



U.S. Department of Housing and Urban Development
Office of Policy Development and Research



Evaluation of the Home Equity Conversion Mortgage Insurance Demonstration

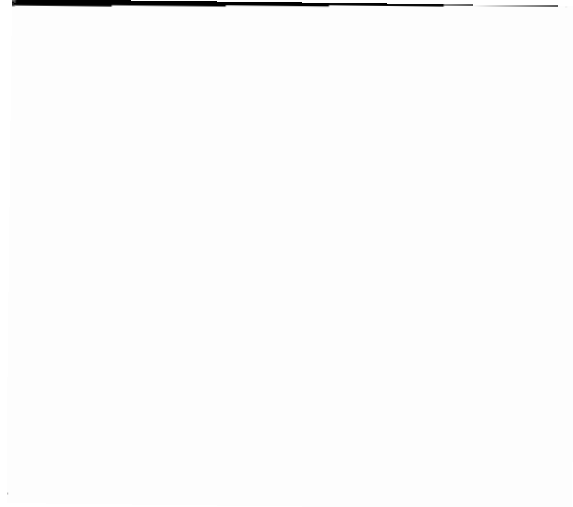
A Report to Congress

**EVALUATION OF THE
HOME EQUITY CONVERSION
MORTGAGE INSURANCE
DEMONSTRATION**

Report to Congress

Department of Housing and Urban Development
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Washington, D.C. 20410

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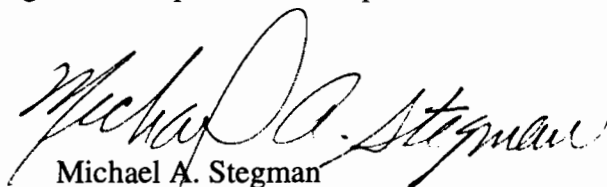


FOREWORD

For more than 60 years, the Federal Housing Administration (FHA) has fostered innovations in mortgage finance that have made homeownership affordable and accessible to a greater number of American families. This report traces the progress of the latest effort by FHA and HUD to promote the use of a promising product—the home equity conversion mortgage (HECM) or *reverse* mortgage—which can help elderly homeowners tap their greatest resource, their home equity, to maintain their homes and meet other essential needs.

This report, the second in a series of periodic evaluations of FHA's HECM Demonstration, shows encouraging progress. The HECM Demonstration was designed through a joint effort by a widely diverse group of public- and private-sector experts led by HUD's Office of Policy Development and Research. Since then, the HECM Demonstration has clearly become the catalyst that brought numerous organizations, mostly in the private sector, together in partnership to originate, service, and finance FHA-insured reverse mortgages. Less direct, but no less important, has been the role of the HECM Demonstration in stimulating the private sector to develop innovative home equity conversion products in the conventional market. Rather than stifling innovation, the Federal government's involvement in the reverse mortgage market has been a model of the way public-private partnerships can draw upon the strengths of each partner to promote new ideas and products. And, as this report shows, early indications are that all of this will come at no expense to American taxpayers.

While the early successes have been many, there is still work to be done. A concern for both conventional reverse mortgage and HECM lenders is their current limited access to capital. Fannie Mae is presently the only secondary market outlet for HECM loans, and its participation has been vital to the progress of the Demonstration. Conventional reverse mortgages are beginning to be funded by insurance companies, pension funds, and commercial banks, although their long-term involvement is uncertain. Other issues of concern are the remaining legal issues at both the Federal and state levels. Through the efforts of the American Association of Retired Persons and the American Bar Association, many legal impediments to reverse mortgages at all levels of government have already been removed. Finally, new truth-in-lending guidelines issued by the Federal Reserve Board require lenders to disclose in detail the costs to the borrower of entering into a reverse mortgage. Such disclosure will protect both consumers and this fledgling industry from those who might wish to profit at the expense of our Nation's senior citizens.



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EVALUATION OF THE HOME EQUITY CONVERSION MORTGAGE INSURANCE DEMONSTRATION

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EVALUATION OF THE HOME EQUITY CONVERSION MORTGAGE INSURANCE DEMONSTRATION

EXECUTIVE SUMMARY

This report represents the second in a series of regular biennial reports to Congress from the Department of Housing and Urban Development evaluating the Home Equity Conversion Mortgage (HECM) Insurance Demonstration in accordance with Section 255(k) of the National Housing Act, as amended by Section 417 of the Housing and Community Development Act of 1987 (P.L. 100-242). This evaluation updates a Preliminary Evaluation of the HECM Demonstration completed in December 1992.

The HECM Demonstration aims (1) to permit the conversion of home equity into liquid assets to meet the special needs of elderly homeowners, (2) to encourage and increase participation by the mortgage markets in converting home equity into liquid assets, and (3) to determine the extent of demand for home equity conversion and the types of home equity conversion mortgages that best serve the needs of elderly homeowners. The Department finds that the Demonstration has made significant progress toward achieving each of these goals, although more time will be necessary to complete this work.

Since the Department's preliminary evaluation was submitted to Congress, the volume of "reverse" mortgage loans originated under the HECM Demonstration has increased rapidly. Several factors have contributed to this increase: participants in the mortgage market have become more familiar with the instrument, many legal impediments have been resolved, and the number of qualified lenders and counselors has increased. As a result the number of loans originated has tripled in the past two years. As of mid-July 1994, a total of 7,991 loans had been closed, compared to 2,155 as of mid-August 1992. New loans are currently being closed at a rate of 300 to 400 per month.

Since the Demonstration began in 1989, there have been 550 loans which have been terminated, of which 37 percent can be specifically identified as being due to the death of the borrower, 34 percent due to the borrower moving out of the mortgaged property, and 8 percent due to a pay off in which the borrower remained in the property. The reasons for the termination of the remaining 21 percent are not known -- although the Department suspects that some of these are due to unreported deaths.

Based on the initial HECM loan termination data, it is clear that there has not been a wave of refinance activity due to the decline in interest rates during 1992 and 1993. Refinances were a driving force in the total origination volume for "forward" mortgages during this time, but not with HECM loans. The Department's HECM actuarial model had assumed HECM loan terminations would not be sensitive to interest rate changes, and the initial evidence confirms this assumption.

The HECM Demonstration has prompted the financial community of lenders, loan servicers, and secondary mortgage market investors to develop the capabilities to originate, service, and finance reverse mortgages under the program. An expansion of lender capabilities, as well as a significant extension of the availability of mandatory housing counseling, has enabled the HECM Demonstration to operate in nearly every state in the country. As of mid-July 1994 there were 74 lenders, including three state housing finance agencies, actively originating HECM loans in 46 states plus the District of Columbia and Puerto Rico. Only Alaska, North Dakota, South Dakota, and Texas have no HECM loans. There is still only one secondary market investor: over 95 percent of HECM loans ultimately are purchased by Fannie Mae for its portfolio. Securitization of HECM loans is not imminent, partly due to unfamiliar cash flow patterns, but also due to the as yet low volume of HECM originations.

While the volume of loan origination under the HECM Demonstration has been growing strongly, several private companies have also initiated their own reverse mortgage programs, and others are soon to be launched. Despite the withdrawal of some private companies from the market in the past few years, it does appear that the HECM Demonstration may have had a role in the development of the conventional reverse mortgage industry. However, the unusually high percent (45 %) of HECM loans to date involving properties with values above the FHA's Section 203(b) loan limit for the area suggests a need for the private sector to expand its participation in the higher value segment of the reverse mortgage market.

Because all reverse mortgages start with low initial loan balances that rise over the life of the loan, the total loan cost (expressed as an effective interest rate) of a reverse mortgage can be relatively high for a borrower whose loan is repaid after only a short term. To alert prospective borrowers to this high short term cost, the Department requires an explicit total loan cost disclosure as effective interest rates under 3 different assumed property appreciation rates and 3 different loan terms, including a short loan term of 2 years. Requiring lenders to disclose loan costs in this manner prior to closing informs prospective borrowers of the potentially high costs of a HECM loan if repaid early. Legislation extending similar disclosure requirements to all reverse mortgages has recently been enacted, and the Federal Reserve Board is preparing a rule to implement the provision.

With regard to legal barriers to the HECM Demonstration at the state level, the Department finds improvements since the previous evaluation, although obstacles do remain. Several states have adopted reverse mortgage enabling legislation (in many cases fashioned after the Model State Law on Reverse Mortgages developed by the American Association of Retired Persons). In some states, however, certain classes of lenders remain ineligible to originate HECM loans. Texas, with the homestead provision in its state constitution that prohibits mortgage lending except for certain specific purposes, is the only state where it is clear that no class of lender may legally originate reverse mortgages. Other state law issues may arise for the HECM Demonstration in the future as lenders attempt to enforce the mortgage with its first lien priority for all advances.

The financial and demographic characteristics of HECM borrowers as of mid-July 1994 are almost identical to those presented in the Department's preliminary evaluation, which reported data on borrowers as of mid-August 1992. Data on participants in the HECM Demonstration shows that the program appeals particularly to older borrowers with substantial equity in their residences but with little current income and few children. The median age of a HECM borrower at closing is 76. HECM borrowers tend to have more valuable houses than other elderly homeowners: the median property value for HECM borrowers to date is about \$102,000 compared to about \$70,418 for all elderly homeowners. Despite the higher property values, the median income of HECM borrowers to date is substantially less than the income of the typical elderly homeowner: less than \$10,500 per year, or 44 percent less than the median income of all elderly homeowners. HECM borrowers derive more than 78 percent of their total income from social security payments. In contrast, among the elderly population as a whole only about 38 percent of total income is derived from social security. HECM borrowers reported an average of 0.59 children, and more than three-quarters report having no children.

An important issue that is addressed for the first time in this evaluation is the adequacy of the mortgage insurance premium under the HECM Demonstration. The dollar amounts that borrowers can access under the HECM Demonstration were computed so that the present value of expected insurance claim losses would not exceed the present value of the expected amount of insurance premium to be collected. Insurance claim losses can occur for any of the following reasons: (1) the borrower remains in the residence for substantially longer than anticipated, (2) the value of the property does not appreciate as much as anticipated, or (3) interest rates rise. Any of these circumstances can result in the outstanding loan balance exceeding the property value at the time the loan becomes due and payable, resulting in a loss.

The initial evaluation of the adequacy of the premium was performed independently by an actuarial consultant. The results of the analysis indicate no reason for immediate concern regarding the Department's risk exposure under the HECM Demonstration. Specifically, the evaluation was based on all 7,473 loans that were active as of June 30, 1994 and indicates that the present value of mortgage insurance premiums collected (including premiums collected through June 30, 1994 as well as future premiums) exceeds the present value of ultimate insurance claim losses by \$6.0 million, or about \$800 per loan. This estimate does not include HUD's salaries and administrative expenses attributable to the Demonstration.

A positive net worth of this magnitude was not anticipated by the Department, because the analysis assumed a more conservative projection of 3 percent annual house price appreciation and not the 4 percent originally used to calculate the principal limit factors in 1989. The main reason for the estimated surplus given the lower appreciation is the 45 percent of loans with properties valued above the 203(b) limit. Such cases are less likely to experience a claim loss than cases with property values within the 203(b) limit because the equity in excess of the limit is not used to determine payments to borrowers, yet it is available to pay off the loan when due. If none of the cases insured had properties valued above the 203(b) limit, the Department estimates that the net worth of the HECM book of business would fall to \$50 per loan --

essentially break-even. As the conventional reverse mortgage market expands, the percentage of loans above the 203(b) limit and the large positive net worth estimate should decline.

The Department also cautions that this premium evaluation is based on assumptions and estimates that will require further confirmation by observation of future claim losses and property appreciation rates. Therefore, no changes in mortgage insurance premium, or program design are necessary at this time due to excessive risk exposure for the Department.

CHAPTER 1

HOME EQUITY CONVERSION MORTGAGES:

BACKGROUND AND PROGRAM BASICS

The Home Equity Conversion Mortgage (HECM) Insurance Demonstration (also known as the FHA *reverse* mortgage program) was created by Congress in 1987 to accomplish three objectives: (1) to permit the conversion of home equity into liquid assets to meet the special needs of elderly homeowners; (2) to encourage and increase participation by the mortgage markets in converting home equity into liquid assets; and (3) to determine the extent of demand for home equity conversion and the types of home equity conversion mortgages that best serve the needs of elderly homeowners. The principal objective of the Demonstration is to enable homeowners ages 62 and older to convert home equity into cash while they continue to live in their homes -- cash that can help elderly Americans to meet housing, health care, and basic living expenses.

The HECM Demonstration was designed by the Department in consultation with other Federal Agencies as well as with several other organizations and individuals with appropriate expertise. This design effort has been recognized as innovative by the financial community,¹ and continues a long tradition of innovation at HUD and FHA, extending back to the 1930s with FHA's pioneering development of the first government-backed home mortgage insurance program and the self-amortizing, low-downpayment, long-term mortgage loan.

¹ "The Roles of FHA and HUD in the 1990's," Secondary Mortgage Markets, Spring 1990.

The HECM Demonstration provides mortgage insurance for reverse mortgage loans originated by FHA-approved lenders. In general, reverse mortgages allow homeowners to borrow against the value of the equity they have built up in their homes. Unlike a traditional or "forward" mortgage, reverse mortgages provide for payments *from* the lender *to* the borrower. This means that the amount of debt secured by a reverse mortgage rises over time as payments are received and interest is accrued. The loan is repayable with interest in a lump sum when the owners sell the house, move permanently, or die. Lenders are repaid out of proceeds from the sale of the property, with any proceeds in excess of the amount needed to pay off the mortgage going to the borrowers or their estate. FHA insurance compensates lenders in the event that sales proceeds are not sufficient to meet the outstanding mortgage balance, and guarantees borrowers that loan payments will continue should the lender default.

Congress originally authorized HUD to insure 2,500 reverse mortgages through September 1991. The Department selected 50 FHA-approved lenders by lottery and gave them each a reservation of insurance authority to originate 50 reverse mortgages. However, in 1990 Congress amended the program in order to extend the Demonstration through 1995 and to expand insurance authority to cover 25,000 reverse mortgages. At the same time, the Department decided to permit the participation of any FHA-approved lender.

As of July 19, 1994, 7,991 home equity conversion mortgages had closed through the Demonstration, more than three times the number closed as of mid-August 1992 when the Department conducted its initial evaluation of the program. Loans have been made in 46 states

plus the District of Columbia and Puerto Rico, with most borrowers ranging in age from 71 to 81 and having properties valued between \$73,000 and \$145,000.

While the initial startup was relatively slow, program activity has accelerated since 1990. In 1993, the total number of HECM loans originated grew by 70 percent over 1992 loan volume, and in the first 6 months of 1994 loan volume has grown by an additional 34 percent. This rapid growth most likely reflects a growing familiarity and acceptance of FHA reverse mortgages among lenders and borrowers alike.

This report presents the Department's second biennial evaluation of the HECM Demonstration, based on analysis of available data from a sample of 1,866 HECM loans originated to date as well as on interviews with individuals involved with the design or implementation of the Demonstration. The report includes several comparisons to the Department's initial evaluation of the HECM Demonstration, conducted in mid-August 1992.² The statute authorizing the HECM Demonstration explicitly identified several issues that should be addressed in each biennial evaluation. These specific issues are summarized below, along with a brief description of the parts of this report in which each issue is addressed.

- Design and implementation of the Demonstration. Section 1.2 presents an overview of the design and implementation of the HECM Demonstration. Specific issues concerning program design and implementation are discussed in the following chapters, as described below.
- Number and types of reverse mortgages written to date. As mentioned, 7,991 reverse mortgages had closed under the HECM Demonstration as of mid-July

² Department of Housing and Urban Development, "Preliminary Evaluation of the Home Equity Conversion Mortgage Insurance Demonstration: Report to Congress," December 30, 1992.

1994. Exhibit 2-5 summarizes the types of loans originated, and Section 2.3.1 discusses the types of reverse mortgage loans.

- Profile of participant homeowner-borrowers, including incomes, home equity, and regional distribution. Chapter 2 presents a detailed discussion of the characteristics of borrowers participating in the HECM Demonstration. Section 2.1.2 focuses on incomes, Section 2.2.1 focuses on property values, and Section 2.2.2 focuses on initial equity as a percent of property value. The geographic distribution of reverse mortgages originated to date is presented in Exhibit 5-1.
- Problems encountered in implementation, including impediments associated with State or Federal laws or regulations governing taxes, insurance, securities, public benefits, banking, and any other problems in implementation. Chapter 5 presents a detailed discussion of legal barriers to the expansion of the HECM Demonstration, including State and Federal laws and regulations. Other problems encountered in implementation are described in Section 3.3 (focusing on lenders) and Chapter 4 (focusing on mandatory housing counseling).
- Types of mortgages appropriate for inclusion in the Demonstration. As Section 2.3.1 explains, all five of the payment options currently offered under the HECM Demonstration have been selected by significant numbers of borrowers to date. It is not possible to conduct a more detailed analysis of the types of mortgages appropriate for inclusion in the program until further data has been gathered directly from participating borrowers as well as from non-participating but eligible elderly homeowners.
- Changes in the Demonstration, or in other Federal regulatory provisions, determined to be appropriate. No design changes need to be made at this time to limit the Department's risk exposure as discussed in Chapter 6. Minor design changes, such as the extension of property eligibility to 2-4 unit buildings and restrictions on the reborrowing of amounts prepaid by the borrower to avoid the unnecessary disclosure requirements for open end credit are discussed in Sections 3.2 and 5.1, respectively.
- Risk created under HECM loans to mortgagors and mortgagees or to the Demonstration itself, and whether the risk is adequately covered by the premiums. Section 1.3 discusses the risk to borrowers, lenders, and the Federal government under the HECM Demonstration. As of June 30, 1994, 550 loans had become due and were paid off, and two loans had been assigned to HUD. Based on this limited number of payoffs and projections of future payoffs based on current activity and borrower characteristics, the adequacy of the mortgage insurance premium is assessed in Chapter 6.
- Whether the Demonstration has improved the financial situation or otherwise met the special needs of participating elderly homeowners. This issue cannot be addressed until further data is collected directly from participating borrowers.

- Whether the Demonstration has included appropriate safeguards for mortgagors to offset the special risks of reverse mortgages. Section 1.3 discusses the risk protection provisions of the HECM Demonstration, and Section 5.1 discusses the required disclosure of the total loan costs to the borrower.
- Whether home equity conversion mortgages have a potential for acceptance in the mortgage markets. Section 3.2 discusses the private reverse mortgage products now being offered by lenders and the relationship of these products to the HECM Demonstration. Section 3.3 describes the importance of the secondary market for reverse mortgages. As noted, loan origination activity under the HECM Demonstration has accelerated significantly in the past three years, and this growth can be attributed in part to the willingness of the Federal National Mortgage Association (Fannie Mae) to purchase adjustable-rate HECM loans on the secondary market. The Federal Home Loan Mortgage Corporation (Freddie Mac) had also expressed a willingness to purchase HECM loans, but to date has not done so.

The statute also specified that the Department should include in each biennial evaluation comments and recommendations solicited from the following individuals and organizations:

- Board of Governors of the Federal Reserve System
- Secretary of Health and Human Services
- Federal Council on Aging
- Federal Home Loan Bank Board
- Comptroller of the Currency
- National Credit Union Administration Board

Each of these individuals and organizations was contacted concerning the issues identified above, and their comments and recommendations have been incorporated into this report. The report is also informed by discussions with participating lenders and HUD-approved housing counselors, as well as representatives of Fannie Mae, the American Association of Retired

Persons (AARP), the National Center for Home Equity Conversion, and others involved with the Demonstration. The observations and perceptions of these participants are valuable contributions to a thorough assessment of the Demonstration and its progress.

The balance of this chapter reviews the origins of the HECM Demonstration and explains the chief features of HECM loans. Chapter 2 summarizes HECM activity to date, including a profile of borrowers, properties, and loan terms. Chapter 3 reports on the participation of the financial community in the Demonstration. Mandatory counseling requirements and efforts to increase the availability of counseling are discussed in Chapter 4. Chapter 5 examines current legal and regulatory impediments to HECM acceptance. The report concludes in Chapter 6 with an initial evaluation of loan terminations and the adequacy of the mortgage insurance premium.

1.1 Program Origins

The HECM Demonstration represents "the first federal endorsement of home equity conversion as a serious housing option for the elderly."³ The HECM Demonstration is designed to meet the needs of elderly homeowners who are house-rich but cash-poor. According to the 1991 American Housing Survey, this description fits approximately 3.5 million elderly homeowners whose incomes are below \$15,000 and whose homes are valued at more than \$50,000. In the past, such homeowners typically had to sell their homes in order to realize accumulated home equity. Although home equity loans are widely available, these loans are essentially second mortgages that require monthly repayment. Low-income elderly households

³ Fairbanks, Joan E. "Home Equity Conversion Programs: A Housing Option for the 'House-Rich, Cash-Poor' Elderly," Clearinghouse Review 23 (Special Issue 1989), National Clearinghouse for Legal Services, Inc.

seldom have the income required to qualify for such a loan, and the risks of foreclosure often make these loans unattractive to them.

In contrast, most reverse mortgages (including both private- and public-sector reverse mortgages not insured by FHA) and other home equity conversion plans are secured only against the value of the home. Reverse mortgages to tap home equity have been evolving for several decades, mostly through loan plans offered by state and local agencies and a few pioneering private lenders. With a reverse mortgage, borrowers can draw down their home equity either in a lump sum or in regular installments. The amount that can be paid out varies according to the value of the home, the interest rate, and the particular loan terms. Most reverse mortgages do not require the loan to be repaid until the borrower moves permanently, sells the home, or dies. The balance is due with interest. Interest is charged to the loan balance each month, so that the total amount of interest owed by the borrower increases as interest compounds. This presents the possibility that the amount of the debt can increase beyond the value of the home.

