



31 May - 03 June 2016

at
ISEG- Lisbon School of Economics
and Management

If you intend to submit a paper for the ASTIN COLLOQUIUM LISBOA 2016, you need to provide a **Synopsis** (using the template on the next page), complete this **Submission Form** and submit both to astincolloquium2016@gmail.com by **Saturday 7 May 2016**. Synopses and submission forms must be sent as MSWord attachments, please do not supply them in the body of an email. You will be advised of the outcome and, if accepted, your abstract will be uploaded to the website.

SUBMISSION FORM

Name: _____ Company: Universidade de Lisboa – Instituto Superior de Economia e Gestao

T: _____ M: _____

E: _____

Title of Paper / Presentation / Session to appear in program: On dividends in the Phase-Type dual risk model

Author/s:

1. Agnieszka I. Bergel _____ 2. Eugenio V. Rodríguez-Martínez

3. Alfredo D. Egídio dos Reis _____ 4. _____

What will your final submission be? Presentation and Paper Presentation Only

If selected, what level of knowledge will delegates attending your session require? (please select only) one
 No prior knowledge General industry knowledge assumed Technical/specific industry knowledge assumed

Note: If you are asked to present at ASTIN COLLOQUIUM LISBOA 2016, it will still be necessary for you to register and pay to attend the Colloquium. IAP does not subsidize, discount, pay for, or extend special registration offers for presenters or delegates.

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ABSTRACT

On dividends in the Phase-Type dual risk model

Agnieszka I. Bergel, Eugenio V. Rodríguez-Martínez & Alfredo D. Egídio dos Reis

Key words: Dual risk model; Phase-Type distribution; Lundberg's equations; ruin probability; time to ruin; expected discounted dividends

Purpose of your paper: Developments in Ruin Theory – Dual Risk Model

Abstract: The dual risk model assumes that the surplus of a company decreases at a constant rate over time, and grows by means of upward jumps which occur at random times and with random sizes. In the present work, we study the dual risk renewal model when the waiting times are Phase-Type distributed. Using the roots of the fundamental and the generalized Lundberg's equations, we get expressions for the ruin probability and the Laplace transform of the time of ruin for an arbitrary single gain distribution. Furthermore, we calculate the expected discounted dividends when the individual common gains follow a Phase-Type distribution.

Note: If you are not presenting a paper for this Colloquium, please include as much detail as possible in your Abstract (maximum three pages) to enable delegates to prepare for your session.

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