Graduated Payment Mortgages

In the space of a few years graduated payment mortgages have achieved fairly widespread acceptance. They presently are the most rapidly growing category of Federal Housing Administration (FHA)-insured mortgages, and legislation has recently been enacted which could expand their use still further. Moreover, the private sector has begun to offer a novel form of mortgage loan which allows the lender to receive a stream of constant payments while the borrower makes graduated payments.

The need to come to grips with the problems which high rates of inflation create for the standard fixed payment mortgage (FPM) has provided the impetus for two basic modifications of the FPM. Variable rate mortgages provide for interest rate adjustments to share the risk of interest rate changes between borrower and lender, but otherwise employ the same schedule of constant monthly payments of interest and principal as the FPM.[1] In contrast, the graduated payment mortgage (GPM) retains the constant interest rate of the FPM, but lowers the monthly payments in the early years of the loan and increases them according to a predetermined schedule.

Fixed payment mortgages

The adoption of the fully amortizing, fixed rate, level-payment mortgage as the standard mortgage design owes a great deal to its ability to reduce mortgage defaults. Prior to the 1930s the fully amortizing loan contract—though apparently the most common form of mortgage loan—was nowhere nearly so prevalent as it is now.[2] Contracts often provided for no amortization or for only partial amortization of the principal amount prior to the maturity date. As a result, a "balloon" payment of principal often became due on maturity. Terms to maturity were frequently short, often only about five years. Common practice was for such loans to be renegotiated at maturity, with a new loan being made to refinance the part of the principal which the borrower did not pay down at that time.

This procedure entailed a number of risks, as became apparent during the depression of the 1930s. First, the short term to maturity, together with the balloon payment feature, meant that, if the borrower had not accumulated sufficient funds to repay the loan at maturity, he might be subject to foreclosure on his property unless he was able to negotiate a new loan for the unpaid balance of principal. Second, since a relatively small amount of amortization—or perhaps none at all—was required, the borrower's equity in the property did not necessarily increase significantly as time went by. As a result, in the event of a loss of income to the borrower or erosion of the value of the property,

This article would not have been possible without the assistance of Henry J Cassidy, Chester C Foster, Diane L Heidt, and Warren Lasko, none of whom bear any responsibility for the views expressed herein

[1] See William C Melton and Diane L Heidt, "Variable Rate Mortgages", this *Review* (Summer 1979), pages 23-31

[2] Almost all mortgages held by savings and loan associations during the 1920s and early 1930s were fully amortizing but other lenders held primarily partially amortizing or nonamortizing mortgages Available data indicate that a variety of short-term mortgages, partially amortizing or nonamortizing, constituted slightly more than half of all mortgages in lending institutions' portfolios before the depression For more details, see Henry J Cassidy, "The Changing Home Mortgage Instrument in the United States", Federal Home Loan Bank Board *Journal* (December 1978), pages 11-17

the temptation to default on the loan might be strong.

With the onset of the depression, loan defaults mushroomed, and many lenders were unable to roll over maturing loans, so that foreclosures surged to a massive rate. In response, the Congress took a variety of measures to reduce the short-term threat of foreclosures as well as to restructure the procedures of housing finance to avoid a recurrence.

Among these measures was Government mortgage insurance administered by the FHA. FHA insurance, begun in 1934, required that loans be long term and fully amortizing, with constant monthly payments. Similarly, Federally chartered savings and loan associations, first created in the 1930s, were limited almost exclusively to making mortgages with those characteristics, and many states passed legislation applying similar restrictions to mortgage lending institutions under their jurisdiction.[3] In addition, the Federal National Mortgage Association (FNMA), organized in 1938, restricted its secondary market mortgage purchases to Government-insured mortgages, thus giving still further impetus to the adoption of the FPM as the standard mortgage instrument.[4] As a result of these measures, by the early postwar period the FPM was by far the dominant residential mortgage loan contract.

