The 1975-76 Federal Deficits and the Credit Market

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THE possible effects on credit markets of the fiscal 1975 and 1976 U.S. Government deficits were of considerable concern in late 1974 and early 1975. Projections of these deficits ran from \$50 to \$80 billion or more. A number of analysts outlined certain conditions under which the financing of such large deficits by Treasury borrowing would have adverse effects on credit markets, pushing short-term interest rates into the double-digit range again and crowding out private borrowing for capital formation. If these conditions developed, it was suggested that the Federal Reserve might attempt to keep interest rates from rising by increasing its rate of purchase of Government securities. As a result, there would be a large increase in the growth of the money stock, which eventually would lead to a new inflationary spiral that would push interest rates higher due to increased inflationary expectations.[1]

The concern for credit markets was based on the assumption that the increased Government demand for credit would overwhelm any decrease in the private demand for credit as well as any increase in the supply of credit. Other analysts maintained that although Government borrowing would increase, private borrowing would decrease substantially during the recession. This decrease in the private demand for funds was expected to largely offset the increased Government demand, with the result that the larger deficits would have little effect on either interest rates or the total quantity of credit.[2]

The deficits in fiscal 1975 and 1976 were \$43.6 billion and \$65.6 billion, respectively, while the largest deficit in the previous ten fiscal years was \$25.2 billion (see Table I).[3] Thus, relative to recent historical standards the deficits in 1975 and 1976 were indeed large, and it is not surprising that they generated considerable concern. But what happened to credit markets and interest rates during this period?

Table I

Fiscal Year Surplus or Deficit

Fiscal Year	Surplus (+) or Deficit (−) (In Billions of Dollars)
1965	− 1.6
1966	− 3.8
1967	− 8.7
1968	−25.2
1969	+ 3.2
1970	− 2.8
1971	−23.0
1972	−23.2
1973	−14.3
1974	− 3.5
1975	−43.6
1976	−65.6

Source: Table, "Federal Fiscal Operations: Summary," Federal Reserve *Bulletin*.

FRAMEWORK FOR ANALYZING CREDIT MARKET CONDITIONS

Credit market conditions can be discussed in terms of a simple supply and demand framework which lumps all credit markets together.[4] The quantity of credit and the price of credit (the market interest rate) are determined by the supply of and the demand for credit. The total demand for credit consists of a private demand plus a Government demand.

An increase in the Federal deficit which is financed by increased Government borrowing results in an increase in the Government's demand for credit and, hence, an increase in the total demand for credit above what it would be in the absence of the increased Government borrowing. The extent to which the increased Federal deficit increases the *total*

[1]This possibility was expressed in this *Review* in a number of different articles. See, for example, Darryl R. Francis, "How and Why Fiscal Actions Matter to a Monetarist," this *Review* (May 1974), p. 7; W. Philip Gramm, "Inflation: Its Cause and Cure," this *Review* (February 1975), pp. 5-6; or Susan R. Roesch, "The Monetary-Fiscal Mix Through Mid-1976," this *Review* (August 1975), pp. 2-7.

[2]This point of view was clearly expressed by James L. Pierce, "Interest Rates and Their Prospect in the Recovery," *Brookings Papers on Economic Activity* (1:1975), pp. 89-112.

[3]Using the unified budget data as reported in the Federal Reserve *Bulletin*.

[4]The discussion in this paper is only in terms of the *nominal* supply and demand for credit and *nominal* rates of interest.

demand for credit depends in large part on whether the deficit is predominantly due to "active" or "passive" elements in the budget.[5] *Discretionary* changes in Federal expenditures and taxes which result from Congressional or Executive actions are "active" elements in the budget. Nondiscretionary, or *automatic*, changes in Federal expenditures or taxes which result from changes in the level of economic activity are "passive" elements in the budget. A Federal deficit which is primarily the result of *active* elements in the budget will tend to produce a larger increase in the total demand for credit than if the deficit were primarily due to *passive* elements. This tendency reflects the fact that credit finances economic activity. If the budget deficit is the result of passive elements, the decline in economic activity which leads to the increased deficit is also generally accompanied by a decline in the private demand for credit.

