North American Actuarial Journal ›

Volume 12, 2008 - Issue 4

Original Articles

Securitization of Longevity Risk in Reverse Mortgages

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Pages 345-371 | Published online: 28 Dec 2012

Cite this article https://doi.org/10.1080/10920277.2008.10597529

Abstract

The reverse mortgage market has been expanding rapidly in developed economies in recent years. The onset of demographic transition places a rapidly rising number of households in an age window in which reverse mortgages have potential appeal. Increasing prices for residential real estate over the last decade have further stimulated interest.

Reverse mortgages involve various risks from the provider-s perspective that may hinder the further development of these financial products. This paper addresses one method of transferring and financing the risks associated with these products through the form of securitization. Securitization is becoming a popular and attractive alternative form of risk transfer of insurance liabilities. Here we demonstrate how to construct a securitization structure for reverse mortgages similar to the one applied in traditional insurance products.

Specifically, we investigate the merits of developing survivor bonds and survivor swaps for reverse mortgage products. In the case of survivor bonds, for example, we are able to compute premiums, both analytically and numerically through simulations, and to examine how the longevity risk may be transferred to the financial investors. Our numerical calculations provide an indication of the economic benefits derived from developing survivor bonds to securitize the "longevity risk component" of reverse mortgage products. Moreover, some sensitivity analysis of these economic benefits indicates that these survivor bonds provide for a promising tool for investment diversification.

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North American Actuarial Journal
Published online: 17 Mar 2014