The adoption of the FPM as the standard form of mortgage contract was successful in overcoming the major problems of the residential mortgage market which existed during the 1920s and the 1930s. Its weaknesses began to become apparent only during the 1960s and 1970s—a period of rapid inflation and historically high and variable interest rates.

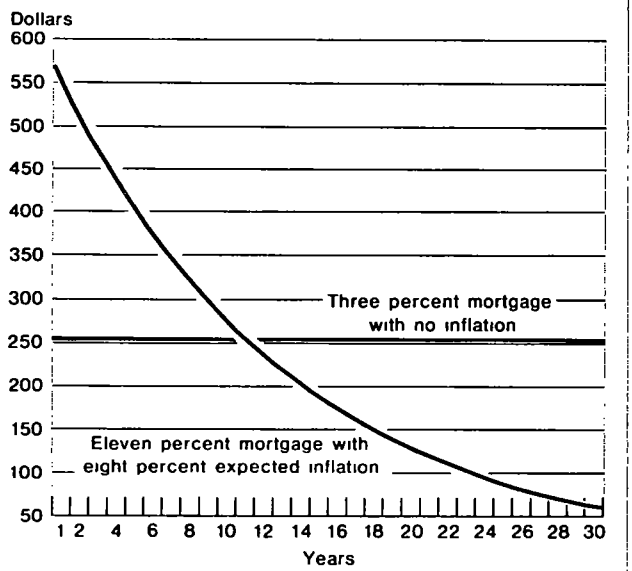
One of the FPM's most severe problems is the burden it creates for young families acquiring a home for the first time. Such families require housing services to accommodate their growing households, yet their current income—which is of major importance for determining the monthly mortgage payments they can afford—is often substantially less than their expected future income. Unfortunately, the FPM, by keeping monthly payments constant, does not allow such families to tailor their payments to their expected income growth. This "life cycle" problem exists even in an environment of stable prices.

Inflation causes an additional problem by making the burden of real mortgage costs in the early years of the loan term even greater relative to borrowers' current income than it would have been with no inflation. As inflation comes to be expected, nominal interest rates adjust upward to compensate lenders, at least in part, for the loss of purchasing power expected to occur during the term of the loan. Thus, if the rate of interest on mortgages were 3 percent in an environment of stable prices, it might rise to about 11 percent if an 8 percent rate of inflation is expected over the term of the loan. If the term to maturity of an FPM is not altered, this increased nominal interest rate raises the monthly payment. However, if the expected rate of inflation actually turns out to be correct, the increased rate of interest is approximately offset by the progressive reduction in the purchasing power of the interest and principal payments, so that the real cost of the loan remains essentially unchanged at about 3 percent per annum.[5]

Though the real cost—*i.e.*, the value of the monthly payments adjusted for price changes—is almost un-

Chart 1

Real Payments of Interest and Principal on Mortgages under Different Inflationary Conditions



Both mortgages are assumed to have a thirty-year term and a $60,000 original principal amount

[3] With the exception of the recently authorized reverse annuity mortgages, Federally chartered savings and loan associations may make balloon residential mortgages with a maximum term of five years, but the value of the loan may not exceed 50 percent of the security (Federal Home Loan Bank Board, *Annotated Manual of Statutes and Regulations*, section 545 6-1) This regulation restricts balloon mortgages to the relatively few individuals capable of making a 50 percent downpayment on a home

[4] In February 1972, FNMA broadened its mortgage purchase program to include conventional mortgages as well

[5] This statement abstracts from considerations such as the tax treatment of interest expense which would reduce the real cost of the 11 percent mortgage relative to that of the 3 percent mortgage

changed, its distribution through the term of the loan changes dramatically. Since inflation erodes the value of the higher nominal payments only gradually, the real cost is significantly higher in the early years of the term and is lower during the later years. For example, an increase in the expected rate of inflation from zero to 8 percent, reflected in an increase in the mortgage interest rate from 3 percent to 11 percent, causes the real cost of the first year's monthly payments on a $60,000 mortgage with a thirty-year term to rise from $253 per month to about $550 (Chart 1). By the eleventh year of the term, the real cost of the 11 percent mortgage has declined almost to the real cost of the 3 percent mortgage; afterward it is less.

