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IMPACT OF DEREGULATION ON THE MORTGAGE MARKET

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Impact of Deregulation on the Mortgage Market

In sharp contrast to the 1970s, which may be viewed as a decade of regulation, the 1980s may become a decade of deregulation. At least, the decade got off to a good start in this direction. Nineteen-eighty was the most significant year for proposed, if not actual, deregulation in the financial sector in modern U.S. history. Whether the proposed deregulation will be translated entirely or even largely into actual deregulation, remains to be seen. Some cynics are already referring to the "deregulation" that has occurred as "reregulation." Nonetheless, both the proposed and actual deregulation have important immediate implications for the way financial institutions conduct business and financial markets, including the mortgage market, operate.

The keystone to deregulation in the financial sector was the enactment of the Depository Institution Deregulation and Monetary Control Act of 1980 (DIDMCA). DIDMCA is the most important and far-reaching financial legislation since the Glass-Steagall (Banking Act) of 1933. It incorporates many if not most of the "reforms" proposed in the post-World War II era by students of our financial system.¹

However, probably the most important changes in the Act relate not to private financial institutions or markets but to the Federal Reserve System

¹For a more complete analysis of the Act, see George G. Kaufman, "The Depository Institution Deregulation and Monetary Control Act of 1980: What Has Congress Wrought" (November 1980).

and indeed reregulate rather than deregulate. For the first time, nonmember commercial banks as well as all other depository institutions offering transaction type deposit accounts are brought under Federal Reserve reserve and data reporting requirements. In doing so, Congress gave the Fed powers beyond even its own wildest dreams and, at least in the short-run, possibly beyond its ability to use effectively.² The number of financial institutions brought under Fed control was increased some sevenfold from 6,000 to 42,000, including savings and loan associations and mutual savings banks.

As a financial regulatory agency, the Fed is no longer one among equals; it is by far the predominant agency.³ The Federal Home Loan Bank Board along with the FDIC, the COC and the NCUA are subordinate partners. (The importance of the Home Loan Bank Board is reduced further by becoming only one vote on the five-member Depository Institutions Deregulation Com-

²In recognition of this, the Federal Reserve has reduced or delayed some reporting requirements for smaller institutions.

³Indeed, Federal Reserve officers are going to extraordinary means to deny this increased power. See, for example, the speech by Vice-Chairman of the Board of Governors Frederick Schultz before the United States League of Savings Associations, San Francisco, November 20, 1980:

The Federal Reserve does not want super-regulator status, and the Monetary Control Act did not confer it. The new legislation did not dilute the regulatory authority of the Federal Home Loan Bank Board, the FSLIC, or any other regulator of thrift institutions. It did not in any way expand the regulatory authority of the Federal Reserve; this was not the purpose of the Act... (I)n practice, the Federal Reserve's direct regulation is largely limited to state-chartered member banks, some 1,000 out of over 14,000 banks in the United States... We are far from a super-regulator and would not want it otherwise.

mittee--DIDC--that supervises the setting and phasing out of Regulation Q.⁴⁾

As the controller of the money supply or interest rates, the Act may or may not have made the Fed more powerful depending on how important one had considered the "leakage" caused by nonmember commercial banks and the shift to transaction accounts at thrift institutions. But, at a minimum, the Fed is no weaker, and it must now either "put up or shut up" as a central bank. To the extent that the Fed puts up and improves its control over the money supply, it will have beneficial implications for the mortgage market far beyond those that changes in either regulation or deregulation can bring about by creating the price and financial stability necessary for both a healthy housing industry and a healthy mortgage lending industry. Indeed, it is because of the Fed's inability to do so in the past, either for lack of means or lack of will, that many of the current problems in the mortgage market may be attributed. In either case, the Fed may be expected to be an even more important factor in the mortgage market than before.

⁴The significance of this change for the thrift industry is emphasized by Milton Feinerman, President of the Federal Home Loan Bank of San Francisco, in remarks to the United States League of Savings Associations, San Francisco, November 17, 1980. Feinerman believes that:

the DIDC sales as the flagship of the fleet-- of a combined task force dedicated to the dilution, whittling away, and possible destruction of the Federal Home Loan Bank System....(I)n pursuit of their mission, they are bringing second class citizenship to housing in America, promulgating bank bias and Federal Reserve economic bias toward specialized finance agencies....The message is clear.. the Fed and the American Bankers Association believe that the Deregulation and Monetary Control Act... (has) but one purpose and final objective--the unification of our nation's financial system under the direct control of the Federal Reserve.

But more directly, DIDMCA impacts on housing and mortgage markets through its deregulation provisions that (1) broaden the lending powers of savings and loan associations and mutual savings banks, (2) broaden the borrowing powers of these institutions to include transactions type deposits, and (3) require a phase-out of Regulation Q type deposit rate ceilings by 1986. Specifically, the Act permits federally chartered SLAs to invest (1) in money market funds; (2) in consumer loans, commercial paper and corporate bonds up to 20 percent of their assets; and (3) in student loans up to 5 percent of their assets. They may also issue credit cards, which increases their likelihood of making consumer loans. Thus, these traditional residential mortgage lending institutions could, if they so wish, allocate proportionately fewer resources to mortgages than they have been doing.

The impact of these provisions on the mortgage market will depend both on whether the thrift institutions will reduce the proportion of their mortgage loans to assets and on the growth of the institutions' total asset base. The growth of the base will be importantly affected by the speed and extent to which Regulation Q and the spread between deposit rates at thrift institutions and commercial banks are phased out and on the institutions' abilities to use the new types of deposit accounts successfully.

II

Financial deregulation is not occurring in a vacuum as an independent event, but is part of an evolving process that is not restricted to the financial industry. Regulation is being overhauled or phased out in many

industries for a single, simple reason--it is not working in terms of producing satisfactory economic or social performance. In almost all instances, the regulations involved are legacies of an earlier age with different problems. For whatever economic or political reasons the regulations may have been adopted initially, the changes in the economy since have reduced their effectiveness to the point where for many the social disadvantages outweigh the remaining advantages. The regulations show their age!

