

*A REVIEW AND PRELIMINARY SURVEY OF GRADUATED PAYMENT
MORTGAGORS*

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ABSTRACT

This paper is a review of the literature on consumer aspects of the Graduated Payment Mortgage (GPM). It presents the findings of a pilot study designed to assess borrowers' knowledge of and experiences with the GPM. In the sample of 43 Federal Housing Administration (FHA) Section 245 GPM holders, over one-third were first-time buyers and over one-third were single persons or household heads. The buyers purchased primarily new or nearly-new single-family detached homes at average or lower prices for the locality. The median housing-income ratio was within the range of 30-34 percent.

The majority of the loans were five-year graduation plans, with typical annual mortgage payment increases of 5 or 7.5 percent. Mortgagors perceived the final GPM principal to be higher than that for a standard fixed-payment mortgage (SFPM); the GPM interest rate and minimum down payment to be about the same or lower; GPM closing costs to be about the same; and GPM equity buildup to be slower. Major perceived GPM advantages were the ability to tailor payments to rising incomes, the ability to qualify for a home and the suitability of GPM down payments compared to SFPM down payments. The income-increase expectations of 61 percent were met. The majority of incomes rose 7 percent or more in the first and second years after loan origination. Speed of equity buildup was important to most owners and most foresaw no difficulties in selling the home during the first five years. For 81 percent, the GPM benefits equalled or outweighed its drawbacks. While nearly one-half would still pick a GPM, 42 percent would take a SFPM, if possible.

INTRODUCTION

Designed to operate in a relatively stable economic and financial environment, the standard fixed-payment mortgage (hereafter SFPM) is inflexible in meeting borrowers' diverse financial needs. It does not permit lenders to adjust earnings to changing economic conditions. Since 1970, lenders have instituted a variety of alternative mortgage instruments (AMIs). One mechanism developed to assist young households is the graduated payment mortgage (GPM) with lower initial payments that rise during the early years.

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While the major feasibility study for AMIs (Kaplan, 1977) includes some investigation of consumer acceptance, the bulk of that research centers on structural aspects, analyses of potential demand and implications for lenders. Although the GPM has been available since 1977 in the form of the Federal Housing Administration (FHA) Section 245 insured loan, studies reporting borrowers' experiences are generally unavailable. This paper summarizes the literature on consumer aspects of GPMs and presents the findings of a pilot study designed to assess mortgagors' knowledge of and reactions to their GPMs.

BACKGROUND

After authorization in 1974 as an experimental program, the permanent FHA Section 245(a) GPM program was initiated in late 1977. It includes a choice of five plans varying in length of graduation period (five or ten years), rate of payment increase, and down payment amount. All are the negative amortization type GPM, (i.e., initial monthly payments are lowered by deferring a portion of the interest, which is added to the principal, causing the mortgage balance to rise during the graduation period.) In 1980, FHA Section 245(b) was authorized on a limited scale to aid lower-income buyers via a larger GPM loan and smaller down payment than the 245(a) plans. In 1981, the Veterans Administration added GPMs to its mortgage guarantee program.

In 1979, the Federal Home Loan Bank Board (FHLBB) authorized federally chartered thrift institutions to offer conventional GPMs with negative amortization. In some states, however, lending regulation allowed only the pledged account mortgage and other GPM variations without negative amortization. (The pledged account mortgage is a special type of GPM where the portion of the interest due not covered by the low initial monthly payment is deducted from a savings account pledged by the borrower). In 1981, FHLBB also authorized graduated payment adjustable mortgage (GPAM) loans that combine the low-start, accelerated payments of the GPM with the adjustable interest feature of the renegotiable-rate mortgage. The Federal National Mortgage Association was willing to buy Section 245 mortgages from the inception of the program, but the two 10-year plans were not included when the Government National Mortgage Association began purchasing GPMs in 1979 (U.S. Comptroller General, 1981). Mortgage bankers accounted for almost all early GPM originations.

