

Residential Mortgage
Criteria Report

**Rating U.S. Home Equity
Conversion Mortgage
Securitizations**

Analysts

Residential Mortgage

Michele Patterson
+1 212 908-0779
michele.patterson@fitchratings.com

Vincent Barberio
+1 212 908-0505
vincent.barberio@fitchratings.com

Performance Analytics

Grant Bailey
+1 212 908-0544
grant.bailey@fitchratings.com

Servicing

Mary Kelsch
+1 212 908-0563
mary.kelsch@fitchratings.com

Related Research

- “Counterparty Risk in Structured Finance Transactions: Swap Criteria,” Sept. 13, 2004
- “Servicing U.S. Residential Reverse Mortgages,” Sept. 25, 2006
- “Interest Rate Risk In Structured Finance Transactions: USD LIBOR,” dated May 15, 2006

■ Summary

While reverse mortgage loan securitizations are not new to the residential mortgage-backed securities (RMBS) market, they certainly have not been considered a mainstream product until recently. The increase in securitization volume that began in 2006 could be attributed in part to the increasing age of the U.S. population, the sharp rise in property values resulting in increased borrower equity, and recent legislation enacted in 2004 allowing reverse mortgages to be securitized in real estate mortgage investment conduit (REMIC) structures. These factors will be discussed in greater detail in this report.

The purpose of this report is to recognize the growing importance of the reverse mortgage product in the marketplace as an increasing percentage of the U.S. population moves into their senior years, and to address Fitch Ratings’ approach to analyzing the various types of transactions in which this product is securitized.

■ Market Background

What is a Reverse Mortgage?

A reverse mortgage is a loan secured by residential real estate that enables borrowers, aged 62 and older, to convert a portion of the equity in their residence to use as current and/or future income. The term “reverse” is used in relation to a traditional “forward” mortgage in which a borrower makes regular payments to a lender. In the case of a reverse mortgage, the lender makes payments to the borrower and the loan is repaid with the proceeds from the eventual sale of the property.

History of the Market

While the reverse mortgage product has existed for several years, it has only recently become a mainstream financing tool used by elderly borrowers. As the U.S. population ages, reverse mortgages and the securities they support have become more common. Reverse mortgages were originally offered in the U.S. in the early 1980s. The Federal Housing Administration (FHA) began providing federal insurance for reverse mortgages in 1989 through its Home Equity Conversion Mortgage (HECM) program. In 1998, the HECM program was designated a permanent program by the U.S. Department of Housing and Urban Development (HUD) and origination activity has steadily increased since then.

Additional reverse mortgage programs have emerged in recent years to meet the needs of borrowers that fall outside of the governmental program guidelines. These proprietary products are not restricted to the government-imposed loan limits and typically allow larger balances

HECM Loan Originations by Fiscal Year

(Fiscal Years Ended Sept. 30)

	Number of Loans
2007	53,064*
2006	76,351
2005	43,131
2004	37,829
2003	18,097**
2002	13,049
2001	7,781
2000	6,640†
1999	7,982
1998	7,896
1997	5,208
1996	3,596
1995	4,165
1994	3,365
1993	1,964
1992	1,019
1991	389
1990	157
Total	291,683

*Represents loan originations from Oct. 1, 2006 through the end of March 2007; the federal fiscal year ends Sept. 30. **U.S. Department of Housing and Urban Development (HUD) ran out of insurance authority and couldn't insure additional Home Equity Conversion Mortgages (HECMs) during the last two weeks of September 2003. †HECMs could not be made for part of fiscal 2000 (July to early October) because Federal Housing Administration insurance authority ran out temporarily. Note: The record for monthly volume was in March 2007 (10,888). By calendar year, there were 8,127 HECMs made nationwide in 2001; 14,181 in 2002; 21,636 in 2003; 47,266 in 2004; 48,493 in 2005; and 85,639 in 2006. Sources: HUD, National Reverse Mortgage Lenders Association.

than the HECM loans; however, they do not have the benefit of the insurance. This report will focus primarily on the HECM program and securitizations of HECMs, as they make up over 90% of all reverse mortgages originated in the U.S. today.