Given an increase in the total demand for credit from an increased Government deficit, regardless of whether the deficit is active or passive, the market interest rate increases as potential borrowers bid for the available credit. As a result, the quantity of credit supplied increases as suppliers of credit are induced to increase their lending by the rise in interest rates. Since Federal Government borrowing is relatively insensitive to changes in the cost of borrowing, the main effect of a rise in the market interest rate is on private sector borrowing. If other factors are unchanged, private borrowers will want to borrow a smaller quantity of credit at this higher interest rate. Since the total quantity of credit supplied is larger, this implies that the *proportion* of credit going to the Government is larger. The resulting absolute decrease in the amount of private sector credit is one illustration of the argument that Government borrowing "crowds out" private borrowing.[6]

This simplified analysis describes the underlying rationale for some of the warnings expressed in 1974-75 about higher interest rates and private borrowing. It was maintained that if the Government increased its debt by $50 to $100 billion in order to finance the large projected deficits, with other factors unchanged, market interest rates would rise. Furthermore, it was claimed that if the Federal Reserve purchased a large proportion of the increased debt in an attempt to prevent this increase in interest rates, higher expected rates of inflation would result. This, in turn, would lead to higher interest rates. The above analysis also implied that the nominal quantity of credit outstanding would increase.

The above outlook for the credit market depended heavily on the assumption that there would not be a substantial decrease in the private demand for credit. Some analysts, however, maintained that the recession would induce much lower private investment because of higher excess capacity, and that the private demand for credit would therefore decrease substantially during fiscal 1975. Private borrowing would be lower primarily as a result of a decline in the private demand for credit and not as a result of a rise in market interest rates. This decrease in private demand, according to proponents of this view, was expected to offset, although not totally, the increase in the Government's demand for funds.[7]

This point of view generally maintained that the credit market would be basically unaffected, in terms of price and total quantity, by the large increase in Government borrowing. As a result of the changes in private and Government demands, the distribution of total credit would change, but interest rates would not be substantially increased and the quantity of credit outstanding would be increased only slightly. Of course, in the absence of the Government's increased borrowing, the expected decrease in private demand would have implied even lower interest rates in 1975-76, according to this view.

GOVERNMENT BORROWING, PRIVATE BORROWING, AND THE CREDIT MARKET IN FISCAL 1975 AND 1976

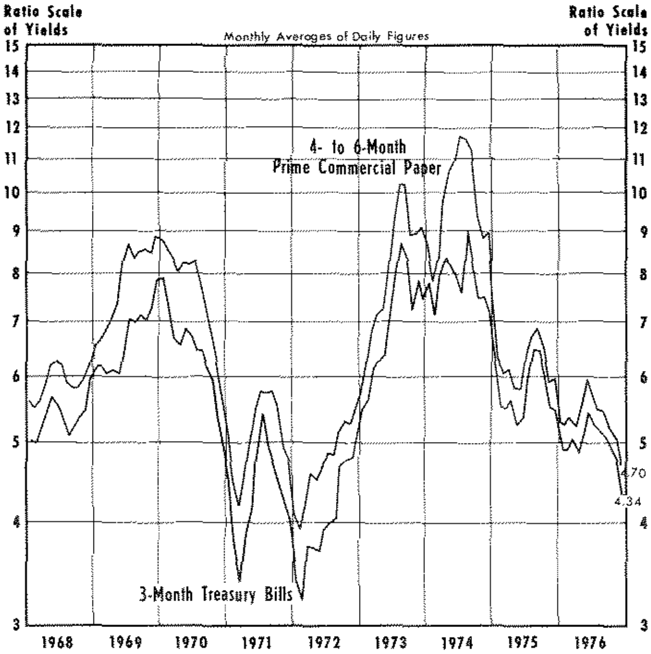
In 1975 and 1976, short-term interest rates did not rise above their mid-1974 peaks, but instead tended to decline. Although short-term rates rose in mid-1975 and again in mid-1976 (see Chart I), these upward movements were not sustained and were not as severe as some analysts had expected. In mid-1975, the upward movement in short-term rates peaked at rates below 7 percent, and in mid-1976 they peaked at

