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**Evaluation Report
of FHA's Home
Equity Conversion
Mortgage Insurance
Demonstration**

**Contract #
DU100C000005978
Task Order No. 12**

Final Report

May 10, 2000

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Executive Summary

Evaluation of the Home Equity Conversion Mortgage Program

This report provides an evaluation of the Home Equity Conversion Mortgage (HECM) Program. As mandated by Section 255(k) of the National Housing Act and amended by Section 417 of the Housing and Community Development Act of 1987 (P.L. 100-242), the Department of Housing and Urban Development is required to periodically report to Congress on the HECM Program. This report represents the final in a series of mandatory reports to Congress on the demonstration phase of the HECM program, which became a permanent HUD program in 1998. Previous evaluation reports were transmitted to Congress in 1992 and 1995. The main findings of this report are that the demonstration phase of HECM has generally been a success, with loan volumes growing, borrowers reporting high levels of satisfaction with the program, premium collections projected to exceed insurance claims by more than \$500 per loan, and a trend toward lower average costs paid by borrowers to originate a HECM loan. Nevertheless, the report does indicate that there are several factors that, if addressed, could increase HECM loan volumes further. One important change that has just been implemented is an increase in the limit on the loan origination fee that can be financed. The ability to generate higher revenue from origination fees is expected to encourage more lenders to offer HECM loans. The report also indicates that future HECM volumes could be raised if (1) overall loan costs continue to decline, (2) FHA loan limits were higher, and (3) the public's awareness of the program were raised. The combination of lower costs, higher loan limits, and increased awareness might encourage more older homeowners to apply.

The original purpose of the HECM Demonstration project was (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. After 10 years of operation, the HECM Demonstration has been converted into a permanent HUD program and made significant progress toward achieving the original purposes. As of October 1999, more than 38,000 elderly homeowners have chosen HECM loans to help them with their financial needs and the program continues to grow steadily. Of the total 38,000 HECM loans, 9,063 loans have terminated and only 388 loans ended in claims on the insurance fund. The terminations generally follow expectations and the claims have been low so far, allowing the fund to build substantial reserves for future claims. Below we summarize key study findings.

Borrowers. Notable features of HECM borrowers and properties relative to the general population of elderly homeowners include:

- HECM borrowers tend to be older and are more likely to be single female households;
- HECM properties are more valuable and owners have a higher equity share;
- HECM properties have a higher share in the West and Northeast regions of the country;
- The program is increasingly located in the center city; and
- Highest penetration is in Utah, Colorado, the District of Columbia and Rhode Island.

Borrowers have a choice of payment plans including term, tenure, line of credit (LOC), and combinations of term/LOC and tenure/LOC. The term plan makes constant monthly payments over a fixed period of time. The tenure plan makes constant monthly payments as long as the borrower remains in the home. The line of credit plan makes payments whenever the borrower requests them up to the available principal limit. Increasingly the line-of-credit (LOC) plan is chosen either alone (68 percent) or in combination with the term or tenure plans (20 percent). Most likely this reflects the fact that LOC plans allow the borrower to access a large portion of their principal limit in the first year. Among the terminated loans, the utilization of available principal limit is clearly higher for LOC plans (78 percent) compared to term (61 percent) or tenure (43 percent) plans. Origination costs are an important concern for HECM borrowers and the evidence shows that median closing costs have declined from \$4,465 in the 1995 Report to \$3,400 over all loans outstanding in July 1999.

Lenders. The active participation by lenders in the HECM program grew rapidly reaching a peak of 195 in 1997, but has declined in the last two years. Lenders have been concerned that the origination fee has been too low to make origination of HECMs profitable, especially relative to more profitable forward mortgages. The amount of the origination fee that could be paid out of loan proceeds (financed) was \$1,800, which effectively limited the fee that lenders could charge because most borrowers cannot afford to pay an amount in excess of \$1,800 in cash. In a Mortgagee Letter issued in March 2000, the Department increased the origination fee that can be financed to the greater of \$2,000 or 2 percent of the maximum claim amount. It is hoped that this increase will increase the profitability of originating HECMs, thereby attracting more lenders to offer these loans. But even with a higher origination fee, economies of scale are important to originators and servicers. However, more than half of the active HECM lenders originate fewer than one loan per month which is leading some lenders to drop the program. Lenders, counselors and borrowers contacted for this study all felt that greater marketing and consumer outreach were needed to promote awareness and to increase demand.

Another deterrent to greater use of the program may be the low amounts that can be borrowed. Demand for HECM loans tends to be lower in areas with low house values because the amount that can be borrowed is so small relative to the fixed origination costs. For the most part, the limits on borrowing capacity are simply the unavoidable result of the compounding of interest payments over the borrower's life expectancy. However, in some cases the owners' borrowing capacity is capped not by their property value but by the 203(b) loan limit. Lenders have proposed that one partial solution to the limited borrowing capacity under the HECM program would be to allow higher loan limits under the HECM program to enable elderly borrowers to tap more of the home equity (but still not to exceed value). Lenders and borrowers would also like to have a streamlined refinance option for HECMs to take advantage of declines in interest rates or increases in house prices. In the FY2000 appropriations bill, Congress has asked HUD to examine this option.

Servicers. The market for HECM servicing has grown more competitive in recent years, increasing from one servicer in 1995 to four firms in 1999. This increased competition has raised the amount paid to originators for servicing rights. HUD notes that servicers report a small but increasing number of cases in which the borrower has failed to keep property taxes and insurance current, or has failed to maintain the property. This suggests a need for HUD to develop loss mitigation policies for HECM that could address these issues. Fannie Mae has determined that in many of these cases borrowers were delinquent in these payments at loan origination, and so could have been identified as likely to encounter this issue again. For all loans it purchases Fannie Mae now requires that borrowers who are one year delinquent in tax or insurance payments at origination must set aside loan funds to support three years of these payments. Another issue for servicers and lenders is the difficulty in finding the appropriate contact person at HUD to resolve problems in a timely manner. Responsibility for the HECM program is shared by several HUD offices and no one office stands out as the obvious contact point.

Private and Secondary Market. Fannie Mae continues to be the sole investor in HECM loans. While lenders generally have a very favorable view of Fannie Mae's policies and actions in this market, greater competition would potentially help the market in terms of the loan products available and the costs to borrowers. Freddie Mac continues to monitor the market for possible entry, but the small number of reverse mortgages has discouraged their entry so far. The most significant development in the private, reverse market since the last evaluation is the introduction of a Fannie Mae product, the HomeKeeper. This product offers borrowers greater choice of reverse mortgages, particularly for those with home values above the 203(b) limits. The only other private sector product currently available is a jumbo loan offered by Financial Freedom in 12 states. However, the advent of securitization of reverse mortgages may help provide greater access to capital for private sector products. As a result, there may be more jumbo products offered in coming years.

Counseling. To ensure that elderly homeowners make well-informed financial decisions, borrowers are required by law to obtain counseling before they can apply for a HECM loan. In the early years of the HECM Demonstration, availability of counseling was a major concern. Currently, counseling availability remains a problem only in rural areas and a few urban areas with very few agencies. The problem has also been eased as both Fannie Mae and HUD have developed phone counseling systems which are now approved for cases where face-to-face counseling is not feasible.

A majority of agencies providing HECM counseling report a very small volume of HECM clients, less than one a month, while a small number counsel a large share of all clients. As a result, there seems to be wide variation in the degree of expertise and experience in HECM counseling across agencies. Feedback on the quality of counseling from borrowers and lenders suggests that variation in the quality of counseling is a concern. Some of the participants in the focus groups felt that they were not aware of the full costs of these loans and would not have chosen a HECM if they had been better informed of other options. Lenders also report that some counselors are not sufficiently knowledgeable about reverse mortgages, and so add to owners' confusion. Currently, HUD is working with the American Association of Retired Persons (AARP) to develop an exam to certify HECM counselors.

Another important concern is the amount of funding available to support both counselor training and the provision of counseling services. The only funding for reverse mortgage *training* for counselors is through a HUD grant to the Neighborhood Reinvestment Corporation for all types of housing counseling. But these sessions are held only about six times a year, and require cash-strapped agencies to pay for travel and accommodations for counselors. At present, funding for HECM counseling *services* is part of a grant program that supports all types of housing counseling and provides only fairly modest funding levels (the median grant in recent years have been about \$15,000). Without adequate funding, many agencies have chosen not to offer this type of counseling. Others have turned to lenders to compensate them for counseling sessions, which raises significant concerns about the impartiality of the counseling provided. Congress has now allowed HUD to set aside up to \$1 million a year from the funds allocated for housing counseling generally to be used specifically for HECM counseling. The Department has set aside these funds for the current fiscal year, which should help address the needs for greater training and financial support for HECM counselors.

Borrower Feedback. Focus groups were held in three metro areas (Providence, RI; Seattle, WA; and New Orleans, LA) to collect direct feedback from borrowers on their experiences and satisfaction with the HECM Program. Many participants were very enthusiastic about the impact HECM loans have had on their lifestyles. They are no longer concerned about their financial well-being and are enjoying retirement. For others, the HECM loan has not dramatically improved their quality of life, but allows them to meet daily living expenses and to stay in their homes. For a few of the focus group participants, the accumulating debt

associated with the HECM loan is very unsettling and these participants are looking for financial alternatives.

The most positive responses came from borrowers who had formed a relationship with their counselor and the counselor provided them with the necessary information to make a sound decision. The least positive responses were from individuals who felt the counseling sessions did not make them aware of the costs associated with the HECM loan. Participants commonly voiced their surprise at the high loan costs, both beginning and ongoing. Also, participants generally agreed that they were overwhelmed by the amount and complexity of information provided during counseling.

In comparing the findings across sites, Providence stands out as the location where participants were most satisfied overall with their experiences. Rhode Island Housing and Mortgage Finance Corporation's (RIHMFC) unique position as counselor, lender, and servicer provided the borrowers with high quality, comprehensive, and local services, which were favorably viewed by the participants. The high level of satisfaction may, in part, be due to a counseling process that provided appropriate information to the borrowers, reducing the number of poor decisions. Borrowers were also less likely to be concerned about the costs of their mortgage. This may be due to better information on costs prior to taking out the loan. But, in part, it may also reflect the fact that RIHMFC has somewhat lower origination and servicing costs than for-profit lenders.

One of the findings unique to Seattle was participants' frustration with the inability to fully tap their large and growing equity. Respondents noted their increasing property values and living expenses, as well as their difficulty in making ends meet with the current HECM loan limits. In New Orleans, respondents were particularly dissatisfied with the costs of the HECM loans. In part, this dissatisfaction seems related to the fact that participants in New Orleans seemed to be somewhat less sophisticated financially than in other areas in terms of their comfort with and understanding of debt. However, this difference may simply reflect poor homeowner counseling which did not adequately inform people of the nature of the loan and so did not adequately screen out those for whom this loan was not appropriate. Also, the relatively low house values, and thus principal limits, in New Orleans means the origination costs are a significant share of the borrowed amount.

Regulatory Issues. Texas is the last state with legal barriers to reverse mortgages. The Texas constitution included a homestead provision, which prohibited lenders from making home mortgages for any reason except to purchase a home, to pay taxes on a home or to finance repairs. Legislative action and a referendum in 1999 removed some barriers, but a line of credit and the use of loan proceeds to purchase a home are still not allowed in Texas. In the wake of these changes in the Texas constitution, in March 2000 the Department issued Mortgagee Letter 00-9 which announced that it would begin insuring reverse mortgages in Texas.

The Total Annual Loan Cost (TALC) regulations are designed to provide a comprehensive measure of loan costs that will allow the borrower to fully assess and compare the costs of various reverse mortgage packages. Although it does not affect HECMs directly, TALC calculations of Fannie Mae's HomeKeeper loan program do not highlight a significant spike in loan costs just after two years because the TALC calculation is made exactly at two years. Another issue that affects HECM directly is the assumption under TALC that only half of a line of credit is drawn at closing. The HECM line of credit increases as the principal limit grows over time, but the HomeKeeper line of credit is set at origination. In both the issue of the two year holding period and the limited line of credit, the concern is that HECM loans are disadvantaged in comparisons with HomeKeeper loans due to the particular assumptions embedded in the TALC regulations.

Actuarial Analysis. The primary purpose of the actuarial analysis is to determine whether the premium structure of HECM loans will be adequate to cover the expected claims of existing loans. There are four innovations in the current 2000 actuarial model relative to the 1995 Report model:

- Pattern of payments are based on actual transactions;
- Separate pattern of payments used for term, LOC and tenure plans;
- House prices assumed to grow from origination to October 1999 according to the OFHEO state repeat-sales index;
- Larger pool of existing loans analyzed (30,000 active loans and 9,000 terminations).

These innovations are designed to make use of the better data now available. The main impact of using actual payment patterns is that the model now reflects the fact that LOC cases (the most common) draw larger payments in their first year than under a tenure plan. Relative to tenure balances, the larger LOC balances continue over the life of the loan leading to larger accumulations of premiums, but also potentially larger claims. These larger claims in the future are partially offset by the reserve that has grown in the last 10 years during which claims have been quite low. But the nature of reverse mortgages is that the outstanding balance does not exceed house value until 8 or 10 years after origination. So ample reserves from the early years are required for the later claims.

The many details of the actuarial model are presented in Chapter 7, but the model results can be presented simply in the following exhibit. The first row gives the 2000 model results based on the existing loans as of October 1999. The second row uses the same set of existing loans but applies the methodology from the 1995 Report. For comparison, the third row repeats the 1995 Report results.

Exhibit E-1
Actuarial Model Results, Per Loan Estimates

	Reserve	Present Value of Future Claims	Present Value of Future Premiums	Net Expected Liability
2000 Model Results	\$3,778	\$5,682	\$2,475	-\$570
1995 Model Results	\$3,778	\$5,473	\$2,277	-\$582
1995 Report Results ¹	\$2,100	\$3,000	\$1,700	-\$800

¹ Estimates based on loans originated up to June 30, 1994.

The first column shows the reserve of accumulated premiums less claims paid up to the cutoff date (October 1999 for the 2000 model or July 1994 for the 1995 results). With so few claims and front-loaded premiums, it is not surprising that the reserve is estimated to have grown to \$3,778 per loan relative to \$2,100 in 1994. The present value of future premiums is the projection of future premiums discounted back to 1999. Increased premiums are linked to increased outstanding balances which are a combination of larger advances and higher utilization of available principal limits by LOC loans. The HECM book of business in 1999 has more LOC loans and the current model assumes a more aggressive payment pattern by LOC loans.

The larger outstanding balances associated with the LOC loans also means larger claims because the outstanding balances surpass house values earlier and by larger amounts. Future house values are assumed to grow at 3 percent compared to about 8 percent for interest and premiums on outstanding balances. The net effect of higher reserves, higher present value of future premiums and higher present value of future claims is that the net liability is projected to be -\$570. This means HUD has a cushion of \$570 per loan beyond what it takes to break even, which implies about a 10 percent margin in the premium. Expressed in terms of the typical adjusted property value (maximum claim amount) of \$102,125, the per-loan surplus is 0.56 percent. Most of the difference between the 2000 model and 1995 model results can be linked to the additional 30,000 loans in the 1999 HECM book of business. Undoubtedly an important factor in the similarity of net results is that both models rely on key assumptions of future house prices that appreciate at 3 percent and termination rates that are 1.3 times mortality rates. As with the 1995 actuarial study, the finding of a positive net worth in the HECM book of business is due in part to the cross subsidization that presently occurs between properties valued above the FHA 203(b) limit and those that are not above the limit. Future HECM borrowers with higher valued homes would benefit if the loan limits were raised, but the projected surplus of the insurance fund may decline as a result.

Sensitivity testing shows that the projected reserve of \$570 per loan is sensitive to assumptions made about future mortgage rates and house-price appreciation rates. Increasing

expected interest rates by one percentage point generates a \$1,187 per loan (or \$35.2 million) liability. Similarly, a one percentage point permanent reduction in house-price appreciation rates creates a \$1,928 per loan (or \$57.1 million) liability. One important factor causing the similarity in results between the 1995 and 2000 base actuarial models is that they both assume the same future interest rates and house-price appreciation rates. Two stress tests were conducted in which house-price appreciation rates are assumed to either increase or decrease by 5 percentage points for three years (that is, appreciation at +8 percent or –2 percent) then return to 3 percent for the remaining life of the loan. Although the changes in house-price appreciation rates are symmetric (appreciation of +8 percent and –2 percent averages 3 percent), the changes in net liability are not symmetric. The temporary reduction in house prices results in \$90 million less in reserves compared to only \$63 million added in the high growth scenario. This suggests that an increase in regional dispersion of house-price appreciation rates can have a deleterious overall affect on the insurance fund, even if the national average is unchanged.

Testing Actuarial Assumptions. The testing of actuarial assumptions is limited by the available data. For some types of data, such as claims, the loans have not seasoned enough to provide reliable measures. Most data limitations, however, will not be cured by the passage of time, but require decisive action to improve the data collection systems. The most important data elements that are incomplete or missing are interest rates, house price information (at termination), cause of termination, partial repayments, payment plan changes and closing costs. The life table method is used to test the assumption that the expected termination rate is 1.3 times the age-specific mortality rate. The tests show that first year terminations are consistently below model expectations. Younger borrowers terminate considerably earlier and older borrowers terminate slightly later than expected. To a lesser degree, single male households terminate earlier while “living with others” households terminate later than expected. Although no single factor can adequately capture these differences, the adjustment factor of 1.3 comes remarkably close for the entire HECM book of business.

The annual house price appreciation rate is assumed to be 3 percent in both the 1995 model and the 2000 model (for future growth). This rate is probably too low given the experience of HECM properties in the 1990s, particularly in the last couple of years. Historically, the long term growth rate is closer to 4 percent. Increasing the assumed house price appreciation rate to 4 percent delays, by only a few years, the crossover point at which outstanding balances exceed house values. Future house price appreciation rates will probably track closely with general inflation, which might be kept low as a matter of Federal Reserve policy. If the economy has undergone a fundamental regime shift, the historical average may be less reliable as a guide to future growth rates. Finally, a comparison across payment plans of borrowers’ ages at termination shows that tenure plan borrowers terminate at an older age. This supports the notion that borrowers in better health are more likely to choose the tenure plan in which payments are deferred to the later policy years.

Chapter One

Introduction^{*}

Created in 1987 under the National Housing Act, the Home Equity Conversion Mortgage (HECM) insurance program is designed to provide elderly homeowners a financial vehicle to tap the equity in their homes without selling or moving from their homes. The loan became known as a “reverse mortgage” because the lender makes payments to the homeowner, which is the reverse of the payment pattern of traditional “forward” mortgages. Reverse mortgages are intended to help “house-rich” but “cash-poor” elderly access additional income to meet expenses, and to assist middle-income senior homeowners convert their home equity into liquid assets.

With a reverse mortgage, a homeowner borrows against equity in the home, receiving from the lender regular monthly payments or advances by request from a line of credit. The borrower can choose from a variety of payment options and switch between options as the need arises.

As the homeowner receives payments and interest is accrued, the amount of debt secured by the reverse mortgage rises over time. When the owner sells the house, moves out, or dies, the lender is repaid with interest out of proceeds from the sale of the property. FHA insures HECM loans originated by FHA-approved lenders to protect the lenders against loss if amounts withdrawn exceed equity when the property is sold.

Objectives and Structure of this Report

The National Housing Act stipulated that the HECM program, which was originally created as a demonstration program, undergo a series of evaluations. A Preliminary Evaluation was completed in 1992, followed by a more recent evaluation in 1995. The purpose of this report is to update the 1995 evaluation according to the requirements of the Act. These requirements, and the chapters in this report in which the requirements are addressed, are summarized in Exhibit 1-1.

To achieve the research objectives set forth by Congress, this evaluation draws on two types of analysis: quantitative and qualitative. The quantitative approach was used for the descriptive analysis of the borrower and property and loan characteristics where administrative data are available. These data also provide the basis for an actuarial analysis

^{*} This report was prepared by Abt Associates Inc. (David Rodda, Christopher Herbert, Hin-Kin (Ken) Lam) with independent consultants (Bradford Case and Ken Scholen), and actuarial review by Milliman & Robertson, Inc. (Noel Abkemeier).

for determining whether actual program loss experience has been consistent with expectations at program origination.

Exhibit 1-1

Map of Evaluation Requirements to This Report

<u>Section of Act</u>	<u>Requirement</u>	<u>Chapter</u>
255 (k) (1) (A)	Update design and implementation of demonstration	Chapter 1
(1) (B)	Number and types of reverse mortgages to date	Chapter 2
(1) (C)	Profile of participant homeowners, including incomes, home equity, and regional distribution	Chapter 2
(1) (D)	Problems encountered in implementation, including impediments associated with State or Federal laws or regulations governing taxes, insurance, securities, public benefits, banking, and other problems	Chapter 3, Chapter 5, Chapter 6
255 (k) (2) (A)	Describe the types of mortgages appropriate for inclusion in such program	Chapter 2
(2) (B)	Describe any changes in the insurance programs under this title, or in other Federal Regulatory provisions	Chapter 1
(2) (C)	Describe any risk created under such mortgages to mortgagors and mortgagees or insurance programs under this title, and whether the risk is adequately covered by premiums under the insurance programs	Chapter 2, Chapter 3, Chapter 7, Chapter 8
(2) (D)	Evaluate whether such program has improved the financial situation or otherwise met the special needs of participating elderly homeowners	Chapter 5
(2) (E)	Evaluate whether such program has included appropriate safeguards for mortgagors to effect the special risks of such mortgages	Chapter 4, Chapter 5
(2) (F)	Evaluate whether home equity conversion mortgages have a potential for acceptance in the mortgage markets	Chapter 3
255 (k) (3)	Incorporate comments and recommendations solicited by the Secretary for the Board of Governors of the Federal Reserve System, the Secretary of Health and Human Services, the Federal Council on Aging, the Federal Home Loan Bank Board, the Comptroller of the Currency, and the National Credit Union Administration Board	Comments from organizations, as required.

The qualitative analysis is based on a series of interviews and focus groups designed to collect information from program participants and interested observers. Counselors, lenders, and servicers were interviewed through telephone interviews. In addition, a series of six focus groups in three cities was conducted to elicit borrower comments on a range of issues including: overall borrower satisfaction with the program, impact on the borrower's quality of life, problems with the current program, and ideas for improvement or expansion.

The balance of this chapter describes the background and history of the HECM demonstration and key elements of the program's design. The remainder of the report is organized as follows:

- Chapter 2 presents a profile of HECM borrowers, properties and loans.
- Chapter 3 describes participation in the HECM program by the financial community.
- Chapter 4 discusses counseling for HECM borrowers.
- Chapter 5 presents findings from the borrower focus groups conducted for this study.
- Chapter 6 covers legal and regulatory issues concerning the HECM program.
- Chapter 7 presents an actuarial analysis.
- Chapter 8 discusses issues of testing actuarial assumptions.

Background and History of the Program

The HECM insurance demonstration program was created by Congress in 1987 under the National Housing Act 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.¹ Originally authorized by Congress to insure 2,500 reverse mortgages through September 1991, HUD designed the demonstration program in consultation with other federal agencies and industry experts and implemented the program with a Final Rule in July 1989.² The next year, Congress extended the demonstration through 1995 and expanded HUD's authority to insure 25,000 reverse mortgages. It subsequently amended the program again to authorize HUD to insure up to 50,000 reverse mortgages through September 30, 2000.

In October 1998, Congress made the program permanent and increased the number of allowable outstanding loans to 150,000. At the same time, the legislation effected several other changes to the program. Additional safeguards were created for borrowers, including prevention of unnecessary charges to borrowers and full disclosure of fees. Congress also

¹ Section 255 under Title II of the National Housing Act, 1987.

² Federal Register, June 9, 1989.

provided funding for pre-application counseling, consumer education, and outreach for potential borrowers, and required HUD to find alternative ways of educating potential borrowers about reverse mortgages. Finally, the new legislation increased the maximum amount of the loan allowable under the program, thereby increasing the amount of equity elderly homeowners could access in their homes through the program. Through October 1999, nearly 40,000 reverse mortgages have been insured under the HECM program.

Program Design

Under the HECM Program, elderly homeowners assume a reverse mortgage secured by the equity in their home. As the borrower receives payments, the amount of the debt secured by the reverse mortgage rises over time. This debt is non-recourse, meaning only the value of the home may serve as collateral, and other personal assets cannot be seized if the house value is not sufficient to pay off the loan. The reverse mortgage becomes repayable when the borrower sells the property, moves out, or dies, as agreed to by the lender and borrower.

Program Eligibility

HECM loans are available to all homeowners at least 62 years old who have low outstanding mortgage balances or own their own home free and clear. The borrower must occupy the property, which may be a single-family home, a one-to-four-unit dwelling, a manufactured home, or a unit in an FHA-approved condominium building or planned unit development. The property must meet FHA minimum property standards.

An appraisal is done before closing to determine the value of the house and to ensure that it meets minimum standards of maintenance. In some cases, repairs may be required as a condition of the loan. The borrower's income and credit worthiness are not of concern to the underwriting process, because payments are made from the lender to the borrower. However, borrowers who have delinquent federal debt that cannot be cleared from the proceeds of a reverse mortgage are disqualified from the program.

Mandatory Counseling

Since its inception, the HECM program has required mandatory pre-loan counseling for all borrowers. The objective of counseling is to ensure that borrowers fully understand the advantages and disadvantages of reverse mortgages, what the alternatives to reverse mortgages are, and how the reverse mortgage will affect their living situation and finances. Counseling is provided by HUD-approved organizations—generally counseling agencies and agencies on aging—that are independent of the lender to ensure that potential borrowers receive unbiased information. The counseling may take place in person or by telephone.

As a result of legislation passed in 1998 to protect program participants, HECM program counselors must discuss with the homeowner whether they have signed a contract or an agreement with an estate planning service firm that requires a senior homeowner to pay a fee

on or after closing. Because such firms can take advantage of borrowers by charging a fee for an unnecessary service, HUD discourages the use of estate planning services or any other services that charge a fee for referring a borrower to a lender. Counselors must inform the borrower that these services are unnecessary to obtain a HECM loan and are ineligible for payment from HECM proceeds.³ The counselor must then annotate this information on the Counselor’s Certificate.

Payments to Borrowers and Calculation of Loan Amount

The HECM program offers borrowers an array of different payment options from which to choose, ranging from regular payments for a fixed term or for life, to a line of credit, or some combination of these choices. The program provides for maximum flexibility, allowing participants whose circumstances change to restructure their payment options. The payment options are shown in Exhibit 1-2.

Exhibit 1-2

Payment Options Available under the HECM Demonstration

Payment Option	Description
Tenure Payments	The borrower receives monthly payments from the lender for as long as the borrower lives and continues to occupy the home as a principal residence.
Term Payments	The borrower receives monthly payments for a fixed period of time, after which the borrower may stay in the home and defer payment.
Line of Credit	The borrower can make withdrawals up to a maximum amount, at times and in amounts of the borrower’s choosing. The borrower could receive a lump sum payment at the time the loan is issued.
Modified Tenure	The borrower receives tenure payments and also has a line of credit.
Modified Term	The borrower receives term payments and also has a line of credit.

The maximum loan amount, also called the *principal limit*, is the maximum lump-sum payment or line of credit a borrower may receive, or the net present value of monthly payments. This amount is calculated using a formula that takes into account the age of the borrower(s), the mortgage interest rate, and the *adjusted property value* (the lesser of the appraised value of the property and the maximum FHA mortgage amount for the borrower’s area).

³ HUD Mortgagee Letter 99-02, “Implementation of the Final Rule—HECM Consumer Protection Measures,” February 18, 1999.

To adjust for the time value of money, the amount of the principal limit is increased monthly after the first month of the loan at a rate of one-twelfth of the current mortgage interest rate plus one-twelfth of one-half percent. For loans originated prior to May 1, 1997, the adjustment factor is based on a 10-year average U.S. Treasury borrowing rate (called the *expected rate*) rather than on current interest rates.

Interest Rate

Reverse loans originated through the HECM program may have either a fixed or an adjustable interest rate, with annual or monthly adjustments linked to the one-year Treasury bill rate. However, almost all HECM loans issued to date have had adjustable rates, largely because Fannie Mae—which has purchased nearly all of the loans issued under the program—does not purchase fixed-rate loans under this program.

To account for the fact that adjustable rates could increase over time, a long-term average rate, called the *expected rate*, serves as a fixed interest proxy and is used to determine the initial principal limit. The expected rate is defined as the sum of the 10-year U.S. Treasury borrowing rate plus the lender's margin, which is typically one to two percentage points.

Risk Protections

Home equity conversion mortgages present certain risks to borrowers and to lenders alike. These risks, and the program protections designed to address these risks, are discussed below.

Borrower Protections

The HECM program offers several important protections for the borrower. First, in no case can the borrower be forced to sell the home to pay off the mortgage. Second, regardless of the length of time before the borrower moves or dies and the house is sold, the borrower's liability is limited to the value of the home, because the reverse mortgage is a non-recourse loan. Finally, the borrower is protected if the lender fails to make payments to the borrower, in which case HUD will make the payments.

Despite these important protections, reverse mortgages do pose some risks to borrowers. The HECM program has built-in mechanisms to minimize these risks. Because HECM loans have relatively high up-front costs, they are not suitable for short-term use. If the homeowner moves out, sells the home, or dies within a few years of taking out the loan, the costs of fees and interest may very well exceed the amount received to date in payments from the lender. This risk is explained to potential borrowers in mandatory counseling in order to discourage from taking out a HECM loan homeowners who plan to move out or sell their home within a short period.

To protect borrowers against extreme interest rate risk, the program sets a 2 percent annual cap and a 5 percent lifetime cap for ARMs with annual adjustments. ARMs that are adjusted monthly have a lifetime cap established by the lender. The HECM program also protects against unnecessary and unfair fees to protect the borrower. Some estate planning firms, for example, attempt to exact a fee from a borrower simply for referring the borrower to a lender. To discourage this practice, the program requires both lenders and counselors to inform the borrower that these services are unnecessary to obtain a HECM loan and ineligible for payment from HECM proceeds. In addition, the program limits the servicing fees lenders can charge for HECM loans.⁴ Until recently, the loan origination fee was not limited, although there was an \$1,800 cap on the amount of this fee that could be paid out of loan proceeds, effectively limiting the origination fees charged. In Mortgagee Letter 00-10, the Department increased the amount of fees that could be financed to the higher of \$2,000 or 2 percent of the maximum claim amount. At the same time, the Department also established these limits as a cap on the total fees that can be charged.

Another feature of the HECM program is the shared appreciation option, which gives the borrower a lower interest rate along with higher payments and preserved equity. With this option, the borrower agrees to share with the lender up to 25 percent of the increase in the property value, as appraised upon sale, relative to its value at origination. This option has not been used in practice, largely because Fannie Mae does not purchase such loans.

Lender Insurance Options

Reverse mortgages pose three main sources of collateral risk for the lender, meaning the loan balance may grow to exceed the value of the collateral. First, the borrower may live in the property so long that the continuing payments to the borrower exceed the value of the home. Second, interest rates may rise, increasing the interest payments and adding to the debt. Third, the property value may drop such that the value is less than expected when the loan becomes due. Under the HECM program, the lender is protected from these risks by FHA mortgage insurance.

The mortgage insurance is funded by mortgage insurance premiums paid by borrowers. The insurance premium has two different components, both of which may be financed: (1) an up-front premium of two percent of the adjusted property value, and (2) a monthly premium of one-twelfth of the annual rate of one-half percent of the outstanding principal balance.

When the loan is closed, the lender has two insurance options from which to choose: (1) the assignment option, and (2) the shared premium option. However, as with the shared appreciation option, the shared premium option has not been used in practice because Fannie Mae does not purchase these loans. Under the assignment option, FHA collects the entire

⁴ Per Mortgagee Letter 98-3, servicing fees for HECM loans are capped at \$30 per month for fixed rate or annually adjustable loans and \$35 for monthly adjustable loans.

mortgage insurance premium, and the lender can assign a mortgage to FHA when the mortgage balance reaches 98 percent of the adjusted property value (also called the maximum claim amount). After assigning the mortgage to FHA, the lender files an insurance claim for the amount of the remaining mortgage balance.

Under the shared premium option, the lender receives a portion of each monthly mortgage insurance premium, but may not assign the mortgage to FHA. When the mortgage is due, if the proceeds from the sale of the property do not cover the mortgage balance, FHA pays the lender the difference, up to the maximum claim amount. However, the lender is liable for any losses in excess of the maximum claim amount. The option (shared premium) has never been chosen by a lender, and the Department does not consider it to be vital to maintain this option in the future.

Special Considerations for the Federal Government

Because FHA insures reverse mortgages issued under the HECM program, the Department assumes the risks associated with borrower longevity, interest rates, and property value changes that otherwise would have been absorbed by the lender. Risk from borrower longevity, and, to a certain extent, property value changes, is *diversifiable*. This means that the risk from individual loans can be spread out by pooling a large number of loans. However, risk associated with interest rate changes and property value changes from a national real estate downturn is *fundamental* risk, which cannot be reduced through diversification.

While property value uncertainty can be partially diversified through pooling, the risk of property values declining in a national economic downturn is not diversifiable. However, fundamental risk in the HECM program depends on long-term property value appreciation rates, so a short-term recession is not likely to cause significant losses.

Data generated by this program evaluation can be used to make adjustments to the program policies and underlying assumptions concerning both diversifiable and fundamental risk and ensure that the program is self-financing in the long-term.

Chapter Two

Profile of HECM Borrowers, Properties and Loans

This chapter presents the descriptive characteristics of the HECM borrowers, their properties and loans to date. It will proceed as follows. We first discuss the data sources we used in the analyses. The following section presents the demographic backgrounds of the HECM borrowers to date as compared to the general population of elderly homeowners in the country. We then compare the property characteristics of the HECM borrowers to those properties typically owned by the elderly. The final section examines the loan characteristics of HECMs to date.

Data Sources

The analyses in this chapter were primarily based on the July 1999 extract of 30,226 HECM loans in the Insurance Accounting Collection System (IACS) database, collected by ACS Government Solution Group Inc. (formerly Computer Data System, Inc.) as a subcontractor to HUD.⁵ We have loan-level information for all the loans in the HECM demonstration originated from the beginning (HUD FY90) through FY98. Property characteristics and some of the borrower background information were supplied by the Computerized Housing Underwriting Management System (CHUMS) database maintained by HUD.⁶

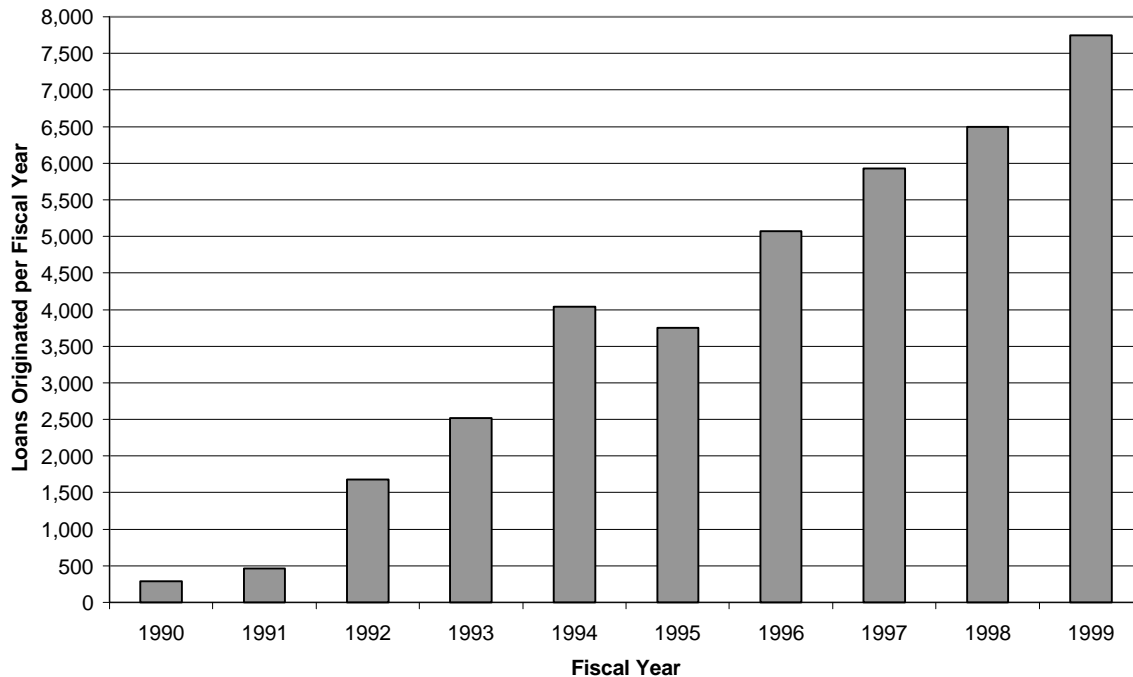
For the general population of elderly homeowners and the attributes of their housing, we depended on data collected in the 1997 American Housing Survey (AHS) National Sample. The HECM participants were compared to a nationally representative sample of 8,085 homeowners who identified themselves as household heads and were 62 or above at the time of the interview.

Exhibit 2-1 presents the number of HECM loans originated in each fiscal year since the Demonstration started in 1989. While there were only a few hundred HECM loans originated in the first two years of the program, the growth accelerated dramatically in FY1994, with about 4,000 loans originated in that year alone. Since then, the growth has been steady and healthy. For instance, during the year of FY1999, approximately 8,000 new HECM loans were endorsed through the end of October 1999.

⁵ The analyses in Chapters 7 and 8 were based on a slightly later (i.e., October 31, 1999) data extract from the IACS system.

⁶ While the CHUMS database contains some additional loans for each fiscal year, all of those had missing data on most of the key fields (such as borrower's age or property appraisal value) and thus were excluded from the analyses.

Exhibit 2-1: Volume of HECM Loans by Year of Origination



HECM Borrower Characteristics

This section presents the demographic characteristics of the HECM participants to date as compared to the typical elderly homeowner in the general population. The demographic information consists of age, gender, household composition, and race/ethnicity. On average, the updated data indicate that the typical HECM participant is a white female of age about 75 years old who lives alone.

In HUD's last HECM evaluation in 1995, relevant variables from the CHUMS database were used to examine the income (namely, annual total income and Social Security income) and information regarding the number of dependent children of the participants.⁷ Another data item was also available to indicate the marital status of participants. However, tabulations from the updated database reveal that these variables are mostly filled with missing or zero values. This probably reflects the fact that filling out the corresponding information is not mandatory in the HECM application process and many participants simply did not supply the formation. We therefore have decided that these data items are not reliable in the database

⁷ *Evaluation of the Home Equity conversion Mortgage Insurance Demonstration: Report to Congress* (U.S. Department of Housing and Urban Development, Washington, DC: 1995).

and we will not examine the distribution of these demographic characteristics in this evaluation.

Age

A key characteristic of the borrowers is their age at the time of the HECM loan application. For each HECM loan, the total amount of funds (called principal limit) available to the borrower is determined by the borrower's age (the youngest borrower's age, in the case of co-borrowers) at the time of application, the adjusted property value, and the expected interest rate. Adjusted property value, also called maximum claim amount, is defined as the lesser of the appraised house value or the local FHA 203(b) loan limit. The HECM proceeds can be in the form of monthly payments, a line of credit, or a combination of the two.

