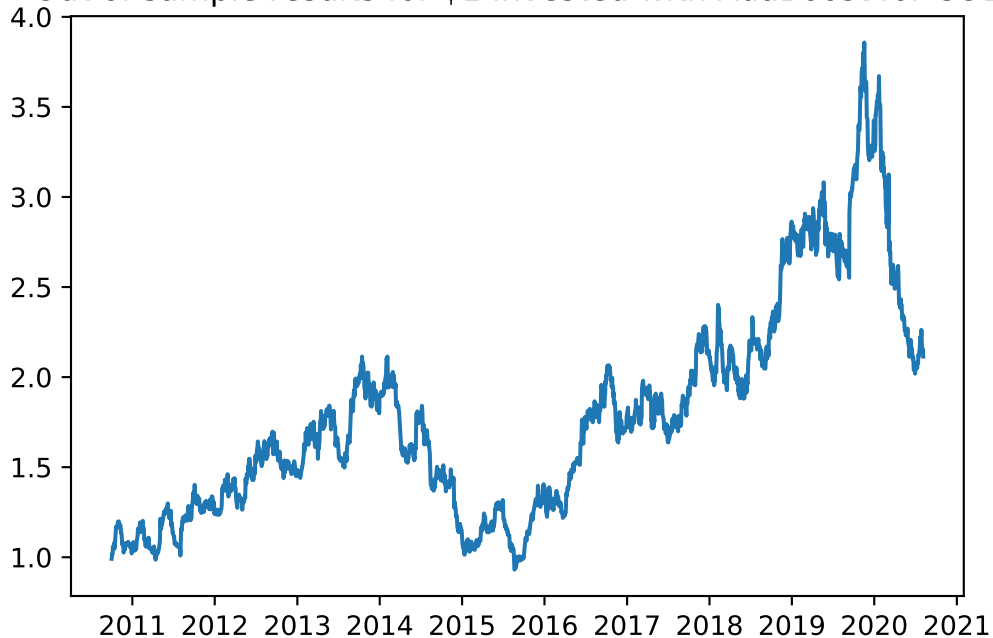


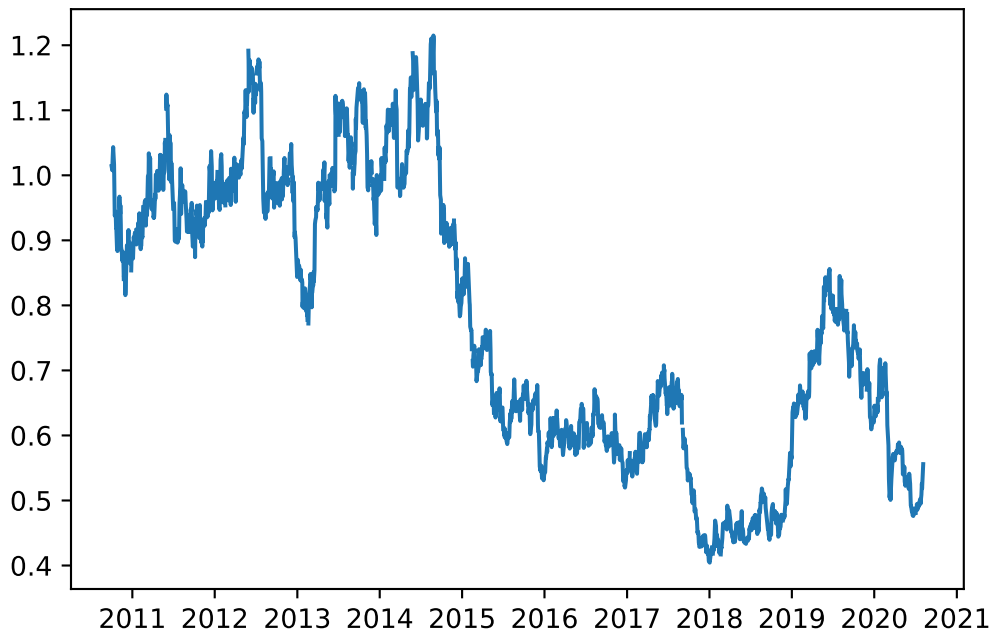
Out of sample results for \$1 invested with AdaBoost for CO1



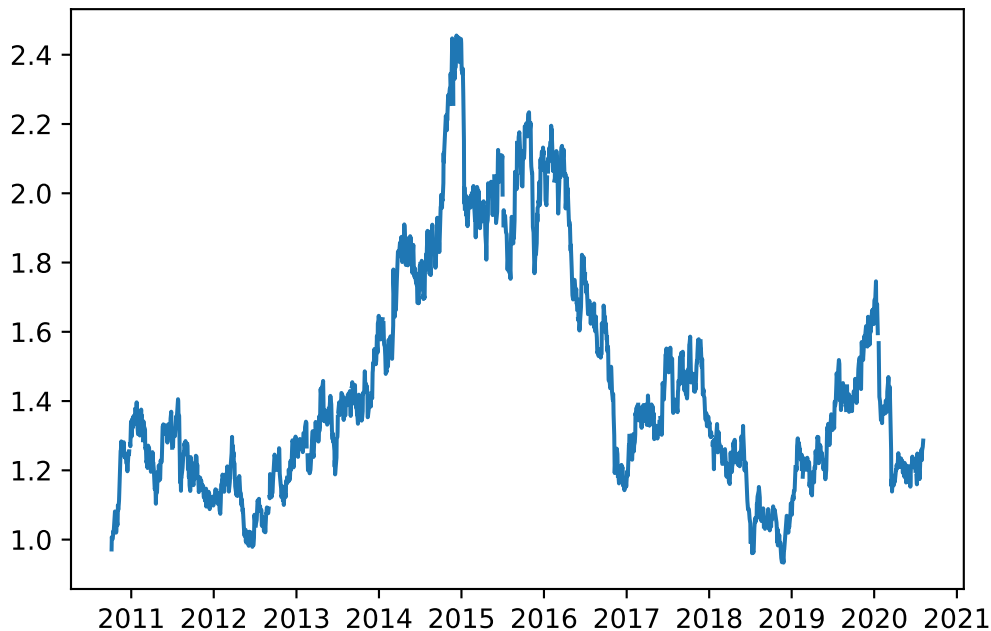
Out of sample results for \$1 invested with AdaBoost for SP1



Out of sample results for \$1 invested with AdaBoost for TY1



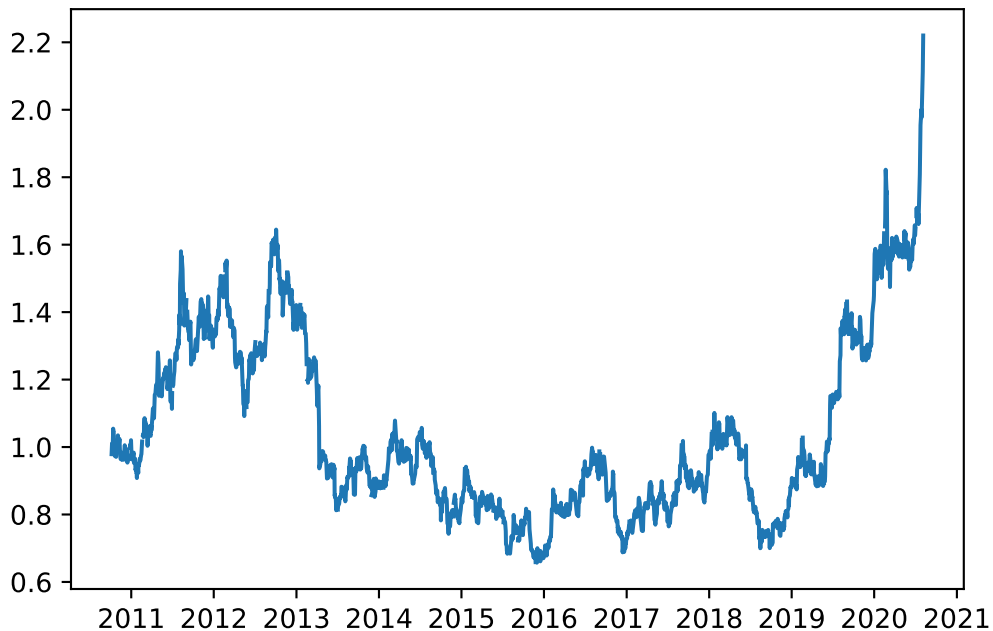
Out of sample results for \$1 invested with AdaBoost for HG1



