



SOCIETY OF ACTUARIES

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**Loss Given Default in the Presence of Multivariate Regular Variation.
Part 1: Introduction**

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Consider a portfolio of n obligors such as loans, corporate bonds and other instruments subject to possible default. We propose a new model for the loss given default (LGD), which takes the depth of default into consideration. A multivariate regular variation (MRV) structure is used to capture the heavy-tailedness and asymptotic dependence of losses. We derived asymptotic formulas for the upper tail of the LGD. The traditional t-distribution model and Archimedean copula model are revisited.