[5]For a detailed discussion of "active" and "passive" budget deficits, see Keith M. Carlson, "Large Federal Budget Deficits: Perspectives and Prospects," this *Review* (October 1976), pp. 2-7.

[6]For a detailed discussion of "crowding out", see J. Kurt Dew, "The Capital Market Crowding Out Problem in Perspective," Federal Reserve Bank of San Francisco *Economic Review* (December 1975), pp. 36-42; Roger W. Spencer and William P. Yohe, "The 'Crowding Out' of Private Expenditures by Fiscal Policy Actions," this *Review* (October 1970), pp. 12-24; and Keith M. Carlson and Roger W. Spencer, "Crowding Out and Its Critics," this *Review* (December 1975), pp. 2-17.

[7]Pierce estimated that Government borrowing in calendar year 1975 would increase by $80 billion while borrowing by other nonfinancial sectors would decrease by $72 billion. See Pierce, "Interest Rates," pp. 106-8.

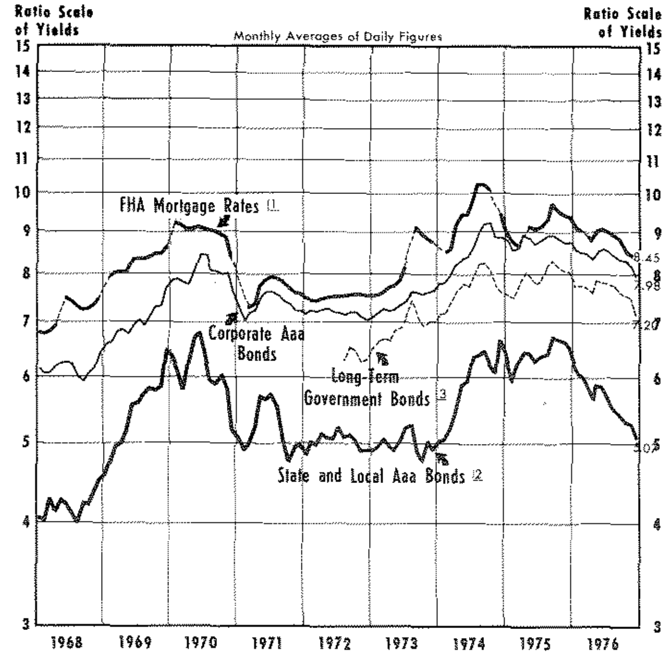
Chart I
Short-Term Interest Rates



Latest data plotted: December

Prepared by Federal Reserve Bank of St. Louis

Chart II
Long-Term Interest Rates



1 FHA 30-year mortgages. Dashed lines indicate data not available.
2 Monthly averages of Thursday figures.
3 Average of yields on coupon issues due or callable in ten years or more, excluding issues with Federal estate tax privileges. Yields are computed by this Bank.
*Latest data plotted: FHA-November; Others-December

Prepared by Federal Reserve Bank of St. Louis

rates below 6 percent. In both cases, short-term rates were well below the 1974 peaks of about 12 percent for four- to six-month commercial paper and about 9 percent for three-month Treasury bills. Long-term interest rates also generally declined from mid-1974 levels, although not as dramatically or consistently as short-term rates (see Chart II).

The funds raised by all nonfinancial sectors in fiscal 1975 were about $8 billion lower than in fiscal 1974 (see Table II). In order for both interest rates and the total amount of new credit to be lower in fiscal 1975 than in mid-1974, the *total* demand for credit must have decreased in 1975. Since Government demand for credit increased in fiscal 1975, private demand must have decreased substantially.[8] A decrease in the demand for credit by the private sector would have to more than offset the increased Government demand in order for the total demand for credit to decline.

