Has the Deregulation of Deposit Interest Rates Raised Mortgage Rates?

R. Alton Gilbert and A. Steven Holland

LEGISLATION enacted in 1980 calls for the gradual phase-out of interest rate ceilings on deposits at banks and thrift institutions by 1986.[1] This legislation was intended to increase the efficiency of financial markets, which a deregulated financial environment provides, and permit small savers to earn more competitive rates on their savings. Many of these interest rate ceilings already have been removed.

Some economists have suggested that the payment of higher interest rates to depositors has contributed to the high rates of interest in this country over the last few years. According to Arenson (1983) in the *New York Times,* "Economists estimate that the higher cost of bank funds probably has raised the general level of interest rates by about 1½ percentage points." Bacon (1983), in the *Wall Street Journal,* quotes Lawrence Chimerine of Chase Econometrics as estimating the same effect on long-term real rates of interest. The basic argument is that the phase-out of Regulation Q has raised the interest expense of depository institutions; in response, these institutions have raised the interest rates they charge borrowers.

This article assesses the effects of the removal of deposit rate (Regulation Q) ceilings on the interest rates charged on mortgage loans. While the analysis developed here applies to all interest rates, we emphasize mortgage interest rates because large proportions of the deposit liabilities of major mortgage lenders, such as savings and loan associations (S&Ls) and mutual savings banks, have been subject to Regulation Q ceiling rates; indeed, one reason for the removal of these ceilings was to increase the ability of these thrift institutions to attract deposits to use for mortgage lending.[2] Furthermore, some analysts have suggested that such deregulation has caused mortgage rates to increase more than other long-term interest rates.[3]

STEPS IN PHASING OUT DEPOSIT RATE CEILINGS

Table 1 describes the steps that already have been taken in eliminating deposit interest rate ceilings. Many of these steps created new types of accounts, with ceiling rates higher than those on passbook savings accounts or with no ceilings at all. The first significant steps in the relaxation of Regulation Q occurred even before the passage of the Depository Institutions

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[1] *Depository Institutions Deregulation* (1980).

[2] Thrifts currently hold around 40 percent of the one- to four-family residential mortgage debt in the United States. They originate a much greater percentage, however, selling a large proportion of their mortgages to investors in the form of mortgage passthrough certificates. See McNulty (1983) for a discussion of mortgage origination and investments of thrift institutions.

[3] For instance, Edward Friedman (1983), pp. A.40–A.41, of Chase Econometrics maintains that:

> The other major effect of the new deposit structure at thrifts and banks is the permanent rise in borrowing costs for deposit institution borrowers relative to open-market rates . . . . The implication is that if, for example, bond rates were to fall to much lower levels, home mortgage rates would not necessarily follow point for point.

Table 1
Steps in the Phase-Out of Regulation Q

Effective date of change	Nature of change
June 1978	Money market certificates established with minimum denomination of $10,000, 26-week maturity and ceiling rates based on the 6-month Treasury bill rate.
November 1978	Automatic transfer service (ATS) savings account created, allowing funds to be transferred automatically from savings to checking account when needed.
June 1979	Small saver certificates established with no minimum denomination, maturity of 30 months or more and ceiling rates based on the yield on 2½-year Treasury securities, with maximums of 11.75 percent at commercial banks and 12.00 percent at thrifts.
June 2, 1980	Ceiling rates on small saver certificates relative to yield on 2½-year Treasury securities raised 50 basis points (maximums retained).
June 5, 1980	Maximum ceiling rate on money market certificates raised to the 6-month Treasury bill rate plus 25 basis points when the bill rate is above 8.75 percent. Other ceilings apply below 8.75 percent.
January 1, 1981	NOW accounts permitted nationwide. On the previous day, ceiling rates on NOW and ATS accounts set at 5.25 percent.
August 1, 1981	Caps on small saver certificates of 11.75 percent at commercial banks and 12.00 percent at thrifts eliminated. Ceiling rates fluctuate with 2½-year Treasury security yields.
October 1, 1981	Adopted rules for the All Savers Certificates specified in the Economic Recovery Act of 1981.
December 1, 1981	New category of IRA/Keogh accounts created with minimum maturity of 1½ years, no regulated interest rate ceiling and no minimum denomination.
May 1, 1982	New time deposit created with no interest rate ceiling, a required denomination of $500 (but no specified minimum) and an initial minimum maturity of 3½ years.
	New short-term deposit instrument created with a $7,500 minimum denomination, 91-day maturity and a ceiling rate tied to the 91-day Treasury bill discount rate.
	Maturity range of small saver certificate adjusted to 30–42 months.
September 1, 1982	New deposit account (7- to 31-day account) created with ceiling rate based on 91-day Treasury bill discount rate, minimum daily balance of $20,000 and either a fixed term or a required notice period of 7 to 31 days.
December 14, 1982	Money market deposit account (MMDA) created with minimum balance of not less than $2,500, no interest ceiling, no minimum maturity, up to six transfers per month (no more than three by draft), and unlimited withdrawals by mail, messenger or in person.
January 5, 1983	Super NOW account created with same features as the MMDA, except that unlimited transfers are permitted.
	Interest rate ceiling eliminated and minimum denomination reduced to $2,500 on 7- to 31-day account.
	Minimum denomination reduced to $2,500 on 91-day accounts and money market certificates of less than $100,000.
April 1, 1983	Minimum maturity on small saver certificates reduced to 18 months.
October 1, 1983	All interest rate ceilings eliminated except those on passbook savings and regular NOW accounts. Minimum denomination of $2,500 established for time deposits with maturities of 31 days or less (below this minimum, passbook savings rates apply).
January 1, 1984	Rate differential between commercial banks and thrifts on passbook savings accounts and 7- to 31-day time deposits of less than $2,500 eliminated. All depository institutions may now pay a maximum of 5.50 percent.
January 1, 1985	Minimum denominations on MMDAs, Super NOWs and 7- to 31-day ceiling-free time deposits will be reduced to $1,000.
January 1, 1986	Minimum denominations on MMDAs, Super NOWs and 7- to 31-day ceiling-free time deposits will be eliminated.

