

Variable Rate Mortgages

Recently, Federally chartered savings and loan associations were authorized to offer variable rate mortgages. Prior to that authorization, various forms of variable rate mortgage instruments were being offered in a number of states, and several states currently are considering introducing some form of them. This interest in variable rate mortgages is due to the difficulties which the standard fixed payment mortgage has created for many lenders in periods of volatile interest rates as well as the prospect that, as restrictions on deposit interest rates are relaxed, lenders' exposure to interest rate volatility is likely to increase.

As its name suggests, a variable rate mortgage (VRM) is a mortgage loan which provides for adjustment of its interest rate as market interest rates change. Often adjustments of VRM interest rates are linked to the movement of some reference market interest rate or index. As a result, the current interest rate on a VRM may differ from its origination rate, *i.e.*, the rate when the loan was made. This is the major difference between a VRM and the standard fixed payment mortgage (FPM), on which the interest rate and the monthly payment are constant throughout the term. Because VRM rates can increase over the term of the loan, VRM borrowers share with lenders the risk of rising interest rates.

Interest rate risk

The major mortgage lenders obtain funds primarily from relatively short-term deposits. The FPM, which generally has a term of twenty-five to thirty years, has significant

interest rate risk for them because the maturity imbalance between lenders' liabilities and their mortgage assets exposes them to the risk of short-term rates paid on deposits and borrowings rising above yields on outstanding mortgages.¹ In such a situation, the interest expense of lenders approaches their interest income, causing losses which, if great enough, could threaten their viability. As a result of the FPM's interest rate risk, lenders make mortgage credit available on less favorable terms than they otherwise would, and their large holdings of seasoned mortgages paying below-market interest rates have limited their ability to obtain funds by paying market rates on deposits.

During the 1950's and early 1960's, when the variability of interest rates was relatively mild and long-term rates consistently exceeded short-term rates, the maturity imbalance of the major mortgage lenders was of little importance. However, with the acceleration of inflation in the mid-1960's, the average level and variability of short-term interest rates rose much more than long-term rates. This increased the risk of borrowing short to lend long, and thrift institutions sought to reduce this risk by lengthening the maturities of their deposits. For example, in the period from 1969 to 1978, savings and loan associations (S&Ls) reduced the share of their total deposits accounted for by passbook accounts, which are effectively payable on demand, from 69 percent to 32 percent. Mutual savings

¹ Nondepository mortgage investors, such as life insurance companies and pension funds, typically have long-term liabilities, so that they are less exposed to interest rate risk through mortgage investments

banks reduced their passbook share from 99 percent to 51 percent. Nevertheless, the average maturity of thrift institutions' assets still far exceeds that of their liabilities.

The constant interest rate on an FPM protects borrowers from increases in mortgage interest costs.² Borrowers can also prepay their mortgages in advance of maturity, although penalties typically must be paid if the loan is repaid within three years of its origination, and there generally will be other, possibly substantial, costs involved in originating a new mortgage, such as fees for appraisal, title search, etc. Prepayment may be attractive to the borrower if the original loan can be replaced by a new loan bearing a significantly lower interest rate. These advantages for borrowers are mirrored by disadvantages for lenders, whose return on a mortgage may decline but will not increase.³

The VRM changes the distribution of interest rate risk by allowing interest rates on outstanding loans to increase if current market rates rise. Should market rates decline, downward adjustment of VRM rates saves the borrower the transactions costs involved in prepayment of an FPM and refinancing. VRM contracts almost never provide for a minimum rate—which would be difficult to enforce when borrowers can prepay their loans without penalty.

VRM terms and rates

VRMs differ greatly in the extent to which they protect borrowers against increases in interest costs. For example, some VRMs provide a rate ceiling, while others do not. Obviously, the rate "cap" is advantageous to the borrower, since it places an upper bound on interest costs. However, it is important to realize that the major protection against interest rate increases may be current mortgage rates, not the rate cap. If lenders attempted to increase rates on outstanding VRMs above the current market rate, borrowers could prepay their VRMs and refinance the loans at current market rates. Thus, depending on the level of prepayment penalties and costs of originating a new mortgage, the current mortgage rate provides an effective

ceiling on VRM rate increases. In practice, when lenders in California and other states have been allowed to raise VRM rates, many have not done so in cases where the new rate would have been higher than, or close to, the prevailing rate on new mortgages.

