

1015-91-117

Yevgeny Goncharov* (goncharov@math.fsu.edu), Florida State University, Department of Mathematics, 208 Love Bldg, Tallahassee, FL 32306. *An Option-Based Approach to Mortgage Modeling with Sequential Refinancing.*

The option-based approach to model prepayment behavior of a borrower is based on the idea that the probability of a refinancing is governed by the comparison of the borrower's liability and the outstanding principal. This approach effectively assumes that the borrower is allowed to refinance his/her mortgage only once. In the paper we relax this assumption. As the result, the model requires computation of the mortgage rate process as opposed to the case of the standard option-based approach, where only the contract mortgage rate was needed. (Received January 31, 2006)