According to program requirements, homeowners must be 62 years old or above to qualify for the HECM loans. As shown in Exhibit 2-2, the median age of the HECM borrowers at the time of application is 75. Tabulations of the loans reveal that only 23 percent of the total HECM participants are younger than 70, and more than 25 percent of the participants are in fact 80 or older at the time of their application. This age distribution among the borrowers is very close to the one reported in last round of the evaluation based on data from mid-July 1994. The median age was 76 years old for borrowers then. In comparison, for the general population of elderly homeowners who are at least 62 years old, the AHS data show that they have a median age of only 72. All these suggest that the HECM program has a strong appeal to the relatively older homeowners, among the eligible.

Exhibit 2-2

Age Distribution of HECM Borrowers and All Elderly Homeowners

Age Category	HECM Borrowers ¹ 1999 Analysis	Elderly Homeowners ² 1997 AHS
62 to 64	6%	14%
65 to 69	17%	24%
70 to 74	28%	23%
75 to 79	24%	20%
80 to 84	14%	12%
85 to 89	7%	5%
90 and above	4%	2%
Median Age	75	72

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

² Data from 1997 American Housing Survey National Sample.

The predominance of relatively older borrowers among the HECM participants is not surprising. This is because the HECM proceeds available to the older borrowers can be

substantially greater than those available to borrowers who are just slightly above the minimum age. To see the logic, suppose there are two participants with different ages but with the same levels of adjusted property value and interest rate. On average the older borrower will have a shorter remaining life expectancy than the younger one. To equalize the expected payments over the life of the loan, the principal limit for the younger borrower is set at a lower level than an older borrower. In other words, compared with younger borrowers with exactly the same levels of interest rate and property value, an older borrower will get a higher amount of monthly payments or line of credit disbursements.

To see the relationship between HECM proceeds and the borrower’s age at the time of application, we have computed the maximum monthly payment and maximum line of credit (equivalent to the net principal limit) available to a typical borrower of different ages. The figures were calculated by assuming that the participant has the median appraised property value (\$107,000), median adjusted property value (\$97,000), median expected interest rate (7.81 percent), median closing cost (\$3,400) and median service fee (\$30). Exhibit 2-3 shows the HECM proceeds for four different ages:

- Lower quartile of the age distribution of HECM borrowers (70 years).
- Median age of HECM borrowers (75 years).
- Upper quartile of the age distribution of HECM borrowers (80 years).
- Median age of the general population of elderly homeowners (72 years).

Exhibit 2-3

Maximum Monthly Payment or Line of Credit Available to Typical HECM Borrowers at Different Ages

	HECM Borrowers			General Population
	Lower Quartile: 70 years	Median: 75 years	Upper Quartile: 80 years	Elderly Homeowners: 72 years
Maximum Monthly Payment	\$301	\$372	\$467	\$328
Maximum Line of Credit (Net Principal Limit)	\$40,173	\$47,305	\$54,940	\$42,997

Exhibit 2-4 and Exhibit 2-5 take the analysis one step further by describing the relationship between the borrower’s age and HECM proceeds as two continuous curves. These clearly indicate that borrowers under the age of 70 at the time of their application will receive HECM proceeds substantially smaller than those of older borrowers with similar loan characteristics.

Exhibit 2-4
Maximum Line of Credit Available to Typical HECM Borrowers at Different Ages

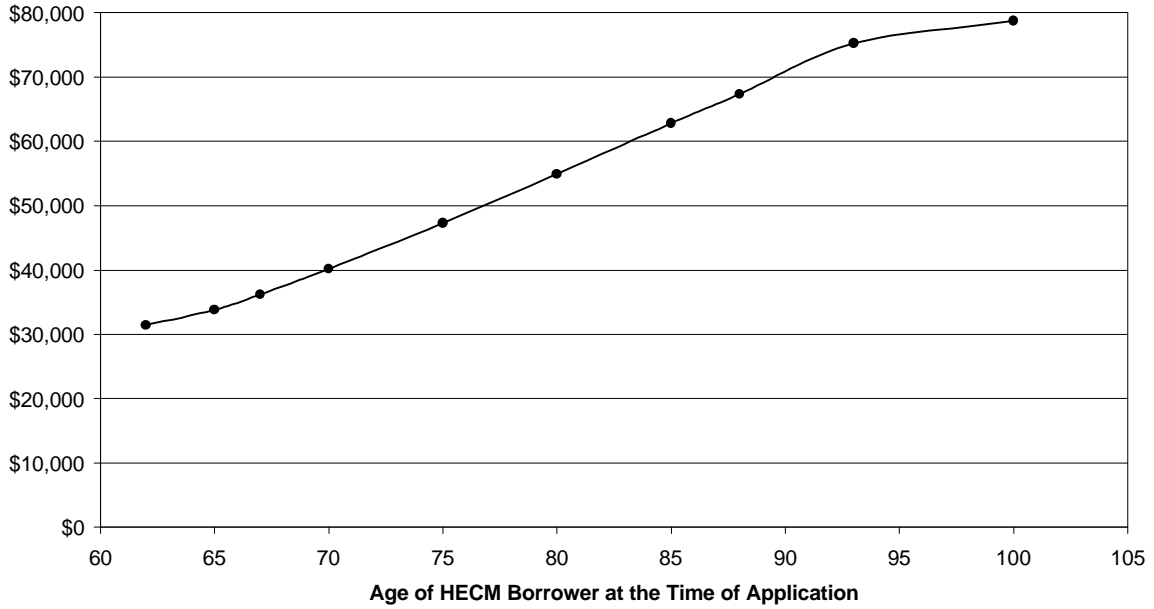
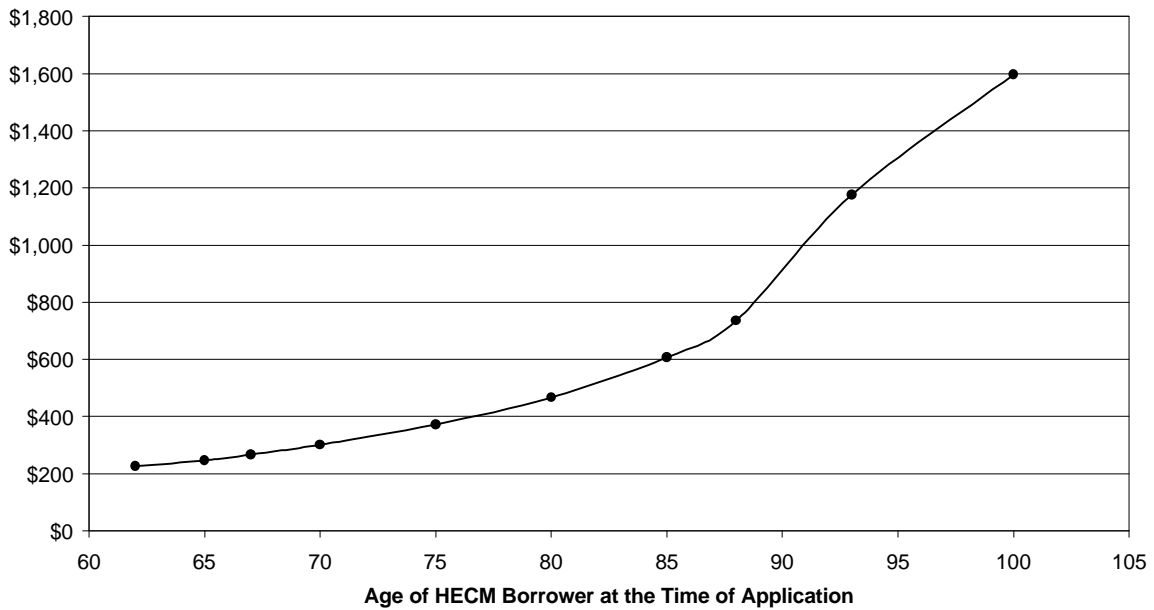


Exhibit 2-5
Maximum Monthly Payment Available to Typical HECM Borrowers at Different Ages



Gender/Household Composition

There are data items in the CHUMS database describing the borrowers' marital status and the number of children. However, reporting this information is not mandatory in the HECM application, so those items in CHUMS are mostly filled with missing and zero values and thus are not reliable. Instead, consistent with HUD's earlier evaluation of the HECM program, we approximated the borrower's household composition by whether there is a co-borrower for the loan. As a result, the universe of participants can be classified into three categories: female living alone, male living alone, or living with others. Exhibit 2-6 reveals that, overall, the gender/household composition of the HECM borrowers remains almost the same as during the last evaluation. The majority (56.3 percent) of the borrowers are females living alone. About 29.8 percent of the borrowers are pairs, while only 13.9 percent of the borrowers are males living alone. In comparison, most (64.5 percent) of the general population of elderly homeowners are living with their spouse or another person. About 27.6 percent of elderly homeowners are women living alone and only 7.9 percent are men living alone.

Exhibit 2-6

Characteristics of HECM Borrowers and All Elderly Homeowners

	HECM Borrowers ¹		Elderly Homeowners ² 1997 AHS
	1999 Analysis	1995 Analysis	
Median Age	75	76	72
Gender/Household Composition:			
Female Living Alone	56.3%	59.5%	27.6%
Male Living Alone	13.9%	12.4%	7.9%
Living With Others	29.8%	28.1%	64.5%
Race/Ethnicity:			
Non-Hispanic White	86.4%	92.7%	87.2%
Non-Hispanic African American	9.2%	5.9%	7.8%
Hispanic	3.1%	0.8%	3.7%
Other	1.3%	0.6%	1.3%

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

² Data from 1997 American Housing Survey National Sample.

In addition, the ratio of females living alone to males living alone among HECM borrowers (4 to 1) is somewhat higher than the equivalent ratio among the general population of elderly homeowners (3 to 1). For both populations, elderly women are much more likely than elderly men to live alone.

Race/Ethnicity

The racial and ethnic composition of the HECM participants is very close to the general population of elderly homeowners, as shown in Exhibit 2-6. A large majority (86.4 percent) of the HECM borrowers are non-Hispanic whites and about 9.2 percent are non-Hispanic African Americans, with other racial/ethnic minorities accounting for 4.5 percent of the total borrowers. In fact, non-Hispanic African Americans are now participating in HECM at a higher rate (9.2 percent versus 7.8 percent) than they are represented in the general population of elderly homeowners.

At the time of HUD's earlier evaluation of the HECM program in mid-July 1994, close to 93 percent of the participants were whites, only 6 percent were African Americans, and other racial/ethnic minorities accounted for only 1 percent of the borrowers. The updated data suggest that the racial composition of HECM borrowers is converging toward the composition of the general population of elderly homeowners. There are several possible explanations for this shift in racial composition of the HECM participants. First, it is possible that the program has been marketed more effectively among minority homeowners than it was prior to the earlier evaluation. Second, it is likely that non-white potential participants are receiving different housing counseling than they were previously regarding the HECM program. Finally, lenders may have become more active in providing loans and other services in minority communities.

HECM Borrowers' Property Characteristics

Our analysis of property characteristics includes the house's appraised value, owner's initial equity, property size, general condition, and locations in the region and city.

Property Value

The most important property characteristic for the HECM program is the appraised value of the property. As mentioned above, the amount of HECM proceeds depends on the borrower's age as well as the property value, at a given level of interest rate. Exhibit 2-7 shows that on average the HECM participants own substantially more valuable properties than the general population of elderly homeowners. The median property value for all elderly homeowners was about \$87,000 in 1997.⁸ In comparison, the median property value of HECM borrowers is \$107,000 at the time of application, which is about 23 percent more expensive than the typical house owned by the elderly. More than two-thirds of the HECM participants have properties that are valued at over \$87,000.⁹

⁸ Property values in AHS were self-reported by the respondents.

⁹ The appraised value assumes that needed repairs have been completed. The comparison of self reported AHS property values in "as-is" condition to HECM appraised values in "as-repaired" condition may exaggerate the real differences at a point in time.

Exhibit 2-7
Characteristics of Properties Owned by HECM Borrowers and All Elderly Homeowners

	HECM Borrowers ¹		Elderly Homeowners ² 1997 AHS
	1999 Analysis	1995 Analysis	
Median Appraised Property Value	\$107,000	\$102,000	\$87,000
Median Owner's Initial Equity:			
Among All Borrowers/Homeowners	100%	100%	100%
Among Those With Outstanding Balances or liens	85.7%	n.a.	69.0%
Median Property Size:			
Lot Size	7,200 sq. ft	8,250 sq. ft	11,250 sq. ft
Living Area	1,327 sq. ft	1,120 sq. ft	1,700 sq. ft
Number of Rooms	6	8	6
Number of Bedrooms	3	3	3
Number of Bathrooms	1.5	1.5	1.5
Property Condition:			
Average Cost of Repairs	\$666	\$836	n.a.
Median Age of Structure	41 years	38 years	38 years
Region:			
Northeast	26.0%	n.a.	19.8%
Midwest	17.8%	n.a.	24.9%
South	20.2%	n.a.	36.9%
West	35.4%	n.a.	18.3%
Location:			
Central City	41.3%	35.2%	24.1%
Metro Non-Central City	46.9%	61.0%	57.2%
Non-Metro	11.8%	3.8%	18.7%

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

² Data from 1997 American Housing Survey National Sample.

The last HECM evaluation reported that median property value was \$102,000 in mid-July 1994 and \$103,000 in 1992 (in 1998 dollars). To see the dynamics of how property values of the HECM borrowers has evolved over the decade, Exhibit 2-8 shows the distribution of median property values (in both nominal and 1998 dollars) by year of loan origination (based on funding date).¹⁰ It clearly indicates that, in real terms, more and more of the HECM

¹⁰ The median property values of each fiscal year were converted to 1998 dollars using the CPI-U Index for all urban consumers.

participants have less expensive house values, as compared with the earlier years of the Demonstration. On average, the median property values for new origination cohorts have declined in real terms by about 16 percent over the decade (from \$124,790 to \$105,000 in 1998 dollars). The lag between the increase in FHA loan limits and the change in housing price values in the market may have contributed to this decline in real HECM property values over the decade. There could also be other reasons for this trend toward lower real home values entering the program. For example, there may now be more lenders active in lower cost states than at the outset of the program. In addition, interest rate declines have raised the monthly payments or maximum amount of line of credit available to borrowers making it easier to market HECMs to homeowners with lower valued homes.

Exhibit 2-8
Median Property Value by Year of Origination

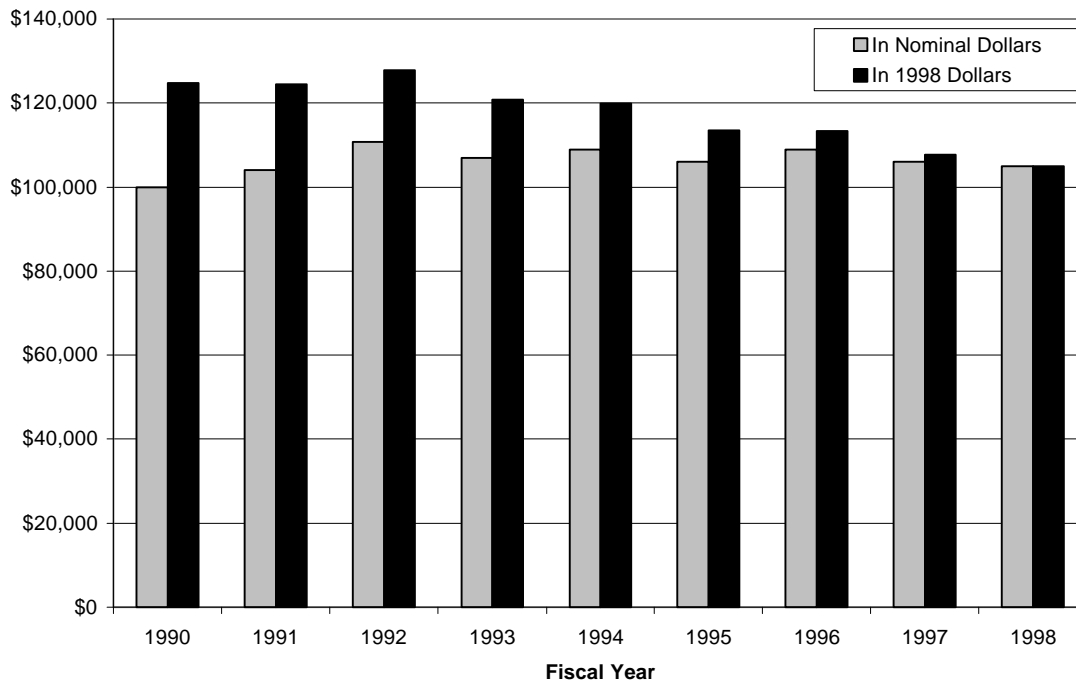


Exhibit 2-9 presents the effect of property value on the maximum monthly payment or line of credit available to typical HECM borrowers with different property values. The HECM proceeds in the exhibit were computed for a borrower with median age (75 years), median expected interest rate (7.81 percent), median closing cost (\$3,400) and median service fees (\$30) at four different property values:

- Lower quartile property value of HECM borrowers (\$78,000).
- Median property value of HECM borrowers (\$107,000).

- Upper quartile property value of HECM borrowers (\$145,000).
- Median property value of the general population of elderly homeowners (\$87,000).

Exhibit 2-9

Maximum Monthly Payment or Line of Credit Available to Typical HECM Borrowers at Different Property Values

	HECM Borrowers			General Population
	Lower Quartile: \$78,000	Median: \$107,000	Upper Quartile: \$145,000	Elderly Homeowners: \$87,000
Maximum Monthly Payment	\$268	\$372	\$489	\$309
Maximum Line of Credit (Net Principal Limit)	\$33,993	\$47,305	\$62,190	\$39,228

Exhibit 2-9 shows that, for example, the typical HECM borrower with a property value of \$78,000 can receive a maximum payment of \$268 per month, or a maximum line of credit of about \$33,993. In comparison, everything else being equal, a similar borrower with property value of \$145,000 will receive a monthly payment of \$489 (about 82 percent higher) or a line of credit of about \$62,190 (about 83 percent higher).

Owner’s Initial Equity

By design, the HECM program is targeted to those elderly homeowners who have a substantial amount of equity in their house. The requirements state that prospective borrowers must either own their property free and clear, or be able to pay off outstanding mortgage balances or other liens at closing from the HECM proceeds. Exhibit 2-7 shows the initial equity for two groups of the HECM participants – all borrowers and the subset of those who had non-zero outstanding mortgage balances or liens at the time of loan application.¹¹ These numbers can be compared to those of the general population of elderly homeowners, using data from the 1997 American Housing Survey.¹²

Looking at the median values of initial equity, both the HECM borrowers and the general elderly homeowners appear to have 100 percent equity on their house. Focusing on those who still had non-zero outstanding balances or liens at the time of loan application or at the

¹¹ From the data items available in the IACS database, we defined:
Equity = [(appraised property value – HECM liens) / appraised value] × 100%.

¹² From the data items available in the AHS data, we defined:
Equity = [(appraised property value – outstanding balances from the 1st and 2nd mortgage – outstanding balances from 1st and 2nd home equity loans) / appraised value] × 100%.

time of AHS interview, we found that HECM participants indeed had substantially higher equity than the general population of elderly homeowners (median of 85.7 percent versus 69 percent). In fact, the vast majority (95 percent) of HECM participants had mortgage balances or liens of at most 31 percent of total property value. In comparison, most (95 percent) of the general elderly homeowners had mortgage balances up to half of their house's market value.

Property Size

Despite the higher market values of their properties, the HECM participants on average have properties that are substantially smaller in terms of area than those of the general elderly homeowners. According to Exhibit 2-7, the median lot size and living area of the HECM borrowers' properties are 7,200 square feet and 1,327 square feet respectively. The general population of elderly homeowners, in contrast, occupies houses with a median lot size that is 56 percent larger (11,250 square feet) and median living area that is 28 percent larger (1,700 square feet). However, in terms of number of rooms, bedrooms and bathrooms in the property, the typical HECM property is almost identical to those of the general elderly homeowners – it is a house with 6 rooms, 3 bedrooms and 1.5 bathrooms.

Both median lot size and median number of rooms are smaller in this evaluation than was reported in the last round of the evaluation, but median living area has become slightly larger. In the 1995 analysis, a typical HECM property had a lot size of 8,250 square feet, living area of 1,120 square feet and 8 rooms.

Property Condition

The general condition of HECM properties was approximated by the structure age and the cost of repairs required to bring the units into compliance with loan guidelines. Measured at the time of application, the HECM properties to date are, on average, about 3 years older than those of the general population of elderly homeowners. The median structure age of the HECM properties is 41 years old, while the typical house owned by the elderly population is about 38 years old. In addition, HECM participants' properties to date appear to be slightly older (3 years) than was reported in the 1995 evaluation, both measured at the time of loan application.

Although they are relatively old, the HECM participants' properties are in rather good condition, as measured by the cost of repairs required. Tabulations indicate that no repairs were needed for more than three quarters of the HECM properties at the time of loan application. The average cost of repairs is about \$666, which represents an approximately 20 percent decrease from the average repair costs reported in the last evaluation (\$836). Both estimates are in nominal dollars.

Region and Location

The geographic distribution of elderly homeowners and of housing prices determine the demand for HECM loans. Exhibit 2-7 presents how the HECM loans to date are distributed

across the four Census regions and city/suburb/rural divisions. Overall, loans located in the Northeast (26 percent) and West (35.4 percent) together account for more than 61 percent of the total. The share of HECM loans in the Midwest (17.8 percent) is the smallest among the four regions. In comparison, the majority of the properties owned by the general population of elderly are located in the Midwest (24.9 percent) and South (36.9 percent) regions. Together they represent about 62 percent of the stock. Relative to the other three regions, homeowners located in the West account for the smallest share (18.3 percent) in the elderly population, whereas the number of loans originated in that region represents the largest proportion (35.4 percent) in the HECM universe.

Exhibit 2-10 shows the distribution (with growth rates) of cumulative loan volume across state boundaries in FY1995 (roughly corresponding to the last evaluation) and FY1999. Map 2-11 plots the state percentage growth rates. In addition, the computed state-by-state HECM penetration rate, defined as the number of loans originated as a percent of elderly homeowners (approximated by the number of elderly homeowners age 65 or more years old reported in the 1990 Census), are presented in Exhibit 2-12.

As Exhibit 2-7 indicates, most of the HECM properties are located in the suburbs¹³ (46.9 percent) and central city (41.3 percent), with properties located in the non-metropolitan areas accounting for only 11.8 percent of the total. The prevalence of HECM properties in the suburbs is consistent with the patterns and trends reported in the last round of the evaluation. However, because the last evaluation depended on geographic classification reported by the property appraisers (rather than the Census Bureau definitions used in this report), the numbers are not exactly comparable. For the general population of elderly homeowners, the majority (57.2 percent) of them are located in the suburbs as well. While only about one-fourth of elderly homeowners have properties in central cities, the share of HECM properties located in central cities amounts to 41.3 percent of the total. In other words, HECM properties are disproportionately located in the central city.

¹³ Defined as the non-central city part of a Metropolitan Statistical Area.

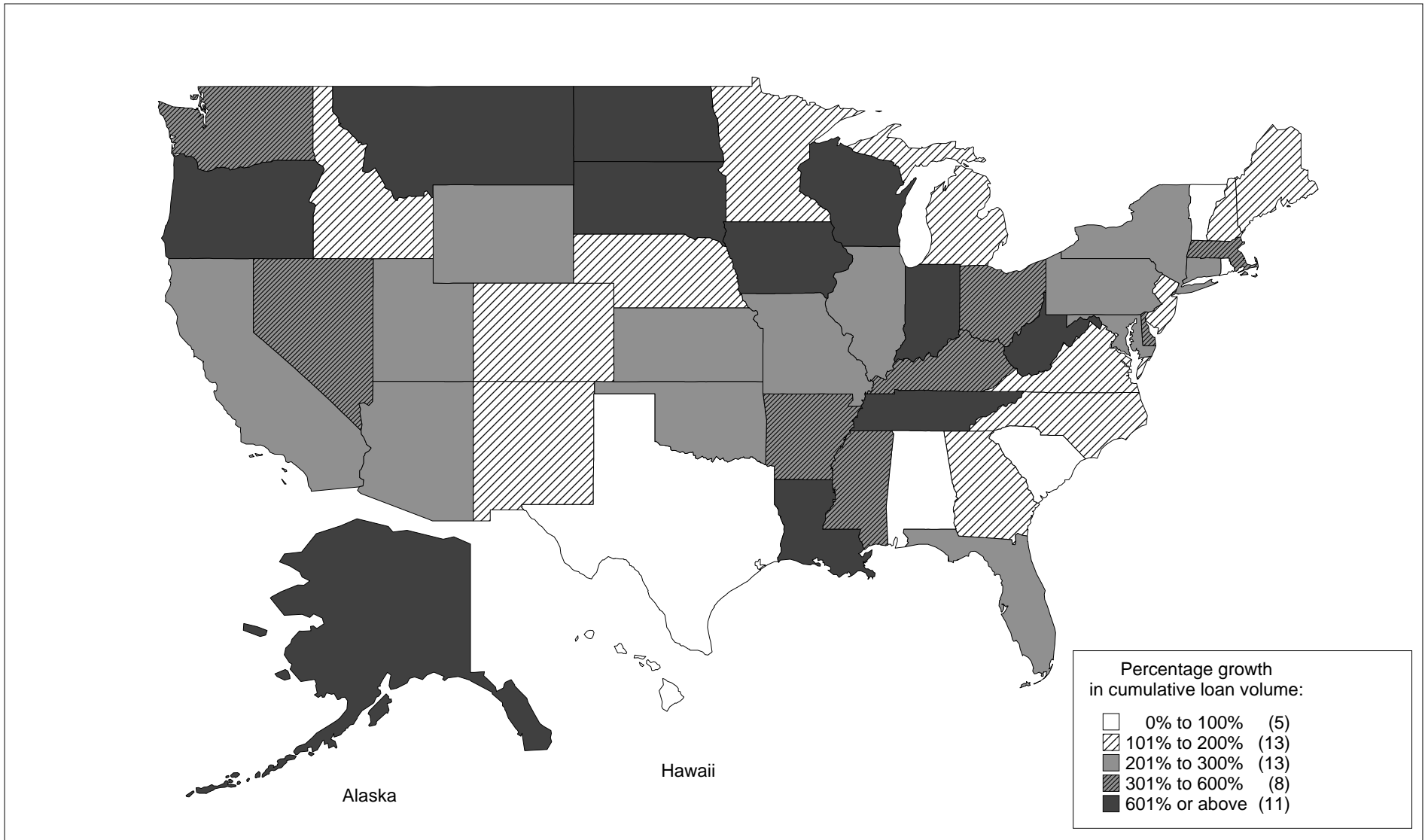
Exhibit 2-10

Growth in Cumulative HECM Volume by State, FY1995 to FY1999

State	FY1995	FY1999	Change in Number of Loans	Percentage Change	State	FY1995	FY1999	Change in Number of Loans	Percentage Change
AK	0	17	17	n.a.	MT	20	164	144	720%
AL	44	132	88	200%	NC	251	738	487	194%
AR	30	158	128	427%	ND	0	13	13	n.a.
AZ	258	831	573	222%	NE	22	59	37	168%
CA	1,224	4,199	2,975	243%	NH	97	201	104	107%
CO	546	1,611	1,065	195%	NJ	525	1,529	1,004	191%
CT	202	739	537	266%	NM	96	234	138	144%
DC	107	296	189	177%	NV	47	196	149	317%
DE	23	118	95	413%	NY	869	2,808	1,939	223%
FL	314	1,089	775	247%	OH	160	833	673	421%
GA	200	427	227	114%	OK	109	410	301	276%
HI	81	152	71	88%	OR	85	602	517	608%
IA	12	101	89	742%	PA	465	1,771	1,306	281%
ID	96	284	188	196%	PR	36	162	126	350%
IL	557	1,792	1,235	222%	RI	318	552	234	74%
IN	76	540	464	611%	SC	94	158	64	68%
KS	54	175	121	224%	SD	0	12	12	n.a.
KY	20	109	89	445%	TN	24	239	215	896%
LA	45	412	367	816%	TX	0	0	n.a.	n.a.
MA	27	129	102	378%	UT	231	908	677	293%
MD	264	796	532	202%	VA	309	847	538	174%
ME	77	163	86	112%	VT	74	121	47	64%
MI	178	530	352	198%	WA	327	1,376	1,049	321%
MN	219	497	278	127%	WI	41	485	444	1,083%
MO	97	311	214	221%	WV	9	81	72	800%
MS	12	63	51	425%	WY	15	55	40	267%

Data source: IACS, through October 1999.

Exhibit 2-11: Growth of Cumulative HECM Loans by State, FY1995 to FY1999



Note: There was no HECM activity in Alaska, North Dakota and South Dakota by the end of FY95, while a small amount (less than 20) of HECM loans were originated in these states by the end of FY99. These states have been grouped into the highest growth-rate category. No HECM activity was observed in Texas by the end of FY99.

Exhibit 2-12
Penetration of HECM Loans by State

State	Number of HECM Loans Originated by October 1999	Homeowners Age 65+ in 1990 (in thousands)	Number of HECM Loans Originated per 1,000 Elderly Homeowners
Utah	1,083	84	12.9
Colorado	2,030	164	12.4
District of Columbia	344	30	11.5
Rhode Island	590	60	9.9
Washington	1,758	289	6.1
Idaho	360	66	5.4
Connecticut	1,010	200	5.0
Nevada	278	57	4.9
Alaska	47	11	4.3
New Jersey	1,973	467	4.2
Arizona	1,032	251	4.1
Oregon	815	200	4.1
Maryland	974	243	4.0
Montana	223	56	4.0
Vermont	126	32	3.9
New York	3,442	881	3.9
New Hampshire	220	56	3.9
Hawaii	207	53	3.9
California	5,586	1,451	3.9
Virginia	1,239	334	3.7
Delaware	148	42	3.5
New Mexico	301	88	3.4
Illinois	2,151	698	3.1
Wyoming	70	26	2.7
Maine	192	77	2.5
Louisiana	598	254	2.4
Oklahoma	546	237	2.3
Pennsylvania	2,094	912	2.3
Minnesota	581	267	2.2
North Carolina	895	423	2.1
Indiana	694	362	1.9
Wisconsin	589	311	1.9
Georgia	523	335	1.6
Ohio	1,079	706	1.5
Michigan	791	576	1.4

Exhibit 2-12 (Continued)
Penetration of HECM Loans by State

State	Number of HECM Loans Originated by October 1999	Homeowners Age 65+ in 1990 (in thousands)	Number of HECM Loans Originated per 1,000 Elderly Homeowners
Florida	1,657	1,241	1.3
Kansas	215	182	1.2
Missouri	400	362	1.1
Arkansas	204	189	1.1
Tennessee	334	325	1.0
South Carolina	196	219	0.9
Nebraska	84	116	0.7
West Virginia	108	153	0.7
Kentucky	154	252	0.6
Iowa	131	220	0.6
Massachusetts	198	341	0.6
Alabama	165	285	0.6
Mississippi	95	183	0.5
South Dakota	25	49	0.5
North Dakota	18	44	0.4
Texas	0	906	0.0
Total	38,573	15,366	2.5

Sources: IACS data, through October 1999. Elderly homeowners count from 1990 Census of Population and Housing, STF-3c.

HECM Loan Characteristics

Our analysis of the HECM loan terms includes payment option, interest rate, adjusted property value, initial principal limit, closing costs and loan terminations.

Payment Options

Five payment options are available to the HECM participants at the time of loan origination:

- Tenure payments. Monthly payments are provided to the borrowers for as long as they occupy the property as their principal residence.
- Term payments. Monthly payments are provided to the borrowers over a specified period of time.

- Line of credit. Borrowers are allowed to withdraw payments as needed, up the principal limit amount of the loan.
- A combination of tenure payments with a line of credit.
- A combination of term payments with a line of credit.

Borrowers can change payment options at any time throughout the life of the loan, subject to a small fee. Our tabulations were based on the information provided in the IACS database for loans originated by the end of fiscal year 1998. The payment plan distribution represents the current distribution, which may have shifted from the pattern of payment plans chosen by borrowers at closing. According to Exhibit 2-13, around two-thirds of the HECM participants chose the line of credit as their payment option, representing a 10 percent increase from the corresponding share reported in the 1995 evaluation. The second most popular payment option is the combination of term payment with a line of credit (12.6 percent), with the remaining HECM participants about evenly divided between the other three payment options. For those who chose term payments as their option, the median term selected is around 8 years.

Exhibit 2-13
Median Loan Terms for HECM Loans

	HECM Borrowers² (as of July 13, 1999)	HECM Borrowers¹ (as of July 15, 1994)
Choice of Payment Plan:		
Tenure Payments	6.2%	8.2%
Term Payments	6.2%	11.1%
Line of Credit	67.7%	56.6%
Tenure with Line of Credit	7.3%	7.9%
Term with Line of Credit	12.6%	16.2%
Median Initial Interest Rate	6.2%	5.7%
Median Expected Interest Rate	7.8%	8.5%
Median Adjusted Property Value	\$102,125	\$97,000
Median Initial Principal Limit	\$54,890	\$46,836
Median Closing Costs	\$3,400	\$4,465

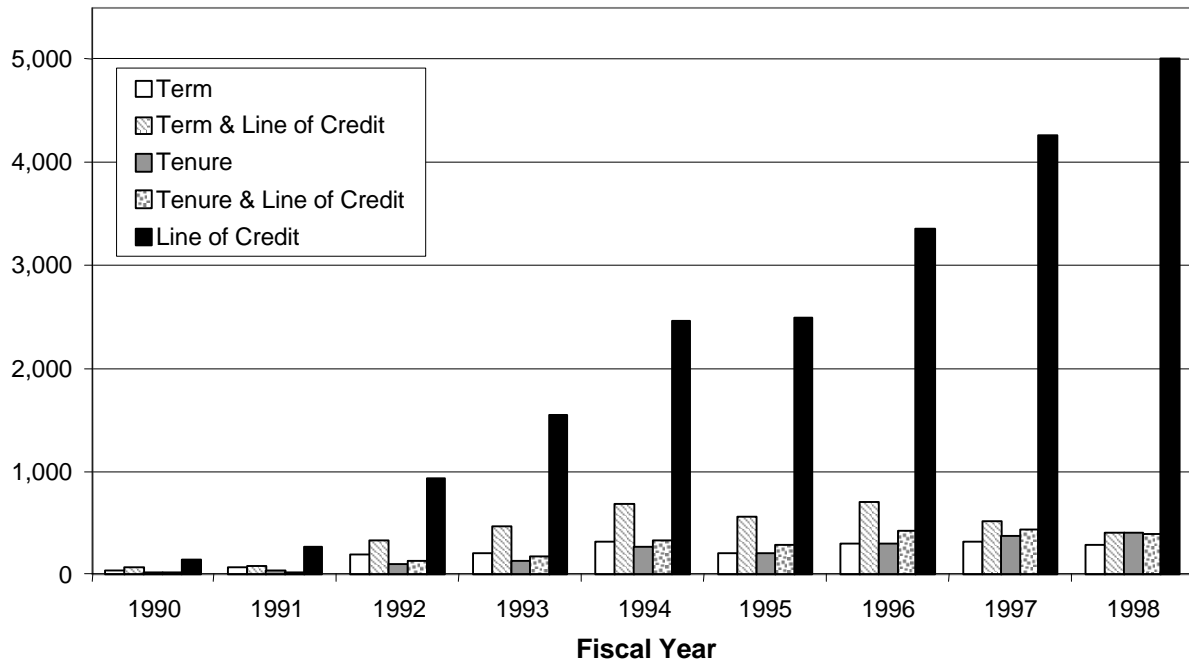
¹Data from ACS reported in the 1995 HECM evaluation. Choice of payment plan data are as of July 15, 1994. All other information are as of the time of HECM loan application. Dollar amounts are nominal.

²Closing costs information was extracted from the CHUMS database. All other information are as of the time of HECM loan application from the IACS database. Choice of payment plan data are as of July 13, 1999. Dollar amounts are nominal.

Compared to the distribution of payment options in July 1994, the term (from 11.1 percent to 6.2 percent) and tenure (from 8.2 percent to 6.2 percent) options are clearly losing share. To fully see the trend over the decade, Exhibit 2-14 presents the number of HECM loans associated with each of these five payment options by year of loan origination. It shows that

the number of borrowers who chose the line of credit option has been growing steadily over the decade, while the number of new loans associated with the other four payment options has remained constant each year.

Exhibit 2-14
Volume of HECM Loans by Payment Plan and Origination Cohort



Interest Rates

A HECM loan can bear interest at either a fixed or an adjustable rate. With less than one percent of the HECM loans originated as fixed-rate, the vast majority are either annually adjusted (60 percent) or monthly adjusted-rate (39 percent) loans. Over the decade, the relative shares of annually adjusted versus monthly adjusted-rate loans have shifted substantially. All the HECMs originated before 1994 bore interest at an annually adjusted-rate. However, since 1994 the share of monthly adjusted-rate loans has increased exponentially, while the number of annually adjusted-rate HECMs originated each year has plummeted. Monthly adjusted-rate loans accounted for 95 percent of all the originations in 1999. The initial interest rate for an adjustable rate HECM loan is set at the U.S. Treasury Securities rate adjusted to a constant maturity of one year, plus a margin. The median value of the margin is 1.6 percentage point. Exhibit 2-13 reveals that the median initial rate is 6.2 percent, up slightly from the 5.7 percent reported in July 1994 for the last evaluation. Most (90 percent) of the loans were originated at initial interest rates between 5.7 percent to 7.51 percent.

A more important quantity for each HECM loan is the expected interest rate (also referred to as expected average mortgage interest rate), which is established as the U.S. Treasury Securities rate adjusted to a constant maturity of ten years, plus a margin. In practice, this is used to determine both the initial principal limit and the compounding rate for projecting future values of the principal limit. The expected interest rate, therefore, is related to the amount of maximum monthly payment or line of credit that is available to the HECM borrower. This relationship is shown in Exhibit 2-15, which reports the amount of HECM proceeds available to a typical borrower of median age (75 years), median property value (\$107,000), median adjusted property value (\$97,000), median closing cost (\$3,400) and median service fees (\$30) at three different expected interest rates:

- Lower quartile expected interest rate (7.31 percent).
- Median expected interest rate (7.81 percent).
- Upper quartile expected interest rate (8.63 percent).

Exhibit 2-15

Maximum Monthly Payment or Line of Credit Available to Typical HECM Borrowers at Different Expected Interest Rates

	Lower Quartile: 7.31%	Median: 7.81%	Upper Quartile: 8.63%
Maximum Monthly Payment	\$383	\$372	\$350
Maximum Line of Credit (Net Principal Limit)	\$50,816	\$47,305	\$41,629

Accordingly, everything else being equal, the amount of HECM proceeds is inversely related to the expected interest rate level. For instance, an average HECM loan originated with a relatively low expected interest rate of 7.31 percent can generate a maximum payment of about \$383 per month, or a maximum line of credit of about \$50,816. Another HECM loan with similar loan terms and a higher expected interest rate of 8.63 percent can produce a maximum payment of only \$350 per month (about 9 percent lower), or a maximum line of credit of only \$41,629 (about 18 percent lower).

Adjusted Property Values

Adjusted property values are defined as the lesser of the appraised property value or the FHA 203(b) loan limit in each local area. Adjusted property values, rather than appraised property values, are used to determine the amount of HECM proceeds for borrowers. In nominal dollars, Exhibit 2-13 indicates that the median adjusted property value is \$102,125 to date,

representing a modest 5 percent increase from the median value of \$97,000 reported in the 1995 evaluation. As we have seen for the analysis of appraised property value above, in real dollar terms, adjusted property values to date should on average be lower than adjusted property values in 1994.