The findings from the 1981 nationwide Survey of Residential Finance showed that, of nearly 25 million mortgages, only 8.6 percent had monthly principal and interest payments that could change for reasons other than a change in the interest rate. Moreover, the Bureau conceded that the data may have overstated the frequency of GPMs--indications showed that some lenders misunderstood the question. Of the 2,141,000 mortgages whose payments could change, only 10.7 percent were for a five-year graduation period (less than 1% were ten-year plans), while 82.4 percent changed in some other way (e.g., if real estate taxes increased or if terms were renegotiated.) Of an estimated 230,000 five-year GPMs, 93 percent had FHA-insured mortgages (U.S. Bureau of Census, 1983).

Predicted Demand for GPMs

The key demand element for the GPM is

families who reasonably expect their incomes to increase rapidly and steadily over a 10-year period, headed by persons who are relatively young and have above average levels of education and/or job status. (Smith, 1979).

Existing rules limited those families to less housing than their expected income indicated they could prudently afford. They would need to re-enter the housing market several times and "trade up" at estimated transaction costs of 25 percent or more of the value of the most recent home (Smith, 1979).

Smith, Wiest, and Field (1977) expected the primary GPM beneficiaries to be renters with below-median incomes, with the under-age-35 group best able to afford them. Colton, Lessard, and Solomon (1979) conclude that GPMs could lower the age of first-time buyers as, "most likely, a function of income." They note that, although households with relatively high present and future incomes can bear the higher future GPM commitments, many can currently cover home ownership payments and do not need the GPM, specially with favorable tax treatment.

Follain and Struyk (1977a, 1977b) predicted that the introduction of GPMs would not radically alter the basic U.S. tenure pattern and that their effect would vary by city or market. They concluded, however, that GPMs could significantly increase the number of home owners with a small amount of federal intervention and required expenditures. Using a life-cycle model of household choice to compare the effects of SFPMs and GPMs on the quantity and timing of an individual's housing decisions, Alm and Follain (1982) conclude that the GPM has the potential to increase substantially the demand for owner-occupied housing in an inflationary environment. Further, households are willing to pay moderate premiums to obtain GPMs. Their findings suggest that if incomes do not decline and inflation remains at high levels during the next decade, housing demand will grow considerably if GPMs become widely accepted.

Consumer Advantages of GPM

In the early years of a GPM, the lower payments significantly reduce the housing-income ratio, compared to the SFPM. In addition, via a corresponding reduction in income requirements for loan qualification, the GPM enables "income stretching" (the purchase of a home more suited to present needs in terms of house and lot size). Other GPM advantages include a choice of mortgage features and, similar to the SFPM, knowledge of the size of future payments (Colton et al, 1977; Weinrobe, 1977).

The rate of increase in GPM payment-size is small compared to expected income growth, and the amount of negative amortization small relative to expected increase in home value (Smith, Wiest, and Field, 1977; Smith, 1979). Melton (1980) states that the requisite rate of property value increase depends on the mortgage interest rate but is "generally quite modest, on the order of 1 percent or so per

year during the first five years of a Plan III Section 245 GPM." At congressional hearings (on Young Families, 1977), Kaplan testified that, although negative amortization in early years would eliminate the equity in the house (based on appraised value at time of purchase), it could be more than offset by a positive impact on equity caused by rising house prices. At the same hearings, Field and Cassidy also testify that a shorter graduation period substantially reduces the amount of negative amortization, yet retains most of the benefits of lowering initial payments.

Kidd (1978) acknowledges that inflation could be a two-edged sword: if real incomes rise for GPM borrowers, they may be able to move up to better homes in a short time (three to five years). But if incomes do not rise, if house values fall or there is insufficient equity, the potential for loss increases.