While the Federal Government raised $50.7 billion in fiscal 1975, compared with $3.3 billion in fiscal 1974, all other nonfinancial sectors raised $132.6 billion — a decrease of $55.5 billion from the fiscal 1974 level. This was the largest year-to-year decrease in the amount of funds going to the private nonfinancial sector in the post-World War II period.

Table II

Funds Raised by Nonfinancial Sectors*

(Billions of Dollars)

Fiscal Year	Total**	U.S. Government	All Other Nonfinancial
1965	$ 71.2	$ 3.8	$ 67.5
1966	76.0	1.6	74.4
1967	60.8	1.8	59.1
1968	97.0	20.7	76.3
1969	96.7	−0.4	97.1
1970	93.6	3.8	89.8
1971	124.4	19.5	105.0
1972	161.5	19.4	142.1
1973	202.1	19.5	182.6
1974	191.5	3.3	188.1
1975	183.3	50.7	132.6
1976	241.0	82.8	158.2

*Based on the sum of unadjusted quarterly flows for each fiscal year, series updated as of November 1976.

**Columns may not sum to total due to rounding.

Source: Table, "Summary of Funds Raised in Credit Markets: Credit Market Funds Raised by Nonfinancial Sectors," Flow of Funds Section, Division of Research and Statistics, Board of Governors of the Federal Reserve System.

[8]Susan R. Roesch and Keith M. Carlson both noted this. See Roesch, "The Monetary-Fiscal Mix," p. 2; and Carlson, "Large Federal Budget Deficits," p. 6. The fall in private demand was also discussed by R. Alton Gilbert, "Bank Financing of the Recovery," this *Review* (July 1976), pp. 2-9.

The decrease in the private demand for credit can be attributed in a general way to the decline in the level of economic activity between late 1973 and early 1975, during which time the United States experienced its most severe postwar recession. However, the specific factors affecting the demand for credit, as well as the supply of credit, are more complex.

The last recession was preceded by a number of shocks to the economy: the oil embargo and subsequent large increase in the price of energy; the end of wage and price controls; crop failures; and the introduction of new Government regulations regarding pollution and safety. These factors all combined to effect a one-time increase in the price level and a reduction in the country's productive capacity.[9]

The increase in the price level was first perceived as an increase in the rate of inflation, and led to upward revisions in lenders' and borrowers' expected rates of inflation, at least in the short term. As a result, the supply of credit decreased and the demand for credit increased, and market interest rates rose rapidly in fiscal 1974. However, without any further shocks to the price level, the rate of change of prices returned to its previous pace. As lenders and borrowers realized this, their inflationary expectations were revised downward. This resulted in a decline in the demand for credit and an increase in the supply, leading to a decline in market rates of interest.

Furthermore, the possibility of future oil embargoes, new wage and price controls, and further substantial changes in Government regulations resulted in increased uncertainty about the future state of the economy and lowered business confidence concerning profitable productive opportunities. Consequently, producers became more cautious about committing themselves to new investment projects, and the demand for credit to finance such investment declined. This general uncertainty also led to a substantial increase in the supply of short-term credit as many economic units sought to build their "liquidity" as protection against future contingencies. Another factor which contributed to the decline in private demand for short-term credit in fiscal 1975 was the sharp decrease in inventory investment during the first half of 1975, which tended to reduce short-term private borrowing.[10]

In contrast to fiscal 1975, the total funds raised in fiscal 1976 by all nonfinancial sectors increased by about $58 billion. Since the 1976 budget deficit was larger than the 1975 deficit (Table I), the Government demand for credit again increased. The Federal Government raised $82.8 billion in fiscal 1976, an increase of about $32 billion over the fiscal 1975 level of $50.7 billion (see Table II). The funds raised by all other nonfinancial sectors also increased in fiscal 1976, by $25.6 billion over the fiscal 1975 level. Nevertheless, these private nonfinancial sectors raised almost $30 billion less in fiscal 1976 than in fiscal 1974.