Size of the Market

To date, there are only a few main players in the U.S. reverse mortgage market, and the nature of the loan mechanics makes it difficult to measure the size of this market. However, the HECM product has seen robust origination growth in recent years (see the table above left). According to the National Reverse Mortgage Lenders Association (NRMLA), the number of reverse mortgages insured by the FHA in the most recent fiscal year, ending Sept. 30, 2006, was 76,351. That is up 77% over the 43,131 insured the prior year. Over 290,000 loans have been endorsed by the FHA since 1990 and approximately 80% of those endorsements have occurred in the past five years. FHA expects this trend to continue. According to industry publications, over the next five years the percentage of the U.S. population estimated to reach 65 years of age and older is approximately 13%. Additionally, it is anticipated that the number of Americans 65 and older will grow to 50 million by

Top 10 U.S. Reverse Mortgage Markets

(Years Ended Dec. 31)

Location	Number of Loans Originated	
	2006	2005
Santa Ana, CA	5,825	3,067
Los Angeles, CA	5,758	3,915
Sacramento, CA	3,625	2,161
Coral Gables, FL	3,577	1,387
San Francisco, CA	3,353	2,040
New York, NY	2,492	1,454
Fresno, CA	2,461	942
Phoenix, AZ	2,438	720
Boston, MA	2,263	1,148
Denver, CO	1,947	1,515

Source: National Reverse Mortgage Lenders Association.

2020, and nearly 80% will own their own home. Annual HECM production over the next 15 years is projected to surpass \$25 billion.

■ **Legislation**

The American Jobs Creation Act of 2004 (the act) was signed into law on Oct. 22, 2004 and became effective Jan. 1, 2005. The act modified the REMIC statute that permitted new types of debt obligations to be securitized through a REMIC structure. With regard to reverse mortgages, the changes made by the Act allow REMICs to hold reverse mortgages as well as the liquid, nonmortgage investments needed to fund any future draws made by the borrowers. In addition, the modifications allow REMICs to issue debt instruments that reflect the contingent nature of the repayment of these types of mortgages.

Prior to February of this year, there was a limit on the number of reverse mortgages FHA could insure under the HECM program. Earlier this year, FHA was forced to stop insuring new reverse mortgages because the statutory cap of 275,000 loans had been reached. However, on Feb. 15 of this year, a continuing resolution (H.J. Res. 20) was enacted that suspended the HECM cap through Sept. 30, 2007 so that a more permanent solution could be reached.

■ **Product Overview**

General Characteristics

As previously stated, a reverse mortgage is a mortgage that allows eligible borrowers to convert a portion of the equity in their residence to use as current and/or future income. The equity is withdrawn as cash in a lump sum payment, unscheduled draws, or periodic payments over time. Borrowers may use the loan proceeds in any way they choose. In all cases, the reverse mortgage

Sample HECM Loan Calculation

Property Value (\$) 300,000	vs.	HUD County Lending Limit (\$) 359,600	=	Maximum Claim Amount (\$)* 300,000
HECM Expected Rate (%)** 7.25	and	Age of Youngest Borrower 72 years	=	Principal Limit Factor† 0.551
Maximum Claim Amount (\$)* 300,000	X	Principal Limit Factor 0.551	=	Principal Limit (\$)‡ 165,300
Principal Limit (\$) 165,300	-	Servicing Set-Asides/MIP/Closing Costs/Initial Loan Payments 33,310	=	Net Principal Limit§ 131,990