Potential GPM Drawbacks

Lenders' greatest reservations about GPMs were the early years' reduced cash-flow and increased risk of default and foreclosure caused by a low down payment, the variation in payment stream or a rising outstanding balance. Although historical risk experience on loans with negative amortization was lacking, the key underwriting concerns (beyond those usual in predicting defaults) appear to be early years' income growth rate and property value appreciation.

Melton (1980) indicates that the default rate on FHA Section 245 has been similar to that for FHA Section 203(b), but that higher Section 245(a) down payments (therefore, more equity) mean less incentive to default. He noted that, although lower payments could reduce defaults in the early years, they might increase later when payments level off at a point higher than they would have been with a SFPM. A 1981 U.S. General Accounting Office study states most HUD underwriters are not routinely assessing the ability of GPM applicants to meet increasing payments and recommended criteria to assess future incomes. HUD responded that the idea had merit in theory, but there was no way to accomplish it without discriminating against some classes of buyers on the basis of age or profession (U.S. Comptroller General, 1981).

The Section 245(a) GPM requires higher down payments to minimize risks associated with negative amortization and to insure it would not increase the outstanding balance above the insurable limit. Although Gravlee (U.S. Congress, Hearings on Housing and Community, 1979) considers the down payment to be the major disincentive for many young families and minority homebuyers, Kaplan (U.S. Congress, Hearing on Young Families, 1977) testified earlier that the inability to meet down payment requirements is not as great an obstacle to home ownership affordability as inability to meet monthly payments. With the advent of Section 245(b), a lower down payment option became available for certain lower-income buyers, but HUD officials questioned the program's actuarial soundness (U.S. Comptroller General, 1981).

Swan (1977) concludes that GPMs with low rates of graduation need not lead to much (if any) increase in defaults, but predicts greater chance of delinquency if a borrower uses the lower early-

payment to purchase a more expensive house. In testimony, Hanrahan (U.S. Congress, Hearings on Young Families, 1977) notes the need for a moderate rate of payment increase (5% or less annually) and for underwriting standards to identify qualified buyers whose incomes would be most likely to keep pace with the rise. He suggests more frequent monitoring of GPMs in loan management and accelerated procedures for initiating delinquency and default counseling. Gravlee (U.S. Congress, Hearings on Housing and Community Development, 1979) testified later that the "relatively steep (7.5%) annual increases under the most popular option (Plan III) used by over 80 percent of GPM borrowers limited the effectiveness of the program." If income increases do not keep up with payment increases, the potential consequences of unemployment, uninsured major medical expenses or other unplanned expenses will be magnified.

During the early years of a GPM, slow equity buildup or the potential for loss could result in resale constraints or mortgagor "immobilization." Kristof (U.S. Congress, Hearings on DHUD--Independent, 1977) favors outright subsidy programs over the GPM. He stated that, while the early-year cost burden was lightened, new problems are created as GPM owners become second-home buyers with limited first-home equity.

Melton (1980) questions future appreciation rates as (and even after) inflation is brought under control. Addressing GPMs' potential inflationary effect on wage demands and housing costs, McFarlin and Vitek (1980a, 1980b) conclude that the Section 245 GPM was not contributing to inflation to any significant degree in California, nor was it adding to housing speculation any more than other single-family insurance programs. They recommend stricter enforcement of the "intent-to-occupy" requirement, however. A HUD evaluation of Section 245 activity in three insuring offices also concludes that the potential for speculative abuse is small given the occupancy requirement and the relatively higher down payments (U.S. DHUD, 1979). A related concern is that the total cost of the GPM is higher than that of the SFPM (Colton et al, 1977; Melton, 1980).

Consumer Safeguards

Consumer protections proposed during the formulation of AMIs include both general and instrument-specific safeguards. Lenders' concerns are the increased borrower education costs resulting from required safeguards and the number and degree of complexity of different AMIs offered (Peat, Marwick & Mitchell, 1977). In 1982, FHLBB regulations replaced some previous safeguard requirements with broad guidelines under which a variety of individual AMIs can be designed (Edwards, 1982).

