Estimating Value at Risk with the Kalman Filter

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VaR estimation

Goal

In this project, the goal is to apply one technique of risk management which measures as a percent the maximum loss which is likely to be exceeded on the portfolio, given a certain probability and time horizon within a given confidence level under assumed market conditions. Using Value-at-Risk, VaR, will estimate the β's of the assets of the portfolio with a Kalman Filter. Overall, the results showed more market sensitivity compared to historical simulation, depending on the assets of the portfolio or on the type of fund itself, for instance a hedge fund.