Out of sample results for \$1 invested with AdaBoost for NQ1



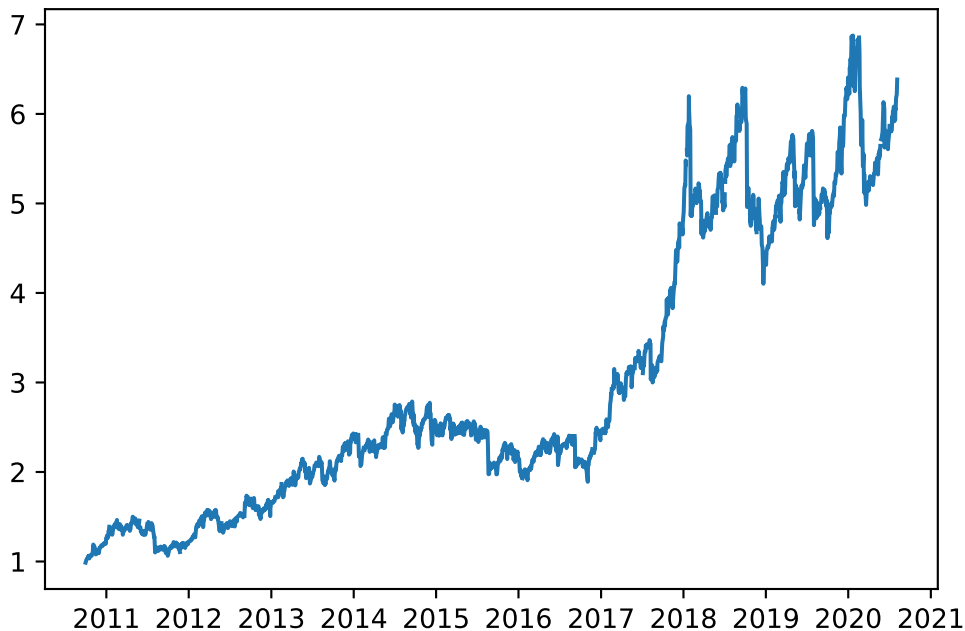
Out of sample results for \$1 invested with AdaBoost for GC1



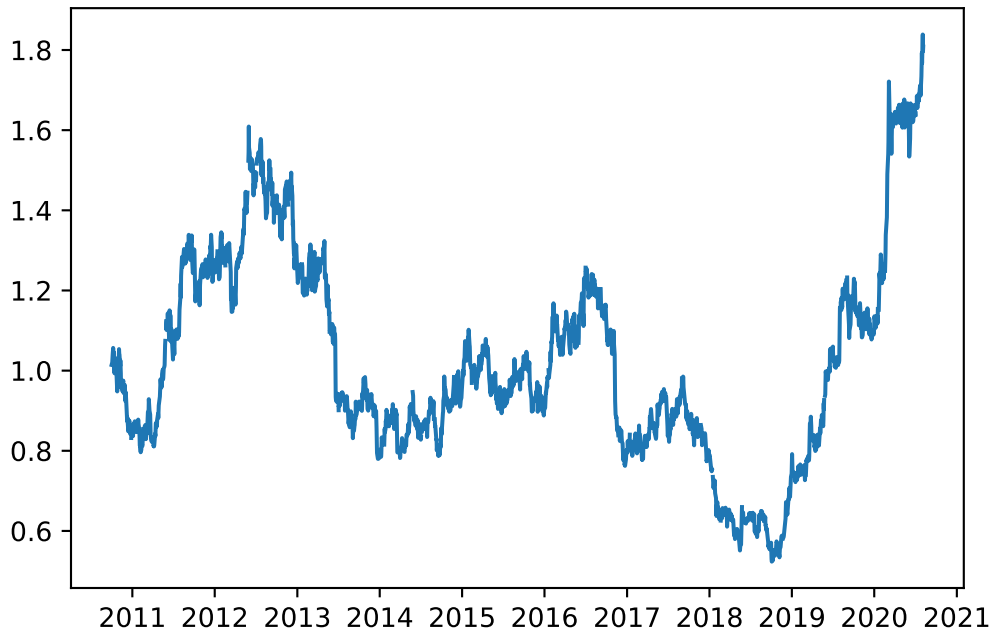
Out of sample results for \$1 invested with Random Forest for CO1



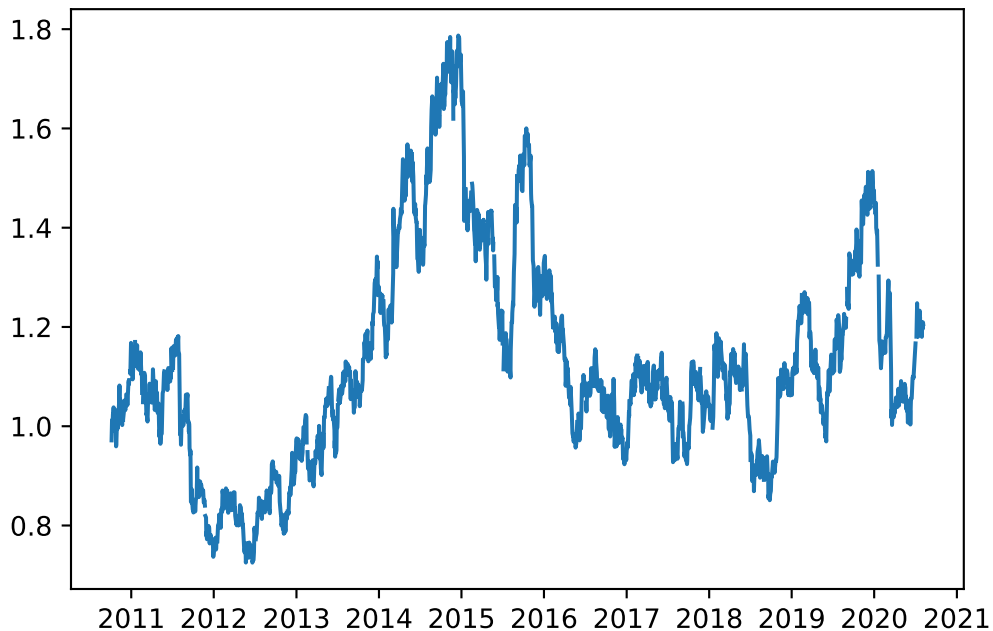
Out of sample results for \$1 invested with Random Forest for SP1



Out of sample results for \$1 invested with Random Forest for TY1



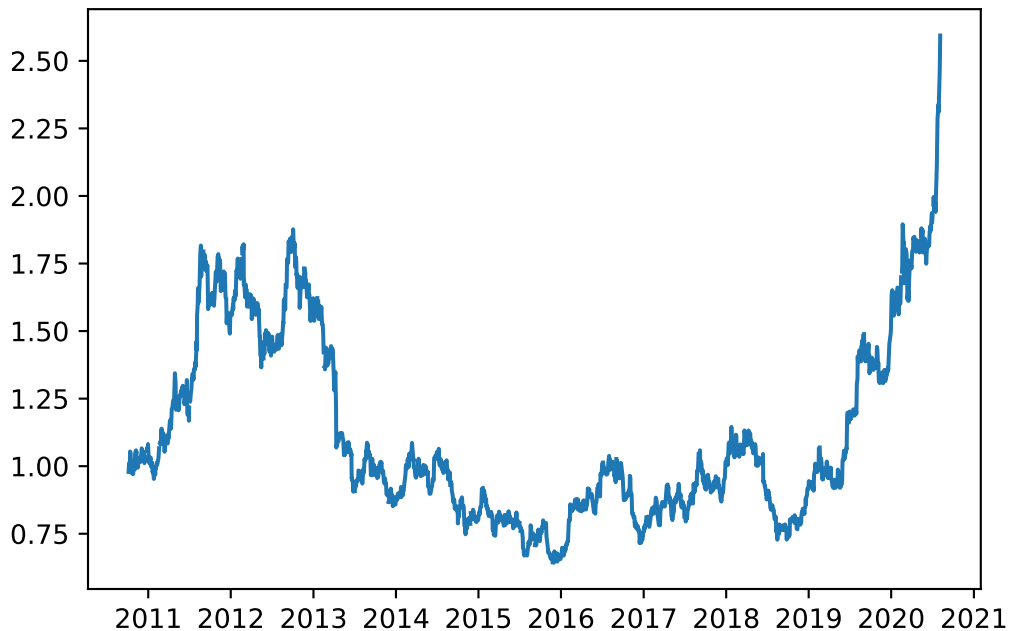
Out of sample results for \$1 invested with Random Forest for HG1