Although the majority of Section 245 buyers have chosen Plan III (which allows the lowest initial monthly payments), two reports suggest that many of them are not fully informed about all available GPM plans (U.S. DHUD, 1979; U.S. Comptroller General, 1981). The reasons for being uninformed include: 1) full explanation to "relatively unsophisticated buyers" is considered by some lenders and real estate brokers to be too time-consuming, complicated or expensive; 2) lack of broker or lender awareness of all five options; and 3) exclusion of the 10-year plans from the GNMA mortgage pools.

McFarlin and Vitek (1980a, 1980b) recommend that only two GPM plans be offered: Plan III (7.5% increases for five years) and Plan IV (2% increases for ten years). Together with the FHA Section 203(b) SFPM, these would provide sufficient variety and would more likely result in brokers and lenders offering choices.

THE PILOT STUDY

Empirical research involving home buyers is limited and few studies have used random sampling techniques. Hempel (1970) and McFarlin and Vitek (1980b) note difficulties in surveying consumers about their mortgages. These include lack of incentives or energies to shop for financing, general ignorance and unconcern for anything beyond the size of the down and monthly payments, built-in biases caused by buyers' loyalty to their purchases and privacy concerns of lenders and borrowers about loan qualification and specific financial arrangements. Yet consumer research on GPMs could yield valuable information upon which to base mortgage lending policies. It could also lead to the development of consumer information directed at potential borrowers who need low early payments. The objective of this pilot study was to survey GPM borrowers about their mortgages.

Instrument Development

A mail questionnaire was deemed most suitable for GPM data collection because of the sensitivity of financial questions, possible embarrassment over "don't know" answers (or to allow time to look them up), and the ability to randomly survey a large sample. To provide content for the instrument, interviews with GPM borrowers and mortgage delinquency and default counselors augmented available literature on GPM mechanics and consumer concerns. Especially useful in survey development were Albaum and Kaufman's (1977; 1979) comparison of variable rate and fixed-rate mortgagors, the analyses of attitudes of a nationwide sample of borrowers concerning GPMs and other AMIs by Colton et al. (1977; 1979) and McFarlin and Vitek's (1980a; 1980b) evaluation of FHA Section 245 GPMs.

The questionnaire was designed to elicit mortgagors' knowledge and perceptions of and experiences with GPMs. Questions centered on shopping for a mortgage, loan characteristics, and annual GPM payment increases. The survey also requested descriptive information about the respondent and the residence. The instrument was constructed according to the Dillman Total Design Method (1978).

The Sample

One savings and loan association, one commercial bank and two mortgage companies agreed to administer the survey to 10 or 15 GPM mortgagors that each selected at random. The researcher sought additional mortgagors through advertisements and a related story in two local newspapers, obtaining 18 volunteers who hold GPM loans.

Of 73 questionnaires mailed in March, 1982, with two follow-ups mailed during the ensuing weeks, 70 were deliverable. As a response incentive, the cover letter announced a supermarket gift certificate drawing to be made from returned questionnaires one month after the initial mailing date. The 43 completed surveys

represented a 61.4 percent response rate.

RESULTS

Descriptive analyses of the data centered on mortgage characteristics and the consumers' experiences with their GPMs. Table 1 shows selected characteristics of the 43 respondents, all of whom hold FHA Section 245 GPMs on single-family detached homes. First-time buyers constitute 37 percent of the sample and another 40 percent had previously owned only one home. Nearly two-thirds are married, but 35 percent are single buyers. Almost 63 percent of the respondents are college graduates and 58 percent are in professional, technical or managerial occupations.

The median income range at the time of purchase was from \$24,000 to \$25,999, with a total range from less than \$20,000 to \$35,000 or more. Borrowers qualified for loans based on two full-time incomes in 51 percent of the cases. A second part-time income was involved in 12 percent, while 37 percent used only one income. The median housing-income ratio is in the 30-34 percent range, with 61 percent of the sample at that level or lower.