Deregulation and Monetary Control Act of 1980 (MCA), with the establishment of money market certificates (June 1978), automatic transfer service accounts (November 1978) and small saver certificates (June 1979). The introduction of NOW accounts nationwide (January 1981) was the first major change in deposit interest rate ceilings put into effect under provisions of the MCA.[4]

The Depository Institutions Deregulation Committee has the responsibility for complete removal of deposit rate ceilings by 1986. The committee meets periodically during the transition period, and most of the changes described in table 1 represent the outcomes of these meetings. Currently, the only ceilings in effect apply to passbook savings deposits and NOW accounts.[5]

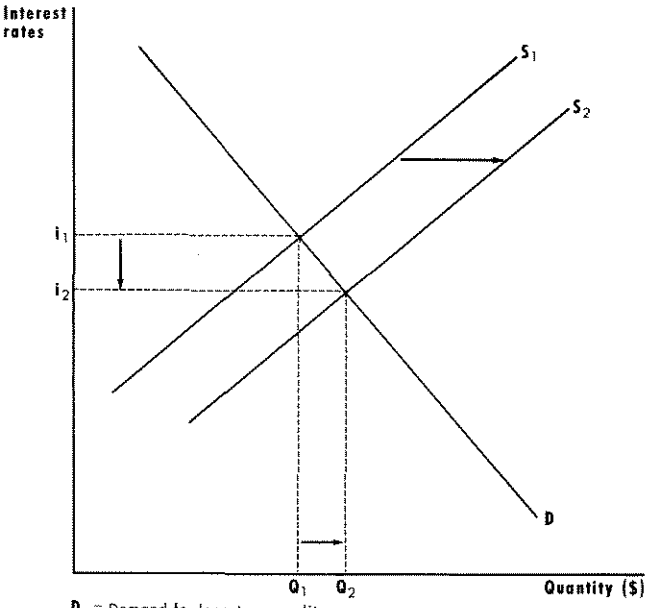
THE DETERMINATION OF MORTGAGE INTEREST RATES

In analyzing how mortgage rates are determined and how they might be affected by the deregulation of deposit interest rates, we assume that lenders, depositors and borrowers are all wealth-maximizers. In particular, we assume that lenders attempt to maximize their profits, depositors attempt to get the highest interest return they can for a given degree of risk, and borrowers search for the lowest interest rates, given other contractual characteristics of the loan.

We also make two alternative assumptions about competitive forces in the market for residential mortgages. Under the first assumption, interest rates on residential mortgages are determined in a competitive national market by the interaction of the total demand for and supply of long-term credit. Under the second assumption, each depository institution has some market power that permits it to choose the interest rate at which it lends.

In the first case, the phasing out of Regulation Q would increase the supply of long-term credit, due to an increase in savings by those whose returns from saving previously were limited by Regulation Q ceiling rates. The increase in the supply of credit would cause long-term interest rates to fall. This is illustrated in figure 1 as a rightward movement in the supply curve from S_1 to S_2 and a reduction in the rate of interest from

Figure 1
Effect of Eliminating the Regulation Q Ceiling Rate on a Competitive Market for Long-Term Credit



D = Demand for long-term credit
S_1 = Supply of long-term credit before elimination of Regulation Q
S_2 = Supply of long-term credit after elimination of Regulation Q

i_1 to i_2. Of course, the decline in rates may be small; it depends on the extent to which deposit rate ceilings limited the incentives for saving. There would be no change in the relationship between mortgage and other long-term interest rates, since differences in risk and liquidity that determine the spreads in interest rates between various types of long-term securities would not be affected by the phase-out of Regulation Q.

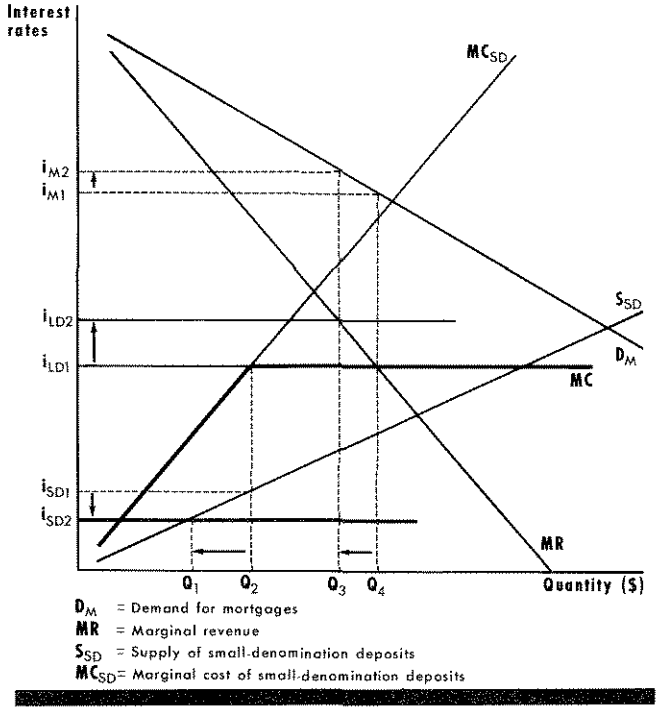
The conclusion is not dramatically different if residential mortgages are made by specialized lending institutions that have some market power. If a firm with market power raises its mortgage rate, it will make fewer loans than if it offered mortgage credit at lower interest rates.[6] This is illustrated by the downward-sloping demand curve (D_M) in figure 2. We also assume that the firm must raise the interest rate it pays on small-denomination deposits if it wishes to attract more of these deposits. This is illustrated by the upward-sloping supply curve (S_{SD}). In contrast, the firm can attract all the large-denomination deposits it wants by selling certificates of deposit at the rate of

[4]NOW accounts were available for many years in New England before their introduction nationwide.