For financial institutions and markets, the changes of particular significance have been the unexpected acceleration in the rate of inflation, which has pushed up interest rates unexpectedly, and technological improvements in communications and fund transfers, which have permitted quick and relatively costless circumvention of both legally imposed specialization and interest rate ceilings. As a result, many financial regulations have become either regulations in name only, producing legally differentiated but economically alike products, or an actual hindrance to the successful long-run operation of some segments of the industry. Deregulation is not a drive by a few fanatics determined to alter or destroy the financial industry, but a response to changes in the system that threaten to handcuff the industry. The lesson is clear--either overhaul the regulations or be overhauled by them! As I shall argue, deregulation follows innovation, some of it actually induced by the regulation itself, rather than preceding innovation. Innovation

destroys the effectiveness of extant regulation.⁵

When one discusses financial regulation, it is difficult not to start with Regulation Q. Regulation Q has had two principal effects on mortgage lending by thrift institutions. One, by periodically encouraging disintermediation, it has both increased the cyclical volatility of available funds and reduced the average amount. Since Regulation Q ceilings were extended to thrift institutions in 1966, savings and loan associations and mutual savings banks increased their combined share of the market for financial assets by 2 percentage points, from 20 percent to 22 percent. However, their market share decreased in a number of years, particularly immediately after the extension of the ceilings to them. In contrast, between 1946 and 1965, these institutions had increased their market share by 8 percentage points, from 12 to 20 percent, and did not experience a decline in any year. Two, at times, Q may have reduced the mortgage rate. Both of these effects have been lessened substantially since the introduction of near-market-rate deposit ceilings on some deposit certificates in 1978. Since then, deposit ceilings have been important only for savings deposits and a diminishing portion of time deposits. In addition, the spread between ceiling rates at thrift institutions and commercial banks has been made less encompassing.

On the positive side, Q did serve to protect the financial solvency

⁵A detailed analysis of the process appears in Edward J. Kane, "Accelerating Inflation, Technological Innovation and the Decreasing Effectiveness of Banking Regulation," Journal of Finance (forthcoming) and _____, "Good Intentions and Unintended Evil: The Case Against Selective Credit Allocation," Journal of Money, Credit and Banking (February 1977), pp. 53-69.

of thrift institutions in periods in which unexpected bursts in the inflation rate made the financing of long-term fixed-coupon rate mortgages with short-term effectively variable-coupon rate deposits suddenly unprofitable. Long-term fixed-coupon securities incorporate in their coupon rate the rate of inflation expected at the time the loan is made. Thus, when subsequent increases in the rate of inflation are a surprise, the coupon rate on these securities is lower than necessary to generate revenues that cover the suddenly higher-than-expected shorter-term deposit rate, operating costs and a competitive profit. By temporarily reducing intra-industry competitive forces, Regulation Q shielded the impacted institutions, but at a cost of slower growth, economic inefficiency, and the development of new, competing institutions.

However, the institutions can partially insulate themselves from such interest rate risk and lessen the need for deposit ceilings, even if the Fed does not "put up" in the future, by using variable coupon rate type mortgages (VRMs) to match their deposit structure more closely. With greater use of these mortgages, final elimination of Q should be possible and should result in an increase in the average flow of funds to the thrift institutions. A case of deregulation made possible by innovation! Any resulting net increase in deposit interest costs should be reasonably small and manageable. Gross increases in cash interest costs should be offset in part by a reduction in noncash interest costs, such as excessive branches and gifts, and improved management. Operating expenses as a percent of assets at SLAs declined from 1950 to 1967, when Q was extended to SLA deposits, but have increased sharply since then as SLAs developed less efficient noncash means of paying competitive

deposit rates.⁶ Of course, as many of these noncash payments, such as excessive branch offices, cannot be stopped immediately, eliminating Q will not help earnings in the short run and a gradual phase-out over six years is appropriate. It might be noted that six years is considerably longer than the time period permitted other industries undergoing deregulation, e.g., the airline industry. Edward Kane has argued recently that the elimination of Q might actually increase industry earnings in that, since the FSLIC protects the institutions from failure, the greater ability to compete for funds will result in a larger volume of high yielding profitable earning assets.⁷

Thus, I do not subscribe to the theory that deregulation will bankrupt the thrift industry or even to the theory that only the largest institutions will survive. The current cost pressures originate from a combination of poor government economic policies and our failure to alter the institutions' mortgage lending powers sooner, not from ongoing or planned deregulation. They would have occurred whether or not deregulation had occurred.

What will happen to the proportion of the institutions' asset base allocated to mortgage loans? I believe that it will be affected only slightly by deregulation for three reasons:

1. Variable coupon rate type mortgages will provide the thrift institutions with most of the same advantages as the new types of permissible loans but at less cost.
2. Thrift institutions have not greatly used similar non-mortgage lending powers where already permitted by state law, and
3. The federal income tax laws continue to favor mortgage loans.

⁶Richard Pickering, "Association Earnings Second Half, 1979" Federal Home Loan Bank Board Journal, May 1980, pp. 34-41.

⁷Edward J. Kane "Reregulation, Savings and Loan Diversification, and the Flow of Housing Finance," Proceedings of Conference on Savings and Loan Asset Management Under Deregulation, (Federal Home Loan Bank of San Francisco) December 1980.

Broader lending authority has been recommended for thrift institutions for two basic reasons. One, to reduce the risks incurred by the institutions by being able to diversify their assets both across types of security issuers for the same maturity (issuer specific or non-systematic risk) and across maturities for the same type of issuer (interest rate or systematic risk) and, two, to permit the institutions to be able to shift their resources to take advantage of any changes in the public's demand for different types of loans. Since 1965, the single most important cause of the periodic poor performance of thrift institutions has been the dramatic and unexpected increases in interest rates. These have increased greatly the interest rate risk the institutions incurred in making long-term fixed-coupon mortgage loans financed by short-term deposits, that is, in engaging in interest rate intermediation. To do so profitably, the institutions must be able to predict accurately the future short-term deposit rates over the life of the mortgage.⁸

As any investor, thrift institutions will assume most risks if the premium received is sufficiently large to cover expected losses. In retrospect, the thrifts vastly underestimated the increases in interest rates and thereby their losses, and failed to charge a sufficiently high premium. It is important to note in evaluating the thrift institutions that the underestimation of the interest rate risk was neither their fault nor limited only to them. The sharp increase in the level and volatility of interest rates is almost completely the responsibility of the federal government, and caught every major group of market participants unaware. Interest rate prediction and interest rate intermediation are difficult

⁸George G. Kaufman, "The Thrift Institution Problem Reconsidered," Journal of Bank Research, Spring 1972, pp. 26-33, and _____, "Managing Thrift Institutions in an Inflationary Environment," Journal of Credit Union Management and Economics, Spring 1981.

in a highly volatile interest rate environment. Fixed-rate mortgages or debt of any kind are a feature of stable economies only and are not the norm in most countries in the world that have experienced far less price stability than the United States. That is, countries in which long-term fixed coupon securities are common are countries with considerable price and financial stability. It is also important to emphasize that interest rate risk has replaced default or credit risk as the major source of risk threatening the viability of most thrift institutions.

