Functional coefficient autoregressive models with application to financial time series

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Autocorrelation in financial returns is a well-documented empirical phenomenon. Although globally weak, this feature can become important locally. In particular, using FCAR type models, typical findings are higher autocorrelations in periods of low activity. The masters thesis will investigate several specifications that have been proposed for the functional coefficient, as well as a nonparametric estimator, and apply them to financial returns. The functional coefficient may depend alternatively on volume, volatility, or simply time. The hope is to learn something about the data generating mechanism of the bivariate volume-return process and the underlying economics.