[5]The prohibition of interest payments on demand deposits is not affected by the MCA.

[6]Lenders might have such market power if most borrowers were limited to borrowing from institutions with offices in their local area and if the government restricted the number of institutions that may establish offices in each area.

Figure 2
Effect of a Regulation Q Ceiling Rate on the Mortgage Interest Rate Set by a Lender with Market Power



interest determined in a competitive national market. With no Regulation Q ceilings in effect, we assume this interest rate is i_{LD1}.

The lender maximizes profits by lending the amount of mortgages at which the marginal cost (the increase in total cost due to the last dollar increase in mortgage lending) equals the marginal revenue (the increase in total revenue from the last dollar increase in mortgage lending). Marginal cost and marginal revenue are illustrated by MC (the heavy black line) and MR, respectively, in figure 2.

The relevant marginal cost curve has two portions: (1) For deposit levels below Q_2, it is the marginal cost of attracting small-denomination deposits (MC_{SD}), since MC_{SD} is less than the interest rate on large-denomination deposits, i_{LD1}. (2) For deposit levels above Q_2, it is equal to i_{LD1}. If the lender wants to attract more deposits than Q_2 for mortgage lending, it will attract Q_2 as small-denomination deposits and any additional funds as large-denomination deposits. In figure 2, if there are no ceilings on deposit rates, the profit-maximizing quantity of mortgage loans is Q_4 with a mortgage rate of i_{M1} and a rate on small-denomination deposits of i_{SD1}.

Suppose regulators impose a maximum interest rate that may be paid on small-denomination deposits of i_{SD2}.[7] The lender will be able to attract only Q_1 of small-denomination deposits and will have to attract any additional funds in the market for large-denomination deposits. Each lender increases its demand for large-denomination deposits, causing the interest rate on these deposits to rise (to i_{LD2}, for instance). By constructing a new marginal cost curve in the same manner as before (not shown), we find that the new equilibrium mortgage rate rises to i_{M2}, and the amount of mortgage lending falls to Q_3. Thus, the theory indicates that a binding ceiling on the interest rates paid on small-denomination deposits results in a higher interest rate on mortgage loans, less mortgage lending, and a higher interest rate on large-denomination deposits.[8] Therefore, the elimination of Regulation Q ceilings should result in lower mortgage interest rates.

Given this conclusion, what are we to make of the argument that the phase-out of Regulation Q ceiling rates has caused mortgage interest rates to rise? It is an assertion that is inconsistent with standard economic analysis, which is based on the wealth-maximizing behavior of business firms and individuals.

WHAT HAS HAPPENED TO MORTGAGE RATES?

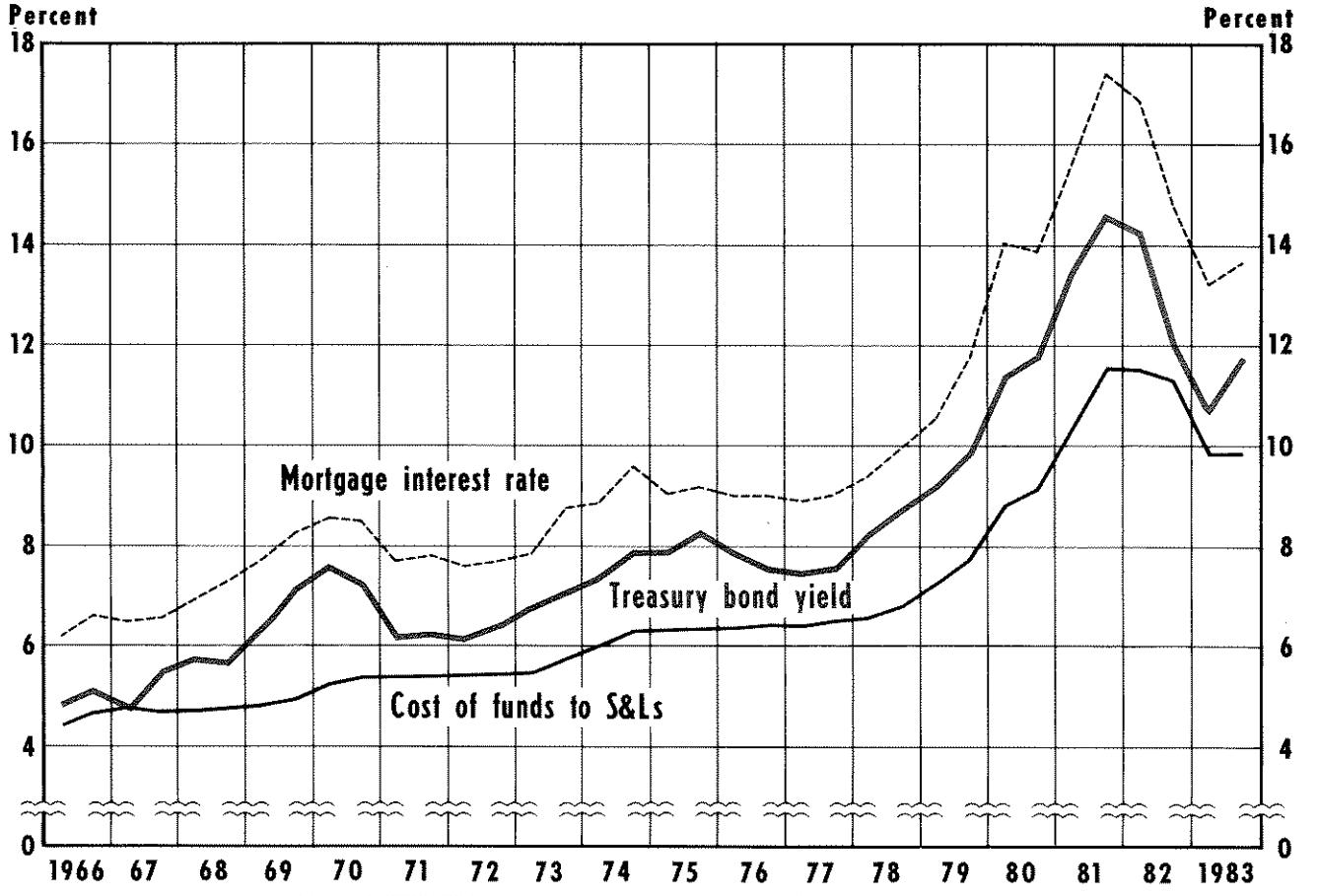
We now compare the recent behavior of mortgage interest rates with movements in other market rates and the average cost of funds for S&Ls. The objective is to determine whether the evidence supports the argument that deregulation of deposit interest rate ceilings has caused mortgage interest rates to rise relative to other market interest rates of comparable duration. The mortgage interest rate series used is published by the Department of Housing and Urban Development: the average interest rate at which residential mortgage lenders make commitments to lend for long-term, fixed-rate conventional loans. The insert on pages 10 and 11 describes several series on residential mortgage interest rates and discusses the basis for choosing this measure.