To reduce their exposure to interest rate risk from interest rate intermediation, that is, from engaging in "active" portfolio management, the thrift institutions can synchronize more closely the timing of changes in the coupon interest rates received on their assets and paid on their liabilities. They can reduce their involvement in the interest rate intermediation business and engage in "passive" portfolio management. Before the era of variable coupon rate type mortgages, the thrifts could expect to shorten the "coupon change periods" on their assets and reduce interest rate risk only by being permitted to extend shorter-term fixed-coupon rate loans, such as consumer loans. But since the late 1970s, this is no longer the case. At the same time, new techniques are being developed by which thrift institutions can "immunize" portfolios of fixed-coupon mortgages from interest rate risk.⁹ Moreover, studies

⁹For a more complete discussion of ways thrifts can manage their interest rate risk, see G.O. Bierwag, George G. Kaufman and Alden L. Toevs, "Management Strategies for Savings and Loan Associations to Reduce Interest Rate Risk" in New Sources of Capital for the Savings and Loan Industry (Federal Home Loan Bank of San Francisco) 1979, pp. 178-204, and Donald P. Tucker, "Financial Reform and Mortgage Lending by Thrift Institutions: Stability for Thrifts Through Liability Management" in Robert M. Buckley, John A. Tuccillo and Kevin E. Villani, Capital Markets and the Housing Sector (Cambridge, Massachusetts: Ballinger Press), 1977, pp. 169-188.

estimate that the demand for mortgage funds will remain strong almost through the end of this century and, as a result of DIDMCA, can be satisfied unhampered by usury ceilings. Thus, the consumer loan power "reform" came too late to be of major use.

But not of no use. Variable coupon rate type mortgages have restrictions on both the magnitude and timing of the coupon changes that may cause less perfect synchronization with deposit rate changes than would consumer loans, and the immunization techniques for fixed-rate mortgages are only in an early stage of development. In addition, consumer loans do permit thrift institutions to diversify their risks specific to the issue, such as default risk. But the evidence suggests that the default performance on residential mortgages has been very good and better than that on consumer loans. Thus, unless the timing of defaults on mortgage and consumer loans differs cyclically, which is unlikely, increased emphasis on consumer loans is unlikely to reduce greatly the default risk assumed.

To make consumer loans, the institutions will have to absorb heavy start-up costs in hiring new personnel, retraining existing personnel, and designing and implementing new procedures. In addition, the existing competition for consumer loans is already intense. Commercial banks have both increased their in-house efforts in this area and expanded additionally into the area through holding company affiliates on an interstate basis, such as Citicorp's Person-to-Person Finance Company. The available evidence for commercial banks suggests that, even after start-up costs, net profits may not be higher on consumer loans than on mortgage loans adjusted for

interest rate risk.¹⁰ Consumer loans arising from credit card transactions are another matter and may be expected to expand sharply with the introduction of credit cards by the thrift institutions. But they are unlikely to accumulate to a significant amount without favorable pricing by the institution as a marketing tool. At year-end 1979, credit card loans accounted for only 15 percent of consumer loans and 4 percent of total loans on the books of commercial banks after 10 years of very aggressive marketing.

Most mutual savings banks have had powers to make consumer and similar loans for many years. Yet, they have not done so in large amounts. The Federal Interagency Task Force on Thrift Institutions, which was established by DIDMCA, reported that, at year-end 1979, consumer loans on the balance sheet of all mutual savings banks accounted for less than 5 percent of their total loans, or only one-third the proportion for commercial banks.¹¹ Similar results were reported for state-chartered SLAs in states in which consumer lending was permissible.

Lastly, savings and loan associations must still have 82 percent of their assets invested in eligible mortgages and other assets to qualify fully for the 40 percent bad debt reserve tax deduction. For every 1 percent below 82 percent, the deduction is reduced by 3/4 of 1 percent. (For mutual savings banks, the comparable numbers are 72 percent and 1-1/2 percent up to 50 percent, respectively.)¹² Thus, increases in nonmortgage lending

¹⁰Brian A. Maris, "Consumer Lending by S&Ls: The Prospects," Federal Home Loan Bank Board Journal, May 1980, pp. 20-25.

¹¹Interagency Task Force on Thrift Institutions, Report (Washington, D.C.: U.S. Department of the Treasury), June 30, 1980, pp. 57-62.

¹²Interagency Task Force, pp. 107-113.

to the full 20 percent ceiling permitted by DIDMCA would require greatly higher returns in order for the institution to break even after taxes. Currently, thrift institutions as a whole have about a 12 percentage point leeway before they would bump the ceiling, although this figure will differ greatly among individual institutions.¹³ Beyond this point, the institution would have to net about 52 pre-tax basis points more on the additional nonqualifying loans in order to break even.¹⁴ Unless this tax restriction is liberalized, it should serve as a strong barrier against large shifts away from mortgage lending.

Nevertheless, it appears likely that the mortgage lending ratio at thrift institutions will decline somewhat. The unknown is whether the effect of this decline will be greater or smaller than the increase in the institutions' total resources from the liberalization of Q ceilings and their increased ability to compete with non-thrift financial institutions, such as commercial banks and money market funds. I would guess that the two effects might approximately cancel each other out, so that there will be little net impact on total mortgage lending by thrift institutions relative to what it would have been in the absence of DIDMCA. Thus, even though DIDMCA diminishes the difference between different types of financial institutions, it does not put an end to specialized institutions any more than the supermarket put an end to "convenience" food stores.

¹³Interagency Task Force, pp. 109-110.

¹⁴Interagency Task Force, pp. 110-111.

