

Default Clustering in Large Portfolios: Typical Events

Kay Giesecke, Konstantinos Spiliopoulos, Richard B. Sowers

(Submitted on 10 Apr 2011 (v1), last revised 4 Mar 2012 (this version, v2))

We develop a dynamic point process model of correlated default timing in a portfolio of firms, and analyze typical default profiles in the limit as the size of the pool grows. In our model, a firm defaults at a stochastic intensity that is influenced by an idiosyncratic risk process, a systematic risk process common to all firms, and past defaults. We prove a law of large numbers for the default rate in the pool, which describes the "typical" behavior of defaults.

Subjects: **Risk Management (q-fin.RM)**; Probability (math.PR); Computational Finance (q-fin.CP)

MSC classes: 91G40, 60F05, 60F10

Cite as: **arXiv:1104.1773 [q-fin.RM]**

(or **arXiv:1104.1773v2 [q-fin.RM]** for this version)

Submission history

From: Konstantinos Spiliopoulos [[view email](#)]

[v1] Sun, 10 Apr 2011 14:53:27 GMT (39kb)

[v2] Sun, 4 Mar 2012 23:19:55 GMT (38kb)

[Which authors of this paper are endorsers?](#)

Download:

- [PDF](#)
- [PostScript](#)
- [Other formats](#)

Current browse context:

q-fin.RM

[< prev](#) | [next >](#)

[new](#) | [recent](#) | [1104](#)

Change to browse by:

[math](#)

[math.PR](#)

[q-fin](#)

[q-fin.CP](#)

References & Citations

- [NASA ADS](#)

Bookmark([what is this?](#))



Science
WISE