

June 1, 1984

## Factors Influencing Long-Term Interest Rates

Since February 1984, long-term interest rates have started to rise again. Twenty-year government bond rates, for example, have climbed by almost 2 percentage points to 13-1/2 percent in mid-May. Short-term interest rates have also increased, but at a much slower pace—ninety-day Treasury bill rates rose by about 1 percentage point to just over 10 percent in the same period (Chart 1). While some of this difference may be associated with special factors—such as a temporary decline in the Treasury bill auction—it suggests that the major force now driving rates up are long-term considerations.

How long-term interest rates will behave during the rest of the year is uncertain as there is considerable disagreement among financial analysts. Henry Kaufman of Salomon Brothers currently forecasts that long-term Treasury bill rates will approach 15 percent by early next year, while Richard Hoey of A.G. Becker Paribas forecasts that rates will drop below 12 percent by this summer. The reason for this diversity of opinions is that different analysts assign different weights to each of the various influences on those rates.

Long-term interest rates are determined in financial markets that are basically "forward looking" in the sense that they incorporate *expectations* about future inflation and other influences on the supply and demand for credit over the life of the long-term investment. Experience over the last decade suggests that three factors, in particular, have had a major impact on changes in long-term interest rates: (1) the inflation rate, which determines the real purchasing power value of the security at maturity; (2) the state of the business cycle, which determines the strength of private credit demands (the stronger the economy, the greater the private demands for credit and the higher the interest rate); and (3) budget deficits, which determine the government's

demand for credit. (The supply of credit from household and corporate savings is also an important factor in the *level* of interest rates. However, the private savings rate has been remarkably stable for many decades, and therefore does not appear to be an important influence on *changes* in long-term interest rates.)

### **Inflation expectations**

There is a strong tendency for long-term interest rates to rise and fall with movements in the actual inflation rate (Chart 2) because expectations of future inflation are strongly influenced by experience with actual inflation. Has an increase in inflation expectations been a major factor behind the recent rise in long-term interest rates?

Most forecasters expect inflation in 1984 to hover around 5-1/2 percent, up from the 3-1/2 percent experienced in 1983. Furthermore, there is a general view that inflation will be higher still in 1985, with the consensus estimate being about 7 percent. This suggests that part of the recent rise in interest rates is related to a rise in inflation expectations. That is, the financial markets believe these inflation forecasts for 1984-85.

Such a method for evaluating long-term rates is probably not appropriate, however. It is not inflation for the next 18 months that dominates the long-term outlook, but inflation expectations over the next five to ten years. One of the most authoritative measures of the financial markets' views of inflation expectations for that time frame is prepared by Mr. Richard Hoey. According to his surveys, sophisticated financial executives currently expect inflation to be 6-3/4 percent over the next ten years and these expectations have not varied more than 1/4 percent from this value for almost two years. As long as the actual rate of inflation is equal to or less than the expected 10-year inflation rate, it is unlikely that long-run inflation

Research Department

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expectations have been rising. Thus, inflation factors alone suggest that long-term interest rates should be stable.

### **Business cycle revisions**

Long-term interest rates at any time incorporate some forecast of the business cycle and therefore of private demands for credit over the next few years. Only when there is an upward revision in the forecast of business cycle expansion, and consequently a revision in the forecast of private demands for credit, would there be an increase in long-term interest rates.

The timing of the rise in the long-term rates in 1983-84 suggests that it was related to upward revisions in the forecast of the business cycle. For example, the rise in long-term Treasury bonds from 10-1/2 percent to 12 percent between May and August 1983 paralleled the release of economic statistics that started to show a recovery in real GNP that was much stronger than what had previously been expected. For example, real GNP growth for the second quarter of 1983 was revised upward from a May flash report of 6.5 percent to the August report of 9.3 percent. This contributed to an upward revision in the forecast for 1983 as a whole from a below-average 3.4 percent to an average 6 percent-plus growth for the first year of the business cycle expansion. It also caused an upward revision of the level of GNP forecasted for subsequent years. The resulting increase in the forecast of future private credit demands led to a rise in long-term interest rates.

Rates were stable between August 1983 and January 1984 as real GNP moved closely in line with market expectations. Then, in February and March, there was another spurt in the economic statistics, with the first quarter estimates of GNP much stronger than previously expected. This led to a further upward revision in estimates both of the strength of the business cycle and of private credit demands down the road.

Those forecasters who saw the first quarter strength as a temporary response to a surge in inventories and who expect the economy to weaken considerably in the remainder of 1984 are forecasting lower long-term interest rates. They expect slower growth in private demands for credit than that currently built into long-term interest rates. How much the rates would decline depends on how much one thought the recent rise in rates was the result of the upward revision in the business cycle forecast. However, the maximum decline in rates from this factor would seem only to put long-term Treasury bonds at 12 percent at the end of the year, that is, back at their mid-February level.

### **Budget deficits**

The expectations of greater budget deficits over the next ten years will raise long-term interest rates because they imply an increase in the government's demand for credit over that period. Thus, the major impact on long-term interest rates of the approximately \$200 billion in structural budget deficits that first materialized in 1983 actually occurred earlier — in 1981 when the legislation responsible for those deficits was enacted. In other words, the expectation of deficits, not their actual occurrence, caused long-term interest rates to rise.

As indicated in Chart 2, long-term interest rates rose substantially in 1981 despite a declining inflation rate and the start of a business cycle recession. (A period of tight monetary policy started in late 1979. However, the liquidity effects of tight money on long-term interest rates are not considered sufficiently large to explain a significant increase in rates.) Treasury bonds rose from 12 percent in January to 13.5 percent in June and 15.5 percent in September 1981 — the highest in this century.

