

# Banking insights

## *The truth about Member bank reserve deposits as a source of Federal Reserve Bank earnings*

As everyone knows, appearances can be deceiving. This is nowhere more true than when a banker looks at the sources of Federal Reserve Bank earnings, as this brief note will explain.

Deposits to a commercial bank are the principal source of loanable funds and thus of earnings. The bank lends or invests the deposits of its customers. Those deposits entail costs since they must be paid for either in interest or in services. A member bank must keep deposits in the District Federal Reserve Bank to satisfy legal reserve requirements. The Fed in turn uses these deposits to buy Government securities that provide the bulk of its earnings. Right? Wrong!

The simple assumption that Federal Reserve Banks operate like commercial banks with the funds provided by "customer" deposits is a great source of confusion and of no small amount of irritation to commercial bankers who feel the Fed earns a huge profit by the use of their money and pays most of it to the Treasury. But the very essence of central banking is that increases in central bank assets *provide* new funds to the banking system, *creating* the reserves which in turn support growth in commercial bank deposits and credit.

The Federal Reserve does not have to have a single penny of deposits in order to buy securities or otherwise extend credit. Rather, its liabilities, including member bank

reserves, result from increases in its assets. Perhaps this can be most easily illustrated in the case of a Reserve Bank loan to a member bank. This transaction is simple. The Reserve Bank's loans increase and the proceeds of that loan are credited to the member's reserve deposit account. (See T-accounts, section A.) Clearly, the loan gave rise to an increase in the reserve deposit.

When the Fed buys securities from a non-bank securities dealer the process is less direct but the effect is the same. It does not use cash derived from a member's deposits to make payment. Rather, it credits the reserve deposit account of the dealer's clearing bank, and the clearing bank, in turn, credits the demand deposit account of the securities dealer. (See T-accounts, section B.)

The receiving bank, however, does not necessarily distinguish this deposit from any other cash item that flows through its customers' accounts every day. The bank does know that of the net inflows that increase its deposits a specified percentage of the resulting credits to its balance must be kept as required reserves—the bank cannot lend or invest it all. But it is easy to overlook the fact that without the Fed's action in buying securities, the bank would not have received the dealer's deposit at all.

What if there is no net addition to total deposits and reserves by the Fed but merely a shift of deposits from one bank to another?

| A. When a member bank borrows \$100,000 from the Fed |                                    |                              |                                  |
|--|------------------------------------|------------------------------|----------------------------------|
| Federal Reserve Bank                                 |                                    | Member bank                  |                                  |
| Advances to member bank                              | + 100                              | Reserve balance at F.R. Bank | + 100                            |
|  | Member bank reserve deposits + 100 |                              | Bills payable to F.R. Bank + 100 |

| B. When the Fed buys \$100,000 of U.S. Government securities |       |                                 |                                      |
|--|-------|---------------------------------|--------------------------------------|
| Federal Reserve Bank   |       | Member bank                     |                                      |
| U.S. securities  | + 100 | Member bank<br>reserve deposits | + 100                                |
|  |       | Reserve balance<br>at F.R. Bank | + 100                                |
|  |       |                                 | Securities dealer's<br>deposit + 100 |

The receiving bank must hold part of that inflow too in its reserve with the Fed. In this case

total reserves of the banking system have not been altered but merely transferred from the paying bank's reserves. In other words, as deposits move from bank to bank, the reserve base that supports them shifts too, although the proportion frozen as reserves may change if the funds move to a bank that, because of its size, has higher or lower reserve requirements.

Actually, a glance at changes in the combined balance sheets of the Federal Reserve Banks over the last 10 years shows that much of the proceeds of FR credit (mostly via purchases of U.S. securities) have been passed through commercial banks to the public in the form of currency. Reserves initially supplied by the Fed are absorbed as banks convert them into currency as demanded by their customers. Member bank reserves increased only \$5 billion net. (See table.) Partly because of reduced reserve requirements, these reserves have supported an increase in deposits at member banks of more than \$300 billion.

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**Most of the reserves supplied by Federal Reserve credit over the past 10 years were absorbed by increased currency demands of the public**

Change, end of 1966 to end of 1976

|  | (billion \$) |
|--|--------------|
| <b>Federal Reserve assets:</b>                           |              |
| Gold certificates and SDRs                               | - 1.0        |
| U.S. securities  | +55.1        |
| Advances to member banks                                 | - .1         |
| All other  | + 8.2        |
| <b>TOTAL</b>   | <b>+62.2</b> |
| <b>Federal Reserve liabilities and capital accounts:</b> |              |
| Federal Reserve notes outstanding                        | +44.4        |
| Member bank reserve deposits                             | + 5.4        |
| U.S. Treasury deposits                                   | +10.0        |
| All other  | + 2.4        |
| <b>TOTAL</b>   | <b>+62.2</b> |

## Bank participation in the residential mortgage market

Residential mortgage loans are important long-term investments for commercial banks in periods of declining interest rates. When business loan demand is strong, bank funds flow into the shorter-term business loans and banks are less willing to make mortgage loans. However, when credit conditions ease and short-term interest rates decline, the usual lagged response by banks is to step-up their residential mortgage lending activities.

Residential mortgage interest rates are currently above banks' short-term loan rates and above their rates reported on business term loans of comparable size.<sup>1</sup> In 1974 business loan rates were more than 250 basis points above mortgage loan rates. Since reaching a cyclical peak in 1974, business loan

<sup>1</sup>Federal Reserve Board quarterly survey of interest rates charged by banks on business loans.