In the May 1980 issue of the Federal Home Loan Bank Board Journal, Richard Marcis, the Board's chief economist, projects the balance sheet of savings and loan associations through 1988 on the basis of three alternative scenarios. He estimates that by 1988, consumer loans will account for about 8-1/2 percent of total loans, regardless of the particulars of the scenario.¹⁵ I personally believe that for the arguments discussed above these estimates may be somewhat on the high side.

Deregulation also may impact the mortgage market through affecting the liability side of the thrift institutions. The two provisions of DIDMCA that are likely to have the major impact here are the scheduled phasing out of Q and the authority to offer NOW and similar transactions accounts. The effects of liberalizing Q on both increasing and stabilizing the flow of funds into thrift institutions have already been discussed, but one more favorable aspect might be noted. In their attempt to forestall disintermediation in recent years, the regulators have inadvertently used Q to shorten the liability structure of the thrifts and thereby increase the degree of interest rate risk they assumed. In mid-1978, near-market equivalent rate ceilings were authorized for six-month money market certificates. One year later, in mid-1979, similar rate ceilings were extended to 4-year or longer certificates. However, only six months later, the minimum maturity on these accounts was shortened to 2-1/2 years. As a result, at year-end 1979, even before the last change, the maturity structure of the liability side of the SLAs' balance sheet was shorter than at year-end 1973, before the extraordinary jump in inflation and interest rates. As can

¹⁵Richard G. Marcis and Dale Riordan, "The Savings and Loan Industry in the 1980s," Federal Home Loan Bank Board Journal (May 1980), pp. 2-15.

be seen from Table 1, the sum of savings accounts, six-month money market certificates, and other liabilities maturing in less than one year, increased from 45 percent of total liabilities in 1973 to 55 percent in 1979. This change increased the degree of interest rate risk borne by the institutions and is just the opposite of what the doctor should have ordered. Thus, the faster liberalization of Q for shorter-term deposits than longer-term deposits has been detrimental to the thrift industry. The removal of Q will permit institutions to freely raise funds of whatever maturity they wish. One may speculate whether the industry would not have been in better shape now if the wild-card experiment in 1973 had not been quickly terminated by Congressional pressure.

The introduction of checking accounts along with consumer loans and trust powers transforms thrift institutions into potentially almost "full service" household centers and should help attract additional deposits. However, because commercial banks can also offer NOW accounts, it is unlikely that SLAs, as a whole, will experience a sharp relative jump in total savings accounts including NOW accounts. The effective average maturity of their savings accounts may be somewhat shorter as depositors switch to NOW accounts.¹⁶ The extent of the shortening and the increase in NOW accounts will depend on the pricing policies used by the individual institutions, particularly after some immediate, probably short-term, pricing dictated primarily by marketing considerations. With respect to other deposit accounts, it is likely that the institutions would try to offset any shortening in savings accounts by lengthening their maturities somewhat, if permitted by deregulation or favorable rate ceilings. Any net shortening that may result may be more efficiently offset on the assets side by

¹⁶Robert Eisenbeis believes that by reducing interest sensitivity, transaction NOW accounts may lengthen the effective maturity of time deposits.

greater use of VRMs than consumer loans.¹⁷

A power that DIDMCA did not bestow but that would be helpful to the institutions is a variable long-term coupon rate deposit to complement the variable rate mortgage. Such a deposit would give the institutions greater flexibility over the degree of interest rate risk they wish to assume and would provide them with a simple way of minimizing this risk without withdrawing from mortgage lending.

III

The argument that deregulation as a direct result of DIDMCA is unlikely to have a major impact on the mortgage market is not to say that there will not be any major changes in the market at all. Major changes will occur and, paradoxically, they will arise in large measure from the failure to enact the DIDMCA reforms sooner. As discussed earlier, while SLAs waited for their long promised new lending powers, the increasing interest risk they were experiencing encouraged them to seek a quicker solution elsewhere. The result was the variable coupon rate type mortgage, and the institutions exerted pressure on the regulatory agencies, Congress, and state legislatures to permit its use. This was successful starting in 1975 in California and in 1979 throughout the United States. As I have argued, these instruments are in many ways superior for SLAs to new lending powers and it is likely that SLAs will rely heavily on them. Indeed, in his projections, Marcis estimates that variable coupon rate mortgages, including renegotiable rate mortgages, will be effectively the only new types of residential mortgage plan offered by savings and loans from now on.¹⁸

¹⁷Failure to phase out Q may reduce the benefit of VRMs by reducing the institutions' ability to compete adequately for funds. J.R. Kearl, "Piecemeal Deregulation: The Problem of Deposit Rate Regulation and Mortgage Innovation," Journal of Economics and Business (Fall 1980), pp. 72-79.

¹⁸Marcis and Riordan, pp. 7-9.

But variable coupon rate mortgages must be understood for what they are--a means for depository institutions to lessen or reduce altogether their exposure to interest rate risk. The risk is shifted to the mortgage borrower. In order for this to be successful without reducing mortgage demand, the mortgage instruments must be designed carefully. For the lending institutions, this implies that deposit rate changes should be passed through to the mortgage borrower so that the institutions incur little or no interest rate risk. For the mortgage borrower, this implies that the interest rate risk assumed should not be so great that he or she will be discouraged from borrowing. The risk should be shared in some optional way between lender and borrower. Unfortunately, after a slow but promising start, these criteria appear to have been forgotten by the regulatory agencies in their apparent haste to deal with the "crisis in the mortgage market" at hand. Recent and proposed regulations affecting variable coupon rate type mortgages clearly tilt the advantage in favor of the lending institutions and against the household borrower. This will, in time, work to the disadvantage of both sides as traditional mortgage demand declines. I will return to this problem shortly.

But there also are other difficulties with variable coupon rate mortgages. These new instruments are highly complex, much more so than the almost straightforward traditional fixed coupon mortgage, and thus establishing a proper price is much more difficult. An incorrectly priced VRM is not helpful to the lending institution. Unfortunately, many lenders do not yet appear to have learned to price these instruments properly at origination. Because the initial VRM rate is tied rigidly at origination to a market rate, and this rate spread cannot

be changed subsequently, once a VRM is made its interest income over its life, like that of an FRM, is independent of the lending institution.