The median home price is in the \$60,000-\$69,999 range. All purchase prices in the sample were under \$80,000, with 14 percent less than \$50,000. New, never-occupied homes accounted for 56 percent of the units, with another 30 percent under ten-years old.

Characteristics of the GPMs

Of the buyers, 72 percent "shopped" at only one lender, with two-thirds of them doing so on their sales agents' recommendations. The majority of the borrowers obtained their GPMs from mortgage companies, with the remainder divided nearly equally between savings and loans and commercial banks. Asked whether they had desired to know more about the GPM at the time they obtained it, only 14 percent responded affirmatively.

Table 2 summarizes selected characteristics of the sample GPMs as described by the mortgagors. Nearly 54 percent of the respondents received no choice in GPM plans, but 30 percent chose from among two to five options. The two most frequent reasons for selecting a particular plan were low initial monthly payments and suitable down payment size. Lenders requested information about future income or career potential and ability to meet increased payments from less than one-fourth of the mortgagors. Several buyers noted standard income verification and work-history queries, but one spouse was required to write a letter of intent-to-see-employment.

Down payments ranged from 0 to 36 percent of the purchase price, with a median of 10 percent. Nearly one-half of the buyers put down more than the required minimum. For 81 percent, the sales contract contained a mortgage payment size contingency. A 5-year graduation period was indicated by 81 percent of the borrowers.

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Table 1. Selected Characteristics of the Respondents and their GPM-financed Homes (N=43)

Variable	N	%
Number of Owner-occupied Homes Before GPM		
None	16	37.2
One	17	39.5
Two or more	10	23.3
Buyers' Marital Status		
Married	28	65.1
Single person	12	27.9
Single head with children	3	7.0
Household Income at Time of Purchase		
Less than \$20,000	12	28
\$20,000-23,999	9	20.9
\$24,000-25,999*	2	4.7
\$26,000-29,999	9	20.9
\$30,000-34,999	9	20.9
\$35,000 or more	1	2.3
No response	1	2.3
Loan Qualification Based on Two Full-time Incomes?		
Yes	22	51.2
No but second part-time income used	5	11.6
No, one income only	16	37.2
Current Housing-Income Ratio		
Less than 25 percent	5	11.6
25-29 percent	7	16.3
30-34 percent	14	32.6
35-39 percent	5	11.6
40-44 percent	3	7.0
45 percent or higher	8	18.6
No response	1	2.3
Purchase Price of GPM Home		
Less than \$50,000	6	14.0
\$50,000-59,999	11	25.6
\$60,000-69,999	13	30.2
\$70,000-79,999	13	30.2
Age of Home at Purchase		
New, never occupied	24	55.8
One to nine years	13	30.2
10 to 36 years	4	9.3
37 or more years	2	4.7

*Median range; other categories have been collapsed unequally to save space.

Table 2. Characteristics of the Respondents' GPMs (N=43)

Variable	N	%	
Type of mortgage lender			
Mortgage company	22	51.2	
Savings and loan	11	25.6	
Commercial bank	10	23.3	
Choice of GPM plans given?			
No	23	53.5	
Yes, 2-3 plans	10	23.3	
Yes, 4-5 plans	3	7.0	
Don't know	7	16.3	
Lender request future income information?			
No	33	76.7	
Yes	10	23.3	
Graduation Period			
5 years	35	81.4	
10 years	1	2.3	
Other period	6	14.0	
No response	1	2.3	
GPM annual monthly payment increase			
7.5 percent	16	37.2	
4.9 or 5 percent	11	25.6	
2.5 or 3 percent	9	20.9	
Other percentage	4	9.3	
Don't know, no response	3	7.0	
Compare initial and final GPM principal			
Final higher	28	65.1	
Final lower	3	7.0	
About the same	2	4.7	
Don't know	9	20.9	
No response	1	2.3	
GPM/SFPM comparisons:			
	Interest Rate	Minimum Downpayment	Closing Costs
GPM higher (faster)	7 16.3	3 7.0	3 7.0
GPM about the same	11 25.6	17 39.5	19 44.2
GPM lower (slower)	13 30.2	11 25.6	5 11.6
Don't know	0 0	1 2.3	5 11.6
	Total Cost	Equity Buildup	
GPM higher (faster)	15 34.9	1 2.3	
GPM about the same	6 14.0	2 4.7	
GPM lower (slower)	1 2.3	26 60.5	
Don't know	10 23.3	3 7.0	