Most individuals are highly sensitive to the timing of real payments during the term of their mortgages, because they must make mortgage payments out of their current incomes and still have sufficient income remaining to meet other expenses. Hence the "front-end load" created by the concentration of the real payments in the early years can be a major burden. While the level of monthly payments can be reduced by decreasing the size of the loan (and increasing the downpayment), this alternative is generally impractical for young, first-time home buyers. In addition, the burden of other expenses relative to income is also likely to be substantial in the early years of homeownership, when many younger persons are starting their families.

FHA-insured graduated payment mortgages

The development of GPMs was the outgrowth of the Experimental Finance Program of the United States Department of Housing and Urban Development (HUD), authorized by the Congress in 1974.[6] Section 245 of the National Housing Act as amended that year authorized HUD to initiate an experimental program to insure mortgages with "provisions of varying rates of amortization corresponding to anticipated variations in family income". The program was an effort to determine whether the problems of first-time home buyers could be alleviated within the framework of accepted mortgage lending practices. In 1977 the Housing and Community Development Act made the program permanent.

As their name suggests, FHA-insured GPMs have monthly payments which are low at first and rise gradually for a period of years before leveling off. Since they have a constant interest rate and a fixed term, the graduated payment feature means that the early monthly payments are insufficient to cover accrued interest. As the unpaid accrued interest is added to the principal balance of the loan, the outstanding loan principal increases; in other words, there is negative amortization in the early years of its term.

Like other FHA-insured loans, Section 245 GPMs are fully insured and intended to be made on an actuarially sound basis—*i.e.*, insurance premium payments are expected to be adequate to cover any losses. Originally, FHA-insured GPMs were subject to the same maximum loan-to-value ratio as FHA Section 203(b) FPMs and, since a GPM's principal increased in the early years, the minimum initial downpayment had to be greater than for an FPM. The Housing and Community Development Act of 1977 relaxed the requirement somewhat by allowing the principal amount of GPM loans to increase as high as 97 percent of the original estimated value.

Since the GPM program was new, HUD restricted it to five alternatives which differ according to the pattern of graduation of the initial payments. Three plans permit payments to increase at 2½, 5, and 7½ percent annually for five years, and two plans allow payments to increase at 2 and 3 percent annually for ten years. Monthly payments during each year are level; increases occur annually. After the final annual increase, the payments become constant for the remaining term of the loan. Payment schedules for an FPM and for Plan III and Plan V GPMs are illustrated in Chart 2. All the mortgages are assumed to have a thirty-year term and a $60,000 initial principal amount. The GPM payments are significantly less in the early years than those of the FPM. Indeed, during the first four years of the Plan III GPM, the total payments are $4,058 less than those for the FPM Over the first six years of the Plan V GPM, total payments are $3,790 less than for the FPM. This early cost advantage is offset in two main respects First, as noted earlier, the GPM plans require somewhat higher downpayments than the FPM. Second, when the GPM payments flatten out, they do so at a higher level than the FPM, owing to the negative amortization in the early years of the term.[7] The result is that, while payments of interest and principal total $213,905 over the thirty-year term of the FPM, they are $14,155 (6.6 percent) more for the Plan III GPM and $17,217 (8 0 percent) more for the Plan V GPM.