Initial Principal Limits

As mentioned earlier, the initial principal limit amount for each HECM loan is determined by the adjusted property value, expected interest rate, and the age of the borrower. It denotes the total present value of the HECM proceeds that can be made available to the corresponding borrower throughout the life of the loan. The median principal limit to date is about \$54,890, with most (90 percent) of the loans having a limit between \$25,875 and \$104,602. Compared to the figure reported in the 1995 evaluation, the median limit has increased by about 17 percent in nominal terms.

Closing Costs

According to the HECM Handbook (4235.1 REV-1), published by HUD, a HECM loan may include origination fees as well as a variety of other third-party fees (such as credit report fee, appraisal fee, mortgage broker's fee, courier fee and document preparation fee), depending on what is customary in the local area. It is thus not surprising to see that the range of closing costs varies substantially among HECM loans. According to our tabulations of the CHUMS database, the closing costs associated with the HECM loans to date have a median value of \$3,400 and a mean value of \$3,826, with a standard error of \$1,565. As shown in Exhibit 2-13, on average, the closing costs of a typical HECM loan have decreased in nominal values by about 24 percent, from the median value of \$4,465 reported in the 1995 evaluation.

Closing costs can play a crucial role in the competition between HECMs, private reverse mortgages and other forms of home equity credit. It is thus useful to see how the HECM closing costs vary across states. We found that, on average, the HECM loans originated in Rhode Island are associated with the lowest closing costs (a median value of \$1,953). States associated with the highest median closing costs are South Dakota (\$5,139) and Maryland (\$5,016). For California and New York, the two states with the largest numbers of HECM loans, median closing costs are \$3,414 and \$4,393 respectively. Compared to the figures reported in the last evaluation, the median closing costs in California has declined by about 32 percent (from \$5,053 in 1994), while the median closing costs in New York has decreased by about 36 percent (from \$6,868 in 1994).

Loan Termination

Earlier evaluations were limited in their descriptions of termination experience because the Demonstration was so small and new that there had been few terminations. As the program has matured, there have been over 9,000 terminations to study.

As of the end of October 1999, there are 9,063 terminated HECM loans, representing about 23 percent of all loans ever originated. Among them, only 388 resulted in claims filed to the FHA insurance fund. Claims information recorded in the IACS system is incomplete, based on claims data maintained by HUD directly. Virtually all of the HECM claims are processed and filed by a manual system in HUD, which does not provide feedback information to IACS.¹⁴ There are three types of HECM claims filed¹⁵:

- Foreclosure or deed-in-lieu. This accounts for more than half (199) of the total claims to date. HUD forecloses when the HECM borrower fails to pay taxes, hazard insurance or cost of repairs, or estate of the borrower fails to cooperate with payment of the outstanding balance from the sale of the property.
- Optional/voluntary assignment. These include 38 percent (153) of all claims filed. The lender may assign the mortgage to HUD when the total outstanding balance is greater than 98 percent of the loan's maximum claim amount. At that time HUD becomes the lender and continues to advance principal and to accrue interest on the loan. In other words, these loans are still technically active in the IACS system.
- Mortgagor's sale. Only 38 claims (accounting for less than 10 percent of total claims) of this type have been filed to date.

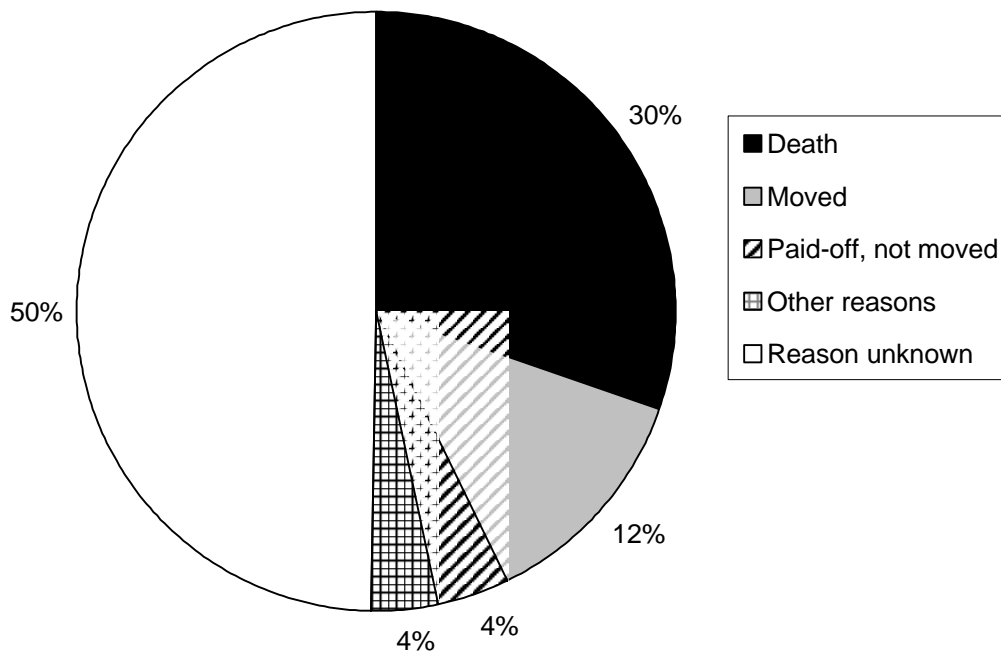
There were 8,675 non-claim terminations reported in IACS as of July 1999. These are loans paid off because of the borrower's death, the borrower moved to a different residence, or the borrower repaid the loan but is remaining in the property. Exhibit 2-16 presents the distribution of paid-off loans by different reasons recorded in the IACS system. As shown, more than 54 percent of these loans were recorded with termination reason unknown. It is likely that many of these paid-off loans are due to the borrower's death.

One interesting analysis is to calculate the level of loan utilization at termination time. If borrowers are leaving substantial untapped equity when their loans terminate (either voluntarily or by having the loan declared due and payable), the loan's fixed costs (i.e., origination costs) will be averaged across a smaller debt. Thus, low utilization rates can raise the cost of funds actually borrowed. Exhibit 2-17 displays the average outstanding loan balance as a percent of accrued principal limit less service-fee set aside for different payment plans and termination types. As expected, for terminations that resulted in claims, the average utilization rate was more than 90 percent across each type of payment plan. For non-claim terminations, LOC loans had the highest utilization rate (78 percent) when they became due and payable, compared to the other payment plans. On average, less than half (43 percent) of the principal limit (less service fee set aside) was used when tenure (and tenure plus LOC) loans were paid off.

¹⁴ We thank Nettie K. James in HUD for providing us with the HECM claims information necessary for this evaluation.

¹⁵ There are no "demand assignment" claims as of the end of FY1999.

Exhibit 2-16: Distribution of Paid-off HECM Loans by Reason of Termination



**Exhibit 2-17
Average Utilization Rate at Loan Termination**

Payment Plan	Non-claim Termination		Claim Termination	
	No. of Loans	Utilization Rate	No. of Loans	Utilization Rate
Line of Credit (LOC)	5,432	78%	304	93%
Tenure and Tenure plus LOC	1,121	43%	8	91%
Term and Term plus LOC	2,122	61%	76	90%

Data: IACS, through October 1999. Claims information from HUD manual filing system.

Chapter Three

Participation by the Financial Community

The HECM demonstration was intended to encourage the participation of the financial community in originating, servicing and investing in reverse mortgages by providing insurance that would protect these firms from the risk of losses. Quite clearly, the availability of mortgage insurance has been instrumental in the development of the reverse mortgage market. But early in the program's development, the participation by a variety of firms, most notably Wendover Financial Services Corporation as the principal loan servicer and Fannie Mae as the principal investor in these loans, was also critical in establishing the HECM market. Continued growth in the participation of the financial community is essential to the HECM program, both to make loans more widely available for borrowers and to provide adequate competition among firms so that consumers are offered the most favorable loan costs and terms.

This chapter discusses issues associated with participation by the financial community in the HECM program, including originators, servicers, and investors. The first three sections discuss issues associated with each of these three roles. Since participation by the financial community is in no small part a function of the potential size of the market, this chapter also examines potential barriers to greater growth in the demand for HECM loans as part of the examination of issues associated with loan origination. The final section of the chapter also presents a summary of developments since the last evaluation in 1995 in the market for private reverse mortgage products.

The findings presented in this chapter are based primarily on interviews conducted with eight large volume HECM originators accounting for a majority of HECM originations, the principal HECM servicers, Fannie Mae, representatives of industry organizations, and HUD staff. In addition, relevant findings from interviews with housing counselors and focus groups with borrowers are also drawn on in assessing the participation by the financial community. Finally, data from the ACS servicing system on the number and type of lenders and servicers participating in the HECM market is analyzed.

Origination

Number and Type of Originators

As shown in Exhibit 3-1, the number of active HECM originators showed fairly steady growth through 1996 and then increased sharply in 1997, reaching a total of 195 lenders, double the number that were active just three years earlier. But in each of the last two years, the number of active lenders has declined. The estimated number of active HECM

originators in 1999 is only 174, an 11 percent decline from the 1997 peak.¹⁶ However, the relatively smooth rise and fall in the number of active HECM lenders masks much greater volatility in the lenders making HECM loans. Exhibit 3-2 shows the number of lenders entering and exiting the HECM market from 1990 through 1999.¹⁷ As shown, in each year the change in the number of active lenders is the result of new lenders entering the market while other lenders exit. Through 1997, the number of entrants exceeded the number of departures so the total number of lenders grew. But beginning in 1998, departures rose sharply while new entrants declined sharply, leading to a decline in the total number of lenders. Thus, the recent decline in the number of HECM lenders reflects both greater difficulty in attracting new lenders to this market *and* greater difficulty in retaining lenders that have entered the market. This volatility in lenders offering HECM loans was noted by several of the housing counselors interviewed who noted that it was difficult to keep track of which lenders were making HECM loans in their area. This problem is exacerbated by the fact that HUD provides lists of lenders who are *approved* to make HECM loans, but approved lenders may no longer be offering this product.¹⁸

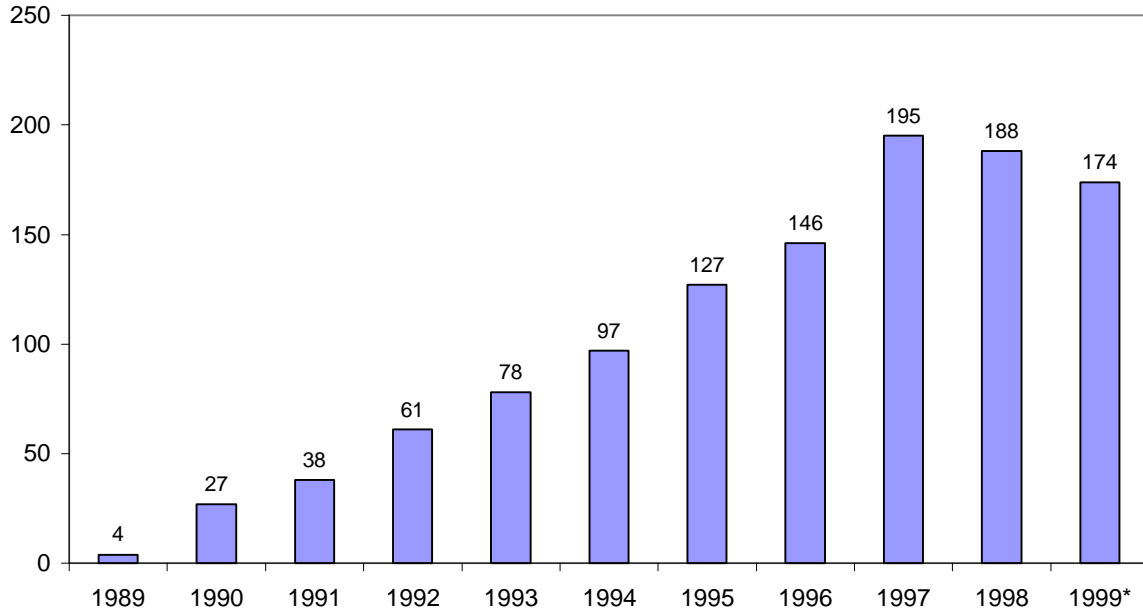
Lenders are motivated to offer HECMs for several reasons. First, many are attracted by the potentially large and growing market for these loans as the number of elder homeowners continues to grow. Second, lenders are interested in expanding the range of products offered to offset fluctuations in demand for other mortgage products. Specifically, the forward mortgage market is subject to sharp fluctuations in demand as interest rates rise and fall. During periods of rising interest rates as forward mortgage activity wanes, companies specializing in forward mortgages will seek alternative market niches for their staff. In part,

¹⁶ Available data for 1999 only covers the period for January through October. During this time 162 lenders originated HECM loans. To estimate the total number of originators expected for 1999, the ratio of originators active during this 10-month period in each year from 1996 through 1998 is compared to the total number of originators. During this 3-year period, on average 93 percent of originators were active during the initial 10-month period. The estimate of 174 active lenders for 1999 is estimated by dividing 162 by this percentage.

¹⁷ Entrants are identified as lenders who first originated HECM loans in a given year. Departures are identified as lenders who failed to originate any HECMs in a given year after having made loans in the prior year. This method of identifying departures may misallocate a departure to a given year to the extent that a firm exited the market in the middle of one year, but this departure only became evident in the following year when no HECMs were originated. It is also important to note that departures may also occur as a result of mergers and acquisitions of firms. In fact, in recent years there has been some consolidation of HECM lenders due to mergers and acquisitions, which would be included here as departures.

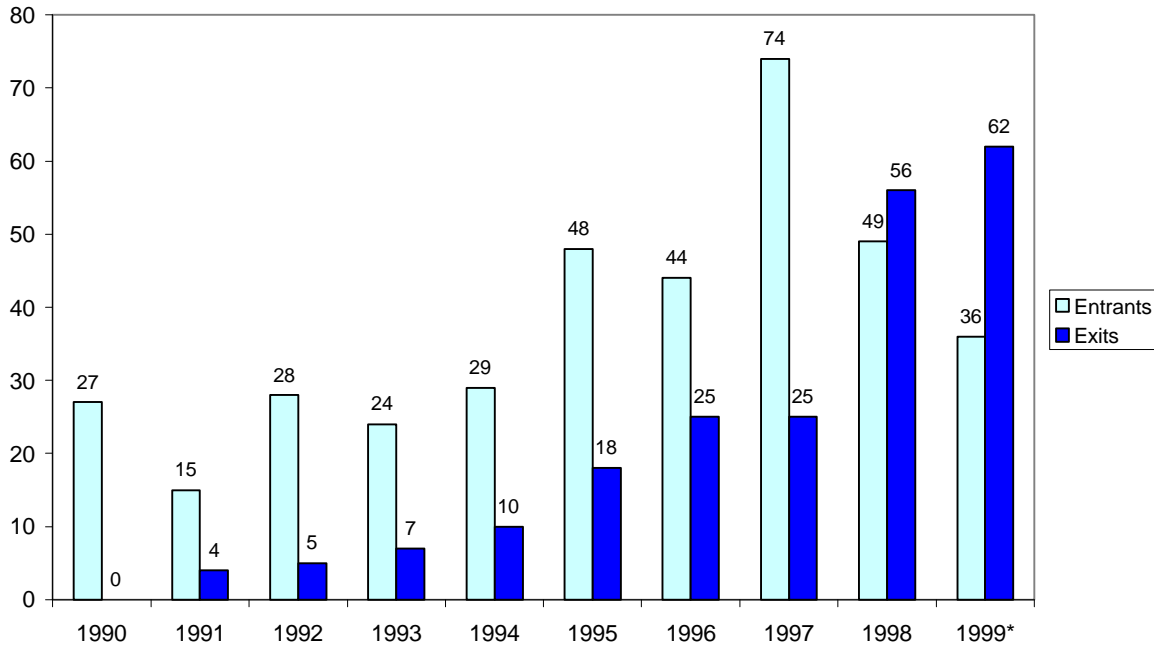
¹⁸ On the other hand, lenders report that it can be difficult to get put on lists of active HECM lenders maintained by HUD and housing counseling agencies. These lists are an important way for lenders to reach interested homeowners. Lenders report having to individually contact HUD headquarters, field offices, and counseling agencies, sometimes repeatedly, in order to have their names added to lists of HECM lenders.

**Exhibit 3-1
Number of Active HECM Originators**



Note: 1999 figure is an estimate based on number of active originators through October 1999 and the proportion of active originators issuing loans in the January-October period during 1996, 1997, and 1998.

**Exhibit 3-2
HECM Lenders Entering and Leaving the Market by Year**



Note: 1999 data is for January through October only.

the strong forward mortgage market of 1998 and early 1999 may have contributed to the decline in the number of HECM lenders as mortgage companies focused their efforts on forward mortgages. Finally, a quite important factor in a lender's decision to offer HECMs is a desire to offer products that serve a social purpose of aiding the lower-income elderly population. For depositories, an additional motivation can be to obtain credit for lending to low- and moderate-income households for Community Reinvestment Act (CRA) requirements. The most active HECM lenders stand out for their passion for this product which springs from their belief in both the potential for this market to grow rapidly and their feeling that these loans can be of great benefit for many elderly homeowners. This passion is an important ingredient keeping these lenders active despite a variety of hurdles in developing the market and continued steady but slow growth in the number of loans originated.

The decision to exit the market is generally due to a lack of demand for HECM loans which makes it unprofitable to keep staff trained in the process of originating these loans. Even if lenders achieve a fairly significant loan volume by industry standards, they may not be able to generate sufficient profits to sustain their commitment to the product. An example of the later is a large mortgage company, which entered the HECM market in late 1996 and quickly became one of the five largest HECM originators. However, they decided to exit this market in 1999 after coming to the conclusion that total loan volumes in the reverse mortgage market were not likely to achieve a level that would be needed to achieve a sufficient level of profits. This decision is particularly notable not just because this firm had achieved a fairly large market share, but also because their interest in offering HECMs was not purely profit driven, but was also driven by a desire to offer a product that would be of assistance to their retirees.

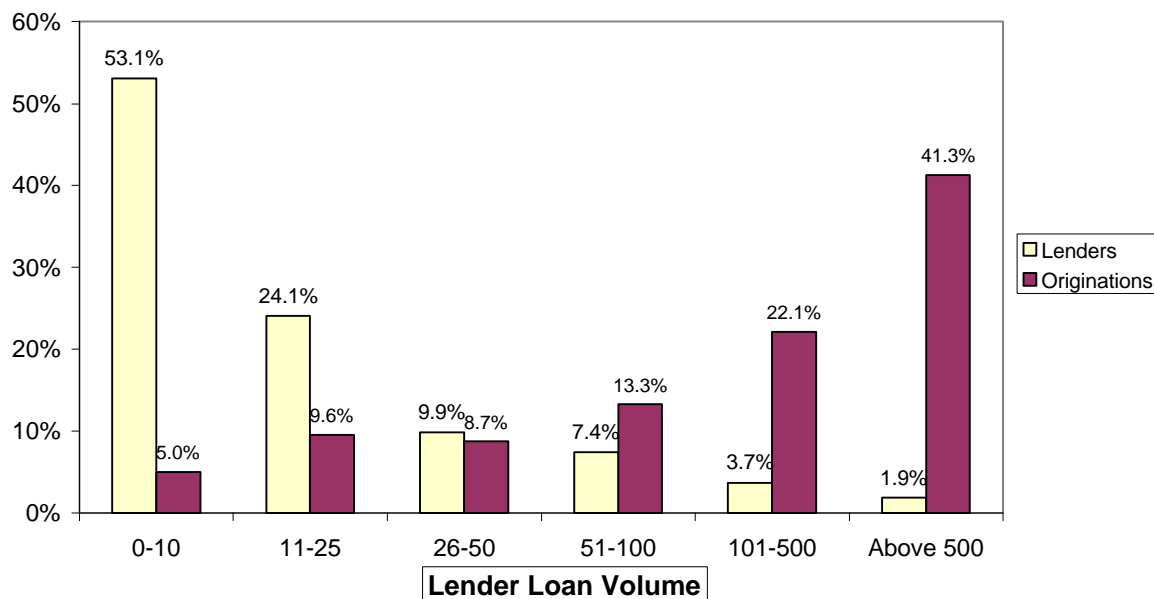
Part of the difficulty lenders have in achieving sufficient volumes of HECM originations is reportedly due to difficulty in getting forward mortgage loan officers to be motivated to originate these loans. In part, lenders report this difficulty has been due to the fact that HECMs reportedly offered lower compensation for loan officers than forward mortgages. One lender noted that a loan officer would typically hope to earn an average of \$2,000 for each loan originated. With HECMs, the origination fee was generally only \$1,800 or slightly higher given the prohibition on financing more than this amount of origination fee. Since this fee has to both compensate the loan officer and cover the lender's overhead and profit, loan officers reportedly could not achieve the same income originating HECMs.¹⁹ The recent increase in the amount of origination fees that can be financed to the greater of \$2,000 or 2 percent of the maximum claim amount is designed to increase the financial incentive of lenders to make HECM loans.

¹⁹ In addition to the origination fee, lenders will also receive a servicing release premium of one to two years servicing fees or servicing income if they service the loans themselves. So the total fees generated for the lender may be between \$2,000 and \$3,000.

Another factor making it difficult to attract the interest of loan officers is that the HECM origination process is more time consuming and requires greater “hand holding” of borrowers than forward mortgages. Homeowners may consider a HECM for a year or more before deciding to take out a loan. During this period they may want to meet several times to go over loan terms and options, sometimes including other family members. Loan officers used to a quicker process with less consumer education required can be frustrated by HECM originations. Several lenders noted that the ideal loan officer in the reverse mortgage field is 80 percent social worker and 20 percent sales person. Loan officers who will stay in the reverse mortgage field are those who are as motivated by a desire to assist elderly homeowners as they are by a desire to earn a good income. For these reasons, lenders who achieve any significant volume of HECM lending have a group of loan officers who solely originate HECM loans. Lenders who expect forward mortgage officers to also originate HECMs will have a difficult time achieving any significant volume of loans.

The issue of lenders exiting the market after failing to achieve a sufficient volume of HECM originations is not trivial as a majority of lenders active in the HECM market originate a small volume of loans. Exhibit 3-3 presents the distribution of HECM lenders and HECM originations in 1999 by lender size as measured by the number of HECMs originated. As shown, slightly more than half of all HECM lenders originated 10 or fewer loans during the first 10 months of 1999, while nearly a quarter originated only 11 to 25 loans. So nearly four

Exhibit 3-3
Distribution of Lenders and Originations in 1999 by Lender Size



Note: 1999 originations for period from January through October only.

out of five HECM lenders are originating at most two loans a month on average. The median firm exiting the market in 1999 had only two years of experience originating HECMs, and achieved a maximum loan volume of 5 loans.

At the other end of the size spectrum, the largest HECM lenders account for a very large share of originations. There are three lenders who have originated more than 500 loans during the first 10 months of 1999, and these lenders account for 41 percent of all originations. Another 6 lenders originated between 101 and 500 loans and together account for 22 percent of all originations. Taken together, these nine lenders have nearly two-thirds of the HECM market.

A large majority of the HECM originators are mortgage companies. Of the lenders originating HECMs during 1999, 74 percent were mortgage companies and 23 percent were depositories.²⁰ Since none of the depositories active in the HECM market are national or even large regional lenders, these lenders account for an even smaller volume of originations – only 13 percent of all HECMs originated in the first ten months of 1999. Several of those interviewed suggested that greater participation by depositories might help to expand the market for HECMs. One of the challenges in appealing to owners is to provide assurance that the lender is a reputable organization that is not out to scam them out of their home. The reputation of local depositories can provide that assurance. One large lender that is a subsidiary of a bank noted that one of their most effective marketing techniques is to include references to reverse mortgage products with bank statements. The seeming reluctance of banks to enter this market may be due to an inability to generate sufficient loan volumes from their local area to merit offering this product. One mortgage company interviewed provides origination and underwriting support to local banks who are interested in originating these loans, but do not have enough volume to have staff trained in this product. These lenders were characterized by having a board member who was motivated to help elderly clients rather than by any profit motives. Banks may also be less interested in originating these loans since the complex and unfamiliar servicing makes it unattractive to hold and service these loans for their own portfolio.

Barriers to Growth of the HECM Market

One of the main obstacles to greater participation by lenders in the HECM program is a lack of demand for these loans. As described in the previous section, without greater demand, lenders are unable to generate sufficient loan volumes to profitably originate HECMs.²¹

²⁰ The remaining 3 percent of lenders are accounted for by two state housing finance agencies (New Jersey and Rhode Island), and three lenders who could not be identified from available data.

²¹ There is also an argument that greater participation by lenders is needed to foster greater demand. That is, more lenders offering the program will increase public awareness and acceptance of these loans and spur greater demand. However, over the 10 years that the HECM program has existed, a fairly large number of

Lenders, counselors, borrowers, and other industry observers were all asked about their views of the barriers to greater growth in the HECM program. One of the principal factors cited by all of these groups was the need for much more outreach and education to promote general awareness about the availability and benefits of reverse mortgages and to address common fears about the risks associated with these loans.

For the most part, those interviewed suggested that HUD, Fannie Mae, and AARP were in the best position to take the lead on broad consumer outreach and education. This opinion is based on the perception that consumers have a great deal of trust in these organizations, that these organizations have an interest in the program throughout the country, and might have the resources to undertake a large-scale education and outreach campaign. In recent years, HUD has not been undertaken any national promotion of the program. While Fannie Mae has done some promotion on its web site and in brochures, it has not done any other advertising or promotions in recent years. Fannie Mae representatives indicate that they have been holding back from promoting reverse mortgages while they assessed the risks associated with these loans and developed approaches to minimize these risks. They report that they are now poised to begin efforts to market these loans more aggressively. They have been conducting a series of focus groups to identify the characteristics of owners most likely to be interested in reverse mortgages, and to identify approaches that are most likely to reach these groups. Fannie Mae's intention is to develop a very tightly targeted marketing approach and to share this information with lenders to help them undertake their own promotion of reverse mortgages.

The National Reverse Mortgage Lenders Association (NRMLA) also reports that they are exploring the possibility of undertaking an industry-sponsored ad campaign, possibly featuring a celebrity spokesperson, which will promote the concept of reverse mortgages generally. However, these plans are in the very early stages of development, with such critical details as the exact form of the campaign, how it will be funded, and how interested owners would be referred to reverse mortgage lenders or counselors yet to be determined.

In addition to simply making more elderly homeowners aware of the availability of reverse mortgages, lenders also argue that consumer outreach needs to promote a more positive image of these loans, rather than as a last resort for financially strapped elderly households trying to stay in their home. Several lenders observed that the general message that is communicated about reverse mortgages in the media tends to be full of warnings about the potential pitfalls of these loans and does not emphasize nearly enough the potential benefits of these loans for households in a variety of financial circumstances. These sentiments were actually echoed in the focus groups with borrowers, who noted that they felt there was a stigma attached to these loans both because it implies dire financial circumstances and

lenders have entered this market, totaling more than 350 different lenders. But most of these lenders have been unable to sustain their activities given the low level of demand.

because they are viewed as not a wise choice. Borrowers noted that their family and friends equated taking out a reverse mortgage with losing your home. These borrowers felt that greater consumer awareness of these products would eliminate the stigma and alleviate these fears, both of which chill homeowner interest in these loans. HUD generally agrees with these lender views provided the consumer education is balanced with accurate information on the costs of reverse mortgages.

The lenders interviewed reported using a variety of approaches to marketing HECMs. For the most part, advertising in mass media, such as television, radio, and high circulation newspapers, has been found to be prohibitively expensive given the number of loans generated. Telemarketing is also viewed as inappropriate because consumers view products offered by telemarketers as likely to be some sort of scam. One of the approaches commonly used by lenders is direct mail, where recipients can return a postcard or call a toll-free phone number to obtain more information. But while this approach is not expensive, the success rate is also reported to be fairly low. Another common approach is to participate in seminars at senior centers, churches, and libraries either solely devoted to reverse mortgages or discussing related topics such as financial planning or long-term care insurance for the elderly. Lenders also look to get articles on reverse mortgages placed in local papers, and will network among housing counselors, lawyers, financial planners, and other professionals who are in a position to advise elderly homeowners of financial options.

Lenders note that one of the challenges in marketing these loans is a depression-era mentality among the current elderly generation that views debt of any kind as risky and unwise. Several noted that marketing targeted at the children of the elderly can be more effective by having the children then advise the parents of the benefits of these loans. One lender estimated that a significant portion of their loans have their origins in recommendations from the borrowers' children. While the conventional wisdom has been that reverse mortgages have their greatest appeal to households without children (and so are not concerned with leaving an estate for their heirs), based on lenders' perceptions and the focus group participants, it appears that a majority of HECM borrowers do have children.

The lenders interviewed argued strenuously that one of the barriers to conducting more extensive marketing has been the limit placed on the amount of origination fee that could be financed with loan proceeds. While HUD did not place any limit on the origination fee that could be charged, it did limit the amount that could be financed to \$1,800. Since borrowers were reluctant to pay out of pocket costs for these loans, this limit served to limit the amount of financing fees that could be charged. Some lenders did charge origination fees that exceeded this \$1,800 limit, but the additional fee that had to be paid in cash was generally not more than a few hundred dollars. Lenders argued that this fee had become more and more restrictive over time, as over six years had passed since it was established in July 1993. As noted above, lenders report that this fee was lower than the amounts generally obtained on forward mortgages, which made it difficult to provide adequate compensation for loan

officers. With such low revenue from these loans, firms often could not afford to pay for even simple marketing campaigns. The recent increase in the origination fee to the greater of \$2,000 or 2 percent of the maximum claim amount is intended to address these concerns.

Another argument made by lenders was that the low level of the fee was one of the barriers to greater participation by lenders in the program. With little profit from these loans, lenders are unable to conduct marketing or provide adequate incentives for loan officers to try to reach potential borrowers. The result was such low loan volumes that lenders could not cover the overhead needed to offer this product, and so they discontinued making HECM loans.

An additional aspect of the new rules on the amount of fees that can be financed is that the ceiling will not just apply to the amount that can be financed, but to the total amount of any origination, application or broker fees that can be charged. This limit is an important consumer protection measure to prohibit unscrupulous lenders from charging arbitrary or capricious fees. Two other avenues for gouging HECM borrowers had already been eliminated by HUD and Fannie Mae. HUD took steps to prohibit the use of HECM proceeds to pay a financial advisor fee for recommending a HECM, while Fannie Mae has prohibited the use of bridge loans which were used to finance origination fees that would then be paid off with the HECM line of credit.

The de facto increase in origination fees, however, runs counter to another potential barrier to expansion of the program – the costs of loan origination. In focus groups and interviews with counselors, a common theme was that the origination costs of these loans were felt to be excessive. For example, the median HECM borrower in 1999 had a maximum claim amount of \$105,000. The typical costs for closing a loan of this amount would include an origination fee of \$1,800, a mortgage insurance premium of \$2,100, and closing costs of about \$1,500, for a total of \$5,400.²² While it appears that these costs are, in fact, not out of line with those of forward mortgages, the perception of high costs remains. In part, this perception may be due to elderly owners' unfamiliarity with current mortgage loan costs. In part, it may be due to the fact that given Fannie Mae's policy of purchasing loans at their par value, HECM loans do not have a "no points, no closing cost" option as is common in the forward mortgage market.²³ Another issue is that while servicing fees are paid over the life of the

²² The closing costs are based on estimates derived from a web site developed by Ibis Capital, LLC (<http://www.reverseweb.com>) which provides estimates of borrowing capacity including loan costs. The loan calculator on this site assumes that closing costs for HECMs are a flat \$600 plus 0.8% of the maximum claim amount. Note that this estimate of typical closing costs is consistent with the median costs from the CHUMS data base cited in Chapter 2. The median closing costs were found to be \$3,400. The total cost of \$5,400 used here includes \$3,300 in closing costs plus the \$2,100 mortgage insurance premium.

²³ In the forward mortgage market, it is common for loan purchasers in the secondary market to pay a premium price for loans originated with above market interest rates. This premium compensates the lender for the origination and closing costs of the loan, so the borrower does not pay them either out of pocket or

loan, the expected present value of these fees is subtracted from the amount available to borrowers. In general, the present value of these fees is on the order of \$3,000 to \$5,000 depending upon the age of the borrower and the prevailing interest rates at closing. While these fees are not paid at closing, since they are subtracted from the amount available to homeowners, both borrowers and counselors interviewed for this study perceived this servicing fee set aside as a closing cost.²⁴ When the servicing fee set aside is added to other costs, the total closing costs appear to be on the order of \$10,000.

Loan costs are also perceived to be high because they can represent a significant share of the total amount that can be borrowed. For example, the principal limit factor for a 75-year old borrower (the median age of borrowers) would be on the order of .5 to .6 in a moderate interest rate environment (from 7 to 9 percent). Given the example of a \$105,000 maximum claim amount, this range of the principal limit would mean that owners could borrow only \$52,500 to \$63,000 against their home. From this amount, the financed closing costs and servicing fee set aside are subtracted to determine how much is available to the owner. Since these fees and set aside total on the order of \$10,000, the loan costs represent between 15 and 20 percent of the total amount that could be borrowed.

However, it is not clear whether there is any room to reduce these costs. Loan closing costs, including the appraisal, title search, credit report, mortgage recording, and attorney's fees, are all fairly standard items which do not appear to be excessive for HECMs.²⁵ As discussed above, lenders have persuaded the Department that the origination fees were too low. The remaining component of costs is the up-front mortgage insurance premium of 2 percent of the maximum claim amount, which is the single largest component of closing costs. But it is not clear whether this fee could be reduced or changed to an annual premium only without exposing the insurance fund to the potential for losses.

with loan proceeds. In essence, the borrower trades a slightly higher interest rate for a no-cost loan. Fannie Mae's policy of buying loans at par means that there is no premium pricing option that can be used to offer a no-points, no closing cost loan.

²⁴ In the case of a forward mortgage, the servicing fee is taken as a portion of the loan interest rate and so borrowers do not perceive this as a separate loan cost. This approach does not work well for reverse mortgages since the loan balance is low at the beginning, so a servicing fee based on a portion of the interest charge would not generate sufficient fees in early years of the loan. For this reason, the HECM program was designed to allow a flat monthly servicing fee charge.

²⁵ FHA recently modified its guidelines concerning the appraisal process to provide greater protections for buyers against properties that are in disrepair or have inflated values. These guidelines have been applied to HECMs even though there are no homebuyers in this program. Lenders note that these new appraisal guidelines have raised the appraisal fees on the order of \$100 to \$200. While this increase is small compared to the total costs of these loans, lenders suggest the change is unnecessary for HECMs and exacerbates already high costs.

Lenders are in favor of modifications to lower the perception of high costs. Most notably, the servicing fee set aside could potentially be built into a principal limit factor so that it is not listed as a separate item reducing the borrowing capacity. However, since the servicing fee can vary by lender, it does seem that some disclosure is needed to indicate the impact of changes in the servicing fee on the amount borrowed. Given the existing cap on servicing fees, there is actually a relatively small, although not inconsequential, impact on borrowing capacity across the range of fees generally offered in the market.²⁶

Some lenders suggested that higher loan volumes might help to reduce costs. For example, with greater loan volumes, it might be feasible to develop origination software to streamline the process along the lines of software used in the forward mortgage market. There may also be other economies of scale in origination that will lower costs, such as management, training, and some back office operations that will remain relatively fixed as loan volumes grow. Any cost savings of these types would reduce the origination fee that lenders need to charge to be profitable. It seems unlikely that any economies of scale would lower origination costs below what they are now, but they may serve to limit further increases.

Even aside from the issue of costs, the small amount of funding that is available to many borrowers may also limit the appeal of the program. As shown in Chapter 2, the amount realized in either monthly payments or a line of credit can be fairly modest for typical borrowers in their 60s or early 70s. While this limited borrowing capacity is unavoidable given the expected life span of these borrowers, the cap on borrowing imposed by the 203(b) loan limits certainly exacerbates this problem. The 203(b) limits were designed for FHA's forward mortgage insurance programs to limit its activities to low- and moderate-income households. In the forward market, where income is a principal determinant of loan amount, the loan limits may be an appropriate way to target this segment of the market. But in the case of reverse mortgages, borrowers are generally all low- and moderate- income households. In this case, the 203(b) limit does not screen out households by income level, but it does limit the amount their equity borrowers can tap. Borrowers and lenders complain that while owners can only borrow up to the applicable 203(b) limit, the *entire value* of the house is pledged against the loan. As a partial solution to this issue, lenders are lobbying for a single, national loan limit for the HECM program. Of course, borrowers with higher home values do have the option of the Fannie Mae program and, in some states, the Financial Freedom program.

Other Origination Issues

The 1995 evaluation noted several issues related to loan origination that hampered the development of the program in its initial years. Among these issues were the need to train

²⁶ For example, assuming a 75-year old borrower and an interest rate of 8 percent, the total amount that can be borrowed is about \$1,250 less assuming a \$35 monthly servicing fee compared to a \$25 monthly fee.

staff in the unique features of reverse mortgages, the need to develop the necessary legal documents needed for closing that conformed to applicable state laws, and the length of time it took to bring a loan from application to closing. For the most part, lenders no longer view these issues as barriers to participation in the program. In order to foster the development of their correspondent networks, loan servicers will provide lenders with staff training, model documents, and on-going origination support. As a result of these efforts, lenders seeking to enter the HECM market can be brought up to speed fairly quickly. Lenders interviewed who had entered the market in recent years did not report any difficulties with regard to staff training or the development of documentation. Loan processing times have also gotten much faster as a result of the introduction in 1995 of direct endorsement by lenders rather than being processed by HUD. In 1995 lenders reported that it typically took two to four months to close a loan. Lenders interviewed for this study indicated that loans can now close in as few as three or four weeks.

Currently, lenders' principal concern about the origination process is the voluminous and cumbersome nature of the documents needed for application and closing. The great volume and complexity of the documentation is seen as intimidating for borrowers and their advisors, and also results in borrowers having to sign and initial more than 60 pages, which can be particularly difficult for elderly borrowers suffering from arthritis or other ailments. The MBA is developing a set of recommendations for modifying the documentation requirements. HUD supports this effort. Among these recommendations are ways to shorten some documents by eliminating duplicative or unnecessary information and to eliminate others entirely either because they are viewed as unnecessary or because modifications could be made to other documents to incorporate the necessary language. In addition to making the process simpler, some of the proposed changes may also reduce closing costs. For example, at present a Second Mortgage and Note are required to secure any cash advanced to borrowers by HUD in the event of a lender failure to advance payments due. Lenders view this as an unnecessary precaution that adds to costs through additional recording fees, although HUD does not agree, and is not considering any change in this specific requirement.

Lenders and borrowers would also like to have a streamlined refinance process similar to that available for forward mortgages. At present, there is no refund of the up-front mortgage insurance premium upon early termination of a reverse mortgage. Thus, if a borrower sought to refinance their HECM to take advantage of lower interest rates, they would have to pay an additional 2 percent of the maximum claim amount. This high cost of refinancing is a strong deterrent for borrowers. In addition, borrowers would also be required to obtain counseling again. The HUD appropriation bill from October 1999 included provisions that require HUD to consider the development of a streamlined refinance process for HECMs, including a reduced mortgage insurance premium and a waiver of the counseling requirement at least in cases where borrowers have only recently received counseling. Of course, a principal concern for HUD in reducing the up-front premium is whether this would expose the insurance fund to greater risk of losses. With a streamlined refinance option borrowers

would be able to increase their debt whenever interest rates were favorable, while they would not have to reduce their borrowing when interest rates rose. In the case of a forward mortgage, refinancing the same amount of debt to a lower interest rate should *lower* the risk of losses to the fund which is why a streamlined refinance process was developed to encourage these loans to stay in FHA's portfolio. In order to cover added risk of loss in refinancing a reverse mortgage, there would probably be a need for some incremental premium charged on the additional borrowing capacity.