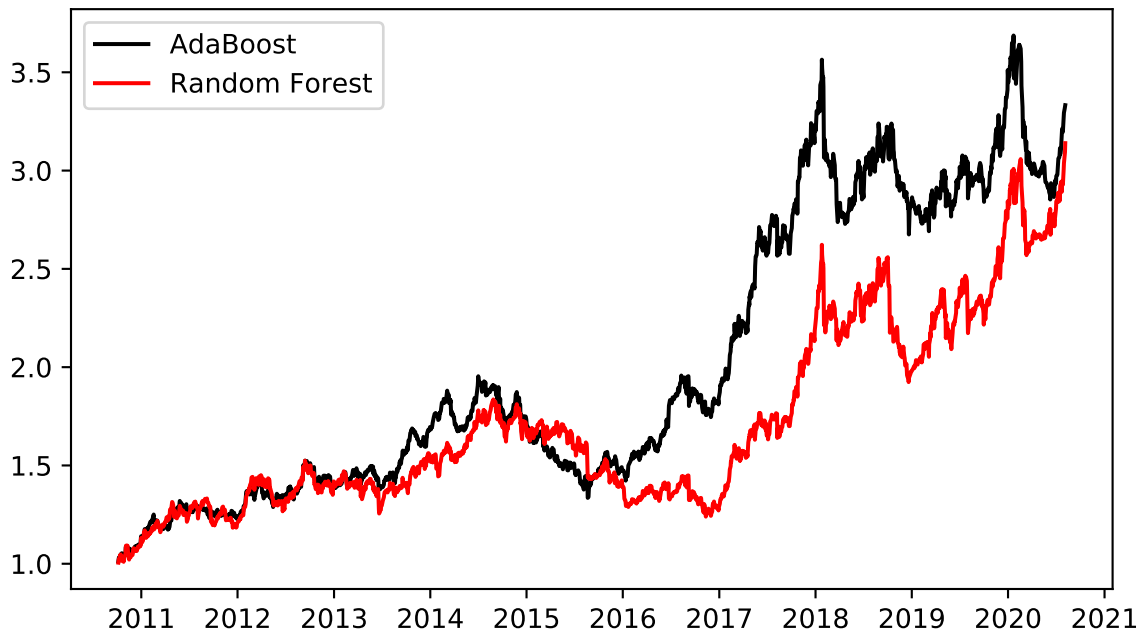
Out of sample results for \$1 invested with Random Forest for NQ1



Out of sample results for \$1 invested with Random Forest for GC1



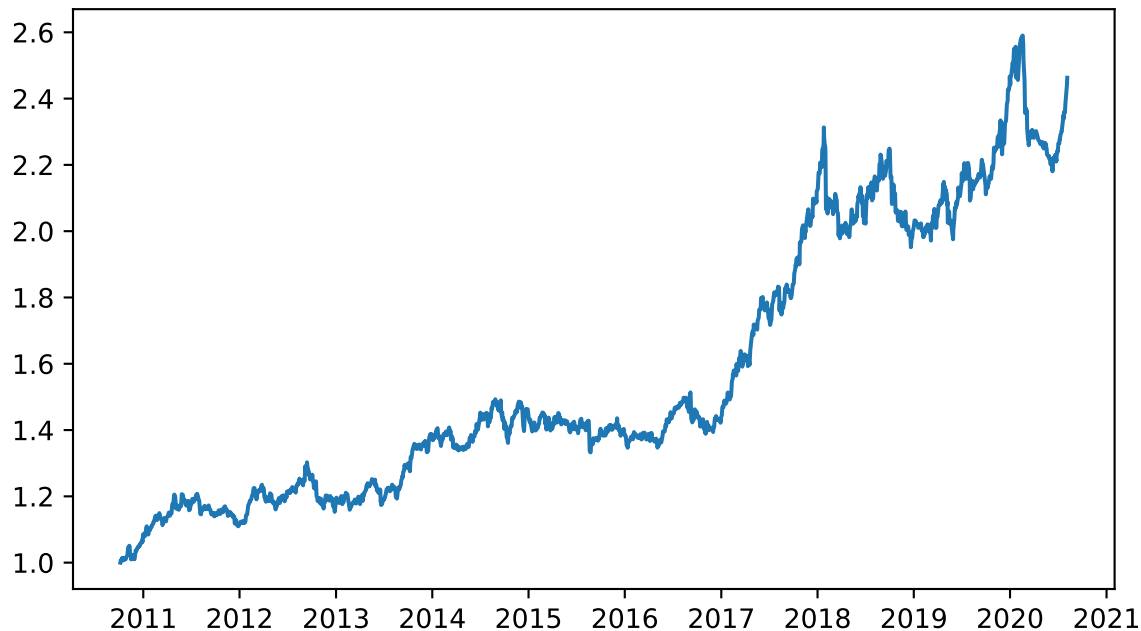
AdaBoost and Random Forest out of sample



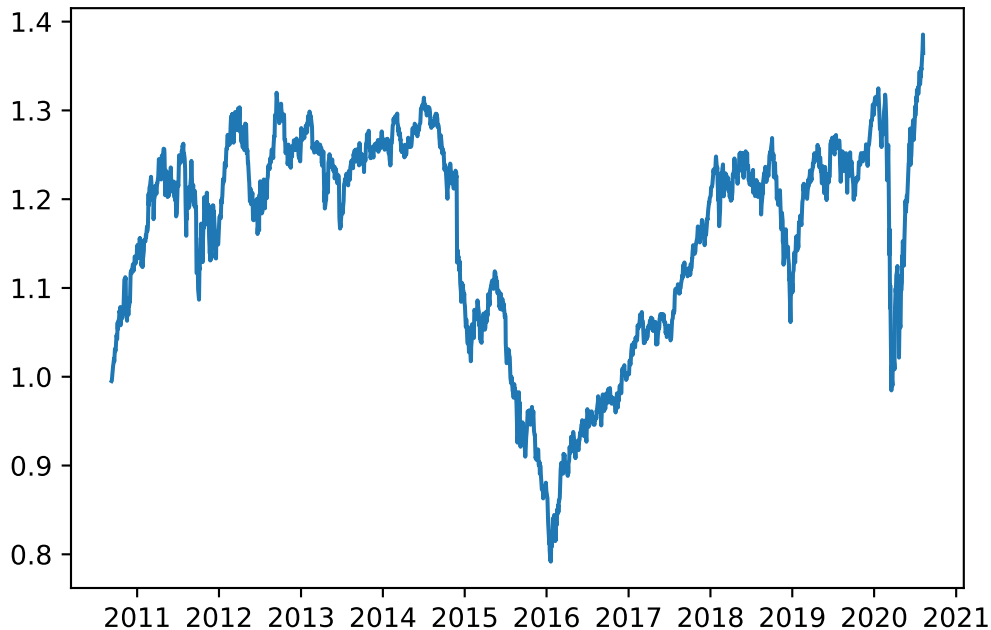
Average of ML models, weight1= 0.5, weight2= 0.5



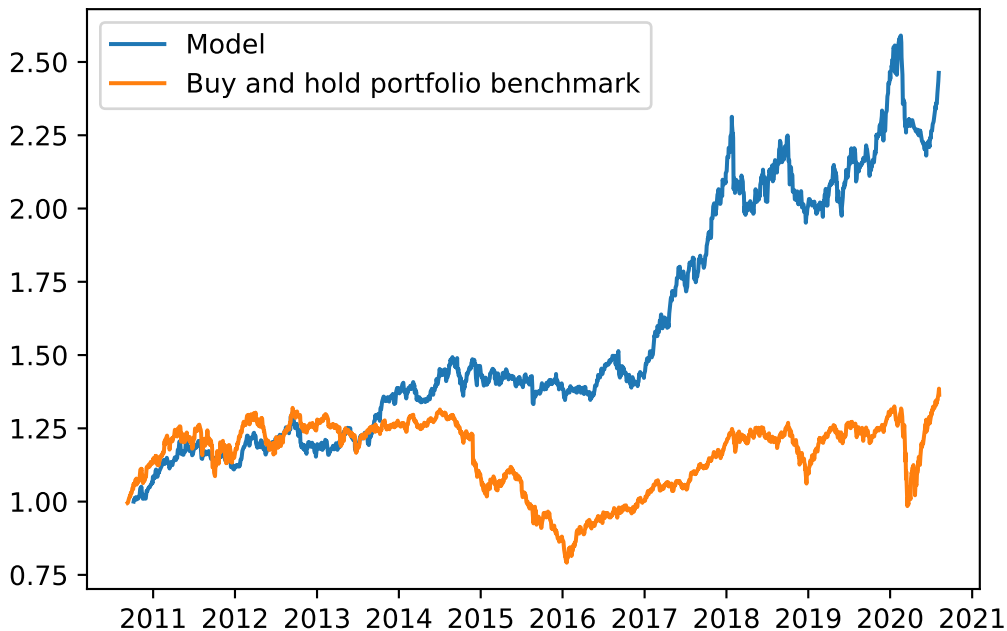
Portfolio: 50% in ATS optimization + 25% in AdaBoost + 25% in Random Forest