[7] In the theoretical analysis illustrated in figure 2, Regulation Q ceiling rates are assumed to apply only to small-denomination deposits. This assumption corresponds to the actual structure of ceiling interest rates under Regulation Q, which have exempted deposits in denominations of $100,000 or more for many years.

[8] The general conclusions would be the same if all deposits were subject to a Regulation Q ceiling rate. Imposing a ceiling interest rate on all deposits that is below the unregulated market interest rate would reduce the amount of deposits the lender could attract. The profit-maximizing lender with market power would raise its mortgage interest rate to ration the reduced supply of mortgage credit among its customers.

Chart 1

Semiannual Comparison of Mortgage Interest Rate with Cost of Funds to S&Ls and 10-Year Treasury Bond Yield



The yield on 10-year U.S. Treasury bonds is used as a measure of the interest rate on long-term debt obligations other than residential mortgages.[9] The 10-year maturity approximates the average length of time that residential mortgages are outstanding. This is much shorter than the stated maturities of conventional loans because of the prepayment of a substantial number of mortgage loans before their maturity.

Chart 1 indicates that semiannual averages of the cost of funds to S&Ls, the mortgage interest rate, and the yield on 10-year U.S. Treasury bonds tend to move together over time.[10] The relationship between changes in the mortgage and bond rates is somewhat closer (correlation coefficient of 0.897) than between changes in the mortgage rate and the average cost of funds (correlation coefficient of 0.816).

All three series were substantially higher in the late 1970s and 1980s than they had been earlier. Thus, the phase-out of Regulation Q ceilings allowed S&Ls to bid for funds by offering rates that kept pace with rises in market interest rates. One indicator of how rising market interest rates and the phase-out of Regulation Q affected the average cost of funds for thrift institutions is the decline in the share of their deposit liabilities held in the form of passbook savings deposits. Between

[9]Mayer and Nathan (1983) use the 10-year Treasury bond rate for the same purpose.

[10]The average cost of funds for S&Ls, obtained from the Federal Home Loan Bank Board, incorporates not only the interest S&Ls pay on deposits, but also the interest they pay on advances from their Federal Home Loan Banks and other borrowed funds. The average cost of funds is somewhat higher than the average interest rate paid on deposits.

Four Measures of Mortgage Loan Interest Rates

This section describes four measures of interest rates on mortgage loans and explains why the HUD commitment rate is chosen in the text. Since the purpose of the paper is to determine how the phase-out of Regulation Q ceiling rates has affected interest rates paid by home buyers on new mortgage loans, the use of interest rates on mortgages traded in secondary markets is ruled out. An important criterion for the choice of a mortgage interest rate series is that the terms on mortgage loans that affect the rate be held constant. This criterion is especially important because of the many changes in the terms on mortgage loans in recent years, such as the rising share of loans with adjustable interest rates.

HUD Mortgage Commitment Rate

The Department of Housing and Urban Development surveys major mortgage lenders (primarily mortgage bankers) nationwide to determine the typical contract rate for loan commitments on long-term, fixed-rate conventional mortgages. This survey is conducted as of the first business day of each month. Lenders are not asked to specify the maturity or loan-to-value ratio of their mortgage loans. This series does not incorporate fees or discount points paid by borrower or lender. The series starts in April 1960.

FHLMC Mortgage Commitment Rate

The Federal Home Loan Mortgage Corporation conducts a weekly survey of mortgage lenders (primarily S&Ls) to determine the contract rates for commitments on fixed-rate loans with maturity of 30 years and loan-to-value ratio of 80 percent. This series also does not reflect fees or discount points. It starts in April 1971.

FHLBB Mortgage Commitment Rate

The mortgage lenders included in the commitment rate survey of the Federal Home Loan Bank Board include S&Ls, mortgage bankers, commercial banks and mutual savings banks. The survey asks these lenders about the interest rates at which they are making commitments to lend on newly built homes, under various combinations of loan-to-value ratios. The maturity of the loans is specified as 25 years or longer. The published data include an average contract rate and an average effective rate; the effective rate includes the fees and discount points, amortized over 10 years. The series plotted in chart 2 is for effective rates. The commitment rate data before September 1983 does not distinguish between rates on fixed-rate loans and those with adjustable rates. The series based on a loan-to-value ratio of 75 percent starts in January 1973.

FHLBB Series on Interest Rates on Mortgage Loans Closed

The Federal Home Loan Bank Board also surveys the interest rates on residential mortgages that are actually closed (i.e., borrowers receive loans to buy homes). This series is available on a consistent basis since January 1973.

