of growth of the money supply. The San Francisco Bank's money market model estimates that for every 1 percent reduction in interest rates, M1 will need to grow 5 percent faster (at annual rates) than it otherwise would have over the next three months.

If the financial markets interpret further reductions in short-term interest rates as an attempt by the Fed indirectly to print money to finance the deficit, long-run inflation expectations and long-term interest rates may rise. Should policymakers decide that the recession is sufficiently severe to warrant further reductions in short-term interest rates, they should consider the effect it would have on the long-term bond markets. A rise in long-term interest rates is a signal that the financial markets perceive monetary policy to be too easy.

Michael Keran

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BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT

(Dollar amounts in millions)

Selected Assets and Liabilities Large Commercial Banks	Amount Outstanding 1/12/83	Change from 1/5/83	Change from year ago Dollar	Change from year ago Percent
Loans (gross, adjusted) and investments*	163,305	−1,137	6,124	3.9
Loans (gross, adjusted) — total#	142,480	−1,076	6,544	4.8
Commercial and industrial	44,818	− 907	3,124	7.5
Real estate	57,586	1	1,317	2.3
Loans to individuals	23,973	− 44	288	1.2
Securities loans	2,597	− 154	515	24.7
U.S. Treasury securities*	7,395	− 9	1,550	26.5
Other securities*	13,430	− 52	− 1,970	− 12.8
Demand deposits — total#	41,153	−3,689	− 844	− 2.0
Demand deposits — adjusted	28,951	−1,178	− 1,070	− 3.6
Savings deposits — total	53,395	3,577	22,247	71.4
Time deposits — total#	82,186	−2,638	− 7,714	− 8.6
Individuals, part. & corp.	72,656	−2,514	− 8,265	− 10.2
(Large negotiable CD's)	28,215	− 926	− 7,366	− 20.7

Weekly Averages of Daily Figures	Week ended 1/12/83	Week ended 1/5/83	Comparable year-ago period
Member Bank Reserve Position			
Excess Reserves (+)/Deficiency (−)	108	144	68
Borrowings	33	20	131
Net free reserves (+)/Net borrowed(−)	75	124	− 63

* Excludes trading account securities.
\# Includes items not shown separately.

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