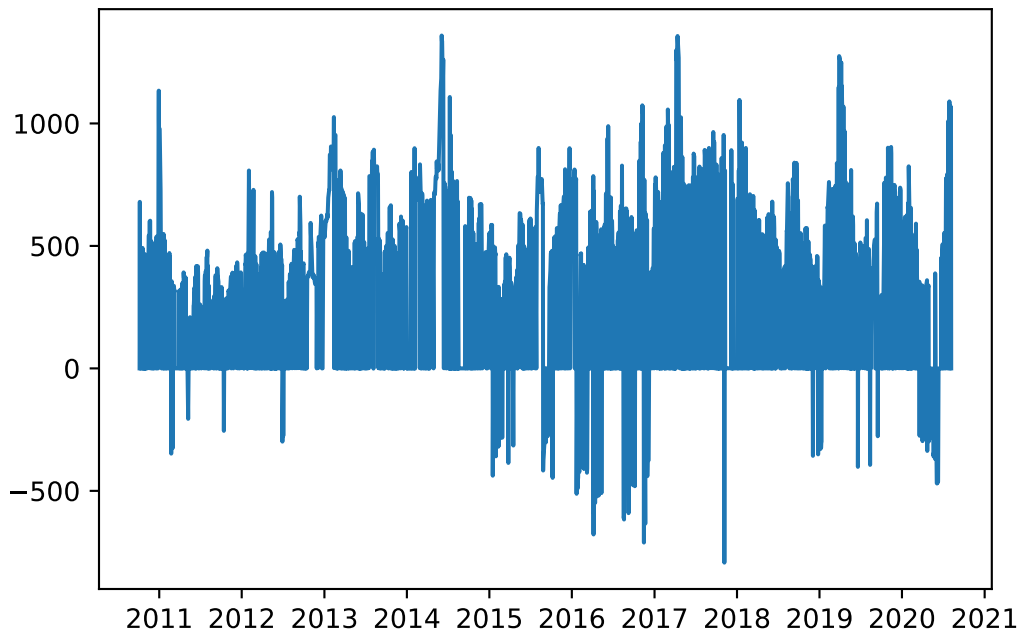
Buy and Hold portfolio of futures contract, rebalanced daily