Like FPM rates, VRM origination rates are affected by expected future interest rates. However, the expected pattern of interest rates in the near future may cause origination rates on FPMs and VRMs to diverge. If rates are expected to rise, the VRM rate should be lower than the FPM rate. But, if interest rates are relatively high and expected to decline in the near future, a lender might well feel that, other things being equal, VRM rate reductions could be more costly to him than the possible prepayment of an FPM, especially if subject to prepayment penalties. In such a case, the lender would require a higher origination rate on a VRM than on an FPM.

Other features of VRM contracts which affect their origination rates are prepayment and assumability provisions. For reasons explained earlier, the absence of prepayment penalties significantly increases the borrower's ability to take advantage of rate declines and avoid rate increases. Similarly, assumability is valuable in that it may allow the borrower to sell a house more easily or to realize a capital gain if the loan rate is below current rates and is not subject to adjustment when the loan is assumed. Other things being equal, a mortgage loan which incorporates liberal prepayment and assumability provisions will carry a higher rate than one which does not.

In addition, VRM origination rates are affected by the index (if any) used for adjusting the rate and the magnitude and frequency of permissible adjustments. If the index does not reflect movements in current market rates—or if index changes may be incorporated into rate adjustments only infrequently—VRMs may have little advantage to lenders over FPMs. If current mortgage rates decline to a level below the VRM rate, borrowers have an incentive to refinance their loans, just as if they had FPMs. Alternatively, VRM borrowers benefit if the loan carries a lower than market rate. Also, if restrictions on VRM rate increases reduce the likelihood of borrowers being unable to meet their payments, VRM default risk will be little different from that on FPMs, and VRM origination rates will not have to incorporate a special risk premium.

Default risk may also be reduced if borrowers have the option of keeping their monthly payments constant by extending the maturities of their loans to offset VRM rate increases. However, if borrowers use the option, lenders may find that the reduction of VRM amortization payments largely offsets the favorable effect on their cash flow of increases in VRM rates. The

² Moreover, if the loan is assumable—i.e., if it can be transferred from the original borrower to a buyer of the house without the terms of the loan being altered—then the borrower may realize a capital gain in the form of a higher price for his house if current rates rise above the original rate

³ However, the lender still has an opportunity for returns on a portfolio of mortgages to increase to some extent at times of rising interest rates, even if the rates on the individual FPMs which comprise the portfolio are constant. One reason is that, in a market with substantial housing turnover, many loans will be prepaid well before maturity, so that they can be replaced with loans bearing current yields. Also, as outstanding loans are amortized, new loans can be made at current yields

Canadian Rollover Mortgages

Rollover mortgages (ROMs) incorporate interest rate adjustments by structuring the loan as a series of relatively short-term loans, each one of which carries a constant interest rate. At the end of the term of the preceding loan, a new loan is originated at the current interest rate.¹ Since amortization is scheduled over a long period of years, a borrower may "roll over" a series of successively smaller loans before the debt is paid off.

ROMs currently account for almost all Canadian single-family residential mortgages. Although they were first introduced in Canada in the 1930's, ROMs have been widely used only since the 1960's. ROMs exist both as conventional mortgage loans and as government-guaranteed loans authorized under the Canadian National Housing Act (NHA). Both types typically have five-year terms.² Amortization is scheduled over a twenty-to thirty-year period for conventional ROMs and twenty-five to forty years for NHA ROMs. At the end of the term, the loan is renewed at the current mortgage market rate.

The government first began to guarantee five-year ROMs in 1969 and last year allowed three-year ROMs to be included in the NHA program. The interest rate on a government-guaranteed ROM is usually lower

than the rate on a conventional loan, and the amortization period is longer. Borrowers have the option to extend the maturity of NHA loans to a maximum of forty years to avoid higher monthly payments if the rate is increased when the loan is refinanced. Borrowers generally do not have this option with conventional ROMs.

During the first two years of the term, up to 10 percent of the principal balance of a NHA ROM may be prepaid with a three-month interest fee. Any amount may be prepaid after the two years with a fee equal to three months' interest. At the end of the term, the borrower may make a prepayment without incurring a fee simply by taking out a smaller loan. Prepayment penalties on conventional ROMs vary with the lender. Generally there is a charge of three months' interest for prepayment during the term, but any amount of the loan may be prepaid without penalty at the end of the term.