The closing rate series is different in several ways from the three commitment rate series. Lenders generally make commitments for mortgage loans a few months before the loans are closed, and interest rates are set at the time of commitment. Therefore, movements in interest rates on loans closed tend to lag movements in commitment rates (see chart 2). Thus, the rate at time of commitment is a better indicator of the rate at which borrowers can obtain mortgage credit at a given point in time. Furthermore, the series for the interest rate at time of closing reflects a conglomeration of loan terms; it incorporates interest rates on fixed rate, adjustable rate and graduated payment loans. It also incorporates mortgages with a variety of loan-to-value ratios and maturities and some mortgage loans with discounted rates under various creative financing schemes.[1] For these reasons, the series on loans closed did not rise as much as the commitment rate series during 1980–82.

The three series on commitment rates tend to move together closely over time (see chart 2). The Federal Home Loan Bank Board's series is slightly higher than the others during some periods, the difference reflecting primarily the amortized fees and discount points. The HUD rate is used in the text as the measure of mortgage interest rates simply because it is available over a longer period than the other two series. None of the results presented in the text would be substantially altered if a different commitment rate series had been used.

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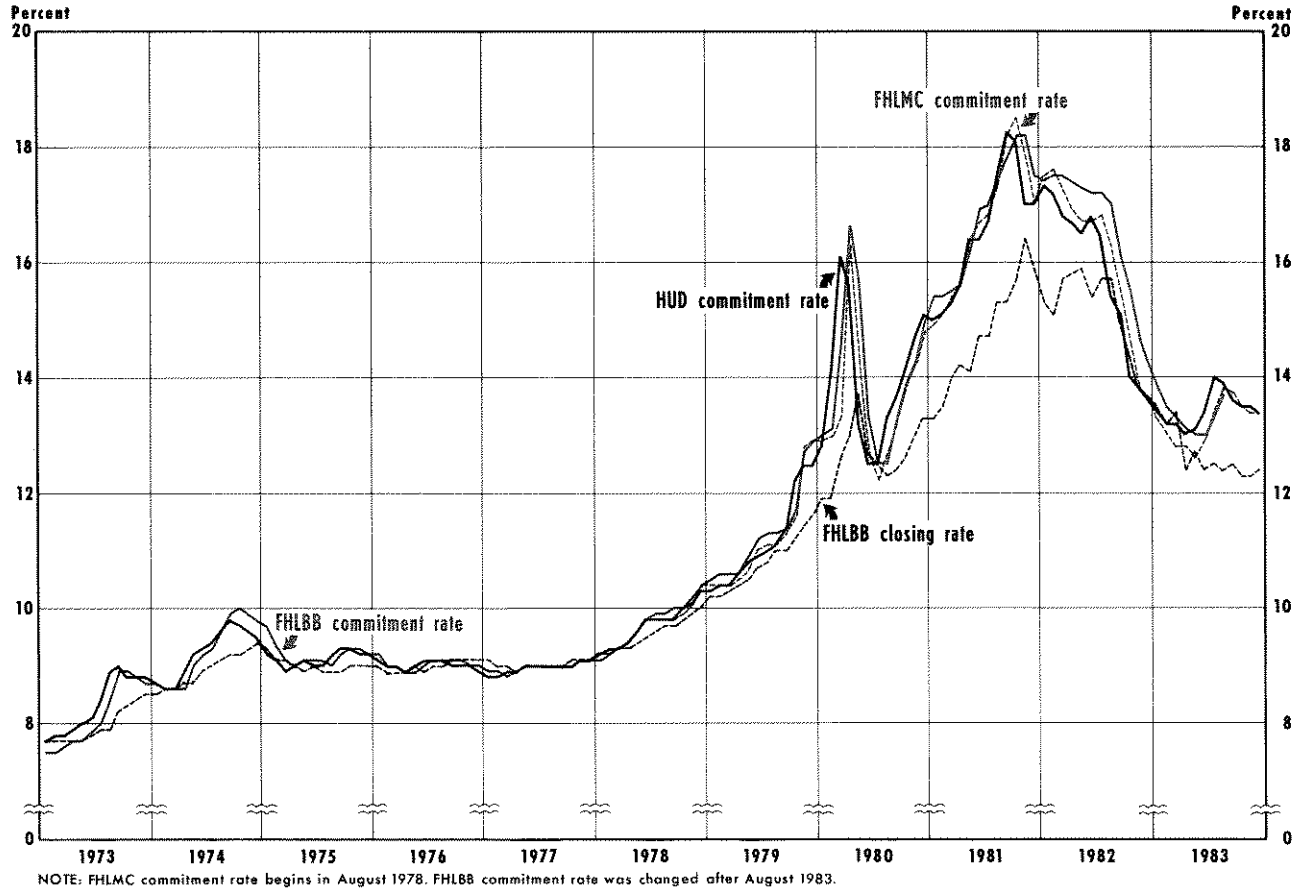
[1] One of the creative financing schemes involves reduced-rate loans to buyers of homes on which a lender has made previous mortgage loans at fixed rates substantially below current mortgage rates. The new buyers generally would prefer to assume the outstanding mortgage loans with the relatively low interest rates, but may be financially unable to do so. The lender would prefer that the new buyer borrow at the prevailing market interest rate, thereby eliminating the old low-yielding mortgage loan. To reduce the incentives for new buyers to borrow enough from other sources to assume the old mortgages with the relatively low interest rates, many lenders have offered to lend to the new buyers at interest rates *between* those on the old mortgages and the prevailing market interest rates. Interest rates on mortgages that involve such arrangements are reflected in the series on average interest rates on mortgage loans closed.

Chart 2
Selected Mortgage Rates



NOTE: FHLMC commitment rate begins in August 1978. FHLBB commitment rate was changed after August 1983.

1978 and 1983, savings deposits (subject to fixed interest rate ceilings) fell from over 35 percent of total deposits to less than 15 percent. Meanwhile, the new money market certificates and money market deposit accounts each grew to represent about 17 percent of total deposits.

