



A Brief History of Successfully Securitizing Jumbo Reverse Mortgage Type Products

The question seems to always come up about prior successful securitizations of jumbo reverse mortgages. The company I founded, Transamerica HomeFirst, sold its 15,000 jumbo reverse mortgage portfolio to Lehman Brothers in 1999. Lehman took the synthetic portfolios we sold them and repackaged them as REITs. The first bond, SASCO 1999 RM1, was issued an Aaa investment grade rating by Moodys (copy attached). Lehman went on through 2005 doing more investment grade rated bond securitizations of tranches of the HomeFirst portfolio. The final bond, SASCO 2005 RM1, paid off in 2016 with investors getting a full return of capital and all interest payments.

Interestingly, the way we then predicted mortality was to “ballpark” moveout when a senior was likely to have lost the use of 2.5 “activities of daily living” (ADLs). We drew this from assisted living care data collected by a Berkshire Hathaway company. Experience with that “ballpark” methodology is what led me in 2007 to ask friends at Berkshire RE if anyone had a better predictor of morbidity and mortality. I was directed to Eric Stallardⁱ, an actuary at Duke’s Medical School. I bought the commercial rights to the unpublished work which is now named the Longevity Cost Calculator (LCC)ⁱⁱ. Stallard subsequently published the model results in 2007 in the *North American Actuarial Journal*ⁱⁱⁱ. The same algorithms replicated the 96%+ accuracy rate in an Alzheimer’s study published in 2014 in the *Journal of Alzheimer’s Disease*^{iv}.

The LCC model predictability was used in 2016 to get an investment grade rating for a mortality bond in a different financial sector. This rating leads NatEquity to believe, should we choose, we can get investment grade ratings for the various jumbo reverse mortgage products we will securitize.

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March 6, 2018
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Attachments:

1. SASCO Reverse Mortgage Securities, Series 1999-RM1 Summary Moody’s page
2. Moody’s SASCO 1999-RM1 rating

ⁱ <https://scholars.duke.edu/display/pub800091>

ⁱⁱ *Longevity Risk in Fair Valuing Level-Three Assets in Securitized Portfolios*, Peter Macrae Mazonas, Patrick John Eric Stallard, Lynford Graham, the Geneva Papers (2011) 36, 516-543. Doi: 10.1057 / gpp 2011.25. <http://www.palgrave-journals.com/gpp/journal/v36/n4/abs/gpp201125a.html> Copies available upon request.

ⁱⁱⁱ Stallard, E., 2007. Trajectories of Morbidity, Disability, and Mortality among the U.S. Elderly Population: Evidence from the 1984-1999 NLTCs. *North American Actuarial Journal* 11(3):16–53.

<http://www.soa.org/library/journals/north-american-actuarial-journal/2007/july/naaj0703-2.pdf>

^{iv} <https://www.ncbi.nlm.nih.gov/pubmed/24064468>

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SASCO Reverse Mortgage Securities, Series 1999-RM1

Moody's Org ID: 400010470

Market Segment: [Structured Finance](#) > [Residential MBS](#) > [Reverse Mortgages](#)

ANALYST	
Lead Rating Analyst:	Jayesh Joseph

KEY CHARACTERISTICS

Closing Date: **23 Aug 1999**
 Location of Assets(at issuance): **UNITED STATES**
 MIS Collateral Type: **MBS - Reverse Mortgage**

ORIGINATOR
HomeFirst, Inc.

TRUSTEE
Wells Fargo Bank Minnesota, N.A.

SERVICER
Unity Mortgage Corp., HomeFirst, Inc.

LEAD UNDERWRITERS
Lehman Brothers, Inc.

Research	Ratings	Related Parties	Go to RMBS Industry Page	
Deal Research	Industry Research	Performance	Related Parties Research	Methodology
Results 1 - 2 Of 2			Page 1 Of 1	
Filter By:		Document Type - All <input type="text"/>	Source - All <input type="text"/>	
Date ▼	Document Type	Title		Source
27 Aug 1999	New Issue Report	Structured Asset Securities Corporation, Reverse Mortgage Notes, 1999-RM01		Moody's Investors Service
24 Aug 1999	Rating Action	MOODY'S RATES THE FIRST U.S. REVERSE MORTGAGE DEAL Aaa		Moody's Investors Service
Results 1 - 2 Of 2			Page 1 Of 1	

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Rating Action: **MOODY'S RATES THE FIRST U.S. REVERSE MORTGAGE DEAL Aaa**

Global Credit Research - 24 Aug 1999

Moody's has assigned Aaa ratings to the senior notes in the first U.S. reverse mortgage deal, SASCO 99-RM1. Moody's has also assigned ratings of Aa2 to the M1 notes and A2 to the M2 notes. The Class B notes are not rated by Moody's. The primary drivers of credit enhancement are the ages of the borrowers and the related time in residence combined with the expected loan-to-value of the property at time of disposition.