¹ Canadian law does not require the lender to guarantee to originate a new loan at the maturity of the preceding loan, but such commitments are the standard practice among mortgage lenders

² ROMs with terms of from one to four years do exist but are less common

small increase in cash flow would then do little to assist lenders to meet their rising cost of funds.⁴

VRM activity in the United States

In different forms variable rate lending has been for years a central feature of housing finance in many European countries.⁵ In addition, rollover mortgages (ROMs) have been the major mortgage instrument in Canada since the 1960's (see box). In contrast, VRM activity in the United States is of more recent origin. Substantial numbers of VRMs have been made in a number of states in the last several years, and the recent authorization of VRMs for Federally chartered S&Ls should spur such activity further. To date, the bulk of VRM activity has been concentrated in California, and California's VRM regulations served as a model for the VRM regulations recently issued by the

Federal Home Loan Bank Board (FHLBB)⁶ As a result, there is a tendency in popular discussion to identify VRMs with the specific version employed in California. As the accompanying box on pages 26 and 27 makes clear, the California VRM regulations are different for S&Ls and commercial banks and also differ in important ways from the FHLBB's regulations. Currently the most common kind of VRM originated by state-chartered S&Ls in California must incorporate a 2½ percentage point cap on cumulative rate increases, and rate adjustments are indexed to the average cost of funds index for California S&Ls published by the San Francisco Federal Home Loan Bank. Rate increases are at the option of the lender, while rate decreases are mandatory.

In contrast to the widespread usage of VRMs in California, VRM activity elsewhere in the country has been uneven. While few states have legislation which specifically forbids VRMs, the law in most states is silent on the matter, and the uncertain legal authority in these states probably has discouraged their introduction. Also usury ceilings in many states preclude meaningful VRM lending activity. Finally, until recently,

⁴ The seriousness of this possibility is illustrated by the response of California VRM borrowers to the August 1978 rate increase. About two thirds of the affected borrowers exercised their option to extend the maturities of their loans rather than allow their monthly payments to increase

⁵ For example, variable rate mortgages of various types are used extensively in the United Kingdom, France, and Germany. In addition, rollover mortgages are common in Switzerland and the Netherlands

⁶ Title 12, Code of Federal Regulations, Parts 545 and 555

California Variable Rate Mortgages

VRM regulations

Regulations governing California VRMs are the product of legislation and of regulation by the California Commissioner of Savings and Loan. In addition, Federally chartered savings and loan associations (S&Ls) in California are subject to the VRM regulations of the Federal Home Loan Bank Board.

Prior to November 23, 1970, VRM lending in California was unregulated. On that date, legislation became effective which allows lenders the option of increasing the VRM interest rate only if the index to which it is tied increases, but a decrease in the rate is mandatory if the index decreases. The index itself is not specified. Semiannual adjustments of VRM rates are provided, with a maximum adjustment of $\frac{1}{4}$ percentage point. Prepayment without penalty is permitted up to ninety days following notification of a rate increase. Also, the terms of the variable interest rate provision are required to be fully disclosed to the borrower before closing the loan and to be described in both the mortgage (or trust deed) and the note. The legislation was amended in 1976 to provide additional protection to borrowers by requiring a $2\frac{1}{2}$ percentage point ceiling on the cumulative increase in the VRM interest rate. In addition, in the event of a rate increase, borrowers were given the option of extending the maturity of their loans to a maximum of forty years in order to keep monthly payments stable. In January 1978, lenders were also allowed to offer a VRM with rate adjustments every five years and a maximum rate increase of $2\frac{1}{2}$ percentage points.¹ These regulations apply to all lenders in California.