The annual increase in monthly principal and interest payments was 7.5 percent for 37 percent of the mortgages, followed by 26 percent with a 5 percent annual rise and 21 percent increasing about 3 percent per year. In comparing the initial and final principal amounts for their GPMs, 65 percent of the mortgagors showed the final amount to be higher, but 21 percent didn't know, and 7 percent thought it would be lower.

Lenders or sales agents had given written or verbal GPM-SFPM comparisons to 74 percent of the respondents. In general, the borrowers perceived the GPM interest rate and minimum down payment to be about the same or lower than a SFPM, GPM closing costs to be about the same, and GPM equity buildup to be slower. Those who knew considered total GPM mortgage costs to be higher than for a SFPM mortgage, but ten respondents didn't know.

GPM Mortgagors' Experiences

Mortgagors' perceptions of and experiences with the GPM are shown in Table 3. The respondents were asked to indicate the GPM's advantages. They most frequently noted: 1) the ability to tailor payments to income growth, 2) GPM is the only way to qualify for a home, and 3) GPM has a more suitable (than SFPM) down payment. Only 23 owners ranked the advantages, most often placing "no other way to qualify" first. Responses to an open-ended question about the "biggest GPM advantage" confirmed those findings and added another: assumability of the loan.

First-time buyers and those with incomes below \$20,000 did not perceive difficulties with GPM, generally indicating that its benefits outweighed the disadvantages and that they would pick a GPM again. Compared to their previous mortgage loans,

CONCLUSIONS AND IMPLICATIONS

Whether fixed-rate or adjustable, or in one of the variations described by Guttentag (1983), the GPM is one of a varied repertoire of alternative mortgage instruments and affordability mechanisms that can make home ownership possible. Depending on its format, it could emerge each time interest rates climb, perhaps serving as a form of bridge or gap financing for young households.

The data suggest that the GPM may best serve middle-income, upwardly-mobile single individuals and couples who are first or second-time home buyers (perhaps located in active housing markets) and whose income growth is certain and steady. Not surprisingly, the most desirable Section 245 features seem to be the low down payment and initial monthly mortgage payments. That combination may allow GPM mortgagors to buy a more expensive home sooner. Larger descriptive studies could develop consumer profile and predictors of "success" with a GPM, perhaps via comparisons of Section 245(a) or 245 (b) and other GPM borrowers. Future studies should explore relationships between particular consumer difficulties and the buyer's experience, income level and change, housing-income ratio, and the mortgage graduation period or rate.

Table 3. Mortgagors' Experiences with GPM (N=43)