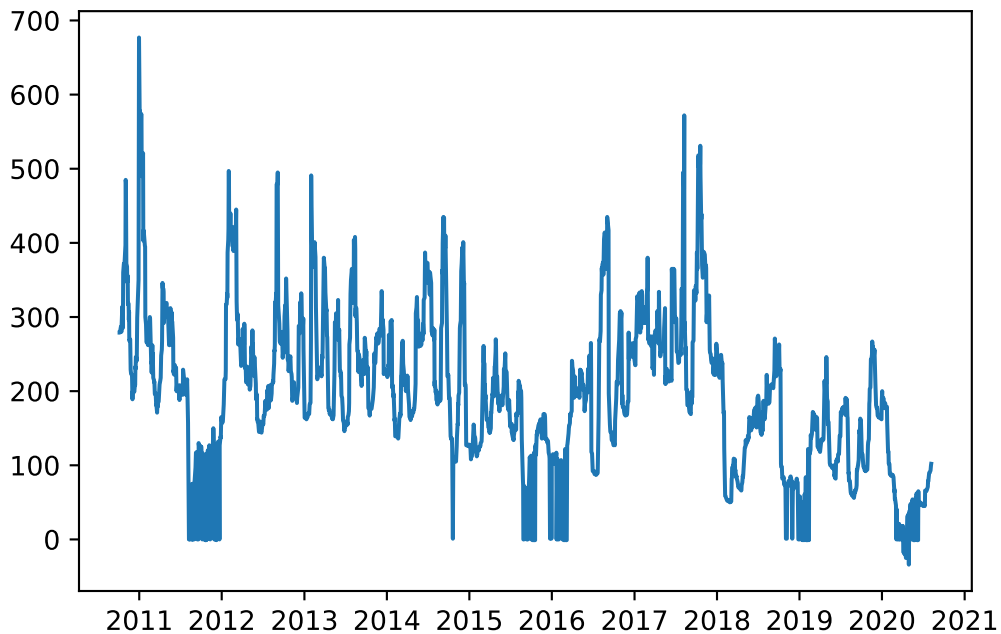
Model vs Benchmark of Buy and Hold



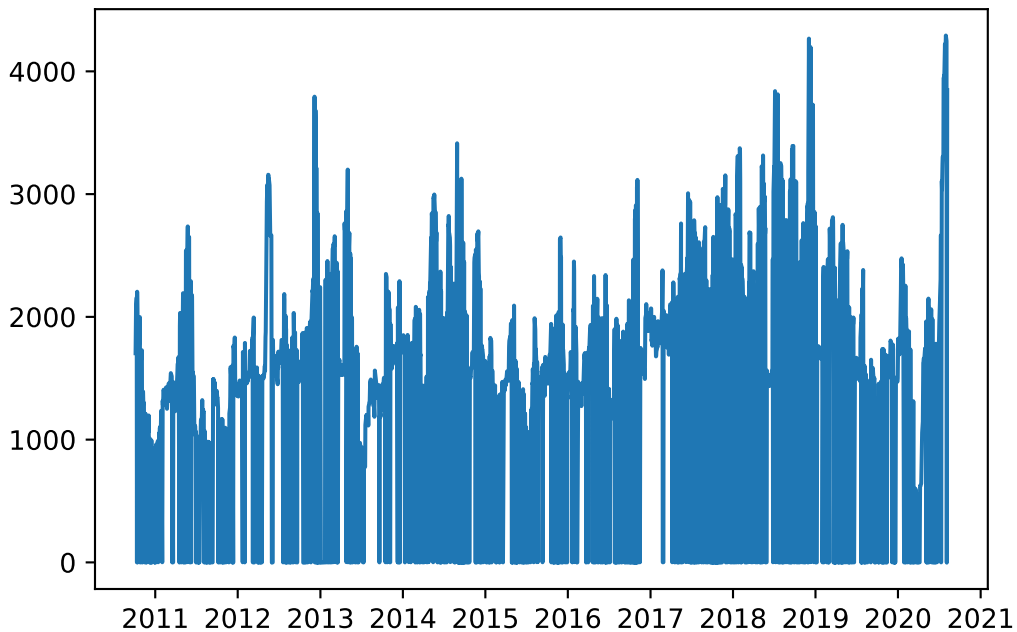
Positions CO1



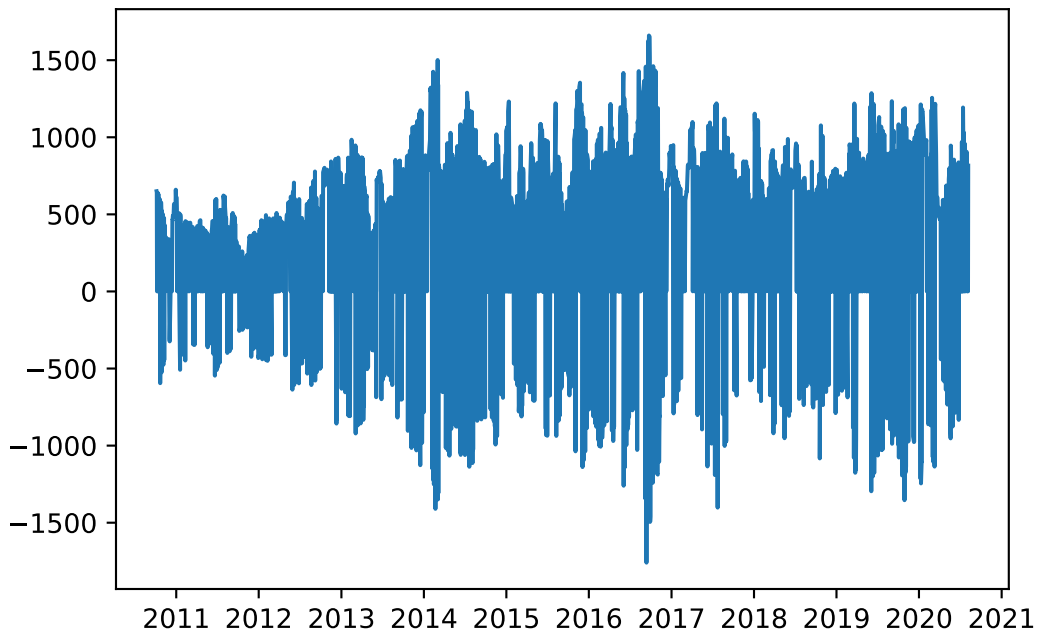
Positions SP1



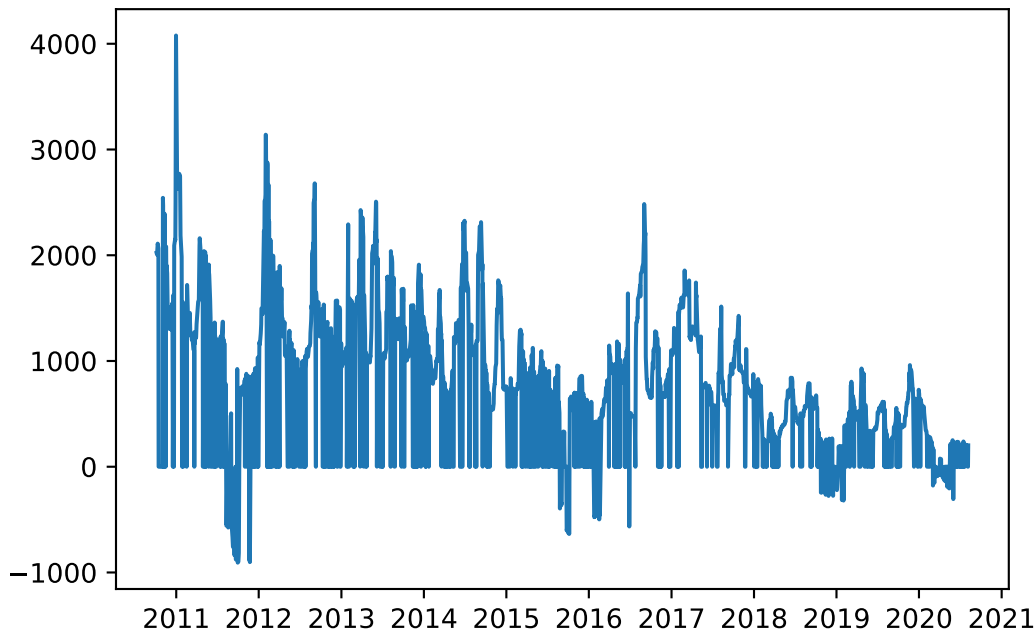
Positions TY1



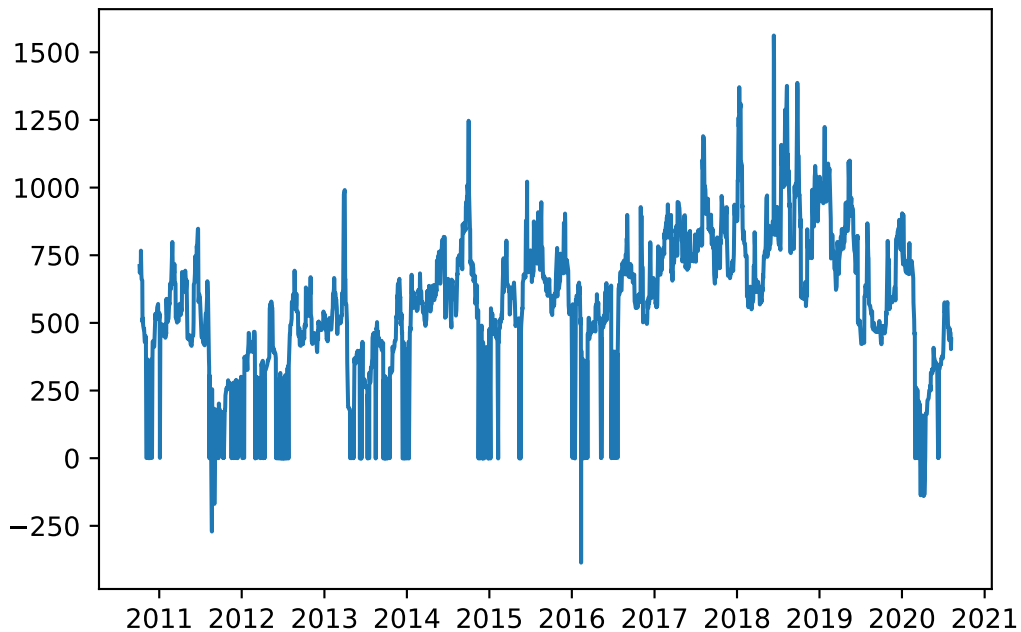