According to Moody's analysts, Pramila Gupta and David Zhai, the ratings of the notes are based upon an analysis of the borrower demographics and the related mortality, mobility and price risk assumptions. The analysis also takes into consideration the characteristics of the underlying mortgage loans, the available credit enhancement, and the legal and structural integrity of the transaction.

Reverse Mortgage Pool:

Pramila Gupta explained that a reverse mortgage differs from a typical mortgage in that the obligor is not obligated to make monthly payments for principal and interest. Instead, accrued interest and monthly advances or draws are added to the amount of principal owed, which are repaid in one lump sum upon a maturity event.

The cashflow from a reverse mortgage is totally dependent on the occurrence of a "maturity event". Any one of three events triggers a maturity event -- the obligor 1) no longer resides in the property; 2) sells the property; or 3) dies. In addition, the lender is also entitled to a shared appreciation fee, if any, based on an increase in the value of the property. If the borrower continues to occupy the mortgaged property longer than expected, thus delaying the maturity event, the amount owed on the loan may exceed the value of the collateral.

All amounts due on a loan are payable solely from the proceeds of the sale of the related property. There is no recourse to the borrower directly or to the borrower's estate. Although the current weighted average loan-to-value ratio is approximately 34%, that ratio can increase significantly as accrued interest and additional draws are added to the loan balance. Even in a robust economy where property values are increasing, when combined with the shared appreciation fees due at maturity, it is possible that the property sells for less than the amount owed on the loan. The longer it takes for a maturity event to occur, the more likely this scenario is, said Gupta.

According to David Zhai, one of the key challenges in rating the deal was analyzing this new type of collateral. Moody's developed a proprietary approach to analyzing the unique risk factors for reverse mortgage pools, including mortality, mobility and price risks. At the loan-by-loan level, the mortality risk was captured by survival probability functions derived from borrowers' ages and historical mortality experiences recorded by the insurance industry. In particular, the approach took into consideration the fact that females tend to live longer than males. The joint life of a couple could be significantly longer than that of single borrowers of comparable ages. The moving out rates were calibrated based on factors such as gender, health and economic status. The timing and amount of the repayments were assessed by combining mortality and mobility assumptions on the first-to-occur basis, and were adjusted by the home price model. It is possible that the home price at the time of a maturity event may be lower than that at the time of origination. On the pool level, geographic correlation would also have a significant impact on the risk factors and deal performance.

The loans are somewhat concentrated geographically, adding to potential volatility in the performance of the pool. Forty-eight percent of the loans are secured by properties located in California, followed by 16% in New York and 13% in New Jersey. California tends to have higher than average property price volatility and an overall decline in the California real estate market could adversely affect the net liquidation proceeds of the properties.

Credit Enhancement:

The notes are backed by \$185 million principal balance of reverse mortgage loans, \$88.4 million of cash in the funding account available to fund potential future draws and advances, a \$28.8 million funding note issued by a Lehman Brothers special purpose corporation and a \$6.1 million MBIA surety bond which declines over 3 years, and subordination of the Class B notes. The only source of payments on the funding note will be amounts received from contingent payments and the interest reserve account. No payments of interest or principal will be made to the Class B notes until the Class A, M1 and M2 have been reduced to zero and any amounts paid under the surety bond have been repaid.

The complete rating actions are as follows:

Depositor: Structured Asset Securities Corporation,

Reverse Mortgage Notes, Series 1999-RM1

\$ 276,151,000 Class A Notes, rated Aaa

\$ 19,285,000 Class M1 Notes, rated Aa2

\$ 13,956,000 Class M2 Notes, rated A2

Servicing:

HomeFirst, the servicer, is a FNMA approved reverse mortgage servicer, as is Unity Mortgage, the backup servicer. The servicer's primary

Related Issuers

[SASCO Reverse Mortgage Securities, Series 1999-RM1](#)

Related Research

[New Issue Report: Structured Asset Securities Corporation, Reverse Mortgage Notes, 1999-RM01](#)

focus is to send payments to the borrowers and collect amounts due under the mortgage loans at maturity. As servicer, HomeFirst will periodically check if the borrowers' still occupy the house as their primary residence and also verify that the properties are well maintained. The servicer will also be required to monitor the payment of tax and insurance premiums by the borrowers and if necessary, make servicing advances with respect to delinquent tax or insurance payments. HomeFirst is an acceptable servicer of reverse mortgages.



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