Other origination-related issues mentioned by lenders include the fact that there is some variation in the requirements for the mortgage insurance certificate (MIC) package required across HUD's regional Homeownership Centers (HOCs). Lenders report that this variation makes this process more complex than it needs to be. Some HOCs are also reported to be somewhat slow in issuing the MIC, which can delay the acquisition of the loans by Fannie Mae. National lenders also note that they are hampered by the lack of a national lender identification number. HUD requires that loans be identified by an identification number for the local branch, even if the loans are being processed by the national office. This requirement results in the MIC being sent to the branch office, which must then forward it to the national office. This additional step adds unnecessary delays and confusion to the process of completing the loan processing.

Servicing

In some respects, the servicing of a reverse mortgage is similar to that of a forward mortgage. Servicers are responsible for providing borrowers with regular statements on their loans, verifying that the owner is paying their property taxes and hazard insurance premiums to protect the interests of the loan holder and the insurer, and taking steps to foreclose on a property in the event of a default on the provisions of the note. Like a forward mortgage, servicers are also responsible for handling loan payments and forwarding the mortgage insurance premium to FHA. Although, of course, in the case of a reverse mortgage, the payments flow from the loan holder to the borrower. Moreover, in the event that the servicer fails to forward monthly payments by the first of the month or to issue line of credit advances in five business days, late charges payable to the borrower are incurred.

However, there are a variety of features of reverse mortgages, and the HECM program, specifically, that make servicing these loans more difficult than forward mortgages. Loan servicers note that the unfamiliar nature of these loans combined with borrowers who are often financially unsophisticated results in the need for more intensive customer service than forward mortgages. Loan servicers are also responsible for ensuring that property repairs required as a condition of the loan are made before funds reserved for this purpose can be disbursed. HECMs are also subject to additional disclosure requirements because of the

open-end nature of these loans.²⁷ For example, a disclosure statement has to be sent to the borrower each time the interest rate changes, which for monthly-adjustable loans means an additional letter each month. HECMs also offer borrowers a variety of payment options, including a line of credit, monthly payments for the duration of the owner's occupancy of the home (tenure) or for a specified number of years (term), or a combination of a line of credit with either of the monthly payment options. Borrowers may also change their type of loan at any time. The variety and complexity of loan options and the ability to change options make HECM servicing quite complex.

Loan Servicing Firms

At the time of the 1995 evaluation, Wendover was the only servicer available for lenders who did not want to service loans they originated. Since then several other firms have entered the reverse mortgage servicing market. In 1996 Unity Mortgage Corporation, which has been one of the largest originators of HECMs since the program's inception and had always serviced its own loans, began offering HECM loan servicing for correspondent lenders. Then in 1997, Seattle Mortgage Company began originating HECMs and offering loan servicing for other lenders. In 1999, Financial Freedom acquired TransAmerica's servicing capacity and is beginning to develop its own network of loan correspondents. As a result of these entrants, the market for HECM loan servicing has become increasingly competitive. Nonetheless, Wendover is still the dominant servicer in the market. Of the 1999 HECM originations (through October), Wendover is the servicer or subservicer for about two-thirds of these loans, while the other three lenders with correspondent networks together account for a little less than a third. There are six other lenders who service the loans they originate, but together these lenders only accounted for two percent of 1999 originations.

Loan servicers offer a variety of enticements to recruit correspondents. As mentioned earlier, lenders who are just entering the HECM market are offered training, model loan documents, and on-going origination support for fairly low cost.²⁸ Since the process of recruiting and training correspondents is not by itself a profitable endeavor, the challenge for servicers is to recruit lenders who will produce a non-trivial volume of loans for their servicing portfolio. As discussed above, nearly 80 percent of HECM lenders originate 2 or fewer loans per month. With few lenders responsible for much of the HECM loan volume, there appears to be growing competition to obtain the servicing rights from high volume lenders.

²⁷ "Open-end" loans allow the borrower to re-borrow amounts that have been re-paid. Mortgages are generally closed-end, where borrowers are not allowed to re-borrow amounts re-paid. Revolving credit cards are open-end credit and are subject to different reporting requirements than mortgages. But because of the line of credit feature of HECMs and borrowers' ability to partial prepay the loan, HECMs are subject to disclosure statements such as those required of credit cards.

²⁸ For example, lenders may be charged a small fee to cover travel costs for a one day on-site training session, and a few hundred dollars per state for model documents.

Competition among servicers for an originator's servicer rights includes the type and quality of support services offered as well as the amount paid for servicing rights, or the servicing release premium. These premiums are generally a function of the borrower age, which is an indication of how long the servicing will last. The younger the borrower, the longer the expected servicing period and the more valuable the servicing rights. Lenders report that a typical servicing release premium is one year of monthly servicing fees. However, other industry observers believe that these premiums have been rising, and may be as much as two years of servicing fees in many cases. Servicers are also reported to be offering higher premiums for high volume lenders.

One of the challenges for servicers in attracting correspondents is that several of the servicers are also originators. Given that lenders are competing against these firms in the origination market, they do not always feel comfortable selling their servicing rights to these firms. Of the loan servicers, only Wendover does not have a retail lending operation. Wendover did have a small retail lending operation as recently as early 1999, but they have discontinued this activity to focus on their core activity of servicing loans.

Some lenders prefer to retain the servicing rights, but will engage one of the servicers as a subservicer. Wendover estimated that about 15 percent of its servicing portfolio is accounted for by loans it subservices. Under this arrangement, the lender retains legal responsibility for the servicing functions, but the servicing functions are actually done by the subservicer. There are several reasons why lenders would prefer to retain the servicing rights. First, in some cases they wish to retain a relationship with borrower. Banks, for example, may not want to sever ties with customers by selling servicing rights. Second, this arrangement may be more profitable as the fee for subservicing is less than the amount charged the borrower. Lenders report that they can realize the same amount of revenue over the course of several years as if they had sold the servicing rights. However, in this case the lender is bearing the risk that the loan will prepay sooner than expected, ending the servicing fee income. As a result, larger lenders may feel more comfortable bearing this risk. Another reason for lenders to retain servicing rights is to maintain the option of later servicing their own portfolio.

Interestingly, Seattle Mortgage Company developed its servicing software with the idea of selling the software including software support to lenders who would then be able to service their own loans. Once this product was established, Seattle hoped that a firm involved in forward mortgage servicing software would then purchase this product to market and support this software. However, because of the small size of the reverse mortgage market, they were unable to attract the interest of these firms. Seattle is still willing to sell the product but is no longer offering software support. As a result, there is a more limited market for this software and they do not expect to sell many copies.

Several lenders expressed a desire to service their own loans. In part, they are motivated by the income that servicing generates. But in part this interest is due to the fact that the

borrowers' experience with the servicer is an important determinant of whether they are satisfied with their loan. Given the importance of word-of-mouth promotions for this growing market, lenders would like to be in a position to ensure that borrowers are well served. Borrowers can also be confused by the sale of servicing rights. Several participants in the focus groups noted that they had chosen a local bank to take out their loan because they were comfortable dealing with these institutions. They were not pleased when the servicing was transferred to another firm. One of the depository lenders interviewed for this study noted that they spent a fair amount of effort during the origination process explaining to borrowers that the servicing rights would be sold, but that the bank would still be a resource for them to call with questions. For the most part, lenders who would like to retain servicing simply have not yet generated a sufficient volume to warrant the investment in servicing systems. But as loan volumes grow, more lenders may begin servicing their own portfolios.

Servicing Fees

As mentioned, one of the attractions of servicing HECMs is the servicing fees that are earned. Currently, servicing fees are limited to \$30 per month for loan with annual interest rate adjustments and \$35 per month for monthly adjustable loans. The latter limit was only established in January 1998 in response to concerns that exorbitant fees were being charged in some cases. For the most part, there is little variation in the servicing fees charged. For loans originated during 1999, three-quarters had a servicing fee of \$30 per month, 15 percent had a fee of \$25 per month, and 10 percent had a fee of \$35 per month. Servicing fees of \$25 per month were more common for annual adjustable loans, as 42 percent of these loans had this lower fee.

As discussed earlier, the servicing fee set aside is often viewed by borrowers and counselors as excessive. In part, this view no doubt reflects the fact that servicing costs are essentially invisible in the forward mortgage market as they are built into the interest rate. It does not appear that the servicing fees charged are excessive. A typical servicing fee on a forward mortgage is 0.25 percent of the outstanding loan balance. On a \$100,000 loan this translates into a \$250 per year fee, while for a \$200,000 loan the fee would be \$500 per year. In comparison, the \$30 per month fee for a HECM generates \$360 per year. As described above, the servicing for these loans can be more intensive than for forward mortgages. In some ways, it is also too early to tell whether the servicing fee is adequate or not since the most intensive servicing activity will occur around insurance claims and foreclosures. Given the short life of most HECM loans originated, it is somewhat of an open question how expensive these processes will be. One servicer noted that it can be quite difficult to complete a foreclosure for a reverse mortgage after a homeowner has died because the homeowner's estate has little motivation to help move the process along to clear title to the property. Another issue that has become more common in recent years is a failure of homeowners to pay property taxes and insurance. Again, as loans and owners age, these types of problems may increase, raising the expense of servicing these loans.

Servicing Issues

One cause for concern with HECMs has been the failure of borrowers to pay property taxes and hazard insurance on these loans, resulting in mortgage defaults. These defaults place servicers, investors and the FHA in the awkward position of having to seek foreclosure of the property to maintain their security interest in the property. Fannie Mae's analysis of these loans found that in many cases borrowers were delinquent on the taxes and insurance at the time they applied for these loans. While borrowers are required to have their property taxes and insurance current at the time of closing, Fannie Mae found that a history of delinquency was a good predictor of future delinquency. As a result, they have developed a new requirement for loans they purchase to protect against the likelihood of delinquency in taxes and insurance payments. Specifically, if a borrower is found to be one year or more delinquent in their tax or insurance payments when they apply for a reverse mortgage, Fannie Mae is now requiring a set aside from their borrowing capacity to cover three years of tax and insurance payments. HUD has not objected to Fannie Mae's policy, and given Fannie's dominance in the HECM market this requirement will govern virtually all HECM originations.

But even with better screening of borrowers at origination, the issue of delinquencies in tax and insurance payments will continue to arise. Since there have been relatively few of these cases in the early years of the program, there has not yet been a detailed loss mitigation strategy developed for handling these cases. At present, in cases where borrowers become delinquent, the Department has encouraged lenders to develop a payment plan with borrowers. However, at least in some cases borrowers' income may be inadequate to meet these expenses. In these cases, absent other solutions, the lenders and HUD will be in the difficult position of foreclosing on elderly homeowners whose financial situation has deteriorated. These situations are not only disastrous for the affected homeowner, they can also exacerbate fears about reverse mortgages. Fannie Mae has expressed its willingness to work with the Department to develop a fully-detailed loss mitigation approach for handling these situations.

A related issue is whether owners are continuing to maintain their properties over time. At present, servicers report that deterioration in property conditions has not been a common problem, although this issue may be found in cases where owners have been unable to keep up with tax and insurance payments. However, one reason why this problem may not yet have arisen as a significant concern is that current HUD regulations do not require servicers to undertake periodic inspections of the properties. In contrast, in Fannie Mae's HomeKeeper mortgage, servicers are required to inspect the property every five years. The first loans made under Fannie Mae's program are just now reaching their five-year anniversary. So far few problems have been found. At the least, it will bear watching to see if Fannie Mae's policy proves useful in early detection of poor property maintenance.

Servicers also report that there are a variety of policies surrounding the claims process that need to be refined. The claims process was essentially adapted from FHA's forward mortgage programs, but as the volume of HECM claims has risen as loans have aged, a variety of shortcomings in the process have been revealed. For example, loans are to be assigned to HUD when the loan balance reaches 98 percent of the maximum claim amount. However, a claim cannot be filed until the servicer receives evidence that the assignment has been recorded. The process of having the assignment recorded and receiving notification of this recording is largely out of the servicer's control and can easily take several weeks or longer. In the meantime, if the outstanding loan balance exceeds 100 percent of the maximum claim amount the loan holder can be held responsible for these excess payments. Another concern is that HUD will not accept assignment if the note is "due and payable" for any reason. One reason for a note to be due and payable is if an owner has fallen behind in their tax or insurance payments. If the lender discovers this situation after the note has reached 98 percent of the maximum claim amount they cannot assign the note to HUD and can be held responsible for any payments that exceed the maximum claim amount to resolve the technical default. A similar problem arises in the event of the death of the borrower. HUD will not reimburse loan holders for any payments made after the borrower's death, but a foreclosure process may be needed to clear title to the property which can easily take several months. In the meantime, taxes and insurance need to be maintained on the property to ensure the security interest in the property. Fannie Mae, HUD, and HECM servicers have been working together to clarify these concerns. Because of concerns about its risk exposure from such issues, Fannie Mae has been delaying efforts to market reverse mortgages pending the resolution of these issues. As of now, Fannie Mae is confident enough that these issues have been or will be resolved that it is proceeding with plans to expand reverse mortgage marketing significantly in 2000.

A common concern cited by servicers, and virtually all other financial firms involved in the program, is that communication with HUD about program issues is difficult. Given the division of responsibility within HUD for issues related to borrower counseling, loan origination, loan servicing, and the claims process, it can be challenging to find the appropriate person to contact. Even when the appropriate person is identified, HUD's response to a request for policy changes or clarification is reported to be quite slow. Lenders and other financial organizations are generally organized to have a reverse mortgage department, with a senior manager overseeing all aspects of the program's operations. These managers find it frustrating that HUD does not have a similar organization where one person has responsibility for the HECM program and can act as a "one-stop" source of information to quickly address their questions and concerns. Instead, given the small scale of the HECM program relative to other HUD insurance programs and the division of responsibilities among many offices, it is hard to find HUD staff who have a sense of ownership of the program.

Another common servicer complaint has to do with the servicing data system managed by ACS Government Solutions (ACS). HUD has contracted with this firm to develop and

maintain an insurance premium collection system for the Department. Servicers complain that they have difficulty reconciling their accounting of insurance premiums due with those generated by the ACS system, that mistakes made in the system are difficult to correct, and that the process of reconciling accounts cannot be automated.

Finally, servicers also have raised the issue of whether loan servicing needs to be transferred when notes are assigned to HUD. At present, HUD has retained Wendover to service assigned loans. Other servicers would like to retain the servicing rights and argue that the change in servicer is confusing to borrowers and is not necessary.

Investors

Fannie Mae continues to purchase virtually all of the HECMs originated.²⁹ As a result, as noted in the 1995 evaluation, Fannie Mae's guidelines about the types of loans it will buy are as important as guidelines issued by HUD in determining the characteristics of HECMs originated. Perhaps most notably, Fannie Mae will not purchase two types of loans that are allowed by the HECM program: fixed-rate loans and those with shared premiums. Fannie Mae has chosen not to purchase either of these types of loans because of concerns about the risks they impose. For fixed-rate loans, there is greater interest rate risk, while for shared premium loans the lender cannot assign the loan to HUD and collect insurance benefits when the loan balance approaches the maximum claim amount. Instead, the lender holds the loan until termination before filing an insurance claim. However, despite the fact that these loan options are hardly ever used because Fannie Mae will not purchase them, they remain as options under the HECM program.

As described above, Fannie Mae purchases all HECM loans at their par value, and does not offer premium pricing. If Fannie were to offer premium pricing, it would enable originators to offer a "no closing cost" loan option to borrowers which might be viewed more favorably. Fannie Mae reports that at this time it would introduce too much complexity to offer premium pricing and so it is not likely to offer this option in the near future.

Fannie Mae has also played an important role in refining the HECM program over time. Fannie Mae has taken the lead in establishing guidelines dealing with such issues as forbidding the use of bridge loans to finance origination costs beyond that allowed by the program, the need to set aside funds for property taxes and insurance in cases where borrowers have demonstrated consistent delinquency in making these payments, and the development of a telephone counseling system to provide better access to quality counseling.

²⁹ Data from ACS's system does not seem to provide accurate information on the loan holder. According to ACS data Fannie Mae is the loan holder of only slightly more than half of the HECMs ever originated. However, all of the lenders interviewed indicated that they sold all of their loans to Fannie Mae. There may be a few loans which have not been sold due to errors made at origination, or by a few small lenders who have chosen to hold their loans, but these seem to represent a trivial number of loans.

At the time the HECM program was established by Congress, Freddie Mac also expressed interest in purchasing reverse mortgages, but it has not yet entered this market. A representative of Freddie Mac contacted for this study indicated that there is not yet a sufficient volume of reverse mortgages to warrant entry into this market at this time. However, Freddie Mac does continue to monitor this market for possible entry. In addition to reverse mortgages, the company is also considering the development of other mortgage products aimed at the particular needs of senior homeowners. Freddie Mac noted that whatever approach it takes to serve senior homeowners, it will be sure to include provisions to eliminate the possibility of predatory lending practices aimed at this potentially vulnerable population.

For the most part, lenders contacted for this study are content with Fannie Mae as the sole purchaser. By and large they have a very positive view of Fannie Mae's role and actions in the HECM market. Of course, they note that competition among loan purchasers could increase the range of loan types available and put pressure on the prices offered. But at present, the lack of competition is not a significant concern for lenders.

Private Sector Products

There have been several significant changes in the private sector reverse mortgage market since the 1995 evaluation. First, beginning in 1995, Fannie Mae introduced its own reverse mortgage product, the HomeKeeper. The loan options available under the HomeKeeper program are similar to those of the HECM program, although there are fewer options (see Exhibit 3-4 for a summary of program characteristics compared to the HECM program). Borrowers can choose tenure payments, a line of credit, or a combination of these options, but cannot choose term payments. One advantage of the HECM program over the HomeKeeper program is that the unused line of credit increases over time, while under the HomeKeeper program it remains constant. All HomeKeepers are monthly adjustable-rate loans, which is also the most popular HECM option. One potential advantage of Fannie Mae's program is that owners with higher-valued homes may be able to borrow more because the limit on the size of loans that can be purchased by Fannie Mae is higher than FHA's 203(b) loan limit. Fannie Mae also has a shared appreciation option that borrowers can choose to increase the amount they can borrow. Under this option, Fannie Mae can claim up to 10 percent of the home value upon termination. However, the total amount due to Fannie Mae cannot exceed the value of the home nor can it exceed the loan limit. Also, equity sharing is not applied to loans that terminate within two years of origination.³⁰ The

³⁰ The timing for the beginning of equity sharing has raised concerns that the total average loan cost (TALC) disclosures required by law does not adequately inform borrowers of the cost of this equity sharing option over time. Currently, borrowers are required to be given the TALC for three time periods: two years after origination, at life expectancy, and at 40 percent beyond life expectancy. Since equity sharing begins only

closing costs are similar to those associated with the HECM, although the initial insurance premium is lower (a 1 percent payment to Fannie Mae rather than 2 percent as under HECM), while the origination fee had been higher prior to the recent change by the Department (the origination fee structure is now fairly similar).

Because of generally more favorable assumptions for borrowers, HECMs usually provide more funds for borrowers and so are often preferred by owners who are eligible for both programs. As a result, the number of HomeKeeper loans originated has been much smaller than the number of HECMs. For example, in 1999 fewer than 1,000 HomeKeeper loans were originated compared to nearly 8,000 HECMs.

The 1995 evaluation described three private sector reverse mortgage products that were available from TransAmerica HomeFirst, Financial Freedom Senior Funding Corporation, and Household Senior Services. Household Senior Services discontinued its program in 1997. Then in 1999, TransAmerica discontinued its program and sold its portfolio of loans to Financial Freedom. As a result, at present, Financial Freedom is the only firm offering a reverse mortgage product other than the HECM or the HomeKeeper.

The Financial Freedom loan is essentially positioned as a jumbo loan as it offers a maximum loan amount of \$700,000 (see Exhibit 3-4 for a summary of program characteristics). Thus, the reverse mortgage market now parallels the forward market in that FHA offers a product up to the 203(b) limits, Fannie Mae offers a product up to its loan limit, and Financial Freedom offers a product that can serve homes above these limits.³¹ But there has been fairly limited access to these jumbo loans. While the defunct TransAmerica loan program had been fairly widely available, up until 1999 Financial Freedom loans had only been available in several Western states. However, Financial Freedom is in the process of beginning lending operations in an additional 8 states, and has announced its intention of expanding its operations to encompass all 35 states where TransAmerica had previously originated loans.

Financial Freedom loans have a much different structure than the HECM or HomeKeeper. Under this program, borrowers receive a lump sum payment at loan closing.³² They may use this lump sum payment to purchase an annuity from Hartford Life to convert this equity into

after two years have passed since origination, the impact of equity sharing is not clearly disclosed. This issue will be discussed more in Chapter 6.

³¹ It is important to note that both FHA and Fannie Mae can make reverse mortgage loans on properties that are valued above their respective loans limits. However, because of the loan limits owners cannot borrow against all of the equity in their homes – even though they are pledging the full value of the asset against the loan. As a result, loans that allow a higher borrowing limit are likely to be more attractive to these owners.

³² Financial Freedom is about to begin offering a line of credit loan type which was offered by TransAmerica. These loans will have explicit interest rate charges and a monthly servicing fee of \$20.

Exhibit 3-4
Summary of Program Characteristics

	HECM	Fannie Mae Home Keeper	Financial Freedom Plan
Dates of Operation	1989-present	1995-present	1993-present
Distribution	FHA-approved lenders in 49 states and DC and Puerto Rico	Fannie Mae-approved lenders in 49 states and DC	Financial Freedom and correspondents in 12 states (AZ, CA, CO, MI, NJ, NV, NY, OR, PA, UT, WA, WY)
Minimum Borrower Age	62	62	62
Eligible Property Types	1-4 unit owner-occupied homes; FHA-approved manufactured homes, condominiums and planned unit developments	Single-family home or condominium; special product available for home purchase	Single-family home, one-to-four-unit dwelling, unit in a condominium building or planned unit development
Program Equity Limit	Up to \$219,849, varies with area 203(b) limit	\$252,700	\$1,000,000
Payment Options	Tenure; term; line of credit; modified tenure; modified term	Tenure; revolving line of credit; modified tenure	Lump sum, with optional annuity purchase for monthly payments; (Line of credit to be introduced in early 2000)
Interest Rate	Annual adjustable and monthly adjustables tied to one-year Treasury bill rate; Annual has 2% annual and 5% lifetime caps; Monthly has 10% lifetime cap; Fixed rate possible but not used	Adjustable, based on weekly average of one-month secondary market CD index, with 12% lifetime cap	No explicit interest rate; Loan is pure equity sharing arrangement
Origination Fee	Greater or \$2,000 or 2 percent of maximum claim amount ³³	2% of home value, or 2% of maximum lending value	2% of appraised value of home; maximum of \$10,000
Insurance Premium	2% of maximum claim amount at origination; 0.5% of outstanding balance (added onto interest rate)	1% origination fee to Fannie Mae; no explicit annual premium but all interest payments to Fannie Mae	No explicit insurance premiums
Servicing Fees	Maximum \$30/month for fixed and annual adjustable; \$35 for monthly adjustable	Maximum \$30/month Minimum \$15/month	No explicit servicing fees
Servicing	FHA-approved lender servicers	Fannie Mae-approved servicers	Financial Freedom

³³ Until recently, there was no limit on the fee, but only \$1,800 could be financed.

monthly payments. One advantage of this approach is that the monthly payments can continue even after the home is sold. The Financial Freedom plan has borrowers specify a given percentage of their home value upon their death or when they no longer occupy the home, up to 80 percent of the home value. Thus, it is an equity-sharing arrangement which ensures that borrowers will retain some share of their home value for their estate. The Financial Freedom plan does not list explicit interest payments or servicing fees, but these costs are imbedded in the assumptions used to determine the amount that can be borrowed. In essence, Financial Freedom is offering a no cost loan option, where the impact of the cost assumptions is reflected in the amount that can be borrowed.

One of the challenges for private sector reverse mortgage products has been to develop a consistent source of funding for these loans. Insurance companies have often been the financial backers of reverse mortgage products, including, for example, Financial Freedom, TransAmerica, and Capital Holdings, an early entrant in the field. However, in many cases the firms financing these loans have grown concerned about the risks of this portfolio and have stopped offering the product. As a result, most private sector reverse mortgage products have been short lived. One significant development in the last few years has been the advent of securitization of reverse mortgages. In 1999, Financial Freedom securitized the portfolio of loans acquired from TransAmerica through Lehman Brothers. This transaction represented the first U.S. securitization of a reverse mortgage loan portfolio. Standard & Poors has also now issued guidelines for the rating of these transactions. With the advent of securitization for these loans, there may now be a more readily available source of capital for jumbo reverse mortgages. Originators of these loans will still have to be well capitalized, as it will take time to develop a portfolio of loans large enough to back the issuance of a security. But securitization will provide firms with a ready avenue to replenish their capital so that they can continue to offer these loans. The ability to securitize reverse mortgages is an important factor in Financial Freedom's plans to expand their lending operations from several Western states to 35 states.

Summary

The active participation of the financial community in the HECM program is vital to ensure that loans are readily available to elderly homeowners with attractive rates and terms. In fact, the number of firms originating HECM loans grew rapidly through 1997, reaching a peak of 195 lenders. However, the number of HECM lenders has declined in each of the last two years as fewer lenders have entered this market and more lenders have withdrawn. One of the reasons cited for this inability to maintain lenders' participation in the market is that the limit on the amount of the origination fee that could be financed at \$1,800 – which implicitly limited the fees charged – was too low to make these loans profitable for lenders to originate. Mortgage loan officers could reportedly earn higher fees on forward mortgages with less effort. As a result, lenders had a difficult time getting loan officers to take an active role in originating these loans. To address these concerns, the Department just recently

increased the origination fee that can be financed to the greater of \$2,000 or 2 percent of the maximum claim amount (while also capping the total fees that can be charged to this amount).

A related issue is that the demand for reverse mortgages has simply been too low to allow lenders to generate enough volume to warrant a commitment to offer this product. More than half of the active HECM lenders originate fewer than one loan a month, and nearly another quarter generate two or fewer a month. One reason for low demand may be a lack of awareness among elderly homeowners about reverse mortgages. Lenders, counselors, and borrowers contacted for this study all felt that greater consumer outreach and education was needed to promote awareness and to dispel unwarranted fears. Lenders argue that low origination fees limited the amount of revenue that can be devoted to marketing and outreach. Lenders believe that the increase in origination fees just implemented will attract more lenders to the program and provide sufficient revenue to support greater consumer outreach.

Aside from greater marketing from individual lenders, there is broad consensus that general consumer education from a source that has a high level of consumer trust is needed to increase public awareness and acceptance of reverse mortgages. HUD, Fannie Mae, and AARP are the primary candidates for undertaking such a campaign. A variety of approaches to consumer education by these organizations and the National Reverse Mortgage Lenders Association are being considered.

Another barrier to greater use of the program may be the high costs of originating and servicing these loans relative to the amount borrowed. The costs associated with originating a HECM include the origination fee, a two percent mortgage insurance premium, and closing costs. In addition, the present value of future monthly servicing fees is also subtracted from the amount that can be borrowed. Taken together, these costs can reach \$10,000 for a typical loan, which can easily represent 15 to 20 percent of the total amount that could be borrowed. Focus group participants and counselors all perceived these costs to be quite high. However, there is no evidence that these costs are excessive, as they are comparable to – or even lower than – the costs associated with forward mortgages. In part, the perception of high costs may be due to the lack of a “no closing cost” option as is common in the forward market as well as the explicit identification of servicing costs, which is not done for forward mortgages.

Another deterrent to greater use of the program may be the low amounts that can be borrowed. For the most part, the limits on borrowing capacity are simply the unavoidable result of the compounding of interest payments over the borrower’s life expectancy. However, in some cases the owners’ borrowing capacity is capped not by their property value but by the 203(b) loan limit. Lenders have proposed that one partial solution to the limited borrowing capacity under the HECM program would be to allow higher loan limits under the HECM program to enable elderly borrowers to tap more of the home equity.

The 1995 evaluation cited concerns about the complexity of the origination process as a barrier to lender entry. However, these issues seem to have been largely eliminated as experience has grown. While lenders do cite some areas for improvement related to the origination process, there do not appear to be any major obstacles. Perhaps the most significant lender concern is to revise the documentation needed to originate these loans to simply the process by reducing the number of documents signed. Lenders and borrowers would also like to have a streamlined refinance option for HECMs to take advantage of declines in interest rates or increases in house prices. In the most recent appropriations bill, Congress has asked HUD to examine the possibility of offering a streamlined refinance option for HECMs.

Given the complexity of servicing HECMs, most originators rely on servicers to perform this function. The market for HECM servicing has grown more competitive in the last few years. Whereas in 1995 there was only one firm offering HECM servicing, by the end of 1999 four firms were competing for servicing rights. This increased competition has reportedly raised the amount paid to originators for servicing rights. While there has not been any noticeable decline in the amount paid for servicing by borrowers, the increased competition may ultimately help to put pressure on borrower servicing fees as well.

One significant servicing issue that has arisen in the last few years is that some borrowers are failing to make timely property taxes and insurance payments, causing defaults on these loans. Fannie Mae has determined that in many cases borrowers were delinquent in these payments at loan origination, and so could have been identified as likely to encounter this issue again. For all loans that it purchases where borrowers are delinquent one or more years in tax or insurance payments, Fannie Mae now requires that three years of these payments are set aside at origination. Even with this policy in place, there will undoubtedly be more of these tax and insurance related defaults in the future. As a result, the Department will need to develop a more systematic approach for dealing with these cases to avoid having to foreclosure on financially strapped seniors. A related issue is that as the program ages, insurance claims are beginning to increase. Fannie Mae and loan servicers have identified a number of ways in which they believe the claims process needs to be refined to eliminate unnecessary costs being imposed on servicers and investors while still protecting HUD's interests.

Another area that must be improved is communication between the Department and the financial community. Financial firms all expressed frustration at identifying the appropriate party within HUD to contact with concerns and then having difficulty in getting timely decisions. In part, the communication problems may stem from the fact that responsibility for the HECM program is split among several departments (where separate departments handle origination, servicing, claims, and counseling issues) and, given the relatively small size of the program, there is no senior manager solely responsible for the HECM program.

With regard to investors in HECMs, Fannie Mae continues to be the sole investor in these loans. While lenders generally have a very favorable view of Fannie Mae's policies and actions in this market, greater competition would potentially help the market in terms of the loan products available and the costs to borrowers. Freddie Mac has not purchased any reverse mortgages. They do continue to monitor the market for possible entry, but believe that the continued small number of reverse mortgages does not yet warrant their entry.

With regard to private sector reverse mortgage products, the most significant development since the last evaluation is the introduction of a Fannie Mae product, the HomeKeeper. This product offers borrowers greater choice of reverse mortgages, particularly those with home values above the 203(b) limits. The only other private sector product currently available is a jumbo loan offered by Financial Freedom in 12 states. However, the advent of securitization of reverse mortgages may help provide greater access to capital for private sector products. As a result, there may be more jumbo products offered in coming years.

Chapter Four

Counseling for HECM Borrowers

Housing counseling plays a critical role in the HECM program. Participants in the program, including lenders, counselors and borrowers, generally acknowledge that counseling is important to ensure that homeowners are fully informed about the implications of reverse mortgages and other options for meeting their needs so that they make appropriate decisions. Recognizing the importance of housing counseling for homeowners interested in reverse mortgages, Congress required counseling for all HECM borrowers. An important implication of mandatory counseling is that the capacity of the financial industry to originate HECM loans is only as great as the capacity of counseling agencies to provide counseling. In short, ideally the HECM program would have housing counseling that is both of generally high quality *and* widely available. Obviously, achieving this ideal is not an insignificant challenge for the HECM program.

Interviews with housing counselors, lenders, and other industry experts, as well as focus groups with borrowers (discussed more fully in Chapter 5), were used to provide feedback on the current status of housing counseling for homeowners interested in HECM loans. In-depth interviews with ten housing counseling agencies were particularly important in assessing the range of organizational structures and counseling methods used across counseling agencies. But it is important to note that the findings presented here are based on a relatively small number of interviews with counseling agencies that are not necessarily representative of all agencies. The agencies interviewed were selected to provide diversity in size, geographic location, and type (e.g., housing counseling agency, community action agency, reverse mortgage specialist, etc.). While a larger and more systematic survey would be needed to draw definitive conclusions about the state of HECM counseling, the counselor interview findings, taken together with interviews with lenders, borrowers, and industry experts, do provide valuable insights into current conditions.

The first section of this Chapter summarizes the requirements for housing counseling as described in HUD handbooks. Succeeding sections discuss the availability of counseling, sources of funding for counseling agencies, staffing and training of counselors, the counseling process, and observations by counselors regarding areas for program improvement. The final section describes current planning efforts by HUD, AARP, and industry groups to introduce changes to the existing counseling system.

Housing Counseling Requirements

One of the unique features of the HECM program is that counseling from a HUD-approved housing counseling agency is a prerequisite for obtaining a loan. The statute also specifically

indicates that counseling must be provided by a third party other than the lender. The process for becoming a HUD-approved housing counseling agency is not onerous. The criteria for approval include a non-profit status, a description of the financial resources to provide counseling services, having one year of operations in the geographic area to be served, and having record keeping practices that will allow the agency to meet HUD reporting requirements. With regard to demonstrating the necessary expertise in the areas where counseling is to be provided, the agency only needs to have administered a counseling program for one year, have staff with at least six months experience and fluency in the language of clients to be served, and must indicate that it has a working knowledge of HUD programs and the local housing market. No examinations or certifications are imposed to verify the expertise of the agency or its staff.

The counseling requirement was included in the statute authorizing the Demonstration program in recognition of both the complex nature of these loans and the potentially significant financial consequences for homeowners of entering into these agreements. Counseling is intended to ensure that borrowers fully understand the program and its implications and are fully informed of other options for meeting their financial needs. Specifically, the statute requires that counseling cover the following topics:

- Options other than a home equity conversion mortgage that are available to the homeowner, including other housing, social service, health and financial options;
- Other home equity conversion options that are or may become available to the homeowner, such as sale-leaseback financing, deferred payment loans, and property tax deferral;
- The financial implications of entering into a home equity conversion mortgage; and
- A disclosure that a home equity conversion mortgage may have federal tax consequences, affect eligibility for assistance under Federal and State programs, and have an impact on the estate and heirs of the homeowner.

The statute also notes that other topics may be required as determined by the HUD Secretary. In February 1999, HUD issued a mortgagee letter to amend the list of requirements to ensure that counselors discuss with borrowers whether they have entered into any agreements with an estate planning service that requires the payment of a fee on or after closing. Counselors must inform the homeowner that such services are not needed to obtain a HECM and that these fees cannot be paid for with loan proceeds. This requirement is part of HUD's efforts to protect homeowners from becoming liable for fees for third-party services that are not necessary and have little or no value for the homeowner beyond what is available without charge from housing counselors.

The requirements for housing counseling not provided for in the statute are detailed in the HUD handbooks Home Equity Conversion Mortgages (4235.1, Rev-1) and Housing Counseling Program Handbook (7610.1, Rev-4). Among these requirements are the

provision that HECM counseling must be provided in one-on-one meetings with the borrower. In addition, the handbooks note that every effort should be made to provide counseling face-to-face. Counseling by phone is only allowed after every effort has been made to provide face-to-face counseling but it has proved not to be feasible. The guide also indicates that counselors should make an effort to conduct counseling in the borrower's home and that children and other advisors should also be invited to attend.

Once counseling is completed, the agency issues a certificate to the borrower certifying that they have received counseling. The handbook notes that the issuance of the certificate does not represent an opinion or decision by the agency about the suitability of a reverse mortgage for the borrower. In fact, the HECM handbook notes that the counselor should advise the homeowner that it is the owner's decision to apply for a reverse mortgage and that only the lender and HUD can determine eligibility for the program. Only after a certificate has been issued can lenders take any action that will result in a charge to the potential borrower.

Availability of Counseling

Since the inception of the HECM program, one of the principal concerns has been the availability of counseling for potential borrowers. The 1995 evaluation noted that counseling services were much more widely available than a few years earlier, but that it was still difficult to find counselors in some areas, particularly outside of urban areas. One source of information about the availability of HECM counseling is the list of counseling agencies approved by HUD to provide HECM counseling. This information is available on the Internet for homeowners and lenders to identify local counselors. At present, this list identifies 851 counseling agencies approved to provide HECM counseling. Exhibit 4-1 lists the number of approved counseling agencies by state. This list suggests that counseling is, in fact, fairly widely available as in most states there are a substantial number of approved agencies. Only a few, more rural states stand out as having a lack of counseling, such as Alaska and New Hampshire which have no approved agencies, Vermont which has only one, and Wyoming which has only two.

To put the number of counseling agencies in perspective, Exhibit 4-1 also includes the number of homeowners age 65 and over in 1990 as an indication of the magnitude of the potential market for counseling services.³⁴ When the number of approved counseling agencies is compared to the eligible population, there is a fairly broad range of coverage of HECM counselors. Minnesota and Wisconsin stand out as states with the lowest ratio of counseling agencies to elderly homeowners. In these states there are more than 60,000 homeowners for each approved agency. At the other end of the spectrum, Maine, Delaware,

³⁴ The actual number of potential borrowers is somewhat larger than the number shown both because of growth in the elderly homeowner population over the decade and because households age 62 and older are eligible for the program.

Maryland, Louisiana and Virginia are among the states with the lowest ratios, with fewer than 10,000 homeowners per counseling agency. Overall, across the nation there are about 18,000 homeowners for each approved agency.

However, the number of approved counseling agencies may overstate the number that are actually providing HECM counseling. Several lenders contacted for this study noted that it can be difficult to find counselors among those that are approved for counseling that are actually providing this service. One indication of this problem is that the approved HECM agencies include 44 agencies in Texas – a state where HECMs are still not offered. One explanation for this overstatement is that agencies approved by HUD to provide “comprehensive” counseling are also eligible to provide HECM counseling. So all comprehensive counseling agencies in Texas are listed as providing HECM counseling.³⁵

An indication of the number of agencies *actually* providing HECM counseling is annual data required from all HUD-approved counseling agencies on the volume of counseling activity by the nature of the counseling for each federal fiscal year (Form 9902 data). This data provides an indication of the actual volume of HECM counseling. However, there are several problems with this data. Most importantly, the fields related to HECM counseling on this form request the number of clients counseled who *obtained* a HECM, rather than the number who were provided with HECM counseling. Since agencies generally do not follow up with clients to determine who actually obtained a loan, they are not in a position to provide the answer to this question. It is believed that most agencies simply respond by reporting the number of potential HECM borrowers counseled. But it is not known how many agencies estimate the number who actually obtained a HECM or skip the field entirely because of a lack of information. Another issue with this data is that as of 1998 there were still a fair number of agencies that did not file this annual report with HUD (although HUD has taken steps to improve the response rate to this survey, most notably by making counseling grants contingent on having filed this report in the preceding year). Finally, it is not clear how accurate record keeping is by these agencies. However, while the data is clearly flawed, it is the only indication of the distribution of HECM counseling across agencies and so is worth considering.