The GPM program got off to a slow start. Regulations in some states against collecting compound interest on residential mortgage loans prevented many

[6] The first kind of GPM authorized nationally was the "flexible payment mortgage" authorized by the Federal Home Loan Bank Board in February 1974 The idea behind it was to reduce the early monthly payments by omitting amortization in the early years of the term However, since amortization constitutes only a small portion of the early payments for an FPM, the payment schedule for a flexible payment mortgage was not greatly different from that for an FPM, and the innovation never attracted much interest

[7] There is a third small offset due to the insurance premium being larger for the increasing principal balance of the GPM than for the FPM

lenders from offering them. This problem was resolved by the Housing and Community Development Act of 1977, which exempted FHA-insured GPMs from such restrictions. Another problem which has yet to be resolved is that GPMs with negative amortization like those in the Section 245 program can increase the tax liability of taxpayers who calculate their income on an accrual basis—which includes most financial institutions. The reason is that, while the unpaid interest on such a GPM is added to the loan principal and not received by the lender in the year it was earned (accrued), it does increase the lender's tax liability for that year Other things equal, this feature makes GPMs a less attractive investment than a standard FPM.

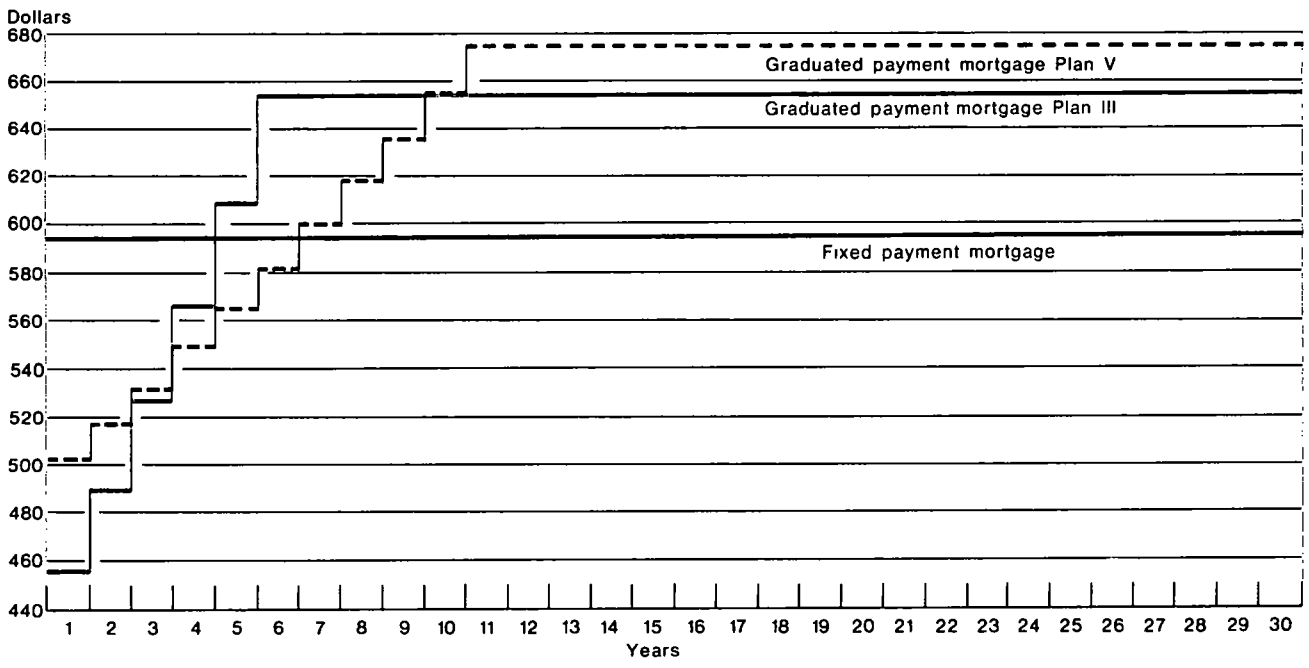
Expansion of the program was also slowed by the relative unattractiveness of the GPMs for the thrift institutions which originate most single-family mortgages. Since the low early payments of the FHA-insured GPMs initially produce less cash flow for lenders than do FPMs, they are not attractive to thrift institutions which rely largely on short-term sources of funds The lack of enthusiasm on the part of thrift institutions, together with mortgage banks' traditional dominance of FHA originations, meant that mortgage banks accounted for almost all GPM originations. The statutory restriction of FHA single-family loans to $45,000—raised to $60,000 in 1977 and to $67,500 in 1979—also reduced the attractiveness of FHA financing in areas where housing prices are relatively high.

