



The University of Chicago
Department of Statistics

Seminar Series

JOZEF L. TEUGELS

Katholieke Universiteit Leuven & EURANDOM

On Reinsurance

MONDAY, May 21, 2007 at 4:00 PM
133 Eckhart Hall, 5734 S. University Avenue

Refreshments following the seminar in Eckhart 110.

ABSTRACT

Traditionally, reinsurance has been used as one possibility to share insurance risks between partners. In practice, reinsurance treaties have either a proportional or a non-proportional character. Nevertheless, the usual motive for reinsurance is the possible advent of large, even catastrophic claims. Since reinsurance is plainly a form of insurance, we first offer a quick survey of a number of results related to insurance. We then apply this approach to proportional and non-proportional reinsurance.

However, it seems worthwhile to add another form of treaty, genuinely based on large claims. The most well-known such treaty is ECOMOR, a reinsurance form introduced in 1950 by the French actuary Thépaut. Despite this long-standing existence, large claims reinsurance treaties have never enjoyed great popularity. We try to understand the reasons behind this lack of recognition. In particular, we derive some new mathematical results about ECOMOR. While doing this, we will present a bird's eye view of extreme value theory.

Based on these results, we formulate some pro's and con's of the ECOMOR treaty. A few concrete examples will further illustrate practical problems that can arise with this kind of reinsurance. All by all, our final conclusion will be that both theoretical and practical understanding of large claims reinsurance need further investigation. Most of the research is based on joint work with Sophie Ladoucette.