Exhibit 4-1 also indicates the number of counseling agencies that reported counseling some potential HECM borrowers during FY 1998. The total number of agencies reporting some volume of HECM counseling is 329, which is much lower than the number of agencies listed

³⁵ It will be noted that Exhibit 4-1 indicates that four counseling agencies in Texas are reported to have provided HECM counseling in FY 1998. There are two possible explanations for this seeming anomaly. Either the reported data is erroneous or the Texas agencies reporting HECM counseling have branches operating in other states where HECMs are offered. But given the nature and location of these agencies, it seems likely that the data is erroneous.

Exhibit 4-1**Approved and Active HECM Counseling Agencies by State**

State	Number of Approved Counseling Agencies	Number of Counseling Agencies Active in FY 1998	Number of Owner Households Age 65+ 1990 (000s)	Ratio of Owners 65+ to:	
				Approved Counseling Agencies	Active Counseling Agencies
Alabama	17	8	285	16,762	35,618
Alaska	0	1	11	NA	10,914
Arizona	11	4	251	22,836	62,800
Arkansas	6	4	189	31,417	47,126
California	74	19	1,451	19,605	76,356
Colorado	16	9	164	10,219	18,167
Connecticut	6	1	200	33,407	200,442
Delaware	5	4	42	8,392	10,490
Dst. of Columbia	6	3	30	4,983	9,967
Florida	68	14	1,241	18,254	88,663
Georgia	10	6	335	33,493	55,821
Hawaii	3	2	53	17,763	26,645
Idaho	4	2	66	16,558	33,116
Illinois	43	12	698	16,225	58,141
Indiana	16	12	362	22,602	30,136
Iowa	6	7	220	36,662	31,425
Kansas	7	1	182	26,039	182,273
Kentucky	12	6	252	20,989	41,978
Louisiana	29	5	254	8,748	50,741
Maine	12	3	77	6,424	25,694
Maryland	28	11	243	8,685	22,107
Massachusetts	11	5	341	30,959	68,109
Michigan	39	6	576	14,775	96,039
Minnesota	4	4	267	66,695	66,695
Mississippi	5	3	183	36,653	61,089
Missouri	11	6	362	32,952	60,411
Montana	4	3	56	13,933	18,577
Nebraska	5	2	116	23,254	58,134
Nevada	3	2	57	18,900	28,351
New Hampshire	0	0	56	NA	NA
New Jersey	46	17	467	10,142	27,443
New Mexico	8	3	88	11,055	29,479
New York	59	36	881	14,927	24,464
North Carolina	26	16	423	16,288	26,468
North Dakota	4	2	44	10,959	21,919
Ohio	33	9	706	21,390	78,428

Exhibit 4-1 (Continued)

Approved and Active HECM Counseling Agencies by State

State	Number of Approved Counseling Agencies	Number of Counseling Agencies Active in FY 1998	Number of Owner Households Age 65+ 1990 (000s)	Ratio of Owners 65+ to:	
				Approved Counseling Agencies	Active Counseling Agencies
Oklahoma	14	6	237	16,928	39,499
Oregon	13	3	200	15,379	66,643
Pennsylvania	38	20	912	23,996	45,592
Puerto Rico	3	1	NA	NA	NA
Rhode Island	4	1	60	14,969	59,876
South Carolina	12	4	219	18,260	54,779
South Dakota	3	3	49	16,270	16,270
Tennessee	12	9	325	27,110	36,146
Texas	44	4	906	20,596	226,558
Utah	4	4	84	20,989	20,989
Vermont	1	0	32	32,009	NA
Virginia	34	10	334	9,826	33,409
Washington	18	7	289	16,063	41,306
West Virginia	7	4	153	21,864	38,262
Wisconsin	5	5	311	62,235	62,235
Wyoming	2	0	26	12,861	NA
Total	851	329	15,366	18,056	46,704

Sources: Approved counseling agencies from <http://www.hudhcc.org/agencies/all.txt>.

Active counseling agencies from data submitted to HUD by counseling agencies using HUD Form 9902 for FY 1998. Owner households from the 1990 Decennial Census, STF-3C.

as approved to provide this counseling. Part of this difference is attributable to the fact that counseling agencies may have several branches that are listed separately as approved to provide counseling, but a single report is filed for the entire organization. But in many cases approved agencies report not having counseled any HECM clients. While this may reflect a lack of demand for this service, at least in some cases, agencies that are approved to provide HECM counseling are not currently offering this service. In some cases agencies have chosen not to provide this counseling due to a lack of funding.³⁶ In other cases, there may no longer be counselors with HECM experience.

³⁶ Recently, a counseling agency serving a large volume of HECM clients in Massachusetts and Connecticut has decided to stop offering this service. This agency cited a lack of funding as the rationale for this decision. The withdrawal by this agency is particularly important for Connecticut where only one other counselor is reported to actual provide this service.

The total number of clients receiving HECM counseling during FY 1998 was reported to be 7,020. In comparison, during this same period 6,496 HECMs were originated. Of note, most counselors interviewed estimated that a very high share of those counseled actually obtained a HECM, generally as high as 90 percent. As an approximation, if we assume that three-quarters of those counseled actually obtained a HECM, the originated loan volume of 6496 implies a total counseling volume of approximately 9,000 homeowners. This estimation suggests that the reported volume of HECM counseling may only account for about 80 percent of the total actual volume of HECM counseling.

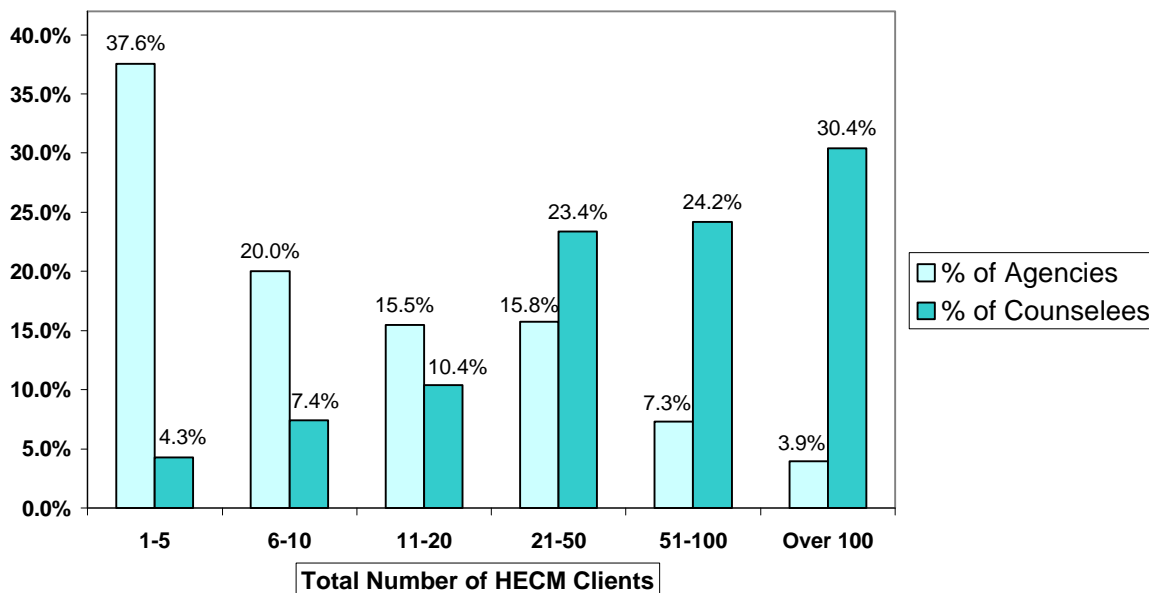
When the number of active counseling agencies is compared to the number of potential HECM borrowers there is an even broader range of coverage across states. New Hampshire, Vermont, and Wyoming stand out as having no active HECM counselors. Other states that are relatively underserved include Connecticut and Kansas where the ratio of active counseling agencies to elderly homeowners is 1-to-200,000 and 1-to-182,000, respectively. At the other end of the spectrum, the ratio of active HECM counseling agencies to elderly homeowners is about ten times lower in Montana, Colorado, South Dakota, Alaska, and Delaware.

Exhibit 4-2 presents the distribution of counseling agencies and counselees by the number of HECM clients counseled. As shown, a majority of agencies have a low volume of HECM clients. Nearly 40 percent counsel 5 or fewer clients per year, while an additional 35 percent counsel between 6 and 20. However, these agencies account for only 22 percent of all HECM counselees. At the other end of the spectrum, only 4 percent of agencies counseled more than 100 clients per year, but these agencies accounted for 30 percent of all HECM counselees. Taken as a group, agencies counseling more than 20 clients per year account for a quarter of all agencies, but nearly 80 percent of all counselees. In sum, most HECM counseling agencies serve a small number of clients, but most HECM borrowers are counseled by agencies serving a relatively large volume of homeowners.

Our interviews with borrowers, lenders, and counselors also provide some indication of the general availability of counseling. Interestingly, in the focus groups, borrowers did not mention any difficulty in locating counselors. In part, this may be due to the fact that borrowers often contact lenders first, and the *lender* will then arrange for the counseling session. Lenders reported spotty coverage by counseling agencies, with some market areas well served and others where it was more difficult to arrange for counseling. One lender noted that there were no counselors in a few counties in one state they served, and so they would sometimes arrange to drive borrowers an hour or two to the nearest counselor. Another lender noted that the only counseling agency they were aware of in one of their states had ceased HECM counseling and so for the time being they did not have any local counselors available. Another issue that was mentioned by one lender is that housing counselors are often located in inner-city neighborhoods serving a primarily low-income population. In some cases, suburban elderly homeowners were reluctant to travel to these

areas for counseling. So even in cases where counseling was available within a reasonable distance, the location and type of agency offering the counseling could be a barrier. Lenders also reported that in some cases counseling could present a significant bottleneck in the process, where they were unable to schedule a counseling session for several weeks.

Exhibit 4-2
Distribution of HECM Counseling Agencies and Counselors
by the Number of HECM Clients for FY 1998



Source: Tabulations of HUD Form 9902 data for FY 1998.

One significant development that had improved the availability of counseling was that HUD had approved the use of phone counseling offered by Fannie Mae on a pilot basis. When local face-to-face counseling was not available, this phone counseling option enabled borrowers to move ahead in the process of considering a HECM. HUD has also been working with AARP, NCHEC, and the Housing Counseling Clearinghouse to develop toll-free phone counseling by “master counselors” on a pilot basis for those who are unable to obtain face-to-face counseling. The master counselors have been selected on a competitive national basis as the most highly qualified HECM counselors. This effort has also entailed the development of a manual and counseling protocol to guide the phone counseling process. As a pilot project, this counseling is available to areas identified as underserved.

The findings from the counselor interviews suggest that a lack of counseling in rural areas continues to be a problem. About half of the counselors interviewed noted that they will occasionally counsel borrowers by phone because no counselors were available in the area where the homeowner lives or because of a long wait to get an appointment with a local counselor. One counselor in the Rocky Mountain region has received calls from borrowers in other states seeking counseling. Aside from one counseling agency that routinely

counseled by phone, the other counselors interviewed were all strongly opposed to phone counseling because of the difficulty of using printed materials and the inability to read homeowners' reactions to the information presented. In three interviews, counselors noted they were involved in efforts to travel to rural areas in the state on a periodic basis to provide counseling in areas where no HECM counselors were located.

Funding

HUD makes funding available on an annual basis to approved counseling agencies through a competitive grant process, with the amount of funding available determined by Congress. Agencies apply for funding for *all* housing counseling activities. In addition to HECM counseling, these other activities include: homebuyer education programs, pre-purchase homeownership counseling, post-purchase counseling, mortgage delinquency and default counseling, loss mitigation counseling, marketing and outreach initiatives, renter assistance counseling, and fair housing assistance. These funds are largely intended to compensate agencies for education and counseling services, although a small amount may be used for "capacity building" such as purchasing computer equipment and software, enhancing telephone infrastructure, or installing facsimile machines. While agencies must be HUD-approved to receive funding, HUD approval does not guarantee funding. Nor is department funding intended to be the sole source of funds for counseling agencies. Rather, agencies are expected to seek funding from other sources, such as local governments, and community lending or Realtor organizations. HUD has noted that "the typical agency receives funding from a variety of sources, including local businesses, banks, Realtors, the United Way, and private foundations."³⁷ Multiple sources are also thought to preserve the perception of objectivity by having agencies not beholden to a single source. However, the housing counseling handbook does note that agencies must avoid conflicts of interest in their funding sources, most notably by not being a party themselves to a transaction involving a client. Agencies are also expressly prohibited from accepting a fee for referring prospective homebuyers to a lender. Counseling agencies are also prohibited from charging a fee to the counselee except in years when HUD does not make any funding available for counseling.

In FY 1997, \$12.3 million in grants were awarded by HUD for housing counseling , including \$4.7 million to 5 national, regional or multi-state intermediaries (organizations providing counseling in more than one state through affiliates), and \$7.5 million allocated to 350 local organizations. Local agencies could apply for up \$100,000 in funding, but the median amount awarded was \$15,000, and roughly three-quarters of grantees received \$25,000 or less. In FY 1998, the total amount awarded was increased to \$18.0 million, with the increased funding essentially set aside for grants to state housing finance agencies. Of the \$18.0 million awarded, \$6.0 million went to 8 national intermediaries, \$5.6 million went

³⁷ See "Demystifying the HUD-Approval Process for Housing Counseling Agencies," <http://www.hudhcc.org/newsletters/winter97/demyst.html>.

to 29 state housing finance agencies, and \$6.4 million went directly to 322 local agencies. Again, the median amount awarded to local agencies was \$15,000, and 80 percent of grantees received less than \$25,000. However, local agencies could also apply to the state housing finance agencies for grants from their HUD allocation. No restriction was placed on agencies ability to both apply directly to HUD for funding and to their state housing finance agency. However, both grants from HUD and from state agencies were limited to a maximum of \$100,000 per grantee. In FY 1999, a total of \$17.5 million was made available to support housing counseling, including \$900,000 that was set aside for Housing Counseling support,³⁸ \$7.5 million for national, regional and multi-state intermediaries, \$3.5 million for state housing finance agencies, and \$5.6 million for local organizations.

One potentially significant recent development is that in the FY 1999 appropriations bill, Congress allowed the HUD Secretary to set aside up to \$1 million from the funding appropriated for housing counseling generally during fiscal years 2000 to 2003 to be devoted to housing counseling and consumer education and outreach for the HECM program. The Department has set aside this funding for the current fiscal year (FY 2000) and is considering possible uses for these funds. While the Department is open to using this funding for marketing, a key concern is the need to develop the capacity of the counseling system to handle any increase in demand for counseling. HUD anticipates issuing a NOFA to allocate this funding sometime during the next year.

In addition to HUD funding, the community action and housing-specific organizations interviewed for this study primarily relied on funding from state and local governments and, to a lesser extent, donations from individuals and corporations. The Catholic Church was a significant source of financial support for an agency affiliated with Catholic Charities. Consumer Credit Counseling Service organizations, which are an important source of HECM counseling, derive their primary income from fees generated by their debt management services.

Two of the agencies contacted noted that they looked to lenders originating HECM loans as an important source of funding for HECM counseling. One agency indicated that they had begun to require lenders to pay for counseling or they would not offer it. This approach was justified on the grounds that HUD did not provide financial support for HECM counseling. Since this agency has received HUD grants, apparently this respondent did not view HUD's support of their housing counseling as covering the HECM program. As a result of lenders' reluctance to pay for counseling, their volume of HECM counseling has declined sharply since last year. Another agency noted that HECM counseling generally uses up all of their HUD grant during the first quarter of the year, leaving no support for HUD counseling for the rest of the year. As a result, they began invoicing lenders for counseling services.

³⁸ "Housing Counseling Support" is defined to include funding for the non-profit Housing Counseling Clearinghouse and/or HUD counseling initiatives.

Lenders were not paying these invoices so the agency stopped offering HECM counseling. Given a lack of counseling in these areas, the agency reported that lenders are considering the possibility of paying for counseling. But until they have a source of funding for HECM counseling, they will not offer it.

Many of the lenders interviewed noted that the practice of charging lenders for HECM counseling seemed to violate HUD's rules concerning conflict of interest. These payments are, in fact, not a violation of HUD policy, which only states that counselors cannot receive a fee for referring borrowers to a lender. In this case, lenders are referring clients to the counselor. In addition, in various HUD descriptions of the need for funding sources for counseling other than HUD, it is noted that local banks are a good potential source of funding.

All but one of the counseling agencies contacted did not indicate any intention of ceasing HECM counseling due to a lack of funding. However, all of the agencies indicated that additional funds would be useful. Half of the agencies contacted indicated that greater funding would allow them to conduct outreach and education to make homeowners aware of the program and how it might be of help for them. Interestingly, only two agencies cited a need for additional funds to expand the counseling staff. Other items mentioned include obtaining computers, video playing equipment, or software training.

Staffing and Training

The agencies contacted for this study were found to have a variety of staffing approaches for providing HECM counseling. In agencies with a small number of HECM clients, staff providing this counseling by necessity also provided other types of housing counseling. In most cases where agencies had a fairly large volume of HECM counseling, there were one or two counselors who exclusively provided HECM counseling for the agency. But such specialization was not universal, as the largest agency interviewed, which had 60 counselors across 16 branch offices, required every counselor to be able to provide all types of housing counseling, including HECM counseling. This agency reported, however, that they would like to have reverse mortgage specialists, but that a lack of funding made such an approach infeasible.

To date, the Department has not required counselors to demonstrate any proficiency to be approved as a HECM counselor, but pilot testing has begun on a counselor exam. In practice, most agencies interviewed rely on a senior staff person to develop expertise in the HECM program and then train other staff involved in counseling. One of the principle means cited for developing expertise in the HECM program is to attend training sessions on reverse mortgages. More than half of those interviewed had personally attended training at some point since the program inception, either at HUD, Neighborhood Reinvestment Corporation (NRC), or American Association of Retired Persons (AARP) sponsored events (this training

is currently provided under the auspices of NRC).³⁹ All but one of those who had not personally attended this training had instead reviewed training videos by the same individuals. This training was universally viewed as extremely helpful. Although several counselors noted that it would be helpful to have shorter, refresher courses available for those who have had the initial training and are experienced counselors. In addition to the NRC training, a few counselors indicated that they attended training sessions sponsored by state counseling associations. Some had also received training from lenders, although these experiences were generally from the early years of the program and do not appear to be common at present.

Currently, HUD supports training for housing counselors through an annual grant to NRC. NRC offers training for all types of housing counseling, including 2-day training on reverse mortgages. The tuition for this 2-day course is \$300, but scholarships are available to cover this cost. The tuition, however, does not cover the cost of travel and lodging for the training. NRC's training institutes are only held about 6 to 8 times a year around the country. As a result, for most agencies, travel and a two-night stay are required. A lack of funding for travel makes it difficult for agencies to attend these sessions.

Counselors cited a number of sources of information for keeping up to date with developments in the HECM program, with the most frequent sources being AARP, NCHEC, and lenders. In fact, several agencies indicated that lenders were their primary source of information about changes in the program. Almost all of the counseling agencies believe that there should be more communication from HUD. The few agencies that relied on HUD as a source of information were using the Internet to access HUD's web site. In discussing the lack of communication from HUD, several counseling agencies noted that they first learned of recent changes in the requirements for the counseling certificate in 1999 from lenders, not HUD. Lenders had learned of this change through a mortgagee letter, but there is not a similar process for routine communication with counseling agencies.

Counseling Process

The counseling process begins when a homeowner contacts the agency to arrange for counseling. A slight majority of the agencies contacted indicated that lenders refer almost all of the homeowners to the agency. Only three of the agencies indicated that a significant portion of their clients (about half) contacted the counseling agency before contacting a lender. In these cases, homeowners learned of the counseling agency either through the Internet (HUD or NCHEC web sites, primarily) or general media coverage of reverse mortgages. Thus, owners generally contact lenders first to learn about reverse mortgages. Lenders will then provide the owner with referrals for counseling. Interestingly, in the focus groups several borrowers could not distinguish between the information provided by lenders

³⁹ Since 1989 this training has primarily been provided by Ken Scholan and Bronwyn Belling.

and that provided by counselors. One woman did not realize until the focus group discussion that the reason for her trip to another downtown office to discuss the loan was for counseling.

Lenders are thus in an important position to direct owners to counseling. Of course, in some market areas, there may only be a single counselor. But in many areas there will be a choice. The lenders interviewed for this study professed to value high quality counseling and would direct borrowers to counselors who they felt offered the best counseling. Some industry observers noted that in some cases, less scrupulous lenders might refer owners to counselors who will provide counseling quickly and will do little to dissuade owners from obtaining a loan. While none of the counseling agencies interviewed seemed to fit this profile, it is certainly a plausible scenario given owners heavy reliance on lenders for counseling referrals and the lack of any quality control for the counseling process.

During the initial phone contact, counseling agencies typically gather basic information on the owners in order to complete an intake form and will arrange for the counseling session. In some cases the information collected is used to generate reports on their borrowing capacity under the HECM and, in some cases, Fannie Mae reverse mortgage programs. In a few cases, agencies reported mailing out a package of materials to owners prior to the counseling session to allow them to review this material before meeting with the counselor. But in most cases informational materials and estimates of borrowing capacity are presented at the session itself.

Virtually all of the agencies said that reports on the financial aspects of the loans, including the amounts that could be borrowed and the associated costs, are reviewed at the session. Some agencies used HUD software to generate these reports, while others used NCHEC software (which includes a comparison with the Fannie Mae program). In one case, the counseling agency did not have access to a computer to generate its own reports, and so relied on the reports given to the owner by the lender.

Other materials most commonly provided to borrowers include pamphlets from AARP and Fannie Mae and lists of state and local programs designed to aid seniors. In a few cases borrowers were given lists of lenders offering reverse mortgages and were advised to shop around among these lenders. In other cases, brochures from a single locally active lender were provided. Only two of the counselors reported providing owners with HUD materials. Counseling agencies also seemed to differ in their approach to providing printed materials to borrowers. Some provided as much material as they had available, while others felt that owners were overwhelmed by too much information and so would provide them with a brief set of materials unless the owner requested more. In particular, two counselors noted that the Fannie Mae pamphlet was too long and detailed for most borrowers.

Nine out of ten agencies contacted strongly preferred face-to-face counseling. The one exception was an agency that only provided in-person counseling when the owner requested

it. This agency indicated that they made up for the lack of personal contact by conducting a longer session by phone – 2 to 3 hours per session. Most counselors felt that face-to-face counseling was necessary to be able to read facial expressions and body language to assess whether owners were fully comprehending the information presented as well as to be able to go over printouts and other printed material together. Nonetheless, many of the counselors had provided phone counseling for owners located at a distance who had no other counseling options. Two of the agencies only provided counseling at the owners' home. These counselors felt that holding the session at home both made owners more comfortable and allowed the counselor to fully assess the owner's situation, such as whether the home was maintained and whether the owner might have other needs that a mortgage could help with. Virtually all of the other agencies would provide counseling in the home for homebound seniors, but generally this occurred in only 5 to 20 percent of their cases.

Most of the agencies reported that counseling sessions generally last for one to two hours. In two cases the sessions were reported to be only 45 minutes to one hour. The agency providing phone counseling reported devoting two to three hours to the session. One agency, which had a very low volume of HECM counseling, reported a very lengthy counseling process, including an initial session of two to three hours, and generally two follow-up sessions, all in the owner's home. This agency also accompanied the owner at closing.

Counselors generally reported that the topics covered correspond to those identified in the statute. Much of the time is spent going over the details of the reverse mortgage transaction and highlighting the consequences of entering into these agreements. Owners are also made aware of other programs that might meet their needs, including tax deferral programs, home rehab loan programs, and other senior aid program offered by state and local governments. Overall, counselors did not feel that the program was too complex for the typical homeowner and felt that they were able to adequately cover the necessary topics during the counseling session.

Feedback from the focus groups on the counseling process found several borrowers who did not feel that their counseling adequately informed them of the loan costs. However, most of the counselors interviewed seemed well aware of the costs associated with obtaining a HECM, with many expressing concern about how high the costs seemed to them. One point of confusion for both borrowers and counselors was the servicing fee set aside, as in a number of cases interview subjects clearly thought that the servicing fees had been charged at closing, rather than simply reserved for future payments. Another concern about the efficacy of counseling that emerged from the focus groups was that in several cases borrowers felt that there were other less costly approaches that could have met their needs which were not discussed by counselors. Of note, there was no evidence from either the counselor interviews or focus groups that counseling failed to adequately inform borrowers of the impact of reverse mortgages on eligibility for other programs or on their estate.

Other Counseling Issues

Mandatory Nature of Counseling

One of the early criticisms of the HECM program was that homeowners would be alienated by mandatory counseling, which could be viewed as paternalistic or demeaning. The 1995 evaluation noted that lenders and advocates for the elderly generally had come to accept counseling as an important aspect of the program given the complexity of these loans. The interviews conducted for this evaluation found essentially no opposition to mandatory counseling from borrowers, lenders, or other industry observers. Counselors reported little resistance from owners about counseling. In fact, in most cases where clients professed that they did not feel that counseling was needed, after the session most of these owners indicated that the session had been helpful. Lenders also did not express the view that counseling should be optional. In part, lenders' acceptance of counseling appears to be related to their understanding that borrowers need to feel assured that these loans are sound and appropriate for them. The involvement of an impartial third party helps provide this assurance. Lenders also noted some concern about the use of the term "counseling" for these sessions as this has a negative connotation for many seniors. The Rhode Island Housing and Mortgage Finance Corporation (RIHMFC), which is unique in acting as both a lender and counselor, uses the term "information session" to describe this part of the process to avoid these negative connotations.

While lenders did not express a desire to eliminate mandatory counseling, several suggested that allowing certified public accountants (CPAs) and lawyers to provide this counseling would be helpful and appropriate for financially savvy owners. In cases where borrowers have an established relationship with a professional advisor, they may feel most comfortable with their lawyer or CPA informing them about these loans. There are issues with this approach, such as how a determination would be made of whether a CPA or lawyer is appropriate for a given borrower since these professionals may be less informed about programs aimed at lower-income seniors. Another issue would be whether these professionals could be compensated for their time, as at present HECM counselors are prohibited from charging clients a fee.

General Outreach and Education

HUD's handbook for the housing counseling program notes that one of the objectives of the program is to have counseling agencies conduct outreach to households eligible for HUD's housing programs.⁴⁰ For the most part, the agencies contacted were conducting little outreach. Several noted that they included HECM counseling as one of the services they offer in brochures describing the agency. A few indicated that they participated in seminars or housing fairs to discuss reverse mortgages when invited by organizers of such events.

⁴⁰ See *Housing Counseling Program Handbook*, Directive No. 7610.1, Section 1-3, A.

Several agencies indicated that they did not conduct any outreach, which was attributed either to a lack of funding for outreach activities or a lack of funding for counseling so that they would not be able to serve additional clients. Only one agency, which had a long-standing dedication to promoting reverse mortgages, actively pursued opportunities to educate owners about the availability of the HECM program. Several agencies indicated that they would like to do more general outreach and education if more funding were available. They viewed such efforts to reach owners who would benefit from a HECM as essential to expand use of the program.

Lenders' Concerns about Counseling

As has been touched on above, lenders generally expressed concern about the availability of counseling. Lenders also noted that the quality of counseling varies quite a bit among counseling agencies. Poor quality counseling was a concern both because it did not adequately prepare owners to decide about whether to obtain a HECM and because it could create more confusion by contradicting accurate information provided by the lender.

Another lender concern about counseling is the potential to lose customers that they had cultivated because of steering by counselors to specific lenders. Some counselors are reported to have developed relationships with certain lenders and recommend that owners use these lenders, regardless of whether the owner had already been dealing with another lender. In some cases, counselors are reported to steer owners to lenders who have loan officers that are salaried and not commissioned because of the counselors' feeling that commission-based lenders put too much pressure on owners to take out a loan. In other cases, counselors may simply use materials developed by a lender to inform owners about the program, which in essence appears as a recommendation for these lenders.

Lenders also express concern about the tendency of counselors to suggest that owners shop around among several lenders before obtaining a loan. Some lenders viewed this as a strong disincentive to conduct marketing since the lender cannot control whether they are able to retain borrowers that they reach with their advertising. Given the existing limit on the amount of origination fees that can be financed and the fact that almost all loans are purchased by Fannie Mae at par, lenders argue that there is little difference among lenders in loan terms or costs. As a result, at present owners may gain little from shopping around. Of course, future program developments may introduce greater variation in loan terms and costs, so that shopping around may enable borrowers to find the best deal.

Lenders also reported that some counselors hold strong views that reverse mortgages should only be used as a last resort, and will counsel owners against these loans unless it is the only option that allows them to stay in their home. In contrast, in order to expand the market for reverse mortgages, lenders would like to promote reverse mortgages not simply as a way to maintain their current lifestyle, but as an option that allows owners to enhance their lives by tapping their home equity. Lenders also cite the possibility of using a reverse mortgage to

reallocate a borrower's wealth so that it is not so heavily invested in real estate as another potential use of the program. Lenders are frustrated by this divergence in opinion between the lender and counselor communities regarding the appropriate use of reverse mortgages.

It is difficult to evaluate lender concerns about counselor activities that undermine their ability to close loans with particular borrowers. On the one hand, lenders point to the language from the statute establishing the HECM program which does not indicate that the counselors should make recommendations about how borrowers should choose a lender. Lenders also suggest that the loss of loans due to counselor recommendations may chill interest by lenders from entering this market. On the other hand, counselors obviously believe that part of their role is to help owners to make the best choice about these loans, including the choice of lender. Lenders would like HUD to clarify what is acceptable counselor behavior regarding recommending specific lenders or whether owners should be encouraged to shop around among lenders.

Proposals for Reform

In 1998 HUD contracted with the Home Equity Information Center of the AARP Foundation to develop recommendations for improving consumer information and counseling in the reverse mortgage market. Following up on that work, HUD then contracted with AARP to lead an effort to develop a certification exam for HECM counselors. The goal is to develop an exam that would be used to certify that counselors have sufficient knowledge and understanding of the program to adequately prepare borrowers for the decision about whether to obtain a loan. The exam is being developed in partnership with AARP, Fannie Mae, NRMLA, and master counselors previously selected by HUD and AARP for a pilot phone counseling service. The exam is currently in the testing phase, with HECM counselors having volunteered to take the exam in exchange for being included in a network of counselors and being offered the possibility of being selected to provide phone counseling services as a master counselor. Once a certification exam is developed, a process for testing and certifying counselors will still have to be developed, although it is anticipated that the American Homeowner Education and Counseling Institute (AHECI) will most likely be involved in granting certification.

Another AARP recommendation for ensuring that owners receive consistent counseling is to develop a software program that would be required to guide counselors through a description of these mortgages, the owner's borrowing capacity, and consideration of various alternatives. At present, many counselors use either HUD or NCHEC software to develop estimates of borrowing amounts and loan costs. But the proposed software would go beyond this information to include all aspects of counseling required by law. The use of software would be intended to ensure that counseling covers all of the required topics and that the presentation of this information is as unbiased as possible. The proposal includes the

recommendation that representatives of different reverse mortgage constituencies would participate in the design of this software.

AARP's recommendations to HUD also included the outline for a new system of providing information to owners interested in reverse mortgages. This system would include a national phone center to handle initial screening of interested owners, group presentations to provide general information on reverse mortgages, and individual phone counseling by "master counselors." This approach is intended to address the concern about being able to delivery high quality information and counseling to all potential borrowers. The initial screening would check for program eligibility and a preliminary estimate of borrowing capacity. It would not require the same training and experience level as counselors, nor would it require in-depth knowledge of local programs.⁴¹ The group sessions would allow owners to explore the program in more detail in a less intense setting than a one-on-one basis. Owners would also benefit from hearing other questions raised and interacting with other potential borrowers. Finally, phone counseling would be offered by the most highly qualified counselors. As described earlier, this "master counseling" is already being tested by AARP and HUD on a trial basis for underserved areas.

To some extent, AARP's proposal represents a refinement and more systematic approach to the existing process. Almost all lenders report that making group presentations is one of the key marketing approaches that they use. Lenders and counselors also describe using initial contacts with owners to screen for their eligibility for the program and lenders will generally provide borrowers with estimates of their borrowing capacity before referring them for counseling. AARP's proposal would refine the current arrangement by shifting the initial screening to a national phone center and by having group presentations handled by counselors. In essence, these responsibilities would be shifted from lenders to counselors. In part this proposal may be aimed at removing any bias that might be introduced by having lenders as the primary source of information for owners. But this type of outreach is obviously an important form of marketing for lenders. And given the limited resources available from HUD, it seems unnecessary to limit outreach by lenders. However, it would certainly be helpful for consumers to have more sources of information, including a national clearinghouse to gather basic program information and more readily available seminars to learn about the benefits and risks of reverse mortgages.

AARP's proposal to allow phone counseling by master counselors is also being implemented as this form of counseling is now becoming available both through Fannie Mae and AARP's master counselors on a pilot basis. However, phone counseling is currently only intended for cases where face-to-face counseling is not possible for the owner. The AARP proposal would allow phone counseling as a choice for all potential borrowers. The counselors

⁴¹ Screening could also be done by mail or over the internet by having owners complete a brief questionnaire to determine eligibility and borrowing capacity.

interviewed for this study are strong proponents of face-to-face counseling as a means of fully assessing an owners need for these funds and understanding of the program. But there are certainly cases where phone counseling is needed, either because local counselors are unavailable or because owners have difficulty traveling. Given the challenges of counseling by phone there does need to be some oversight of this process. Allowing phone counseling only by master counselors would seem to be a prudent step to ensure the quality of this process.

Finally, AARP is also developing a proposal to increase funding for HECM counseling. Under this proposal, a counseling fee of \$100 would be included as a closing cost. This fee would go into a central fund managed by HUD to support HECM counseling. The use of a central fund to disburse this revenue is intended to break the direct link between the fee and the service so that counselors are not motivated purely by the fee. In addition, the central fund would allow HUD to control the quality of counseling offered by having a competition for funding based on an evaluation of the quality of services offered. Lenders interviewed for this study were generally in favor of having a fee for counseling that would be paid at closing. They believe that allowing a fee for counseling would help ensure that good quality counseling is more widely available. However, some lenders were not necessarily supportive of AARP's suggestion that the fee go into a central fund rather than simply being paid to the agency that provided the counseling for the borrower. In their view, this process would add unnecessary complexity to the process. Some lenders also noted that allowing a fee for counseling would make it easier to include CPAs and lawyers as counselors. However, the idea of charging an additional closing fee runs counter to the goal of reducing origination costs. HUD is giving consideration to AARP's proposal, though the Department has in the past strongly advocated free counseling.

Summary

The availability and quality of HECM counseling are critically important constraints in the development of this market. Borrowers are required by law to obtain counseling before they can apply for a HECM. As a result, the capacity of the counseling system is an important concern in the growth of the program. But in addition, given the complexity of the program and the potentially serious implications of entering into these loans, high quality counseling is also needed to ensure that owners make appropriate decisions about these loans.

In the early years of the Demonstration, the availability of counseling was a significant important concern. At present, lenders report that it is rare that they cannot obtain counseling for borrowers, although in some cases it may take some time to schedule the session. Counseling continues to be difficult to obtain in rural areas, although even in some urban states, the number of agencies providing HECM counseling relative to the potential number of borrowers can be quite low. Concerns about the availability of counseling have also been eased in the past year as both Fannie Mae and HUD have developed phone counseling

systems which are now approved on a pilot basis for cases where face-to-face counseling is not feasible. Also, in some rural states, counseling agencies have also begun efforts to travel to distant parts of the state on a rotating schedule to offer the option of face-to-face counseling services.

While it is difficult to evaluate the general quality of HECM counseling, there is clearly a wide variation in the approach to providing these services. Most of the ten agencies interviewed for this study provide face-to-face counseling in the vast majority of cases, but one relies primarily on phone counseling. The typical counseling session lasts from one to two hours, although some were as short as 45 minutes and others consisted of several sessions of a few hours each. Some agencies have staff specially trained in this subject area that provide all of this counseling, while other agencies require all housing counselors to provide HECM counseling. A majority of agencies providing HECM counseling report a very small volume of HECM clients, less than one a month, while a small number counsel a large share of all clients. As a result, there seems to be wide variation in the degree of expertise and experience in HECM counseling across agencies.

Feedback on the quality of counseling from borrowers and lenders suggests that variation in the quality of counseling is a concern. Some of the participants in the focus groups felt that they were not aware of the full costs of these loans and would not have chosen a HECM if they had been better informed of other options. Lenders also report that some counselors are not sufficiently knowledgeable about reverse mortgages, and so add to borrowers' confusion. At present, the Department does not have any provisions to monitor the quality of counseling. However, HUD is working with AARP to develop an exam that is intended to be used to certify HECM counselors.

Another important concern is the amount of funding available both to support counselor training and the provision of counseling services. Currently the only funding for reverse mortgage training is supported through a grant from HUD to the Neighborhood Reinvestment Corporation for all types of housing counseling. But these sessions are only held about six times a year, and require cash-strapped agencies to pay for travel and accommodations for counselors. At present, funding for HECM counseling services is part of a grant program that supports all types of housing counseling and provides only fairly modest funding levels (the median grant in recent years have been about \$15,000). Without adequate funding, many agencies have chosen not to offer this type of counseling. Others have turned to lenders to compensate them for counseling sessions, which raises significant concerns about the impartiality of the counseling provided. Congress has now allowed HUD to set aside up to \$1 million a year from the funds allocated for housing counseling generally to be used specifically for HECM counseling. The Department has set aside these funds for the current fiscal year, which should help address the needs for greater training and financial support for HECM counselors.

Chapter Five

Borrower Feedback

One of the specific issues that biennial reports to Congress are required to address is whether the HECM program has “improved the financial situation or otherwise met the special needs of participating elderly homeowners.” Neither of the two previous evaluations was able to obtain direct feedback from HECM borrowers about their satisfaction with the program. For this study, focus groups were held with borrowers in three metro areas to provide direct feedback about borrower experience and satisfaction with the program. More specifically, the focus groups were used to explore how borrowers first learned of the HECM program, their reasons for wanting to obtain a HECM, their experiences with counseling, loan origination and servicing, the impact of the HECM on their lives, and their suggestions for improvements to the program. While the number of borrowers participating in these focus groups is fairly small, the information obtained nonetheless provides valuable feedback about the efficacy of the program and aspects that need improvement.⁴²

Methodology

To address the objectives of this phase of the evaluation, six focus groups with HECM borrowers were conducted in October and November 1999. Focus groups were held at local senior centers and a public library in the following cities: Providence, RI, Seattle, WA, and New Orleans, LA. Two groups were held in each city. Selection of the locations for the groups was based on several criteria. First, areas with a sufficient level of HECM borrowers in a relatively contiguous geographic area were identified to facilitate recruitment of the groups. From this group, Providence, Seattle, and New Orleans were selected to provide regional diversity and to represent, on average, areas with moderate, high and low property values, respectively.

Eligible participants were identified from HUD databases on HECM borrowers. For each site, recruitment began with an initial pool of approximately 100 reverse mortgage borrowers residing within a five-mile radius of a zip code with a high density of HECM borrowers and an average house value that was representative of the area. Borrowers were offered both an incentive payment and transportation to facilitate their participation in the groups. Recruitment was somewhat challenging because of the wariness of borrowers about the nature of the process generally and because some seniors were too frail or otherwise

⁴² Of course, since the focus groups were held with borrowers who chose to obtain a HECM, they provide less information about reasons why the program did not meet the needs of seniors who were interested in a reverse mortgage but ultimately chose not to obtain one. Focus groups with potential HECM borrowers would provide valuable information that could be used to refine the program and to develop effective consumer education programs.

unwilling to travel to the focus group site. Ultimately, in each location, a total of 16-20 respondents were recruited to assure a minimum of 10 participants in each location. However, due to the lower number of borrowers in the New Orleans area, the radius was expanded to include borrowers within seven miles of the meeting site. As a result of expanding recruitment in New Orleans, the average house value of focus group participants was somewhat higher than planned.