Positions HG1



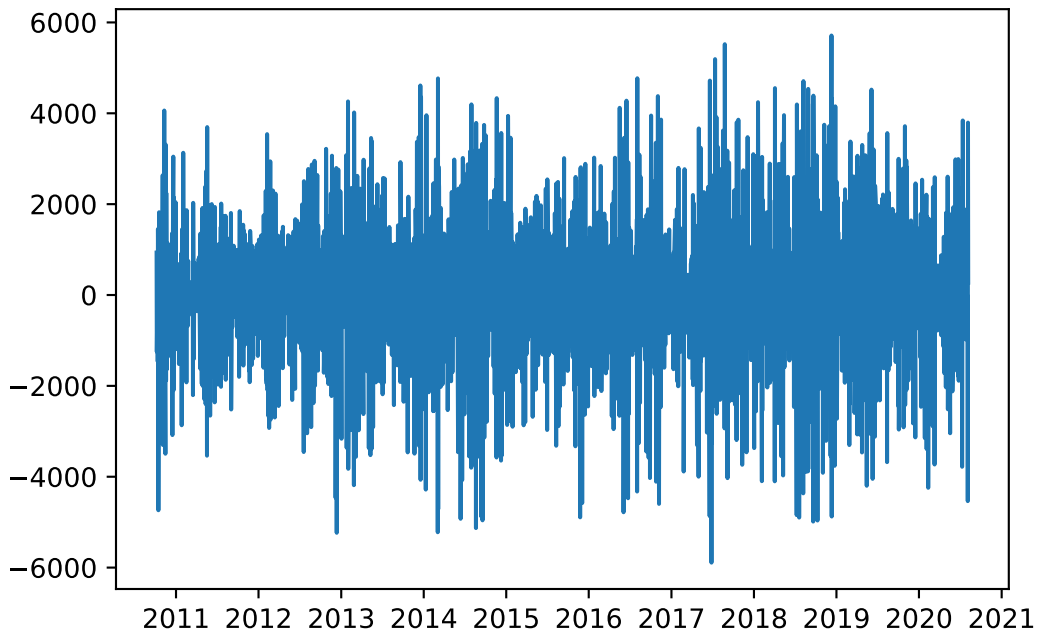
Positions NQ1



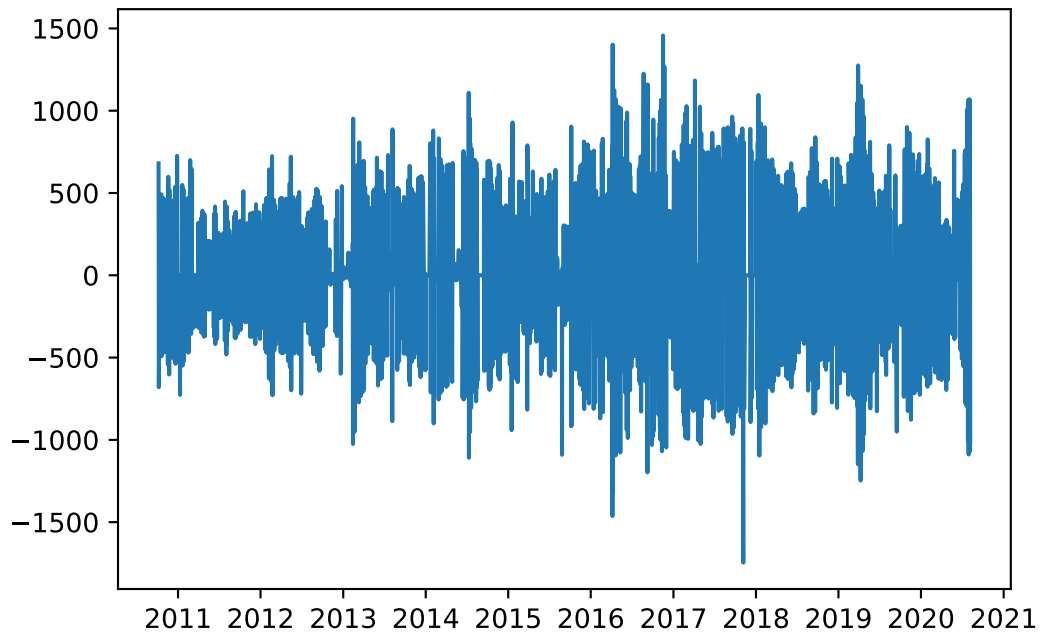
Positions GC1



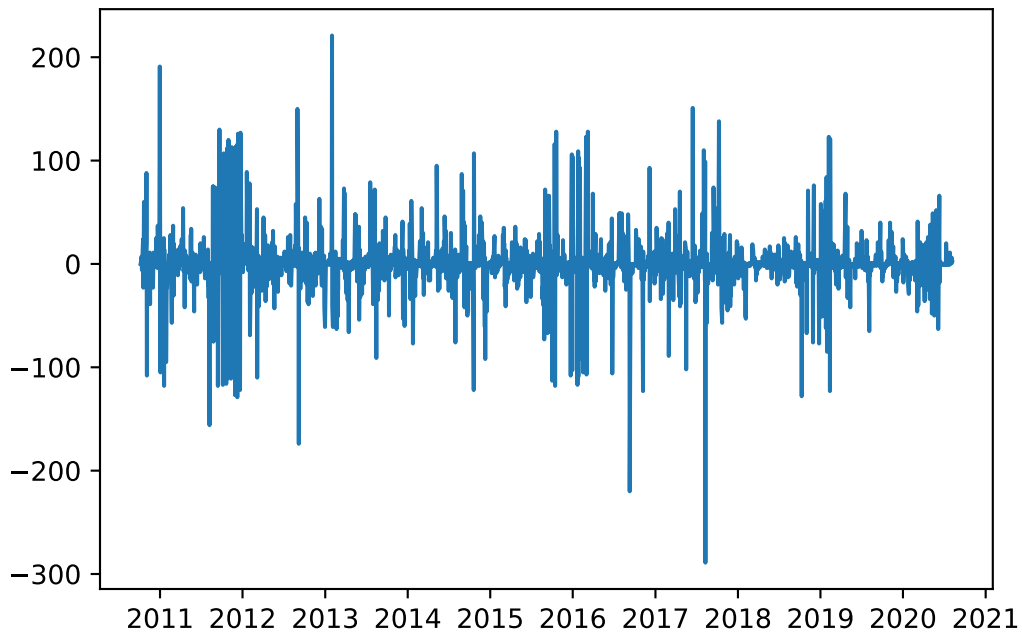
Total lots trades



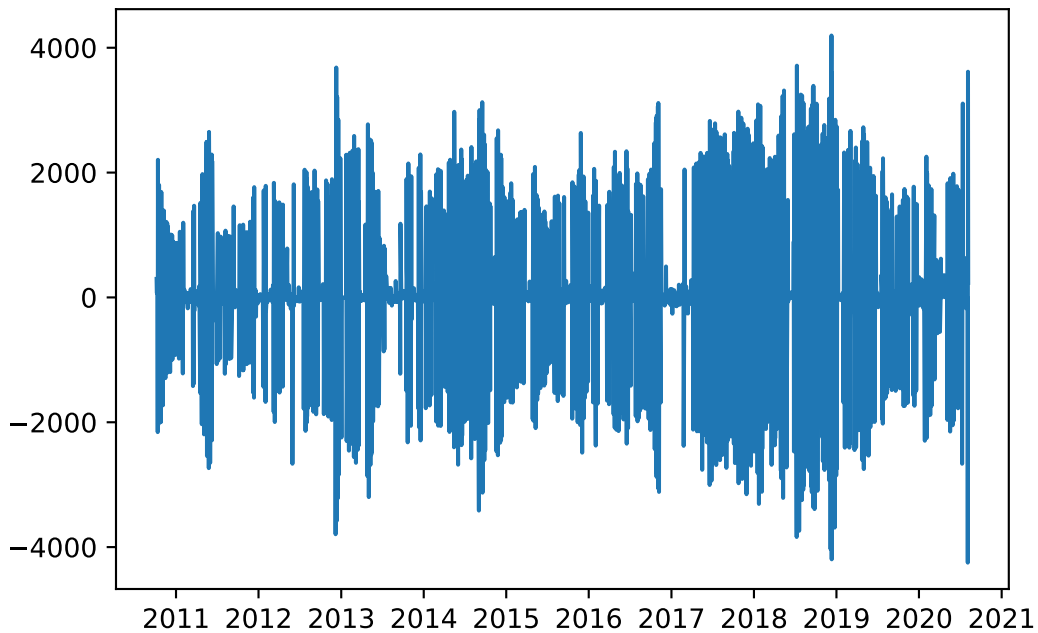
Trades CO1



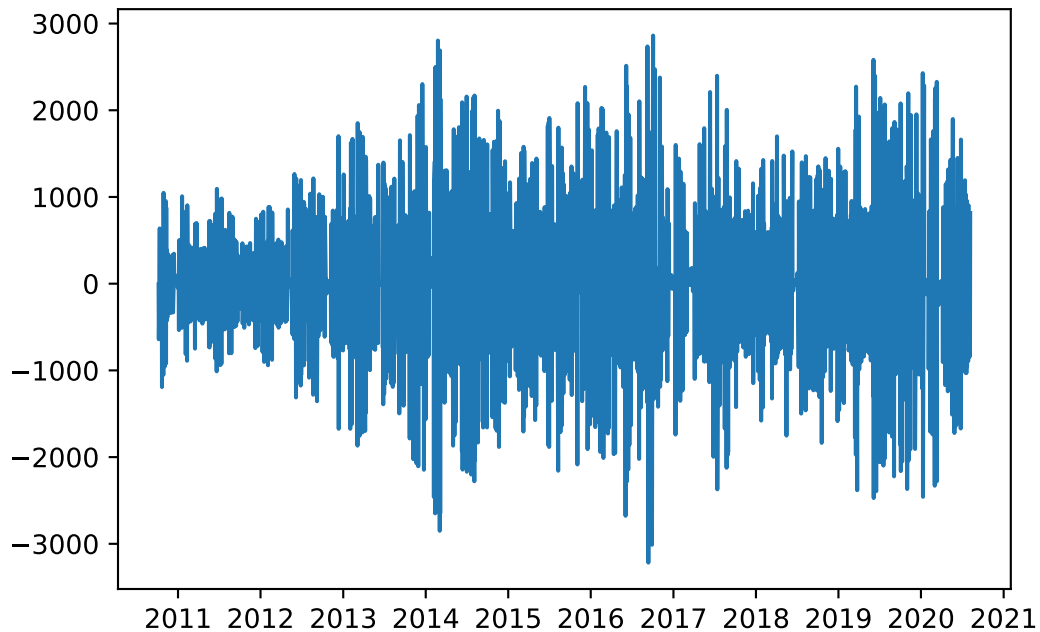
