

Exercise 6

Simon A. Broda

1. (a) In the file `sp500.wf1`, compute the historical 1% VaR using `@quantile`. Note that this uses the entire sample, rather than the last m returns.
(b) Determine the Normal VaR.
(c) Determine the VaR based on a GARCH(1, 1) model with Normal innovations, and with standardized t innovations.
(d) Make a plot with your VaR estimates overlaid on the negative log returns.
(e) Test your VaR forecasts for correct unconditional coverage, independence, and correct conditional coverage.