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Study of construction and empirical of the credit risk contagion models among the Internet financial platforms. (Chinese. English summary) Zbl 07448811

Summary: The credit risk contagion of Internet financial platforms is an important content of Internet financial risk supervision. First, this article defines the Internet financial platform, clarifies the research object, and studies the contagion path of its credit risk. Then based on the complex network theory and the contagious disease dynamics theory, the business characteristics of the Internet financial platform are combined to construct an SEIR model of credit risk transmission among Internet financial platforms with time-lag. The influence of susceptible input rate, platform correlation, contagion recovery rate, platform elimination rate, contagion latency and immune failure period on credit risk contagion behaviors between Internet financial platforms is analyzed through basic regeneration numbers; the influence degree of each variable is analyzed through simulation. Finally, from the perspective of cutting off the contagion path, countermeasures and suggestions are proposed to prevent and control credit risk contagion among these platforms based on controlling the contagion source, monitoring the infectious medium, improving immunity, and prolonging the latency.

MSC:
91G45 Financial networks (including contagion, systemic risk, regulation)
91G40 Credit risk

Keywords:
Internet financial platform; credit risk transmission; SEIR model with time-lag; simulation analysis