Trades SP1



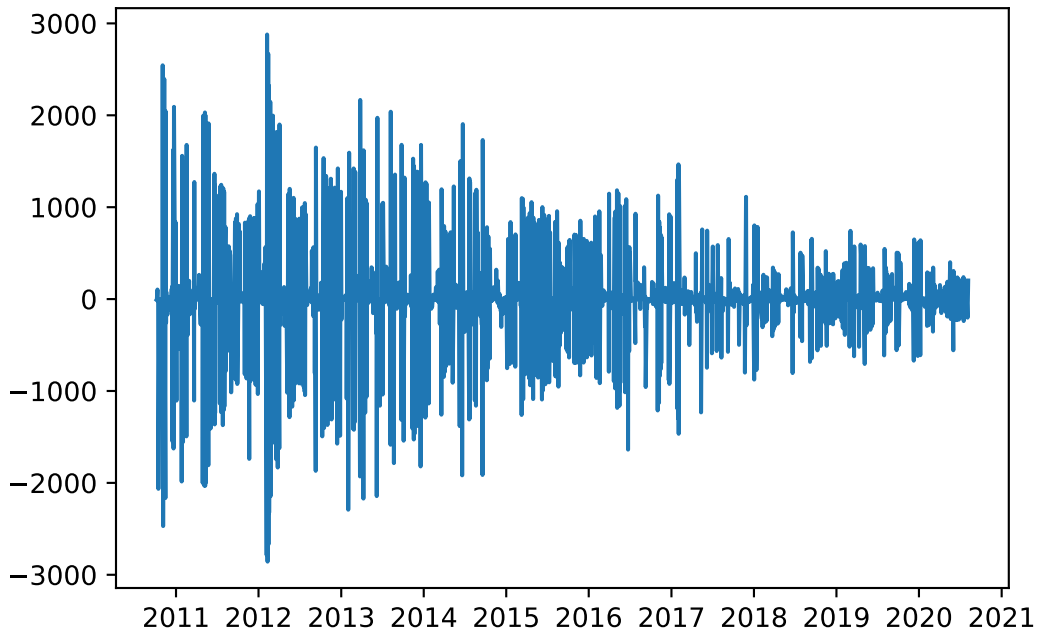
Trades TY1



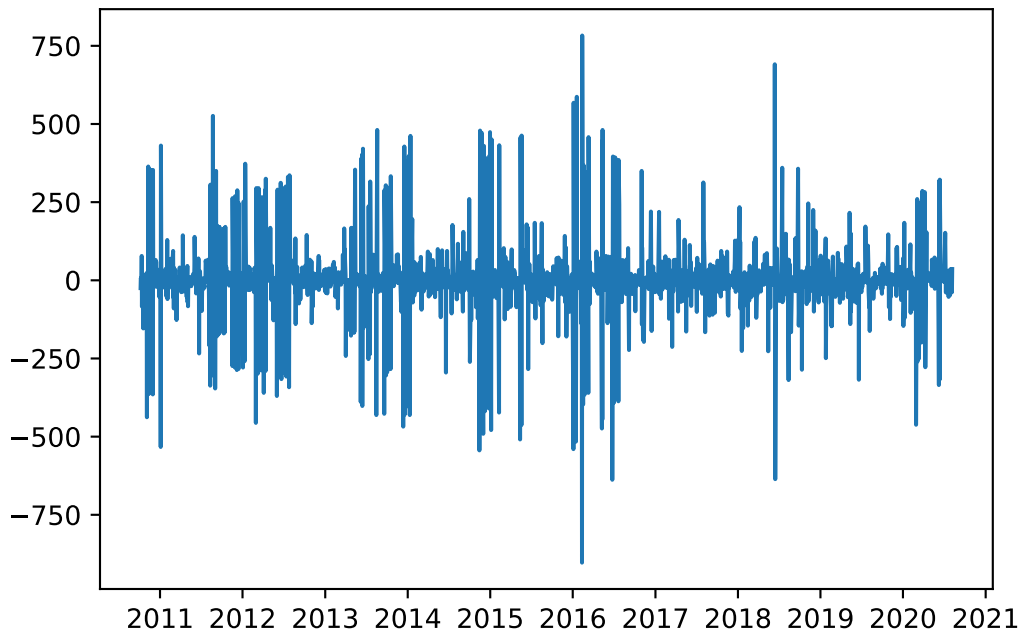
Trades HG1



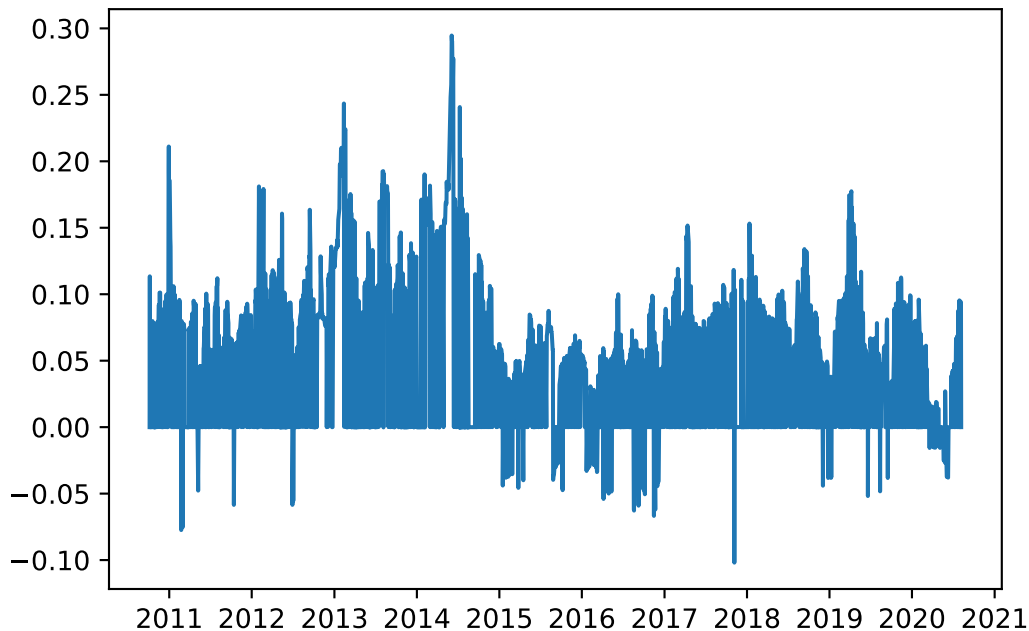
Trades NQ1



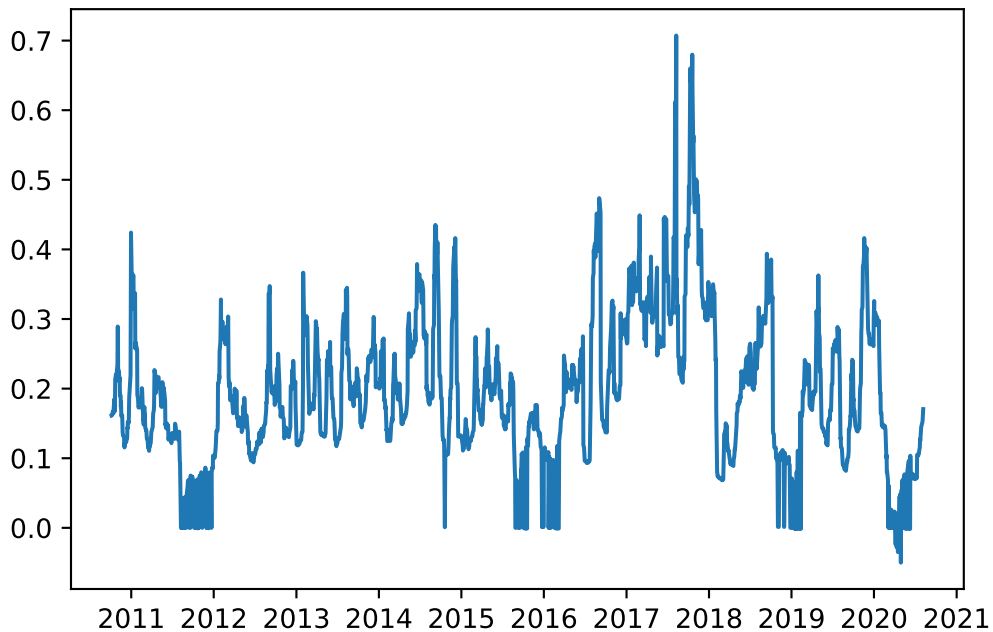
Trades GC1



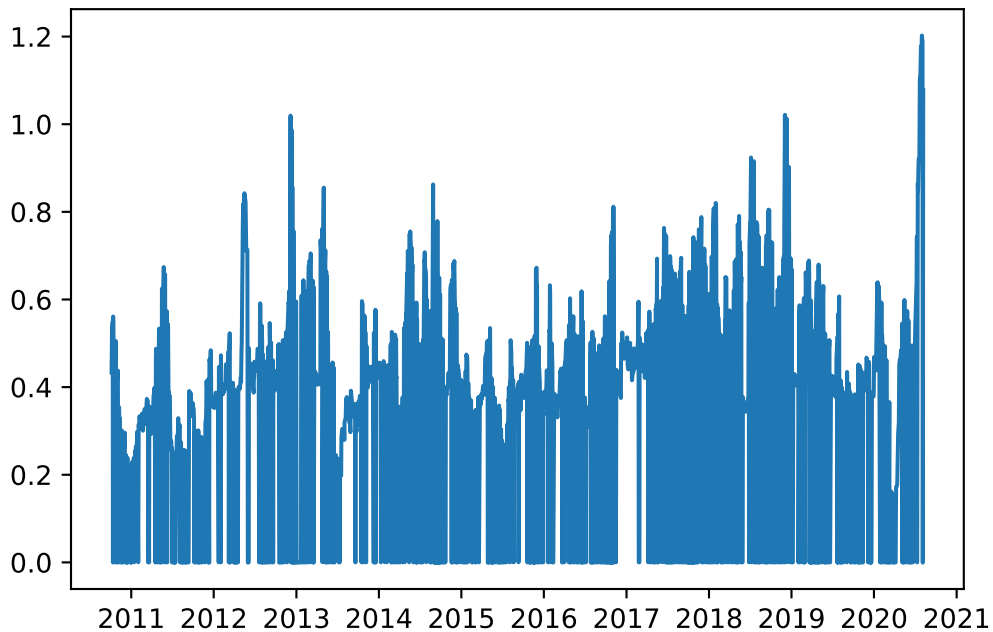
Leverage CO1