If the initial interest rate is set too low, the VRM may be priced too low throughout its life and be unprofitable. For example, if the yield curve is downward sloping so that long-term fixed coupon rates are below short-term rates, new VRMs may need to be priced so that their rates are initially higher than on comparable fixed coupon rate mortgages and possibly even higher than on some long-term deposits. If things turn out as expected and short-term rates decline, the VRM rate will eventually decline below the FRM rate, and the VRM will be as profitable over the life of the mortgage as the FRM. If rates decline less than expected--as has been the case over much of the last decade--the VRM will be more profitable than the FRM; and if rates decline more than expected, the VRM will be less profitable. But if the VRM rate were initially pegged below the comparable FRM rate--as many institutions have done in recent years for marketing purposes--and market rates decline at all, the VRM will be unprofitable.

Variable coupon rate type mortgages are not new; they were used widely in the United States before the 1930s. However, they were phased out when the long-term fixed-coupon amortized mortgage was introduced by FHA. Nor did the mortgage lenders suffer from this change; they experienced many very profitable years under all possible shapes of the yield curve--downward sloping as well as upward sloping. Thus, we should be careful not "to kill the goose that laid the golden mortgage."

Moreover, spinning off their interest rate intermediation business completely and engaging in only passive portfolio management may not

necessarily be in the best long-term interests of the thrift institutions. Active portfolio management, which may be viewed as selling "interest rate insurance" to household mortgage borrowers, has been profitable throughout the greater part of the institutions' history, and it is not unreasonable or wholly wishful thinking to assume that it may be so again in the near future.

Fortunately, I do not necessarily see the end of the long-term fixed coupon mortgage. If inflation is brought under control, I see its quick return. In a more stable market. I envision both mortgage lender and borrower acting like any other lender and borrower and deciding whether to lock in today's interest rate for the life of the loan and choose an FRM or to bet on a favorable interest rate change and choose a VRM. If permitted, the market will determine the relative price of each type of mortgage based on borrower and lender preferences. This forms the basis for my disagreement with Dick Marcis' projections. We have a tendency to project from only the most recent observations and to react to the "crisis of the moment." I recall that the bond market had been pronounced dead by experts on, at least, two different occasions in 1980 and in strong shape in between.

Why have recent regulations altered the design of variable rate mortgages? I believe it is both because of a failure to fully understand the underlying theory of interest rate intermediation by thrift institutions and because of an attempt by some regulators to construct a mortgage instrument that will be successful on the secondary market. The second reason is strange because there is hardly a secondary mortgage market for the original mortgage instrument in the true sense of the term, and it is not obvious

that one is either quickly needed or would be aided greatly by VRMs.¹⁹ Sales to FNMA are not really secondary market sales, but rather direct pass-throughs of new mortgages to a permanent new investor. It is difficult to consider the sale of FNMA's debt as a secondary mortgage market transaction. Likewise, sales to FHLMC are for transformation into a more marketable security, which in turn is traded on the secondary market. Only direct sales to GNMA and private parties represent true secondary market transactions and most of these apparently trade only once before finding a permanent home.

Despite the worthwhile attempts to standardize mortgage contracts, it is apparent that the major "secondary market" mortgage instruments will be pooled pass-through securities and sponsored agency debt. To the extent that the pooled securities retain some of the characteristics of the constituent original mortgage securities, their marketability is affected by the features of the underlying originating mortgages. If changes in the coupon rate on VRMs were tied to the individual lender's cost of funds, as theory would suggest, it would be difficult to pool mortgages of different issuers whose costs of funds may change by different amounts and at different times. This would suggest that the cost of funds for a number of institutions in a larger geographical area, such as a state or FHLB district,

¹⁹Ernest Bloch, "Moving Mortgage Financing into the Capital Market: GNMA's and Other Mortgage Back Issues," (Working paper, New York University), November 1979, and Patric H. Hendershott and Kevin E. Villani, "Residential Mortgage Markets and the Cost of Mortgage Funds," AREUEA Journal (Spring 1980), pp. 55-76. For a history of the secondary market in mortgages, see "Secondary Mortgage Market: Appendix to Statement of Kenneth Rothchild" in Secondary Market Operations of FNMA and FHLMC: Hearings (Committee on Banking, Housing and Urban Affairs, U.S. Senate 94th Cong., 2nd sess.), December 1976, pp. 159-185.

may serve as an index for the pooled security that would satisfy the needs of both primary and secondary markets without being unduly unfair or beneficial to either lender or borrower.²⁰ In fact, most mortgage pools to date have been geographically concentrated.

In practice as well as in theory, a financial institution is fully protected from interest rate risk when the rates on its outstanding mortgages change in perfect synchronization with its own cost of funds, not any other rate. Moreover, it appears reasonable that many of the ultimate investors, particularly larger institutions and government agencies, are better equipped to assume interest rate risk at lower cost than are households. Thus, some of the emphasis in the design of new variable coupon rate mortgages on the secondary market, such as the tying of the rate to a market bond or mortgage rate rather than to the institutions' cost of deposits and a major widening of the maximum interest rate change band (which works like a deductibility clause in an insurance contract), is misplaced.²¹ On the other hand, by restricting adjustments to no more than every three to five years, the Board's RRM version of the VRM is less useful to the lending institutions without providing overall compensating benefits to borrowers.

²⁰For a discussion of the criteria for an appropriate index and other features of variable coupon rate mortgages, see George G. Kaufman, Financial Intermediaries and Variable Rate Mortgages (Research Working Paper No. 16, Federal Home Loan Bank Board), 1977.

²¹Successful experience with selling VRMs tied to the regional cost of funds is described in James R. Montgomery, "The Growing Dependence on Non-Deposit Sources of Funds: in New Sources of Capital for the Savings and Loan Industry (Federal Home Loan Bank of San Francisco), 1979, pp. 235-237. Consumer groups have sometimes argued against a cost of funds index because they believed that this rate could be manipulated by the lending institutions. Some thought would show that, although any institution can manipulate the rate, they cannot do so in their favor for any length of time. See Kaufman, Financial Intermediaries and Variable Rate Mortgages.

If the economy is to be continued to be bombarded by inflation surprises so that interest rate intermediation becomes unduly risky, some type of government interest rate insurance scheme for the protection of the mortgage lender is preferable for the efficient operation of mortgage markets to a further widening of the maximum interest rate change band that may reduce mortgage demand.²² The cost of insurance would be placed squarely on the source of the problem--the federal government. The design of new mortgage instruments should be reevaluated with a view to improving their efficiency in the important primary market. A strong secondary market can only be built on the foundation of a strong primary market!