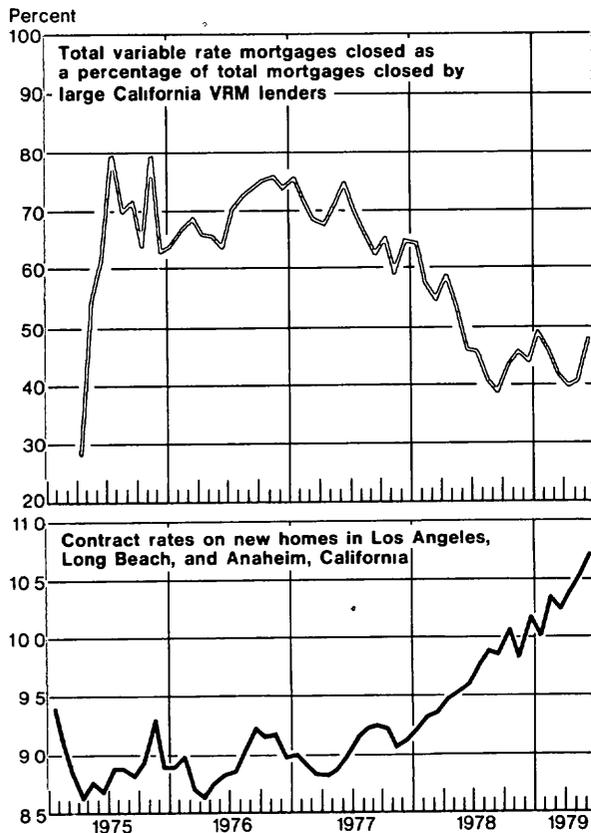
In addition, California S&Ls are subject to the more restrictive regulations of the State Commissioner of Savings and Loan.² VRMs providing for semiannual interest rate adjustments must be indexed to the weighted average cost-of-funds index for all California S&Ls published by the Federal Home Loan Bank of San Francisco.³ Effective June 23, 1979, VRMs providing for interest rate adjustments every five years must be indexed to the average yield on accepted bids for commitments to sell conventional mortgages to the Federal Home Loan Mortgage Corporation. Also, the minimum rate increase which can be implemented is $\frac{1}{10}$ percentage point, except that, for VRMs with semiannual rate adjustments, smaller increases may be implemented if the $\frac{1}{4}$ percentage point maximum prevented rates from being adjusted fully in the previous semiannual period. Index increases of less than $\frac{1}{10}$ percentage point may be accumulated until they total at least $\frac{1}{10}$ percentage point. Borrowers are also required to be notified at least thirty days in advance of any rate adjustments.

Effective January 1, 1979, the Federal Home Loan Bank Board (FHLBB) authorized VRM lending by Federally chartered S&Ls in areas where Federally chartered associations had faced a competitive disadvantage in the market. At the time, California was the only state which the FHLBB felt met this requirement. Most of the FHLBB's VRM regulations for Federally chartered S&Ls are essentially identical to those currently applicable to state-chartered S&Ls in California. However, Federally chartered S&Ls may make only annual rate adjustments no greater than $\frac{1}{2}$ percentage point. Also, in the event of a rate decrease, Federal associations must decrease the maturity of the loan first—but not to less than the original maturity of the loan—and then adjust the monthly payments. Other FHLBB regulations are significantly more restrictive. Federally chartered S&Ls must offer fixed payment mortgages (FPMs) as well as VRMs and must provide detailed information to facilitate the borrower's intelligent choice between them. To force Federally chartered S&Ls to continue to offer FPMs on reasonable terms, VRM acquisitions are restricted to 50 percent of their total mortgage originations and purchases. Also, effective July 1, Federally chartered S&Ls must index their VRMs to the national cost-of-funds index published by the FHLBB.

Growth of VRMs

VRMs had a very slow start in California. In the mid-1960's, one state-chartered savings and loan association attempted to incorporate provisions for variable interest rates in its mortgage loan contracts, but strongly negative consumer response discouraged the effort. Two S&Ls tried to promote VRMs in 1970 but met with only modest success. In 1971 another S&L began offering VRMs more successfully. In 1975 VRM activity finally picked up, as a significant number of large lenders began to offer them. Currently there are about twenty-seven state-chartered S&Ls, two national banks, and two state-chartered banks offering VRMs in California. Federally chartered S&Ls are beginning to offer them as well.

From mid-1975 through 1977, the volume of VRMs increased rapidly, as large California VRM lenders had about 60 to 80 percent of their new loan originations in VRMs (chart). However, during 1978, as mortgage interest rates rose sharply, the VRM percentage declined to about 40 to 50 percent, and VRM growth has slowed. The reason apparently is that lenders are offering VRMs on less attractive terms relative to FPMs in anticipation of declining interest rates. Other things being equal, an FPM with prepayment penalties is more attractive to the lender in these circumstances since it locks in high interest rates.



Sources: Federal Home Loan Bank of San Francisco and Federal Home Loan Bank Board

After September 1978 the VRM percentage increased sharply, though it has resumed its decline since the beginning of this year. The resurgence was probably stimulated in part by the California Supreme Court's August 1978 decision in *Wellenkamp vs. Bank of America* that "due-on-sale" clauses in mortgage contracts cannot be exercised by lenders in order to increase interest rates on mortgages to current market levels.⁴ The decision severely reduces lenders' ability to increase interest rates on FPMs in the active California housing market. Unless the law is changed or the Court reverses itself, VRMs should be even more attractive to California lenders in the future than they were in the past.