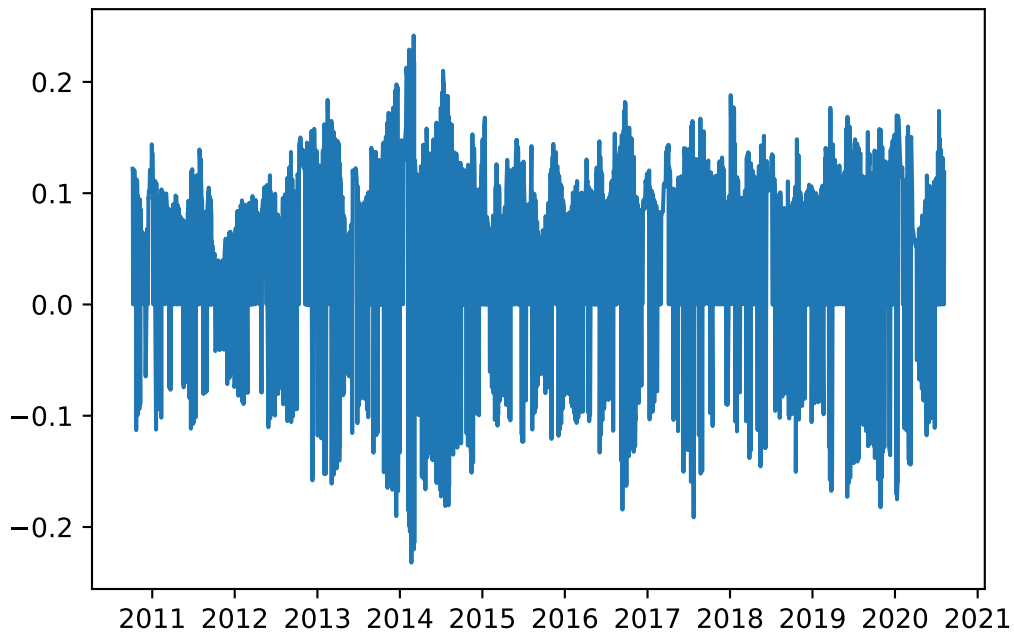
Leverage SP1



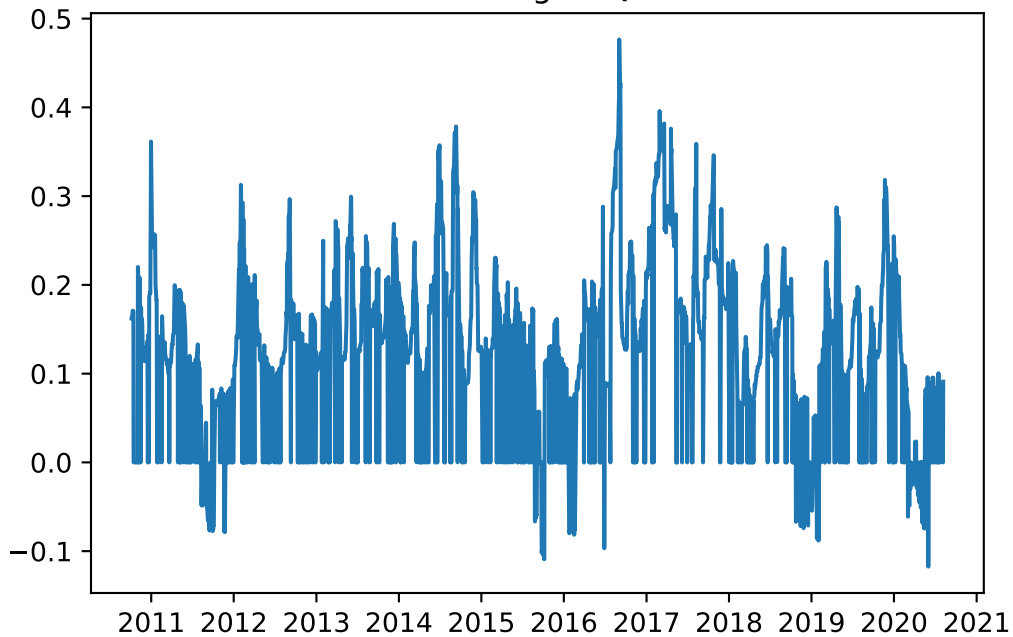
Leverage TY1



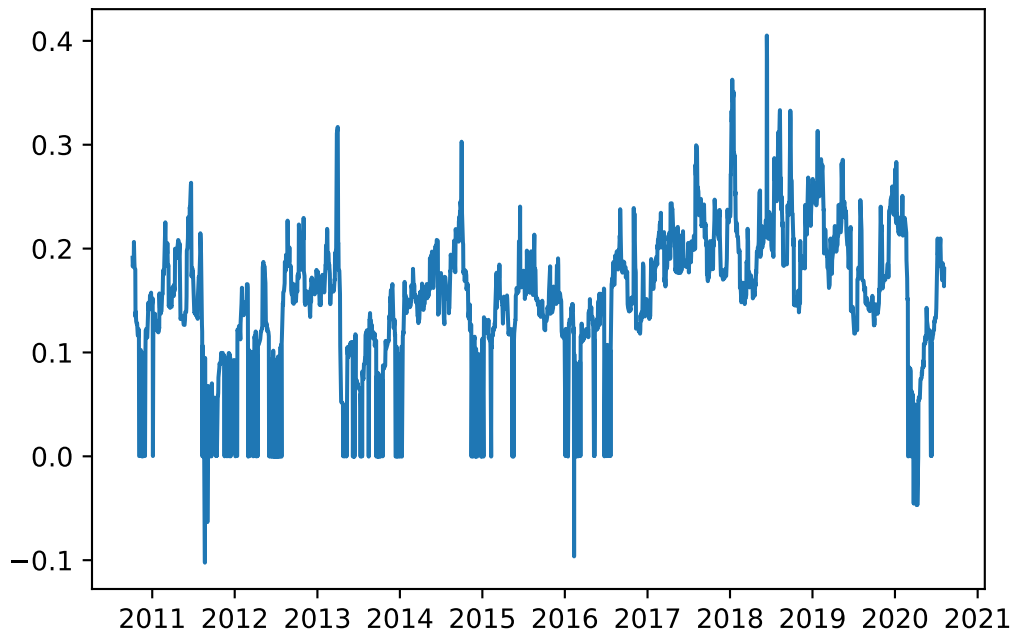
Leverage HG1



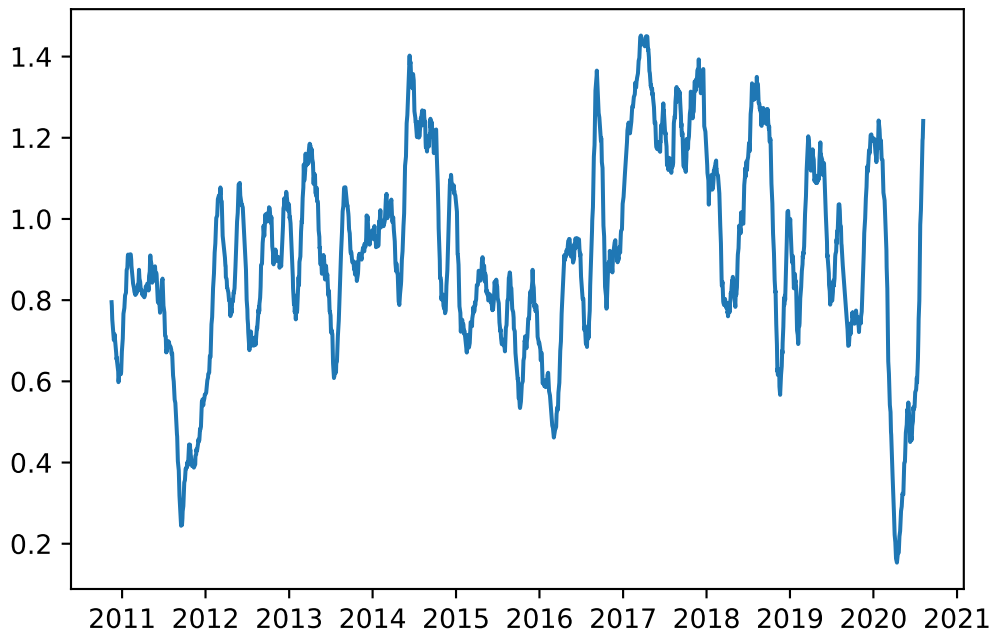
Leverage NQ1



Leverage GC1



Total leverage



Transaction costs as a percentage of AUM

