

Optimal portfolio allocation with health contingent income products: The value of life care annuities

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Abstract

Later life health expenditures are uncertain and have a substantial impact on the annuitization, consumption and savings behavior of retirees. We study the implications for optimal portfolio allocation and individual welfare of including health contingent income products in the retirement product menu. We develop a life-cycle model of annuitization, consumption and investment decisions for a single retired individual who face stochastic capital market returns and uncertain out-of-pocket health costs. The model allows either life annuities or life care annuities---a typical health contingent income product---to be purchased at retirement. Using the calibrated model with health costs and transitions estimated from the Health and Retirement Study, we find individuals in good health at retirement increase their level of annuitization by around 6%, but individuals in relatively bad health do not. This raises the question of whether life care annuities can succeed in pooling different risks. Nonetheless, life care annuities allow individuals to consume more in later life and they tend to hold a more risky portfolio. The welfare gain for access to a life care annuity market is around 3%. Our results have practical implications for the design of pension products and the regulation of the private insurance market.

Keywords: Life-cycle portfolio choice; Long-term care insurance; Retirement; Household finance.

JEL Classifications: D91, D14, G11, I13, H55, J32

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