Although the total funds raised by the private sector increased in fiscal 1976, the private demand for credit did not show a substantial increase. In fact, private short-term credit declined during most of fiscal 1976. The sluggish private demand for credit during fiscal 1976 showed up in the decline of business loan demand at commercial banks and the volume of commercial paper outstanding, both of which are primary sources of short-term credit by corporations.[11] The volume of commercial paper declined between March 1975 and May 1976, while business loans at commercial banks declined throughout fiscal 1976.

With an increase in the Government's demand for credit and little change in private demand, the *total* demand for credit increased. However, interest rates did not increase, as would be expected if the total demand for credit increased while the supply was constant. Instead, in fiscal 1976 interest rates were generally lower than in fiscal 1975. This combination of lower interest rates and higher credit indicates that the supply of credit increased both absolutely and relative to the total demand for credit.

The decrease in the rate of inflation since mid-1974 and the moderate rates of growth of the monetary base and the money stock during fiscal 1976 resulted in downward revisions of investors' expected rates of inflation. This tended to increase the supply of credit since lenders did not have to require as high an interest rate to maintain their purchasing power. In addition, the amount of funds available for lending increased during fiscal 1976, as indicated by an almost 19 percent increase in gross private saving over this period.[12]

The distribution of credit between the Government and private sectors has changed considerably in the last two fiscal years. In fiscal 1975, 27.7 percent of all

[9]See Denis S. Karnosky, "The Link Between Money and Prices — 1971-76," this *Review* (June 1976), pp. 17-23.

[10]See Gilbert, "Bank Financing," pp. 5-6.

[11]Ibid., p. 4.

[12]Gross private saving includes personal saving and undistributed corporate profits (with inventory valuation and capital consumption adjustments).

Table III

Proportion of Total Funds Raised by Nonfinancial Sectors Going to the U.S. Government*

(Percent)

Fiscal Year	U.S. Government
1965	5.3%
1966	2.1
1967	2.9
1968	21.3
1969	**
1970	4.1
1971	15.6
1972	12.0
1973	9.7
1974	1.7
1975	27.7
1976	34.4

*Based on the sum of unadjusted quarterly flows for each fiscal year, series updated as of November 1976.

**Represents a net outflow for this sector (negative flow).

Source: Table, "Summary of Funds Raised in Credit Markets: Credit Market Funds Raised by Nonfinancial Sectors," Flow of Funds Section, Division of Research and Statistics, Board of Governors of the Federal Reserve System.

funds raised in the credit markets by nonfinancial sectors went to the U.S. Government, up from 1.7 percent in fiscal 1974 (see Table III). The Government's share of funds increased further in fiscal 1976, to 34.4 percent.

THE FEDERAL DEBT AND THE FEDERAL RESERVE

As shown in Panel 3 of Chart III, the proportion of the total outstanding Federal debt (total gross public debt less debt held by U.S. Government agencies and trust funds) held by the Federal Reserve had been rising fairly steadily through 1974 — from about 12 percent in 1962 to almost 24 percent in fiscal 1974. In the ten fiscal years prior to fiscal 1975, the largest increase in the Federal debt was recorded in fiscal 1968, $20.7 billion, of which 26.6 percent was monetized.[13] From fiscal 1970 through fiscal 1974, the Federal Reserve generally monetized over 20 percent of the increases in the Federal debt (see Table IV). Many analysts expected this pattern to continue through fiscal 1975 and 1976, but instead the Federal Reserve monetized much lower proportions of the increases in the debt.

[13]The Federal Reserve does not purchase Government securities directly from the Treasury when engaging in open market operations. Rather, it purchases securities which the Treasury has already sold to the private sector.

