



North American Actuarial Journal >

Volume 11, 2007 - [Issue 3](#)

605 | 153 | 3
Views | CrossRef citations to date | Altmetric

Original Articles

Natural Hedging of Life and Annuity Mortality Risks

Samuel H. Cox FSA, MAAA, PhD & Yijia Lin PhD

Pages 1-15 | Published online: 02 Jan 2013

📄 Cite this article 🔗 <https://doi.org/10.1080/10920277.2007.10597464>

Sample our
Economics, Finance,
Business & Industry Journals
>> [Sign in here](#) to start your access
to the latest two volumes for 14 days

📖 References

🗨 Citations

📊 Metrics

🖨 Reprints & Permissions

Read this article

🔗 Share

Abstract

The values of life insurance and annuity liabilities move in opposite directions in response to a change in the underlying mortality. Natural hedging utilizes this to stabilize aggregate liability cash flows. We find empirical evidence that suggests that annuity writing insurers who have more balanced business in life and annuity risks also tend to charge lower premiums than otherwise similar insurers. This indicates that insurers who have a natural hedge have a competitive advantage. In addition, we show how a mortality swap might be used to provide the benefits of natural hedging.

Related Research Data

Securitization of Mortality Risks in Life Annuities

Source: Journal of Risk & Insurance

Risk Overhang and Market Behavior

Source: The Journal of Business

Reinsurance and the liability insurance crisis

Source: Journal of Risk and Uncertainty

Approaches and Experiences in Projecting Mortality Patterns for the Oldest-Old

Source: North American Actuarial Journal

Historical and Projected Mortality for Mexico, Canada, and the United States

Source: North American Actuarial Journal

Theory of Rational Option Pricing

Source: The Bell Journal of Economics and Management Science

Corporate mergers, stockholder diversification, and changes in systematic risk

Source: Strategic Management Journal

Related research

People also read

Recommended articles

Cited by
153

Information for

[Authors](#)

[R&D professionals](#)

[Editors](#)

[Librarians](#)

[Societies](#)

Opportunities

[Reprints and e-prints](#)

[Advertising solutions](#)

[Accelerated publication](#)

[Corporate access solutions](#)

Open access

[Overview](#)

[Open journals](#)

[Open Select](#)

[Dove Medical Press](#)

[F1000Research](#)

Help and information

[Help and contact](#)

[Newsroom](#)

[All journals](#)

[Books](#)

Keep up to date

Register to receive personalised research and resources by email



Sign me up



Copyright © 2025 Informa UK Limited [Privacy policy](#) [Cookies](#) [Terms & conditions](#)

[Accessibility](#)



Taylor & Francis Group
an informa business

Registered in England & Wales No. 01072954
5 Howick Place | London | SW1P 1WG