In the absence of mortgage insurance, the private lending community overall has been reluctant to take on this and other risks associated with reverse mortgages. Those lenders who have offered plans have usually tried to reduce their risks by offering a fixed-term product that requires the homeowner to repay the loan at a prescribed date. FHA reverse mortgage insurance is designed both to protect lenders against this risk and to permit elderly homeowners to remain in their homes for as long as they desire and are able to do so. By making reverse mortgage insurance available to lenders nationwide, the Demonstration attempts to encourage the origination and servicing of reverse mortgages.

The Office of Economic Affairs in the Department's Office of Policy Development & Research (PD&R) assumed lead responsibility for developing the HECM Demonstration. Starting in early 1988, staff from this office worked closely with staff from the Office of Housing and the Office of General Counsel to identify key design issues and to determine the type of reverse mortgages to be insured through the Demonstration. HUD staff also consulted with other Federal agencies, private lenders and mortgage market participants, home equity conversion experts, and representatives of the elderly. These efforts resulted in a draft proposed rule by October 1988, the selection of the pilot lenders by February 1989, and the issuance of a final rule in June 1989. The first HECM loan closed in October 1989.

1.2 Program Design

Reverse mortgages available under the HECM Demonstration offer borrowers the broadest array of choices currently available in a home equity conversion plan. The FHA reverse mortgage permits borrowers to choose from several payment plans and to change payment plans at any time. Borrowers can elect

- a term plan that provides for regular payments over a specified period of time (at the end of which payments stop but the borrower can remain in the home indefinitely);
- a tenure plan that provides level monthly payments for as long as the borrower occupies the property as a principal residence; or

- a line of credit plan that allows borrowers to make draws at the times and in the amount of the borrower's choosing.

In addition, borrowers may choose to preserve a portion of their equity as a line of credit while they receive term or tenure payments. The Demonstration permits maximum flexibility. A borrower may receive a lump sum draw at closing to pay off an existing mortgage, to pay off a contractor's lien for repairs, or for other purposes. In addition, a borrower may combine a tenure or term mortgage with a line of credit or restructure payments to accommodate changes in his or her circumstances.⁴

Although the HECM Demonstration provides borrowers with the flexibility to adapt the payment stream to their changing financial circumstances, this innovation also presents some difficulties. Experience to date with the Demonstration suggests that while a single reverse mortgage with multiple payment options (as with HECM) may be conceptually simple, implementation has not been easy because the flexibility of the program tends to complicate origination and servicing.⁵ For example, because borrowers are allowed to prepay the mortgage balance in part and then to re-borrow the amount prepaid, lenders are required to comply with open-end credit disclosure requirements imposed by the Federal Reserve Board, which are new

⁴ The flexibility afforded by a HECM loan is possible because the expected value of payments under each option has the same present value at closing; this means that the options differ from each other only in the timing of payments.

⁵ Mortgage servicers -- which may be the lender or a separate company operating under a servicing agreement -- perform several functions, including making scheduled or unscheduled payments to borrowers; processing changes in payment options or requests for line-of-credit advances; making payments for mortgage insurance, taxes, hazard insurance, or other items necessary to maintain the security interest of the lender; accepting prepayments from the borrower; and preparing financial reports for the borrower and for the owner of the mortgage.

and unfamiliar to the majority of lenders. Furthermore, because borrowers may establish lines of credit instead of or in addition to scheduled monthly payments, mortgage servicers must also respond to borrowers' unscheduled requests for payment as well as regular disbursements. These features, along with borrowers' ability to change payment plans at any time, have complicated the servicing of these mortgages.

1.2.1 Eligible Borrowers

Any homeowner 62 years of age or older may qualify for a HECM loan provided that he or she owns a home free and clear (or can subordinate existing liens at closing) and occupies the property as a principal residence. A qualified homeowner whose spouse temporarily or permanently resides in an institution continues to be eligible for a reverse mortgage so long as the homeowner continues to use the house as his or her principal residence. Lenders issuing FHA reverse mortgages are required to certify annually that the home is the principal residence of at least one borrower.

Because reverse mortgages are secured only by the property and not by the borrower's credit worthiness, borrower underwriting is minimal. It is presumed that many borrowers are interested in obtaining a HECM loan to pay off other debts. However, the Department requires a credit check to assure that borrowers do not have any delinquent Federal debt that cannot be cleared from mortgage proceeds. Unlike a forward FHA mortgage, the Department has no income requirements under the HECM Demonstration. Since payments are made from the lender to the borrower, the borrower's ability to support the mortgage is not an issue.

1.2.2 Mandatory Counseling

The law establishing the HECM Demonstration requires potential borrowers to receive counseling from an approved third party independent of the lender. The focus of the counseling is to provide borrowers with an explanation of reverse mortgages and their alternatives, and to assure that borrowers understand fully the impact of this financial decision upon their current living situation and estate. Counseling is provided through a network of comprehensive counseling agencies and area agencies on aging that have been approved by the Department for HECM counseling.

1.2.3 Eligible Properties

The property occupied by the borrower must be a one-family dwelling that meets HUD's minimum property standards.⁶ Repairs needed to bring a home up to this standard may be financed from mortgage proceeds before or after closing in accordance with program rules.

Repairs that are expected to cost less than 15 percent of the adjusted property value⁷ may be made after closing and are subject to inspection. Repairs that are estimated to exceed 15 percent may be performed under a contractor's lien, which is then paid off at closing. Whether

⁶ In 1994 the Department proposed legislation to extend the eligibility of the HECM Demonstration to properties with two-to four-family dwellings provided an otherwise eligible borrower occupies one of the units.

⁷ Adjusted property value, also called "maximum claim amount," is defined as the lesser of the appraised property value or the FHA Section 203(b) limit for the local area.

repairs are made before or after loan closing, the reverse mortgage program can function as a deferred payment rehabilitation loan program.

Cooperative housing is currently ineligible under the Demonstration. The exclusion of cooperative housing reflects the Department's belief that the newness of reverse mortgages, together with HUD Field Offices' limited experience in dealing with cooperatives, would result in significant processing delays. A condominium unit may be an eligible property under the Demonstration provided that the unit is located in a HUD-approved condominium project. HUD approval depends upon factors such as the project's legal structure, management, and percentage of owner-occupancy.

1.2.4 Calculation of Payments to Borrowers

Payments to borrowers are based upon the age of the youngest borrower, the mortgage interest rate, and the adjusted property value. The *adjusted property value* (or "maximum claim amount") is the lesser of the appraised value of the property or the maximum mortgage on a one-unit residence as established for the FHA Section 203(b) program.⁸ The adjusted property value limits the loan proceeds that can be received by a HECM borrower whose property value exceeds this amount.

⁸ Under the HUD Appropriations Act of 1994, the maximum mortgage limit for a one-unit residence under the FHA Section 203(b) program was increased to \$152,362. While most areas have mortgage limits of less than this figure, some high-cost areas have mortgage limits as high as \$152,362. In addition, the base limit was raised to \$77,197. Both limits are now indexed for inflation. The base limit is 38 percent of the Fannie Mae and Freddie Mac conforming loan limit; the ceiling is 75 percent of the conforming loan limit.

Payments are calculated using a *principal limit factor*, which may be regarded as a limit on the initial loan-to-value ratio.⁹ There is a unique principal limit factor for each combination of the borrower's age and an interest rate. For example, the principal limit factor corresponding to a 75-year-old borrower with a 10 percent interest rate is 0.416. The principal limit factor measures the percentage of the adjusted property value that is available to the borrower on the first day that a mortgage is in effect (41.6 percent in this case). Principal limit factors are generated by a payments model that contains assumptions about the longevity of the borrower and the appreciation of the property. The principal limit factors are used to calculate payment streams under the tenure, term, and line-of-credit options.

1.2.5 Interest Rates

A HECM loan may bear interest at either a fixed or an adjustable rate. To date, however, very few fixed-rate HECM loans have been issued.¹⁰ Adjustable rate mortgages require the use of a fixed interest proxy, called the *expected average mortgage interest rate*, to determine both the initial principal limit and the compounding rate used to project future values of the principal limit. The expected average rate is fixed at the time of loan origination. It is generally higher than the initial adjustable rate, just as long-term rates are usually higher than

⁹ The principal limit factor is calculated to be the highest initial loan-to-value ratio for which the premium collected will cover all the Department's expected costs resulting from mortgage insurance claims. For a technical discussion of principal limit factors, see the Department's Interim Report to Congress, October 1990; also Edward J. Szymanoski, Jr., "Risk and the Home Equity Conversion Mortgage", *Journal of the American Real Estate and Urban Economics Association*, Vol. 22, No. 2, 1994.

¹⁰ As noted in Chapter 3 of this report, Fannie Mae will not purchase fixed-rate loans originated under the HECM Demonstration. As a practical consideration, this policy has almost eliminated the fixed-rate option because Fannie Mae is the most active purchaser of HECM loans. As of June 30, 1994, out of the 7,991 HECM loans originated, 89 fixed rate loans had been originated by two lenders.

short-term rates. The use of this rate results in a lower initial principal limit and, consequently, lower payments than if the initial adjustable rate were used. This adjustment maintains the actuarial soundness of an adjustable rate mortgage.

1.3 Risk Protection

Reverse mortgages carry certain risks. Uninsured public and private sector programs existing prior to the advent of the HECM Demonstration pursued a number of risk-reduction strategies, but most failed to provide sufficient comfort for lenders and borrowers alike. While the design of certain program elements contributes to risk reduction, mortgage insurance offers the primary means for reducing risks under the HECM Demonstration.

1.3.1 Borrower Protection

Regardless of the HECM payment option selected, an elderly homeowner cannot be forced to sell his or her home to pay off or subordinate the mortgage, even if the principal balance grows to exceed the value of the property. When the borrower does move or die and the property is sold, the borrower's liability will be limited to the value of the home. In addition, the borrower is protected if the lender fails to make the required payments under the mortgage. The Department will step in to make the payments to the borrower, and the

defaulting lender must either resume making payments or assign the mortgage to HUD within 30 days.¹¹

Under HECM, the borrower must pay an FHA mortgage insurance premium (MIP) to insure lenders against loss in the event that sales proceeds are not sufficient to pay off the mortgage. The insurance premium consists of two parts, both of which may be financed: (1) an up-front premium of two percent of the adjusted property value,¹² and (2) a monthly premium of one-twelfth of the annual rate of one-half percent of the outstanding principal balance, which accrues to the outstanding balance.

In addition, the HECM Demonstration offers a shared appreciation option, although no shared appreciation HECM loans have been originated as of mid-July, 1994, and none are expected to be originated in the immediate future. Under this option, the lender may claim up to 25 percent of the increase in the house value, upon sale, relative to its value at origination.¹³ In return for sharing appreciation with the lender, the borrower would be given a lower interest rate on the note at origination, which would provide higher payments and preserve equity. The lack of interest in this option is due in part to recent market conditions which make shared

¹¹ If the lender resumes payments, the lender must reimburse HUD, with interest, for all payments that HUD made to or on behalf of the borrower. If the lender does not resume payments and fails to assign the mortgage to HUD within 30 days, then the insurance contract is terminated. In this case the lender forfeits any interest that has accrued, as well as future interest, and the lender will be reimbursed only for payments made to or on behalf of the borrower, and only after the mortgage becomes due and payable.

¹² The "adjusted property value" is also called the "maximum claim amount."

¹³ The lender's share of house value appreciation is subject to the restriction that the lender realize an effective interest rate of no more than 20 percent, where the effective interest rate is computed as the average interest rate of the HECM loan during the 12 months preceding sale of the house, plus the lender's share in the appreciation of the property value over the life of the loan.

appreciation less attractive -- specifically, relatively low interest rates and low property appreciation rates. It is also due in part to Fannie Mae's decision not to purchase HECM loans with shared appreciation. Unless market conditions change, the added complexity of the shared appreciation option is not likely to be viewed favorably by borrowers or lenders.

1.3.2 Lenders' Insurance Options

The mortgage insurance premium was estimated by the Department to cover all losses, whether these losses are borne by FHA or private lenders. At the time that a mortgage is closed, a lender can choose one of two insurance options: the *assignment option* or the *shared premium option*.¹⁴ Under the assignment option, FHA collects all of the MIP. The lender has the option of assigning a mortgage to FHA at the time that the mortgage balance, including accrued interest and MIP, equals 98 percent of the maximum claim amount. Following assignment of the mortgage, the lender files an insurance claim for an amount equal to the mortgage balance and has no further obligations under the mortgage. The Department will continue to make any payments that are owed the borrower and will accept full responsibility in the event of loss.

Under the shared premium option, the lender forgoes assignment of a mortgage to FHA and retains a portion of the periodic MIP to compensate for the assumption of additional risk. At the time that the mortgage is due and payable, FHA will pay the lender the difference

¹⁴ As explained in Chapter 3, Fannie Mae will not purchase HECM loans unless lenders have selected the assignment option. As a practical consideration, this requirement almost eliminates the shared premium option because Fannie Mae has purchased most HECM loans originated to date.

between the mortgage balance and the sales proceeds up to the maximum claim amount. The lender is liable for losses that exceed the maximum claim amount, and the lender's share of the periodic MIP has been calculated to equal the expected value of these losses. However, as discussed more fully in Chapter 3, the shared premium option has not been used to date, in large part because such loans cannot be sold to the secondary market.

1.3.3 Special Considerations for the Federal Government

As the insurer of home equity conversion loans, the Department faces two basic kinds of risk. *Diversifiable risks* are those that are independent and related to characteristics of a particular loan. *Fundamental risks* are interdependent, such as the risk of a national economic recession. As implied in the name, diversifiable risk can be reduced through insurance pooling. By pooling a large number of reverse mortgages from many different regions of the country, the Department can reduce the risk of loss arising because an individual house does not maintain its value, or because an individual borrower lives beyond the life expectancies assumed under the Demonstration, or even because a region experiences an economic downturn.

Although fundamental risk cannot be reduced through diversification, the HECM Demonstration is not likely to suffer significant losses from a short-term recession in house prices. Loan-to-value ratios in the HECM Demonstration remain low for many years, compared to conventional forward mortgages, and loan balances -- including interest charges, monthly disbursements, and other charges -- rise only gradually over time. Fundamental risk in the HECM Demonstration therefore depends on long-term rather than short-term house price

appreciation rates. The long-run expected annual appreciation rate of four percent that is assumed in the program also assumes a 10 percent annual standard deviation. This allows the program to withstand considerable regional variation from the long-run average as well.

Overall, the HECM Demonstration has been designed to break even. It is not intended to be a subsidy program. The data generated by the Demonstration will be used to refine program policies and the assumptions used in the payments model, so that the program will pay for itself in the long run.

CHAPTER 2

HECM ACTIVITY TO DATE

Although reverse mortgages are available to all single-family homeowners over age 62, analysis of borrowers participating in the HECM Demonstration to date suggests that these mortgages appeal primarily to certain well-defined groups of potential borrowers. This chapter reviews HECM activity to date, focusing upon the characteristics of HECM participants and the program design elements that appear to be most attractive to potential borrowers. An understanding of the factors that influence a prospective borrower's decision whether or not to participate in the HECM Demonstration can be a valuable tool in amending the program design elements, if necessary, to meet the needs of eligible elderly homeowners.

The analysis for this report is based on a sample of 1,866 HECM loans drawn from a data base compiled by QSoft, Incorporated under contract with the Department. The QSoft data base is largely a subset of the Computerized Housing Underwriting Management System (CHUMS) maintained by the Department, which includes information on reverse mortgage loans that had been endorsed as of the end of June 1994. The QSoft database generally includes loans originated earlier in the HECM Demonstration. Some parts of the analysis are based on a separate data base of all individual transactions (including disbursements, charges, repayments, and plan changes), maintained by Computer Data Systems, Inc. (CDSI) under contract with the

Department. The CDSI data base includes all loans that had obtained firm commitment as of mid-July 1994, including several that had not yet closed or been endorsed.¹⁵

2.1 Borrower Characteristics

The HECM Demonstration is expected to appeal primarily to elderly homeowners who are house-rich but cash-poor -- that is, who have a substantial amount of equity in their home but who have relatively low current incomes. It can be expected, then, that HECM borrowers will have lower incomes and higher house values than the general population of elderly homeowners. Beyond this general rule, the specific design elements of any self-selecting program suggest that there may be significant differences between the characteristics of participants and the characteristics of those who choose not to participate. The differences observed in the HECM Demonstration to date are shown in Exhibit 2-1, which compares several characteristics of HECM borrowers to similar data for all elderly homeowners. This section summarizes the differences between HECM borrowers and the broader population of elderly homeowners, and identifies the program design elements that may be related to their decision whether or not to participate in the program.

¹⁵ Disbursements and other transactions can occur before a loan has been endorsed, but not before the loan has closed. The CDSI data base, then, has transactions data for all loans that have closed, plus non-transactions data for loans that have obtained firm commitment but have not yet closed.

EXHIBIT 2-1: Characteristics of HECM Borrowers and All Elderly Homeowners

	HECM Borrowers ¹	Elderly Homeowners ²
Median Age	76.0 years	73 years
Median Income:		
Total Annual Income	\$10,368	\$18,446
Social Security Income	\$8,126	\$ 7,009 ³
Average Number of Children	0.59	na
Sex/Household Composition:		
Female Living Alone	59.5%	28.6%
Male Living Alone	12.4%	7.7%
Living With Others	28.1%	63.7%
Race:		
White	92.7%	89.1%
Black	5.9%	7.4%
Hispanic	0.8%	2.5%
Other	0.6%	1.0%

¹ Data from HECM application materials as of date of application.

² Data from 1991 American Housing Survey.

³ Estimated using figures from Susan Grad, "Income of the Population 55 or Over, 1990," Office of Research and Statistics, U.S. Social Security Administration (April 1992).

2.1.1 Age

Borrowers must be at least 62 years old to qualify for a reverse mortgage under the HECM Demonstration. While there have been a few borrowers in their early 60s, Exhibit 2-1 shows that the median age of HECM borrowers to date has been 76.0 years. In fact, most of the HECM borrowers to date have been between 71 and 81 years old, with 5 percent of

median age of all elderly homeowners is 73 years, suggesting that participants in the HECM Demonstration tend to be somewhat older than non-participants.¹⁶

The prevalence of older borrowers is not surprising because the amount of money available to older borrowers can be substantially greater than the amount available to borrowers only slightly older than the minimum age. Specifically, for a given interest rate the principal limit factor, which represents the share of property value available to borrowers for either monthly payments or line-of-credit disbursements, depends on two factors: the adjusted property value (also called the "maximum claim amount," defined as the lesser of the property value or the local FHA 203(b) loan limit) and the age of the borrower. Because older borrowers have shorter remaining life expectancies than younger borrowers, the principal limit increases with the age of the borrower to equalize expected payments over the life of the loan. Thus the Demonstration can be expected to appeal most strongly to older prospective borrowers because maximum monthly payments and credit limits are generally larger.

As an illustration, the maximum monthly payment and maximum line of credit (principal limit) available to a typical borrower at different ages are shown in Exhibit 2-2. This exhibit presents figures computed for a borrower with the median property value (\$102,000) and the median expected interest rate (8.52%) at four different ages:

¹⁶ In fact, the American Housing Survey identifies "elderly homeowners" as those at least 65 years old. If there were no relationship between borrower age and HECM participation, then, the median age of HECM participants would be expected to be less than the median age of all elderly homeowners, since HECM participants include some who are less than 65 years old.

**EXHIBIT 2-2: Maximum Monthly Payment or Line of Credit
Available to Typical HECM Borrowers at Different Ages**

	Lower Quartile 71.5 years	Median 76.0 years	Upper Quartile 81.2 years	Elderly Homeowners 73 years
Maximum Monthly Payment	\$289	\$367	\$471	\$317
Maximum Line of Credit (Principal Limit)	\$35,883	\$43,470	\$51,645	\$38,788

- the lower quartile of the age distribution of HECM borrowers (71.5 years), which means that one-fourth of all HECM borrowers to date were younger than that age at the time of their application, and three-fourths were older;
- the median age of HECM borrowers (76.0 years);
- the upper quartile of the age distribution of HECM borrowers (81.2 years), which means that one-fourth of all borrowers were older, and three-fourths were younger; and
- the median age of all elderly homeowners (73 years).

As shown in the chart, the monthly payment or line of credit available to younger participants in the HECM Demonstration can be substantially less than the amounts available to older participants. For example, a borrower aged 71.5 years with a typical property value and expected interest rate can receive monthly payments of \$289 or a line of credit of \$35,883 at the start of their loan. In comparison, an otherwise identical borrower aged 81.2 years can receive monthly payments of \$471 (about 63 percent higher) or a line of credit of \$51,645 (about 44 percent higher). It is not surprising, then, that HECM borrowers tend to be older than non-participating elderly homeowners.

There are other factors, as well, that explain the tendency for HECM borrowers to be older than the general population of elderly homeowners. For example, older eligible homeowners (that is, those in their late 70s, 80s, or 90s) are likely to have less current income than younger eligible homeowners (those in their 60s or early 70s). Older eligible homeowners are also likely to have greater medical expenses, and are more likely to require costly home services or remodeling to remain in their homes.