Participant Profiles

In total, 34 borrowers participated in the group discussions. Specifically, there were 10 participants in Providence, 13 participants in Seattle, and 11 participants in New Orleans. The participating borrowers were primarily women, but also included several married couples and two legal guardians. In general, the participants appeared to be healthy, mobile elders.

Each of the participants provided answers to some initial questions to gather basic demographic characteristics and to assess their overall satisfaction with the program. Borrowers were asked their age, the type of loan they had, the number of years they had the loan, whether they had any children, and their overall satisfaction with the HECM. Of the 34 respondents in the three locations, 71 percent were female and the average age was 76 years. Among the 77 percent of respondents with children, the average number of children was 3.2. The majority of the respondents (65 percent) were white (non-hispanic), 35 percent were black, and 3 percent were hispanic.⁴³ The average appraised property value at closing was \$144,956. As targeted, the highest property values were found in Seattle, with an average of \$200,038. Average property values were lower in New Orleans (\$116,000) and Providence (\$107,055). The length of time since closing on the reverse mortgage ranged from 4 months to 11 years, with an average of 3.4 years. Participants in Providence had their loans the longest, almost 6 years on average, versus approximately 2.5 years in Seattle and New Orleans. Overall, 67 percent of respondents had a line of credit, 15 percent received monthly payments, and 18 percent received both monthly payments and had a line of credit.

⁴³ The share of minority borrowers participating in the focus groups is much higher than among HECM borrowers. This result may be due to the fact that the focus groups were held in central city locations where more minorities live.

Exhibit 5-1**Participant Information by Site**

	<u>Providence, RI</u>	<u>Seattle, WA</u>	<u>New Orleans, LA</u>	<u>Combined Site Data</u>
TOTAL PARTICIPANTS	10 (Including 1 Guardian)	13 (Including 1 Guardian)	11	34 (2 Legal Guardians)
<u>Demographic Characteristics</u>				
Female Participant %	80%	77%	45%	71%
Average Age	77	76	77	76
Non-hispanic White	100%	45%	55%	65%
Non-hispanic Black	0%	55%	35%	35%
Hispanic	0%	0%	9%	3%
Respondents with Children	50%	92%	91%	76.5%
<u>Loan Characteristics</u>				
Length of Reverse Mortgage	5.8 Years	2.5 Years	2.4 Years	3.4 Years
Property Appraisal Value	\$107,055	\$200,038	\$116,000	\$144,956
<u>Loan Type</u>				
Term	30%	0%	9%	12%
Tenure	0%	0%	9%	3%
Line of Credit	50%	77%	73%	67%
Term & LOC	20%	15%	0%	12%
Tenure & LOC	0%	8%	9%	6%

Satisfaction with the HECM Program

Prior to the group discussion, participants were asked to rate their overall level of satisfaction with HUD's HECM program on a scale from 1 to 5, where 5 is very satisfied and 1 is very dissatisfied. Overall, the participants' level of satisfaction with the reverse mortgage product was fairly high, with an average rating of 4.1. Satisfaction was highest in Providence, with an average rating of 4.5. Satisfaction was lower in Seattle (4.1) and lower still in New Orleans (3.6). Exhibit 5-2 presents the satisfaction ratings by site.

Exhibit 5-2**Overall Satisfaction with HECM by Site**

	Providence, RI	Seattle, WA	New Orleans, LA	Total
Very Satisfied	80% (8)	55% (6)	27% (3)	53% (17)
Satisfied	10% (1)	27% (3)	36% (4)	25% (8)
Neither Satisfied nor Dissatisfied	0%	0%	18% (2)	6.5% (2)
Dissatisfied	0%	9% (1)	9% (1)	6.5% (2)
Very Dissatisfied	10% (1)	9% (1)	9% (1)	9% (3)
Average Satisfaction Rating	4.5	4.1	3.6	4.1

Note: Number of observations in parenthesis.

Many participants remarked that this program has allowed them to maintain a higher quality of life. One participant noted: "...it has made the difference between living and just existing." For many participants, the supplemental income allows them to have an "extra cushion" and to "maintain their quality of life without having to worry." For many other participants, the reverse mortgage was a last, but welcome, resort and has allowed them to stay in their homes and remain independent: "This program helped me to stay in my home during a very difficult time and not be a burden on my children." One respondent in Seattle commented: "I am satisfied about the reverse mortgage in theory, because the alternative (losing independence or moving to assisted living facility) doesn't appeal to me. If you want the best way to keep independent, this program is pure gold. A good program for a sense of well-being."

Among the minority of participants who were dissatisfied with their loans, some were still concerned about their financial situations: "They tell you that you'll never have to worry again. Well, that's fine, but I am worrying." In addition to these concerns, some participants were very discouraged at the costs associated with their reverse mortgages: "It looks good going in, but you have to ask how much that money is going to cost you." Initially enthusiastic about the program, participants realized: "After a short while, you realize you are in deeper than you thought you'd be." Borrowers with monthly payments were also somewhat more dissatisfied with the program. Of the five borrowers who reported to be dissatisfied with the program, three had chosen a monthly payment option.

How Borrowers First Heard of the HECM Program

The majority of the participants first learned about the HECM product from family or friends, local newspaper articles, or, in a few cases, printed materials from the American Association of Retired Persons (AARP). Many children suggested the reverse mortgage to their parents as a way to “enjoy life” and to “remain independent,” and assisted their parents in learning more about the product. There were however, a few participants who admitted that their children were not happy with their decision to obtain a HECM: “My sister (and my son) said that they have seen too many people lose their homes that way.” Many participants were surprised to learn about the reverse mortgage program: “I thought it was a new program!” To obtain information about HECMs, participants contacted the telephone numbers listed in the newspaper articles, approached their local banking institutions, or, less frequently, contacted HUD or Fannie Mae directly to request additional information.

Initially, most of the participants were very enthusiastic about the program and considered it to be a solution to their problem. Participants varied in the length of time needed to make the decision to inquire about the reverse mortgage. Those needing money quickly to pay off debts were more likely to spend less time deciding than those using the loan to supplement their income.

Reasons for Interest in HECMs

The majority of participants were interested in the HECM program because the program would allow them to remain in their homes: “I didn’t want to move around. I want to live on that street until I can’t live anymore by myself.” For many participants, the program provided the extra “cushion” to dismiss a few financial concerns. One respondent said: “it leaves you feeling pretty comfortable; my small pension and social security would not take care of all the bills I have.” Another woman said: “I had to get my bathroom redone, so that I wouldn’t fall in the tub anymore, but I could not pay off that monthly bill at 18 percent interest.” A few borrowers used the money to continue doing the kinds of things they have always enjoyed doing, but that were more difficult to do on a fixed income. One couple said: “We knew exactly what we were going to do with it... we used the money to travel.” Another woman took out a line of credit to invest. Whether providing cash to pay off debts, supplemental income for miscellaneous expenses such as travel, or a line of credit for home repairs or substantial bills (e.g., property taxes or car insurance), the goal of most participants was to remain independent and to enjoy the same quality of life to which they had been accustomed. As one participant said: “It hasn’t changed my quality of life, it has kept me up

Counseling Process

In Providence, all the participants contacted the Rhode Island Housing and Mortgage Finance Corporation (RIHMFC), the state housing finance agency.⁴⁴ In Seattle and New Orleans, participants generally first contacted a lender, who then helped arrange for their counseling. Strangely, a few borrowers stated that they did not receive any counseling, despite the fact that a counseling certificate is required to obtain a HECM. Some borrowers could not distinguish between the information provided by lenders and that provided by counselors. One participant only realized during the focus group discussion that her trip to a downtown office other than the lender's office was for counseling: "I didn't know that was the counseling." Several participants mentioned that they had either their spouse or another family member present during the counseling session.

The primary form of counseling also varied. Some participants had multiple visits with counselors, often in their own homes, while others had single visits with counselors. The typical counseling session was reported to last from 45 minutes to one hour. In a few cases, borrowers were given videotapes to watch, and in at least one case the videotape was all the counseling they received. The few participants who viewed the reverse mortgage videotapes were very pleased with this delivery of information: "We could keep those tapes as long as we needed and go back and listen to them at any time." While most borrowers had no contact with counselors after closing, a few participants in Providence mentioned that they continue to call their counselors with questions.

In general, counseling focused on issues related to reverse mortgages. Few participants reported being offered alternatives to the HECM program. Some said that they wished they had considered other options: "If we would have thought about it a little more we could have

The general level of satisfaction with the counseling process varied by location. In Providence, participants were generally very satisfied with the counseling they received from RIMHFC: "...she [the counselor] guided us so well. She gave us great advice." Many Providence participants had multiple visits with their counselors and remained under the direction of one counselor for the entire process: "You didn't get shuffled from one person to another. That is helpful, you are used to them, and they [the counselor] are used to you." A few participants in Providence mentioned the opportunity to consult with a lawyer from the Department of Elderly Affairs. In Seattle and New Orleans, satisfaction with the counseling services varied more. Some participants were quite pleased with the services they received, while others felt that they "didn't learn anything new in counseling, it was just something we

⁴⁴ Rhode Island is unique in the dominant role played by the state housing finance agency in the program. HUD has given RIHFMC permission to operate as borrower counselor, lender, and servicer. This agency accounts for the vast majority of HECM loans in the state.

were required to complete.” Another respondent who was particularly disappointed in the quality of her counseling experience noted that the “very young” counselor admitted to her, “I just got into this”. The respondent stated: “...the counselor wasn’t quite sure of this, and wasn’t quite sure of that. The counselor gave me that big old stack of papers and said, ‘go over these and let me know what you think’.”

All participants noted the overwhelming amount of paperwork they received at the counseling session: “I was given so much information, it was hard to absorb or understand....” Overall, a majority of participants had an overwhelming feeling of “not knowing what to ask” in the counseling sessions. One respondent said: “There was so much material, you don’t get down to the fine points and details.”

The biggest complaint mentioned by most of the participants was their surprise at the actual costs of the HECM and the fact that they did not feel they were adequately informed of these costs in their counseling sessions. As one participant noted: “They give you a ton of figures, but they never tell you it is going to cost you this much money.” Another woman said: “I thought she was very nice and very thorough, but I did not remember her telling us that the costs would be that much.” Borrowers lack of familiarity with the mortgage process contributed to this feeling. One couple noted: “We have never had a loan and I guess there are some things we just didn’t understand.” The explanation of associated costs also varied by location. In this respect, most of the participants in Providence said they felt they were well-informed: “This is a loan, they told us, we are not buying your home, and the loan must be paid back.” In contrast, in New Orleans several participants were reportedly told by counselors: “You won’t have to pay this back.”

Origination and Servicing Process

In Seattle and New Orleans the market allowed for some variation in lending institutions, while in Rhode Island, RIHMFC dominates the origination and servicing of HECMs. For participants in Seattle and New Orleans, the selection of lending institutions was very limited: “There were only two lenders to select from. One was in Portland. I called for four or five weeks to one lender and no one called back.” Many of the participants in these locations contacted their own local bank and were directed to an institution that handled reverse mortgages. If their local bank was not listed as a lender, the majority of the participants would contact the participating lender closest to their home. Most of participants would have preferred to set up their HECM with their local bank, and felt that this might reduce the difficulty in contacting their current servicer with questions. Several participants in both Seattle and New Orleans noted that they would like to have at least a local branch of their servicer within their area, or an individual they could use as a regular contact: “I don’t know who to call anymore. I have a bunch of phone numbers, but they all seem to give you the run around.” A few participants have contacted their lenders with questions, and only a

few have had responses they feel are sufficient: “I wrote a note and wanted a payment plan –

Participants appeared to be fairly satisfied with the process of obtaining a HECM. Most felt that requirements such as property appraisals were reasonable. They also understood that one of the terms of the loan is that they must keep up with their home repairs and property taxes. However, since many borrowers had not obtained a loan in many years, they were surprised by some of the loan requirements. In Providence, some borrowers noted that they were required to have a termite inspection done on their home, while participants in Louisiana were required to have a flood inspection as well as acquire flood insurance before qualifying for the reverse mortgage. One New Orleans participant remarked: “For 28 years we never had flood insurance and we were required to get it for this.”

Participants also appear to be satisfied with the payment process from their lending institutions. Participants on the monthly payment plan or those requesting distributions from their line of credits did not experience any delays in receiving their funds. One participant in Providence said: “You just call them up and tell them you need the money and you get it

Participants also said they were satisfied with the amount and type of information contained in the statements they receive from their lending institution. Some borrowers in Providence who had a line of credit associated with their reverse mortgages mentioned that it would be nice if the statements included information about the remaining balance and the amount drawn to date. The statements, however, do appear to create some stress among the participants, particularly when they receive their first statement. Often, it is only when they receive the first statement that the information about the associated costs of the loan, the monthly servicing fee, the interest rate and amount, and set-asides first become apparent to the borrowers. For many, it is at this point that they start to question the costs of the loan. Many participants were unhappy about the monthly servicing fee. Those participants who were displeased with this fee did not feel that the level of service they were receiving from their loan servicers justified a monthly fee. There also seemed to be some confusion about refinancing options and procedures. Only one participant in the three groups inquired about refinancing, and this borrower was told that the associated costs were too substantial.

Participants noted that they would like to see improved accessibility of servicers. Many complained about the sale of their loan to an out-of-state institution. One man said: “I wasn’t happy when the bank sold my note—I thought I was going to deal directly with my bank.” Displeased about the high closing costs, set-asides, and monthly servicing fees, many participants noted that their frustration level could be greatly decreased if they felt they had someone they could contact who would respond to their questions and concerns. Several participants commented that although they “don’t know who to contact” they also “wouldn’t

know what to ask,” and would like additional opportunities for on-going reverse mortgage education.

Impacts of the HECM Program

Participants noted the various impacts the HECM program has made on their lives. For most participants, the program has allowed them to remain in their homes, maintain their quality of life, and live independently. As one participant said: “I am satisfied, I have no money worries now.” A few participants are even saving funds from their reverse mortgage on a monthly basis: “We use the money to travel, go out to eat, and sometimes we even put some

For some participants, however, the income from the HECM does not enable them to do all they had hoped, which in part they attribute to the high costs of the loan. But even aside from concerns about the amount of income generated by the loan, a significant concern for several participants, primarily in New Orleans, is having the debt of the reverse mortgage or worrying about the accruing costs of the loan. For example, even though changes in interest rates do not affect how much can be borrowed, one participant said: “I’m going to pay it off, I am afraid interest rates are going to go up.” Some of the borrowers are attempting to pay back the loan in full, even if it places a hardship on them. One couple said: “We will pay it back... what we don’t have we will take out of my husband’s IRA.”

In some cases the desire to repay the loan reflects the fact that the loan was probably not needed. For example, a borrower in New Orleans arranged for a line of credit so his wife would have a source of income if he died. But he survived his wife and has no need for the loan. He now wants to repay the loan and faces a sizeable unpaid balance even though he has never borrowed any money. Another woman in Seattle took out the loan to have some additional income. She was motivated primarily by a friend who had taken out a HECM to deal with a financial crisis distress and was quite pleased with the loan. She had received her first few statements and realized how quickly the associated costs and interest added up. To ease her worry, she took out a personal loan to repay the balance of her mortgage. This woman attributes poor counseling as a contributing factor in her decision to take out the loan.

Ideas for Program Improvements

One of the issues that focus groups identified as a potential program improvement is to facilitate greater public awareness about the nature of the program and its potential benefits. For example, the majority of the participants noted that there is a stigma attached to the reverse mortgage. Some felt that it is similar to a “handout – or something that you should be ashamed of.” One participant commented that “I was embarrassed sort of to tell my children... you know, how you like to hide your problems.” With increased marketing and distribution of materials, many believe that the impact of this stigma could be greatly reduced

and that fears could be eased. A consumer education campaign would also be useful to allay fears about reverse mortgages. One participant noted: "My sister said, 'I've seen too many people lose their homes that way.' My son was under the same impression, too. We knew that wasn't the case, but that is how they felt."

Participants would like to see "follow-up" sessions or panel discussions with people from their own communities who understand the product to provide an opportunity to ask questions and discuss concerns after loans have been originated. They suggested senior centers and churches as good places to hold these meetings or informational sessions.

All participants would like to see significantly reduced costs and servicing fees. In addition, many of the participants in the Seattle area suggested eliminating the national borrowing limit, or creating an adjustment for the rapidly increasing property values and property taxes in the area. One respondent summarized this by saying: "My line of credit is only what the state of Washington will lend you and that's not even half of the equity I have in my house... the \$149,000 limit is as obsolete as Santa Claus."

Finally, some participants with a line of credit, especially those in Providence, commented that they would like to have their remaining balances included in their monthly statements.

Summary of Findings

Many participants were very enthusiastic about the impacts the HECM have had on their lifestyles. These respondents note that they are no longer concerned about their financial well being and are enjoying retirement. For others, the mortgage has not drastically improved their quality of life, but allows them to meet daily living expenses while remaining in their homes. For a few of the borrowers, the debt associated with the mortgage is very unsettling. In a couple of these cases, the participants realized after the fact that they had other options to address their financial concerns, and are now repaying the HECM.

Primarily, the focus group participants first learned about the program through newspaper and magazine articles or from family and friends. Generally, the borrowers wanted to have the ability to maintain their current life styles by remaining in their houses and living as independently as possible. Many participants invested a significant amount of time researching the product prior to taking out the HECM, while others needed the funds in a shorter amount of time and therefore expedited the process.

Many variations in the method, duration, and overall counseling experience were highlighted in each location. The most positive responses came from individuals who felt that they had formed a relationship with an individual who provided them with the necessary information to make a sound decision. The least positive responses were from individuals who felt that the counseling sessions did not adequately inform them of the costs associated with this

product. Regardless of their overall opinion of the counseling services, participants generally agreed that they were somewhat overwhelmed by the amount and complexity of the information provided during the counseling session.

In each location, the participants voiced their surprise at the high costs of the HECM. Even when participants accepted the need for the various services and reports associated with originating a mortgage, many were extremely discouraged by the associated costs. Several participants were also frustrated with the absence of loan servicers within their own communities. Several borrowers noted that contacting and receiving responses from their servicers was difficult, and would prefer to have a local contact within their area.

All participants suggested that the marketing campaign and information distribution for this product should be increased. Respondents would like to see more frequent news articles, open forums with community members, and informational meetings at senior centers or churches. Participants feel that awareness and education will help eliminate a stigma associated with these mortgages.

In comparing the findings across sites, Providence stands out as the location where participants were most satisfied overall with their experiences. RIHMFC's unique position as counselor, lender, and servicer provided the borrowers with high quality, comprehensive, and local services, which were favorably reviewed by the participants. The high level of satisfaction may in part be due to a counseling process that provided appropriate information to the borrowers, reducing the number of poor decisions. Borrowers were also less likely to be concerned about the costs of their mortgage. This may be due to better information on costs prior to taking out the loan. But in part it may also reflect the fact that RIHMFC has somewhat lower origination and servicing costs than for-profit lenders.

One of the findings unique to Seattle was participants' frustration with the inability to fully tap their large and growing equity. Respondents noted their increasing property values and living expenses, as well as their difficulty in making ends meet with the current reverse mortgage borrowing limits. In New Orleans, respondents were particularly dissatisfied with the costs of the HECM. In part, this dissatisfaction seems related to the fact that participants in New Orleans seemed to be somewhat less sophisticated financially than in other areas in terms of their comfort with and understanding of debt. However, this difference may simply reflect poor homeowner counseling which did not adequately inform people of the nature of the loan and so did not adequately screen out those for whom this loan was not appropriate.

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Chapter Six

Legal and Regulatory Issues

At the time that the HECM Demonstration was started, there were a variety of legal and regulatory barriers that hampered the origination of reverse mortgages. But more than 10 years have passed since the program was initiated and few legal and regulatory barriers remain. The 1995 report found that a few lingering legal barriers at the state level had largely been resolved, with the notable exception of Texas where the state constitution did not allow borrowing against home equity. Reverse mortgages have yet to be originated in Texas, although most legal obstacles have now been eliminated. The first section of this chapter discusses the recent changes in the legal situation in Texas and prospects for originating reverse mortgages in that state in the near future. The other principal legal and regulatory issues identified in the 1995 evaluation related to disclosure issues for HECMs. The second section of this chapter will update the status of these disclosure issues.

Legal Barriers to Reverse Mortgages in Texas

The Texas constitution included a homestead provision which 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 provision, no second mortgages or home equity lines of credit were made in Texas until 1997 when the constitution was amended to allow home equity lending. While the changes made at that time did not explicitly prohibit reverse mortgages, there were continued restrictions in the language allowing home equity lending which led both HUD and Fannie Mae to refuse to insure or purchase reverse mortgage loans from that state.

In the spring of 1999, the Texas legislature passed a bill intended to correct the remaining deficiencies so that reverse mortgages would be allowed in the state. In order to revise the constitution, the amendment had to pass a statewide referendum, which it did in November 1999. The new language clarifies that a lender can have a loan be due and payable when the borrower dies, ceases to occupy the home for more than 12 months, commits fraud, fails to maintain the priority status of the lien such as by failing to pay property taxes, or fails to maintain, repair or insure the property. The amendment also removed a loophole that allowed borrowers to continue to receive loan payments after leaving their home as long as they informed the lender of their location. However, even with the revised language, lines of credit (other than lump sum disbursements at closing) and the use of loan proceeds to purchase a home will still not be allowed in Texas.

The enactment of these changes in Texas has cleared the way for FHA to insure reverse mortgages in the state. In March 2000, the Department issued Mortgagee Letter 00-9 which

announced that it would begin insuring reverse mortgages in Texas. Two modifications to the HECM regulations were required in order to accommodate unique features of the Texas law. These modifications are only applicable to HECMs originated in Texas. The first modifications relate to the acceleration of the mortgage. The HECM program allows acceleration of the mortgage if the borrower ceases to occupy the property or if the borrower refuses to allow the lender to inspect the property. To accommodate Texas law, the mortgage will not be accelerated until borrowers have failed to occupy the property for twelve consecutive months and HUD will not accelerate the mortgage in response to a borrower's refusal to allow a property inspection. The other modification relates to Texas' continued prohibition against line of credit loans. The line of credit feature has been used by lenders to set aside funds for repairs to the property or for property tax and insurance payments. HUD has changed the model documents to instead allow loan proceeds to be used to fund escrow accounts for these purposes. Since payments made from the escrow account do not represent a plan change, the borrower cannot be charged a fee for these payments as they would be for disbursements from a line of credit.

Lenders are anxious to begin making loans in this market, but note that it may take some time to begin lending following HUD's decision to allow HECMs. Time will be needed to develop the appropriate origination documents, to train loan officers in the reverse mortgage product, and to help develop the counseling network needed to serve interested owners.

Fannie Mae representatives indicated that they would allow HomeKeeper loans in Texas once HECMs were also offered. Fannie Mae was reluctant to offer the sole reverse mortgage product in the state because of concerns that they would attract owners who were not necessarily the most appropriate users of a HomeKeeper loan, but would choose this option due to a lack of any other choices. Now that HECMs have been approved by HUD for Texas, Fannie Mae will also enter this market.

Disclosure Issues

The 1995 evaluation noted that one of the challenges for mortgage lenders in handling HECMs was to meet the Truth-in-Lending Act disclosure requirements for open-end credit. Traditional forward mortgages are considered closed-end credit where the amount initially borrowed and then repaid, cannot then be re-borrowed. Under an open-end loan, such as a revolving credit card, borrowers can repay and then re-borrow funds. The 1995 evaluation noted that because of differences in reporting requirements for open-end credit, mortgage lenders needed to learn and comply with an entirely different set of requirements from those they were used to in order to participate in the program. This unfamiliarity with open-end credit requirements was seen as a barrier to participation by lenders.

Originators interviewed for this study indicated that there was little confusion concerning the open-end credit disclosure requirements. For the most part, the process of originating HECM

loans had been systematized enough that this issue was not a significant stumbling block for lenders seeking to originate HECMs. On the other hand, servicers noted that the disclosure requirements could be quite onerous. For example, several servicers noted the requirement of disclosing any changes in interest rate as a particular nuisance since monthly adjustable loans have changes virtually every month. The 1995 evaluation noted that the Department was preparing a proposed rule to eliminate borrower's access to funds that have been repaid over the life of the loan. This change was expected to make all HECMs closed-end credit and eliminate additional reporting requirements. However, the Department decided not to implement this change because it believed the ability to reborrow amounts repaid could be an attractive feature for some borrowers.

The other significant disclosure issue for HECMs is the requirement that borrowers be informed prior to closing of the expected total annual loan cost (TALC) of the loan measured as an effective interest rate.⁴⁵ The current TALC requirements were specified in amendments to Regulation Z issued by the Federal Reserve Board in 1995 to enact changes required by the Home Equity Protection Act of 1994. This regulation applies to all reverse mortgages, not just HECMs.

The calculation of an effective interest rate for reverse mortgages is quite different than for forward mortgages since the effective interest rate will vary quite a bit depending upon both the length of the time the loan is held and the rate of housing price appreciation – neither of which have much of an impact on the cost of forward mortgages. For forward mortgages, the rate of house price appreciation is not a factor in estimating loan costs as the amount repaid does not depend on the house value at loan termination. In contrast, for reverse mortgages, even those without explicit equity sharing arrangement, the amount repaid may be a function of changes in the house value. For example, if the house values fail to grow at the rate assumed in the HECM program so that the loan amount exceeds the value of the house, borrowers are not liable for the debt in excess of the house value. As a result, borrowers will end up with a much lower cost loan. With regard to the life of the loan, because origination costs make up a sizeable share of the amount borrowed at origination, the effective interest rate starts out very high for reverse mortgages, but declines fairly significantly as the loan ages. In contrast, for forward mortgages, the effective interest rate declines only slightly over the life of the loan as closing costs become a smaller share of the amount paid.

Recognizing the unique nature of reverse mortgages, the TALC requirements for reverse mortgages call for disclosure of effective interest rate costs under nine different scenarios involving three different house price appreciation assumptions and three different holding periods. The three house price appreciation rates are 0 percent, 4 percent, and 8 percent. The

⁴⁵ The NCHEC web site (www.reverse.org/info.update.tila.html) was an important source of information on the development of the TALC calculation for reverse mortgages and a discussion of concerns about the current requirements.

appreciation rates chosen provide a fairly generous range around a mid-range estimate of 4 percent that is similar to that assumed in the HECM pricing model. The three required time periods are two years after closing, at the life expectancy for the borrower, and at 140 percent of the borrower's life expectancy. As will be discussed below, the choice of time periods for disclosure may have more important implications for the usefulness of the TALC.

The TALC is designed to provide a comprehensive measure of loan costs that will allow borrowers to fully assess and compare the costs of various reverse mortgage options. For the most part, the TALC has proven to be a useful tool for this purpose. The TALC is also readily calculated using HUD, NCHEC or other software available to lenders. So the reporting of this information is not difficult for lenders.

There are, however, several concerns about possible deficiencies in the TALC disclosure. The principal concern has to do with the chosen time periods for the disclosure of effective interest rates relative to the beginning of equity sharing arrangements. This issue affects Fannie Mae HomeKeeper loans with equity sharing, but not HECMs. When borrowers choose the equity sharing option, they pledge up to 10 percent of the home's value at termination. But this equity sharing only begins *after* two years have passed since origination. Since the TALC disclosure is required for *exactly* two years from the day of origination, this equity sharing arrangement is not included in the effective interest rate for the loan at two years. Since the next disclosure period is at life expectancy which will often be several years further in the future, the jump in loan costs in year 3, which may double the effective interest at that time, will not be evident from the TALC which declines fairly steadily with loan age.

Another concern with the TALC is that the assumptions made about draws upon a line of credit do not take into account the HECM feature that allows unused borrowing capacity to grow over time. The TALC calculation assumes that half of the line of credit is drawn at closing and the rest is never used. As a result, a comparison of a HECM with a HomeKeeper, which does not provide for increases in the unused line of credit, will not take this difference into account. In both the issue of the two year holding period and the limited line of credit, the concern is that HECM loans do not compare favorably with HomeKeeper loans due to the particular assumptions embedded in the TALC regulations.

NCHEC has raised other, more minor concerns about the TALC. But at present the Board of Governors of the Federal Reserve does not have any plans to modify Regulation Z to address these concerns.

Chapter Seven

Actuarial Analysis

The primary purpose of the actuarial analysis is to determine whether the premium structure of HECM loans is adequate to cover expected claims on existing loans. It is important to note that no effort is made to predict the size of the potential market or expected demand. Rather, the focus is on the existing book of business and answering the question: “Will the premiums in reserve plus the expected future premiums be sufficient to pay for all expected claims?”

A secondary purpose of the actuarial model is to test the actuarial assumptions particularly about terminations. This chapter presents the model framework and the next chapter provides information on testing the actuarial assumptions. A third purpose of the actuarial model is to lay the groundwork for a more realistic model as better data becomes available and more claims occur. Borrowers are concerned about the high costs of financing and refinancing HECM loans. One important contribution of the actuarial model would be to test under what circumstances a change in the premiums would be warranted. Before the model is ready to address that issue, it needs to be grounded in better information about changing property values and the propensity of borrowers to prepay. Unfortunately, crucial elements of the data have not been and still are not being systematically collected to support this extension of the model. Chapter 8 deals explicitly with data issues. However, the model does lay the groundwork for these extensions by providing separate predictions by payment plan and by allowing house values to appreciate according to their state housing market.

The foundation and basis for comparison is the actuarial model described in the 1995 Report. That model assumed that the existing pool of loans would proceed to draw advances from the available principal limit at the same rate as the tenure plan loans do. Although only a small percentage of loans actually follow the payment pattern of the tenure payment plan, this simplifying assumption made it possible to allocate the principal limit to borrowers. Most borrowers actually use the Line of Credit (LOC) payment plan. This is harder to model because the advances are unscheduled and lumpy. The lumpiness of the advances is not a concern for the model, because we are not examining the pattern of cash flows for lenders. But it does matter whether the unscheduled advances tend to occur early or late in the life of a loan because the annual premiums are 0.5 percent of the outstanding balance. If the balance starts off high, the premiums will be earned much earlier and will accumulate with interest. The underlying assumption of the tenure plan is that payments are divided evenly and stretched out over a long period of time. This means that the bulk of premiums are collected late in the life of the loan because then the outstanding balance is highest. Moreover, the risk of outstanding balances exceeding property values is smaller for the tenure plan because there is more cushion from available principal limit (and thus equity).

This is because tenure plan borrowers are not scheduled to exhaust their principal limit until they reach 100 years old. In contrast, line of credit borrowers could withdraw their entire principal limit on the funding date. Few borrowers go to that extreme, but advances are definitely larger and earlier under the LOC than the tenure plan. To highlight the difference, the actuarial model for the 2000 Report replicates the model from the 1995 Report and then proceeds with a number of innovations that extend the basic model.

Innovations

There are four innovations in the current actuarial model relative to the 1995 Report model:

1. Pattern of payments estimation based on actual transactions.
2. Separate patterns of payments for term, LOC and tenure plans.
3. House price appreciation from origination according to OFHEO state repeat-sales index.
4. Data on nearly 39,000 loans including over 30,000 active loans and 9,000 terminations.

The most fundamental change in the actuarial model, the 2000 model for short, is that advances and charges are estimated from actual transaction data. An extract from the IACS system provided information on all advances and charges for the 12 months from November 1998 to October 1999. This information allowed us to calculate the average increase in outstanding balance according to payment plan and policy year. For the purposes of the model, the dollar amounts are divided by the amount of available principal limit. The available principal limit is calculated as the current principal limit of the corresponding policy year less the service fee set-aside and less the outstanding balance.⁴⁶ Using the ratio of actual charges to the available principal limit, the model assumes that in the future borrowers will make similar draws on their available principal limit. Although this is more realistic than assuming all loans draw scheduled payments under the tenure plan, as was done in the 1995 model, there is still a lot of smoothing under the ratio of available principal limit approach.⁴⁷ In essence, we don't know when borrowers will take their lumpy payments, but our best guess is that they will follow in the future a pattern that is similar, on average, to the pattern of the recent past.

⁴⁶ The major difference in the model calculation and one done by the loan servicer is that this amount is calculated for an entire year rather than a single month. Even if there are no additional advances during the year, there will be automatic charges for interest, MIP and service fees that have to come out of the available principal limit.

⁴⁷ The 1995 model used tenure payments as a proxy for expected (pooled) cash advance payments under all payment options. This proxy was believed to be reasonable and the best available at the time because the analysts did not have sufficient data with which to model cash advance patterns by payment option. The current study was able to obtain and utilize additional data on cash advance patterns, which has improved the actuarial model.

A second innovation is to allow each payment plan to follow a different pattern of payments. The key difference between plans is that LOC payments tend to be larger in the early policy years whereas a term or tenure plan draws smaller payments spread over many years. The distinction attenuates for the hybrid payment plans of term/LOC and tenure/LOC. Even though the differences are small, the model still retains the flexibility that borrowers of these hybrid payment plans will have their own payment utilization patterns. Moreover, the payment plans associated with the loans are just the most recent payment plan and not necessarily the plan the loan started with nor the plan it will end with. Unfortunately, without much information about the typical patterns of plan changes, we are left with the assumption that the distribution of plans will stay roughly the same. Loans already in a term or tenure plan are assumed to stay in that plan until the end of the term. However, if a borrower reaches the end of a term agreement and still has some available principal limit, we assume the borrower will switch to a LOC and proceed to make unscheduled draws from the available principal limit. We also assume that once a loan goes beyond the first nine policy years for which we have estimates of payments, the borrower will proceed to make annual draws of one-third of the remaining available principal limit. This creates a pattern of payments that asymptotically approaches exhausting 100 percent of the principal limit. As the outstanding balance grows, most of the available principal limit that becomes available each year is devoted to the automatic charges of interest, premiums and service fees. The borrower's probability of survival gradually decreases and the model estimates expected values until the borrower reaches 110 years old.

A third innovation is to allow house price appreciation to follow the state repeat sale index created by the Office of Federal Housing Enterprise Oversight (OFHEO). This innovation only applies for the time between origination and the cutoff date of October 31, 1999. After that point, we assume the property appreciates at the long run average of 3 percent per year. Undoubtedly, some states and metropolitan areas will grow faster than 3 percent in the short run, especially given the remarkably strong housing market enjoyed by nearly the entire country in the last few years. The use of state-specific repeat sales indices allows borrowers to take advantage of recent value gains which provide the Department with an additional equity cushion against claims. In the long run, however, it is prudent to assume some areas will suffer price declines and revert to an average growth rate of about 3 percent. Without actual house sales information for participating properties, this important assumption will remain un-testable for the foreseeable future.⁴⁸

⁴⁸ Actual sales data associated with HECM terminations could improve the actuarial model in two ways:

- First, this information could help determine if properties entering the HECM program appreciate at the same rate as indicated by the OFHEO house price indices. Some researchers have suggested that HECM properties may be more inclined to suffer from functional obsolescence and under-maintenance than the typical property in a housing market.
- Secondly, this could help us to determine whether sales proceeds are significantly less in terminations due to the borrower's death, compared to other terminations. This could be the case if the borrower's

By far the biggest advantage enjoyed by the 2000 model over the 1995 model is having more data to work with—the 2000 model has information on 38,000 loans divided between 30,000 active loans, 7,500 terminated without claim, and 350 claims. It is not the large number of active loans, but rather the medium number of terminations that allows the model to test how realistic are the original assumptions about termination. The number of claims is still too small to reach reliable conclusions, in part because nearly half of those claims are assignments. In these cases, the Department pays a claim of the outstanding balance to the original note holder, usually Fannie Mae, once the outstanding balance reaches 98 percent of the maximum claim amount. The maximum claim amount is the smaller of the appraised house value and the local loan limit. Borrowers continue to live in their house and can continue to receive payments. Even though the insurance is no longer in place to protect the lender, the liability for the outstanding balance continues for HUD until the loan is repaid. Once more loans have reached their final outcome there will be enough information to analyze claims and assignments. In this report, we mostly focus on the non-claim terminations in comparison to expectations as described in detail in the next chapter.

The overall finding from the 2000 actuarial model is that the current premium structure in the program is sound and adequate. There is no evidence that the Department's HECM insurance fund is facing any excessive risks from this existing book of business. Specifically, as of October 31, 1999, the volume of HECM loans was estimated to have a net reserve of \$112.2 million, which is defined as the total value of past premiums less past claims. The model projected that the present value of total claims in the future will be \$168.7 million, whereas the present value of future premiums was estimated to be \$73.5 million in total. Therefore, the estimated present value of total premiums (premiums paid to date plus projected premiums) exceeds the estimated present value of total claims (past claims plus projected claims) by approximately \$17 million.

How the Model Works

This section documents the mechanics of our actuarial model. The analysis is done on the universe of HECM loans originated from the beginning of the Demonstration (FY1990) through October 31, 1999. This consists of 30,000+ active loans, 7,500+ paid-off loans and 350+ claims. The operation of the actuarial model includes two major components:

- The first component involves the calculation of **present value of net mortgage insurance reserve** generated from all loans up to the cutoff date, which is defined as the present value of cumulative mortgage insurance premiums collected less claims already paid.

estate does not have the incentive to maximize the sales price, or if the estate does not cooperate, resulting in lenders having to foreclose on the property.

- The second component of the model consists of, for all the active loans as of the cutoff date, calibrating the **present values of future mortgage insurance premiums and future expected claim losses**.

Assuming there are no new loans in the future, the actuarial model assesses whether the insurance reserve plus future premiums are sufficient to cover future claims.

Insurance claim losses are expected to occur in the event that the borrower's total outstanding loan balance exceeds the appreciated value of his/her property at the time the loan is due and payable. However, the exact timing of a loan becoming due and payable is unknown and is difficult to estimate in a deterministic framework. Even for HECM loans that have already been assigned to HUD by the lenders, these loans technically are still active and cannot be classified as due and payable. Assignment happens when a loan's outstanding balance exceeds 98 percent of the corresponding maximum claim amount (adjusted property value) and the lender has chosen the optional/voluntary assignment insurance agreement with HUD.⁴⁹ At that time HUD pays the lender an amount approximately equal to the outstanding loan balance; HUD becomes the lender and continues to advance principal and to accrue interest on the loan. The house has not yet been sold. The actual claim losses to HUD will be known when the loan finally does terminate (for example, due to the borrower's death) and the house is sold in the market.

Taking these complications into consideration, our actuarial model adopts the approach of calibrating future claim losses and the time at which each loan will become due and payable (i.e. terminated) in a probabilistic framework.⁵⁰ Specifically, the model assumes the follows:

- For each loan, there is a *due/payable probability* (positively related to the borrower's age) and a *loan survival probability* (negatively related to the loan duration and due/payable probability) associated with each of the projected policy years.
- Since the exact timing of a loan becoming due/payable is uncertain, so is the occurrence of a claim (and the claim losses associated with it). Instead, the model calculates, for each loan, claim loss amounts from all policy years where the outstanding balance exceeds the projected value of the house. These policy-year-specific claim loss amounts are defined as the difference between the projected outstanding balances and projected property values. During policy years that the outstanding loan balance is less than house value, claim losses are set to zero.

⁴⁹ Virtually all lenders choose voluntary assignment over shared premium loans because Fannie Mae will not buy shared premium loans.