Variable	N	%				
Perceived advantages of the GPM*						
Can tailor payments to income increases	19	44.2				
No other way to qualify for a home	18	41.9				
GPM downpayment more suitable than SFPM	14	32.6				
Allows purchase of more expensive home	10	23.3				
Lower payments allow higher other housing costs	8	18.6				
Knowing exact future payments	7	16.3				
Ability to limit housing budget item	5	11.6				
Other advantages	3	7.0				
Income increase expectations met?						
Yes	26	60.5				
Too early to tell	8	18.6				
No	8	18.6				
No response	1	2.3				
Post-GPM annual income changes						
	Year 1	Year 2	Year 3			
Decrease	2	4.7	1	2.3	1	2.3
0 percent (no increase)	2	4.7	0	0.0	0	0.0
4-6 percent increase	3	7.0	1	2.3	0	0.0
7-9 percent increase	6	14.0	6	14.0	2	4.7
10-12 percent increase	10	23.3	4	9.3	3	7.0
13-20 percent increase	5	11.6	7	16.3	0	0.0
21-50 percent increase	5	11.6	2	4.7	0	0.0
51-79 percent increase	0	00.0	1	2.3	0	0.0
No response	10	23.3	21	48.8	37	86.0
How were GPM increases managed?*						
Not applicable, no increase yet		12	27.9			
Income increase covered		27	62.8			
Changed other budget areas		5	11.6			
Payments more than 5 days late		4	9.3			
Other income added		3	7.0			
Borrowed		2	4.7			
Other, no response		2	4.7			
Causes of increased payment troubles*						
No applicable, no problems		33	76.7			
Uninsured major medical		4	9.3			
Increased utilities' costs		4	9.3			
Major car expense		2	4.7			
Childbearing/raising expense		2	4.7			
Educational expenses		1	2.3			
Other reasons		2	4.7			
No response		3	7.0			
Difficulties encountered so far*						
None or no response		24	55.8			
Slow equity buildup hinders resale		12	27.9			
Less money for other things		5	11.6			
Income did not keep pace with payments		2	4.7			
Other		3	7.0			

Criteria for evaluating home financing alternatives could involve characteristics of the borrower, the housing unit, the local market

and interest rates or the GPM mechanism itself.

The evolutionary process of AMIs is stabilizing and the payments on the GPMs made in the late 1970s have now leveled off. An investigation of GPMs after at least five years' experience would provide additional data that are needed to provide bases for individual housing choices, mortgage lending decisions, and home ownership policies.

One specific implication of the pilot study can probably be made safely. The assistance of real estate sales professionals, mortgage loan officers, housing counselors, and consumer educators will become more necessary as the rent vs. buy decision becomes less clearcut. Nonfixed payments may eliminate the inflation-hedge advantage of home ownership, and consumers may need to unlearn the "house payment always stays the same" generalization. One may also need to prepare buyers to deal with major shifts in household budgets and to provide financial counseling if GPM delinquency and default rates rise. At a minimum, housing educators need to develop effective generic materials for teaching about the multiple variables, needed safeguards or negotiating points, and potential consequences that AMI consumers and, in particular, first-time buyers, may encounter. Future challenges that are faintly evident in these data would doubtless appear more clearly in larger studies of GPM or other AMI mortgagor experiences.

REFERENCES

- Albaum, G. Consumer reactions to variable rate mortgages. *Journal of Consumer Affairs*, 1979, 13, 262-81.
- Albaum, G. and Kaufman, G. The variable rate residential mortgage: Implications for borrowers. In Kaplan, D.M. (Ed.), *Alternative mortgage instruments research study*, (Vol.1). Washington, D.C.: Federal Home Loan Bank Board, 1977, VI-1-47.
- Alm, J. and Follain, J.R. Alternative mortgage instruments: Their effects on consumer housing choices in an inflationary environment. *Public Finance Quarterly*, 1982, 10, 134-57.
- Colton, K.W., Lessard, D.R., Modest, D.M., and Solomon, A.P. National survey of borrowers' housing characteristics, attitudes and preferences. In Kaplan, D.M. (Ed.), *Alternative mortgage instruments study*. Washington, D.C.: Federal Home Loan Bank Board, 1977, III-1-165.
- Colton, K.W., Lessard, D.R. and Solomon, A.P. Borrower attitudes toward alternative mortgage instruments. *AREUEA Journal*, 1979, 7, 581-609.
- Dillman, D.A. *Mail and Telephone Surveys: The Total Design Method*. New York: John Wiley and Sons, 1978.
- Edwards, C.S. Alternative mortgage instruments. *Family Economics Review*, 1982, 1-18.