Since the GPM program was new, lenders also needed time to become familiar with the alternative designs, to make adjustments in their loan processing procedures, and then to market GPMs to potential borrowers. The result was that, out of a total of 321,118 FHA single-family mortgage insurance endorsements in 1977, only 331 were for GPMs. However, following the increase in the maximum FHA loan size, the Federal override of state laws barring collection of compound interest on residential mortgages, and the establishment of the Section 245 program on a permanent basis in late 1977, the situation changed dramatically. By December 1978, over 25 percent of total new single-family endorsements were GPMs During 1979, about 27 percent of the total were GPMs.

The regional distribution of GPMs is highly uneven,

Chart 2

Monthly Payments of Interest and Principal for a Fixed Payment Mortgage and Two Graduated Payment Mortgages



A term of thirty-years and a contract rate of 11½ percent are assumed Payments for mortgage insurance are not included

with most activity taking place on the West Coast and in the southeastern part of the country. Indeed, by the end of 1979, California alone accounted for about a third of all GPMs in the country. This uneven pattern of introduction of GPMs is probably attributable to regional differences in the composition and strength of housing demand as well as state usury laws and other restrictions on the ability of lenders to offer them.

Two provisions of the Housing and Community Development Amendments of 1979, signed into law on January 4, 1980, may expand the GPM program significantly. First, the maximum loan size for single-family mortgages insured by the FHA was increased from $60,000 to $67,500. Second, the GPM program was modified to increase the permissible GPM loan size when the initial home value is below or slightly above the maximum loan size. The new GPM authorized in Section 245(b)—the previous Section 245 is now renamed Section 245(a)—is similar to the earlier GPM and, for both programs, the loan balance at no time can exceed 97 percent of the value of the house. However, for the earlier program this was the initial appraised value; in the new Section 245(b) program the value of the home is assumed to increase over time, thus relaxing the 97 percent limitation. In projecting the future home value, HUD is authorized to employ a maximum 2½ percent annual rate of price appreciation—a rate well below that observed in recent years.

Depending on how the new program is implemented, the Section 245(b) GPMs may allow GPM borrowers to increase substantially their initial loan size and thus to reduce their downpayments.[8] The smaller downpayment would increase the attractiveness of GPMs for many people. However, the Congress placed a number of restrictions on the program. First, to concentrate the Section 245(b) program on first-time home buyers, applicants must not have owned a home in the preceding three years Second, the number of mortgages insured in any fiscal year is limited to 10 percent of the aggregate initial principal amount of all one- to four-family mortgages insured under Section 245(b) during the preceding fiscal year or 50,000 mortgages, whichever is greater. Nevertheless, there appears to be ample scope for the new program to expand.

Conventional graduated payment mortgages

The HUD program has given impetus to the development by the private sector of conventional—*i.e.*, non-FHA-insured—GPMs. First, the relatively low maximum FHA loan size, together with the rather demanding FHA construction standards and paperwork requirements, makes FHA loans of whatever form unattractive for many borrowers and lenders. Second, as noted earlier, the negative amortization in the early years of an FHA-insured GPM can create an increased tax liability and a cash flow pattern unattractive to many lenders. The former problem can be avoided through conventional financing. The latter problem has been alleviated through the development of a novel form of mortgage loan which allows the lender to receive a stream of constant monthly payments while the borrower makes graduated payments.