Chart 3 plots the same three interest rate series on a monthly basis since May 1979.[11] The relationships among the three series enable us to see that changes in the cost of funds to S&Ls clearly lag changes in the mortgage rate and the Treasury bond rate, usually by about two months. A simple statistical analysis confirms the visual pattern in chart 3. The contemporaneous correlation between changes in the cost of funds and the other two series is actually negative, though not statistically significant. However, the correlation between the current change in the mortgage rate and the change in the cost of funds two months later is 0.612.[12]

The Rise of Mortgage Rates Relative to Other Long-Term Interest Rates

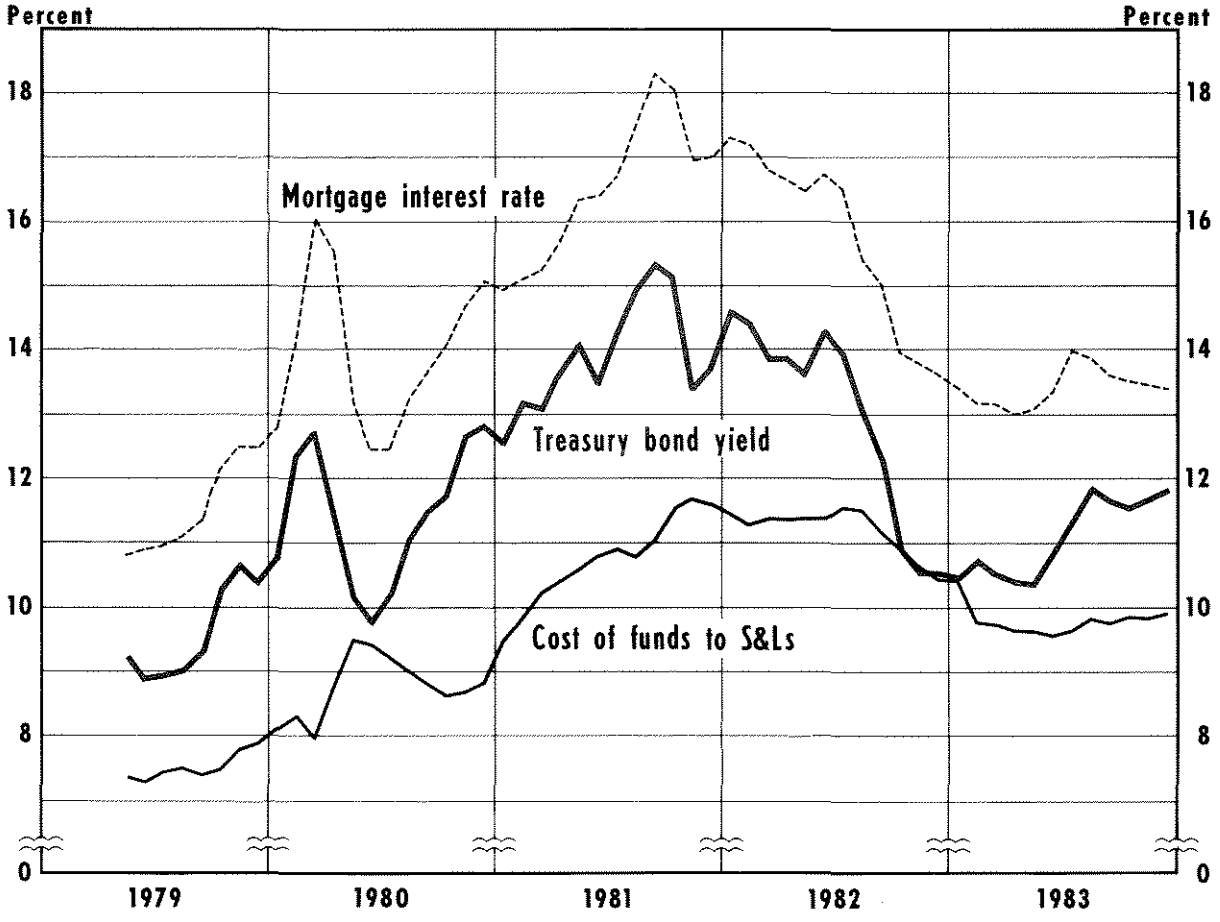
The behavior of mortgage rates since 1980 appears to lend empirical support to the hypothesis that deregulation has resulted in higher mortgage rates relative to other long-term rates. The average spread between the mortgage rate and the 10-year Treasury bond rate from 1966 to 1979 ranged generally from 1 to 1.75 percentage points; in the 1980s, it has ranged from 2 to 3 percentage points.

[11]See Chamberlain, Olin and McKenzie (1983) for a discussion of the monthly cost of funds data. This series is actually the *median* cost of funds rather than the average.

[12]The contemporaneous correlation between changes in the mortgage rate and changes in the yield on 10-year Treasury bonds is 0.794, indicating that interest rates on both kinds of long-term debt instruments are affected simultaneously by the same credit-market influences.

Chart 3

Monthly Comparison of Mortgage Interest Rate with Cost of Funds to S&Ls and 10-Year Treasury Bond Yield



Since 1980, however, the average spread between the mortgage rate and the average cost of funds for S&Ls also has increased, by roughly the same order of magnitude as the increase in the average spread between mortgage rates and the rate on 10-year Treasury bonds. The gap between mortgage interest rates and the average cost of funds stayed mostly between 2 and 3.5 percentage points before 1980; since then, it has varied between 3.25 and almost 6 percentage points. Therefore, the widening in the spread between mortgage rates and the Treasury bond rate does not appear to be the result of a higher average cost of funds to S&Ls.

Why, then, did mortgage rates rise relative to rates on Treasury bonds of comparable term to maturity after 1980? The answer appears to involve differences between conventional residential mortgages and Treasury bonds as debt instruments. The two major differences are: (1) Most mortgages allow the borrower to pay off his debt before maturity without penalty; and (2) There is risk of default on mortgage loans. Treasury bond holders face neither prepayment risk nor default risk.