Table IV

Federal Reserve Holdings of Federal Debt

Period Ending June:	Changes in Federal Debt (Billions of Dollars)	Changes in Federal Debt Held by the Federal Reserve Banks (Billions of Dollars)	Proportion of Change in Federal Debt Held by the Federal Reserve Banks (Percent)
1970	$ 6.8	$3.6	53.0%
1971	19.5	7.8	40.0
1972	20.6	5.9	28.6
1973	18.9	3.6	19.1
1974	2.2	5.5	250.0
1975	51.0	4.2	8.2
1976	82.9	9.7	11.7

Source: Table, "Ownership of Public Debt," selected issues of the Federal Reserve *Bulletin*.

To finance the 1975 deficit, Federal debt increased $51 billion.[14] During fiscal 1975, the Federal Reserve increased its holdings of the outstanding debt by $4.2 billion, so that 8.2 percent of the increase in the debt was monetized (see Table IV). In fiscal 1976, 11.7 percent of the $82.9 billion increase in the debt was monetized. Consequently, there was not a large increase in the growth of the monetary base, and the expected surge in the money stock did not materialize (see panels 4 and 5 of Chart III). While the proportion of the total outstanding Federal debt held by the Federal Reserve decreased, a larger proportion was being taken by commercial banks, corporations, and "other investors"[15] (see Tables V and VI).

SUMMARY AND OUTLOOK

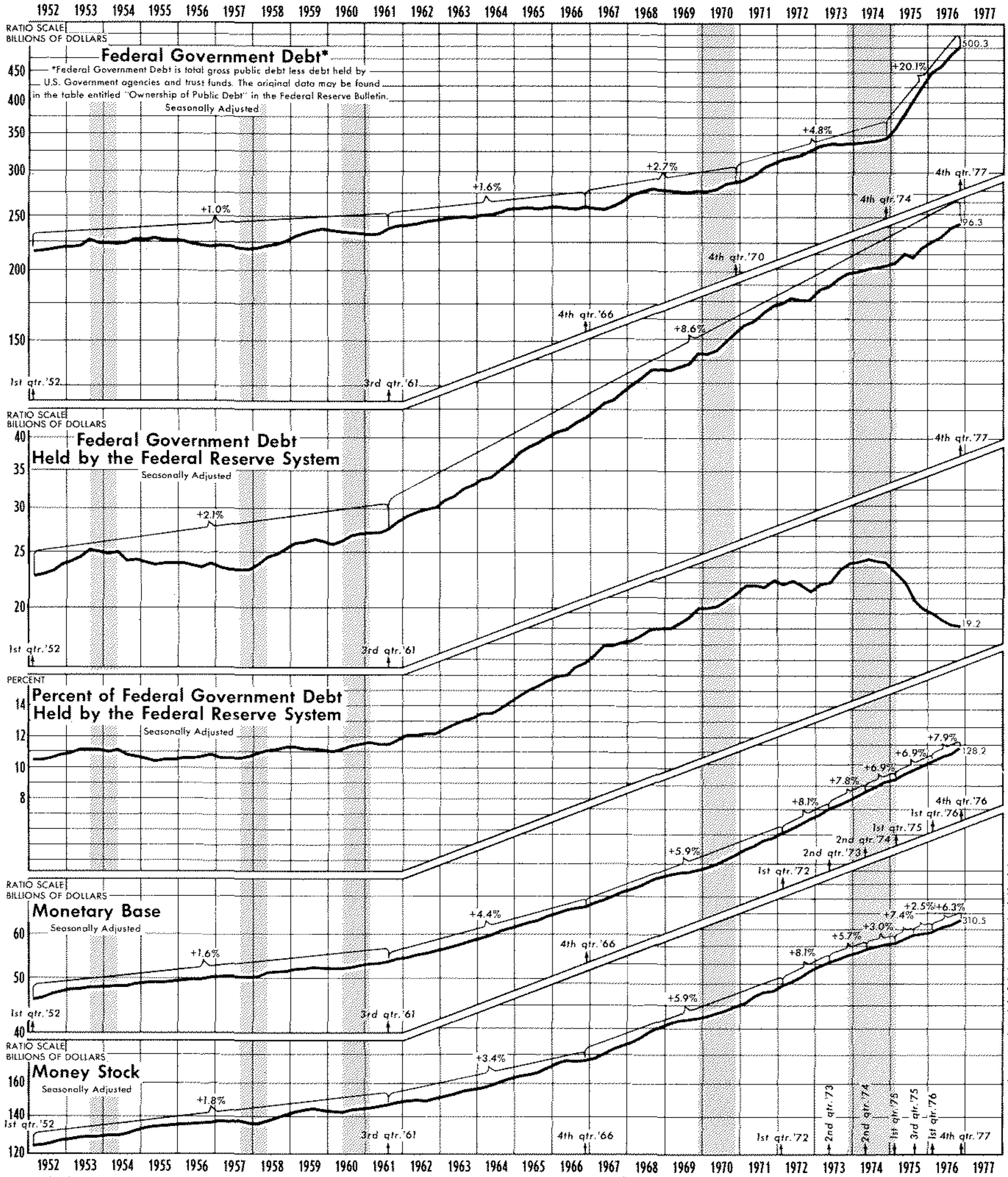
Of the total funds raised in the credit markets in fiscal 1975 and 1976, a larger proportion went to the Government than in the previous ten years (Table III). In fiscal 1975, the private demand for funds decreased; the private sector wanted to borrow less at any level of interest rates. Thus, their share of the total funds raised would have declined even if the Government's demand for funds had remained constant. On the other hand, had the Government demand for funds not increased, the decreased demand by private borrowers would have resulted in even lower interest rates.