⁵⁰ As the HECM volume grows and more claims and paid-off loans are observed in the future, a refinement to the actuarial model will be to estimate claim, pay-off and prepayment probabilities from a loan-level hazard model. Then the actuarial model could assign claim, due and payable, and voluntary pay-off probabilities to each loan based on borrower and loan characteristics.

- For each loan, the stream of potential claim losses associated with future policy years are weighted by the probabilities of due/payable (termination) and loan survival in the corresponding year. This gives the expected value of future claims.
- For each loan, projection of claim losses and other financial variables (for example, future premiums) will be done for every future policy year until the borrower reaches 110 years old. As the borrower gets older, the due/payable probability will rise and the loan survival probability will decrease so that the associated claim losses and premium amounts will be discounted accordingly.

Under this framework, the risk of potential claim losses can increase due to one or more of the following circumstances:

- The borrower remains in the house for substantially longer than expected at the time of loan origination. This is especially true for borrowers who choose the tenure payment plan. By design, the borrower has the right to receive monthly payments as long as he/she is alive and lives in the property (even though the outstanding balance has already exceeded the accrued principal limit). The outstanding loan balance, which consists of automatic charges and cumulative payments, can exceed the appraised value of the property as the loan seasons.
- Borrowers start off their loan balance at a higher level with large unscheduled payments in the early policy years. By design, a borrower with the line of credit payment plan can withdraw any portion of the loan's available principal limit at any time after the funding date. Premiums and other automatic charges will thus be accumulated and added to the outstanding balance early. As the loan matures, the outstanding balance can exceed the projected property value.
- House values do not increase as expected over the life of the loan.
- Interest rates rise above expectations.

Therefore, assumptions about parameters and financial variables in the actuarial model will have significant impact on determining the amounts of future claim losses. Specifically, these parameters may include loan due/payable probability, payment patterns, premiums, interest charges, and property value appreciation rate. The assumptions and computation formulas of these key variables are explained in detail in the latter part of this chapter.

Present Value of Net Mortgage Insurance Reserve

After loan closing, every HECM borrower is required to pay an upfront (initial) premium of 2 percent of the maximum claim amount (adjusted property value) and a monthly mortgage insurance premium (MIP) according to the annual rate of 0.5 percent of the loan's outstanding balance. These two together generate a mortgage insurance *reserve* for the Department that can be used to compensate the FHA insurance fund for future claims as well as the ones that have already been filed. The *net reserve* is calculated by subtracting claim

amounts from the corresponding year's MIP payment when the claims are disbursed. In addition, HUD can earn interest on these streams of net reserve. The first step in assessing the soundness of the overall HECM premium structure involves calculating the current value of this net reserve.

The current value (at cutoff date) of net reserve is computed as follows:

$$Reserve = \sum_{t=1}^k (Premium_t - Claim_t) \times (1 + i)^{n-t}$$

where $Premium_t$ is the total amount of MIP paid from all loans during year t , $Claim_t$ is the total amount of claim disbursements during year t , i is the 10-year Treasury rate of that year, k is the loan duration (in years), and n is the total number of years between loan closing and the cutoff date. In the computation, MIP payments will be stopped once the loan is paid off or a claim disbursement amount has been paid for that loan.

This computation requires claim disbursement information as well as past MIP payment history of all loans. For claims history, we obtained all the loan-level disbursement amounts paid by HUD since the program began until cutoff date. This claims information was recorded in a manual system by HUD.⁵¹

A complete MIP transaction history was not extracted from the IACS system, due to expenses. Borrowers who chose the tenure and term payment plans receive fixed and scheduled monthly payments from the program according to payment allocation formula. It is possible to recreate the entire MIP payment history of those loans. However, most of the HECM borrowers are in the line of credit (LOC) payment plan. The lumpiness and unscheduled nature of their payment patterns prevent us from recreating each loan's MIP payment history using a formula. Therefore, our actuarial model adopted the approach of estimating annual MIP payment patterns from the cross-section information of different HECM entry cohorts observed at the cutoff date (October 31, 1999). For consistency, this approach was used to model the MIP payment patterns of loans in each payment plan (including the tenure and term payment plans). The IACS system reports cumulative MIP balances paid up to the cutoff time for each loan, regardless of whether the loan is active or already terminated. Loan duration of those loans since closing spans from one month to 9 years. The data thus allow us to relate a typical loan's MIP payment amount to its loan duration, using the multiple regression approach. Specifically, to allow differentiation by

⁵¹ We thank Nettie K. James in HUD for providing us with the HECM claims information file necessary in this evaluation.

payment plans, we estimated the following regression equation separately for loans belonging to each of the five payment plans:

$$Y = a + bX$$

where Y is the natural logarithm of the loan's cumulative MIP balance (excluding upfront premiums) at cutoff time, X is the natural logarithm of the corresponding loan duration in years, a and b are regression coefficients. The natural logarithm specification was introduced to account for a potential non-linear relationship between cumulative MIP amount and loan duration. Using the regression equations, for each payment plan, a smooth average cumulative MIP payment amount can be generated for each loan duration year. The last step in this calculation is to take the difference in the estimated cumulative MIP balance between each policy year. Exhibit 7-1 shows the estimated MIP of each policy year for the five payment plans.⁵²

Exhibit 7-1: Estimates of Annual Mortgage Insurance Premium Payment Patterns

Policy Year	Term	Line of Credit (LOC)	Tenure	Term/LOC	Tenure/LOC
1	\$83	\$148	\$83	\$99	\$90
2	\$138	\$182	\$131	\$151	\$135
3	\$171	\$197	\$158	\$180	\$159
4	\$197	\$208	\$179	\$201	\$177
5	\$218	\$216	\$197	\$219	\$192
6	\$237	\$223	\$212	\$234	\$205
7	\$254	\$229	\$225	\$248	\$216
8	\$270	\$234	\$237	\$260	\$226
9	\$284	\$238	\$249	\$271	\$235
10	\$297	\$242	\$259	\$281	\$243

Data source: Regression estimates from IACS data, through 1999.

Computations from our actuarial model estimated that, up to the cutoff date of October 31, 1999, the cumulative volume of HECM loans have generated a total reserve of \$112.2 million, after deducting the claim disbursements that have already been paid.

⁵² These estimates are very close to the average MIP payment patterns generated from the tabulations of loan transaction history in the recent 12 months. Please refer to Exhibit 7-3 through Exhibit 7-6 for comparison. The year-to-year growth in MIP payments on the term and tenure loans is relatively flat. This is likely due to the fact that older loans were originated in higher interest rate environments. This means that older loans had higher expected interest rates, which in turn implies a lower principal limit factor, and hence, lower outstanding loan balances even for comparable home values.

Present Value of Future Premiums and Future Claim Losses

The second component of the actuarial model involves calculating the present values of *projected* premiums and claim losses in the future from all the active loans as of October 31, 1999. In turn, this requires the projection of the following key variables over the life of each loan:

- Loan duration
- Cash payments to borrowers
 - Accrued (current) principal limit and available principal limit
 - Service fee set-aside
- Premiums
- Interest charges
- Outstanding loan balance
- Property values
- Expected claims

Loan Duration

Loan duration (also called policy years) measures the number of years between loan origination and the time when the loan becomes due and payable. In reality, a loan can become due and payable (i.e. terminated) at any time after origination, either because of the death of the borrower, or because of other reasons (for example, the borrower can repay the loan, or the borrower can move out of the property). As mentioned above, for the purpose of this analysis, every projected policy year since cutoff is assigned a probability that the loan will become due and payable (or terminated) in that year. This probability consists of two components:

- *The probability of the borrower's death.* This was estimated as a function of the borrower's age at that policy year. We used the mortality probabilities published by the National Center for Health Services of the U.S. Department of Health and Human Services. Exhibit 7-2 shows the estimated probability of death associated with each of the one-year age interval. These probabilities were computed from the total U.S. population and they represents the proportion of persons alive at the beginning of each one-year age interval who are expected to die during that age interval.⁵³

⁵³ "Vital Statistics of the United States: Volume II, Section 6," 1991. Table 1, Life Table for the Total Population, for 1979-1981. Note that the original model developed for the HECM Demonstration used mortality rates for elderly females. Our approach of using the total elderly population follows the 1995 Evaluation Report.

- *The probability of termination for all reasons other than borrower's death.*
Consistent with HUD's assumption when the HECM program was designed, this probability is assumed to be 30 percent of the corresponding probability of death.⁵⁴

Exhibit 7-2
Probability of Death (Mortality Rate) for Each Age

Age	Probability of Death	Age	Probability of Death	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+	100%

Data source: "Vital Statistics of the United States: Volume II, Section 6," 1991. Table 1, Life Table for the Total Population, for 1979-1981.

Therefore, the total probability that a loan will become due and payable (or terminated) in a given policy year is calculated as the sum of these two probabilities. Since, for a given policy year, the second probability is just a fixed proportion (i.e. 30 percent) of the first probability, the total probability is just 1.3 times the corresponding year's mortality rate.

⁵⁴ HUD's original pricing model acknowledged that the mortality rates of HECM borrowers might deviate from those of the general population because participants are likely to self-select into the program according to unobservable characteristics. Thus the assumed termination rate of 1.3 times the age-specific mortality rate using the 1979-81 Department of Health and Human Services table for females as the base, was designed to account for all HECM terminations, regardless of the reason for the termination. To be consistent with the 1995 Report, the mortality rate for the total population, and not just for females, is used in this report.

Finally, the probability of loan survival at the beginning of any given policy year t is related to the duration of the loan and can be computed as the following:

$$\text{Prob. of Loan Survival}_t = \text{Prob. of Loan Survival}_{t-1} \times (1 - \text{Prob. of Due/Payable}_{t-1}) .$$

The probability of loan survival at the cutoff date is set to 1 because all loans used in the projection are still active at cutoff.

Similar to the 1995 model, the 2000 model makes projection for premiums, claim losses and other financial variables for all the policy years from the cutoff date until the borrowers reach 110-year-old, and then applies the probabilities of due/payable and loan survival to estimate the expected values.

Cash Payments to Borrowers

Projection of payment patterns is a crucial part of the actuarial model. Unlike the 1995 actuarial model, which assumed every borrower would receive future payments according to the tenure plan, the 2000 actuarial model makes a more realistic payment patterns projection based on actual recent experience. Specifically, we assume borrowers will stay with their currently chosen payment plan for the rest of the loan life. The only exception is for borrowers who currently chose the term payment plan. We assume they will switch to the LOC plan if there is available principal limit left once the loan reaches the end of its originally agreed term.

Tenure Payment Plan Borrowers

For borrowers with the tenure payment plan, specific payment formulas can be used to calculate future monthly payment amounts, given the amount of charges and advances reported at the cutoff date. These payment formulas were designed by HUD and printed in the appendix section of the HECM Handbook (4235.1 REV-1). According to the regulations, tenure borrowers have the right to continue receiving monthly payments as long as they are alive and occupy the house as their primary residence (even if the outstanding balance has exceeded the accrued principal limit). In the actuarial model, therefore, borrowers of the tenure plan will continue to receive the projected payment amount in each policy year until they reach 110 years of age.

The first step in projecting future payments for tenure borrowers is to calculate the available principal limit, which is the portion of the principal limit available to the borrower as of the cutoff date. The calculation requires the following intermediate variables:

- *Accrued (current) principal limit.* The IACS system reports the original principal limit at loan origination, which is determined by the (youngest) borrower's age, expected interest rate, and adjusted property value. The principal limit is increased each month according to the following formula:

$$\text{PrincipalLimit}_k = \text{PrincipalLimit}_0 \times (1 + i)^{k-1}$$

where i is the monthly compounding rate defined as one twelfth of the sum of the expected interest rate and annual mortgage insurance premium rate (i.e. 0.5 percent), and k is the number of months since loan origination.

- *Loan service fee set-aside.* This is the amount that is set aside from the accrued principal limit to cover future monthly service fees, and is computed as the present value of the stream of service fees over the remaining maximum duration of the loan:

$$\text{Service Fee Set - Aside} = S \times \frac{(1 + i)^{m+1} - (1 + i)}{i \times (1 + i)^m}$$

where S is the monthly service fee, i is the monthly compounding rate as mentioned above, and m is the number of months that the loan's service fee is expected to be collected over the remaining duration of the loan⁵⁵:

$$m = 12 \times [100 - \min(\text{Borrower's Age at Origination}, 95) - k + 1].$$

If the loan's service fee charges are included in the interest rate and thereby paid as a percentage of the outstanding loan balance, then the monthly service fee S and set-aside can be zero in this computation. For all other loans, service fee set-aside decreases as the loan duration (in months) k increases, reaching zero when the borrower is 100 years old. For each subsequent year, the value is set to zero.

The available principal limit for the loan was then calculated as the accrued principal limit at cutoff date, minus the outstanding balance and the loan service fee set-aside as of the same date. Then, finally, the future monthly payment to the borrower under the tenure plan was computed as an annuity, using the following formula:

⁵⁵ When HUD designed the HECM program, borrowers of the tenure payment plan were assumed to live until they are 100 years old. Given that most people do not live to 100 years old, this fixed annuity is conservative compared to a life contingent annuity. The Department chose the fixed annuity assumption to keep the tenure and line of credit payment plans approximately equivalent.

$$\text{Monthly Payment} = \text{Available Principal Limit} \times \frac{(1+i)^m \times i}{(1+i)^{m+1} - (1+i)}$$

Line-of-Credit and Hybrid Payment Plans Borrowers

For borrowers with the line-of-credit and hybrid payment plans, there is no algebraic formula for calculating monthly payment since borrowers can withdraw unscheduled payments from the loan’s available principal limit at their discretion, as long as the outstanding balance has not exceeded the accrued principal limit amount. It is, however, reasonable to approximate the future advance patterns by using the average payment patterns observed in the IACS system. Specifically, we were able to get a complete loan-level transaction history for the existing book of business for the 12 months preceding the cutoff date, namely November 1998 to October 1999. Some of the currently active loans were as old as 10 years, while other loans had just been endorsed right before the data extract. This means that there was a sufficient variety of entry cohorts in the data that we could associate the average payment patterns to the loan policy year.

In the data extract, transactions are identified by IACS transaction codes. Payments are grouped into six categories: unscheduled advances, scheduled advances, initial fees (upfront premium), MIP, interest charges, and service fees. Exhibit 7-3 reports the average annual advances and fees by policy year, computed from loans of all payment types combined. The average amount of these payment categories by policy year for LOC, tenure (and tenure plus LOC) and term (and term plus LOC) are shown in Exhibit 7-4, Exhibit 7-5 and Exhibit 7-6 respectively.⁵⁶ To minimize the impact of loan size, the total annual advances plus fees amount was normalized by expressing it as a utilization rate – that is, advances plus fees as a percent of the corresponding year’s available principal limit. These estimated average utilization rates by policy year are presented in Exhibit 7-7. These Exhibits reveal that borrowers of the LOC plan tend to take out a large lump sum of unscheduled payment within the first few years of the loan’s life, compared to borrowers of other payment plans. Relative to borrowers of other payment plans, the utilization rate for the LOC borrowers is high right at the beginning of the loan life. For instance, on average, the utilization rate for borrowers in LOC plan is 61.3 percent for the first policy year, while the corresponding figures are only 37.7 percent for borrowers in the term plan and 27.3 percent for tenure plan borrowers respectively.

⁵⁶ Preliminary tabulations of the data indicated that the payment patterns for tenure and tenure plus LOC borrowers are quite similar. Therefore, these loan types were pooled together to increase sample size. The same applies to the estimates for loans of term and term plus LOC payment plans.

Exhibit 7-3
Average Advances and Fees by Policy Year, All Loans

Policy Year	Number of Loans	Scheduled Advances	Unscheduled Advances	Interest	Upfront MIP	Annual MIP	Service Fee	Total Fees and Advances
1	10,546	\$5,042	\$27,321	\$1,786	\$2,440	\$146	\$260	\$36,995
2	5,777	\$5,001	\$3,064	\$2,456		\$200	\$345	\$11,066
3	5,238	\$4,029	\$2,032	\$2,934		\$226	\$336	\$9,557
4	3,217	\$3,782	\$1,700	\$3,246		\$250	\$314	\$9,292
5	2,638	\$3,587	\$1,468	\$3,323		\$252	\$308	\$8,938
6	2,102	\$3,529	\$1,375	\$4,376		\$333	\$312	\$9,925
7	1,206	\$3,222	\$1,390	\$4,328		\$328	\$312	\$9,580
8	517	\$3,220	\$1,281	\$4,412		\$335	\$295	\$9,543
9	210	\$1,258	\$1,602	\$4,935		\$328	\$282	\$7,865

Data source: IACS data, November 1998 to October 1999.

Exhibit 7-4
Average Advances and Fees by Policy Year, Line-of-Credit (LOC) Loans

Policy Year	Number of Loans	Scheduled Advances	Unscheduled Advances	Interest	Upfront MIP	Annual MIP	Service Fee	Total Fees and Advances
1	8280	\$2,818	\$29,559	\$1,947	\$2,371	\$159	\$262	\$37,116
2	4298	\$2,257	\$3,238	\$2,644		\$215	\$346	\$8,700
3	3650	\$3,547	\$2,223	\$3,126		\$242	\$335	\$9,473
4	2125	\$2,947	\$1,887	\$3,435		\$264	\$316	\$8,849
5	1715	\$6,217	\$1,677	\$3,336		\$253	\$311	\$11,794
6	1287	\$3,185	\$1,612	\$4,503		\$342	\$314	\$9,956
7	748	\$4,000	\$1,670	\$4,314		\$327	\$314	\$10,625
8	282	\$954	\$1,745	\$4,387		\$333	\$295	\$7,714
9	109	\$0	\$2,137	\$4,392		\$330	\$287	\$7,146

Data source: IACS data, November 1998 to October 1999.

Exhibit 7-5
Average Advances and Fees by Policy Year, Tenure and Tenure/LOC Loans

Policy Year	Number of Loans	Scheduled Advances	Unscheduled Advances	Interest	Upfront MIP	Annual MIP	Service Fee	Total Fees and Advances
1	1288	\$3,261	\$16,625	\$1,045	\$2,802	\$85	\$245	\$24,063
2	777	\$3,914	\$2,098	\$1,801		\$146	\$342	\$8,301
3	753	\$3,772	\$1,261	\$2,358		\$177	\$332	\$7,900
4	459	\$3,762	\$1,051	\$2,674		\$207	\$314	\$8,008
5	349	\$3,631	\$713	\$3,068		\$234	\$311	\$7,957
6	289	\$3,829	\$704	\$3,942		\$302	\$316	\$9,093
7	148	\$3,272	\$685	\$4,063		\$310	\$309	\$8,639
8	81	\$3,222	\$391	\$3,999		\$305	\$292	\$8,209
9	31	\$3,200	\$577	\$4,307		\$331	\$264	\$8,679

Data source: IACS data, November 1998 to October 1999.

Exhibit 7-6
Average Advances and Fees by Policy Year, Term and Term/LOC Loans

Policy Year	Number of Loans	Scheduled Advances	Unscheduled Advances	Interest	Upfront MIP	Annual MIP	Service Fee	Total Fees and Advances
1	978	\$7,490	\$18,800	\$1,393	\$2,517	\$113	\$265	\$30,578
2	702	\$6,282	\$2,305	\$2,029		\$164	\$339	\$11,119
3	835	\$4,277	\$1,403	\$2,614		\$200	\$344	\$8,838
4	633	\$3,817	\$1,218	\$3,028		\$234	\$308	\$8,605
5	574	\$3,524	\$965	\$3,439		\$262	\$300	\$8,490
6	526	\$3,371	\$881	\$4,304		\$329	\$303	\$9,188
7	310	\$3,195	\$681	\$4,488		\$341	\$309	\$9,014
8	154	\$3,264	\$451	\$4,675		\$355	\$297	\$9,042
9	70	\$2,358	\$650	\$4,439		\$324	\$281	\$8,052

Data source: IACS data, November 1998 to October 1999.

Exhibit 7-7

Average Utilization Rate by Payment Plan and Policy Year

Policy Year	All	Term	LOC	Tenure	Term/LOC	Tenure/LOC
1	54.3%	37.7%	61.3%	27.3%	32.8%	21.5%
2	54.9%	26.0%	65.5%	21.7%	31.8%	15.9%
3	62.1%	28.3%	78.7%	16.8%	33.9%	15.5%
4	46.0%	27.3%	55.8%	29.1%	31.8%	15.8%
5	39.3%	31.1%	46.6%	16.2%	31.8%	15.4%
6	45.7%	37.2%	56.1%	16.6%	36.2%	16.8%
7	38.7%	32.3%	44.6%	27.0%	33.7%	16.0%
8	33.6%	31.8%	39.3%	18.7%	32.5%	15.0%
9	31.1%	35.6%	35.7%	18.1%	26.6%	15.6%

Data source: IACS data, November 1998 to October 1999.

For borrowers of the LOC and hybrid payment plans (i.e. tenure/LOC and term/LOC), these estimated average utilization rates were used to project advances and fees for the first 9 policy years.⁵⁷ For the subsequent policy years, we assume the utilization rate is 33 percent. In other words, the resulting projection beyond the first 9 policy years is a smooth increase asymptotically approaching 100 percent of the loan's accrued principal limit. It is worth emphasizing that, regardless of policy year, the projected amount is the sum of automatic charges (interest, MIP, and service fees) and unscheduled advances. For each policy year of each loan, the model also calculated the automatic charges separately. When the projected amount is added to the outstanding balance, priority is given to automatic charges. That is, if the projected amount is smaller than the calculated automatic charges, the model assumes the outstanding balance will increase by the automatic charges amount for that year. In addition, consistent with regulations stated in the HECM handbook, the model will stop payments once the outstanding balance reaches the loan's accrued principal limit amount. However, automatic charges will keep adding to the outstanding balance.

Term Payment Plan Borrowers

For borrowers with the term payment plan, the model assumes they continue to receive monthly term payment reported in the IACS system as agreed. When the term is reached and if there is still non-zero available principal limit amount left, the model assumes the borrower will switch to the LOC plan and continues to accumulate advances and automatic charges on the outstanding loan balance as mentioned above. Payments will be stopped once the

⁵⁷ The multiple regression approach can be used to model these payment utilization rates for different payment plans, similar to the method we used in modeling the MIP payment history in the reserve calculation. This will be a potential refinement of our actuarial model.

outstanding balance exceeds the accrued principal limit. But automatic charges will keep accumulating regardless.

Premiums

Insurance premium charges in the HECM program include two components -- upfront (initial) premiums and monthly mortgage insurance premiums (MIP). The upfront premium, which is equal to 2 percent of the maximum claim amount, is collected once at loan origination. The total value of these is already accounted for in the calculation of the mortgage insurance reserve above. The monthly MIP is charged at the annual rate of 0.5 percent of the loan's outstanding balance for the life of the loan. Given that our actuarial model operates on an annual basis and makes projection for each policy year (rather than policy month), the 0.5 percent rate is adjusted upward to 0.501 percent to account for monthly compounding.

Interest Charges

Interest is charged and added to the outstanding loan balance according to the previous period's outstanding loan balance on a daily basis. Lenders set interest rates at the current U.S. Treasury Securities rate adjusted to a constant maturity of one year, plus a margin. Future interest rate levels are unknown, but it is prudent to assume they may stay at a relatively high level in the actuarial model (since the use of a lower interest rate will decrease the risk of expected claim losses). The expected interest rate is a good candidate to use in the projection because it is generally higher than the initial adjustable rate the lenders actually use. Therefore, the actuarial model assumes each loan will accrue interest charges according to the median value of the *expected average mortgage interest rate*, 7.8 percent, observed for the existing HECM loans. Since our model computes interest charges on an annual basis, the 7.8 percent rate is adjusted upward to 8.11 percent to account for daily compounding. The projected interest rate is assumed to remain constant throughout the life of each loan.

Outstanding Loan Balances

The IACS system reports the outstanding balance of each loan at cutoff time. In each subsequent year of the analysis, the outstanding loan balance is estimated as the previous period's loan balance plus the projected amount of cash payments to borrowers, annual total of monthly mortgage insurance premiums, annual total of service fees, and interest charges accrued during that year.⁵⁸ While partial repayments by borrowers during the life of the loan do occur, they do not appear to happen frequently. It is thus reasonable to assume in the actuarial model that there is no partial prepayment before the loan is due and payable (i.e. terminated).

⁵⁸ If loan service fee charges are already included in the interest rate and thereby paid as a percentage of the outstanding loan balance, the monthly service fee can be zero in this computation.

Property Values

Projected house values are another important component of the actuarial model. As mentioned above, the trajectory of future house values will determine the occurrence and magnitude of expected claim losses. The IACS system only reports the appraised property values at loan origination, and updated housing price information is not available. The 1995 actuarial model assumed house prices follow a 3 percent annual appreciation rate from loan origination until loan termination. Our actuarial model makes use of additional information provided by the OFHEO house price index and adjusts the original appraised values forward into the future in two steps:

- First, we assume the appreciation rate of HECM properties followed the quarterly OFHEO state repeat-sale House Price Indexes (available up to the third quarter of 1999) from loan origination to cutoff time (i.e. October 30, 1999). For properties located in area outside of the 50 states (for example, Puerto Rico), the Index for the US as a whole was used.
- Then, for each subsequent year beyond the cutoff date, HECM properties are assumed to appreciate at a constant annual growth rate of 3 percent. This adjustment can be computed according to the following formula:

$$P_t = P_c \times (1.03)^n$$

where P_t is the projected property value at policy year t , P_c is the property value at cutoff time, and n is the number of years since cutoff.

Present Value of Expected Claim Losses

The claim loss of a loan is the amount by which the total outstanding loan balance exceeds the current property value at the time the loan becomes due and payable. Since the exact date that a loan becomes due and payable is uncertain, as mentioned above, we used a probabilistic approach in the calculation. The actuarial model computes the *expected claim loss* associated with each projected policy year. This is defined as the excess of the projected outstanding loan balance over the projected property value in each policy year multiplied by the probability that the loan will become due and payable (i.e. terminated) during that year:

$$\text{Expected Claim}_t = (\text{Outstanding Balance}_t - \text{Property Value}_t) \times \text{Prob. of Due/Payable}_t$$

where t is the subscript for policy year. For loans and projected policy years when the property value is greater than the outstanding balance, expected claim losses are set to zero.⁵⁹

⁵⁹ A future improvement to the actuarial model would be to deduct transaction costs from the property value when computing expected claims. However, currently there is no available data with which to measure the

Then, for each loan, the present value of the expected claim loss in each projected policy year can be calculated according to the following discounting formula:

$$\text{P.V. of Expected Claim}_t = \frac{\text{Expected Claim}_t \times \text{Prob. of Loan Survival}_t}{(1+i)^n}$$

where i is median value of expected interest rate (i.e. 8.11 percent) of all the HECM loans from origination to cutoff, n is the number of years since cutoff, and t is the subscript for policy year.

Finally, the cumulative present value of expected claims is calculated as the sum of all the present values of expected claims over all the projected policy years for all loans:

$$\text{P.V. of Total Expected Claim} = \sum \text{P.V. of Expected Claim}_{t, k}$$

where t is the subscript for policy year and k is loan subscript.

Present Value of Projected Mortgage Insurance Premiums

The streams of projected mortgage insurance premiums (MIP) collected in each policy year will be discounted according to the following formula:

$$\text{P.V. of Projected MIP}_t = \frac{\text{Projected MIP}_t \times \text{Prob. of Loan Survival}_t}{(1+i)^n}$$

where i is median value of expected interest rate (i.e. 8.11 percent), n is the number of years since cutoff, and t is the subscript for policy year.

And then the cumulative present value of projected MIP is calculated as the sum of all the present values of projected MIP over all the projected policy years for all loans:

$$\text{P.V. of Total Projected MIP} = \sum \text{P.V. of Projected MIP}_{t, k}$$

where t is the subscript for policy year and k is loan subscript.

deduction needed to account for transaction costs on the sale of the property and as a result the model is conservative in projecting ahead future house value appreciation (i.e., 3 percent).

Net Expected Insurance Liability

The final step in assessing the adequacy of MIP collected in the HECM program involves comparing the present value of expected claims with the present value of projected MIP, taking into account the current value of the mortgage insurance reserve. In other words, the net expected insurance liability is calculated as:

$$\text{Net Expected Liability} = \text{P.V. of Total Expected Claims} - (\text{Reserve} + \text{P.V. of Total Projected MIP})$$

According to our calculation using the 2000 actuarial model, the existing HECM book of business was projected to generate a present value of \$73.5 millions in future premiums. The present value of future claim losses was projected to be approximately \$168.7 million. Recall that in the previous section the current reserve was estimated to be about \$112.2 millions in total value. Overall, these lead to the conclusion that the existing book of business will have a net expected liability of -\$17.0 million (or -\$570 per loan), implying that the reserve plus future premiums are more than enough to cover all the past and potential claims in the future. Expressed in terms of the typical adjusted property value (maximum claim amount) of \$102,125, the per-loan surplus is 0.56 percent. In other words, the premium structure in the HECM program is at least adequate.

Summary of Actuarial Model Results

This section summarizes the overall actuarial model results. The first row of Exhibit 7-8 and Exhibit 7-9 presents the results of applying the 2000 actuarial model to the existing book of business HECM loans (29,701) as of October 30, 1999. The model also made use of premium payments and claims disbursement information from 9,063 already terminated loans when calculating the size of the insurance reserve. Aggregate estimates are presented in Exhibit 7-8, while Exhibit 7-9 displays per loan estimates. For comparison purpose, the two Exhibits also illustrate the results of applying the 1995 actuarial model to the same set of HECM loans. Findings reported in the last round of evaluation (for HECM book of business as of June 30, 1994) are printed in the third row of the Exhibit 7-9 for reference. Note that the analyses from the 1995 report were done on substantially earlier cohorts of loans (1990-1994). So the aggregate estimates are not comparable to the new estimates from the existing HECM book of business. Comparing per loan estimates may also be problematic.

Overall, regardless of whether the 1995 or 2000 actuarial model was used, the estimates indicate that the HECM mortgage insurance premiums are adequate and there is no evidence that the Department's FHA insurance fund is facing any excessive risks from this book of business. Specifically, the 2000 model estimated that the mortgage insurance reserve (less claims already paid) as of October 30, 1999 has already accumulated to a total value of \$112.2 million, or about \$3,778 per loan. The present value of future expected claim losses resulting from the existing book of business HECMs were estimated to be approximately

Exhibit 7-8**Actuarial Model Results, Total Estimates (in Millions of Dollars)**

	Reserve (Past Premiums less Past Claims)	Present Value of Future Claims	Present Value of Future Premiums	Net Expected Liability
2000 Model Results	\$112.2	\$168.7	\$73.5	-\$17.0
1995 Model Results	\$112.2	\$162.5	\$67.6	-\$17.3

Exhibit 7-9**Actuarial Model Results, Per Loan Estimates**

	Reserve (Past Premiums less Past Claims)	Present Value of Future Claims	Present Value of Future Premiums	Net Expected Liability
2000 Model Results	\$3,778	\$5,682	\$2,475	-\$570
1995 Model Results	\$3,778	\$5,473	\$2,277	-\$582
1995 Report Results ¹	\$2,100	\$3,000	\$1,700	-\$800

¹ Estimates based on loans originated up to June 30, 1994.

\$168.7 million, or about \$5,682 per loan. At the same time, according to the model, this same set of loans will generate a present value of \$73.5 million in mortgage insurance premiums in the future, which is equivalent to about \$2,475 on a per loan level. Therefore, the estimated present value of total premiums will exceed the projected present value of claim losses by \$17 million, or about \$570 per loan. In other words, this book of business is expected to have a *net worth* (or negative net expected liability) of \$17 million.

When we applied the 1995 actuarial model to the same set of loans, the estimates were quite similar. The 1995 model also shows that the estimated reserve and future premiums are more than enough to cover expected claim losses in the future. The mortgage insurance premiums therefore are still adequate under this scenario. However, the projected future claim losses (162.5 million vs. 168.7 million) and future premiums (67.6 million vs. 73.5 million) are lower, compared to the corresponding estimates from the 2000 model. Moreover, the net worth estimate, \$17.3 million (vs. \$17 million), is higher relative to the 2000 model. It is not

surprising that the assumptions made in the 1995 actuarial analysis may lead to projected future claims and future premiums that are biased-downward. Recall that the main difference between the two models revolves around how future payments to borrowers will be allocated after the cutoff date. The 1995 model approximates future payment patterns by using the tenure payment plan for every borrower. The tenure payment plan spreads out each borrower's loan principal limit and allocates it evenly over the borrower's lifetime. However, the majority of borrowers are now in the line of credit payment plan. As mentioned above, tabulations of payment patterns and utilization rates from transaction history data reveal that they tend to take out a significant portion of their loan's principal limit very early (usually in the first year of the loan's life). Compared to the tenure plan where payments are divided evenly and stretched out, this front-loading of payments among the line of credit borrowers leads to large automatic charges (interest and MIP) that start accumulating on the loan's outstanding balance in early policy years. Automatic charges, which are proportional to outstanding balance, will keep accumulating to the outstanding balance throughout the life of the loan. As discussed early in the chapter, large outstanding balances tend to raise the risk of claim losses (although it leads to larger cumulative MIP as well), everything else being equal. In addition, claim losses and MIP that happen earlier in the life of the loan will have a larger weight in the present value calculation process.

It is worth noting that approximately 29 percent of the active HECM loans as of October 1999 had original appraised property values above the FHA 203(b) loan limit of the local area. The extra equity cushion provided by this portion of HECM loans probably contributes to the finding of an overall positive net worth from the actuarial analysis, even under a relatively conservative house price appreciation assumption of 3 percent.⁶⁰ In the 1995 evaluation, 45 percent of the loans had original appraised value above the local FHA 203(b) loan limit in mid-1994. As we suggested in Chapter Two, many factors (for example, competition from other similar products such as Fannie Mae's HomeKeeper program) may have contributed to this trend of lower-valued houses entering the HECM program. Intuitively, this trend explains the finding of a relatively smaller overall net worth (\$570 per loan in 1999 vs. \$800 per loan in 1995) in this evaluation.

Sensitivity and Stress Testing

The Year 2000 actuarial model has several key assumptions. Among them, it is assumed that the house-price appreciation rate is 3 percent per year and the expected interest rate stays at 7.8 percent level for all future years.⁶¹ It is important to test how sensitive the actuarial model results presented in the above section are to the assumed values of these two

⁶⁰ A 4-percent annual house price appreciation rate was used in the original pricing model when HUD designed the HECM program.

⁶¹ Recall that the 7.8-percent interest rate is the median expected rate for all the HECM originations. It serves as a proxy for future note rate in the actuarial model.

parameters. In addition, a simple stress test methodology is used to examine the performance of the current book of business. A stress test is a type of scenario analysis used to evaluate the financial strength of loan portfolios and corporations under adverse business conditions. Securities rating agencies are in the process of developing similar stress scenarios for pools of reverse mortgages as part of their rating criteria.⁶² Specifically, the customized stress test methodology employed by this study emphasizes short-term fluctuations in annual house-price appreciation rates. Results from different scenarios can then be combined into an overall estimate by the technique of probabilistic weighting or averaging. This section documents the sensitivity testing and scenario stress tests we have conducted on the actuarial model results.⁶³

Sensitivity Testing

Four expected interest rate values, namely 6.8 percent, 7.8 percent, 8.8 percent and 9.8 percent, were used in the tests. The expected interest rates represent average mortgage rates expected over the life of the loans. Three values of the annual house-price appreciation rate, namely 2 percent, 3 percent and 4 percent, were allowed in combination with each of four expected interest rate values. Other things being equal, higher expected interest rates will result in a larger amount of net expected liability because of the increase in automatic charges. A lower level of future house-price appreciation rate will have a similar effect. The outstanding loan balance will exceed the house value earlier in the life of the loan. Thus, it is more likely that the sale of the house will not cover the outstanding balance at termination.

Results of the sensitivity testing are presented in matrix format and are reported in Exhibit 7-10 and Exhibit 7-11, for total and per loan estimates respectively. The estimates for the base case are printed in the darkest shading in the two exhibits. Any shading in the two exhibits highlights a positive net worth (or negative net liability) estimate, implying that the reserve plus future premiums will be adequate to cover future claims for this combination of house-price appreciation and expected interest rate values.

Major findings from the two exhibits can be summarized as follows:

- In general, the actuarial model results are quite sensitive to changes in the values of future house-price appreciation and expected interest rates. In other words, the net worth estimates reported in Exhibits 7-8 and 7-9 rest critically on the assumed values of 3-percent annual house-price appreciation and 7.8 percent expected interest rate.

⁶² For example, see *Structured Finance: Reverse Mortgage Criteria* (Standard & Poor's, New York, NY: 1999).

⁶³ This sensitivity analysis did not consider changes in HECM termination speeds. Certainly, if HECM loans terminate more slowly than assumed, expected losses may increase. An analysis of the HECM termination rate assumption is presented in Chapter 8.

Exhibit 7-10

**Actuarial Model Results of Sensitivity Testing:
Net Expected Liability, Total Estimates (In Millions of Dollars)**

		Future Expected Interest Rate			
		6.8%	7.8%	8.8%	9.8%
Future House-Price Appreciation Rate	2%	\$20.6	\$57.1	\$107.9	\$163.7
	3%	-\$55.5	-\$17.0	\$35.2	\$93.6
	4%	-\$118.1	-\$83.7	-\$33.8	\$24.4

Note: Shading reflects a negative net expected liability, or positive net worth.

Exhibit 7-11

**Actuarial Model Results of Sensitivity Testing:
Net Expected Liability, Per Loan Estimates**

		Future Expected Interest Rate			
		6.8%	7.8%	8.8%	9.8%
Future House-Price Appreciation Rate	2%	\$696	\$1,928	\$3,642	\$5,521
	3%	-\$1,871	-\$570	\$1,187	\$3,157
	4%	-\$3,983	-\$2,824	-\$1,139	\$824

Note: Shading reflects a negative net expected liability, or positive net worth.

One reason that the 2000 actuarial model results are so similar to the 1995 model results is that both models assume the same expected interest rate and house-price appreciation rate.

- If the annual house-price appreciation rate is set at 2 percent (1 percentage point below the base case value) for all future years, this book of business will result in a positive net liability (i.e., negative net worth) for all interest rates tested. For example, with a 2 percent house-price appreciation rate and a 7.8-percent expected interest rate, the overall net worth estimate will drop by \$74.1 million (or \$2,498 per loan) from the base case level to a negative net worth of \$57.1 million (or \$1,928 per loan).
- Compared to the effect of the annual house-price appreciation rate, the actuarial model results appear to be relatively less sensitive to changes in expected interest rate values. For instance, if the house price appreciation rate stays constant at the base case value (3 percent) and expected interest is set at the 8.8 percent level (a 1-percentage point increase from the base case value) for all future years, the net worth estimate will only drop by \$52.2 million (or \$1,757 per loan) from the base case level to a negative net worth of \$35.2 million (or \$1,187 per loan).

