## **Accepted Manuscript**

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PII:	S0167-6687(16)30241-4
DOI:	http://dx.doi.org/10.1016/j.insmatheco.2017.07.002
Reference:	INSUMA 2366
To appear in:	Insurance: Mathematics and Economics
Received date :	June 2016
Revised date :	June 2017
Accepted date :	5 July 2017

Please cite this article as: Menoncin, F., Regis, L., Longevity-linked assets and pre-retirement consumption/portfolio decisions. *Insurance: Mathematics and Economics* (2017), http://dx.doi.org/10.1016/j.insmatheco.2017.07.002

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## Longevity-linked assets and pre-retirement consumption/portfolio decisions\*

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## Abstract

We solve the consumption/investment problem of an agent facing a stochastic mortality intensity. The investment set includes a longevity-linked asset, as a derivative on the force of mortality. In a complete and frictionless market, we derive a closed form solution when the agent has Hyperbolic Absolute Risk Aversion preferences and a fixed financial horizon. Our calibrated numerical analysis on US data shows that individuals optimally invest a large fraction of their wealth in longevitylinked assets in the pre-retirement phase, because of their need to hedge against stochastic fluctuations in their remaining life-time at retirement.

Keywords: longevity risk, pre-retirement savings, portfolio choice, HARA prefer-

ences.

<sup>\*</sup>The Authors would like to thank conference participants to the 2nd PARTY 2015 Conference, the XXXII AFFI Conference, the IIA Colloquium Oslo, the 19th IME Conference and the 27th EURO 2015Conference for helpful comments. Luca Regis gratefully acknowledges financial support from the CrisisLab project funded by the Italian Ministry of Education.

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