Abstract

In the aftermath of the 2007-2008 financial crisis, there has been criticism of mathematics and the mathematical models used by the finance industry. We answer these criticisms through a discussion of some of the actuarial models used in the pricing of credit derivatives. As an example, we focus in particular on the Gaussian copula model and its drawbacks. To put this discussion into its proper context, we give a synopsis of the financial crisis and a brief introduction to some of the common credit derivatives and highlight the difficulties in valuing some of them.

We also take a closer look at the risk management issues in part of insurance industry that came to light during the financial crisis. As a backdrop to this, we recount the events that took place at American International Group during the financial crisis. Finally, through our paper we hope to bring to the attention of a broad actuarial readership some “lessons (to be) learned” or “events not to be forgotten”.

*Senior SFI Chair