The loan is structured so that part of its proceeds is placed with the lending institution in a pledged savings account from which withdrawals are gradually made to supplement the borrower's early payments. The result is a loan with constant payments to the lender and graduated payments by the borrower. This means that the loan does not have the FHA-insured GPM's tax and cash flow disadvantages for lenders, who in addition acquire funds through the pledged account. Moreover, the pledged-account GPM circumvents many states' prohibitions against increasing monthly mortgage payments and the charging of interest on accrued interest—an important consideration, since the Housing and Community Development Act of 1977 overrode such state laws only for FHA-insured GPMs.

Finally, even though lenders typically pay only the passbook savings account interest rate on the pledged account, generally a tax saving will be realized which offsets or exceeds the loss of income created by borrowing funds at the mortgage rate and investing them at the passbook rate. The reason is that the borrower may deduct the withdrawals from the pledged account from his taxable income, since they are used to pay part of the mortgage interest. As a result, his deductible interest expense exceeds his actual out-of-pocket outlay for mortgage interest during the early years of the loan.

It is difficult to estimate the volume of originations of pledged-account GPMs. Since the loan is essentially an FPM from the standpoint of lenders, available data do not separate out the pledged-account GPMs from other mortgages. However, judging by the vigor with which they have been promoted, the volume of pledged-account GPMs may well be substantial.

GPMs in the secondary market

Additional impetus to GPM lending has been provided by the opening-up of the secondary mortgage market to FHA-insured GPMs Initially, almost the only part of the secondary market in which FHA-insured GPMs were

[8] As of this writing, HUD has not yet determined whether the new program would operate in the same Plans I-V as the Section 245(a) GPMs or whether new graduation periods and rates would be created

Who Borrows through FHA-Insured Graduated Payment Mortgages?

Data collected in a special survey conducted by the United States Department of Housing and Urban Development indicate that the GPM (Section 245) borrower is on average 29-30 years old—one to two years younger than the average FPM (Section 203(b)) borrower. Most borrowers in both programs are married, but there is substantial singles participation as well. As one would expect, considering their lower average age, GPM borrowers generally have slightly fewer dependents than do FPM borrowers. A large majority—three quarters or more—of borrowers under both programs are first-time home buyers. However, GPM borrowers are somewhat more likely to own a home which is being sold to finance the purchase of a new home. The income of GPM borrowers is on the whole not very different from that of FPM borrowers —though in some individual markets GPM borrowers have markedly lower average incomes.

Though nationwide comparisons of FPM and GPM borrower characteristics are complicated by the fact that California has accounted for a disproportionate share of GPM volume, it appears that GPM borrowers buy significantly more expensive homes which they finance with larger mortgages. Because of the low early monthly payments of the GPM, this results in only a slightly greater burden of first-year housing expense relative to income for GPM borrowers, compared with FPM borrowers. GPM borrowers also put down significantly larger downpayments—in part because the most popular Plan III GPM requires a larger downpayment, but also because in many cases the maximum FHA loan size is a constraint. As a consequence, GPM borrowers generally have a lower loan-to-value ratio than FPM borrowers.

Average Characteristics of FPM and GPM Borrowers

Characteristic	FPM borrowers	GPM borrowers
Sales price	$36,130	$48,996
Mortgage amount	$34,427	$44,557
Total annual family income	$22,167	$22,128
Loan-to-value ratio	92.6%	89 8%
Total housing expense/ net effective income	30.9%	32.3%
Total fixed payments/ net effective income	51.7%	50 9%

Data are for loans on existing single-family structures endorsed during the first quarter of 1979 Fixed payment mortgage loans (FPMs) are those endorsed under Section 203(b), graduated payment mortgage loans (GPMs) are those endorsed under Section 245

Source United States Department of Housing and Urban Development.

sold was the FNMA purchase program. Early in 1979, the Government National Mortgage Association (GNMA) expanded its pass-through certificate program to allow FHA-insured GPMs to be included in mortgage pools underlying the certificates.[9]

The GPM-GNMA certificates—familiarly referred to as "Jeeps"—provide an ownership interest in a pool containing mortgages with five-year graduation periods (Plans I-III). In practice, since the vast majority of GPM borrowers prefer Plan III, which has the steepest graduation schedule, the pools consist overwhelmingly of mortgages of this type. Because of the graduation feature, GPM-GNMAs have a slightly longer average maturity, or "duration", than do standard GNMAs. This is true both of the contracted term to maturity and also of the average maturity calculated on the basis of prior experience with prepayments of FHA mortgages. As a result, the price of a GPM-GNMA security should be slightly more volatile than that of a standard GNMA security.