Mortgage Rates and the Prepayment Option

Investors must be compensated with higher interest rates on residential mortgages than on Treasury bonds to compensate for the risk of prepayment by debtors.[13] Mortgage borrowers must pay a higher interest rate for such a "call option." The value of this option need not remain constant over time. In particular, its value will be higher during periods of more volatile long-term

[13]For a more thorough analysis of the role of the prepayment option in determining the spread between mortgage interest rates and Treasury bond rates, see Hendershott, Shilling and Villani (1982).

interest rates than during periods of stable rates, because of the increased likelihood that the prepayment option will be exercised. Long-term interest rates were extremely variable by historical standards from 1980 to 1982. Thus, we would expect mortgage rates to rise relative to Treasury bond rates during this period.

The size of the interest rate premium necessary to compensate investors for the prepayment option on residential mortgages can be gauged by examining the spread between the yield on passthrough securities issued by the Government National Mortgage Association (GNMA) and the yield on 10-year Treasury securities. The risk of prepayment is the major difference between investing in GNMA passthroughs and Treasury bonds. Investors who purchase these passthrough securities receive the interest and principal payments from a pool of FHA-VA government-guaranteed residential mortgages. Thus, there is no more risk of default on the interest and principal payments on GNMA passthroughs than there is for bonds issued by the U.S. Treasury. Any prepayment of the mortgages, however, is "passed through" to the holders of the passthrough securities.[14]

This feature reduces the probability of a capital gain on GNMA passthrough securities compared with an investment in Treasury bonds. If long-term interest rates decline after an investor buys Treasury bonds, their market value rises, and the investor receives a capital gain if he sells them. In contrast, if long-term interest rates decline after an investor buys GNMA passthrough securities, the mortgages in the investment pool are more likely to be prepaid. Because such prepayments reduce the size of the potential capital gain, a premium in the form of a higher yield on mortgage passthroughs is required to make investors indifferent between them and Treasury bonds.

Chart 4 indicates that the spread between yields on GNMA passthrough securities and 10-year Treasury bonds rose during 1980 through early 1983. Thus, one reason for the relative increase in mortgage interest rates during those years was a rise in the rate premium necessary to compensate investors for the prepayment option on mortgages.

[14]Another factor that accounts for a small portion of the spread between rates on GNMA passthrough securities and Treasury bonds is the effect of state and local taxes. Interest earned on Treasury bonds is exempt from state and local taxes, but earnings on mortgage passthroughs are not. There is no reason to suspect that this factor has increased in importance during recent years. There also could be differences in yields on these two assets if investors do not view them as being of roughly equal term to maturity, as we are assuming.

Mortgage Rates and Default Risk

Another reason for the rise in interest rates on conventional mortgages since 1980 appears to be a general rise in interest rates on privately issued debt securities relative to yields on securities issued or guaranteed by the federal government. Table 2 shows that the average spread between interest rates on privately issued debt instruments and Treasury securities is higher in the generally recessionary period, February 1980 to November 1982, than in the expansionary period, April 1975 to January 1980.[15] This is a reflection of the greater default risk associated with privately issued securities during recessionary periods. In each case, the differences in mean spreads between the time periods are statistically significant at the 1 percent level.[16] The pattern of spreads between mortgage and Treasury bond rates is very similar to the pattern of spreads between yields on other privately issued securities and Treasury securities of comparable duration.

Table 2 also indicates that the spreads between yields on privately issued and U.S. Treasury securities declined to near their pre-1980 levels a few months after the economic recovery began in December 1982. The decline in the spread between the mortgage commitment rate and the Treasury bond rate occurred despite the authorization of money market deposit accounts — a major relaxation of Regulation Q ceiling rates that occurred in the first month of the current recovery.

These observations are supported by the behavior of delinquency rates for mortgages. The percentage of conventional mortgages with payments delinquent for 60 days or more rose steadily from 0.61 percent in the second quarter of 1979 to 1.37 percent in the first quarter of 1983, then began to decline. Delinquency rates in the 1980s have been substantially higher than in the period 1964–79, which undoubtedly accounts for a substantial portion of the higher mortgage rates relative to Treasury bond rates observed since 1980.[17]

[15]The period from July 1980 to July 1981 is officially classified as an economic recovery. The financial markets, however, did not respond during that period as they typically do during expansionary periods. Stock price indexes were little affected, and the spread between corporate Baa and Aaa bond rates (known to be influenced by cyclical factors) changed little. The lack of response is undoubtedly due to the weakness and short duration of the recovery.

[16]Some corporate Baa bonds grant a call option to the issuer. Part of the increase in the spread between the Baa bond rate and long-term Treasury securities, therefore, is accounted for by an increase in the value of this prepayment option.

[17]The average quarterly delinquency rate (60 days or more) for conventional mortgage loans between I/1964 and IV/1979 was 0.58 percent; between I/1980 and IV/1983, it was 1.01 percent. This difference is statistically significant at the 1 percent level.

