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## Sample autocovariances of random-coefficient AR(1) panel model

*Joint with*

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We study the asymptotic distribution of sample covariances computed from  $N \times T$  panel data, comprising  $N$  independent copies of a random-coefficient AR(1) time series of length  $T$ . We show that sample covariances may have a variety of stable and non-stable limits depending on how the density function of a random autoregressive coefficient behaves near the unit root and how  $N$ ,  $T$  increase mutually. The obtained results complement the paper [1], where we have studied the asymptotic distribution of the sample mean for the same random-coefficient AR(1) panel model.

## References

- [1] V. Pilipauskaitė, D. Surgailis, Joint temporal and contemporaneous aggregation of random-coefficient AR(1) processes, *Stochastic Process. Appl.* **124** (2014), 467–483.