VRM rate changes

Interest rates on VRMs have decreased only once since 1970 but have increased several times. Following a rate decrease of 15 basis points in October 1972, the only S&L actively lending through VRMs implemented 25 basis point rate increases in April and October 1974 and in April 1975. The first rate increase implemented by a significant number of large lenders occurred following the August 1978 announcement that the cost-of-funds index increased in the first half of 1978 by 12.9 basis points. This increase in the cost of funds, plus earlier small accumulated increases, allowed about a 20 to 22 basis point rise in VRM rates, and twenty S&Ls out of twenty-one implemented it for most of their VRMs. There was very little consumer reaction to the increases. According to a survey conducted by the California Commissioner of Savings and Loan, only 4 percent of the borrowers who received notice that their rates were being raised wrote inquiries to lenders, and only 5 percent of the inquiries were complaints. A large majority of VRM borrowers—67 percent—decided to extend the maturity of their loans to avoid any increase in monthly payments. Most recently, the San Francisco FHLB announced in February of this year that, in the second half of 1978, the cost-of-funds index increased 30.1 basis points. This increase allowed lenders to raise their rates on most VRMs by the maximum increase of 25 basis points, with a further 5 basis point increase possible six months later.

¹ To date this new variant does not seem to have attracted much attention

² In practice, California commercial banks offering VRMs in most cases voluntarily adhere to the rulings and regulations of the Savings and Loan Commissioner.

³ Between June 24, 1971 and January 1, 1976, S&Ls were required to use an index of the cost of funds of all S&Ls in the Eleventh Federal Home Loan Bank District, which includes Arizona, California, and Nevada

The index now used with California VRMs is calculated by dividing California S&Ls' total annualized funds cost by their average total funds:

$$2 \times \frac{\left[\begin{array}{l} \text{total interest or dividends paid on} \\ \text{savings capital, FHLB advances, debentures, and} \\ \text{other borrowings} \end{array} \right]}{\left[\begin{array}{l} \text{averages of} \\ \text{savings capital, advances, debentures, and other} \\ \text{borrowings outstanding} \end{array} \right]}$$

The index is released semiannually, usually in February and August, for the six-month periods ended December 31 and June 30.

⁴ A due-on-sale clause is a device commonly used in real property security transactions to provide, at the lender's option, for acceleration of the maturity of the loan upon the sale of the real property security.

Federally chartered S&Ls outside California were not authorized to offer VRMs.

Two states with considerable VRM activity are Ohio and Wisconsin. VRMs offered in Ohio are essentially similar to California VRMs, but the dominant form of VRM in Wisconsin differs from most others in that its rate is not tied to an index. Called the "escalator clause mortgage", it provides for a constant rate for three years, after which the rate may be adjusted once a year. The borrower is protected by restrictions on rate increases. The maximum initial rate increase is 1 percentage point, and a 0.5 percentage point maximum applies to successive increases. Borrowers are also protected to some extent by the option to prepay their loans without penalty within four months following a rate increase or anytime the rate is 2 percentage points or more above the original contract rate. For this kind of VRM, then, the current mortgage rate serves as an effective "index", since the virtual absence of prepayment penalties insures that lenders will not increase rates on outstanding VRMs above current mortgage rates.

Wisconsin lenders may offer a California-type VRM as well as the escalator clause mortgage. However, lenders strongly prefer the "escalator", and virtually all state-chartered S&Ls offer it, as do a number of Federally chartered S&Ls.⁷ In contrast, activity in the California-type VRM is negligible. Though there were some complaints from borrowers who had their interest rates increased in 1974, following 1975 legislation governing the frequency and size of increases, rate adjustments seem generally to have been accepted by borrowers.

There has also been substantial VRM activity in several New England states, most notably Massachusetts.⁸ VRMs in New England differ in a number of respects from those in California. Typically there is no cap on cumulative upward adjustments of VRM rates, and borrowers have either very limited options to extend maturities to offset rate increases or none at all. Indexes used also vary. In Maine and New Hampshire, VRM lenders generally have used as an index some measure of the cost of funds to lending institutions. In Massachusetts and Connecticut the norm is an index of current interest rates on new mortgages. Absence of a cap on rate increases and a

maturity-extension option, together with indexation to mortgage rates, means that VRM borrowers in New England share more interest rate risk than their California counterparts. As a result, VRM lenders in New England must offer more attractive "discounts" off the FPM lending rate than do California VRM lenders. In New England the norm seems to be about a ½ percentage point reduction of the VRM rate relative to the FPM rate—considerably greater than the typical reductions of ¼ percentage point or less in California.

