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Securitization of Longevity Risk in Reverse Mortgages

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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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Source: Journal of the American Statistical Association
A Poisson log-bilinear regression approach to the construction of projected lifetables
Source: Insurance Mathematics and Economics
Reverse Mortgages: Contracting and Crossover Risk
Source: Real Estate Economics
LONGEVITY INSURANCE: A MISSING MARKET
Source: The Singapore Economic Review
Pricing Death: Frameworks for the Valuation and Securitization of Mortality Risk
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