Optimal annuitization with background risk and equity exposure during retirement

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Objective of OEE

- Insurance decisions, portfolio choices, and lifecycle saving strategies are intertwined.
- How do changes in one market affect choices on other markets?

Aims of the paper

- How much to annuitize at 65?
- Can one explain low voluntary annuitization by
  - The existence of uninsurable risks (health care);
  - The inability to invest in risky assets?
- Characterize optimal saving and portfolio allocation after 65.
- Other interesting features of the model:
  - Mean-reverting interest rate dynamics
  - Mean-reverting inflation dynamics

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The role of life annuities

- Insurance against longevity risk
- Full annuitization is optimal if
  - there is no bequest motive;
  - annuity offers equity exposure;
  - there is no background risk;
  - annuity pricing is actuarially fair.
- In the presence of background risk, a liquid wealth must be used as a buffer stock.
- If annuity offers no equity exposure, a fraction of liquid wealth should be used to invest in stocks.

Main results

- Huge welfare gain of life annuities, equivalent to as much as a 50% increase in consumption!
- The (almost) full annuitization result is robust to the introduction of uninsurable risks and to the absence of equity exposure.

Limitations of the model

- No annuity premium load
- No asymmetric information
- Annuity decision can be made only at 65
- No persistence in shocks on health expenses (lognormal (10%, 7%) of FRAI)

- What if shock > wealth?

Bequest motive

- The model has no bequest motive.
- By introspection and casual observations, leaving a bequest to heirs is an important saving motive at old age.
- Ambiguous effects of the bequest motive on annuitization at 65.
- Pessimism (on life expectancy) can explain the unattractiveness of life annuity.

Annuity as a commitment device

- Life annuity is a commitment device not to consume the entire wealth early after retirement.
- Similar aspects in life insurance wealth, real estate wealth,…
- The illiquidity of annuity wealth is beneficial.
- But it is also a problem in the presence of uninsurable risks.

Other comments

- To professionals : Why not offering equity exposure in life annuity products? Impact of the 2008 financial crisis?
- To professionals: Why not combining life annuity products and long-term health care insurance?
- Health shocks affect the marginal utility of consumption. Endogeneous health investment decision.