Indeed, a reevaluation of the now traditional variable rate mortgage in the light of the objective of building a strong mortgage market may reveal that, although introduced only recently, the VRM may already be out of date--done in by that ever present villain on our current economic scene, the continued acceleration in the rate of inflation, which ironically enough, was the reason for the VRM's introduction in the first place. As discussed earlier, interest rates on variable-rate, as well as fixed-rate, mortgages include a premium for the expected rate of inflation. Thus, increases in the expected rate of inflation increase interest rates and are

²²For proposals for mortgage rate insurance see George G. Kaufman, "The Case for Mortgage Rate Insurance," Journal of Money, Credit and Banking, November 1979, pp. 515-19 and James Pierce, "A Program to Protect Mortgage Lenders Against Interest Rate Increases" in Financial Institutions and the Nation's Economy: Compendium of Papers Prepared for the FINE Study, Book 1 (U.S. Congress, House of Representatives, Committee on Banking, Currency and Housing, 94th Cong., 2nd sess.), June 1976, pp. 93-100. Government rather than private insurance may be required because the probabilities of unexpected interest rate increases are difficult to compute and the increases affect all loans simultaneously.

translated immediately into higher monthly payments on new mortgages by the full amount of the inflation increases expected over the mortgage period. Yet the borrower's income will increase only slowly through time more or less in line with the rate of inflation. Thus, the mortgagor's payment to income ratio jumps immediately and sharply increases the burden of the mortgage. It matters little to the mortgagor that the burden will be compensatingly lower later. This is the well-known "tilt problem."²³ At today's level of interest rates, which are almost double the level when VRMs were first introduced, the early year burden is sufficiently high to be troublesome and restrain home purchases, particularly those associated with job transfers. The VRM is an instrument designed to deal with excessive interest rate volatility, not necessarily with high rates of inflation.

An alternative mortgage that reduces this early year burden while still protecting the mortgage lending institution is the price level adjusted mortgage (PLAM). This mortgage ties or indexes both the monthly payment and the unpaid principal to a general price index, such as the CPI. Thus the mortgage payments are relatively low at the beginning and increase at more or less the same rate as the borrower's income so that the burden will remain relatively constant.²⁴ PLAMs are the standard mortgage in a number of countries, including Israel and Brazil, and have been recommended recently for the United States by Milton Friedman.²⁵

²³See James Kearl, "Inflation and Housing," Journal of Political Economy (October 1979), pp. 1115-1138, and Donald Lessard and Franco Modigliani, "Inflation and the Housing Market: Problems and Potential Solutions," in New Mortgage Designs for Stable Housing in an Inflationary Environment (Federal Reserve Bank of Boston), 1975, pp. 16-17.

²⁴Lessard and Modigliani, pp. 33-37, and Henry J. Cassidy, "Price Level Adjusted Mortgages Versus Other Mortgage Instruments," Federal Home Loan Bank Board Journal, January 1981, pp. 3-11.

²⁵Milton Friedman, "How to Save the Housing Industry," Newsweek, May 26, 1980, p. 80.

PLAMs were analyzed by Modigliani and Lessard in their study of alternative mortgage instruments in 1975, but were rejected in favor of variable coupon rate instruments primarily because they believed that the institutional change would be too great and that it may require new, similar price level adjusted deposits for thrift institutions.²⁶ Most likely for these same reasons, PLAMs were dismissed out of hand in the Federal Home Loan Bank Board's Alternative Mortgage Instruments Research Study.²⁷ Except for the above factors, which I do not view as serious barriers, and the determination of the "real" rate of interest at origination, PLAMs are relatively simple instruments, considerably simpler than some types of VRMs. They also minimize the undesirable income redistribution effects that occur when interest rates impound price expectations incorrectly.²⁸ It appears, unfortunately, that accelerating inflation has now made the time right to give more serious consideration to these instruments.

IV

Lastly, how have the many important and often dramatic innovations of the decade of the 1970s--mortgage pass-through securities and bonds; alternative type mortgages, including variable coupon rate mortgages; the expansion of FNMA, GNMA, and FHLMC; the beginnings of a true secondary

²⁶Lessard and Modigliani, pp. 36-37.

²⁷Federal Home Loan Bank Board, Alternative Mortgage Instrument Research Study (Washington, D.C.), 1977, pp. 1-2.

²⁸James R. Kearl, "The Housing Market and Alternative Mortgage Instruments," in AMIRS.

market; futures trading in GNMA pass-throughs; etc.--impacted the mortgage market? The net effects appear smaller than one might expect considering the magnitude of these innovations. To be completely comfortable with such a conclusion, however, one would need to construct a model that could estimate how the market might have looked in the absence of these changes. But this is beyond the scope of this paper.

More casually, to the extent that a number of these innovations were intended to broaden the ownership mix of residential mortgages, their impact should be observable from an analysis of ownership data. These data are shown in Table 2. From the end of World War II through 1970, the major changes in ownership reflected a sharp increase in the proportion of mortgages held by savings and loan associations and mutual savings banks from a combined 39 percent in 1950 to 56 percent in 1970 and sharp declines in the proportions held by life insurance companies from 19 to 9 percent, by commercial banks from 21 to 14 percent, and by households from 17 to 8 percent. Thus, the ownership of residential mortgages in this period became more concentrated.

Since 1970, the increasing use of mortgage pools is clearly evident. By 1979, pools accounted for 12 percent of all mortgages. Savings and loan associations continued to increase their share of the market, while commercial banks reversed their investment strategy and began to increase their share of the market. Mutual savings banks reduced their market share sharply, and life insurance companies stopped being a factor for all practical purposes. In 1979, life insurance companies held only 2 percent of all residential mortgages, down from 20 percent 30 years earlier. In dollar terms, they held only one-half as much as they had in 1965 and actually less than they had in 1955. Government ownership, including sponsored agencies, although

highly volatile from year to year, did not increase greatly in relative terms during the decade.