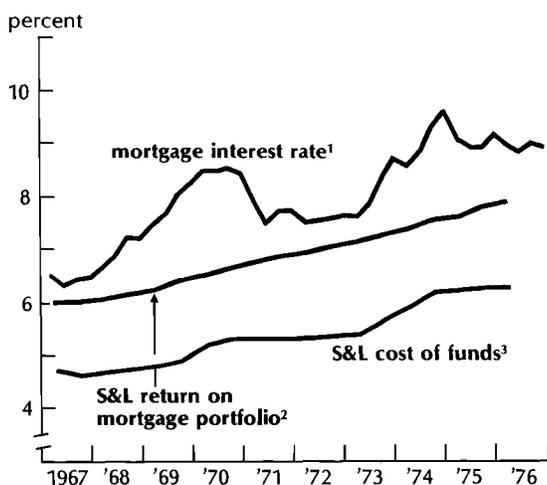
rates have dropped more than 300 basis points, but mortgage loan rates are down less than 100 basis points.

The positive spread of mortgage interest rates over the business loan rate suggests a continuation of the expansion of residential mortgage loans at commercial banks into 1977.

### Limiting factors of mortgage rate movements

Savings and loan associations (S&Ls) are the major source of residential mortgage loans. From 1967 through 1976 S&Ls accounted for an annual average 70 percent of the increase in residential mortgage loans held by depository institutions. The percentage varied, however, from 56 percent in 1967, when credit conditions eased, to 90 percent in 1975, when conditions were unusually tight. Commercial banks' 20 percent average annual increase over the same time period ranged from 32 percent in 1967 to 1 percent in 1975.

### The upward trend in S&L cost of funds has limited declines in mortgage interest rates



<sup>1</sup>HUD series—first mortgage contracts on new homes.  
<sup>2</sup>Interest earned on mortgages as a percent of average mortgage balances net of loans in process.  
<sup>3</sup>Interest and dividends paid on savings, FHLB advances, and other borrowed money during period as a percent of average savings and borrowings.

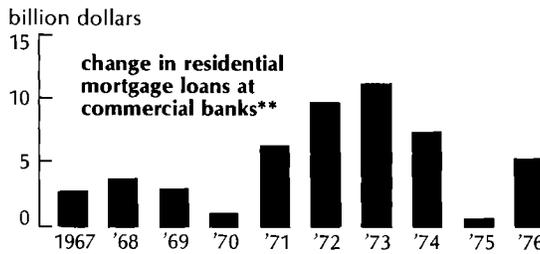
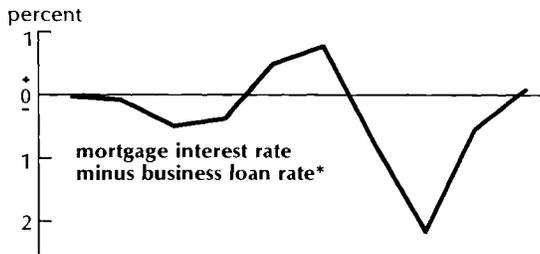
The domination of the residential mortgage market by S&Ls means that their cost of funds tends to limit any decline in mortgage interest rates. The cost of funds at S&Ls has been rising since 1967, with the rate of increase accelerating during periods of sharply rising market interest rates. In the interim periods, when credit conditions have eased, the cost of funds leveled off but did not decline. Contract mortgage interest rates on new loans have declined after reaching new highs at cyclical peaks but not to the previous low levels. At the troughs of the interest rate cycles in 1967 and 1972, mortgage interest rates were about 180 to 200 basis points above the average cost of funds at S&Ls. Currently, the average quoted mortgage interest rate of 8.80 percent is about 240 basis points above the S&L cost of funds.

The increase in residential mortgage interest rates during periods of credit restraint is limited by usury rate legislation and growth in consumer disposable income. Usury rates have been raised in many states in accordance with the rising trend in mortgage interest rates but nevertheless continue to constitute an effective upper limit to any sharp rise in residential mortgage interest rates. Consumer disposable income generally increases slowly over the long term. As the source of funds for repayment of residential mortgage loans, it thus limits the demand for mortgage funds and any short-term increase in mortgage interest rates.

### Commercial bank holdings

Commercial bank holdings of residential mortgage loans expand more rapidly when mortgage interest rates exceed rates available on other investments. This occurs primarily when business loan demand declines and credit conditions ease. The expansions and contractions of residential mortgage loans at commercial banks have generally lagged the peaks and the troughs of this yield spread by about four quarters. The spread reached a maximum in the second quarter of 1972 and the growth of residential real estate loans at commercial banks was largest in the second

**Peaks in commercial bank mortgage lending activity have lagged peaks in the mortgage-business loan interest rate spread by about one year**



\*Average of spreads between first mortgage contract rate on new homes (HUD series) and business long-term loan rates (FRB quarterly interest rate survey).

\*\*FRB Flow of Funds Accounts.

quarter of 1973. Similarly, the largest negative spread was reached in the third quarter of 1974, and residential mortgage loan holdings actually contracted during the third quarter of 1975. As business loans declined and rates were reduced in 1975 and 1976, residential loans again became relatively attractive and commercial banks expanded their portfolios of these loans accordingly.

Recent changes in the spread between mortgage interest rates and business loan rates suggest a continuation of the expansion of real estate loans at commercial banks in 1977. After the spread changed from a negative 216 basis points in 1974 to a negative 54 basis points in 1975, bank holdings of residential loans rose \$5.5 billion in 1976 compared to only \$.8 billion in 1975. The change in the spread to a positive 8 basis points in 1976 would, based on the four-quarter lag, portend continued growth of residential mortgage loans at commercial banks during 1977 from existing commitments.

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