*Maximum claim amount is the lesser of the home value or the U.S. Department of Housing and Urban Development (HUD) county lending limit. **Home Equity Conversion Mortgage (HECM) expected rate is the 10-year Constant Maturing Treasury, plus a margin. †Principal limit factor (PLF) is the present value factor determined by HUD based on the age of the youngest borrower and the HECM expected rate. ‡Principal limit is the PLF multiplied by the HECM maximum claim amount. §Net principal limit is the principal limit minus servicing set-asides, mortgage insurance premiums (MIP), closing costs, and any initial loan payments. This is the total amount that an individual can borrow.

borrower retains all the benefits and responsibilities of home ownership. The mortgage becomes due and payable upon the death of the homeowner(s) or a move from the residence, either case is known as a ‘maturity event.’ A maturity event could also occur due to a contractual breach by the borrower, which may include failure to pay property taxes, maintain hazard insurance, occupy the residence or maintain the property in reasonable condition. Upon a maturity event, the house is sold and the proceeds are used to pay off the mortgage.

Eligibility Requirements

- **Borrower Age:** Eligible borrowers are persons 62 years of age or older. In the case of co-borrowers, each must be at least 62.
- **Occupancy Status:** The borrower(s) must live in the home as their primary residence.
- **Property Type:** Single-family one-unit dwellings are eligible properties for all reverse mortgages. Some programs also accept two- to four-unit owner-occupied dwellings, along with some condominiums, planned unit developments, and manufactured homes. Mobile homes and cooperatives are generally not eligible.
- **Lien Position:** Eligible borrowers must own the home free and clear or satisfy any outstanding liens upon the receipt of the reverse mortgage loan proceeds.

Counseling

Counseling is required for all borrowers of reverse mortgages and must occur during or prior to the application process. As a consumer protection tool, the counseling ensures that an independent third-party certifies borrower understanding of the product and alerts the borrower to alternative financing options.

HUD guidelines require counselors to review the following with the applicant: alternative options that are available to the borrower, including housing, social services, health, and financial alternatives; the financial implications of entering into a reverse mortgage; and any tax consequences affecting a borrower’s eligibility under state or federal programs or that may have an impact on the estate.

Use of Funds

The proceeds from a reverse mortgage can be used in any way the borrower chooses. Historically, the funds have been used primarily to supplement income, cover living expenses, or repair or modify a home. However, as the product has become more mainstream, proceeds are being used for other purposes, such as to retire outstanding debts, buy a new car, take a vacation, and even prevent foreclosure.

Loan Amounts

The amount of money an individual is able to borrow under the HECM reverse mortgage program depends upon the individual’s age, the value of the home, and current interest rates. The older the person and the more valuable the home, the more money the borrower may be able to receive. The home’s location plays a factor as well; HECM loans are subject to geographically determined loan limits imposed by HUD guidelines. In 2006, the FHA loan limits varied from \$200,160 in rural areas to \$362,790 in urban areas. (For an example of how to determine how much an individual can borrow see the text box above.)

Insurance

Under the HECM program, a borrower is required to pay a mortgage insurance premium. This insurance guarantees that if a lender is unable to continue

making payments to the borrower, HUD will step in to make those payments. In addition, the insurance ensures that the borrower will never owe more than the value of the home.

Payment Options

There are four different payment options for a HECM reverse mortgage. A borrower may change the payment plan at any time throughout the life of the loan, as long as the principal limit is not exceeded.

- **Tenure:** Borrower receives fixed monthly payments for as long as the property is occupied and maintained as the principal residence.
- **Term:** Similar to an annuity, the borrower receives fixed monthly payments for a fixed period of time (the 'term') selected by the borrower.
- **Line of Credit:** A line of credit is established equal to the net principal limit, and the borrower may choose to make withdrawals at times and in amounts as needed.
- **Modified Tenure/Modified Term:** A combination of the line of credit option and either the tenure or term options above.

Recourse

All reverse mortgage loans are non-recourse to the borrower. In the event a borrower remains in the property longer than anticipated by the lender, the risk of a loss is borne by the lender.