[14]Federal debt is not equal to the budget deficit mainly because of: 1) changes in the deficits of off-budget agencies, and 2) changes in cash and monetary assets of the Treasury.

[15]"Other investors" include savings and loan associations, nonprofit institutions, corporate pension trust funds, dealers and brokers, and certain Government deposit accounts and Government-sponsored agencies.

Chart III

Influence of Federal Government Debt on Monetary Expansion



The first four shaded areas represent periods of business recessions as defined by the National Bureau of Economic Research. The fifth shaded area is tentative and has been defined by the Federal Reserve Bank of St. Louis.

Latest data plotted: MB and MS-4th quarter; Others-4th quarter estimated

Table V

Ownership of Federal Debt
(Billions of Dollars)

Period Ending June:	Federal Debt	Federal Debt Held By: Federal Reserve Banks	Commercial Banks	Individuals	Insurance Companies	Mutual Savings Banks	Corporations	State and Local Governments	Foreign and International	Other Investors
1965	$253.9	$39.1	$58.2	$70.7	$10.7	$5.6	$15.3	$24.1	$15.7	$16.8
1966	253.2	42.2	54.8	72.8	10.0	5.0	14.2	24.5	15.4	16.9
1967	250.9	46.7	55.5	70.4	9.0	4.2	11.0	23.6	14.7	19.3
1968	271.6	52.2	59.7	74.2	8.5	4.0	12.0	25.1	12.9	22.7
1969	268.9	54.1	55.3	77.3	8.1	3.5	11.1	26.4	11.1	22.0
1970	275.7	57.7	52.6	81.8	7.2	3.2	8.5	29.0	14.8	21.0
1971	295.2	65.5	61.0	75.4	7.0	3.3	7.4	25.9	32.7	17.2
1972	315.8	71.4	60.9	73.2	6.7	3.5	9.3	26.9	50.0	14.0
1973	334.7	75.0	58.8	75.9	6.3	3.3	9.8	28.8	60.2	16.6
1974	336.9	80.5	53.2	80.7	5.9	2.6	10.8	28.3	57.7	17.3
1975	387.9	84.7	69.0	87.1	7.1	3.5	13.2	29.6	66.0	27.6
1976	470.8	94.4	91.8	96.4	10.5	5.1	25.0	39.5	69.8	38.2

Source: Table OFS-2, "Estimated Ownership of Public Debt Securities by Private Investors," *Treasury Bulletin* (September 1976), p. 65.

