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Tomoyuki Ichiba* (ichiba@pstat.ucsb.edu), South Hall 5607A Department of, Statistics and Applied Probability, University of California, Santa Barbara, CA 93106. *Interactions in the system of interbank lending.*

We consider diffusion models of the interbank lending system. The lending preferences from one bank to another characterize stability/instability of the system, in particular, multiple defaults of banks. These preferences can be seen as consequences of optimizations of each bank in the system. We examine boundary behaviors of the multiple defaults and propose financial health indicators. In order to understand effects of large-scale interactions among banks, we also discuss a process-level large deviation principle for the system and propagation of chaos result. (Received September 16, 2013)