Reinsurance and securitisation in insurance risk management

Pauline Barrieu and Henri Loubergé
Preliminary Version (July 2011)

Abstract

Large systematic risks, such as those arising from natural catastrophes, climate changes and uncertain trends in longevity increases have become an issue for society and more particularly for the insurance industry. Against this background, the combination of reinsurance and capital market solutions (insurance-linked securities) has received an accrued interest. In this paper, we first develop a general model of optimal risk-sharing among three representative agents .an insurer, a reinsurer and a financial investor, making a distinction between systematic and idiosyncratic risks. In a second stage, we focus on the impact of regulation on risk transfer by differentiating reinsurance and securitization in terms of their impact on reserve requirements. Our results show that different regulatory prescriptions will lead to quite different results in terms of global risk-sharing.