

Clustering financial institutions based on Wasserstein distance

Wednesday, 3 August 2022 17:00 (20 minutes)

Financial institutions submit data on their credit portfolios to regulators. An individual institution can be identified with a distribution that is representative of its respective credit portfolio. We are interested in finding representative clusters of financial institutions based on the notion of Wasserstein barycenter. A particular challenge arises from missing data since financial institutions are subject to different regulatory requirements. This leads us to establish a form of the k-means clustering algorithm in Wasserstein space which can deal with missing coordinates.

This is based on joint work with Julio Backhoff and Mathias Beiglböck.

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Session Classification: Session A2 Stochastics

Track Classification: Stochastics