2.1.2 Income

While there are no income criteria determining eligibility for the HECM Demonstration, the program is expected to appeal primarily to elderly homeowners with limited current income. As Exhibit 2-1 shows, most of the participants in the HECM Demonstration have relatively low incomes: the median total annual income reported by HECM borrowers to date was just \$10,368. In fact, a quarter of all HECM borrowers had annual incomes of less than \$7,700, while fewer than ten percent of all HECM borrowers reported incomes greater than \$20,000. In contrast, according to the American Housing Survey, in 1989 the median income for households headed by a householder at least 65 years old was \$18,446.

As expected, most of the borrowers under the HECM Demonstration reported that social security payments accounted for most of their total annual income. As Exhibit 2-1 shows, the median HECM borrower reported social security income of \$8,126. Half of the borrowers to date derived more than 95 percent of their total income from social security, and three-quarters depended on social security for more than 66 percent of their total income. In contrast, among

the general population aged 65 years or older, only about 36 percent of total income is derived from social security. Even among the elderly with annual incomes below the poverty line, social security accounted for only about 79 percent of total income on average.¹⁷

2.1.3 Number of Children

Reverse mortgages are likely to appeal most strongly to older homeowners without children, for two reasons. First, homeowners with children may be able to rely on assistance from their children to supplement their current income, while those without children may have no other resources to meet their living expenses. Second, homeowners with children may want to protect their equity in order to leave a more valuable bequest to their children at their death, while homeowners without children may have no desire to protect their legacy. This line of thought is consistent with HECM loan experience to date. As shown in Exhibit 2-1, the average number of children reported by HECM borrowers is only 0.59, and more than three-quarters of the borrowers reported having no children.¹⁸ (Comparable data for all elderly homeowners are not available.)

¹⁷ U.S. Bureau of the Census, unpublished data from March 1990 Current Population Survey, cited in U.S. Senate Special Committee on Aging et al., "Aging America: Trends and Projections, 1991 Edition."

¹⁸ The data reported on children is not required, and it is not known if some borrowers misunderstand the question and report only *dependent* children. This could result in underreporting.

2.1.4 Sex/Household Composition

The perception of lenders, counselors, and others involved in the implementation of the HECM Demonstration has been that borrowers are most commonly elderly women living alone. This perception is confirmed by the data. In fact, as Exhibit 2-1 shows, almost three-fifths of all HECM borrowers to date are women living alone. About 28 percent of borrowers are pairs (mostly male/female couples), while only about 12 percent are men living alone. In contrast, among the general population aged 65 years or older, almost 64 percent of all elderly live with their spouse or another person. Only about 29 percent of elderly households are women living alone and only about 8 percent are men living alone.

As noted in the Department's earlier evaluation of the HECM program, the actual distribution of HECM borrowers by sex is very close to the distribution predicted in the design of the program. Specifically, as explained in the interim report to Congress, the HECM payments model uses the female general population mortality table for all borrowers, including co-borrowers, because single females are expected to comprise the majority of borrowers. Couples should be the next largest group, followed by single males. The interim report cited a study of existing reverse mortgage programs¹⁹ estimating the average distribution to be "63 percent single females, 12 percent single males, and 25 percent married couples."

¹⁹ Maurice Weinrobe, "Marketing Home Equity Conversion -- Who Are the Users?" Faculty Briefing Paper presented at AARP Conference: Innovation in Home Equity Conversion: Toward the 1990's, Washington, 1988.

The ratio of women living alone to men living alone among HECM borrowers to date (almost 5 to 1) is somewhat higher than the equivalent ratio among the elderly population as a whole (about 3 to 1), according to the American Housing Survey in 1991. Both patterns reflect the fact that elderly women are much more likely than elderly men to live alone. These patterns arise partly as a result of differences in life expectancy -- women tend to live about seven years longer than men, so married men often die before their wives do -- and partly because elderly men are more likely to remarry than are elderly women after they have been widowed or divorced.

2.1.5 Race

As Exhibit 2-1 shows, approximately 93 percent of HECM borrowers to date have been white and almost 6 percent have been African American, with other minorities accounting for only about one percent of HECM borrowers. In comparison, in 1991 about 89 percent of all elderly homeowners were white, about seven percent were African American, and close to 4 percent were from other minorities. At the time of the Department's initial evaluation of the HECM Demonstration in mid-August 1992, close to 96 percent of HECM borrowers were white, about 3 percent were African American, and there was only one hispanic borrower. (Race was not recorded for one percent of borrowers.) The updated data suggest that the distribution of HECM borrowers by race now more closely approximates the distribution of elderly homeowners in the population as a whole. It is possible that this shift (although still slight) in the racial composition of HECM borrowers may indicate that the program is being marketed more effectively among non-white elderly homeowners than it was prior to the

Department's initial evaluation. Alternatively, it is possible that non-white potential borrowers are receiving different housing counseling than they were previously regarding the HECM program. Moreover, lenders may have become more active in providing loans and other services in minority communities.

Although the racial distribution of HECM borrowers appears to be converging toward the distribution of elderly homeowners as a whole, it is possible that elderly minority homeowners may continue to be underrepresented among HECM borrowers even in the absence of differences in marketing, counseling, or lending patterns. For example, according to the American Housing Survey, the median value of properties owned by elderly black homeowners in 1991 was just \$46,550, substantially less than the median value for elderly homeowners of all races (\$70,418). This lower property value is reflected in a lower principal limit under the HECM Demonstration, which means that most African American reverse mortgage borrowers would have lower monthly payments and a lower initial line of credit than most white borrowers would have. Most elderly African American homeowners also had less owner's equity in their properties -- only about 91 percent in 1991, compared to a median of 96 percent for all elderly homeowners, according to the AHS -- which means that African American homeowners generally would have less available under the HECM Demonstration, in the form of monthly payments or a line of credit, after their existing liens had been cleared. Since these factors suggest that many African American borrowers would realize less financial benefit from participating in the HECM Demonstration, it is possible that they would participate in the HECM Demonstration at lower rates than white elderly homeowners.

2.2 Property Characteristics

As noted, the HECM Demonstration is expected to appeal to elderly homeowners who have substantial equity in their property but who have relatively low current incomes available to meet ordinary or extraordinary living expenses. On the other hand, the constraint on HECM proceeds represented by the FHA 203(b) loan limits implies that the HECM Demonstration will not appeal as strongly to homeowners with properties valued at substantially more than the loan limit for their area (particularly to the extent that private reverse mortgages are available as an alternative to the HECM Demonstration). Exhibit 2-3 presents a comparison of property characteristics for HECM borrowers and for all elderly homeowners. This section discusses the differences between the property characteristics of participants and non-participants.

2.2.1 Property Value

While it was noted that HECM borrowers have substantially lower annual incomes than elderly homeowners not participating in the program, Exhibit 2-3 shows that HECM participants own substantially more valuable properties than other elderly homeowners. The median property value for all elderly homeowners was just \$70,418 in 1991, according to the American Housing Survey. In contrast, the median property value of HECM participants to date was \$102,000 at the time of application, and three-fourths of all participants had properties valued at more than

**EXHIBIT 2-3: Characteristics of Properties Owned by HECM Borrowers
and All Elderly Homeowners**

	HECM Borrowers ¹	Elderly Homeowners ²
Median Property Value	\$102,000	\$70,418
Median Owner's Equity	100 %	96.0%
Median Property Size:		
Lot Size	8,250 sq. ft	15,246 sq. ft
Living Area	1,120 sq. ft	1,616 sq. ft
Number of Rooms	8.0	5.6
Number of Bedrooms	3.0	2.7
Number of Bathrooms	1.5	1.5
Property Condition:		
Average Cost of Repairs	\$836	na
Median Age of Structure	38 years	35 years
Location:		
Urban	35.2%	25.8%
Suburban	61.0%	45.4%
Rural	3.8%	28.8%

¹ Data from HECM application materials as of date of application.

² Data from 1991 American Housing Survey.

\$73,000.²⁰ Clearly the participants in the program can accurately be called house-rich as well as cash-poor.

²⁰ Exhibit 2-3 shows that the properties owned by HECM borrowers tend to be significantly more valuable than properties owned by elderly homeowners in general even though they are also much smaller in terms of lot size and living area. This apparent contradiction is attributable to the fact that HECM borrowers tend to live in urban and suburban areas rather than in rural areas. According to the 1991 American Housing Survey, median property values among elderly homeowners are much higher in central cities (\$72,413) and suburbs (\$87,554) than in rural areas (\$49,506), even though they tend to be on much smaller lots (0.19 and 0.37 acres, respectively, versus 0.75 acres in rural areas).

The median property value for all HECM borrowers, as of June 1994, \$102,000, is approximately one percent lower than in the 1992 preliminary evaluation, when HECM borrowers had a median property value of \$103,000. For elderly homeowners in general property values increased about 7 percent. However, this difference may be attributed to the different time periods represented by the two data sources. The data reported for all elderly homeowners represent the growth in property values from 1989 to 1991, while for HECM borrowers the data reflect values at the time of application, from 1989 through June 1994.

Exhibit 2-4 shows the effect of property value on the maximum monthly payment or line of credit available to typical HECM borrowers with different property values. This exhibit presents figures computed for a borrower of the median age (76.0 years) and with the median expected interest rate (8.52%) at four different property values:

- the lower quartile property value of HECM borrowers (\$73,300);
- the median property value of HECM borrowers (\$102,000);
- the upper quartile property value of HECM borrowers (\$145,000), assuming the highest adjusted property value of \$151,725; and
- the median property value of all elderly homeowners (\$70,418).

As Exhibit 2-4 shows, the typical HECM borrower with a property value of just \$73,300 can receive maximum payments of about \$246 per month, or a maximum line of credit of about \$29,148. In contrast, an otherwise identical borrower with a relatively high property value of \$145,000 can receive monthly payments of about \$548 or a line of credit of about \$64,927.²¹

²¹ Assuming the FHA 203(b) limit for the area is \$151,725.

**EXHIBIT 2-4: Maximum Monthly Payment or Line of Credit
Available to Typical HECM Borrowers at Different Property Values**

	Lower Quartile \$73,300	Median \$102,000	Upper Quartile \$145,000 ¹	Elderly Homeowners \$70,418
Maximum Monthly Payment	\$246	\$367	\$548	\$234
Maximum Line of Credit (Principal Limit)	\$29,148	\$43,470	\$64,927	\$27,710

¹ Financial calculations are based on the maximum claim amount, which is equal to the lesser of the property value or the FHA Section 203(b) loan limit for each area. The FHA loan limit was no higher than \$151,725 when these loans were originated.

An identical borrower with a property valued at \$70,418, the median for all elderly homeowners, would receive only about \$234 per month or a line of credit of only about \$27,710.

The relatively high property values of HECM participants is particularly striking considering that the maximum adjusted property value permitted under the HECM Demonstration is set at the FHA 203(b) loan limit for each area. Thus owners of properties valued at more than the FHA loan limit, no higher than \$151,725 at the time of the analysis,²² cannot take advantage of the full equity in their house under the HECM Demonstration. Notwithstanding this restriction, in the sample of 1,866 loans analyzed for this evaluation, 45 percent of participants have initial property values that exceed their maximum claim amount.

²² The HUD Appropriation Act of 1993 raised the ceiling on FHA loan limits to \$151,725, allowing the limit in some high-cost areas to rise above the prior ceiling of \$124,875. The HUD Appropriation Act of 1994 raised the ceiling to 75 percent of the Fannie Mae/Freddie Mac conforming loan limit, which makes the current ceiling \$152,362.

More than ten percent of all participants to date have properties valued at more than \$200,000, and some properties are worth more than \$600,000. This may reflect a lack of financial alternatives for owners of high-value properties, or elements of the HECM Demonstration that make it attractive in spite of the restriction represented by the FHA loan limit.

As the Department's initial evaluation of the HECM Demonstration noted, the participation of HECM borrowers with property values above the FHA 203(b) loan limit generates a cross-subsidy from these borrowers to borrowers with properties valued less than the FHA loan limit. As more conventional alternatives become available in the market, the 45 percent figure mentioned above should decline, although it will probably not reach zero, because some potential borrowers with properties valued slightly above the 203(b) limit will still find the HECM Demonstration to be attractive. The cross-subsidy arises from the fact that it would be relatively unlikely that payments to borrowers who have such high actual property values will exceed the value of the property at repayment. For this reason, the mortgage insurance premium computed for these borrowers under the HECM Demonstration may be higher than necessary to cover expected losses on their reverse mortgages. See Section 6.2 of this report for an estimate of the magnitude of this cross-subsidy. This cross-subsidy issue was recognized and discussed in the Department's Interim Report to Congress.²³

²³ U.S. Department of Housing and Urban Development (Office of Policy Development and Research), "Interim Report to Congress on the Home Equity Conversion Mortgage Insurance Demonstration," October 1990.

2.2.2 Initial Equity

The HECM Demonstration requires that prospective borrowers own their property in whole, or be able to pay off outstanding mortgage balances or other liens at closing from the proceeds of the HECM loan. As Exhibit 2-3 shows, owner's equity for a majority of HECM borrowers to date represented 100 percent of total property value, meaning that all outstanding mortgage balances were paid off. In fact, more than 95 percent of HECM borrowers to date had mortgage balances of 26 percent or less of total property value. In comparison, among all elderly homeowners, owner's equity amounted to about 96 percent of property value for the median homeowner, only marginally lower than the median observed among HECM participants.

2.2.3 Property Size

Despite the higher market values of their properties, most of the HECM borrowers to date appear to own houses that are significantly smaller than the average for the population at large. For example, as shown in Exhibit 2-3, the median lot size for HECM borrowers was about 8,250 square feet, and half of all HECM borrowers had lots of between 6,000 and 13,250 square feet. In comparison, according to the American Housing Survey, the median lot size among all elderly homeowners was about 15,246 square feet in 1991. Similarly, the median amount of living area among HECM borrowers was about 1,120 square feet, and half of all borrowers lived in houses of between 905 and 1,380 square feet. In contrast, the median living area among all elderly homeowners was about 1,616 square feet in 1991. Properties of HECM

participants are quite similar to those of non-participants in terms of the median numbers of bedrooms (3.0 versus 2.7) and bathrooms (1.5 for both groups).

Both median lot size and median number of rooms are higher for HECM borrowers in this evaluation than was reported in the 1992 preliminary evaluation, but median living area is slightly smaller. The larger lot size and larger number of rooms are likely a reflection of the shifts in location of HECM borrowers from cities to suburbs discussed below.

2.2.4 Location

The substantially higher values of HECM properties, combined with their smaller size, most likely reflects striking differences in the geographic location of HECM borrowers compared to the elderly population at large. As Exhibit 2-3 shows, HECM borrowers are highly concentrated in metropolitan areas: about 61 percent live in suburbs, another 35 percent live in central cities, and only 4 percent live in rural areas.²⁴ In contrast, according to the 1991 American Housing Survey, in 1991 about 44 percent of all elderly homeowners lived in suburbs; only about 26 percent lived in central cities, and 29 percent lived in rural areas. It is possible that this marked difference in the locations of participants and non-participants reflects systematic differences in the availability of HECM lenders or counselors (or both) in rural and urban areas.

While the percentage of HECM borrowers in rural areas remains low (less than 4%), there has been a shift from urban to suburban areas from the 1992 preliminary evaluation data

²⁴ These designations are made by the property appraiser and do not correspond to any official designation of urban or suburban areas.

to the data reported here. While the percentage of HECM borrowers in urban areas has decreased by approximately 4 percent, the percentage in suburban areas has grown by approximately the same amount.

2.2.5 Condition of Property

In general, the condition of properties owned by HECM borrowers seems to be fairly good, at least as measured by the cost of repairs required to bring the property into compliance with loan guidelines. More than half of all HECM borrowers had no repairs required to bring their units into compliance, and the mean estimated cost of required repairs was just \$836. (Comparable figures for all elderly homeowners are not available.) Where direct measures of property condition are not available, the age of a house is often used as a useful proxy for the condition of the property. As Exhibit 2-3 shows, properties owned by HECM borrowers appear to be quite comparable to those owned by the general population of elderly homeowners. The median age of properties owned by HECM borrowers was about 38 years as of loan application date. This is only slightly older than the median age of houses belonging to all elderly homeowners, about 35 years according to the American Housing Survey.

2.3 HECM Loan Terms

With the exception of the choice of payment option, most of the significant terms of reverse mortgages under the HECM Demonstration depend only on the borrower's age, the adjusted property value, and the prevailing interest rates at loan origination. It is likely, however, that the terms that prospective borrowers face affect the likelihood that they will participate in the program. Specifically, the loan terms -- adjusted property value, interest rates, and principal limit, in addition to the payment option chosen -- determine the maximum line of credit and the maximum monthly payments available to borrowers. The median loan terms under which HECM loans have been originated to date are shown in Exhibit 2-5. This section discusses the loan terms and the importance of each in determining the maximum funds to which borrowers have access.

2.3.1 Payment Options

The HECM Demonstration permits borrowers to design a payment stream that meets their individual financial requirements. Borrowers can select one of five payment options at loan origination and may change payment plans at any time throughout the life of the loan. As mentioned earlier, the available payment plans are:

- (1) the tenure payment option, which provides for monthly payments to borrowers for as long as they occupy the property as their principal residence;
- (2) the term payment option, which provides for monthly payments over a specified period of time (most commonly ten years);

EXHIBIT 2-5: Median Loan Terms for HECM Loans to Date

	HECM Borrowers (as of mid-July 1994)	HECM Borrowers (as of mid-August 1992)
Choice of Payment Plan: ¹		
Tenure Payments	8.2%	10.4%
Term Payments	11.1%	15.7%
Line of Credit	56.6%	51.2%
Tenure w/ Credit	7.9%	7.2%
Term w/ Credit	16.2%	15.5%
Median Initial Interest Rate	5.72%	8.11%
Median Expected Interest Rate	8.52%	9.63%
Median Adjusted Property Value	\$97,000	\$101,000
Median Principal Limit	\$46,836	\$41,958
Median Closing Costs	\$4,465	N.A. ²

¹ Choice of payment plan data from CDSI data base as of mid-July 1994. All other data from HECM application materials as of date of application.

² Median closing costs by year of application are: \$3,821 in 1989 (based on a small number of loans and therefore somewhat less reliable; \$4,473 in 1990; \$4,471 in 1991; \$4,498 in 1992; and \$4,473 in 1993. While the closing cost figure includes the origination fee (now limited to \$1,800), there is some uncertainty regarding other costs that may have been included in this value, and the data show wide variations by state.

- (3) a line of credit with no payment plan, which allows borrowers to draw down payments as needed;
- (4) a combination of tenure payments with a line of credit; and
- (5) a combination of term payments with a line of credit.

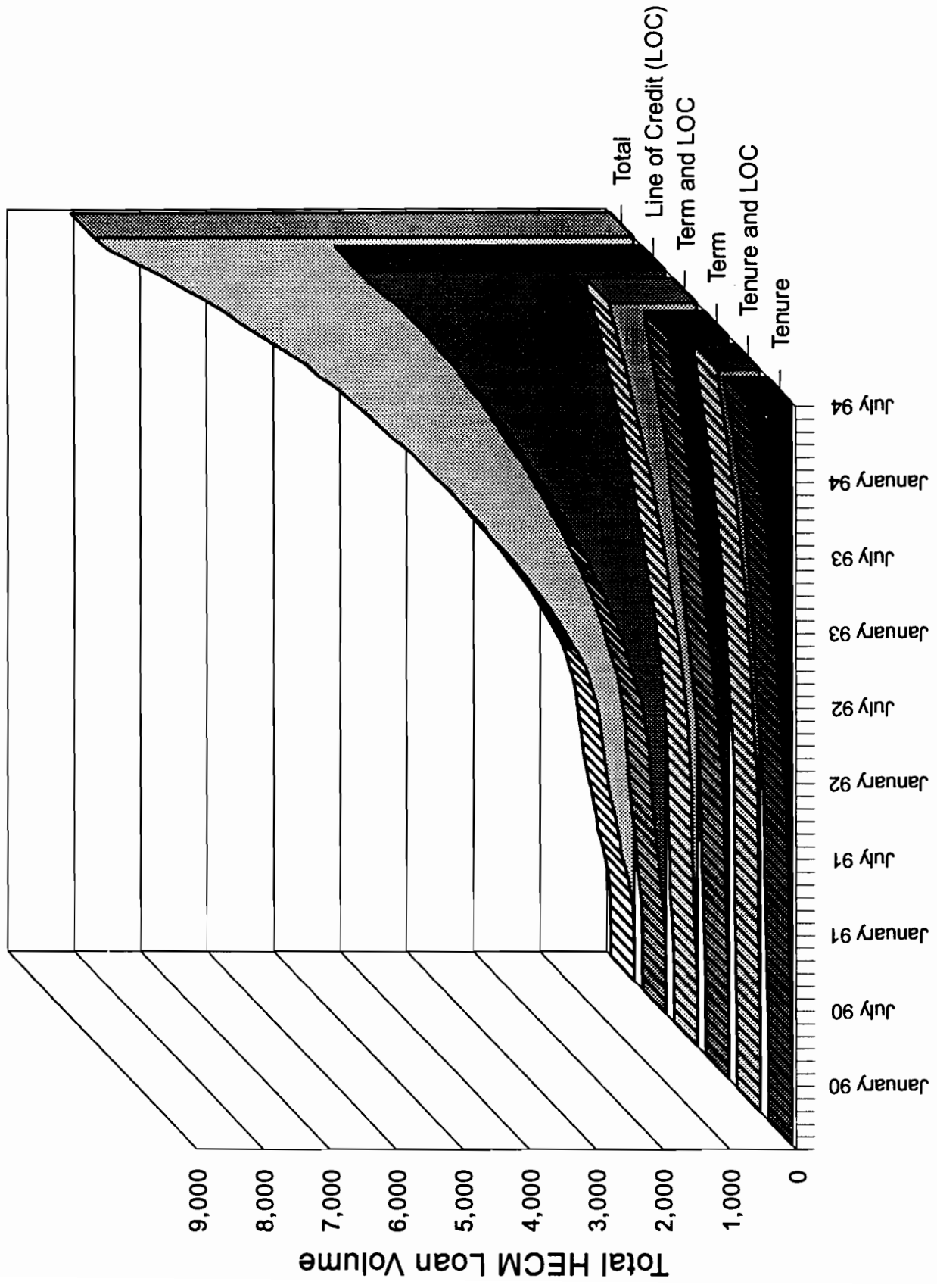
As the middle column of Exhibit 2-5 shows, as of mid-July 1994 about 8 percent of all HECM borrowers had elected to receive regular monthly payments as long as they occupy their home (the tenure payment option), down slightly from about 10 percent at the time of the Department's initial evaluation in mid-August 1992. Another 11 percent have selected the term

payment option, again down from the 16 percent observed as of mid-August 1992. In contrast, nearly 57 percent of all HECM borrowers to date have established a line of credit with no monthly payments, an increase from the 51 percent observed at the time of the Department's initial evaluation. Finally, 8 percent of borrowers have combined tenure payments with a line of credit and 16 percent have opted to combine term payments with a line of credit, both slight increases over earlier figures. Exhibit 2-6 shows the growth in the number of borrowers opting for each payment option over the period since the first HECM loan was originated in October 1989.

