 Download This Paper (Delivery.cfm/99072313.pdf?abstractid=170689&mirid=1)

Open PDF in Browser (Delivery.cfm/99072313.pdf?abstractid=170689&mirid=1&type=2)

 Add Paper to My Library

Share:    

Insurance and Reinsurance Contracts as Complex Derivatives: Application to Multiple Peril Policies

36 Pages

Posted: 5 Aug 1999

Alan Robert Jung (https://papers.ssrn.com/sol3/cf_dev/AbsByAuth.cfm?per_id=67749)

San Francisco State University

Cyrus A. Ramezani (https://papers.ssrn.com/sol3/cf_dev/AbsByAuth.cfm?per_id=101588)

California Polytechnic State University, San Luis Obispo

Date Written: July 24, 1999


Abstract

Multiple peril insurance schemes (e.g., revenue and earnings insurance) provide protection against adverse movements in several named risks. Their indemnity payoff function resembles that of exotic options with complex contingencies. In this paper we show how the option-based pricing techniques from financial economics can be used to calculate fair premiums for such contracts. Using three existing revenue insurance contracts as examples, we demonstrate the usefulness of this approach. The products we consider are sold by private insurance companies, but are reinsured by US government. We show that the reinsurance contract can also be valued by the same technique. Our valuation methodology is very tractable and may be preferred to other techniques, particularly when the risks underlying the insurance products can be hedged using financial instruments. Our application provides new insights on the valuation of public reinsurance of private risks and can be extended to other areas such as the recently proposed Federal catastrophe reinsurance.

JEL Classification: G13, G22, Q14, Q18

[Suggested Citation](#) >

[Show Contact Information](#) >

 Download This Paper (Delivery.cfm/99072313.pdf?abstractid=170689&mirid=1)

Open PDF in Browser (Delivery.cfm/99072313.pdf?abstractid=170689&mirid=1&type=2)

39 References

1. F Black

The Pricing of Commodity Contracts

Journal of Financial Economics , volume 4 , p. 167 - 179 Posted: 1976

Crossref (https://doi.org/10.1016/0304-405x(76)90024-6)

2. F Black , M Scholes

The Pricing of Options and Corporate Liabilities

The Journal of Political Economy , volume 81 , p. 637 - 654 Posted: 1973

Crossref (https://doi.org/10.1086/260062)

3. K Borch

~~A Theory of Insurance Premiums~~

The Geneva Papers on Risk and Insurance , volume 10 , issue 36 , p. 192 - 208 Posted: 1985

We use cookies that are necessary to make our site work. We may also use additional cookies to analyze,

improve, and personalize our content and your digital experience. For more information, see our [Cookie](#)

[Policy](https://www.elsevier.com/legal/cookiepolicy) (https://www.elsevier.com/legal/cookiepolicy)

4. P Boyle

Options: A Monte Carlo Approach

[Cookie Settings](#)

Accept all cookies

Crossref (https://doi.org/10.1016/0304-405x(77)90005-8)

0 Citations

Fetch Citations



Do you have a job opening that you would like to promote on SSRN?

Place Job Opening (<https://www.ssrn.com/index.cfm/en/Announcements-Jobs/>)

Paper statistics

DOWNLOADS	919
ABSTRACT VIEWS	4,052
RANK	51,301

39 References

PlumX Metrics



(https://plu.mx/ssrn/a/?ssrn_id=170689)
Related eJournals

Derivatives eJournal (https://papers.ssrn.com/sol3/JELJOUR_Results.cfm?form_name=journalBrowse&journal_id=1504400)

Follow



Contracts & Commercial Law eJournal (https://papers.ssrn.com/sol3/JELJOUR_Results.cfm?form_name=journalBrowse&journal_id=140588)

Follow



View more >

Feedback

Submit a Paper > (<https://hq.ssrn.com/submission.cfm>)

SSRN Quick Links

SSRN Rankings

About SSRN

(<https://www.facebook.com/SSRNcommunity/>)

([https://www.linkedin.com/company/493409?](https://www.linkedin.com/company/493409?trk=tyah&trkInfo=clickedVertical%3Acompany%2CentityType%3AentityHistoryName%2CclickedEntityId%3Acompany_493409%2Cidx%3A0)

[trk=tyah&trkInfo=clickedVertical%3Acompany%2CentityType%3AentityHistoryName%2CclickedEntityId%3Acompany_493409%2Cidx%3A0](https://www.linkedin.com/company/493409?trk=tyah&trkInfo=clickedVertical%3Acompany%2CentityType%3AentityHistoryName%2CclickedEntityId%3Acompany_493409%2Cidx%3A0)

(<https://twitter.com/SSRN>)

(<http://www.elsevier.com/>)

Copyright (<https://www.ssrn.com/index.cfm/en/dmca-notice-policy/>) Terms and Conditions (<https://www.ssrn.com/index.cfm/en/terms-of-use/>)

Privacy Policy (<https://www.elsevier.com/legal/privacy-policy>)

All content on this site: Copyright © 2023 Elsevier Inc., its licensors, and contributors. All rights are reserved, including those for text and data mining, AI training, and similar technologies. For all open access content, the Creative Commons licensing terms apply.

We use cookies to help provide and enhance our service and tailor content.

To learn more, visit [Cookie Settings](#).



(<http://www.relx.com/>)

(<https://papers.ssrn.com/sol3/updateInformationLog.cfm?process=true>)