Chart 4

Selected Interest Rate Spreads

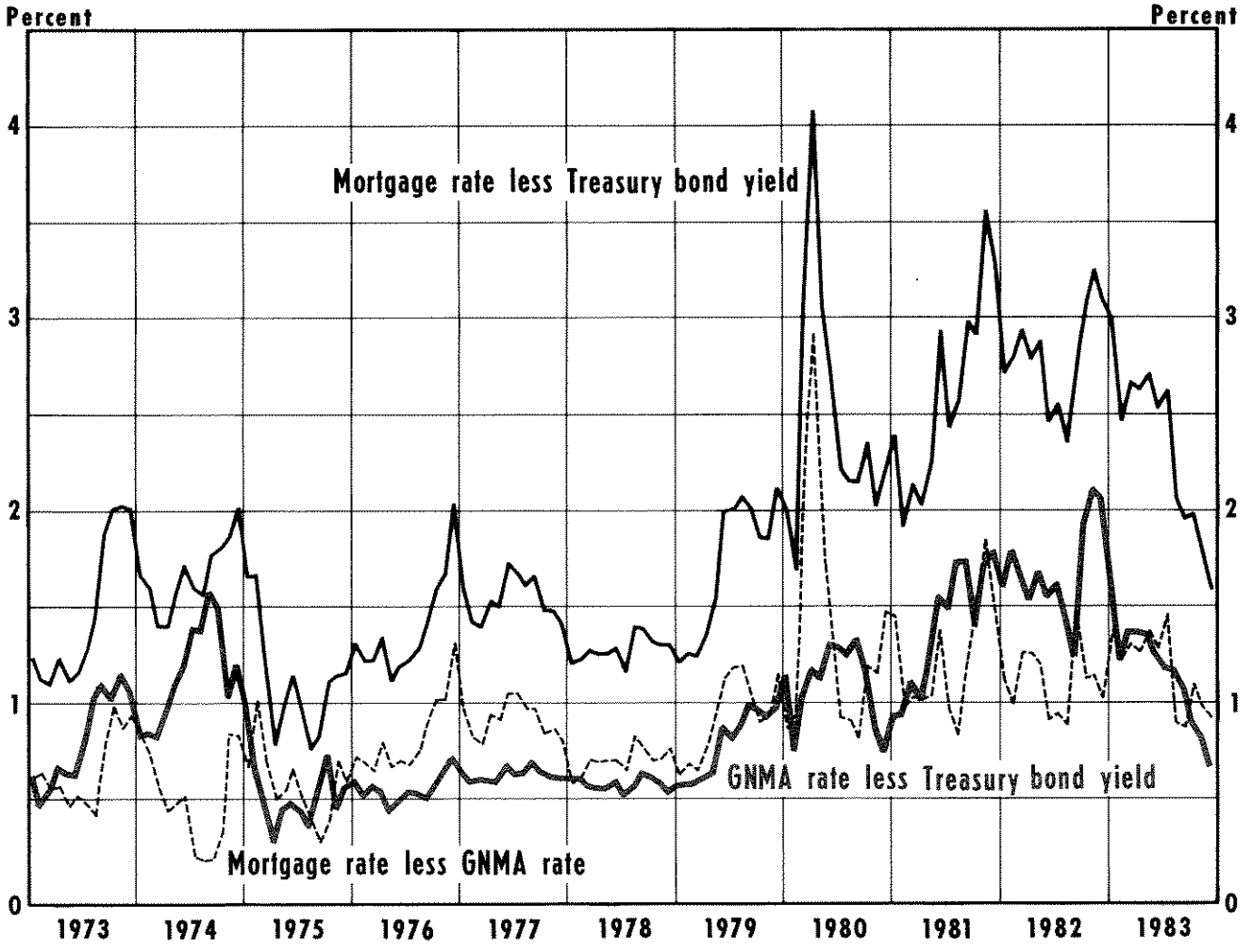


Table 2

Spreads Between Interest Rates on Privately Issued Debt Instruments and U.S. Treasury Securities (monthly average spreads in percentage points)

Interest Rate Spread	Apr. 1975–Jan. 1980	Feb. 1980–Nov. 1982	Dec. 1982–July 1983	Aug. 1983–Mar. 1984
Mortgage rate minus 10-year Treasury bond rate	1.41	2.63	2.71	1.71
Corporate Baa rate minus long-term Treasury bond rate	1.67	2.90	2.83	1.88
3-month commercial paper rate minus 3-month Treasury bill rate	0.53	1.29	0.26	0.31

Table 3
Decomposition of the Spread Between the Mortgage Rate and the 10-Year Treasury Bond Rate (monthly average spreads in percentage points)

Type of risk	Measure of risk	Apr. 1975–Jan. 1980	Feb. 1980–Nov. 1982	Dec. 1982–July 1983	Aug. 1983–Mar. 1984
Default risk	Mortgage rate minus GNMA rate	0.79	1.26	1.29	0.94
Prepayment risk	GNMA rate minus 10-year Treasury bond rate	0.62	1.37	1.42	0.77

The effects of the major factors that appear to account for the rise in mortgage rates relative to Treasury bond rates can be seen in table 3 (and also in chart 4). For the period 1980–82, the premium to compensate for the risk of prepayment (approximated by the spread between the yield on GNMA passthrough securities and 10-year Treasury bonds) was about 75 basis points higher on average than in 1975–79. The default risk premium on privately issued securities not guaranteed by the government (approximated by the spread between interest rates on new conventional residential mortgages and the yield on GNMA passthrough securities) was approximately 50 basis points higher on average during this period. Therefore, both effects appear to share in the responsibility for higher mortgage interest rates relative to Treasury securities in the early 1980s. Both have declined during the current economic expansion.

CONCLUSION

Economic theory suggests that the deregulation of deposit interest rates does not cause mortgage rates to rise and may, in fact, result in lower mortgage interest rates than would otherwise be observed. Nonetheless, many believe that the higher average cost of obtaining loanable funds that results from deregulated deposit rates have led to higher mortgage rates.

Since the introduction of new types of deposits with flexible interest ceilings (or no ceilings at all), the average interest rate on mortgage loans, the average cost of funds for savings and loan associations, and market interest rates in general have risen substantially. The notion that higher mortgage rates are due to the removal of deposit interest rate ceilings, however, is not supported.

Although mortgage rates have moved higher relative to government bond rates of similar duration following the beginning of deregulation, that pattern appears to be unrelated to the deregulation of deposit rates. Instead, it was the result of more variable interest rates, which caused a higher premium for the option of prepaying a mortgage loan, and the economic downturn in the early 1980s, which raised the premium for the risk of default on mortgages. Since interest rates have become less variable and an economic expansion has begun, the spreads between mortgage rates and government bond rates have fallen over the last year to close to their pre-1980 level.

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