The shift in the distribution of HECM borrowers by payment option appears to indicate growing interest among elderly borrowers in establishing a line of credit, either instead of or in addition to receiving monthly payments. According to CDSI data on individual loan transactions, about 97 percent of borrowers with lines of credit have made at least one credit draw. Moreover, borrowers are likely to have drawn on their line of credit whether or not they also receive regular monthly payments. On average, the borrowers who have used their lines of credit have made an average of 1.9 draws at an average of \$5,962 per draw. In fact, almost half of the total amount available under HECM lines of credit has already been drawn: the total amount drawn as of the end of July 1994 was approximately \$75.56 million, or \$11,452 per line-of-credit loan, out of a total of \$157.96 million, or \$23,949 per line-of-credit loan, available under established lines of credit.

One of the most important features of the HECM Demonstration is that borrowers can change their payment option at any time, subject to a small fee. However, CDSI data suggest

EXHIBIT 2-6: Growth in HECM Loans by Payment Option, 1989-1994



that only about 14 percent of HECM borrowers to date have made any change in their payment option. Since most HECM loans were originated very recently, it is possible that a much higher percentage of borrowers will change their payment options at some time during the life of their HECM loan, but it is impossible to estimate this percentage at this early stage of the HECM Demonstration. Most of the borrowers who have changed their payment options to date have established lines of credit instead of, or in addition to, their initial choice of payment option. According to CDSI data, of the 1,012 borrowers who have changed their payment option, 439 of them, or about 43 percent, have established a line of credit.²⁵ Another 342 borrowers established a line of credit with term payments, while 120 selected a line of credit with tenure payments. Only 78 borrowers changed their choice of payment option to term payments, and only 33 changed to tenure payments.

2.3.2 Interest Rates

While both fixed-rate and adjustable-rate loans can be insured under the HECM Demonstration, fixed-rate loans account for only about one percent of all HECM loans originated as of mid-July 1994, and only two lenders have originated fixed-rate HECM loans. A lender assumes considerable interest rate risk with a fixed-rate HECM loan, as would a secondary market investor. Fannie Mae will not purchase any fixed-rate HECM loans because of this risk, and Fannie Mae's policy makes it unlikely that any HECM lenders will resume origination of fixed-rate loans in the foreseeable future.

²⁵ This analysis focuses on the most recent payment option chosen; initial and interim payment options (if they differed from the most recent payment option) were unavailable.

The *initial interest rate* for an adjustable rate HECM loan is established at some margin above the one-year Treasury rate.²⁶ Since the Demonstration began, Treasury rates have experienced generally consistent declines that are reflected in the initial interest rates obtained by borrowers. Initial interest rates have been as high as 10.5 percent for some early loans and as low as 4.14 percent for recently originated loans. As Exhibit 2-5 shows, the median initial interest rate has been about 5.72 percent, and most loans were originated at initial interest rates between 5.05 and 7.12 percent. As the third column of Exhibit 2-5 shows, the median interest rate was 8.11 percent as of the time of the Department's initial evaluation (mid-August 1992). The sharp decline in median initial interest rates (almost 30 percent in just two years) reflects the overall movement of interest rates during that period. The decline in initial interest rates may also have enhanced the growth of loan volume under the HECM Demonstration, because lower interest rates reduce the rate at which loan balances increase under the program. Unlike in the forward mortgage market, however, the decline in interest rates in the last two years did not produce a large number of refinancings for HECM loans. While the exact number of refinancings is not known, the data indicate very few refinancings of HECM loans during this period.

The HECM Demonstration uses *expected interest rates*²⁷ for the purpose of computing the principal limit amount, which determines the maximum monthly payment or line of credit

²⁶ The one-year Treasury rate is defined as the most recent weekly average yield for U.S. Treasury bonds and notes adjusted to a constant maturity of one year, as published by the Board of Governors of the Federal Reserve. Most HECM loans were originated at a margin of 1.6 percentage points above the one-year Treasury rate, although the margin is fixed by agreement between the borrower and the lender.

²⁷ The expected interest rate is defined the same way as the initial interest rate, except that the most recent weekly average yield for U.S. Treasury bonds and notes is adjusted to a constant maturity of ten years rather than one year.

available to each borrower. Expected interest rates, therefore, can have a substantial impact on the maximum monthly payment or line of credit that is available to a borrower under the HECM Demonstration. This effect is illustrated in Exhibit 2-7, which presents the maximum monthly payment and line of credit available to a typical HECM borrower of the median age (76.0 years) and with the median property value (\$102,000) at three different expected interest rates:

**EXHIBIT 2-7: Maximum Monthly Payment or Line of Credit
Available to Typical HECM Borrowers at Different Expected Interest Rates**

	Lower Quartile 7.92 %	Median 8.52 %	Upper Quartile 9.23 %
Maximum Monthly Payment	\$382	\$367	\$347
Maximum Line of Credit (Principal Limit)	\$47,506	\$43,470	\$38,936

- the lower quartile expected interest rate (7.92 %);
- the median expected interest rate (8.52 %); and
- the upper quartile expected interest rate (9.23 %).

As shown in the chart, the maximum monthly payment or line of credit available to borrowers under the HECM Demonstration is inversely related to the expected interest rate. This relationship reflects the fact that the principal limit is computed to make the expected mortgage insurance losses over the life of the loan no greater than the expected premium collected. Specifically, higher expected interest rates mean higher future loan balances, which in turn would result in larger insurance losses unless the amount of principal advanced is reduced. For

example, a typical HECM borrower initiating a loan at a relatively low expected interest rate of 7.92 % can receive maximum payments of about \$382 per month, or a maximum line of credit of about \$47,506. An otherwise identical borrower initiating a loan at a higher expected interest rate of 9.23 % can receive maximum monthly payments of only about \$347, or a maximum line of credit of only about \$38,936. These amounts are computed so that the present value of the principal amounts disbursed over the life of the loan (whether monthly or line-of-credit), including premium charges and servicing fees, will not exceed the principal limit.

As noted, interest rates declined sharply over the period since the Department's initial evaluation of the HECM Demonstration. The median expected interest rate reflects this decline, dropping by about 13 percent (from 9.63 percent to 8.52 percent) between mid-August 1992 and mid-July 1994. Because a decline in expected interest rates translates directly into a larger monthly payment or a larger line of credit for borrowers, this decline in interest rates may have enhanced the growth of loan volume under the HECM Demonstration.

The decline in interest rates has not caused a wave of refinancings of HECM loans as it has in the forward mortgage market. An analysis of HECM loan terminations shows the following. Since the Demonstration began in 1989, there have been 550 loans which have been terminated, of which 37 percent can be specifically identified as being due to the death of the borrower, 34 percent due to the borrower moving out of the mortgaged property, and 8 percent paid off the loan and remained in the property. The reasons for the termination of the remaining 21 percent are not known -- although the Department suspects that some of these are due to unreported death of the borrower.

2.3.3 Adjusted Property Values

As noted, adjusted property values are defined as the lesser of the property value or the FHA 203(b) loan limit in each area.²⁸ For this reason, the program is not expected to appeal strongly to homeowners with property values substantially higher than the adjusted property value (although, as noted earlier, there have been several borrowers with property values substantially above the FHA loan limit). The median adjusted property value under the program to date was approximately \$97,000, which is lower than the median property value of borrowers participating in the program (\$102,000) because of the constraint of the FHA loan limits.

2.3.4 Principal Limits

The principal limit under the HECM Demonstration is computed by multiplying the adjusted property value by a principal limit factor computed on the basis of the expected interest rate and the age of the (youngest) borrower. As noted, this limit represents the amount that can be made available to each borrower as the present value of the expected stream of future payments. For the sample of HECM loans originated to date the median principal limit was about \$46,836, with limits for most loans between \$34,500 and \$62,300.

²⁸ The FHA 203(b) limit was 95% of median sales price in the local area, with a maximum of \$151,725 and a minimum of \$67,500 as of the mid-July 1994 date that the data for this report was gathered. The HUD Appropriation Act of 1994 raised the maximum to \$152,362 and the minimum to \$77,197; both limits were implemented by HUD in October 1994.

As the third column of Exhibit 2-5 shows, the median principal limit has increased by almost 12 percent (from \$41,958 to \$46,836) since the time of the Department's initial evaluation. Since the median adjusted property value and median borrower age both declined slightly during the period from mid-August 1992 to mid-July 1994, the significant increase in principal limits can be attributed to the sharp decline in interest rates over that period.²⁹

2.3.5 Closing Costs

Closing costs include origination fees that may be closely related to the value of the property, but a large portion of the costs may be subject to the requirements of specific statutes in each state. In the sample of HECM loans originated to date, the median closing costs (excluding the 2 percent MIP) are \$4,465, and closing costs in most cases have ranged between \$3,400 and \$5,800. The average closing costs to date are approximately \$4,800.

While the median closing costs are \$4,465, there is a great deal of variation among states. For example, in New York and California, the two states with the largest numbers of HECM loans closed to date, median closing costs are \$6,868 and \$5,030, respectively. In New York, up to a quarter of this amount can be attributed to state fees and taxes that range from \$855 to \$1,855.³⁰ The New York State legislature has recently passed a bill that will eliminate the recording tax for reverse mortgages and should result in lower origination fees. In

²⁹ It is likely that lower interest rates may have made the program attractive to more people with lower-valued homes.

³⁰ National Center for Home Equity Conversion. "Taxing Self-Reliance: Government Barriers to Reverse Mortgages," February 1993.

California, origination fees are increased by the cost of required inspections. High closing costs may warrant continued attention to ensure that the HECM Demonstration continues to benefit elderly homeowners with relatively limited liquid financial resources.

As noted in footnote 2 to Exhibit 2-5, there has been no appreciable change in closing costs since 1990. These results suggest that there has been no significant impact on closing costs arising from the Department's decision to change the limit on the amount of the origination fee that can be financed from loan proceeds from one percent of property value to \$1,800, which went into effect in July 1993.

2.4 Factors Affecting Choice of Payment Option

The summary statistics presented above have identified certain key factors -- for example, income, age, and property values -- that appear to affect prospective borrowers' decisions concerning whether or not to participate in the HECM Demonstration. For those elderly homeowners who do decide to participate, these same factors may affect the choice of a payment option. This section updates the analysis presented in the Department's preliminary evaluation concerning the impact of selected borrower and property characteristics on the probability that HECM Demonstration participants will elect each of the five payment options.³¹

³¹ The analysis is based on the results of a series of logistic regression equations estimated using a sample of 1,578 HECM loans from the Q-Soft, Inc. data base. This sample is not necessarily random, and may not be fully representative of all HECM loans. However, the distribution of choice of payment plan across the five options — tenure, term, line of credit, tenure/credit, and term/credit — is quite similar to that shown in the CDSI data base of loans that had closed as of mid-July 1994. The analysis is based on the Q-Soft data base because it includes extensive information on borrower and property characteristics, whereas the CDSI data base includes very few borrower or property characteristics. Appendix A presents additional results of this analysis.

The purpose of the analysis is to identify design elements of the HECM Demonstration that might be modified to meet more fully the financial requirements of elderly homeowners. Any recommendations for program modifications must, however, be based on a more complete analysis of HECM data, as well as on information collected directly from borrowers, lenders, and housing counselors participating in the HECM Demonstration.

2.4.1 Age

Exhibit 2-8 presents the estimated probability that a typical HECM borrower at three different ages will choose each of the five payment options.³² In this and subsequent charts, boldface type is used to indicate differences in estimated probabilities that are considered statistically significant at an 80% level of confidence. This means that there is less than a 20% chance that the estimated probabilities would seem to be so different if in fact the actual probabilities were the same.

According to the estimates derived from the analysis, a typical borrower aged 76.0 years (the median for HECM borrowers to date) is about 37 percent likely to elect the line of credit option, about 8 percent likely to choose the tenure option (that is, to receive monthly payments until the property ceases to be their primary residence), and about 12 percent likely to choose

³² It should be pointed out that there are two reasons that the sum of these percentages does not equal unity. First, they are based on artificial model borrowers for whom one variable at a time (such as borrower age) varies while all other borrower characteristics, property characteristics, and loan terms are fixed at the median. Because no such model borrowers actually exist, readers should use these figures for illustrative purposes only. Second, the effect of the independent variable, in this case AGE, on payment plan choice varies by which option is under consideration. Also, these percentages do not match the distribution by payment option shown in Exhibit 2-5 because these data are from the Qsoft data set, a subset of the CDSI data set of all HECM loans originated to date.

EXHIBIT 2-8: Effect of Borrower Age on Selection of Payment Plan¹

	Age of Borrower		
	71.5 years	76.0 years	81.2 years
Probability of Tenure Option	7.1%	7.9%	8.9%
Probability of Term Option	10.3%	10.3%	10.3%
Probability of Line of Credit Option	42.1%	37.3%	32.1%
Probability of Tenure plus Line of Credit Option	10.2%	12.3%	15.3%
Probability of Term plus Line of Credit Option	22.0%	22.5%	23.1%

¹ Bold typeface indicates that the differences are statistically significant at an 80 percent confidence level.

a combination of these two options. An otherwise identical but younger borrower is more likely to elect the line of credit option but less likely to choose tenure payments or to combine tenure payments with a line of credit, while the reverse pattern holds for an older borrower. Thus a borrower's age is negatively related to the probability that the borrower will elect a line of credit and positively related to the probability that the borrower will choose tenure payments or combine tenure payments with a line of credit.

2.4.2 Income

Exhibit 2-9 shows the estimated relationship between income and the choice of payment option. As this exhibit shows, there is a significant positive relationship between the borrower's income and the probability that they borrower will choose to establish a line of credit, and a negative relationship between income and the choice of a line of credit combined with term payments. As would be expected, higher-income borrowers are more likely to elect to establish

a line of credit to cover extraordinary unforeseen expenses, while lower-income borrowers are more likely to elect payment options to cover ordinary living expenses.

EXHIBIT 2-9: Effect of Income on Choice of Payment Option¹

	Income		
	\$7,644	\$10,368	\$14,939
Probability of Tenure Option	8.2%	7.9%	7.3%
Probability of Term Option	10.0%	10.3%	10.7%
Probability of Line of Credit Option	35.6%	37.2%	39.4%
Probability of Tenure plus Line of Credit Option	12.8%	12.4%	11.7%
Probability of Term plus Line of Credit Option	24.4%	22.4%	19.2%

¹ Bold typeface indicates that the differences are statistically significant at an 80 percent confidence level.

2.4.3 Sex/Household Composition

Exhibit 2-10 shows the relationship between the sex or household composition of borrowers and the probability that they will choose each payment option. As this exhibit shows, it appears that elderly women living alone are significantly more likely to select the tenure option than are borrowers living together (including married couples); elderly men living alone, in contrast, are significantly less likely to elect the tenure option. It is possible that this result reflects in part the shorter life expectancy of men relative to women, since monthly payments

under the tenure option are based on the life expectancy of women and are therefore lower than they would be if based on male life expectancies.

EXHIBIT 2-10: Effect of Sex on Choice of Payment Option¹

	Living with Others	Female Living Alone	Male Living Alone
Probability of Tenure Option	7.5%	8.4%	6.5%
Probability of Term Option	10.6%	9.8%	12.3%
Probability of Line of Credit Option	38.2%	36.8%	36.2%
Probability of Tenure plus Line of Credit Option	11.4%	14.0%	11.7%
Probability of Term plus Line of Credit Option	23.2%	22.5%	21.1%

¹ Bold typeface indicates that the differences are statistically significant at an 80 percent confidence level.

2.4.4 Property Value

Interestingly, there appears to be no significant relationship between property value and choice of payment option. This result differs from the finding in the Department's initial evaluation that property value was significant in choosing the tenure and line of credit options, and is somewhat surprising since the maximum claim amount (which is based on the property value) is critical to determining the monthly payments or line of credit to which a borrower has access.

2.4.5 Location

Exhibit 2-11 presents the estimated probability that a typical borrower living in urban, suburban, and rural areas will elect each of the five payment options. As this exhibit shows, there appear to be dramatic differences in the HECM payment option choices made by otherwise identical borrowers living in the three locations. Rural borrowers are much less likely to choose either a term payments option or tenure payments combined with a line of credit than urban or suburban borrowers. Urban borrowers are significantly more likely to choose term payments than suburban borrowers, while suburban borrowers are more likely to choose tenure payments with a line of credit.

EXHIBIT 2-11: Effect of Property Location on Choice of Payment Option¹

	Location of Property		
	Urban	Suburban	Rural
Probability of Tenure Option	7.1%	8.4%	7.9%
Probability of Term Option	12.3%	9.6%	6.3%
Probability of Line of Credit Option	38.6%	36.5%	33.8%
Probability of Tenure plus Line of Credit Option	14.7%	19.0%	8.8%
Probability of Term plus Line of Credit Option	23.8%	21.7%	24.9%

¹ Bold typeface indicates that the differences are statistically significant at an 80 percent confidence level.

The reasons for these dramatic estimated differences between otherwise identical borrowers in central city, suburban, and rural areas are not clear. It may be that borrowers in the three areas may use HECM loan proceeds for substantially different purposes, and choose

payment options to meet their disparate requirements. Or, it may be that the three locations may reflect other differences that are not, or only imperfectly, captured in the available data. For example, according to the American Housing Survey, monthly housing costs for homeowners age 65 and over in 1991 were substantially higher in central cities (\$262) and suburban areas (\$291) than in rural areas (\$213). Since it is quite likely that HECM borrowers make payment option decisions in large part on the basis of their monthly housing expenses, the differences observed between the three areas may reflect differences in housing costs.

CHAPTER 3
PARTICIPATION BY THE FINANCIAL COMMUNITY
IN THE HECM DEMONSTRATION

Homeowners' access to HECM loans depends upon the willingness of lenders to make such loans. The HECM Demonstration is designed to encourage and increase reverse mortgage lending by private lending institutions through the provision of mortgage insurance. This chapter discusses the involvement in the Demonstration of the nation's financial community -- the lenders, institutional investors, and loan servicers whose participation has already demonstrated a high degree of acceptance of reverse mortgages in the marketplace. Also discussed in this chapter is an overview of developments in the conventional, uninsured reverse mortgage market, which has experienced the withdrawal of some firms whose products predated HECM, and several new entrants into the market with new products that have been influenced by the HECM Demonstration.

3.1 Lender Participation in HECM Demonstration

Since the origination of the first HECM in October 1989, there has been growing acceptance of the HECM loan among conventional lenders, and lender activity has increased particularly rapidly in the last two years. As of mid-July 1994, the Demonstration involved 75 lenders in 46 states plus the District of Columbia and Puerto Rico.³³

³³ As of July 13, 1994, no HECM loans had closed or reached firm commitment in 4 states: Alaska, North Dakota, South Dakota, and Texas.

Despite adequate initial lender interest, a number of obstacles delayed origination of HECM loans. Some lenders could not readily locate title companies that understood and were interested in insuring reverse mortgages, a problem that has been virtually eliminated as awareness of reverse mortgage products has increased. The lack of qualified counselors in some areas also limited lenders' ability to qualify borrowers but, as Chapter 4 discusses, this problem has been substantially reduced as well. Finally, lenders in certain states could not reconcile reverse mortgages with state law provisions, a problem that, as Chapter 5 discusses, has been significantly reduced due to growing understanding of state laws by lenders and title companies and changes that have occurred to accommodate reverse mortgages. Faced with these initial problems many lenders who expressed early interest in the Demonstration withdrew.

Several changes to the HECM Demonstration have had a positive impact on lender participation. These changes are the result of a 1991 Congressional amendment that modified the Demonstration in major respects. The Demonstration has been extended through 1995,³⁴ and insurance authority has been increased tenfold to 25,000 loans. As a result, HUD opened participation in the program to all FHA-approved lenders, not just those selected by lottery as was done at the outset of the Demonstration. Lenders are no longer limited to 50 loans each, which was also an early restriction under the Demonstration.