In fiscal 1976, the supply of credit increased relative to demand, so that the increased budget deficit again did not have the adverse effects on interest rates and private borrowing which had been expected by some analysts. As a result of the large decline in the private demand for credit in fiscal 1975 and the increased supply of credit in fiscal 1976, upward pressure on interest rates did not materialize.

The Federal Reserve did not purchase a large proportion of the debt in fiscal 1975 and 1976, compared to the previous five fiscal years. In fact, the Federal Reserve's share of the total outstanding debt declined in the last two fiscal years. The Government deficit was mainly financed by the private sector, with larger proportions of the debt held by commercial banks, corporations, and some nonbank financial institutions.

Table VI

Percentage Ownership of Federal Debt

Period Ending June:	Proportion of Federal Debt Held By: Federal Reserve Banks	Commercial Banks	Individuals	Insurance Companies	Mutual Savings Banks	Corporations	State and Local Governments	Foreign and International	Other Investors
1965	15.4%	22.9%	27.8%	4.2%	2.2%	6.0%	9.5%	6.2%	6.6%
1966	16.6	21.6	28.8	3.9	2.0	5.6	9.7	6.1	6.7
1967	18.6	22.1	28.1	3.6	1.7	4.4	9.4	5.9	7.7
1968	19.2	22.0	27.3	3.1	1.5	4.4	9.2	4.7	8.4
1969	20.1	20.6	28.7	3.0	1.3	4.1	9.8	4.1	8.2
1970	20.9	19.1	29.7	2.6	1.2	3.1	10.5	5.4	7.6
1971	22.2	20.7	25.5	2.4	1.1	2.5	8.8	11.1	5.8
1972	22.6	19.3	23.2	2.1	1.1	2.9	8.5	15.8	4.4
1973	22.4	17.6	22.7	1.9	1.0	2.9	8.6	18.0	5.0
1974	23.9	15.8	24.0	1.8	0.8	3.2	8.4	17.1	5.1
1975	21.8	17.8	22.5	1.8	0.9	3.4	7.6	17.0	7.1
1976	20.0	19.5	20.5	2.2	1.1	5.3	8.4	14.8	8.1

Source: Table OFS-2, "Estimated Ownership of Public Debt Securities by Private Investors," *Treasury Bulletin* (September 1976), p. 65.

The negligible impact of the 1975-76 Federal deficits on credit markets suggests that these deficits were primarily due to passive rather than active elements in the budget. Thus, increased Government borrowing due to the decline in economic activity tended to be offset by a concomitant reduction in private borrowing. For example, it has been estimated that two-thirds of the budget deficit during this period was due to passive elements.[16]

Large budget deficits such as those experienced in 1975 and 1976 will continue to be a matter of concern for the next few years. The projected deficit for fiscal 1977 is $57.2 billion, somewhat lower than the fiscal 1976 deficit, and this is before any new tax cuts or spending programs which the new Administration may propose to include in this year's budget. With a $12-16 billion program like that recently proposed by the new Administration for fiscal 1977, the current budget deficit will probably be larger than the $65.6 billion fiscal 1976 deficit.

If the private demand for credit remains sluggish in 1977, as was the case during most of 1976, then there will be little upward pressure on interest rates as a result of the large amount of Government borrowing required to finance the 1977 deficit. On the other hand, if private borrowing increases rapidly in 1977, the large amount of Government borrowing will contribute to strong upward pressure on interest rates. Without a matching increase in the supply of credit, such an increased demand will increase interest rates. Under these circumstances, the large Government deficit could lead to the crowding-out effects which some feared would occur in 1975-76.

[16]Carlson, "Large Federal Budget Deficits," p. 6.