NORD/LB
Die norddeutsche Art.

Feedback to Business Cases of EU Horizon 2020 FIN-TECH project

Dr. Oliver Lorenz, 04.12.2019

Finanzgruppe

Network based scoring models to improve credit risk management in peer to peer lending platforms

Scope	▪ Scope is restricted to P2P lending. Aren‘t the results also (partly) useful for classic bank loans?
Methodology	▪ The validated methodology is a bit mixed up between network analysis and machine leaning (pd prediction). ▪ Outliers are not filtered. Maybe a manual cleaning process would lead to more correct input data and also avoid overfitting. ▪ Have regulation techniques (like punishing terms for logit regression) been used? ▪ The application of network measures seems to be quite sophisticated.
Validity	▪ Is the sample size (about 4500) large enough to produce accurate results? No information is given how this sample was divided into training sample, validation sample, and test sample. Probably the same dataset was used like in use case II, then 4500 would only be the training subset out of 15 K. How was this selected?
Conclusion	▪ The minimal spanning tree seems to be a good visualization for concentration risk. Maybe it wold be possible to derive a simple algorithmic network areas with high risk in order to obtain an easy indicator for risky loans. ▪ I did not get the clue how the distance measure was used in the ml algorithm (additional input value?)

Factorial Network Models To Improve P2P Credit Risk Management

Scope	▪ Scope is (like use case I) restricted to P2P lending. Aren‘t the results also (partly) useful for classic bank loans? ▪ The model described shall not only distinguish between ‘good’ and ‘bad’ borrowers but also be a early warning system.
Methodology	▪ The discussion of the validated methodology starts with the focus on factor network based segmentation. ▪ The connection to the application of the clusters onto the regression could be clearer.
Validity	▪ The sample size (about 15000) seems to be significant. This sample was divided into 70% training sample, no validation sample, and 30% test sample.
Conclusion	▪ Could the results from the factor segmentation be helpful for the explanation of the result?

Spatial regression models to improve P2P credit risk management

Scope	▪ Scope is (like use case I and II) restricted to P2P lending. Aren't the results also (partly) useful for classic bank loans?
Methodology	▪ The methodology relies on a broad set of assumptions. Were they verified? ▪ The idea behind seems very promising.
Validity	▪ Difficult to give feedback at this point, more evidence about the validity of the assumptions made would be helpful.
Conclusion	▪ It's not completely clear, what is new according to the work of Calabrese et al. (2017).