Exhibit 3-1 presents a profile of participating lenders by type of institution and the number of loans originated. As this exhibit shows, mortgage bankers represent about 72 percent of lenders currently active in the program and account for about 90 percent of loans made to

³⁴ Two bills had been pending in the previous Congress which would have extended the Demonstration -- one by 5 years; the other by 1 year. There is no current legislation pending to extend the Demonstration.

date. In contrast, bank and thrift institutions account for only about 23 percent of the lenders currently active in the program and only about 5 percent of loans to date. Three state housing finance agencies -- in Maine, Rhode Island, and Virginia -- are also active HECM lenders, although only the Rhode Island agency has originated an appreciable number of HECM loans.³⁵

EXHIBIT 3-1: HECM Activity by Type of Lender

Type of Lender	Number of Lenders Originally Authorized	Number of Lenders Currently Active ¹	Current Number of Loans and Firm Commitments ²	Current Aggregate Loan Balance ³ (Millions)
Mortgage Bankers ⁴	33	54	8,054	\$213.0
Banks and Thrift Institutions	14	17	468	\$10.9
State Housing Finance Agencies	3	3	340	\$9.2

¹ As of July 13, 1994. Excludes several lenders that originated loans but that currently participate only through Wendover Funding correspondent program.

² Includes loans that had received firm commitments but that had not yet closed as of July 13, 1994. Excludes 88 loans for which HUD is mistakenly identified as the lender. The total balance for the "HUD" loans is \$0.3 million.

³ Including disbursements, interest, mortgage insurance premiums, and other charges. Loan balance is zero for loans that had not yet closed.

⁴ Includes lenders participating through Wendover Funding correspondent program.

³⁵ Loans originated by banks, thrift institutions, or State housing finance agencies, but currently serviced through the Wendover Funding correspondent program, are included in Exhibit 3-1 under "Mortgage Bankers." For this reason, Exhibit 3-1 underrepresents the actual activity to date by banks, thrift institutions, and state housing finance agencies.

3.1.1 Reasons for Participation

According to the 1991 American Housing Survey, 15.7 million American homeowners are age 65 or older. The widespread desire among the elderly to age in place (that is, to remain in their own homes rather than to move in with family members or to institutions)³⁶ may give HECM loans special appeal over other home equity conversion options that do not protect the borrower's right to stay in his or her home. In addition, the same demographic changes that foretell declining demand for forward mortgages suggest increasing demand for reverse mortgage products. Faced with an aging population and shrinking first-time homebuyers market, mortgage lenders are starting to look for innovative products to serve less traditional markets. Also as interest rates rise and traditional forms of mortgage activity decline, lenders are actively seeking alternatives such as the HECM Demonstration.

According to several lenders and reverse mortgage experts contacted for this biennial evaluation, many participating lenders see HECM loans as a way to provide a full line of services to the communities in which they operate. Lenders express confidence in the market potential of this product, and also choose to participate in the program because they perceive HECM loans to be a relatively risk-free way to serve community needs. The ease of selling HECM loans to the secondary market greatly increases the attractiveness of the product to lenders. The recent rapid growth in HECM activity can be attributed in part to the decline in interest rates that occurred in 1992-1993.

³⁶ AARP estimates that 84% of elderly Americans wish to remain in their own homes. See Understanding Senior Housing for the 1990s (AARP, 1990).

In addition to the market potential of HECM loans, lenders indicate that they enjoy the satisfaction of providing a service to help elderly homeowners remain in their homes, and lenders interviewed identified providing a service to the community as the most attractive feature of participation. For lenders subject to Community Reinvestment Act (CRA) requirements, home equity conversion mortgages offer an opportunity to demonstrate service to low-income persons and communities and to improve CRA ratings.

Important safeguards built into the HECM Demonstration increase lenders' willingness to participate by reducing their risks. The slow initial development of private reverse mortgage models indicates that few private lenders were willing to put their own capital at risk issuing uninsured reverse mortgages. Active HECM lenders say that FHA insurance is critical to their participation. In fact, some lenders and others knowledgeable about the Demonstration believe that FHA insurance effectively eliminates lender risk.

In principle, FHA insurance offers lenders two basic forms of protection, as noted earlier. Lenders participating in the Demonstration have the choice between a shared premium and an assignment option. While both options reduce the collateral risk that the mortgage balance on a HECM loan may grow to exceed the value of the property, the assignment option effectively shields participating lenders from any collateral risk. Furthermore, for this and other reasons (discussed below), secondary market investors will only purchase reverse mortgage loans on which the lender has selected the assignment option. As a result, in practice all lenders participating in the program have chosen the assignment option.

3.1.2 Reverse Mortgage Origination

Loan origination refers to the set of activities that bring a loan to closing. Complex and unconventional aspects of the HECM loan presented challenges for lenders participating in the first years of the Demonstration. With little reverse mortgage experience to draw upon, the business of marketing, originating, and servicing HECM loans was at first costly and time-consuming for lenders. In order to start originating HECM loans, lenders first needed to develop staff capabilities, documents, and loan processing procedures specific to the HECM Demonstration requirements. Gradually, however, lenders have begun to realize economies of scale and to benefit from the experience of pilot participants.

Staff Capabilities. Reverse mortgages are new territory for private lenders. Prior to the late 1980s, reverse mortgages were largely the domain of public agencies. The National Center for Home Equity Conversion estimates that at the outset of the HECM Demonstration only 2,500 private loans had been originated nationwide. For lenders accustomed to forward mortgages, reverse mortgage activities required fundamental changes in their thinking and procedures. In order to gain added familiarity with reverse mortgages in general and with the HECM Demonstration in particular, several lenders have participated in the HUD-sponsored HECM training sessions offered to counseling agencies. In the 10 sessions held between January and August 1994, lenders have represented an average of 25 percent of those trained. This training has been useful for giving lenders an introduction to home equity conversion and features of the HECM loan; attendance has also promoted links between lenders and counselors, a relationship

that is crucial to keeping borrowers in the pipeline. However, some specific needs of lenders cannot be met through this training.

Lenders are finding that the complexity of HECM processing warrants assigning specialized staff to perform HECM activities. The small volume of HECM loans originated by most lenders does not make it cost-effective to train all loan officers in reverse mortgage origination.

Documents. FHA provides model security instruments and notes to lenders for all of its single-family programs, including the HECM Demonstration, but lenders must ensure that the model documents conform to any applicable state requirements. Unlike other programs, however, the uniqueness of the HECM loan limits the applicability of existing models for questions of state law. Lenders can purchase state-specific loan documents from private vendors; however, lenders must still assure compliance with relevant state law and regulations.

Preparing documents to satisfy Truth-in-Lending Act requirements has also been difficult for some lenders. The Federal Reserve Board classifies reverse mortgages as open-end credit when they permit re-borrowing of any amounts repaid before loan termination. Since HECM borrowers can re-borrow amounts repaid, the Fed's Regulation Z requires the same disclosure information for HECMs as provided for revolving charge accounts and ordinary home equity lines of credit. Mortgage lenders, accustomed to the truth-in-lending requirements for closed-end credit (i.e., forward mortgages), are not as familiar as commercial lenders with open-end requirements. This and other legal barriers are discussed in more detail in Chapter 5.

Loan Processing. Reverse mortgage processing is often labor-intensive. Even though HECM underwriting is reduced because loans are based upon the value of the property rather than the borrower's income, lenders complain that origination is burdensome. One lender interviewed recently said that it can take as long as 8 months from the time a borrower submits an application to the time that a loan is closed. For others, the time it takes to close HECM loans generally ranges from two to four months.

To the extent possible, the Department designed HECM procedures to mirror FHA forward processing. One major difference, however, is that all HECM loans are HUD-processed whereas nearly all FHA forward mortgages are direct-endorsed by the lender. HUD processing requires lenders to refamiliarize themselves with an activity that they perform less and less frequently. Further, the approval of the HUD field office staff must be obtained at each stage in the process between application and settlement. Several of the lenders interviewed for this evaluation maintained that bureaucratic requirements and the time required because they are not allowed to perform direct endorsements are among the major drawbacks of the HECM Demonstration. In response to this, the Department is considering providing for direct endorsement of HECM loans, and it is planning to expedite the processing of all HECM loans through the new HUD processing centers, such as the recently opened Denver center.

3.1.3 Origination Costs

As with forward mortgages, lenders participating in the HECM Demonstration may recover a portion of their transaction costs from fees charged to borrowers. For the HECM

Demonstration, HUD has determined that general FHA rules pertaining to allowable costs and fees apply. HUD has also established several specific requirements for reverse mortgages.

The Department did not limit the origination fee charged by HECM lenders. This differs from FHA forward mortgages, for which origination fees are restricted to one percent of the loan. The Department does, however, limit the amount of HECM origination fee that can be financed from loan proceeds to \$1,800. Any amount above \$1,800 must be paid for from the borrower's own funds.

The Department previously limited the amount of origination fee that could be financed to one percent of the adjusted property value. However, many lenders were charging 1 to 1.5 percent or a flat fee of \$1,500 to \$1,800. The limit on financing of origination fee to one percent became a hardship for many borrowers who could not afford to pay the amount above the limit in cash. The higher cap on the financing of origination fees has removed this burden in most cases, and it does not appear to have raised the amounts that lenders charge for origination.

Closing costs on a HECM loan also include an upfront mortgage insurance premium. HUD requires lenders to collect at closing a mortgage insurance premium equal to two percent of adjusted property value, defined as the lesser of the property value or FHA 203(b) mortgage limits. Other fees passed on to borrowers at closing include appraisal costs, title search and recordation, a credit check (to make sure that the borrower does not have any delinquent Federal debts that cannot be cleared), and reasonable and customary local fees and taxes. The majority

of these fees are standard for all borrowers within a state or locality, but there is variation across states, as discussed in Chapter 2 of this evaluation.

3.1.4 Reverse Mortgage Servicing

Reverse mortgage servicing runs counter to forward mortgage servicing practices. Servicing encompasses all activities performed after the loan has closed. Lenders may service home equity conversion mortgages themselves or arrange for others to perform servicing. Although certain basic responsibilities are the same for both forward and reverse mortgages -- for instance, loan balances must be calculated and account statements sent -- there are important differences.

Instead of collecting payments from borrowers, reverse mortgage servicers disburse payments to borrowers and obtain reimbursement from the investors (often Fannie Mae). With a HECM loan, disbursements include any regularly scheduled payments (for term and tenure plans) and/or line of credit advances. HUD requires that late charges, payable to borrowers, be assessed if the servicer fails to distribute monthly payments by the first of each month, or if line of credit advances are not issued within five business days. The flexible payment plan available with FHA reverse mortgages creates unpredictable payment streams. In turn, this unpredictability makes servicing functions difficult to standardize. Borrowers may change payment options at any time, which means that each loan is serviced in effect as a line of credit, even when it is not. New financial calculations must be performed each time the borrower elects to change to a different payment option.

Under the HECM Demonstration, servicers must ensure that property repairs required as a condition of loan approval be completed before funds are disbursed. They must also verify that taxes and hazard insurance are paid. Although most HECM borrowers elect to continue paying these expenses directly, servicers are still responsible for verification and for paying any delinquencies that result from borrowers' failure. An additional servicing responsibility of HECM servicers is the payment to HUD of the monthly insurance premium.

Together these requirements mean that reverse mortgages require more individualized attention than forward mortgages. The premium collection system operated for the Department by Computer Data Systems, Inc. (CDSI) gives lenders on-line access to detailed information on scheduled and unscheduled payments to borrowers, current loan balances, and other data for each loan.³⁷ Even with the assistance of this premium collection system, however, few lenders have the technical capacity or inclination to service reverse mortgages themselves. Instead, most lenders look to a professional servicer to fulfill these functions.

Most HECM servicing activity to date is performed by Wendover Funding, a North Carolina firm that manages servicing for approximately 4,200 of the HECM loans originated as of mid-July 1994. Wendover has a relationship with the majority of lenders participating in the

³⁷ The CDSI premium collection system begins with basic information on each loan, obtained from the CHUMS system. Lenders then access the system on-line to update loan information at closing, after which CDSI computes the initial mortgage insurance payment and debits the lender's account. After loan closing, CDSI enters data on scheduled monthly payments to each borrower in accordance with the payment option chosen; lenders enter data on unscheduled payments and changes in payment options. CDSI then updates the outstanding loan balance each month, computes the monthly MIP, and debits the lender's account.

HECM Demonstration.³⁸ For example, the firm has been contracting to subservice loans since the inception of the program. Under a subservicing arrangement, the originating lender remains the servicer-of-record (that is, the lender retains full legal responsibility to the owner of the loan -- commonly Fannie Mae -- to ensure that servicing is performed) but contracts with Wendover to perform all functions. Currently, Wendover subservices approximately 1,350 HECM loans for 18 different lenders. Wendover acts as the servicer-of-record for the balance of its portfolio, having acquired servicing rights from the originating lenders through a correspondent program. This program, launched in June 1991, enables Wendover to purchase loans from originating lenders, and then sell the loans on the secondary market while retaining servicing rights and responsibilities.

Wendover's correspondent program offers lenders several advantages that can speed and facilitate their participation in the HECM Demonstration. For a fee of \$2,700, Wendover provides lenders with all of the loan documents required to originate HECM loans in their state along with a one-day training workshop, training manual, and on-going support from a staff of 15 in their North Carolina headquarters and 4 in Denver. This considerably reduces lenders' time and expense preparing their own documents and systems and is particularly helpful for lenders who do not have experience originating FHA loans. Lenders must, however, still develop their own Regulation Z compliance materials.

³⁸ Wendover currently services or sub-services HECM loans for an average of 40 lenders per month out of the 74 lenders participating in the program. Nearly all other lenders perform their own servicing, with the exception of the James B. Nutter Company, which services loans for itself and one other lender, and Providential, which has announced that it will no longer purchase servicing after August 31, 1994.

The Department permits, but does not require, lenders to charge borrowers a flat monthly fee for servicing. The fee amount must be established at closing and the principal limit on the loan reduced by a sufficient amount to fund the fee for the duration of the mortgage. The fee is charged only as it is earned. Because HECM servicing is not yet a competitive industry, Wendover Funding's fee structure has become the standard, with fees that average \$25 per month. In addition, the Department permits lenders to impose a flat fee of up to \$20 for every modification to the borrower's payment plan.

3.2 Lender Participation in Private Sector Reverse Mortgage Products

As mentioned, private sector reverse mortgage products were introduced before the HECM Demonstration began. The early products had mixed success, and their difficulties can be attributed to several factors. First, the laws of many states created barriers to reverse mortgages, as discussed in Chapter 5. Second, large expenses were incurred for marketing and other upfront costs that could not be overcome with the low volume of activity. Third, in some cases products that began in the 1980s depended heavily on expected appreciation in property values that did not materialize. Fourth, the lack of a secondary market for their products greatly increased the risk to the lender.³⁹

More recent products have enjoyed greater success. These products generally fall into two categories: those that resemble the HECM Demonstration, with differences primarily in

³⁹ The first of these products that had difficulty was that of American Homestead, offered from 1984 to 1988. Its profitability was tied to appreciation rates. Providential's more recent product was modeled after the American Homestead product, with its returns depending on appreciation. Without sufficient appreciation, funding for new products was not available.

terms of (1) higher principal limits, (2) payments that continue after the borrower moves from his or her home, and (3) less flexibility in structuring or changing payment plans; and products that reduce the risk faced by the lender by offering fewer options and limiting lines of credit. In general, these products appear to be designed to appeal to the higher end of the market in terms of home values. This section outlines the principal features of several of the private sector products that are now offered or will soon enter the market, and discusses their relationship to the HECM Demonstration.

3.2.1 Private Sector Product Descriptions

One of the primary complaints raised by lenders regarding the HECM Demonstration as currently structured is the limit imposed by the maximum claim amount, defined as the lesser of the appraisal property value or the FHA Section 203(b) limit for the local area. Even in high cost areas, this limit is currently \$152,300, far lower than many home values. By relaxing this restriction to provide higher upper limits for the amount of equity that a homeowner can receive, private sector products appear to be meeting unmet demand for reverse mortgages among elderly homeowners with higher property values.

Another objection to the current HECM Demonstration among lenders is the lack of authority to use direct endorsement, which can cause delays in the origination process.⁴⁰ As the program has grown some HUD field offices have become increasingly overburdened, further extending loan processing times. By originating their own products, lenders working through

⁴⁰ As noted, the Department is considering a change that would permit direct endorsement of HECM loans.

private reverse mortgage programs are able to greatly reduce processing times and better serve borrowers, many of whom have immediate needs for payments.

Due to the annuity-like structure of reverse mortgages, insurance companies are perceived to be the only major class of investors likely to be comfortable with the variable payment stream potential of reverse mortgages, and some financial institutions offering reverse mortgages have teamed up with such companies to reduce lender risks. (Teaming up with a well-known insurance company may also provide a significant marketing advantage). Exhibit 3-2 presents a comparison of several private sector reverse mortgage programs, highlighting the major features of each product in comparison to the HECM Demonstration.

3.2.2 Relationship of Private Sector Products to the HECM Demonstration

One concern raised by financial institutions that have developed private reverse mortgage products is that future increases in the 203(b) loan limit will make the HECM Demonstration increasingly competitive with private sector products.⁴¹ Conversely, the simplicity of several private sector reverse mortgage programs makes them more attractive to lenders, and could reduce the incentive for lenders to offer HECM loans.

According to the National Center for Home Equity Conversion and the lenders interviewed, a major concern for originators of HECM loans is the lack of direct endorsement. For consumers, important issues include the ineligibility of 2- to 4-unit buildings under the

⁴¹ The HUD Appropriation Act of 1994 raised the high cost area ceiling on the FHA 203(b) mortgage limit to 75 percent of the Fannie Mae and Freddie Mac conforming loan limit, making the current ceiling \$152,362.

EXHIBIT 3-2: Private Sector Reverse Mortgages

Company: Product Line	Capital Holdings: Homearnings	Transamerica: House Money	Freedom: Freedom Plan	Household: Ever Yours	Republic: Evergreen Home Income Plan
Dates of operation	1988-1992	as of June 1993	as of Fall 1993	as of July 1994	expected Sept. 1994
Distribution	CA, FL, KY, VA	CA, NJ, NY, PA	CA	FL, GA, IL, KY, MD, MI, OH, VA	CO, MD, NY, VA, WA
Minimum Borrower Age	65	65	None	62	65
Eligible Property Types	SF detached, condominium	1 to 4 units (if 1 is owner- occupied); manufactured housing, ¹ condominium	1 to 2 units; condominium	SF plus condominium; maximum home value \$500,000	SF detached only; values \$133,333 to \$800,000
Payment Options	monthly; line of credit w/monthly; lump sum w/monthly	monthly (\$150 min.); line of credit w/monthly; lump sum; max. claim \$600,000	lump sum; annuity option (term or life- time) ²	line of credit w/check access ³	monthly advances w/deferred lifetime annuity; ⁴ monthly payments w/lump sum limited to 1/4 of 75% of value
Fees	\$3,000 + 7% of property value	1½% of property value + normal closing costs	1½% of amount mortgaged ⁵ + normal closing costs	2% of appraised value (range \$2,000 to \$5,000) + normal closing costs	borrower pays standard closing costs; bank pays origination fee to originator
Servicing	own	own	insurance company	own	Wendover Funding
Number Originated	2,000	300	260	none as of 7/94	none as of 7/94

¹ Manufactured housing is eligible only if it is attached to a foundation and the homeowner also owns the land on which the house is located.

² Payments are made "wherever the borrower lives." If the borrower remains out of his or her residence for 365 days in a 465-day period, then he or she is considered to have moved permanently.

³ The line of credit ranges from \$10,000 to a maximum of \$250,000, and the borrower has the option of writing monthly payments to himself or herself. Borrowers are allowed to repay and reborrow at any time, and no payments are required until the borrower moves.

⁴ Annuities are provided by Hartford Life Insurance Company.

⁵ The homeowner is required to keep 25 percent of property value unmortgaged.

HECM Demonstration⁴² as well as the limited amount of equity available because of FHA's 203(b) loan limits. Private sector products have overcome these obstacles by providing faster loan processing with direct endorsement, allowing higher loan balances, and, in the case of two products now on the market, allowing buildings with two to four units to be eligible for reverse mortgage loans.

Some financial services companies offering reverse mortgages express the belief that the HECM Demonstration has been instrumental in bringing new programs into the market. With a large and growing market, these companies believe there is room for both the HECM loan product and their own products, but they maintain that it is important to keep distinctions between the two. Specifically, lenders offering private reverse mortgage products maintain that the HECM Demonstration should continue to serve the lower end of the market in terms of home value by not raising the cap on the maximum claim amount.

3.3 Influence of a Secondary Market for Reverse Mortgages

The establishment of a secondary market for reverse mortgages has been essential to the success of the HECM Demonstration. Lenders, particularly mortgage bankers, are accustomed to dealing with mortgage products that can be sold to secondary market investors in exchange for capital to make additional loans. Prior to the HECM Demonstration, reverse mortgage loans had to be maintained in the lender's own portfolio, thus putting the lender's own funds at risk and limiting the volume of loans that could be made.

⁴² In 1994 the Department proposed legislation to extend HECM eligibility to buildings with two to four units, provided one of the units is occupied by the building's owner who is eligible for a HECM loan.

