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Loss distributions conditional on defaults

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(Submitted on 12 Feb 2010)

The impact of default events on the loss distribution of a credit portfolio can be assessed by determining the loss distribution conditional on these events. While it is conceptually easy to estimate loss distributions conditional on default events by means of Monte Carlo simulation, it becomes impractical for two or more simultaneous defaults as the conditioning event is extremely rare. We provide an analytical approach to the calculation of the conditional loss distribution for the CreditRisk+ portfolio model with independent random loss given default distributions. The analytical solution for this case can be used to study the properties of the conditional loss distributions and to discuss how they relate to the identification of risk concentrations.

Comments: 11 pages

Subjects: **Risk Management (q-fin.RM)**Cite as: **arXiv:1002.2604v1 [q-fin.RM]**

Submission history

From: Dirk Tasche [[view email](#)]**[v1]** Fri, 12 Feb 2010 17:29:48 GMT (11kb)*[Which authors of this paper are endorsers?](#)*Link back to: [arXiv](#), [form interface](#), [contact](#).

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