

Data processing

Training period 2011-08-09 - 2015-07-31; Testing period 2015-08-03 - 2016-10-07

Original number of stocks: 172; Macro: SPY

Stocks removed after liquidity and outlier processing: 116

Stocks removed after correlation processing: 0

Top correlated stocks with the market ['ETW', 'EOS', 'BIF', 'NIE']

Lowest correlated stocks with the market ['NQP', 'PML', 'VKQ', 'MUA', 'NBB']

Stocks with highest historical CVAR-5.0%:

['GRBK', 'AXDX', 'JKS', 'PACB', 'GERN']

Stocks with lowest historical CVAR-5.0%:

['VKQ', 'MUI', 'NBB', 'IQI', 'NQP']

Monte Carlo model and Optimization

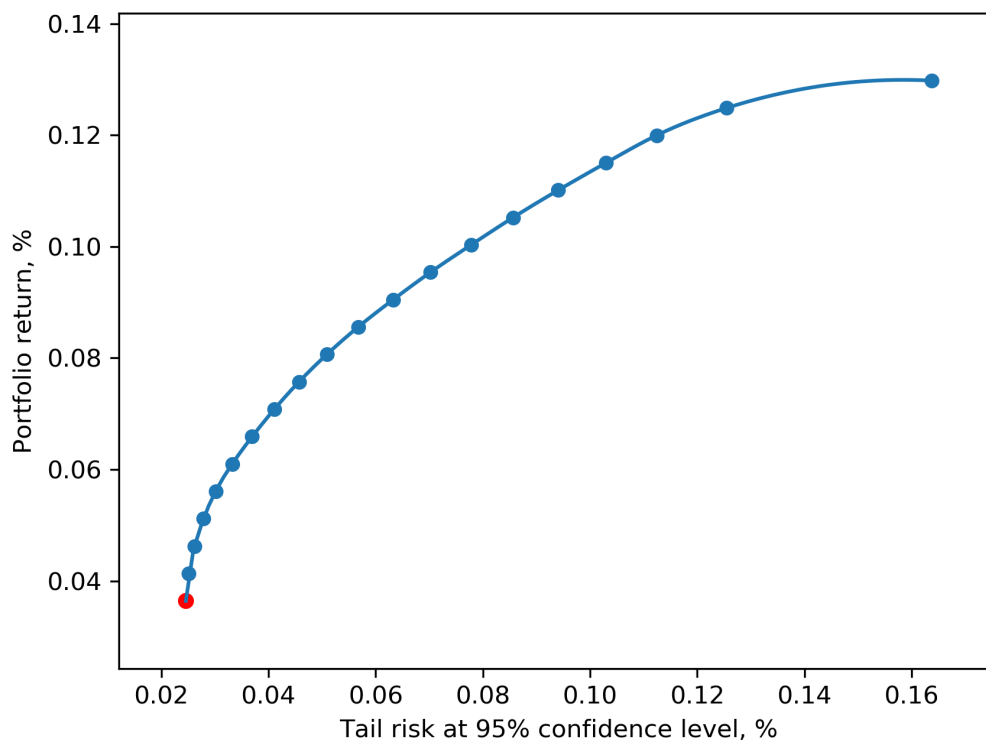
Monte Carlo model: Scenarios: 2000; Days 50; GARCH: 0

Macro model: Regime: 1; Percentile: 0 - 100

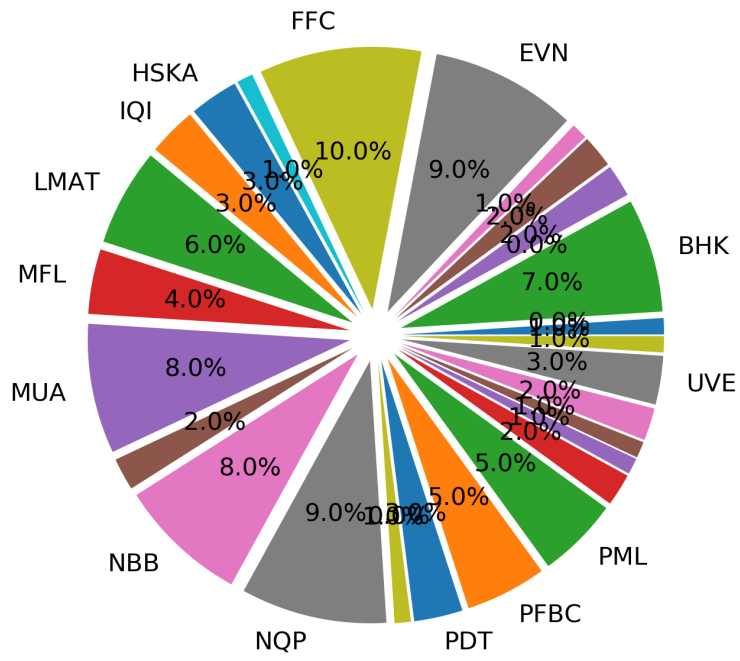
Solutions: 0; Risk level: -20; Max weight: 0.1