At the outset of the Demonstration, the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac) agreed to purchase HECM loans originated by their network of approved lenders. Lender acceptance of the HECM instrument depends on the willingness of one or both of these institutions to purchase HECM loans. Most HECM loans issued to date have been sold to Fannie Mae. In fact, as of mid-July 1994, Fannie Mae's portfolio includes 7,533 HECM loans, about 94 percent of the total volume to date.⁴³ Freddie Mac has not followed up on its commitment to purchase HECM loans.

In order to sell reverse mortgage loans to Fannie Mae, the originating lender must negotiate a commitment equal to the estimated balance of all mortgages to be sold. Lenders who are not approved by Fannie Mae may still sell their reverse mortgages through Wendover's correspondent program. As noted, Wendover acts as an intermediary between the primary lender and secondary market. This concept has expanded the pool of lenders participating in the HECM Demonstration by offering secondary market access to small volume lenders or firms that are otherwise precluded from selling to Fannie Mae, and has been a factor in the recent volume increases under the Demonstration.

As a condition of purchasing loans made under the HECM Demonstration, Fannie Mae imposes on lenders additional requirements that affect the types of loans they originate. Fannie

⁴³ HECM loans not currently held by Fannie Mae fall generally into four categories. First, several loans will eventually be sold to Fannie Mae but have not yet either because they were originated only recently or because lenders made mistakes in originating the loans and must correct these mistakes before the loans are eligible to be purchased by Fannie Mae. Second, some loans cannot be sold to Fannie Mae because of similar mistakes in origination that cannot be corrected; lenders must therefore retain these loans in portfolio. Third, two lenders have originated fixed-rate HECM loans that Fannie Mae refuses to purchase. Finally, at least one lender is holding HECM loans in portfolio by choice, and does not intend to sell them to Fannie Mae.

Mae will not purchase shared appreciation mortgages. Lenders who sell HECM loans to Fannie Mae must also elect the assignment option. Fannie Mae also refuses to purchase fixed rate loans, primarily due to the greater risk that in a high interest rate environment the costs to the lender of obtaining capital might exceed the rate at which borrowers can draw against their HECM loans. These policies reveal the considerable influence the secondary market has upon primary lenders: as discussed above, no participating lenders have selected a shared premium option, none presently offers a shared appreciation loan, and only two have issued any fixed-rate mortgages.

Presently, Fannie Mae retains all reverse mortgages in portfolio. The convertibility of the HECM payment plan, which exists for the benefit of borrowers, does present a challenge to securitization of reverse mortgages. According to Fannie Mae, an investor product would need to be more restrictive. A more significant barrier to securitization, however, may be the low volume of HECM loans to date. Although recent growth has been impressive, the volume of HECM loans to date still does not warrant securitization.

CHAPTER 4

COUNSELING FOR HECM BORROWERS

Converting home equity into cash represents a major life decision affecting homeowners and their heirs. To make certain that prospective borrowers understand the full impact of tapping into home equity, the HECM Demonstration requires homeowners to receive counseling before they commit to participating in the program. Counseling serves to inform borrowers about the financial implications of the reverse mortgage loan as well as the other housing, social service and financial resources available to them. It has been argued that the counseling requirement may deter potential borrowers who are either unwilling or unable to attend counseling sessions. Discussions with counselors, lenders, and program administrators suggest, however, that counseling is an important component of the program that provides useful information to the borrowers and allows them to make informed decisions.

The statute mandates that borrowers receive counseling from an independent third party before entering into a HECM loan. Counseling must: (1) inform borrowers about other housing, social service, and financial resources that may be available to them; (2) review home equity options other than HECM loans; (3) explain the financial implications associated with the HECM loan; and (4) make them aware of the potential impacts of a reverse mortgage on their tax status, eligibility for public benefits, and estate.

HECM counseling interventions are typically very client-specific and time-intensive, and the relative emphasis placed upon each of the four mandated topics varies according to the

borrower's needs, interest, and understanding. There is also some regional and even local variation in what topics are discussed as a result of the availability or absence of particular options and services. Typically, counselors report that the financial terms and structure of the reverse mortgage are more difficult to explain to clients than other information. Clients often have trouble understanding the concept of the reverse mortgage and the increasing balance associated with the loan. Counselors also find it challenging to explain the maximum claim amount, the interest rates, and the associated fees to clients who are unfamiliar with these concepts.

Although counselors do not follow a single standard procedure, some approaches are common to many providers. For example, client intake usually takes place by telephone, when prospective borrowers first contact the counseling agency. This initial telephone contact allows the counselor to gather basic personal and property data to make a preliminary eligibility determination. Borrowers are then typically sent a package of written materials to study and review in advance of their counseling session.

At the counseling session itself, which may last from 1 to 3 hours depending on the circumstances, the counselor and client spend time discussing needs in greater detail. This might include clarifying information, working up or presenting projections showing the impact of various HECM payment options, and talking through other issues, such as alternatives to HECM, the individual goals and situation of the client, and other social services that may be required. The session typically concludes with the completion of a counseling certificate.

Questions and concerns that arise after the session are usually handled by telephone. Counselors generally find that required HECM topics are too complicated to be addressed through one limited intervention. In the words of one counselor, "You can't expect borrowers to absorb complicated material all at once. Information can only be simplified to a point. If it's reduced too much then I'm not doing my job."

Counseling agencies are guided by the HUD Housing Counseling Handbook (7610.1 rev. 2) and by the HUD Program Participants' Handbook (4235.1). Other popular resources include publications from the American Association of Retired Persons (AARP) and question-and-answer guides developed by Fannie Mae. Materials that counselors typically provide to consumers include a computer printout of the amortization schedule, fact sheets, and lists of alternative resources.

Early in the Demonstration, several participants suggested that mandatory counseling might alienate some potential borrowers who would consider it paternalistic. Now, however, advocates for the elderly, lenders, and others involved in the HECM Demonstration generally agree that the complexity of HECM loans warrants counseling. In particular, the most vulnerable households are typically most in need of counseling and are least likely to know that they could benefit from assistance. Most observers agree that nearly all borrowers can benefit from the information, explanation, and support that counseling provides. While other methods of providing information about the program (such as videotapes, an 800 telephone information line, community college courses, and on-line services) have the potential to provide information to some consumers, most agree that such measures would not be as effective as one-on-one

assistance. Concern about HECM counseling arises primarily from the difficulties encountered in bringing the required services to these consumers. In fact, according to the National Center for Home Equity Conversion, the primary issue for lenders is no longer whether counseling itself is a good idea, but rather the availability and quality of counselors.

When the HECM Demonstration began, availability of counseling services was limited. Today, with numerous approved agencies in place, counseling services are much more widely available. However, while HUD's network of comprehensive housing counseling agencies has expanded, it is not evenly distributed. Coverage tends to be better in urban areas, although the situation in Los Angeles, with only one counseling agency for all of Orange County, demonstrates that uneven distribution can be a problem in many areas.

In several states, counseling agencies responsible for HECM counseling serve large geographic territories. This can make it difficult for borrowers to come to counselors or for counselors to travel to borrowers. Consumers with limited mobility sometimes have to wait for service because counselors are unable to schedule the necessary time for a home visit. In addition, the difficulty of making financial comparisons without using the HUD HECM personal computer software (unless the counselor has a laptop computer), is an added problem for counselors, although HUD does encourage home visits to screen properties for eligibility.

One potential solution to transportation difficulties is the use of telephone counseling. While counselors understand the need for telephone counseling in some circumstances, those interviewed for this study emphasized that the quality of telephone counseling tends to be lower

than that of face-to-face counseling. Counselors find it easier to establish rapport with clients in person, and therefore to learn more about each client's particular needs. Counselors involved in telephone counseling report spending more time explaining the program in order to ensure comprehension, and less on alternatives.

A relatively new obstacle confronting some counseling agencies is maintaining their HUD approval. In order to remain approved, agencies must provide counseling to at least 50 households per year. Some agencies, particularly those in more rural areas, are not able to generate that volume. Several groups are working to find creative solutions to such dilemmas, however. For example, in Virginia the State Office on Aging is developing a pilot program to have area agencies work as satellite offices, and jointly retain their HUD approval.

AARP is the only group under contract to the Department to provide training to HECM counselors. Attendance at the two-day AARP training is not a formal prerequisite for providing HECM counseling, but participants report that the training greatly enhances their understanding of reverse mortgages and their skill in HECM counseling. AARP has provided reverse mortgage training for counseling staff from new and existing HUD-approved agencies, members of the nation's aging network, lenders, and attorneys specializing in elder law issues. HUD funded initial training efforts at \$300,000 in 1990, provided \$150,000 in 1991 and 1992, and increased funding to \$200,000 in 1993. AARP applied for \$250,000 in 1994. The training funds have allowed the AARP and its subcontractor, the National Center on Home Equity Conversion, to develop and deliver multiple training workshops in each of the HUD regions. As of August 1994, AARP had offered 64 training sessions for approximately 3,000 people.

Participants included some 1,200 counselors from 700 agencies, lenders, HUD headquarters and field staff, elder-law attorneys, and aging network specialists.

The quality of HECM counseling has not been consistent over time or across agencies. Anecdotal evidence from lenders and borrowers has suggested that some counselors provide higher-quality services than others, although observers report that the overall quality of counseling services is improving and becoming more consistent. AARP training appears to have played a significant role in this overall improvement. Rigorous counselor certification is sometimes cited as a way for ensuring consistent high-quality counseling services in the future. The National Federation of Housing Counselors offers a test for counselors, as do some states, but rigorous and consistent certification requirements have not been put into effect. HUD plans to issue a Request for Proposals to obtain assistance in certifying all types of housing counselors. However, the effect of certification on the quality of HECM counseling is not clear because the certification process will include the full range of housing counseling functions and not be focused on the HECM Demonstration.

Another concern for counseling agencies is the source of funding, since resources at the federal, state, and local levels are limited. Agencies are prohibited from charging clients for counseling, nor can participating lenders pay for counseling. According to several counselors interviewed for this evaluation, the rate at which Department reimburses agencies may not fully compensate agencies for their actual costs in providing HECM counseling.⁴⁴

⁴⁴ The Department issued a Notice of Funding Availability (NOFA) in March 1994 that changed the formula to determine agencies' costs per counseling unit. The per unit reimbursement will be lower than under the previous formula, but definitions of counseling units have been clarified, and the formula is intended to more closely compensate agencies for their actual costs.

In 1994, of the approximately \$12 million appropriated for counseling, \$250,000 was allocated to provide training for the HECM Demonstration and \$8.9 million was allocated for the full range of counseling services provided by HUD-approved counseling agencies. The HUD Appropriation Act of 1994 contains \$50 million for counseling activities during fiscal year 1995, although that amount is currently under discussion for partial rescission. Other funds for counseling agencies come from Community Development Block Grants (CDBG), state or local governments, private sources, or Community Reinvestment Act (CRA) funds. The Department does not know how much of these other funding sources may have been used for HECM counseling.

Because of tight funding, agencies seldom perform thorough client tracking. Estimates of the number of initial inquiries that result in reverse mortgage counseling tend to be based on perception rather than recordkeeping. Similarly, agencies lack the capacity to follow up with counseled clients to determine how many actually choose to take out a HECM loan and why. The screening function of counseling agencies is highly valued by lenders, who are spared the time and expense of having to explain the program features to prospective borrowers who may prove ineligible or may choose not to pursue a HECM loan after learning about it. Counselors suspect that, among those counseled who decide not to move forward, there are some for whom a reverse mortgage may make sense in the future. If circumstances change (or, in the case of younger borrowers, when the borrower grows older and can realize larger payments), the homeowner may decide to pursue a reverse mortgage either through the HECM Demonstration or through a non-insured program that may be available in the local market.

The Housing Authorization bill that had been pending in the last Congress would have required a survey of borrowers for the 1996 evaluation of the HECM Demonstration. Such a survey would to some extent serve the client tracking function by providing more information about the clients who move forward in the program. At present there is no legislation pending in the current Congress regarding a mandatory survey of HECM borrowers, although the Department will consider conducting such a survey through its Office of Economic Affairs prior to the 1996 HECM evaluation.

CHAPTER 5

LEGAL AND REGULATORY ISSUES

While significant progress toward eliminating barriers to the growth of the HECM Demonstration has occurred since the Department's preliminary evaluation in 1992, particularly at the state level, there are still a number of regulatory and legal issues that affect the implementation, and potentially the continued success, of the HECM Demonstration. This chapter is organized in three sections. The first section discusses disclosure issues including those required under the provisions of the Truth-in-Lending Act (TILA), and the specific HECM disclosure requirement of the National Housing Act. The second section addresses an accounting issue that was raised by the Securities and Exchange Commission (SEC) regarding income recognition from publicly held companies which invest in uninsured reverse mortgages -- an issue that does not affect investors in HECM loans. Finally, the third section presents an overview of the status of state laws that affect the implementation of the program in particular states.

5.1 Disclosure Issues

As noted in the 1992 Preliminary Evaluation of the HECM Demonstration, the Federal Reserve Board considers a reverse mortgage (including one originated under the HECM Demonstration) to be "an open end consumer credit plan under which extensions of credit are secured by a consumer's principal dwelling." Specifically, a HECM loan is defined as open end credit plan because borrowers can have subsequent access throughout the life of the loan to

any funds that they voluntarily repay after having received them. Accordingly, disclosures for open end credit as required by the Truth-in-Lending Act (TILA) apply to HECM loans.

TILA disclosure requirements for open-end credit plans differ from disclosure requirements for traditional home mortgages which are recognized as closed end credit. The disclosures for HECM loans are similar to those required for revolving credit card accounts and home equity lines of credit, and not those of traditional mortgages. Because of this difference, mortgage lenders must generally learn and comply with an entirely different set of disclosure requirements in order to participate in the HECM Demonstration.

TILA disclosures for open end credit include a number of specific statements that make little sense in the context of reverse mortgages. For example, TILA requires that lenders provide potential borrowers a statement that "in the event of any default, the consumer risks the loss of the dwelling." This statutory provision was implemented by the Federal Reserve Board in Regulation Z, which requires a "statement that ... loss of the dwelling may occur in the event of a default." However, such a statement is inappropriate for HECM loans because borrowers are much less likely to lose their property as the result of a loan default. In general, borrowers would risk losing their property only if they failed to pay taxes, failed to keep the property in good repair, or otherwise endangered the lender's security interest in the property.

To eliminate this confusion, the Department is preparing a proposed rule that would eliminate the access borrowers presently have to funds that have been repaid during the life of the loan. The Department expects that, if implemented, this change would switch the

classification of HECM loans from open end to closed end credit, eliminating the inappropriate disclosures.

Another important disclosure provision affecting the HECM Demonstration is the National Housing Act requirement for a disclosure of total loan costs as effective interest rates prior to loan closing. The *total loan cost (TLC) rate* is the total cost of the loan to the borrower, expressed as an effective annual percentage rate. For reverse mortgages in general, the TLC rate is affected by many factors including:

- the nominal rate used to calculate interest charges against the loan balance;
- the pattern of principal advances by the lender to the borrower, including closing costs and fees as well as monthly payments or draws against a line of credit;
- the actual rate of appreciation of the borrower's property value during the life of the loan; and
- the length of time that the loan remains outstanding.

For example, the TLC rate on the loan will be higher as a result of (1) higher nominal interest rates; (2) higher closing costs, mortgage insurance premiums, and fees for servicing or other post-closing charges; (3) higher house price appreciation rates; or, especially, (4) shorter loan terms. Effective TLC rates will also be higher for loans in which the borrower received less advance of principal (such as, for example, when the borrower takes tenure payments as opposed to a large lump sum at closing).

Since reverse mortgages are less costly for borrowers who intend to remain in their homes for most or all of their remaining life expectancy--and for borrowers who will remain alive for most or all of their remaining life expectancy--the TLC rates for both HECM loans and conventional reverse mortgages are substantially higher for any loan that remains outstanding for a significantly shorter term than life expectancy. The reason is that reverse mortgages, unlike forward mortgages, begin with low initial loan balances that increase over time. Because closing costs, mortgage insurance premiums and other fees represent a fixed cost of loan origination, they may appear high relative to the borrower's cash received if the loan is paid off before cumulative payments to the borrower have grown significantly.⁴⁵

Under the HECM Demonstration, lenders are required to disclose the anticipated total loan cost rates under nine different scenarios, representing one assumed pattern of cash advances along with three different actual house price appreciation rates (zero percent, four percent, and eight percent annually) and three different loan periods (two years, the borrower's life expectancy, and 140 percent of the borrower's life expectancy).⁴⁶ The algorithm used to compute the HECM total loan cost disclosure, as well as a sample disclosure for a typical borrower, are shown in Appendix B of this report.

⁴⁵ Some private sector reverse mortgage products have received critical attention arising from the experiences of borrowers who have paid off their reverse mortgages at a relatively early date and have therefore experienced high effective rates (see Andrew Bary, "Reversals of Fortune," Barron's, July 4, 1994). These have generally been the result of high loan fees, interest rates, and exit fees such as shared appreciation.

⁴⁶ The National Housing Act requirement is for two loan terms: a short term and one equal to the borrower's life expectancy. The Department added the third term based on 140 percent of life expectancy to disclose to the borrower the cost of holding the loan for a longer period than life expectancy.

Section 154 of the Riegle Community Development and Regulatory Improvement Act of 1994, enacted on 9/23/94, requires disclosure of total loan costs for all reverse mortgages in a manner similar to that currently required by HUD on HECM loans. The Federal Reserve Board published a proposed rule on December 2, 1994 that would implement this provision after receipt and review of public comments and issuance of a final rule.

5.2 Income Recognition Under Reverse Mortgages

The structure of all reverse mortgages (including HECM loans) introduces significant uncertainty as to the investment value of the loan. Any reverse mortgage providing for payments (or a line of credit) during an unspecified term represents an uncertain liability because the total obligation of the lender depends on the actual life of the loan, as well as on future changes in interest rates. For example, the tenure payment option under the HECM Demonstration provides for monthly payments as long as at least one borrower remains in the property as his or her primary residence. Moreover, uninsured reverse mortgages (i.e., private sector products) also represent an additional uncertainty in asset value because repayment of the loan depends on the value of the property at loan termination. Investors who hold HECM loans as assets are not at risk of loss from a shortfall in the property value because of the protection that the HECM Demonstration provides. The Securities and Exchange Commission requires these sources of uncertainty to be reflected in the accounting treatment of publicly held companies which invest in uninsured reverse mortgages. This is a protection for investors in such companies from misleading information about the recognition of income from these assets.

In 1992 the SEC, recognizing that reverse mortgages "are unique new products that are not contemplated by existing accounting literature,"⁴⁷ sought to clarify the accounting treatment of projected cash flows under reverse mortgages, specifically those offered by the Providential Corporation through its uninsured reverse mortgage program. As the SEC noted,

customary loan accounting is inappropriate because: (1) laying aside the "borrower's" ability to prepay the "loan," return of and return on the Company's investment will come solely from proceeds of sale of the borrower's residence; (2) the Company has an open-ended commitment to make payments to the mortgagor until his or her death; and (3) the absence of a fixed and certain maturity date and amount are a material risk to realization.

The SEC developed an accounting policy for the recognition of income from uninsured reverse mortgages that "recognizes the risks associated with the open-ended commitment to make payments to the mortgagor by adjusting the accounting yield on a group or 'pool' of contracts on the basis of actuarial estimates of contract terminations." While the outline of this accounting policy is appropriate given the uncertainty associated with reverse mortgages, however, the SEC also determined that "the Company *should not assume any future changes in property value when projecting cash flows*," and noted that "the staff will object to income recognition that includes assumptions about future increases in the value of real estate."⁴⁸

The SEC's proposed pool accounting treatment for uninsured reverse mortgages appears to have been appropriately developed partly in response to the possibility of future regional housing price declines (such as Texas during the 1980s), which could adversely affect the

⁴⁷ Letter of Walter P. Schuetze, Chief Accountant, Securities and Exchange Commission to William J. Texido, Chairman, President, and Chief Executive Officer, Providential Corporation, July 14, 1992.

⁴⁸ *ibid.*, emphasis added.

income received on reverse mortgage assets located in such a region. Prior to the SEC ruling, the accounting treatment permitted lending institutions to recognize inappropriately high income from mortgage loans in these troubled housing markets.

Unfortunately, however, the SEC's proposed assumption of no future changes in property value significantly reduced (1) the financial attractiveness of uninsured reverse mortgage loans to publicly held lenders and investors; (2) the monthly payment or line of credit that such lenders could offer to borrowers; and (3) the financial viability of companies holding uninsured reverse mortgages in portfolio.

In response to comments from the Providential Corporation and other organizations participating in or interested in reverse mortgage programs, the SEC revised its policy in September 1992. The revised SEC ruling regarding the recognition of income from uninsured reverse mortgage assets allowed the investor to take into account projected appreciation in property values. Specifically, the SEC determined that pool basis accounting would still apply, but that income could be recognized at the internal rate of return for a stream of expected cash flows for a pool of reverse mortgages, with the expected cash flows determined by simulation techniques⁴⁹ that take into account a reasonable projected mean rate of house price appreciation as well as the variation of individual house price changes around the projected mean rate. The policy provides that this simulation be re-run each reporting period after property values have been "marked to market" according to real estate appraisals (or actual property transactions, for houses sold through loan terminations). The expected cash flow for the pool of reverse

⁴⁹ That is, by a Monte Carlo simulation.

mortgages is then defined as the average of the cash flows projected in several runs of the simulation, and the internal rate of return for income recognition purposes is computed from this expected cash flow.