Thus, it would appear that the innovations did little to make mortgage ownership more attractive either to old disenchanted investors or to new investors. But, this is not the whole story. One needs to pierce the veil of mortgage pools to assign ownership properly. Because some 30 percent of GNMA pass-through securities, which represent the overwhelming proportion of pooled mortgage securities, are held in nominee accounts and another 8 percent by dealers, mortgage banks, and other temporary accounts, such piercing is not easy. If one-third of this amount is assigned to pension and retirement funds, as is estimated by GNMA, the decline in the importance of both these funds and life insurance companies would appear to have slowed but not reversed.²⁹ One might expect this trend to continue and possibly reverse as mortgage pass-throughs and, particularly, mortgage bonds are tailored even more closely to the needs of these investors for longer-term investments (including fixed-coupon securities) without servicing costs. Eventually, mortgage ownership should broaden again. Of course, the aggregate data disguises shifts within each institutional category, and it is likely that the pass-through and similar securities permitted increased fund mobility among SLAs and MSBs to expedite and enlarge the flow of funds from surplus to deficit areas. Thus, the innovations have served to support the share of the mortgage market held by thrifts as well as the market as a whole during the recent difficulties.

²⁹David F. Seiders, "The GNMA-Guaranteed Passthrough Security," Staff Economic Study, 108 (Washington, D.C.: Board of Governors of the Federal Reserve System), 1979, pp. 33-61 and _____, "Major Developments in Residential Mortgage and Housing Markets," AREURA Journal, (Spring 1980), pp. 4-32.

What might be expected to cause more dramatic changes in the ownership mix of residential mortgages? Importantly, changes in the return on mortgages relative to other securities. What have mortgage rates done relative to other market rates? The empirical evidence is mixed. Many studies that compare mortgage rates to bond rates report a relative decline in mortgage rates.³⁰ But this may not have been so. Mortgage yields are notoriously difficult to compare with yields on other securities in part because of differences in default risk, in the underlying mathematics of yield computations, and in the length and predictability of their average lives.³¹ At a minimum, mortgage yields must be compared with yields on securities of similar average lives (duration) rather than similar maturities. If one compares FHA mortgage yields with 10-year Treasury bond yields as is shown in Table 3, the spread in yields has remained relatively unchanged since 1955 in the face of the above innovations, greater federal government intermediation, increased volatility in housing, etc.³² The

³⁰Seiders, p. 11; Michael A. Sallette, Dexter Senft, and Ellen Barry, Mortgage Related Securities (New York: First Boston Corporation), 1979, p.4.

³¹George G. Kaufman and George E. Morgan, "Standardizing Yields on Mortgages and Other Securities," AREUEA Journal, (Summer 1980), pp. 153-179.

³²A similar conclusion is reached by Seiders, "Major Developments," p. 26. The appropriateness of comparing mortgage yields with the 10-year Treasury security yield rather than longer yields is supported by a recent study that shows that returns realized on mortgages in recent years were much greater than those realized on either long-term corporate or Treasury bonds but not much different from those realized on 10-year Treasuries. Michael Waldman and Steven P. Baum, "The Historical Performance of Mortgage Securities: 1972-1980," Mortgage Banker, (October 1980), pp. 87-99

reduction in the spread relative to longer-term bonds, such as corporate Aaa's, most likely reflects differences in average life and in default risk.

More rigorous studies, however, have reported statistically significant reductions in mortgage rates and/or increases in mortgage flows as a result of government intervention.³³ It is also difficult to imagine that the commitment activities of FNMA and GNMA and the futures market in GNMA securities have not increased stability in the mortgage market. Rosen reports evidence to support this contention.³⁴ To the extent increased stability implies a lower risk premium, this would be reflected in lower mortgage rates. Nonetheless, any rate decreases, if they do exist, appear not to be very large.

Thus, on net, the evidence suggests that government intervention in the 1970s either took up the slack left by the withdrawal of the life insurance companies and mutual savings banks or actually drove them out of the market. It also suggests that mortgages have been priced pretty

³³A reduction in FHA yields as a result of the GNMA pass-through program is reported by Deborah G. Black, Kenneth D. Garbade, and William L. Silber, "The Impact of the GNMA Pass-Through Program on FHA Mortgage Costs" (Working paper, New York University), August 1980. A reduction in mortgage rates, particularly during periods of stringency in the mortgage market, is reported by Kenneth T. Rosen, "The Federal National Mortgage Association, Residential Construction, and Mortgage Lending" (Working paper, University of California at Berkeley), August 1980. See also Patricia H. Hendershott and Kevin E. Villani, Regulation and Reform of the Housing Finance System (Washington, D.C.; American Enterprise Institute), 1977, pp. 39-44.

³⁴Rosen, p. 33.

much in line with other comparable debt securities and that the ex-post loss experience on mortgages from unexpected increases in interest rates is not unique. This should not be surprising. Most empirical studies report that the increased intervention by the government agencies appears to have had only a small lasting effect on mortgage rates. After all, unlike the Federal Reserve, the housing agencies have to raise their funds on the capital markets. Thus, the total demand for credit is not reduced. Rather, the agencies principally redirect credit from other uses into the mortgage market. To this extent, mortgage rates should decline. But it is likely that, unless some other characteristic of the mortgage instrument that lowers interest rates is changed, some mortgage lenders now will view the mortgage rate as too low and will in time transfer their funds elsewhere, so that any direct effect is only short run.³⁵ Broader ownership of mortgages is likely to require higher not lower mortgage rates.

It should also be remembered that the financial mortgage market is not necessarily synonymous with either the new or total housing market. The large majority of mortgages finance existing rather than new home purchases. As has been amply documented in recent years, residential mortgage funds have increased much faster than the dollar amount of private residential construction. As can be seen from Table 4, net new mortgage funds averaged between 40 and 60 percent of new residential construction until 1970, but then jumped to 90 percent in 1973 and 110 percent in 1979. It is evident that all of these funds were not used to purchase new homes. Residential construction was lower in the late 1970s as a

³⁵For a review of empirical studies on the effect of government-sponsored agencies on the mortgage market, see Sydney S. Hicks, "Federal Housing Agencies: How Effective Are They?" Voice (Federal Reserve Bank of Dallas), October 1978, pp. 8-18. See also Leo Grebler, "An Assessment of the Performance of the Public Sector in the Residential Housing Market: 1955-1974" in Buckley et al, Capital Markets, pp. 311-346.

