1154-60-1690 **Andrey Sarantsev***, 1664 N Virginia St, Reno, NV 89557, and **Tomoyuki Ichiba** and **Michael Ludkovski**. *Dynamic Contagion in a Banking System.*

We consider a dynamic model of interconnected banks. New banks can emerge, and existing banks can default, creating a birth-and-death setup. Microscopically, banks evolve as independent geometric Brownian motions. Systemic effects are captured through default contagion: as one bank defaults, reserves of other banks are reduced by a random proportion. After examining the long-term stability of this system, we investigate mean-field limits as the number of banks tends to infinity. Our main results concern the measure-valued scaling limit which is governed by a McKean-Vlasov jump-diffusion. The default impact creates a mean-field drift, while the births and defaults introduce jump terms tied to the current distribution of the process. Individual dynamics in the limit is described by the propagation of chaos phenomenon. In certain cases, we explicitly characterize the limiting average reserves. (Received September 16, 2019)