

R exercises: week 6

FINANCIAL ECONOMETRICS

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CHAPTER 13: Estimation of the dynamic regression model

1. Inspect carefully the R file `estimate_REG_II.R`, which contains code to estimate the parameter-driven regression model¹. Then do the following:
 - Estimate the dynamic regression model by indirect inference for the series contained in the datasets `xt.txt` and `yt.txt`. Consider $H = 50T$.
 - Estimate the dynamic regression model of the previous question using only 2 lags of the autocovariance instead of 15. Comment on the results.
2. Consider the code in `estimate_OD_reg.R` to estimate the observation-driven regression model. Estimate the dynamic regression model using weekly log-returns of IBM as y_t and weekly log-returns of the S&P 500 index as x_t . Consider data from 2000 to 2019. Plot the estimated β_t and comment the results.

¹See also the Lecture Notes for a detailed explanation of the code