percent of GNP than it was in the 1950s, yet new mortgage funds were considerably greater. A significant percentage of the mortgage loans had obviously been used to finance other purchases, either directly or indirectly by financing equity takeouts on sales of existing homes, and may be expected to increase if housing prices continue to outpace the overall price level.³⁶ This will intensify the pressure on thrift institutions. But, even if deregulation reduced the flow of mortgage funds from traditional mortgage lenders, which I doubt, it is not evident that it would impact the construction of new residential housing equally unfavorably. Deregulation will have a far smaller impact on the health of the mortgage market per se than either continued innovation in primary and secondary market mortgage instruments or stability in the overall economy, both of which should also aid new housing. However, alternative mortgages per se will not necessarily increase or stabilize the construction of new homes. The fluctuations in housing starts is as great in Canada, where VRMs are the predominant type of mortgage, as in the U.S.³⁷

³⁶Similar conclusions are reached in "Tapping the Home-Equity Till," Morgan Guaranty Survey (August 1979), pp. 4-7; Allan H. Meltzer, "Credit Availability and Economic Decisions: Some Evidence from the Mortgage and Housing Markets," in Government Credit Allocation (San Francisco; Institute for Contemporary Studies), 1975, pp. 123-150; and David F. Seiders, "Mortgage Borrowing Against Equity in Existing Homes: Measurement, Generation, and Implications for Economic Activity," Staff Economic Study, 96 (Board of Governors of the Federal Reserve System), 1978.

³⁷Michael Unger, "The Canadian Mortgage Market and the Renegotiable Term Mortgage" in Subcommittee of the Committee on Government Operations, "Renegotiable Rate" Mortgage Proposals of the Federal Home Loan Bank Board (U.S. Congress, House of Representatives, 96th Cong., 2nd sess.), March 26 and 27, 1980, pp. 361-387.

Proposed remedies for the mortgage market should not be considered separately from those for the long-term bond market as a whole. Distinct housing policies would appear to be more effective on the supply side for land, labor and capital than on either the demand or supply sides for financial mortgages.

TABLE 1
SAVINGS AND LOAN ASSOCIATIONS
LIABILITY STRUCTURE
YEAREND 1973 and 1979

	1973		1979	
	Billion Dollars	Percent of Total	Billion Dollars	Percent of Total
Liabilities, Total	248	100	535	100
Deposits, Total	220	89	460	86
Passbook	103	42	117	22
6 mos MMCs			127	24
Certificates	117	47	188	35
NOW Accounts			-	
Jumbo CDs			27	5
Borrowings, Total	17	7	55	10
Short-Term	8	3	25	5
Long-Term	9	4	30	5
Mortgage Backed Bonds			3	1
Capital and Other	11	4	20	4
Memorandum Item				
Short-Term Liabilities, Total	8	3	175	33
6 mos MMCs			127	24
Jumbo CDs			27	5
FHLB Advances	7	3	15	3
Repurchase Agreements			6	1

Source: Federal Home Loan Bank Board

Table 2
 Ownership of Residential Mortgage Debt
 1950 - 1979

	1950	1955	1960	1965	1970	1975	1979
Total - Billion Dollars	45	88	142	221	298	491	868
Percent Distribution							
Total	100	100	100	100	100	100	100
Savings and Loans	29	34	39	43	42	45	45
Mutual Savings Banks	10	13	15	15	14	10	7
Credit Unions	-	-	-	-	-	-	-
Commercial Banks	21	17	14	14	14	16	17
Life Insurance	19	20	18	13	9	4	2
Pension and Retirement							
Funds	-	-	1	2	2	1	1
Finance Companies	1	1	1	2	2	1	1
Households	17	10	7	7	8	8	8
Government and							
sponsored agencies	3	3	5	2	7	8	7
Mortgage Pools	-	-	-	-	1	6	12
Other	-	2	-	2	2	1	-

Source: Board of Governors of the Federal Reserve System, Flow of Funds Accounts.

Table 3

Yields on FHA Mortgages and
Other Securities
1955 - 1979

Year	FHA Mortgage *	Moody's	10 Year	FHA Basis Point Spread from	
		Corporate Aaa (percent)	Treasury Bond	Corp Aaa	10 Yr Treas
1955	4.25	3.06	2.72	119	153
1956	4.38	3.36	3.08	102	130
1957	4.96	3.89	3.54	107	142
1958	5.05	3.79	3.27	126	178
1959	5.26	4.38	4.18	88	108
1960	5.77	4.41	4.13	136	164
1961	5.39	4.35	3.84	104	155
1962	5.21	4.33	3.96	88	125
1963	5.04	4.26	3.98	78	105
1964	5.02	4.40	4.17	62	85
1965	5.05	4.49	4.25	56	80
1966	5.96	5.13	4.86	83	110
1967	6.13	5.51	4.97	62	116
1968	6.78	6.18	5.48	60	130
1969	7.74	7.03	6.46	71	128
1970	8.77	8.04	7.21	73	156
1971	7.42	7.39	6.11	83	131
1972	7.19	7.21	6.23	82	96
1973	7.85	7.44	6.73	41	112
1974	9.21	8.57	7.31	64	190
1975	9.05	8.83	7.42	22	163
1976	8.74	8.43	7.53	31	121
1977	8.41	8.02	7.36	39	105
1978	9.44	8.73	8.33	71	111
1979	10.69	9.63	9.24	106	145

* Rates on new homes in Southwest Zone with maturities of 25-30 years, assuming average maturity of 12 years, and subtracting 1/2 percent for servicing.

Source: Salomon Brothers

Table 4
Mortgage Funds and Residential Construction
1950 - 1979

Year	(1)	(2)	(3)	(4) (5)		
	Net Flow of Residential Mortgage Debt	Private Residential Building	GNP	Columns		
				(1)÷ (2)	(1)÷ (3)	(2)÷ (3)
	(Billion Dollars)			(Percent)		
1950	8	18	286	41.4	2.6	6.3
1955	13	22	399	57.5	3.1	5.5
1960	11	23	506	48.3	2.2	4.5
1965	17	28	688	61.3	2.5	4.1
1970	15	32	982	47.0	1.5	3.2
1975	41	47	1,529	89.0	2.7	3.0
1979	108	97	2,369	111.2	4.6	4.1

Source: Board of Governors of the Federal Reserve System, Flow of Funds Accounts and President's Council of Economic Advisor, Annual Report, 1980.