Yields of GNMA securities—including GPM-GNMAs —currently are quoted on the basis of a twelve-year prepayment assumption.[10] This is convenient for standard GNMA securities, since in most cases the yield distortions are not large. However, the assumption is less firmly grounded in the case of GPM-GNMAs, since there is no prior experience on which to base an evaluation of the accuracy of the approximation. On the one hand, if GPM borrowers are more likely to consider their homes as permanent investments and are less inclined to move than other borrowers, the GPM prepayment experience will be slower than prior FHA experience. On the other hand, if GPMs are especially attractive to upwardly mobile families inclined to move

[9] For a description of the GNMA certificate program, see Charles M. Sivesind, "Mortgage-Backed Securities The Revolution in Real Estate Finance", this *Review* (Autumn 1979), pages 1-10.

[10] For a description of the calculation of yields on GNMA securities, see Sivesind, *loc cit*

to a better house after a few years, then the GPM-GNMA prepayment rate could be faster than prior experience. In these circumstances, GNMA, for want of any better alternative, has applied the standard twelve-year prepayment assumption to yield calculations for GPM-GNMAs.

Trading in GPM-GNMAs has reflected the fact that the instrument is new, with few pools existing compared with standard GNMA securities. As a result of their less liquid market and their longer expected average term, GPM-GNMAs have traded at a discount of one to two points relative to level-payment GNMAs with the same coupon interest rate.

The number of GPM-GNMA pools has increased substantially—to 1,102 pools with an unpaid principal balance aggregating to $2.3 billion at the end of February 1980—and GNMA anticipates that the volume will expand in tandem with the growth of GPM originations. The liquidity of the market should improve in the future as the number of pools increases further.

Secondary market activity in pledged-account GPMs has been more modest. A number of sales of packages of GPMs carrying mortgage insurance provided by private mortgage insurance firms have occurred. Activity should be stimulated, however, when the Federal Home Loan Mortgage Corporation initiates its planned pilot purchase program

Evaluation of graduated payment mortgages

As noted earlier, FHA-insured GPMs have expanded rapidly in the few years the program has existed. Though it is too early to make a definitive judgment, indications are that to some extent the expansion of Section 245 GPMs has been at the expense of Section 203(b) FPMs. If this pattern continues and also holds for conventionally financed GPMs, then the impact of continued growth of GPMs would not be primarily to expand the mortgage market, though some increase would occur, but rather to allow borrowers to arrange their housing finance more conveniently than at present.

The major unanswered question concerning the growth and development of GPMs is not, however, a matter of relative rates of expansion; it is the implications of GPMs for loan defaults in the years ahead. As noted earlier, a key benefit obtained from adoption of the FPM as the standard mortgage design was to avoid any recurrence of the enormous volume of mortgage defaults which was precipitated by the depression of the 1930s. To the extent that the FPM is modified, defaults might once again become a source of concern.

In the past, the most important determinant of mortgage defaults has been the amount of equity which the borrower has in his house. Since equity is lowest in the early years of the mortgage term, the incentive to default—and its observed incidence—is greatest then. To the extent that a GPM with negative amortization—such as the FHA-insured GPM—increases the balance of the loan in the early years of the term, the owner's equity relative to the original purchase price declines. Other things equal, this should increase his incentive to default. This effect could be offset, however, if the rate of appreciation of the home's value exceeds the rate at which the loan balance increases. The requisite rate of increase in value depends on the level of the interest rate but is generally quite modest, on the order of 1 percent or so per year during the first five years of the thirty-year term of a Plan III GPM. The loan balance of pledged-account GPMs decreases continuously, but the larger initial loan size means that an additional default incentive is created, compared with both an FPM and an FHA-insured GPM Both kinds of GPMs reduce the front-end load in the time pattern of the real payments on the mortgage, and this will probably reduce defaults in the early years, though they might be increased later on.

