



North American Actuarial Journal >

Volume 9, 2005 - [Issue 4](#)

585 | 69

Views | CrossRef citations to date | 6 Altmetric

Original Articles

Modeling Surrender and Lapse Rates With Economic Variables

Changki Kim PhD

Pages 56-70 | Published online: 03 Jan 2013

📄 Cite this article 🔗 <https://doi.org/10.1080/10920277.2005.10596225>

Sample our
Mathematics & Statistics
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

This paper presents surrender rate models with explanatory variables such as the difference between reference and crediting rates, policy age since issue, financial crises, unemployment and economy growth rates, and seasonal effects. The logit function and the complementary log-log function are used in modeling surrender rates.

This paper shows that the logit model and the complementary log-log model generally perform better than the existing surrender rate models such as the arctangent model. It also shows that the surrender rate models are different according to insurance policy types, and it finds proper surrender rate models for four insurance groups: protection plans, education plans, endowment, and annuities.

Related Research Data

[Some Truths about Ostriches: Who Doesn't Prepay Their Mortgages and Why They Don't](#)

Source: Journal of Housing Economics

[On the market risk involved in the public financial system in Japan: A theoretical and numerical investigation](#)

Source: Journal of Banking & Finance

[Generalized Linear Models](#)

Source: Unknown Repository

[Economic and Market Predictors of Insolvencies in the Life-Health Insurance Industry](#)

Source: Journal of Risk & Insurance

[Generalized, Linear, and Mixed Models](#)

Source: Unknown Repository

[An economic approach to valuation of single premium deferred annuities](#)

Source: Unknown Repository

[Computing durations for bond portfolios](#)

Related research

People also read

Recommended articles

Cited by
69

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

