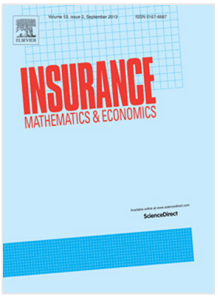
Accepted Manuscript



Optimal life-insurance selection and purchase within a market of several life-insurance providers

A.S. Mousa, D. Pinheiro, A.A. Pinto

PII: S0167-6687(15)30069-X
DOI: http://dx.doi.org/10.1016/j.insmatheco.2016.01.002
Reference: INSUMA 2171

To appear in: *Insurance: Mathematics and Economics*

Received date: June 2015
Revised date: October 2015
Accepted date: 13 January 2016

Please cite this article as: Mousa, A.S., Pinheiro, D., Pinto, A.A., Optimal life-insurance selection and purchase within a market of several life-insurance providers. *Insurance: Mathematics and Economics* (2016), http://dx.doi.org/10.1016/j.insmatheco.2016.01.002

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

Optimal life-insurance selection and purchase within a market of several life-insurance providers

A. S. Mousa*

Dept. of Mathematics, Faculty of Science, Birzeit University, Palestine

D. Pinheiro

Dept. of Mathematics, Brooklyn College of the City University of New York, NY, USA

A. A. Pinto

LIAAD – INESC TEC and Dept. of Mathematics, Faculty of Science, University of Porto, Portugal

Abstract

We consider the problem faced by a wage-earner with an uncertain lifetime having to reach decisions concerning consumption and life-insurance purchase, while investing his savings in a financial market comprised of one risk-free security and an arbitrary number of risky securities whose prices are determined by diffusive linear stochastic differential equations. We assume that life-insurance is continuously available for the wage-earner to buy from a market composed by a fixed number of life-insurance companies offering pairwise distinct life-insurance contracts. We characterize the optimal consumption, investment and life-insurance selection and purchase strategies for the wage-earner with an uncertain lifetime and whose goal is to maximize the expected utility obtained from his family consumption, from the size of the estate in the event of premature death, and from the size of the estate at the time of retirement. We use dynamic programming techniques to obtain an explicit solution in the case of discounted constant relative risk aversion (CRRA) utility functions.

*Corresponding author

Email addresses: asaid@birzeit.edu (A. S. Mousa*), dpinheiro@brooklyn.cuny.edu (D. Pinheiro), aapinto@fc.up.pt (A. A. Pinto)

Download English Version:

https://daneshyari.com/en/article/5076462

Download Persian Version:

https://daneshyari.com/article/5076462

Daneshyari.com