Fees/Taxes

HECMs are typically accompanied by a variety of costs and fees, most of which are similar to those incurred under a traditional mortgage. These fees include: an application fee (which usually includes the cost of an appraisal and a credit report), an origination fee, closing costs, insurance premiums, and a monthly servicing fee. These costs generally can be paid with loan advances, in which case they are added to the loan balance.

Maturity Events

A reverse mortgage becomes due and payable when the borrower (or in the case of couples, the last remaining spouse) dies, the property is no longer the primary residence of the borrower, the property is not occupied by the borrower for 12 consecutive months or if the borrower violates the terms of the mortgage covenants. The mortgage covenants include failure to pay property taxes, maintain hazard insurance, or maintain the property in reasonable condition. A

reverse mortgage can be prepaid, in full or partially, at any time.

Risk Factors

Fitch considers several key risks as part of the analysis of this product as noted below. These risks will be addressed in further detail in the following sections.

- **Property Value Risk:** The value of a property may not have appreciated as much as might have been expected, or may even decline if the borrower failed to make sufficient capital improvements or perform regular maintenance on the property.
- **Loan Accretion Risk:** When the loan is outstanding for longer than expected and the interest has caused the loan amount to accrete to an amount above the property value.
- **Cross-Over Loss Risk:** When the balance of the loan exceeds the value of the property and proceeds from liquidation of the property are insufficient to satisfy the loan obligation. A cross-over loss can occur due to Property Value Risk and/or Loan Accretion Risk.
- **Loan Maturity/Extension Risk:** Risk involved if borrowers remain in their homes longer than anticipated, delaying maturity events as the outstanding balance of the loan increases.
- **Rate/Basis Risk:** Basis risk occurs when there is an interest rate, index, or timing mismatch between the underlying reverse mortgage and the RMBS bonds.
- **Funding/Liquidity Risk:** Depending on the structure of the transaction, an entity must demonstrate that it has sufficient liquidity to fund all future draws or advances. This can result in significant cash flow needs throughout the life of the transaction. Several avenues are available to ensure liquidity requirements are met, including funding future draws with cash or some of other type of liquidity facility. In any case, Fitch will review the liquidity providers and facilities to determine whether they are in compliance with Fitch's structured finance counterparty criteria. (See "Counterparty Risk in Structured Finance Transactions: Swap Criteria," dated Sept. 13, 2004 on Fitch's web site at www.fitchratings.com.)
- **Servicing Risk:** Fitch also considers the unique challenges servicers face regarding reverse mortgages. This product requires a specialized focus, where the processes of servicing 'traditional' mortgages no longer apply.

Consequently, in June 2006, Fitch introduced reverse mortgage ratings into its U.S. residential servicing criteria. *(For more information on Fitch's reverse mortgage servicing analysis, see "Servicing U.S. Residential Reverse Mortgages," dated Sept. 25, 2006 on Fitch's web site at www.fitchratings.com.)*

■ Rating Approach

Unlike traditional 'forward' mortgage analysis, reverse mortgages do not rely on the credit quality of the borrower since repayment does not depend on a borrower's ability to make ongoing payments. Therefore, particular attention must be paid instead to the value of the property, the life expectancy of the borrower, program expenses, interest rates, loan payment terms and structures, and mortgage insurance. Fitch's rating approach for reverse mortgage securitizations, in general, focuses on the stress factors that would lead to the loan balance exceeding the value of the property securing the loan, thereby reducing the amount of funds available to pay the notes.

The assumptions outlined below are used to generate a set of cash flows that reflects the performance of the collateral over the life of the transaction. Our analysis includes a review of the impact of prepayment, interest rate and draw stress factors on the balance of the mortgage loans, as well as the impact of market value decline (MVD)/Severity stresses on the value of each property within the loan pool. In each period, a portion of each of the loans is repaid, via the prepayment assumptions, representing funds available to the transaction.

These structures are analyzed by generating a series of cash flows based on the specific deal structure and loan characteristics to simulate the various prepayment, interest rate, draw rate, and severity assumptions over the life of the transaction. The objective is to assess whether, based on various stress scenarios, the maturity events will ultimately generate sufficient cash flow to pay down the notes and determine the level of subordination, if any, necessary to cover potential losses.

