ABSTRACT

Since Hurricane Andrew in 1992, the pricing of reinsurance coverage for catastrophes has changed significantly. This talk will provide a brief overview of catastrophe reinsurance products and current pricing of treaty excess-of-loss coverage using the third-party catastrophe loss modeling software popular in the reinsurance industry today. Output from these models provides estimates of the entire probability distribution of losses. This detailed loss information was not previously available in the industry. As a consequence, more meaningful measures of profitability such as the reinsurer’s return on equity can be determined from the loss distribution. We discuss the general statistical ideas behind these proprietary models and examine some candidates for measures of return on equity.

This talk is based on work experience with a Chicago-based reinsurer and is intended to be accessible to students.