The revised accounting policy developed by the SEC appears to provide protection to investors in publicly held companies that hold uninsured reverse mortgages as assets, while not establishing a barrier to the further development of the private, uninsured reverse mortgage industry.

5.3 Legal Issues at the State Level

The HECM Demonstration was designed to make the program available to prospective borrowers in as many states as possible. Since the preliminary evaluation was completed in 1992, several states have amended their legislation or adopted new laws that permit expansion of the HECM Demonstration. Exhibit 5-1 illustrates the loan volume by state as of July 13, 1994.⁵⁰ As this exhibit shows, HECM loans have been originated in all but four states: Alaska, North Dakota, South Dakota, and Texas.

Variations in loan volumes among states are, in part, a reflection of legal and regulatory barriers that restricted reverse mortgage activity in the first few years of the Demonstration. States that had no HECM activity in 1992 but in which HECM loans have been originated

⁵⁰ In interpreting these figures it is important to keep in mind that loan volume in each state depends on several factors other than state legal barriers, including the numbers of interested lenders, qualified counselors, and eligible borrowers.

during the past two years, include Arkansas, Kentucky, Louisiana, Mississippi, Oklahoma, West Virginia, Wisconsin, and Wyoming. In addition, 31 loans have now been originated in Puerto Rico. In several states, a "Model State Law on Reverse Mortgages," developed by AARP in cooperation with the ABA's Commission on Legal Problems of the Elderly, the National Center for Home Equity Conversion, and HUD, has been used to ease the difficulties of state laws inappropriate for regulating reverse mortgages. The model law both authorizes and regulates reverse mortgages. Specifically, the model law:

- promulgates specific rules for reverse mortgage lending, and identifies legal provisions that are inapplicable to reverse mortgage lending;
- specifies the treatment of reverse mortgage proceeds by public benefit programs; and
- provides a mechanism for encouraging and supporting independent consumer information and counseling.

The lack of activity in Alaska, North Dakota, and South Dakota can be attributed more to demographic and economic issues than to legal and regulatory barriers. There are no known legal and regulatory barriers in these states, and it appears to be simply a matter of time before loans are originated there. In North Dakota, at least one reverse mortgage lender is available but no loans have been originated yet.

In the State of Texas, however, lack of HECM activity clearly reflects the continued existence of significant legal barriers to the use of reverse mortgages. As the Department's initial evaluation of the HECM Demonstration noted, perhaps the most significant state-level barrier to the HECM Demonstration is a homestead provision in the Texas constitution that

EXHIBIT 5-1: HECM Activity by State¹

<u>States with HECM Activity</u>			
STATE	NUMBER OF LOANS	STATE	NUMBER OF LOANS
Alabama	46	Mississippi	13
Arizona	254	Montana	18
Arkansas	15	Nebraska	20
California	1,219	Nevada	47
Colorado	532	New Hampshire	82
Connecticut	204	New Jersey	528
Delaware	23	New Mexico	105
District of Columbia	110	New York	924
Florida	319	North Carolina	248
Georgia	205	Ohio	151
Hawaii	91	Oklahoma	97
Idaho	88	Oregon	83
Illinois	554	Pennsylvania	452
Indiana	78	Puerto Rico	31
Iowa	10	Rhode Island	332
Kansas	56	South Carolina	97
Kentucky	16	Tennessee	21
Louisiana	49	Utah	201
Maine	76	Vermont	68
Maryland	247	Virginia	332
Massachusetts	32	Washington	321
Michigan	177	West Virginia	7
Minnesota	232	Wisconsin	23
Missouri	101	Wyoming	15
<u>States with No HECM Activity to Date:</u>			
Alaska	North Dakota	South Dakota	Texas

¹ Data reflect originations and firm commitments as of July 1994.

prohibits lenders from making home mortgages for any reasons except to purchase a home, to pay taxes on a home, or to finance repairs to a home. Because of this, no second mortgages or home equity lines of credit can be advanced in Texas except for these stated purposes. The homestead provision is viewed as a protection against foreclosure, but it denies elderly

homeowners in Texas the opportunity to obtain reverse mortgages (including HECM loans). In April 1994, the U.S. Court of Appeals for the Fifth Circuit ruled that, under the Alternative Mortgage Transactions Parity Act of 1982, regulations of the Office of Thrift Supervision preempted the Texas constitutional and statutory homestead laws that barred reverse mortgages.⁵¹ However, this ruling has been overturned by Section 102(b)(5) of the Interstate Banking and Branching Efficiency Act of 1994, enacted 9/29/94.

Despite the continued prohibition in Texas, many other state-level legal and regulatory barriers to reverse mortgage loans have been eliminated at least to the extent that lenders now feel comfortable with the level of legal risk that still remains as a result of ambiguous state laws and the novel features of reverse mortgages. The following examples reflect the range of activity that has been initiated recently to reduce state-level barriers to reverse mortgage loans or to encourage home equity conversion.

- New York passed enabling legislation specifically authorizing reverse mortgage loans and exempting HECM loans from any provisions that would otherwise limit their availability. This change eliminated some confusion among lenders concerning whether reverse mortgage loans were authorized under existing statutes. The New York enabling legislation also requires that lenders notify a third party selected by the borrower or the state office on aging in the event of possible foreclosure. New York also eliminated recording taxes on reverse mortgages, which should sharply reduce closing costs in a state that currently has among the highest closing costs in the nation on HECM loans.
- Tennessee also passed enabling legislation, and recognized that the term of a reverse mortgage may be either definite or indefinite by eliminating (with respect to reverse mortgages) a 20-year maximum term for open-ended credit.

⁵¹ First Gibraltar Bank, FSB and Beneficial Texas, Inc. v. Morales, 19 F. 3d 1032 (5th Cir. 4/29/94.)

- Illinois authorized the Illinois Housing Development Authority to offer reverse mortgages. The legislature is also considering a bill that would eliminate a provision prohibiting reverse mortgages for purposes other than to finance home improvements or to pay insurance premiums or real estate taxes.
- South Carolina enacted reverse mortgage enabling legislation effective July 1, 1994 following the recommendations of a task force (including the state housing finance agency and the state commission on aging) to study home equity conversion.
- Utah authorized the state Division of Aging and Adult Services to provide reverse mortgage counseling, either directly or through independent contractors.
- The Massachusetts Joint Legislative Rules Committee is considering a recommendation to review state statutes that affect reverse mortgage lending.
- Several states have passed legislation exempting proceeds of reverse mortgage loans from calculations used to determine eligibility for means-tested entitlement programs.

Although most significant state-level barriers to reverse mortgage origination have been eliminated, some remain that affect the classes of lenders who may originate them. In Minnesota, for example, the state government has determined that mortgage bankers are not authorized to originate reverse mortgages. Before this recent interpretation, the majority of HECM loans in Minnesota were originated by a mortgage banker. It is not clear whether this recent ruling will affect the future volume in the state. Also, a bill that would have authorized credit unions to originate reverse mortgages was vetoed. Other lenders, however, are permitted to originate reverse mortgages in Minnesota.

Although legal uncertainties affecting the origination of HECMs and other reverse mortgages have diminished significantly, the Department remains concerned about the uncertainty of state laws that may affect enforcement of the HECM as a first mortgage. This

is of particular interest to HUD because enforcement of lien priority against other creditors becomes an increasingly important issue over time as loan balances begin to exceed property values so that some secured creditors might not be able to have their loans satisfied from the sales proceeds. Most HECM loans will probably be assigned to HUD before this situation occurs so that HUD has legal concerns not necessarily shared to the same degree by originating lenders.

The laws in some states are not clear regarding the lien priority to be granted to loan advances made over an extended number of years under a mortgage that was recorded as a first mortgage. HUD has attempted to ensure that all HECM loan advances will be regarded under state law as mandatory or obligatory advances that, under the law prevailing in most states, would also have a first lien priority, but there remains some legal risk in some states.

CHAPTER 6

ACTUARIAL ANALYSIS OF THE HECM MORTGAGE INSURANCE PREMIUM

In the design of the HECM Demonstration the mortgage insurance premium (MIP) is intended to cover potential claim losses against the FHA insurance fund. Insurance claim losses will occur in the event that the borrower's total outstanding loan balance exceeds the appreciated value of his or her property at the time that the borrower's loan becomes due and payable. In general, claim losses are expected to arise as a result of one or more of the following circumstances:

- First, losses may arise because the borrower remains in the property for substantially longer than expected at the time of loan origination. The sum of monthly or lump sum payments (plus interest, MIP, and other charges against loan balance) may exceed the value of the property before the borrower leaves the property.
- Second, losses may arise because the property appreciates over the duration of the loan at an average rate that is substantially lower than the rate assumed in the calculation of HECM payments. In this case the value of the property at the time that the loan becomes due and payable may not be adequate to repay the outstanding loan balance
- Third, claim losses may arise because interest rates rise, resulting in a higher rate of interest accrual than anticipated. Since most HECM loans have adjustable note rates, and payments to borrowers are not reduced when rates rise, the higher interest accrual may cause the loan balance to exceed the property value.

Of course, in many cases it is expected that the value of the borrower's property will exceed the outstanding loan balance at the time that the loan becomes due and payable, either because (1) the borrower remains in the property for a substantially shorter period than his or

her life expectancy at loan origination, (2) the property appreciates at an average rate that is substantially higher than the expected appreciation rate, or (3) interest rates remain below the expected note rate. In these cases no claim will arise against the FHA insurance fund, even though the borrower paid initial and monthly mortgage insurance premiums (MIP) through the duration of the loan.

The HECM Demonstration is designed to break even, and is not intended to be a subsidy program. For this reason, it is important that the MIP be established at a level that is sufficient to cover expected insurance claims, but no higher than necessary to avoid losses to the insurance fund.

In order to ensure that the MIP is established at an appropriate level, the statute authorizing the HECM Demonstration calls for regular evaluations to determine whether the risk of claims against the FHA insurance fund is adequately covered by mortgage insurance premiums. This chapter presents the first evaluation of the adequacy of mortgage insurance premiums under the HECM Demonstration. The analysis in this chapter was performed independently by an actuarial consultant.

It is important to recognize that this initial evaluation of the adequacy of mortgage insurance premiums is based on a relatively small amount of data collected from the earliest years of the HECM Demonstration. Because of this, the Department does not yet have adequate confidence in the reliability of the assumptions and estimates used in this independent evaluation to use it in support of significant policy recommendations. Instead, the Department obtained this

initial evaluation of mortgage insurance premiums to meet the statutory requirements of this evaluation, and to use the initial assessment to determine whether the Department's exposure warrants immediate closer scrutiny. The Department believes that the methodology described in this chapter is sound, and intends to develop it further at a later date. The Department further finds that the initial assessment of the adequacy of the mortgage insurance premium presents no reason for immediate concern regarding the Department's risk exposure under the HECM Demonstration.

6.1 Methodology for Evaluation of Mortgage Insurance Premium Adequacy

This evaluation of the adequacy of the HECM mortgage insurance premium is based on individual loan data for the 7,473 active HECM loans as of June 30, 1994. The analysis makes projections of the following critical variables that determine whether or not claims will be filed against the FHA insurance fund (as well as the claim amounts):

- Cash payments to borrowers,
- Mortgage insurance premiums,
- Interest charges,
- Outstanding loan balances,
- Property values, and
- Loan durations.

On the basis of these projections, the analysis estimates the present value (as of July 1, 1994) of expected claims and projected mortgage insurance premiums for all loans active as of June 30, 1994. Of course, borrowers who originated loans prior to this date have already paid mortgage insurance premiums, including an upfront premium of 2 percent of the adjusted

property value, generating a reserve that will be used to compensate the FHA insurance fund for future claims under the HECM Demonstration. Therefore, the reserve existing as of June 30, 1994 was computed by calculating the present value of mortgage insurance premiums that had been paid through the HECM Demonstration as of that date, and then subtracting the total amount of claims that had been filed against the FHA insurance fund as of the same date.⁵²

If the present value of projected mortgage insurance premiums (plus the reserve) exceeds the present value of expected claims, then the analysis indicates that the HECM Demonstration is not expected to generate net losses for the FHA insurance fund.⁵³ Conversely, if the present value of expected claims exceeds the present value of projected mortgage insurance premiums (plus the reserve), then the analysis indicates that the mortgage insurance premium is not adequate to compensate for losses generated under the HECM Demonstration.

Cash Payments to Borrowers. For the purposes of estimating future cash payments to borrowers, the analysis makes the assumption that all borrowers, regardless of the pattern of past payments, will receive monthly payments under the tenure plan, starting July 1, 1994 and continuing throughout the remaining term of the loan. These payments are based on (1) the *net principal limit* of each loan as of June 30, 1994; (2) the age of the youngest borrower at loan origination; (3) the expected interest rate; and (4) the number of months from loan origination through June 30, 1994.

⁵² It should be noted that the Department may eventually be reimbursed in part for claims paid at the time of assignment when the loan becomes due and payable and the property is sold.

⁵³ Note that the analysis does not include the Department's administrative costs (salaries and expenses), which have not yet been estimated with regard to the Demonstration.

The first step in projecting cash payments to the borrower is to calculate the *net principal limit*, which is the amount that is available to the borrower as of June 30, 1994. The net principal limit is computed by calculating the *new principal limit* as of June 30, 1994, and then subtracting the *outstanding loan balance* as well as a *loan servicing set-aside*.

- The original principal limit for each borrower is determined at the time of application by applying a principal limit factor (computed on the basis of the age of the youngest borrower and the expected interest rate) to the adjusted property value. The principal limit is increased each month by the following formula:

$$\text{PRINCIPALLIMIT}_t = \text{PRINCIPALLIMIT}_0 * (1+i)^{(k-1)}$$

where i is the monthly compounding rate calculated as one twelfth of the sum of the expected interest rate and the annual mortgage insurance premium rate (0.5 percent), and k ($=1,2,\dots$) indicates the k -th month during which the loan has been active. The new principal limit, then, is the principal limit in effect as of July 1, 1994.

- The loan servicing set-aside is an amount that is set aside from the principal limit to cover future loan servicing fees, and is calculated as the present value of the stream of servicing fees projected over the remaining maximum duration of the loan. The loan servicing set-aside is computed using the following formula:

$$\text{SERVICINGFEES-SET-ASIDE}_t = S * [(1+i)^{(m+1)} - (1+i)] / [i * (1+i)^m]$$

where S is the monthly servicing fee, i is the monthly compounding rate, and m is the number of months that the loan servicing fee is expected to be collected over the remaining duration of the loan:

$$m = 12 * (100 - \text{MIN}(\text{BORROWER'S INITIAL AGE}, 95)) - k + 1$$

- Finally, the net principal limit for the loan was then calculated as the new principal limit as of June 30, 1994 minus the outstanding loan balance and the loan servicing set-aside as of the same date.

After computing the net principal limit, the future monthly cash payment to the borrower under a tenure plan was then calculated as an annuity, using the following formula:

$$\text{MONTHLY PAYMENT} = \text{NET PRINCIPAL LIMIT} * \frac{(1+i)^m * i}{(1+i)^{(m+1)} - (1+i)}$$

Mortgage Insurance Premiums. The mortgage insurance premium is equal to two percent of the maximum claim amount in the first period of the loan, plus 1/2 percent of the outstanding loan balance annually thereafter. Since the analysis is based only on loans that were active as of June 30, 1994, the initial two percent MIP is already included in the outstanding loan balance.

Interest Charges. Future interest rates are uncertain, but it seems reasonable to assume that the current interest environment is abnormally low. The median expected interest rate for

HECM loans, 8.52 percent, was therefore used as a proxy for interest charges in this analysis. For the purpose of this analysis, the interest rate is assumed to remain constant throughout the remaining duration of each loan.

Outstanding Loan Balances. In the initial year of the analysis, the outstanding balance of each loan is recorded in the data base provided by Computer Data Systems Incorporated (CDSI) as of June 30, 1994. In each subsequent year of the analysis, the outstanding loan balance is estimated as the previous year's loan balance plus cash payments to borrowers, mortgage insurance premiums, servicing fees, and interest charges during that year. The analysis assumes that there are no partial repayments by borrowers during the term of the loan.

Property Values. The projected property value is based on the initial property value inflated by an assumed annual appreciation rate of three percent over the remaining life of the loan.⁵⁴ Therefore, the value of each property in any given year is estimated as follows:

$$\text{PROPERTYVALUE}_t = \text{PROPERTYVALUE}_0 * 1.03^t$$

where t ($=0,1,2,\dots$) indicates the number of years since the loan was originated.

⁵⁴ The HECM Demonstration uses principal limit factors calculated on an assumed long term annual property appreciation rate of 4 percent. However, the design of the Demonstration also takes into account the likely variability of individual rates of house price appreciation around the average rate. In contrast, this initial evaluation of the adequacy of mortgage insurance premiums does not take into account variation in individual house price appreciation rates, and it uses a lower annual average appreciation estimate of 3 percent. The use of the lower average appreciation rate is more appropriate for evaluating the premium at this time for two reasons. The first is that Price Waterhouse, in its independent actuarial review of FHA's Mutual Mortgage Insurance Fund for fiscal year 1993, assumed a constant quality house price appreciation rate of 3.2 percent into the future. The second reason is that a lower average appreciation rate should be used to offset the losses that individual house price variations, if included in the estimates, would have introduced. For future evaluations, the Department intends to extend the analysis by developing a Monte Carlo simulation approach to account for cross-sectional variation.

Loan Durations. For the purposes of computing the servicing fee set-aside as well as monthly payments under a tenure option, the HECM Demonstration assumes that each borrower will remain in their property for the greater of five years or until they turn 100 years of age. However, this evaluation of the adequacy of mortgage insurance premiums develops estimates of the probability that each loan will become due and payable in any given year, either because of the death of the (younger) borrower or because the property ceases to be the borrower's principal residence for other reasons.⁵⁵ The total probability that a loan will become due and payable in any given year is computed as the sum of the borrower's *probability of death* and the *probability of repayment* for reasons other than death.

- The probability of death is estimated on the basis of mortality probabilities developed by the National Center for Health Statistics of the U.S. Department of Health and Human Services.⁵⁶ The mortality probability represents the proportion of persons alive at the beginning of each one-year age interval who are expected to die during that age interval. The estimated probability of death during each borrower age interval is shown in Exhibit 6-1.
- The probability of repayment for reasons other than death is estimated at 30 percent of the corresponding probability of death. While the probability of

⁵⁵ As of June 30, 1994, 550 HECM loans had become due and payable. Of the loans for which the payoff reason was known, 37 percent were paid off because of the death of the borrower, and 63 percent were paid off for another reason. The percentage paid off because of the borrower's death could be higher, because borrower deaths are not always recorded.

⁵⁶ "Vital Statistics of the United States: Volume II, Section 6," Table 1, Life Table for the Total Population, for 1979-1981 and (abridged, not yet published) for 1991. This mortality data is not the same source used in the design of the Demonstration, it was chosen by the actuarial consultant who performed this analysis.

EXHIBIT 6-1: Repayment Probabilities

Borrower Age	Probability of Death	Borrower Age	Probability of Death	Borrower Age	Probability of Death
62	1.4%	78	5.1%	94	19.8%
63	1.6%	79	5.6%	95	21.2%
64	1.7%	80	6.1%	96	22.5%
65	1.8%	81	6.7%	97	23.8%
66	1.9%	82	7.4%	98	24.9%
67	2.1%	83	8.1%	99	26.1%
68	2.3%	84	8.8%	100	27.1%
69	2.5%	85	9.6%	101	28.1%
70	2.7%	86	10.6%	102	29.0%
71	2.9%	87	11.5%	103	29.8%
72	3.2%	88	12.4%	104	30.6%
73	3.4%	89	13.4%	105	31.3%
74	3.7%	90	14.4%	106	32.0%
75	4.0%	91	15.7%	107	32.6%
76	4.3%	92	17.0%	108	33.2%
77	4.7%	93	18.4%	109	33.7%
				110 or more	100%

repayment for reasons other than death could be estimated on the basis of the pattern of repayments observed to date under the HECM Demonstration, not enough repayments have occurred to date to develop reliable estimates of these probabilities.⁵⁷

The probability that the loan would become due and payable in any given year is computed as the sum of the borrower's probability of death in that year (based on the borrower's age) and the borrower's probability of repayment in that year for reasons other than death (based on the duration of the loan). Finally, the *probability of loan survival* is computed as follows:

$$\text{PROBSURVIVAL}_t = \text{PROBSURVIVAL}_{t-1} * (1 - \text{PROBDUE/PAYABLE}_{t-1})$$

⁵⁷ The Department intends to extend this evaluation of the adequacy of mortgage insurance premiums at a later date by developing estimates of the probability of repayment on the basis of the pattern of repayments observed under the HECM Demonstration.

Present Value of Expected Claim Losses. The claim loss is the amount by which the loan balance exceeds the current property value at the time that the loan becomes due and payable. This is not computed at the time of the assignment of the loan to HUD for loans insured under the assignment option, because assigned loans are still active. Even though HUD technically pays the lender a claim at the time of assignment, the actual claim loss can only be determined at the time the loan becomes due and payable.

Since the date that loans will become due and payable is uncertain, this analysis develops an *expected claim loss*, computed as the potential claim loss in each year of the loan (equal to any excess of the projected outstanding loan balance over the projected property value) multiplied by the probability that the loan will become due and payable during that year.