Prepayment Stresses

For a sufficiently large pool of reverse mortgages, maturity events can be expected to occur with enough regularity to generate the cash flows necessary to support a securitization. However, as with most mortgage-related products, the timing of principal

repayment for reverse mortgages will be uncertain. Due to this inability to precisely predict the timing of the individual loans' maturity events, Fitch utilizes a 'prepayment rate' assumption that repays a portion of each loan in every period in proportion to the prepayment rate on the outstanding pool.

Fitch believes prepayments occur primarily as a function of a borrower's mortality rate and mobility rate (i.e., the rate at which borrowers move from their homes). Both of these factors are stressed, as described below, to derive the prepayment rate assumption used in the analysis.

- **Mortality:** For purposes of stressing mortality rates, Fitch will look to a benchmark measure of U.S. mortality rates, such as those regularly used by the insurance industry. Currently, our analysis includes use of the 1994 Group Annuity Mortality (GAM-94) Table, which is the most recent Group Annuity Mortality Valuation Standard published by the Society of Actuaries. This table replaced the GAM-83 which was the old standard and was developed to serve for at least 15 years. Fitch may consider other mortality rate benchmarks if the parties to a transaction provide sufficient analytic support for their use. These tables provide probabilities of mortality for each gender based on age.

Stressing mortality rates for reverse mortgage pools largely means assuming borrower mortality rates are slower than the selected benchmark over the life of the pool. Slower mortality rates result in borrowers remaining in their home for longer-than-expected time periods. Therefore, loan balances will increase more than originally expected, due to additional draws being made by the borrower and accreting interest on the loan, and have a higher probability of exceeding the property value. The stresses applied to the mortality rates correspond with the age of the borrower. Additionally, the magnified severity of the slowdown in mortality relative to the benchmark increases for higher rating categories.

- **Mobility:** There is limited research concerning the impact of mobility on borrower prepayment rates. However, it is known that mobility rates are highly correlated with the age of the borrower, their economic status, as well as a constant level of 'move-out' activity that is unrelated to age, health or economics.

As borrowers age, they are more likely to move out of their principal residence and into the

homes of relatives or assisted living facilities. This assumption that mobility is influenced by age or health-related factors is expressed as a function of mortality, as explained in the previous section. Economic status is expressed as a function of a borrower's current property value and the corresponding regional median property value. For this purpose, Fitch utilizes published median home prices within Metropolitan Statistical Areas (MSA), as defined by the U.S. Office of Management and Budget. Together, these factors combine to derive a 'mobility rate.' As is the case with mortality, mobility rates are stressed by slowing them down relative to the benchmark projections. Likewise, mobility rates are gradually reduced as the rating category/scenario increases.

Market Value Decline/Severity Stresses

As a result of the FHA mortgage insurance, HECM loans are not exposed to price depreciation scenarios. Nonetheless, these loans do have some exposure to a portion of the costs that HUD may not cover in the event of a loan default. Consequently, we apply a minimal severity stress to the property value over the life of the loan. This severity stress functions similarly to the MVD assumptions by reducing the amount of available cash at a loan's maturity event, but is much less severe.

Interest Rate Stresses

Most reverse mortgage loans to date carry variable interest rates, typically indexed to the one-year Constant Maturing Treasury (one-year CMT). However, in the future, we may see more loans indexed to the London Interbank Offered Rate (LIBOR). Any increases in the index will cause the loan to accrete at a faster rate. Thus, as interest rates increase, the more likely the loan balance will exceed the value of the home. Fitch stresses interest rates in reverse mortgages to simulate this effect and address any basis risk that may be present in the structure of the transaction. The particular type of interest rate stresses will vary across transactions depending on the characteristics of the loans and the bond structure. *(For more information on Fitch's interest rate stresses, see "Interest Rate Risk In Structured Finance Transactions: USD LIBOR," dated May 15, 2006 on Fitch's web site at www.fitchratings.com.)*