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Follain, J. and Struyk, R. Home ownership effects of alternative mortgage instruments. In Kaplan, D.M. (Ed.), *Alternative mortgage instruments research study* (Vol. 3). Washington D.C.: Federal Home Loan Bank Board, 1977a, XIV-1-41.

Follain, J. and Struyk, R. *Homeownership effects of alternative mortgage instruments*. Washington, D.C.: The Urban Institute, 1977.

Guttentag, J.M. Solving the mortgage menu problem. *Housing Finance Review*, 1983, 2, 227-52.

Hempel, D.J. *A comparative study of the home buying process in two Connecticut housing markets*. Storrs: University of Connecticut Center for Real Estate and Urban Economic Studies, 1970.

Kaplan, D.M., (Ed.), *Alternative Mortgage Instruments Research Study* (Vols. I-III). Washington, D.C.: Federal Home Loan Bank Board, 1977.

Kidd, P.E. FHA 245 mortgages may be a two-edged sword for mortgage bankers. *Mortgage Banker*, 1978, 65-70.

McFarlin, E.D. and Vitek, T. GPM: A huge success in HUD's Region IX. *Federal Home Loan Bank Board Journal*, 1980a, 14-17.

McFarlin, E.D. and Vitek, T. The HUD GPM program: An evaluation. *Mortgage Banker*, 1980b, 27-28.

Melton, W.C. Graduated payment mortgages. *Federal Reserve Bank of New York Quarterly Review*, 1980, 5, 21-28.

Peat, Marwick, and Mitchell and Company. Accounting, tax, origination and servicing implications of AMIs. In Kaplan, D.M. (Ed.), *Alternative mortgage instruments research study* (Vol.2). Washington, D.C.: Federal Home Loan Bank Board, 1977, XII-1-135.

Smith, J.D. Measuring economic strain under alternative mortgage instruments (Working Paper No. 27). Washington, D.C.: Federal Home Loan Bank Board, 1979.

Smith, J., Wiest, P. and Field, A. Demographic study of potential AMI demand. In Kaplan, D.M. (Ed.), *Alternative mortgage instruments research study* (Vol.1). Washington, D.C.: Federal Home Loan Bank Board, 1977, IV-1-39.

Swan, C. Alternative mortgage instruments and mortgage defaults. In Kaplan, D.M. (Ed.), *Alternative mortgage instruments research study* (Vol.2). Washington, D.C.: Federal Home Loan Bank Board, 1977, IX-1-35.

White

- U.S. Bureau of Census *1981 Survey of residential finance* (HC 80-5). Washington, D.C.: Author, 1983.
- U.S. Comptroller General, *New mortgages for financing homes need uniform and comprehensive safeguards* (CED-81-53). Washington, D.C.: U.S. General Accounting Office, 1981.
- U.S. Congress, House. Subcommittee of Committee on Appropriations. *Hearings on DHUD--Independent agencies appropriations for 1978*. 95th Congress, First Session, 1977.
- U.S. Congress, House. Subcommittee on Housing and Community Development. *Hearings on Housing and Community Amendments of 1979*. 96th Congress, First Session, 1979.
- U.S. Congress, Senate. Committee on Banking, Housing and Urban Affairs. *Hearings on Young Families Housing Act of 1977*. 95th Congress, First Session, 1977.
- U.S. DHUD Office of Policy and Program Development. *Interim evaluation of the graduated payment mortgage program*. Washington, D.C.: Author, 1979 (mimeo).
- Weinrobe, M.D. Analysis of consumer safeguards for AMIs. In Kaplan, D.M. (Ed) *Alternative mortgage instruments research study* (Vol.3). Washington, D.C.: 1977, XXI-1-106.