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Nils Detering* (detering@pstat.ucsb.edu), University of California, South Hall 5505, Statistics and Applied Probability, Santa Barbara, CA 93106, and **Thilo Meyer-Brandis**, **Konstantinos Panagiotou** and **Daniel Ritter**. *An Asymptotic Model for Fire Sales*.

In this article, we propose an asymptotic model for fire sales in financial systems. Our starting point is a setup for finite financial systems which consist of institutions holding shares of certain assets and capital. Caused by an initial shock and described by some exogenous sale function institutions start selling some of their shares. This provokes a decline in the asset price described by some price impact function and more institutions might be forced to sell assets. We describe the final state of the system by a fixed point equation. Under mild regularity assumptions, we can then consider the limit as the size of the system tends to infinity and we derive explicit analytic results for the final price impact (which is of interest also to investors outside the considered financial system) and the number of finally defaulted institutions. Moreover, we characterize resilient and non-resilient systems and determine capital requirements to make systems resilient. Our results allow to analyze the trade-off between objectives for single firm risk management (diversification) and those for systemic risk management (non-overlapping portfolios). (Received September 20, 2018)