Following computation of the expected claim loss (for brevity, the word "loss" is omitted from the formulas), the present value of the expected claim loss is calculated using the following formula:

$$PVCLAIM = \frac{EXPECTEDCLAIM * PROBSURV * PROBDUE/PAYABLE}{(1+i)^{LoanYear}}$$

where i is the median expected interest rate of .0852; ProbSurv is the probability of loan survival; and ProbDue/Payable is the probability that the loan will become due and payable following the death of the borrower or for other reasons. Finally, the *cumulative present value of expected claims* is computed as the sum of the present values of expected claims over all years for all loans active as of June 30, 1994:

$$PVTOTALCLAIMS = \sum PVCLAIM$$

Present Value of Projected Mortgage Insurance Premiums. In order to compare expected claims with projected mortgage insurance premiums, the present value of projected mortgage insurance premiums is estimated as follows:

$$PVPREMIUM = \frac{PROJECTEDPREMIUM * PROBSURV}{(1+i)^{LoanYear}}$$

Finally, the *cumulative present value of projected mortgage insurance premiums* is computed as the sum of the present values of projected premiums over all years for all loans active as of June 30, 1994:

$$PVTOTALPREMIUMS = \sum PVPREMIUM$$

Current Value of Mortgage Insurance Reserve. As noted, cumulative mortgage insurance premiums paid through June 30, 1994 (less claims paid to date) provide a reserve against future claims. Since the FHA can earn interest on this reserve in advance of claims against it, the current value of the mortgage insurance reserve is computed as follows:

$$RESERVE = \sum (PREMIUM_t - CLAIMS_t) * (1+i)^{n-t}$$

where $Premium_t$ represents the total value of premiums paid during year t (from the initial year of the HECM Demonstration through June 30, 1994); $Claims_t$ represents the total value of claims

against the insurance fund during year t ; and i is the rate of interest on past premiums accruing to the insurance fund.

Net Expected Insurance Liability Under the HECM Demonstration. The final step in evaluating the adequacy of mortgage insurance premiums under the HECM Demonstration is to compare the present value of expected claims with the present value of projected mortgage insurance premiums. Taking into account the current value of the mortgage insurance reserve, the *net expected insurance liability* under the HECM Demonstration can be estimated as follows:

$$\text{NETEXPECTEDLIABILITY} = \text{PVTOTALCLAIMS} - (\text{RESERVE} + \text{PVTOTALPREMIUMS})$$

6.2 Findings of Initial Evaluation of the Adequacy of Mortgage Insurance Premiums

As previously noted, the analysis described above was conducted using data on 7,473 HECM loans that were active as of June 30, 1994. This initial analysis provided no evidence indicating that the Department faces any excessive risk exposure as a result of this book of business. Specifically, the initial analysis indicated that the present value of expected future claim losses on loans active as of June 30, 1994 could be estimated at approximately \$22.6 million, or about negative \$3,000 per loan. At the same time, the present value of projected mortgage insurance premiums to be collected in the future on the same loans can be estimated at approximately \$13.0 million, or about \$1,700 per loan. Finally, the mortgage insurance reserve as of June 30, 1994 totaled approximately \$15.6 million, or about \$2,100 per loan. This means that the estimated present value of mortgage insurance premiums (including premiums

paid to date as well as projected premiums for loans active as of June 30) exceeds the estimated present value of claims (including claims filed to date as well as expected claims arising from loans active as of June 30) by approximately \$6.0 million, or about \$800 per loan. Thus the initial evaluation of the adequacy of the mortgage insurance premium under the HECM Demonstration suggests that the mortgage insurance premium is adequate.

A positive net worth for the HECM book of business was not anticipated by the Department, because the analysis was based on a more conservative projection of 3 percent annual house price appreciation and not the 4 percent used to calculate the principal limit factors in 1989. It is a reasonable finding, however, given the fact that about 45 percent of all HECM loans are made on properties with values above the Section 203(b) limit for the area. Such cases are less likely to experience a mortgage insurance claim than cases with property values within the 203(b) limit because the home equity above the limit is not used to calculate payments to borrowers, but it is available to pay off the loan when it becomes due and payable.⁵⁸

The Department estimates that without the cross-subsidies from these insured properties above the 203(b) limit, the net worth of the HECM book of business would drop by about \$5.7 million, resulting in a net worth of \$0.3 million, or essentially *break-even*. That is, if in the analysis of the 7,473 active loans, the property value were hypothetically reduced to equal the adjusted property value (maximum claim amount), the present value of premiums minus the

⁵⁸In addition to the cases involving properties above the 203(b) limit, the net worth of the HECM book of business has also been helped by the low interest rates since 1992. The low rates have produced lower amounts of accrued interest than anticipated, keeping the present value of future claim losses lower than it would have been in a higher rate environment.

present value of claim losses would change from the estimate of \$800 per loan noted above to \$50 per loan.

As the conventional reverse mortgage market expands, and if the Section 203(b) limits are raised, then the percentage of insured properties valued above the 203(b) limit is likely to fall below the current 45 percent. However, this percentage is not expected to reach zero because HECM loans will still remain attractive to many borrowers with properties valued slightly above the 203(b) limit. As this occurs, the positive net worth of HECM loans should begin to decline as well.

It is also important to keep in mind that this initial evaluation is based on assumptions and estimates that are not yet adequately confirmed by the observed pattern of loan repayments, claim losses, and property appreciation rates to date. In fact, there have only been two loans assigned to HUD since its inception. Moreover, the Department intends to extend and improve this actuarial analysis of the HECM Demonstration at a later date, both by refining the methodology and by developing more reliable assumptions and estimates on which to base an updated analysis. Therefore, while the Department finds that the initial evaluation of mortgage insurance premiums provides no basis for immediate concern regarding the Department's risk exposure, the evaluation also does not yet provide adequate basis for significant changes in the assessment of mortgage insurance premiums or in related aspects of the design of the HECM Demonstration.

APPENDIX A

ANALYSIS OF FACTORS AFFECTING CHOICE OF PAYMENT OPTION

This appendix presents additional results of the analysis described in Chapter 2 of the factors affecting the decisions that HECM borrowers make regarding each of the five payment options: (1) tenure payments; (2) term payments; (3) line of credit; (4) combination of tenure payments with line of credit; and (5) combination of term payments with line of credit.

Number of Children. Exhibit A-1 shows the estimated probability that a typical borrower with different numbers of children will choose each payment option. As this exhibit shows, the number of children appears to be negatively related to the probability that a borrower will select tenure payments or a combination of tenure payments with a line of credit, but positively related to the probability that a borrower will select a line of credit with no monthly payments. Specifically, a borrower with no children (the most typical case to date) is about 9 percent likely to elect the tenure payment option, while an identical borrower with two children is only about 5 percent likely to choose this option. Similarly, a borrower with no children is about 13 percent likely to choose a combination of tenure payments with a line of credit, while one with two children is only about 8 percent likely to do so. In contrast, the probability that a borrower will establish a line of credit increases from about 36 percent for a borrower with no children to about 43 percent for one with two children.

Race. In the Department's initial evaluation of the HECM Demonstration, the race of the borrower was found to have no significant effect on the choices that borrowers make

EXHIBIT A-1: Effect of Number of Children on Selection of Payment Plan¹

	Number of Children		
	0	1	2
Probability of Tenure Option	8.6%	6.7%	5.2%
Probability of Term Option	10.4 %	10.1 %	9.9 %
Probability of Line of Credit Option	35.9%	39.4%	42.9%
Probability of Tenure plus Line of Credit Option	12.8%	10.3%	8.3%
Probability of Term plus Line of Credit Option	22.8 %	22.1 %	21.5 %

¹ Bold type face indicates that the differences are statistically significant at an 80 percent confidence level.

regarding payment options. With a greater number of minorities now participating as borrowers, more minorities are represented in the data set, and some variation in payment plan choices by race can now be seen. For example, significant differences were found between African American and white borrowers in choosing the term payment option. White borrowers are 11 percent likely to select this option, while African American borrowers are only 4 percent likely to do so. In contrast, African American borrowers show a greater propensity for selecting the line of credit option, with a 5 percent likelihood compared to less than 4 percent for otherwise identical white borrowers. The payment plan selections of other racial groups were not found to be significantly different from those of white borrowers.

Condition of Property. Exhibit A-2 shows the estimated relationship between the cost of repairs required as a condition of HECM loan approval and the probability that the typical

borrower will choose each of the five payment options.⁵⁹ For example, there is about an 18 percent likelihood that the typical borrower with no required repairs (the most common situation to date) will elect to receive term payments; the likelihood is only about 11 percent, however, that an otherwise identical borrower with required repairs costing \$835 will choose the same option. Similarly, a borrower with no required repairs is more likely (11 percent) to elect the tenure payment option than is a borrower with required repairs costing \$835 (8 percent). In contrast, a borrower with no required repairs is slightly less likely than an identical borrower with \$835 in required repairs to establish a line of credit or to combine a line of credit with tenure payments.

EXHIBIT A-2: Effect of Required Repairs on Choice of Payment Option

	Cost of Required Repairs		
	\$0	\$200	\$835
Probability of Tenure Option	11.3%	10.5%	8.3%
Probability of Term Option	18.4%	16.3%	11.1%
Probability of Line of Credit Option	35.0%	35.4%	36.9%
Probability of Tenure plus Line of Credit Option	11.5%	11.7%	12.3%
Probability of Term plus Line of Credit Option	22.8%	22.7%	22.6%

It is possible that these patterns reflect the likelihood of extraordinary or unforeseen expenses associated with maintenance or repair of the borrower's property. While the estimated

⁵⁹ As noted, property age is often used as an indirect measure of the condition of the property. Property age, however, does not appear to have had any effect on decisions regarding payment options.

cost of required repairs must be set aside from HECM loan proceeds at origination, borrowers with required repairs may also elect to establish a line of credit at loan closing to cover larger-than-expected costs associated with the required repairs. Also, the existence or magnitude of required repairs may reflect a more general deterioration in the condition of the property, and borrowers receiving regular monthly payments may establish a line of credit to finance maintenance or repairs even though they are not required to do so under the loan agreement.

Interest Rates. Exhibit A-3 shows the estimated relationship between expected interest rates and the choice of HECM payment option. As this exhibit shows, there is a significant positive relationship between expected interest rates and the probability that the borrower will elect either the tenure option or the term option. Specifically, there is about a 7 percent probability that a typical elderly homeowner taking a HECM loan with a relatively low expected interest rate of 7.92% will choose the tenure option. In contrast, the probability that an otherwise identical borrower with a relatively high expected interest rate of 8.99% will choose a line of credit is about 9 percent. Similarly, a typical borrower with an expected interest rate of 7.92% is about 8 percent likely to choose the term option, while the same borrower with an expected interest rate of 8.99% is about 12 percent likely to elect the same combination.

Closing Costs. Exhibit A-4 shows the estimated relationship between the magnitude of loan closing costs and the choice of payment option. As this exhibit shows, closing costs appear to be positively related to the probability that borrowers will elect the tenure payment option or the term payment option, but negatively related to the probability that borrowers will elect the line of credit option or to combine term payments with a line of credit. Specifically, a typical

EXHIBIT A-3: Effect of Expected Interest Rates on Choice of Payment Option

	Expected Interest Rates		
	7.92 %	8.52 %	8.99 %
Probability of Tenure Option	6.7%	7.6%	9.0%
Probability of Term Option	8.5%	9.9%	11.9%
Probability of Line of Credit Option	36.1 %	36.9 %	37.9 %
Probability of Tenure plus Line of Credit Option	13.3 %	12.6 %	11.8 %
Probability of Term plus Line of Credit Option	22.0 %	22.5 %	23.1 %

borrower with relatively low loan closing costs of \$3,414 is only about 6 percent likely to choose to receive tenure payments and about 9 percent likely to choose term payments, while an otherwise identical borrower with relatively high closing costs of \$5,787 is about 10 percent likely to elect tenure payments and about 11 percent likely to choose the term payment option. In contrast, a typical borrower with low closing costs is about 40 percent likely to establish a line of credit, while an identical borrower with high closing costs is only about 35 percent likely to make the same choice.

Real Estate and Other Debt. Exhibit A-5 shows the estimated relationship between the choice of payment option and the amount of real estate or other debt that HECM borrowers had at the time of loan application. As this exhibit shows, there is a positive relationship between the amount of debt and the probability that borrowers would elect to establish a line of credit: borrowers with no debt were about 37 percent likely to set up a line of credit, while identical borrowers with relatively high debt of \$9,763 were about 44 percent likely to set up a line of

EXHIBIT A-4: Effect of Closing Costs on Choice of Payment Option

	Closing Costs		
	\$3,414	\$4,465	\$5,787
Probability of Tenure Option	6.0%	7.4%	9.7%
Probability of Term Option	9.0%	10.0%	11.4%
Probability of Line of Credit Option	40.1%	37.8%	35.0%
Probability of Tenure plus Line of Credit Option	12.6%	12.5%	12.3%
Probability of Term plus Line of Credit Option	25.5%	23.2%	20.5%

credit. In contrast, there was a slight negative relationship between debt and the probability that borrowers would choose to combine a line of credit with either monthly tenure payments or monthly term payments.

EXHIBIT A-5: Effect of Debt on Choice of Payment Option¹

	Real Estate and Other Debt		
	\$0	\$234	\$9,763
Probability of Tenure Option	7.9%	7.9%	7.2%
Probability of Term Option	10.3%	10.3%	9.7%
Probability of Line of Credit Option	37.0%	37.1%	44.0%
Probability of Tenure plus Line of Credit Option	12.5%	12.4%	10.9%
Probability of Term plus Line of Credit Option	22.7%	22.5%	17.8%

Closing Date. The last factor investigated for its effect on the choice of payment option was the date on which the closing for a HECM loan took place. This factor was investigated to determine whether borrowers applying later appeared to be making different payment option choices than those applying earlier. There are several reasons why this might occur. First, later borrowers may have heard about the program from earlier borrowers, and may choose their payment option based on the experiences of earlier borrowers. Alternatively, housing counseling regarding the choice of payment options may have changed over the course of the HECM Demonstration. Finally, it is possible that the borrowers who applied for HECM loans early in the Demonstration are different in some significant way from the borrowers who have applied for HECM loans more recently, and that this difference affects their choice of payment option.

The estimated relationship between closing date and choice of payment option is shown in Exhibit A-6. As this exhibit shows, it appears that there is very little relationship between closing date and choice of payment option. A typical borrower applying for a HECM loan in

June 1991 was 8.1 percent likely to select tenure payments, while an identical borrower applying in June 1993 was 7.6 percent likely to do so. The closing date was not found to have a significant effect on any of the other four payment options.

EXHIBIT A-6: Effect of Closing Date on Choice of Payment Option

	Closing Date		
	June 91	June 92	June 93
Probability of Tenure Option	8.1%	7.9%	7.6%
Probability of Term Option	10.0%	10.4%	10.7%
Probability of Line of Credit Option	34.1%	37.9%	41.8%
Probability of Tenure plus Line of Credit Option	12.2%	12.5%	12.7%
Probability of Term plus Line of Credit Option	22.7%	22.5%	22.3%

Appendix B

HECM Total Loan Cost Disclosure Algorithm

The total cost to the borrower of a mortgage loan expressed as an annual percentage rate varies by (1) the pattern of principal advances made to the borrower, (2) the length of time the loan is outstanding, and (3) the realized appreciation rate of the mortgaged property. For traditional home purchase mortgages these three amounts are usually treated as "knowns" -- i.e., the full amount of loan principal is advanced at closing, the loan term is estimated from the average life of similar loans, and the property value is usually assumed to remain at its original appraised value. For HECM loans, all three of these amounts are variable.

The total loan cost is the fixed annual percentage rate (r) that solves the equation:

$$\min[\text{BAL}(T), \text{VAL}(T)] = \sum_{t=0}^T [\text{ADVANCE}(t) \times (1+r)^{T-t}],$$

where

t = time variable,
 T = assumed disclosure period ($0 \leq t \leq T$),
 $\min[a,b]$ = the lesser of the two quantities a or b ,
 $\text{BAL}(t)$ = outstanding balance at time t ,¹
 $\text{VAL}(t)$ = property value at time t ,²
 Σ = summation over time,
 $\text{ADVANCE}(t)$ = cash advance paid to borrower at time t ,³
and
 $(1+r)^n$ = the quantity $(1+r)$ raised to the n -th power.

¹ The outstanding balance includes principal, interest, and any accrued loan costs such as mortgage insurance premium, closing costs, and post-closing fees for servicing. For loans with exit fees such as shared appreciation, replace the loan balance by the amount owed under the loan agreement.

² If the property appreciation rate is α , then the following substitution can be made:

$$\text{VAL}(t) = \text{VAL}(0) \times (1 + \alpha)^t,$$

where $\text{VAL}(0)$ is the initial appraised value.

³ Note that this does not include cash advances made on behalf of the borrower to cover loan costs, only cash actually received by the borrower, or advances made on behalf of the borrower to cover non-loan costs such as real property tax, or repairs. Any cash payments by the borrower for closing costs or, in the case of a forward mortgage, regular monthly P&I payments would be treated as negative advances in the equation.

With standard fixed-rate home purchase loans, the outstanding balance does not exceed the original property value; hence the left-hand side of the equation reduces to $BAL(T)$. With a HECM loan, property appreciation enters the calculation because the balance can exceed the property value, and due to the non-recourse feature of the loan, the amount required to "pay off" the loan is limited to the property value.

Using the above definition of a total loan cost rate, the HECM disclosure algorithm makes the following assumptions about cash advances to the borrower, length of time the loan is outstanding, and property appreciation:

1. Cash Advances are assumed to consist of:
 - Any lump sum advance taken at closing ($t = 0$), plus
 - Scheduled monthly cash advances ($0 \leq t < T$), plus
 - An assumed pattern of draws against any line of credit equal to one-half of the line of credit drawn at closing ($t = 0$) and no future draws.
(NOTE: this is not what the actual draws on a line of credit will look like, but only an assumed pattern for purposes of calculating a disclosure of total loan costs.)
2. A separate total loan cost disclosure is made for each of three assumed lengths of time that the loan is outstanding. One is for a short time period (2 years), the second is for a typical length of time (approximate life expectancy of the borrower), and the third is a longer than expected period (approximately 40 percent longer than life expectancy). The attached Exhibit B-1 shows the three assumed disclosure periods by age of borrower.
3. A separate total loan cost disclosure is made for each of three assumed annual appreciation rates for the property. These were selected to be 0 percent, 4 percent, and 8 percent.

Based on the above assumptions, the HECM disclosure requirement consists of 9 actual total loan cost rates arrayed in a grid according to the 3 disclosure periods and the 3 appreciation rates. See Exhibit B-2 for an example of a HECM disclosure.

EXHIBIT B-1: HECM Disclosure Periods by Age of Youngest Borrower

Age of Youngest Borrower	Disclosure Period 1	Disclosure Period 2 (Life Expectancy)	Disclosure Period 3
62	2 years	21 years	30 years
63	2 years	20 years	29 years
64	2 years	19 years	27 years
65	2 years	18 years	26 years
66	2 years	18 years	26 years
67	2 years	17 years	24 years
68	2 years	16 years	23 years
69	2 years	16 years	23 years
70	2 years	15 years	22 years
71	2 years	14 years	20 years
72	2 years	13 years	19 years
73	2 years	13 years	19 years
74	2 years	12 years	17 years
75	2 years	12 years	17 years
76	2 years	11 years	16 years
77	2 years	10 years	15 years
78	2 years	10 years	15 years
79	2 years	9 years	13 years
80	2 years	9 years	13 years
81	2 years	8 years	12 years
82	2 years	8 years	12 years
83	2 years	7 years	10 years
84	2 years	7 years	10 years
85	2 years	6 years	9 years
86	2 years	6 years	9 years
87	2 years	6 years	9 years
88	2 years	5 years	8 years
89	2 years	5 years	8 years
90	2 years	5 years	8 years
91	2 years	4 years	6 years
92	2 years	4 years	6 years
93	2 years	4 years	6 years
94	2 years	4 years	5 years
95+	2 years	3 years	4 years

Exhibit B-2

LOAN TERMS

Age of Borrower	75
Property Value	\$100,000
Initial Draw (Principal Advance)	\$1,000
Line of Credit	\$4,000
Monthly Cash Advance	\$301.80

UPFRONT LOAN COSTS (Paid from Loan Proceeds)

Closing Costs	\$2,500
Mortgage Insurance Premium (MIP)	\$2,000

MONTHLY LOAN COSTS (Accrued into Loan Balance)

Interest (Annual Rate)	9.0%
MIP (Annual Rate)	0.5%
Servicing Fee (Flat Monthly Charge)	\$25.00

Total Loan Cost Rates

Appreciation Rate	Disclosure Period (Yrs.)		
	2	12	17
0%	39.8%	10.8%	4.6%
4%	39.8%	11.2%	10.8%
8%	39.8%	12.2%	11.2%

The above table shows total loan costs as average annual percentage rates based upon cash advances received by the borrower to the end of three projected loan terms: 2 years, the estimated life expectancy of the borrower, and a term of approximately 1.4 times life expectancy. Since the timing of cash advances received from line of credit draws is not known, an assumption is made for purposes of estimating total loan costs that one-half of the line of credit will be withdrawn at closing with no subsequent withdrawals. The table discloses total loan cost rates for three assumed annual house price appreciation rates: 0, 4, and 8 percent. House appreciation affects these rates because the amount that the borrower must repay is limited to the value of the property at all times.

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