Draw Rates

Another key element of the analysis is to estimate a stressed draw rate, due to the borrower's choice in

payment options. While this loan feature also carries serious liquidity implications for the overall transaction when these future draws are included as part of the securitization, the stress is applied on the collateral level. To assess what impact borrowers drawing on their mortgages at different rates will have on the cash flows, our analysis includes an evaluation of two scenarios. The first scenario assumes that all borrowers draw down the full amount in the first period, while a second scenario assumes every borrower draws five percent of the available balance in every period. Each scenario has a different impact on the periodic and ultimate cash flows generated from the loans, although the average historical monthly draw rate of borrowers is approximately 2% of the available balance.

Transaction Structure

Given the early stage of development of this market, participants are actively exploring new and alternative structures to improve program efficiencies and execution. One of the concerns faced by issuers is the reverse mortgages' potential for future loan draws by borrowers, and that these draws may need to be funded or provided for upfront. Additionally, issuers must account for the ongoing payment of servicing fees, insurance premiums, and other costs in a transaction in which the borrower is not making periodic payments on the loan.

To date, the structures for HECM transactions have been fairly uniform, consisting of a single class of floating rate 'AAA' rated notes. The notes are issued as one-year CMT floaters to mitigate any basis risk from the collateral. A reserve account is funded upfront with enough cash to cover future draws as well as interest shortfalls and fees. Due to the significant liquidity needs of a sizable reserve account, we expect additional structures to appear in the near future. Variations in the future might include utilizing a variable funding note to fund future draws, or the securitization of only the portion of loans outstanding at the time of issuance. In this instance, the future draws are funded outside of the transaction reducing the need for such a sizable reserve fund.

Additional structural features may include issuing a LIBOR-indexed note, which is a popular feature in the jumbo reverse mortgage transactions. These structures require further scrutiny due to the basis risk that is introduced with collateral indexed to one-year CMT. Another common attribute is the issuance

of interest-only strips, which are typically paid at the top of the waterfall.

A key challenge to issuers is the inability to accurately predict the timing of funds from the collateral. This concern leads to the issuance of pass-through notes, where the interest and/or principal can be deferred to later periods. While the ability to defer principal and interest helps to prevent any wind down or default scenarios, especially in the early periods when cash flows may be sparse, typically an interest reserve amount is in place to provide additional resources to pay timely interest under Fitch's stress scenarios. The financial condition of the servicer also plays an important role since the servicer is responsible for providing the borrower with any potential future draws.

As the market matures, Fitch expects to see many variations in transaction structure that will be more economically efficient for issuers and investors, opening the door for more participants to enter the market.

■ Origination and Servicing

As part of the rating process for these securitizations, Fitch evaluates the capabilities of originators and servicers of reverse mortgages. Unlike the underwriting of traditional mortgages, which relies heavily on the borrower's creditworthiness, reverse

mortgage underwriting is based on the adaptation of statistical data (e.g., life expectancy tables), interest rates, and property valuation for determining the amount the originator is willing to lend. And there needs to be strict adherence to the HUD guidelines. Additionally, reverse mortgage servicers require a distinct and specialized operational focus. Unlike traditional servicers, reverse mortgage servicers should have a unique ability to monitor and disburse payments to borrowers, and strong customer service experience for such a "high touch" product.

■ Performance

Given the limited volume of the loan product, the early stages of the reverse mortgage securitization market and the favorable real estate conditions, until recently, that has taken place over that past several years, loan loss information, particularly on HECM loans, is extremely limited.

As with all transactions rated by Fitch, we will continue to monitor the performance of previously rated reverse mortgage transactions. Depending on the performance and maturity of this market, changes may be made to the stress scenarios Fitch employs for rating future transactions. Fitch will continue to keep market participants informed about evolving topics and the rating approach of reverse mortgages.

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