VRMs as short-term mortgages

Borrowers seem to have responded to the substantial rate discounts offered in New England by favoring VRMs over FPMs when they expected to move, to sell their homes, and to prepay their mortgages in the near future. Although it is still too early to say so definitely, it appears that substantially lower initial rates on VRMs may lead to selection of borrowers preferring lower current interest rates in anticipation of prepaying their loans well before any substantial rate increases will have occurred. If this proves to be generally true, then VRMs, instead of functioning solely as a long-term variable-rate lending instrument, in effect would also be a device for making short-term mortgage loans. Indeed, at least one New England mortgage lender has specifically designed and marketed its VRM to appeal to "transient" homeowners who expect to move within a few years after originating their mortgages.

The major advantage to such a use of the VRM is that, under certain circumstances, it allows individuals who expect to be short-term borrowers to reduce their borrowing costs. In addition, borrowers avoid both the expense of writing a new loan upon maturity of a short-term loan and the risk that new finance might not be available then. Moreover, borrowers have flexibility in determining when to prepay or transfer their loans (if the loans are assumable). Thus, VRMs may provide a mechanism through which lenders, without attempting to screen short-term borrowers from long-term borrowers, may offer what are in effect short-term mortgage loans while retaining for borrowers many of the advantages of long-term financing.

Consumer protection

Consumer protection figures prominently in most discussions of VRMs. At the heart of the issue is disclosure of the terms of the mortgage contract. The FHLBB and a number of states have promulgated comprehensive regulations designed to insure that a borrower understands his potential mortgage costs with a VRM. By encouraging consumers to evaluate their borrowing options carefully and by insuring that lenders disclose to borrowers all information relevant for an

⁷ There is some uncertainty as to whether an escalator clause mortgage complies with FHLBB regulations, which in general prohibit loans with an increasing sequence of monthly payments. Some Federally chartered S&Ls avoid the appearance of a conflict by extending the term of the mortgage to offset the effect of a rate increase on monthly payments. Others have interpreted the regulation as allowing them to increase monthly payments.

⁸ A number of lenders in New England also offer ROMs similar to those used in Canada.

intelligent choice between different mortgage instruments, these regulations facilitate the sound development of VRMs.

In addition to disclosure regulations, consumer protection measures have taken several other forms. For example, for many lenders the FPM is, for all practical purposes, the only mortgage design permitted. As a means for implementing consumer protection, such a draconian approach has obvious drawbacks.

Another approach to consumer protection is incorporated in the regulations issued by the FHLBB in December of last year, which required that any Federally chartered S&L offering VRMs also offer FPMs to prospective borrowers to assure them "the freedom to choose". While there are some mortgage lenders which lend only through VRMs, the great majority of VRM lenders also offer FPMs. There are two main reasons. First, since many individuals continue to prefer fixed monthly payments, it can still be profitable for lenders to offer FPMs. Second, for reasons developed more fully below, the VRM is likely to gain less acceptance in the secondary mortgage market than the FPM, so that lenders desiring to originate and sell mortgages have a strong incentive to offer FPMs. In light of these factors, the FHLBB's regulation will probably have little overall effect, though it may constrain some individual lenders.

Another, more important, way in which regulators and legislators occasionally have sought to protect the interest of borrowers is through placing restrictions on the form of the mortgage contract. For example, California VRMs have a 2½ percentage point cap on cumulative rate increases, and lenders must permit borrowers to extend the maturity of their loans (subject to certain limitations) to prevent rate increases from adding to their monthly payments. Since these features make VRMs more similar to FPMs and thus lessen their attractiveness to lenders, they contribute to limiting the rate discounts offered on California VRMs.

Also contributing to the smallness of the discounts is the linkage of most VRM rates to a statewide S&L cost-of-funds index. The California requirement resulted from a view that VRMs should enable lenders only to recoup variations in their average cost of funds and should not reflect movements in mortgage rates unrelated to movements in the cost of funds. While this view has an intuitive appeal as a means of insulating lenders' profits from fluctuations in the cost of funds, the insulation provided is only partial. In a period of rising interest rates, lenders' average returns on VRMs will rise about in tandem with their average funds costs, and their profit rates will be relatively stable. However, in a period of declining interest rates, yields on new mortgages will probably fall more than average funds

costs, causing downward adjustments of VRM rates to lag behind the declining mortgage rates. Such a situation might lead to some consumer resentment until mortgage rates declined sufficiently to make it attractive for borrowers to prepay the VRMs and refinance them. As a result, returns on VRMs indexed to lenders' average cost of funds should rise roughly in tandem with average funds costs as rates rise, but probably will fall disproportionately as rates decline. This prospect clearly limits the magnitude of rate discounts which lenders can offer on VRMs.