Confidence: 0.95; Leverage: 1; Exposure: 0

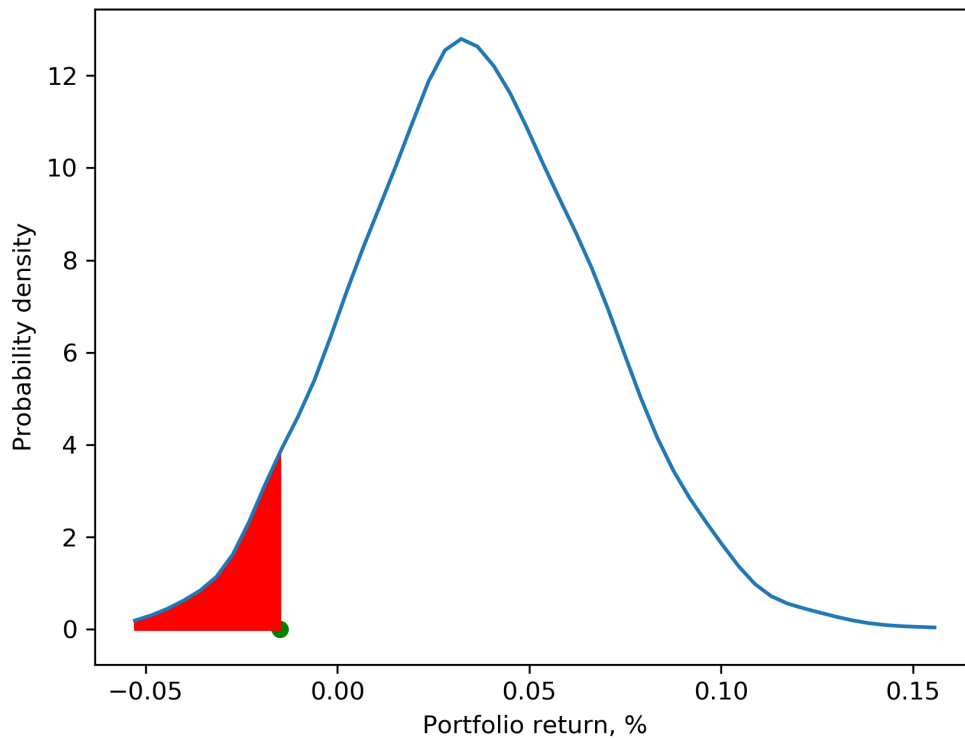
Efficient frontier, optimal solution is highlighted with the red color:



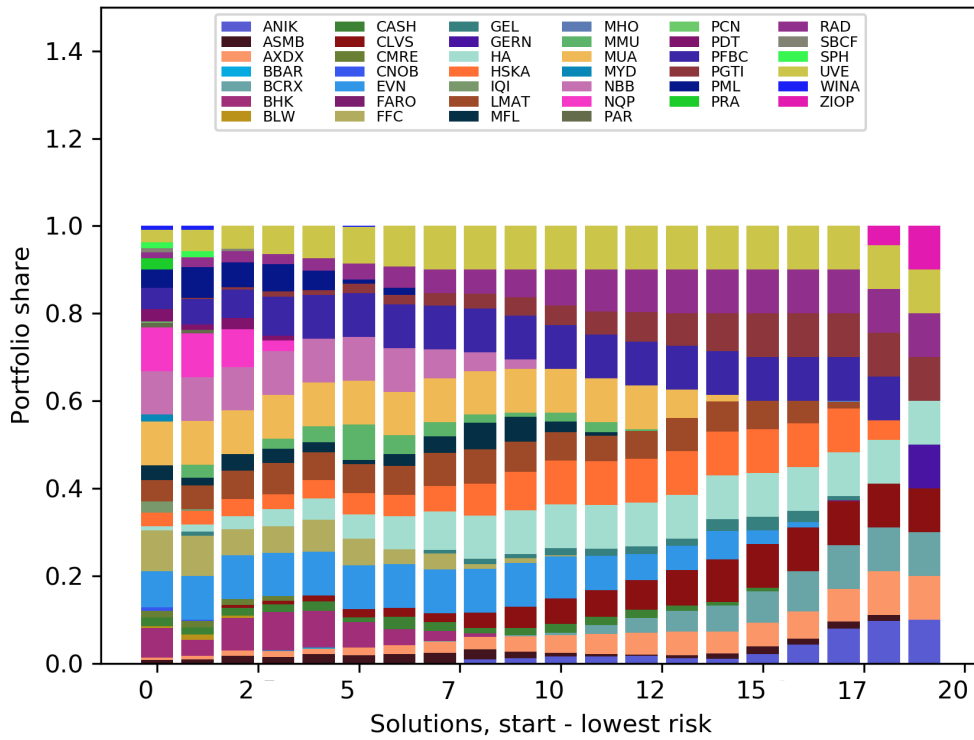
Tail risk breakdown:



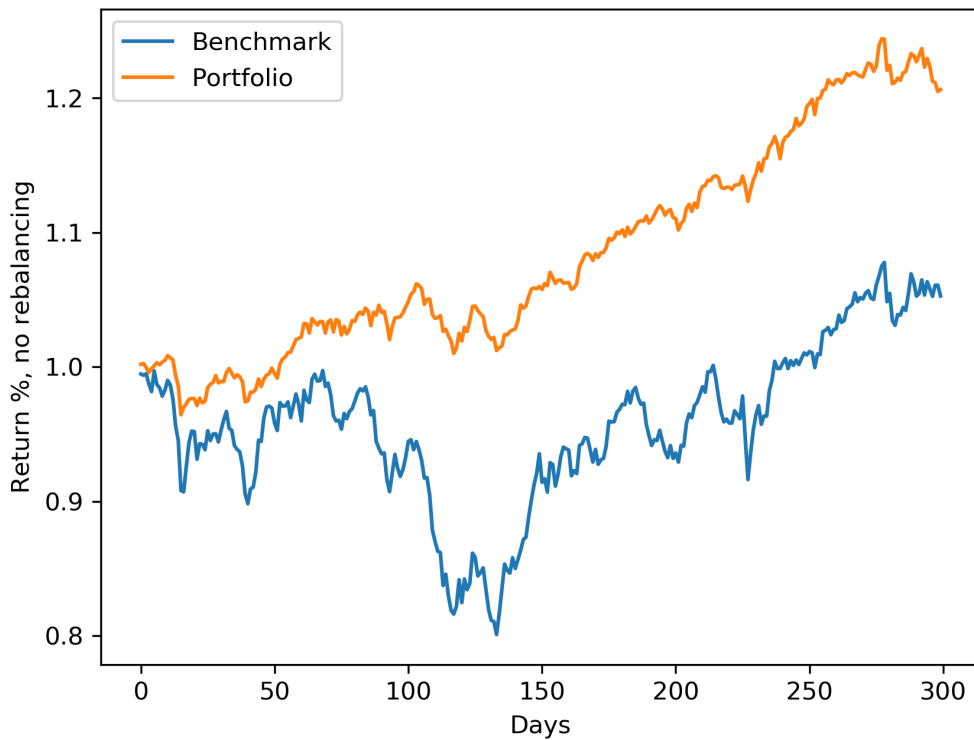
Portfolio return distribution:



Portfolio structure:



Backtesting results:



Portfolio statistics

Sharpe portfolio: 2.06; Sharpe market: 0.17; Sortino portfolio: 2.71; Sortino market: 0.26

Portfolio max. drawdown: 0.05; Portfolio return: 0.2063; Market return: 0.0528

Portfolio alpha: 0.0006; Portfolio beta: 0.3495; Portfolio volatility: 0.0052; Market volatility: 0.0111

Portfolio structure:

Stock	Weight
ASMB	0.01
AXDX	0.01
BHK	0.07
CASH	0.02
CMRE	0.02
CNOB	0.01
EVN	0.08
FFC	0.09
HA	0.01
HSKA	0.03
IQI	0.03
LMAT	0.05
MFL	0.03
MUA	0.1
MYD	0.02
NBB	0.1
NQP	0.1
PAR	0.01
PDT	0.03
PFBC	0.05
PML	0.04
PRA	0.03

RAD	0.01
SBCF	0.01
SPH	0.01
UVE	0.03
WINA	0.01