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Investigation on financial crises with the
negative-information-propagation-induced model

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1. By building negative-information-propagation-induced model, we investigate the relationship between the generation of financial crises and propagation effects of negative information about potential deterioration of economic situation in group of investors.
2. We introduce the target critical value of financial crises and the discrimination parameter that judges whether or not negative information will be propagated extensively in group of investors.
3. By comparing the ratio of the total number of investors after long enough time to the total number of investors at some time as initial time with the target critical value of financial crises, we can real-time monitor the economic situation of financial crises.
4. The results of theoretical analysis and numerical simulation show the effectiveness of governments in preventing financial crises from the viewpoint of the negative-information-propagation-induced model.

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