Indexing VRM rates to funds costs also contributes to concerns that the progressive removal of deposit interest ceilings may raise funds costs and thus increase VRM rates, at least until the cap rates are encountered. The actual situation is more complex—and less threatening to borrowers—since they may prepay and refinance VRMs if their rates get out of line with market mortgage rates. No doubt some increases of mortgage rates will result from removal of deposit interest ceilings, but these will probably be substantially less than the increases in deposit interest rates.⁹ The probable result, then, is that current mortgage rates will constrain increases in VRM rates resulting from indexing the rates to lenders' funds costs.

Since California VRMs are less attractive to lenders than those indexed to mortgage rates without rate caps and maturity extension options, it is not surprising that VRM rate discounts in California are relatively small. Ironically, though California VRMs do incorporate protections for consumers, they may also prevent individuals who expect to remain in their homes for relatively short periods of time from obtaining more favorable mortgage rates than long-term borrowers. In a housing market with turnover as high as that in California, the generally small rate discounts available to short-term borrowers may represent a considerable cost to consumers

VRMs in the secondary mortgage market

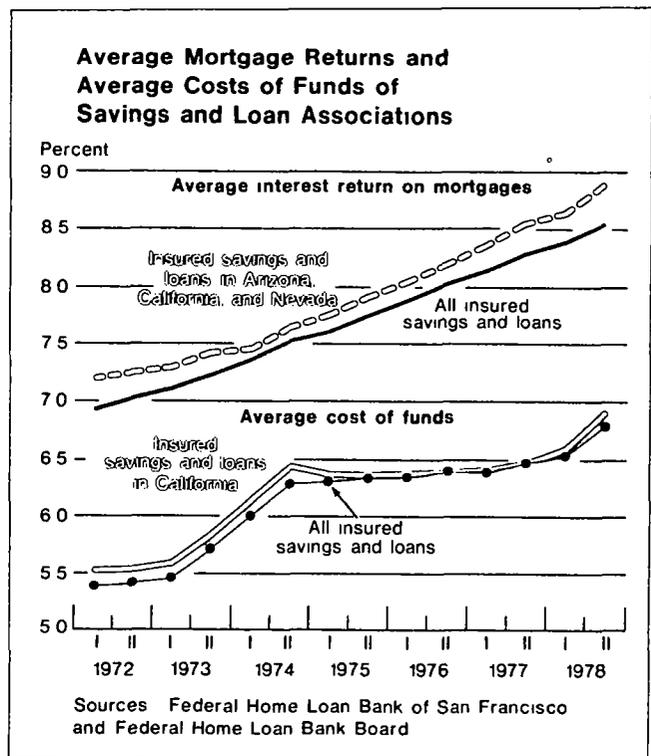
Because VRMs are a new mortgage instrument, sales of VRMs in the secondary mortgage market are a relatively new phenomenon. They are almost always arranged through negotiation between the originator and the investor—either directly or through a broker. However, in March 1978, the first public offering of VRM pass-through securities was made by the Home Savings and Loan Association of Los Angeles, the

⁹ Part of the reason is that as deposit interest ceilings are removed, lenders may initiate explicit charges for services heretofore provided free as a form of noninterest remuneration. In addition, many investors in the mortgage market—such as insurance companies and pension funds—are unaffected by deposit interest ceilings, and their demand for mortgages will dampen upward movements in mortgage rates relative to rates on alternative investments.

largest S&L in the country. The issue was well received by primarily institutional investors. A second issue in October met a somewhat poorer reception, and there have been no further public offerings of VRM pass-through securities since then. At this time, two main factors account for the relative unattractiveness of California VRMs in the secondary market. The California usury law limits the interest rate increases which out-of-state investors may expect.¹⁰ Also, prevailing expectations of future declines in interest rates make fixed-rate investments more attractive to investors. Should rates decline significantly, public offerings of VRM pass-through securities could become attractive once again.