With government spending promising to rise at the same rate in the four years of the Reagan administration as in the Carter administration, and with a major cut in tax rates, it became clear to financial markets

during 1981 that future government deficits would be substantially higher than they had expected. Most forecasts were for deficits about \$200 billion per year. The historic peak in long-term interest rates at 15-1/2 percent in September 1981 came just seven weeks after the largest tax cut in U.S. history became law. By the same token, about one percentage point of the fall in long-term interest rates in 1982 occurred in the week following the tax increase in August of that year.

There have been no substantial legislative moves to deal with the deficit since August 1982. Thus, until recently, financial markets embedded in long-term interest rates expectations of budget deficits close to \$200 billion in each of the next ten years. Now independent budget analysts estimate that if no action whatsoever is taken by Congress and the Administration, deficits would grow to \$300 billion by the year 1990. One could interpret the rise in long-term interest rates in April and early May as market concerns that even the minimal action necessary to keep this from happening will probably not materialize.

The conventional political wisdom is that if no legislative action is taken to cut deficits before the summer recess, Congress will take no action at all in this election year. If the financial markets become concerned about this, long-term interest rates would probably rise further this year. Whether long-term government bonds rise to 15

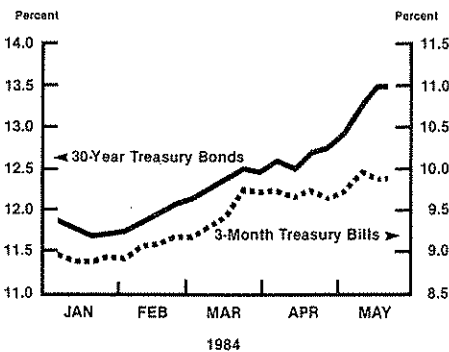
percent as forecast by Mr. Kaufman of Salomon Brothers probably depends upon whether the markets expect any legislative action on deficits next year, that is, 1985. If Congress can take the minimal actions this year to keep future deficits from rising above \$200 billion, it probably would bring long-term government bond rates back to their mid-April level of 12.5 percent from their mid-May level of 13.5 percent. Only a major cut in deficits below the \$200 billion level could lead to a substantial fall in long-term interest rates.

### Conclusion

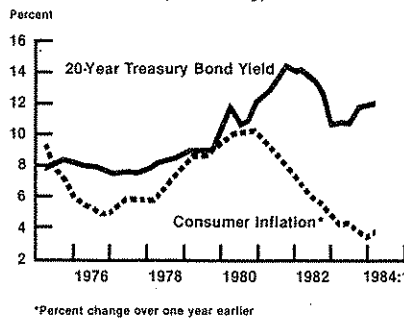
The wide diversity of financial analysts' forecasts about the course of interest rates in 1984 means that the analysts give different weights to the likely outcome of the inflation, business cycle, and deficit factors discussed above. Those who expect interest rates to come down tend to emphasize that there will be a substantial weakening in business cycle demands for credit and that Congress and the Administration will take at least minimal action to keep future deficits from rising above current levels. Those who forecast interest rates to rise substantially from current levels either consider that the business cycle expansion will be stronger than usual or that fiscal actions will not be taken to prevent deficits from rising in the future. Changes in long-term inflation expectations do not seem to be a major factor in the current rise of long-term interest rates.

Michael Keran

**Chart 1**  
Long- and Short-Term Interest Rates  
(Weekly)



**Chart 2**  
Long-Term Rates and Inflation  
(Quarterly)



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**BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT**

(Dollar amounts in millions)

Selected Assets and Liabilities Large Commercial Banks	Amount Outstanding	Change from	Change from 12/28/83	
	5/16/84	5/09/84	Dollar	Percent Annualized
Loans, Leases and Investments <sup>1 2</sup>	180,187	496	4,162	6.1
Loans and Leases <sup>1 6</sup>	160,639	652	5,284	8.8
Commercial and Industrial	48,520	99	2,557	14.4
Real estate	59,834	114	935	4.1
Loans to Individuals	28,017	111	1,366	13.3
Leases	5,019	6	44	2.2
U.S. Treasury and Agency Securities <sup>2</sup>	12,000	- 106	- 507	- 10.5
Other Securities <sup>2</sup>	7,548	- 50	- 615	- 19.5
Total Deposits	187,914	2,574	- 3,083	- 4.1
Demand Deposits	45,410	2,358	- 3,827	- 20.2
Demand Deposits Adjusted <sup>3</sup>	29,316	289	- 2,015	- 16.7
Other Transaction Balances <sup>4</sup>	12,131	- 165	- 644	- 13.1
Total Non-Transaction Balances <sup>6</sup>	130,374	382	1,389	2.7
Money Market Deposit Accounts—Total	39,337	- 33	- 260	- 1.7
Time Deposits in Amounts of \$100,000 or more	39,027	275	862	5.8
Other Liabilities for Borrowed Money <sup>5</sup>	18,675	-3,717	- 4,332	- 48.9
<b>Weekly Averages of Daily Figures</b>	<b>Week ended 05/07/84</b>	<b>Week ended 04/23/84</b>		
<b>Reserve Position, All Reporting Banks</b>				
Excess Reserves (+)/Deficiency (-)	89	32		
Borrowings	120	102		
Net free reserves (+)/Net borrowed(-)	236	- 33		

<sup>1</sup> Includes loss reserves, unearned income, excludes interbank loans

<sup>2</sup> Excludes trading account securities

<sup>3</sup> Excludes U.S. government and depository institution deposits and cash items

<sup>4</sup> ATS, NOW, Super NOW and savings accounts with telephone transfers

<sup>5</sup> Includes borrowing via FRB, TT&L notes, Fed Funds, RPs and other sources

<sup>6</sup> Includes items not shown separately

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