While the short period of time during which the FHA GPM program has been in operation precludes firm generalizations about default rates, there have been some indications that Section 245 GPMs have default rates which are either the same as, or lower than, Section 203(b) FPMs. However, more than ordinary caution is needed in interpreting this performance. First, downpayments on FHA-insured GPMs frequently have been greater than required under the program, and this should reduce defaults. The most likely reason for the larger downpayments is that the FHA's loan size limitation required buyers of more expensive homes to increase their downpayments to qualify for FHA insurance. In addition, since FHA-insured GPMs have a slower cash flow than FPMs of equal maturity and interest rate, persons financing through GPMs should expect to pay more points than with an FPM.[11] This also would tend to restrict the availability of GPM financing to borrowers capable of making larger downpayments. Finally, some GPM borrowers may have a preference for low monthly payments—to such an extent that they would be willing to reduce their liquid assets in order to lower the loan size and thus the monthly payments. This approach can make sense when the mortgage interest rate is substantially higher than the savings account interest rate, as has been the case during the FHA program's existence.

[11] A point is 1 percent of the principal value of a mortgage note Since the maximum FHA mortgage rate is generally held well below market levels, points are charged to raise to market levels the yield on the funds actually advanced While sellers are legally obligated to pay any points charged on an FHA mortgage, they generally attempt to shift this cost to the buyer by increasing the sale price and thus the downpayment required of the buyer

The absence of hard evidence concerning the default experience with FHA-insured GPMs raises the issue of precisely what an "actuarially sound" GPM is. The designers of the FHA program had in mind a mortgage contract in which the degree of graduation did not exceed the prospective rise in income of the borrower during the early years of the loan term. In fact, however, the available evidence suggests that income projections are not taken very seriously by GPM originators, with the result that Plan III—which has the steepest graduation rate—dominates all FHA's other GPM options. Now that the Congress has authorized the Section 245(b) GPM, in which an assumption is made concerning the future rate of price appreciation of the house, the evaluation of the soundness of GPMs has still less to do with actuarial methodology as usually understood. In the near future, continued inflation may ratify any such assumption and prevent the emergence of problems in the GPM program but, as inflation is brought under control, the validity of the assumption could be eroded. In such a case, as both inflation and mortgage interest rates declined, GPM borrowers—because of their larger loan sizes—would have an especially strong incentive to refinance their loans at lower interest rates. In addition, defaults and delinquencies might increase.

Outlook for graduated payment mortgages

In the long run, the best way to deal with the front-end load induced in the real payments of an FPM is to reduce the rate of inflation. In the near-term, however, the GPM—whether FHA-insured or conventional—clearly has an important role to play in alleviating some of the problems created for many borrowers, especially young families, by exclusive reliance on the FPM as the standard mortgage design. GPMs will likely continue to expand at a brisk rate in the near future. Perhaps the principal obstacle to their doing so is the recent advent of single-family mortgages financed through issues of tax-exempt bonds. In areas where such programs have been actively employed, GPM activity has been very slight, for GPMs obviously are less attractive to house buyers than mortgages offered at below-market interest rates. Thus, the outlook for growth of GPMs will be influenced by the outcome of pending legislation to restrict issues of single-family mortgage revenue bonds.

In the longer term, even after inflation is brought under control, graduated payment mortgages are likely to remain an important innovation in the mortgage market, by virtue of providing greater flexibility in tailoring mortgage payments to anticipated income growth than does the fixed payment mortgage.

William C. Melton