Nevertheless, a number of obstacles currently prevent VRMs from becoming a standard fixture of the secondary market. Since some states prohibit VRMs, lenders in such states may not buy them—either as whole loans or as participation certificates in pools of VRMs—for inclusion in their portfolios.¹¹ Moreover, even in states where VRMs are legal, Federally chartered S&Ls cannot purchase VRMs originated, for example, by California lenders with terms different from those authorized by the FHLBB. Also, Federal housing agencies such as the Federal National Mortgage Association and the Federal Home Loan Mortgage Corporation currently do not purchase VRMs.

The fundamental obstacle to purchases by the housing agencies as well as to trading VRMs in the secondary market is their lack of uniformity. Non-homogeneous mortgage pass-through securities can be traded only after some detailed examination of the underlying mortgages. While newly issued Government National Mortgage Association pass-through securities bearing a given contract interest rate are uniform as to the contract rate and the original term, VRM pass-through securities, even if they have the same origination rate, may have different rate caps and different rate indexes. Moreover, although the indexes could be formally identical, different regional conditions affecting funds costs or current mortgage rates—especially state usury ceilings—might lead to variations in the pattern of implementation of VRM rate adjustments. Thus, with regional differences in deposit and mortgage markets, the origination rates as well as the course of rate adjustments will differ from one region to another. As a result, it will be difficult to trade VRM pass-through securities without some inspection of the



underlying mortgages. This situation clearly favors determination of the terms of secondary market transactions in VRMs through negotiation between the buyer and seller, either directly or through a broker. Where the offering is large enough and the seller is sufficiently well-known to investors, it may be feasible to arrange a public offering. But, due to the lack of uniformity of VRMs, it will be difficult for securities dealers to "make markets" for them by posting the prices at which they stand ready to buy and sell.

To avoid such "fragmentation" of the secondary market for VRMs, a single, nationwide index has been suggested in place of the various local or regional indexes currently being used. The FHLBB lent support to this view in its recent regulations which required that all Federally chartered S&Ls offering VRMs after July 1 use the same nationwide cost-of-funds index. While widespread adoption of a uniform index clearly would reduce the variety of VRMs, several problems would remain. First, not all lenders would be attracted to the uniform index. For example, lenders in California might prefer to continue to index their VRMs to their average cost of funds. As the chart shows, the California average cost of funds generally has tracked the national average very closely—the simple correlation coefficient between the two indexes is 0.99—

¹⁰ Out-of-state lenders are subject to a 10 percent usury ceiling which does not apply to California S&Ls and commercial banks.

¹¹ However, since FHLBB regulations authorizing VRMs take precedence over such state laws, Federally chartered S&Ls in such states may offer VRMs.

but discrepancies have emerged, especially during periods of rising interest rates. Another reason why lenders might prefer to avoid using the nationwide index is that they might want to use VRMs to make short-term mortgage loans as described earlier, in which case they probably would want to index them to current mortgage rates. Moreover, even if all VRMs were tied to the nationwide index, local mortgage market conditions, including usury ceilings, would affect the ability of lenders to implement the VRM rate adjustments allowed by the national index. As a result, some heterogeneity would remain. Thus, use of a national index, though it will increase the uniformity of VRMs, does not appear likely to eliminate the fragmentation of the secondary market for VRMs.

Outlook for VRMs

While it is difficult to predict the future growth and impact of VRMs, experience in California and elsewhere suggests that they should enjoy a ready market in states where they have not yet been introduced. In the near future VRMs are likely to spread more widely throughout the country. Effective July 1, the

FHLBB authorized Federally chartered S&Ls in all states to offer VRMs and, as pressure grows to raise or eliminate deposit interest ceilings, interest in expanding lending through VRMs should increase. As more lenders are able to use VRMs to reduce the risk of lending long and borrowing short, VRMs should have a favorable impact on the supply of mortgage credit throughout the business cycle.

Experience to date illustrates the variety of feasible VRM designs, including nonindexed VRMs like the Canadian ROM and the "escalator clause" mortgage popular in Wisconsin, VRMs indexed to current mortgage rates as in New England, and VRMs indexed to a measure of lenders' funds costs as in California. Some of these VRMs provide borrowers considerable protection against future rate increases, though not so much as an FPM. But such protection is generally obtained only at the cost of higher origination rates, which may prevent short-term borrowers from reducing their borrowing costs with a VRM. Thus, in the future development of VRMs, the cost of imposing restrictions on the form of VRMs should be weighed carefully against the expected benefits.

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