Stress Tests

Future events are uncertain. It is, however, quite unlikely that expected interest rates and house-price appreciation rates will stay abnormally high or low for all future years, as we assumed in the sensitivity testing above. Instead, from a policy-maker's view point, it is more relevant to test how **short-term** fluctuations in macroeconomic conditions, particularly changes in house-price appreciation rates, will affect the performance of the current book of business in terms of expected net worth. This type of simulation is called scenario stress testing in the literature and is considered a powerful management tool in the industry.⁶⁴ Specifically, three scenarios are considered here:

- **Base case scenario.** Macroeconomic conditions follow the assumed values in the actuarial model. In particular, the house-price appreciation rate will be 3 percent per year, and expected interest rate stays at 7.8 percent for all future years.
- **Alternative scenario #1.** Let us assume that overall house prices fall at a rate of 2 percent per year for the next three years, due to economic shocks. That is, the house-price appreciate rate is -2 percent for the next three years (5 percentage point lower than the value assumed in the Base Case Scenario). This can happen if the economy falls into recession. We assume the house-price appreciation will revert to the annual rate of 3 percent in the fourth year and beyond. Future expected interest rates stay constant at 7.8 percent for the entire scenario.

⁶⁴ For example, similar but more complicated versions of the stress tests were performed on the entire portfolio of loans purchased by Freddie Mac. See *Freddie Mac 1998 Annual Report*, pages 38 and 39.

- **Alternative scenario #2.** Overall house-price appreciation soars at the rate of 8 percent per year for three years, due to high housing demand in a booming economy. That is, the house-price appreciation rate is 5 percentage points above the value assumed in the Base Case Scenario for the first three years. We assume the house-price appreciation will return to the annual rate of 3 percent right after that. Future expected interest rates stay constant at 7.8 percent for the entire scenario.

Results from the scenario stress tests are presented in Exhibit 7-12. They can be summarized as follows:

- For the Base Case, the net expected liability is -\$17.0 million, or -\$570 on a per loan basis, exactly as those reported in Exhibits 7-8 and 7-9.
- Alternative Scenario #1 results in a net expected liability of \$72.9 million (or an average of \$2,460 per loan) for the current book of business. This means that the reserve plus future premiums are not sufficient to cover future claims on the insurance fund. The implication is that a significant drop in property values, even for a relatively short period of time, can result in a sizable amount of negative net worth.
- For Alternative Scenario #2, the short-term and sharp increase in house prices yields an overall net expected liability of -\$80.2 million (or -\$2,704 per loan), implying that reserve plus future premiums will be more than enough to cover future claims.
- The simulation results of these two scenarios demonstrate the potential impact of regional heterogeneity of the HECM loans in this book of business. Although the house-price appreciation rates in the two alternative scenarios deviate from the Base Case in a symmetric manner, the resulting changes in net worth are not symmetric. The net worth of Alternative Scenario #1 declines from the Base Case by about \$90 million, whereas Alternative Scenario #2 yields a net worth that is only \$63 million above the Base Case value. This is probably due to the fact that loan characteristics such as appraised values and outstanding balances are not distributed uniformly across the country. Even if the national average house-price appreciation rate remains unchanged, an increase in regional dispersion can have a harmful effect on the insurance fund reserves.
- Future events are uncertain. One way to combine the results from the three scenarios into a single stress-test estimate is to assign probabilities (or weights) to the events and, from that, we can compute the expected (or weighted average) net worth estimate across the three scenarios. For example, we can assume that the three scenarios are equally likely to happen in the future, which implies that each gets the equal weight of 1/3. This will yield a weighted net worth of \$8.1 million, or \$272 per loan, for this book of business. Assigning the weights in a more rigorous manner is beyond the scope of this study.

Exhibit 7-12**Actuarial Model Results of the Stress Tests: Net Expected Liability**

	Assumptions	Net Expected Liability	
		Total (in millions)	Per Loan
Base Case Scenario	Future House-Price Appreciation Rate = 3%. Future Expected Interest Rate = 7.8%.	-\$17.0	-\$570
Alternative Scenario #1	Future House-Price Appreciation Rate = -2% for the next 3 years and then 3% for the rest. Future Expected Interest Rate = 7.8%.	\$72.9	\$2,460
Alternative Scenario #2	Future House-Price Appreciation Rate = 8% for the next 3 years and then 3% for the rest. Future Expected Interest Rate = 7.8%.	-\$80.2	-\$2,704

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Chapter Eight

Data Needs and Testing Actuarial Assumptions

The actuarial model developed in Chapter 7 relies on a variety of assumptions in order to project the future value of the HECM insurance fund. Two of the most important assumptions are the future house price appreciation rates and the termination rate being 1.3 times the mortality rate. Ideally those assumptions and others would be tested against actual outcomes to determine the validity and accuracy of those assumptions under conditions similar to what we expect in the future.

The testing of actuarial assumptions is limited by the amount of data available from the Department's current tracking systems. Unfortunately, some of the data necessary for testing the model's assumptions are not yet being collected which means it will not be possible to test the assumptions in this evaluation or even the next evaluation. Therefore, it seems appropriate to start the chapter which was intended to discuss testing actuarial assumptions by discussing ways to improve the data systems so that future evaluations can be more informative. After the section on data issues, there is a section on testing the assumption that terminations occur at 1.3 times the mortality rate. This is followed by a short section on testing the assumption of 3 percent annual house price appreciation rate. The final section addresses the question: "Do people electing tenure payment plans tend to live longer?"

Data Sources

There are three sources of data for evaluating HECM loans: CHUMS, IACS and the claims database. CHUMS captures the loan application data. It contains demographic information not available from the other data sources. IACS is the system designed primarily to track mortgage insurance premiums and includes accumulated advances, interest, service charges and repayments. The source of information entering the IACS system is the servicers providing advances to borrowers. Scheduled cash advances to borrowers, premiums, interest and service fees are automatically accumulated, but unscheduled advances, recalculation charges and interest rates have to be reported by the servicers. A serious concern for most servicers is the time and tedious effort involved in the data entry to the IACS system. Servicers have their own computer systems for tracking the HECM loans, but IACS is not able to accept a computer data transfer. This forces servicers to enter the data twice, which not only creates opportunities for entry errors, but also exacerbates servicer concerns about data integrity. Claims are calculated using information from the servicer's own tracking system, so servicers are more concerned about correcting errors in their own system than in IACS.

The system for calculating claims is essentially a manual system at this point, which neither gets information from nor provides feedback information to the IACS system. This means that the claims data is more accurate than IACS on assignment and amount of claims. It is also possible, but difficult to determine, that not all the termination information is reaching the IACS system. This could mean that balances are inflated by interest and premiums being charged after the loan has terminated. There are certainly examples of this occurring for single months. It is unknown the extent to which this lag in reporting goes on beyond a month. Although very few in number so far, the claims are distributed across various termination types that are not clearly defined. The distinctions between claim, foreclosure, payoff, sale and voluntary termination could be sharpened. The key distinction should be between claim and non-claim terminations.

HUD needs to consider the costs and benefits of modifying the current CHUMS, IACS, and claims data systems to achieve better integration, and to collect additional data elements to improve management of the program. Separate components could still be maintained for loan origination, tracking, claims and disposition, but consistency checks should be incorporated to protect data integrity. There are many cases with missing or extreme values that might not happen if servicers were required to correct erroneous data entry. The cooperation of servicers would be greatly enhanced if the HUD system could accept file transfers from the servicer systems. This would not only improve the quality of the data collected, but make it easier for HUD management to access and analyze the data.

Key Data Missing

This 2000 Report leaves many of the same questions unanswered as did the 1995 Report due to a lack of relevant data. For example:

- Is the mortality rate the right bench mark for termination rates?
- Do elderly homeowners continue to maintain the houses so that the house value appreciates close to the area average rate?
- How accurate is the expected interest rate in predicting future rates?
- How often do borrowers change payment plans and for what reasons?

Answers to the above questions, which ultimately affect the ability of the Department to be effective in managing the HECM program, will require steps to collect additional data now. Below is a list of key data items that need to be collected for a more reliable and comprehensive actuarial review.

Interest Rates. The current IACS data field for interest rates appears to have a mixture of current and original contract rates. Given that nearly all the HECM loans are adjustable rate mortgages, it is not surprising that the interest rates are updated. A system improvement the Department will consider is to record the original rate as distinct from the most recent update.

The underlying actuarial model assumed that the expected (10-year) interest rate would be the appropriate proxy for interest rate over the long run. Better information about current rates being charged by lenders will make it possible in the future to test accurately whether that assumption needs to be adjusted or not.

House Price Information. Currently there is no method for capturing the sales value of the house securing the HECM loan. The original actuarial model assumed a 4 percent house value appreciation rate over the long run. During the 1990s, this appreciation rate has been exceeded in many areas, but a 3 percent rate seems more sustainable in the future. Moreover, it is an open question whether borrowers with little equity will continue to maintain their property even as their health deteriorates. Since the size of a HECM claim depends on the difference between the house value and the outstanding balance at the time of sale, any small, persistent deviation from the assumed property appreciation rate can result in large differences in net worth of a book of business. A useful, but costly, way to get better information on how homes entering the HECM program actually appreciate would be for the Department to require some post-closing inspections by servicers. This does not seem practical. Another less costly approach would be to require servicers to report the actual sales price when the home is ultimately sold to pay off the loan. To gain broad cooperation from servicers, there might have to be an incentive payment. At a minimum, sales data should be required for claims other than assignment.

Cause of Termination. Nearly 50 percent of the terminations have “cause unknown” for the reason of termination. The original actuarial model assumed that the termination rate would exceed the mortality rate by 30 percent. Knowing the cause of termination would make it possible to know whether the mortality rate is the appropriate benchmark. Early evidence presented below suggests that terminations are much higher for younger borrowers, which may mean that a constant percentage above the mortality rate is not the best approach. Better information on the cause of termination would enhance the investigation of HECM terminations. An “exit” survey might also be valuable in providing information on customer satisfaction as well as a more thorough understanding of the factors motivating termination other than mortality.

Partial Repayments. The data extract from IACS for this study did not include information on repayments, but the information could be obtained for subsequent studies. Responses from the focus groups suggested that partial repayments are occasionally made. Small repayments are recorded in the IACS system by reducing the balance amount for the 2 percent up-front mortgage insurance premium. This seems like an odd approach, which does not highlight the amount of repayment over the life of the loan. A comparison of 2 percent of the maximum claim amount and the loan balance for initial fee shows that nearly 8 percent of the active loans have made partial repayments and nearly 3 percent have made repayments exceeding 2 percent of the maximum claim amount. A separate field accumulating the

partial repayments over the life of the loan would allow future evaluations to easily investigate the extent of partial repayments by HECM borrowers.

Payment Plan Changes. The IACS system only records the current payment plan, yet a borrower can change plans at any time and many do, sometimes more than once. Models to date, including this one, assume very little switching of payment plans. Even if we had a clear idea of what motivates plan switching, it is unlikely that we will develop information sources on the income and health of the borrowers to accurately predict plan changes. Nevertheless, we should track the changes made in sufficient detail to recognize the common patterns. With this basic information, we could test the impact of plan changing on the actuarial value of the insurance fund. This would be better than the current assumption that such changes have no impact, which may or may not be true. At the least, IACS should record the original payment plan, the date of change and the type of new plan through the first three changes.

Vague Transaction Codes. Transaction codes are brief descriptions in the data files that designate various types of charges and advances to the borrowers account. The current transaction codes in IACS are too vague to distinguish the types of advances charged to the borrower's account at closing, such as closing costs and origination fees versus payments that the borrower could spend. A common reaction by borrowers is that the "closing costs" for HECMs are very high. Unfortunately, it is not possible with IACS data to do much of an analysis of closing costs because the transaction codes do not identify them. This seems like a relatively simple matter of requiring lenders to report separate codes for the type of advance or fee charged at closing. A related issue is the estimation of borrower equity which could be verified if payments for existing liens were identified.

Income Status of Borrowers Unknown. There is no systematic source of income information, which makes it impossible to measure the degree of improved financial status of borrowers due to HECM.⁶⁵ Borrower focus groups provide anecdotal evidence that HECMs do enhance the financial well-being of borrowers, but it is difficult to determine how many borrowers use HECM payments to defray living expenses. Line of credit is, by far, the dominant form of payment plan, which seems to indicate that borrowers do not rely heavily on regular HECM payments to pay for living costs. However, most LOC borrowers take very large advances in their first year of the loan. HECM credit may be more important to the wealth, than the income, of borrowers.

⁶⁵ The CHUMS data contain an item for borrower's annual total income. However, tabulations from the database reveal that the variable is mostly filled with missing or zero values. This probably reflects the fact that filling out the corresponding information is not mandatory in the HECM application process and most participants simply did not supply the information.

Testing the Termination Rate Assumption

The purpose of this section is to test whether the actual termination rates are significantly different from expected termination rates. The expected termination rates are assumed to be 1.3 times the age-specific female mortality rates. After a brief description of the life table methodology used, the findings are presented in a series of tables according to age subgroup. Additional tables for household subgroups and age subgroups are in the appendix. It is important to note that this testing is not intended to be a thorough modeling of HECM repayment behavior. The single factor of 1.3 times the mortality rate does not track actual terminations for most policy years or subgroups. Nevertheless, that single factor does quite well at predicting the overall termination rate.⁶⁶

Methodology. The basic approach to the testing follows the life table method, which is a simple form of non-parametric hazard modeling.⁶⁷ According to this approach, the conditional probability of termination can be estimated by the ratio of the actual terminations to the number of loans at risk. The number of loans at risk or the risk set is the number of loans that are still active at the beginning of the policy year less half of the loans censored in the policy year. In this case, most loans are censored by the end of data at the cutoff date of October 31, 1999.⁶⁸ Without further information it is assumed that the censored loans remain active through half of the year in which they are censored. In the following tables, the risk set is labeled the Effective Sample Size. The probability of termination is conditional on the loan remaining active or “surviving” up to the beginning of the policy year. The unconditional probability of termination would divide terminations by the total number of loans. This would be a distorted measure because many loans have already terminated or are censored by the end of available data. By measuring a conditional probability of termination, the model estimates what percentage of the surviving loans terminated in each policy year.

⁶⁶ Life expectancies in the general population are increasing, which suggests HECM termination rates may slow in the future. Also, different subgroups (such as single males or couples) have different mortality rates than single females. Since move-out rates may also change over time and across population subgroups, further study of HECM termination rates (which occur when borrowers die or when they move out) is needed. Some additional research on HECM termination rates is under way and confirms many of the findings presented in this report. See Szymanoski, E.J., Diventi, T.R., and Chow, M., “*Understanding Reverse Mortgage Cash Flows: A Hazard Model of HECM Loan Terminations*”, draft HUD staff paper presented at the 2000 meetings of the Allied Social Sciences Associations in Boston, MA.

⁶⁷ Kalbfleisch, J.D. and Prentice, R.L., (1980), *The Statistical Analysis of Failure Time Data*, New York: John Wiley & Sons, Inc.

⁶⁸ Most loans are censored because they were originated only a few years or less before the cutoff date. Censored simply means there is no information about those loans beyond that date. In lieu of additional information, the life table method adjusts the risk set by counting only half the censored cases in the year of censoring and none in subsequent years. For example, suppose 100 loans are active at the beginning of the year and 80 loans are censored during the year. The risk set would be 180-40 or 140 loans.

Given the limitations on the data, the conditional probabilities of termination provide a reasonable basis for expectations about the termination rates for future books of business.

In this test, it is assumed that HECM loans terminate at 1.3 times the age-specific mortality rate of the youngest borrower. To correspond with the 1995 Report, we are using the mortality rates for the total population,⁶⁹ rather than females only as was assumed in the original model for the HECM Demonstration. The difference is that mortality rates are somewhat higher for the total population than for females only which slightly increases the assumed termination rates for each age group. In the tables reported below, the expected number of terminations is the sum of termination probabilities from each loan in the risk set. This is calculated by determining the age of the youngest borrower for each policy year and then assigning the termination probability as 1.3 times the mortality rate for that age. For example, suppose the youngest borrower is 70 at origination. The mortality rate for a 70 year old person is 2.7 percent which means the termination probability is 1.3 times 2.7 percent or 0.035. In the second policy year, the borrower is 71 with a mortality rate of 2.9 percent and a termination rate of 0.038. If a loan is censored in a policy year, the termination probability is divided in half. The termination rates for all loans in the risk set are added up to get the expected number of terminations for each policy year.

The conditional probability of termination is the actual number of terminations divided by the effective sample size (risk set) for the policy year. Similarly, the expected termination rate is the expected number of terminations divided by the effective sample size. The ratio of actual terminations to expected terminations shows how close actual terminations are to expected terminations. Ratios above 1.0 indicate more actual terminations than expected while those below 1.0 have fewer terminations than expected. In the tables below, the stars beside the ratios highlight the policy years in which the ratio is significantly different from 1.0. Typically they are statistically different when the effective sample size is greater than several hundred. That there are differences is not surprising. What we are most concerned about is a consistent pattern of ratios deviating from 1.0. One helpful measure is the weighted average of the ratios which is reported at the bottom of the ratios column. The effective sample size for each policy year is used as the weight. This downplays the later policy years with small sample sizes. Another feature to consider is the pattern of deviations across policy years.

Findings. Five tables are included in the text. These tables show the termination rates for the entire HECM book of business as of October 1999 as well as four subgroupings by age of youngest borrower at origination. For the interested reader, the technical appendix to Chapter 8 contains three additional tables according to household type (couples, single

⁶⁹ “Vital Statistics of the United States: Volume II, Section 6,” Table1, Life Table for the Total Population, for 1979-1981 as reported on page 6-9 of the 1995 Report.

women only, single men only) and three tables for 3-year age subgroups centered around 65, 75 and 85.⁷⁰

There are five major findings from the termination tables:

- No single factor relative to mortality rates can capture the pattern of termination;
- First year terminations are consistently below expectations;
- Younger borrower terminate earlier than expected and older borrowers tend to terminate later than expected;
- Single men terminate earlier than expected and those living with others terminate later than expected; and
- Overall, the factor of 1.3 is remarkably close.⁷¹

Looking down the column of ratios of actual terminations to expected terminations, one can see a pattern. Typically, the ratio starts low in the first year, rises rapidly to a peak in the next several years and then gradually attenuates. An adjustment to the 1.3 factor can shift ratios up or down, but this underlying pattern remains. This indicates that a single factor cannot adequately capture the probabilities of termination. Factors other than mortality rate come into play in determining when borrowers terminate and a more thorough modeling exercise is needed to understand what drives the pattern of terminations.

First year terminations are consistently below model expectations, most likely because borrowers in poor health or intending to move would not incur the substantial costs of a HECM loan. In fact, it is surprising how many borrowers terminate so soon after taking out a HECM loan.

The tables of age subgroups show that younger borrowers (62 to 69 at origination) are more likely to terminate than expected and older borrowers (80 and above) are less likely to terminate. For example in Exhibit 8-2, the weighted average ratio is 1.88 with every year above 1.0 except the first year and the last two years. It would take a ratio of 2.45 rather than 1.3 to lower the weighted average ratio to 1.0. This shows that the younger borrowers are much more likely to terminate than implied by the factor of 1.3. On the other hand, the factor of 1.3 is too high for the older borrowers. Looking at either the 80 to 89 age group or

⁷⁰ If the “expected” termination rates in Exhibits 8-1 to 8-5 and A-1 to A-6 were defined to be 1.3 times the female only mortality rates, which was the case in the original HECM pricing model, the ratios of actual to expected terminations would be higher.

⁷¹ If the underlying mortality rates are assumed to be female only, then 1.3 times mortality as an overall approximation may actually understate HECM terminations.

the 90 and over age group, the ratios in most years are below 1.0 as is the weighted average ratio. To match expectations to actual termination rates, the factor of 1.3 would have to be reduced to 1.14 for the 80 to 89 age group and down to 1.10 for the 90 and over group.

The tables for household subgroups (Appendix A-1 through A-3) shows that households with a male living alone terminate earlier than expected. Households with a female living alone terminate slightly later than expected. The use of mortality rates for females only might eliminate the small gap between the weighted average ratio of 1.04 and 1.0. The household type “Living with Others” primarily represents married couples who help one another maintain their independent lifestyles as elderly homeowners. With one another’s help they are able to stay in their house longer than single men or single women.

**Exhibit 8-1
Actual and Expected Termination Rates for All Age Groups and Household Types**

Policy Year	Actual Number Terminated	Actual Number Censored	Effective Sample Size	Actual Termination Rate		Expected Number Terminated	Expected Termination Rate	Actual Termination Relative to Expected Termination ¹
				Conditional Probability of Termination	Standard Error			
1	1,196	7,734	34,896	0.034	0.001	2,280	0.065	0.52*
2	2,316	5,971	26,848	0.086	0.002	1,886	0.070	1.23*
3	1,863	4,830	19,131	0.097	0.002	1,412	0.074	1.32*
4	1,416	3,846	12,930	0.110	0.003	1,007	0.078	1.41*
5	874	2,591	8,296	0.105	0.003	684	0.082	1.28*
6	511	2,432	4,910	0.104	0.004	433	0.088	1.18*
7	280	1,478	2,444	0.115	0.006	237	0.097	1.18*
8	116	877	987	0.118	0.010	106	0.108	1.09
9	31	244	310	0.100	0.017	37	0.118	0.85
10	10	147	84	0.120	0.036	10	0.120	1.00
							Weighted Average	1.04

¹ Asterisk denotes that actual termination rate is significantly different from the expected termination rate at the 95 percent level of significance.

Exhibit 8-2**Actual and Expected Termination Rates Where Age of Youngest Borrower at Origination From 62 to 69**

Policy Year	Actual Number Terminated	Actual Number Censored	Effective Sample Size	Actual Termination Rate		Expected Number Terminated	Expected Termination Rate	Actual Termination Relative to Expected Termination ¹
				Conditional Probability of Termination	Standard Error			
1	204	1,914	7,945	0.026	0.002	208	0.026	0.98
2	358	1,527	6,021	0.059	0.003	172	0.029	2.08*
3	309	1,147	4,326	0.071	0.004	134	0.031	2.31*
4	278	816	3,035	0.092	0.005	102	0.034	2.72*
5	184	589	2,055	0.090	0.006	75	0.037	2.45*
6	115	664	1,244	0.092	0.008	49	0.040	2.33*
7	48	439	578	0.083	0.011	25	0.043	1.93*
8	20	195	213	0.094	0.020	10	0.047	2.00*
9	2	51	70	0.029	0.020	4	0.051	0.56
10	1	41	22	0.047	0.045	1	0.055	0.84
							Weighted Average	1.88

¹ Asterisk denotes that actual termination rate is significantly different from the expected termination rate at the 95 percent level of significance.

Exhibit 8-3**Actual and Expected Termination Rates Where Age of Youngest Borrower at Origination From 70 to 79**

Policy Year	Actual Number Terminated	Actual Number Censored	Effective Sample Size	Actual Termination Rate		Expected Number Terminated	Expected Termination Rate	Actual Termination Relative to Expected Termination ¹
				Conditional Probability of Termination	Standard Error			
1	440	3,971	18,074	0.024	0.001	915	0.051	0.48*
2	965	3,066	14,115	0.068	0.002	773	0.055	1.25*
3	825	2,616	10,309	0.080	0.003	612	0.059	1.35*
4	658	2,314	7,019	0.094	0.003	453	0.065	1.45*
5	427	1,451	4,479	0.095	0.004	315	0.070	1.36*
6	255	1,315	2,669	0.096	0.006	205	0.077	1.25*
7	157	774	1,369	0.115	0.009	115	0.084	1.36*
8	68	512	569	0.120	0.014	52	0.092	1.30*
9	21	137	177	0.119	0.024	18	0.103	1.16
10	9	78	48	0.188	0.056	5	0.112	1.67
Weighted Average								1.07

¹ Asterisk denotes that actual termination rate is significantly different from the expected termination rate at the 95 percent level of significance.

Exhibit 8-4**Actual and Expected Termination Rates Where Age of Youngest Borrower at Origination From 80 to 89**

Policy Year	Actual Number Terminated	Actual Number Censored	Effective Sample Size	Actual Termination Rate		Expected Number Terminated	Expected Termination Rate	Actual Termination Relative to Expected Termination ¹
				Conditional Probability of Termination	Standard Error			
1	395	1,548	7,442	0.053	0.003	827	0.111	0.48*
2	747	1,168	5,689	0.131	0.004	688	0.121	1.09*
3	582	919	3,899	0.149	0.006	508	0.130	1.14*
4	395	639	2,538	0.156	0.007	357	0.141	1.11*
5	230	493	1,577	0.146	0.009	239	0.152	0.96
6	130	407	897	0.145	0.012	147	0.164	0.88
7	67	245	441	0.152	0.017	78	0.178	0.86
8	26	149	177	0.147	0.027	34	0.193	0.76
9	7	47	53	0.133	0.047	11	0.208	0.64
Weighted Average								0.87

¹ Asterisk denotes that actual termination rate is significantly different from the expected termination rate at the 95 percent level of significance.

Exhibit 8-5**Actual and Expected Termination Rates Where Age of Youngest Borrower at Origination is 90 or More**

Policy Year	Actual Number Terminated	Actual Number Censored	Effective Sample Size	Actual Termination Rate		Expected Number Terminated	Expected Termination Rate	Actual Termination Relative to Expected Termination ¹
				Conditional Probability of Termination	Standard Error			
1	157	301	1,436	0.109	0.008	331	0.230	0.47*
2	246	210	1,023	0.240	0.013	253	0.247	0.97
3	147	148	598	0.246	0.018	158	0.264	0.93
4	85	77	339	0.251	0.024	95	0.280	0.90
5	33	58	186	0.177	0.028	55	0.295	0.60*
6	11	46	101	0.109	0.031	32	0.313	0.35*
7	8	20	57	0.140	0.046	19	0.326	0.43*
8	2	21	29	0.070	0.048	10	0.340	0.21*
9	1	9	12	0.087	0.083	4	0.353	0.25*
Weighted Average								0.72

¹ Asterisk denotes that actual termination rate is significantly different from the expected termination rate at the 95 percent level of significance.

Even though expectations about particular age groups could be improved by adjusting the 1.3 factor, it is remarkable how well that factor works overall.⁷² The weighted average ratio shown in Exhibit 8-1 for the entire HECM book of business is 1.04. An adjustment factor of 1.353 would be required to match overall expectations to actual terminations, at least so far. The current HECM book may have a relatively larger number of younger borrowers than in the steady state because so many loans have been originated in the last couple of years. It is difficult to project, but in the long run the factor of 1.3 may be as close as any single factor can get.

Testing the 3-Percent Annual House Price Appreciation Rate

In both the 1995 and 2000 actuarial models, the housing price of the homes backing the HECM loans is assumed to follow a 3 percent annual appreciation rate after the cutoff date (October 31, 1999 in the 2000 model). In the 1995 model the 3 percent rate was also assumed for appreciation prior to the cutoff date. The accuracy of the actuarial analyses depend, to a very large extent, on the soundness of this assumed house price appreciation rate.

Absent information on changes in actual house prices for HECM properties, the reasonableness of this assumption can best be tested by computing the annual appreciation rate of the house price of the existing HECM loans, assuming they follow the quarterly OFHEO state repeat-sale indexes from loan origination to cutoff date. The following growth formula can be used in the calculation:

$$G = \left(\frac{P_t}{P_0} \right)^{1/t} - 1$$

where G is the computed annual appreciation rate, P_t is the house price at a cutoff date (i.e. October 31, 1999), P_0 is house price at loan origination, and t is the time interval (in years) since loan origination. Our calculation indicates that, for the 38,000 houses backing the existing HECM loans, the median and average annual appreciation rates are both 4 percent, with lower-quartile being 3 percent and upper-quartile being 5 percent. In other words, the 3-percent figure we used in our actuarial analysis projection is a conservative assumption. Again, the fact that so much of the current HECM book of business has originated in the last couple of years pushes up the overall average. Appreciation rates in 1990 to 1992 were 1.8

⁷² This assumes a mortality rate for the total population, rather than for the female population, to be consistent with the 1995 report. The original pricing model was based on mortality rates for females only. Given that the mortality rate for the total population is higher than for females only, the adjustment factor being tested has already been shifted up relative to the original pricing model.

percent according to the OFHEO repeat sales index. However, in the 1996 to 1998 period appreciation rates were 4.6 percent, which undoubtedly accounts for the 4 percent overall growth rate for HECM properties.

Taking a longer view, appreciation rates were only 2.9 percent for the 1990 to 1998 period according to OFHEO compared to 2.8 percent inflation by the CPI-U index. The 1980s were actually more favorable to housing with appreciation rates of 5.3 percent per year (OFHEO 1980 to 1990). General inflation was 4.7 percent in the 1980s. If house price appreciation rates revert to a long term average, 4 percent seems reasonable. However, if the Federal Reserve maintains its stance to keep general inflation low, a long-run average of 3 percent may be a realistic projection.

Testing Borrower's Age at Termination of Different Payment Plans

By design, borrowers of the tenure payment plan will continue to receive monthly payments as long as they are alive and maintain the house as their principal residence. However, for the other payment plans, monthly payments stop once the outstanding loan balance reaches the accrued principal limit of the loan. Potentially, it can create economic incentives for borrowers who are healthier or are expected to live longer to select the tenure plan. If this self-selection exists, this could increase the risk that the borrower's outstanding balance exceeds the appreciated value of the house when the loan becomes due or payable. The incidence of insurance claim losses would increase as a consequence.

To test the existence of this self-selection, the average age of borrowers at loan termination of different payment plans was calculated for all the paid-off loans in the IACS data. Exhibit 8-6 presents the average age at loan termination for all the paid-off loans as well as loans that were paid off because of the borrower's death.⁷³ Among all the paid-off loans, borrowers who chose the tenure and tenure and LOC plans had an average age of 83.3 and 84.3 at termination, which are higher than those of other payment plans. A t-test indicates the difference is statistically significant at the conventional 95-percent level. Similar patterns of borrower's termination age exist among the loans that were paid off to date due to the reason of death. It shows that, on average, borrowers of tenure and tenure & LOC payment plans lived longer compared to those who chose other payment plans. A t-test supports that the difference in means is statistically significant at the conventional 95-percent level. Exhibit 8-7 presents the average loan duration (in months) at termination calculated separately for borrowers of tenure (including the tenure and LOC hybrid) and other payment plans. Consistent with the findings about age at termination discussed above, it shows that borrowers with the tenure plan tend to have loan durations that were slightly longer than those of other payment plans at the time of termination. For example, among all the paid-off

⁷³ Only half of the terminations have a recorded reason for termination, so this analysis assumes the terminations with a recorded reason are representative of all terminations.

loans as of October 1999, the average loan life was 34 months for tenure borrowers, whereas the borrowers of other payment plans had an average loan life of 32.6 months. The difference is statistically significant at the conventional 95-percent level, as substantiated by a t-test. These results provide preliminary evidence that borrowers in relatively better health are more likely to choose the tenure payment plan which defers payments until the later years.

Exhibit 8-6
Average Borrower's Age at Loan Termination

Payment Plan	All Paid-Off Loans	Loans Paid-Off Due to Borrower's Death
Term	81.8	83.3
Term & LOC	82.6	84.4
Tenure	83.3	84.4
Tenure & LOC	84.3	85.8
Line of Credit (LOC)	79.1	81.8

Data source: IACS data, through October 1999.

Exhibit 8-7
Average Loan Duration at Termination, in Months

Payment Plan	All Paid-Off Loans	Loans Paid-Off Due to Borrower's Death
Tenure	34.0	33.4
Others	32.6	31.8

Data source: IACS data, through October 1999.

Summary

The testing of actuarial assumptions is limited by the available data. For some types of data, such as claims, the loans have not seasoned enough to provide reliable measures. Most data limitations, however, will not be cured by the passage of time, but require decisive action to improve the data collection systems. The most important data elements that are incomplete or missing are interest rates, house price information (at termination), cause of termination, partial repayments, payment plan changes and closing costs. The life table method is used to test the assumption that the expected termination rate is 1.3 times the age-specific mortality rate. The tests show that first year terminations are consistently below expectations.

Younger borrowers terminate earlier and older borrowers terminate later than expected.

Single men households terminate earlier and "living with others" households terminate later

than expected. Although no single factor can adequately capture these differences, the adjustment factor of 1.3 comes remarkably close for the entire HECM book of business. Additional hazard modeling could refine the adjustment factor, particularly for subgroups.

The 3 percent annual house price appreciation rate assumption used in the Chapter 7 actuarial models is too low given the experience of HECM loans in the 1990s, particularly in the last couple of years. Historically the long term growth rate is closer to 4 percent. Future house price appreciation rates will probably track closely with general inflation, which might be kept low as a matter of Federal Reserve policy. If the Federal Reserve policy is successful at keeping general inflation low or elderly homeowners are not able to fully maintain their properties, the assumption of a 3 percent appreciation rate is appropriate. Finally, a comparison across payment plans of borrowers' ages at termination shows that tenure plan borrowers terminate at an older age. It makes sense that borrowers in better health choose the tenure plan because the payments are deferred to the later years and borrowers would have to live a long time to benefit from those later payments.

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Appendix A

Exhibit A-1**Actual and Expected Termination Rates for All Age Groups, Household Type “Living**

Policy Year	Actual Number Terminated	Actual Number Censored	Effective Sample Size	Actual Termination Rate		Expected Number Terminated	Expected Termination Rate	Actual Termination Relative to Expected Termination ¹
				Conditional Probability of Termination	Standard Error			
1	170	1,249	9,781	0.017	0.001	474	0.048	0.36*
2	434	1,858	8,057	0.054	0.003	423	0.052	1.03
3	400	1,488	5,950	0.067	0.003	334	0.056	1.20*
4	339	1,299	4,157	0.082	0.004	251	0.060	1.35*
5	245	897	2,720	0.090	0.005	175	0.064	1.40*
6	148	844	1,604	0.092	0.007	109	0.068	1.36*
7	79	503	783	0.101	0.011	58	0.074	1.36*
8	41	277	314	0.131	0.019	26	0.082	1.60*
9	9	72	98	0.092	0.029	9	0.096	0.96
10	4	49	29	0.140	0.065	3	0.100	1.41
Weighted Average								0.96

¹ Asterisk denotes that actual termination rate is significantly different from the expected termination rate at the 95 percent level of significance.

**Exhibit A-2
Actual and Expected Termination Rates for All Age Groups, Single Women Only**

Policy Year	Actual Number Terminated	Actual Number Censored	Effective Sample Size	Actual Termination Rate		Expected Number Terminated	Expected Termination Rate	Actual Termination Relative to Expected Termination ¹
				Conditional Probability of Termination	Standard Error			
1	741	2,080	18,323	0.040	0.001	1,339	0.073	0.55*
2	1,438	3,282	14,901	0.097	0.002	1,171	0.079	1.23*
3	1,144	2,627	10,509	0.109	0.003	867	0.083	1.32*
4	824	2,065	7,019	0.117	0.004	610	0.087	1.35*
5	494	1,397	4,464	0.111	0.005	411	0.092	1.2*
6	278	1,306	2,618	0.106	0.006	260	0.099	1.07
7	160	763	1,306	0.123	0.009	141	0.108	1.13
8	58	471	529	0.110	0.014	63	0.120	0.92
9	19	136	167	0.114	0.025	21	0.128	0.89
10	4	76	42	0.095	0.045	5	0.124	0.77
Weighted Average								1.04

¹ Asterisk denotes that actual termination rate is significantly different from the expected termination rate at the 95 percent level of significance.

Exhibit A-3**Actual and Expected Termination Rates for All Age Groups, Single Men Only**

Policy Year	Actual Number Terminated	Actual Number Censored	Effective Sample Size	Actual Termination Rate		Expected Number Terminated	Expected Termination Rate	Actual Termination Relative to Expected Termination ¹
				Conditional Probability of Termination	Standard Error			
1	230	571	4,571	0.050	0.003	320	0.070	0.72*
2	406	744	3,683	0.110	0.005	278	0.075	1.46*
3	302	655	2,578	0.117	0.006	204	0.079	1.48*
4	246	465	1,716	0.143	0.008	143	0.083	1.72*
5	133	295	1,090	0.122	0.010	95	0.088	1.39*
6	84	282	668	0.126	0.013	63	0.094	1.33*
7	39	199	344	0.114	0.017	37	0.107	1.06
8	17	126	142	0.120	0.027	17	0.120	1.00
9	3	36	44	0.068	0.038	6	0.132	0.51
10	2	21	13	0.160	0.104	2	0.156	1.03
Weighted Average								1.24

¹ Asterisk denotes that actual termination rate is significantly different from the expected termination rate at the 95 percent level of significance.

**Exhibit A-4
Actual and Expected Termination Rates Where Age of Youngest Borrower at Origination From 64 to 66**

Policy Year	Actual Number Terminated	Actual Number Censored	Effective Sample Size	Actual Termination Rate		Expected Number Terminated	Expected Termination Rate	Actual Termination Relative to Expected Termination ¹
				Conditional Probability of Termination	Standard Error			
1	75	636	2,623	0.029	0.003	62	0.024	1.21
2	134	500	1,980	0.068	0.006	50	0.025	2.67*
3	117	358	1,417	0.083	0.007	39	0.028	2.99*
4	98	271	986	0.099	0.010	30	0.030	3.29*
5	58	200	652	0.089	0.011	21	0.033	2.71*
6	36	213	388	0.093	0.015	14	0.036	2.62*
7	13	128	181	0.072	0.019	7	0.039	1.86
8	6	71	69	0.088	0.034	3	0.042	2.10
9	1	14	20	0.050	0.049	1	0.046	1.10
10	1	11	7	0.154	0.142	0	0.048	3.18
Weighted Average								2.31

¹ Asterisk denotes that actual termination rate is significantly different from the expected termination rate at the 95 percent level of significance.

Exhibit A-5**Actual and Expected Termination Rates Where Age of Youngest Borrower at Origination From 74 to 76**

Policy Year	Actual Number Terminated	Actual Number Censored	Effective Sample Size	Actual Termination Rate		Expected Number Terminated	Expected Termination Rate	Actual Termination Relative to Expected Termination ¹
				Conditional Probability of Termination	Standard Error			
1	148	1,249	6,124	0.024	0.002	316	0.052	0.47*
2	335	1,021	4,841	0.069	0.004	270	0.056	1.24*
3	284	840	3,575	0.079	0.005	215	0.060	1.32*
4	225	974	2,384	0.094	0.006	157	0.066	1.43*
5	123	495	1,425	0.086	0.007	103	0.072	1.19
6	82	421	844	0.097	0.010	67	0.079	1.23
7	54	243	430	0.126	0.016	37	0.087	1.45*
8	26	152	178	0.146	0.026	17	0.095	1.54
9	7	40	56	0.125	0.044	6	0.104	1.20
10	1	28	15	0.067	0.064	2	0.113	0.59
Weighted Average								1.04

¹ Asterisk denotes that actual termination rate is significantly different from the expected termination rate at the 95 percent level of significance.

**Exhibit A-6
Actual and Expected Termination Rates Where Age of Youngest Borrower at Origination From 84 to 86**

Policy Year	Actual Number Terminated	Actual Number Censored	Effective Sample Size	Actual Termination Rate		Expected Number Terminated	Expected Termination Rate	Actual Termination Relative to Expected Termination ¹
				Conditional Probability of Termination	Standard Error			
1	112	380	1,894	0.059	0.005	236	0.125	0.47*
2	203	297	1,444	0.141	0.009	197	0.137	1.03
3	162	218	983	0.165	0.012	146	0.149	1.11
4	104	157	634	0.164	0.015	102	0.161	1.02
5	60	129	387	0.155	0.018	67	0.173	0.90
6	40	87	219	0.183	0.026	41	0.187	0.98
7	16	58	106	0.151	0.035	22	0.204	0.74
8	10	29	47	0.215	0.060	10	0.224	0.96
9	4	14	15	0.267	0.114	4	0.239	1.12
Weighted Average								0.84

¹ Asterisk denotes that actual termination rate is significantly different from the expected termination rate at the 95 percent level of significance.