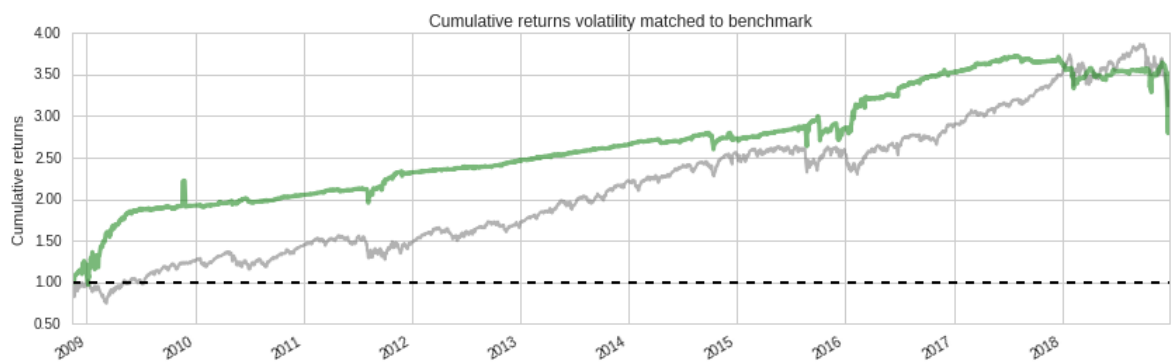
```
100% Time: 0:00:02|############################################################
#|
```

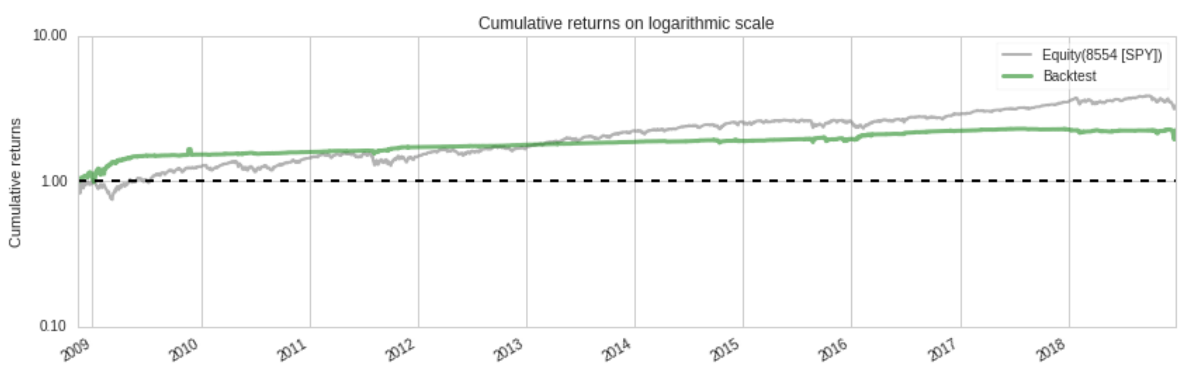
Start date	2008-11-11
End date	2018-12-28
Total months	121

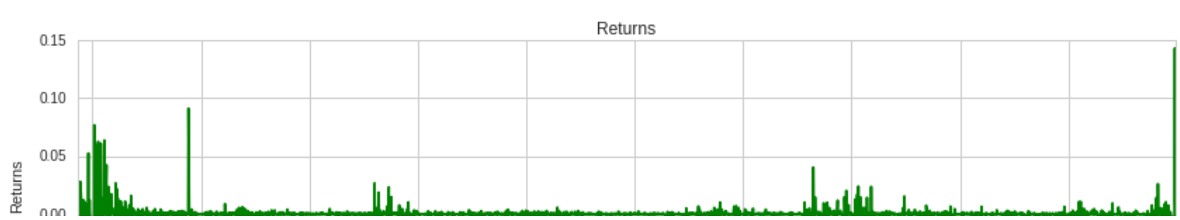
	Backtest
Annual return	8.2%
Cumulative returns	122.5%
Annual volatility	10.8%
Sharpe ratio	0.79
Calmar ratio	0.52
Stability	0.91
Max drawdown	-15.8%
Omega ratio	1.35
Sortino ratio	1.38
Skew	5.16
Kurtosis	126.59
Tail ratio	1.30
Daily value at risk	-1.3%
Gross leverage	1.77
Daily turnover	2.5%
Alpha	0.09
Beta	-0.02

Worst drawdown periods	Net drawdown in %	Peak date	Valley date	Recovery date	Duration
0	15.82	2017-07-31	2018-12-24	NaT	NaN
1	14.78	2008-12-23	2009-01-06	2009-01-14	17
2	9.54	2009-01-20	2009-01-28	2009-02-17	21
3	8.69	2009-11-24	2010-01-29	2011-09-30	484
4	6.09	2015-10-01	2015-10-08	2016-01-25	83

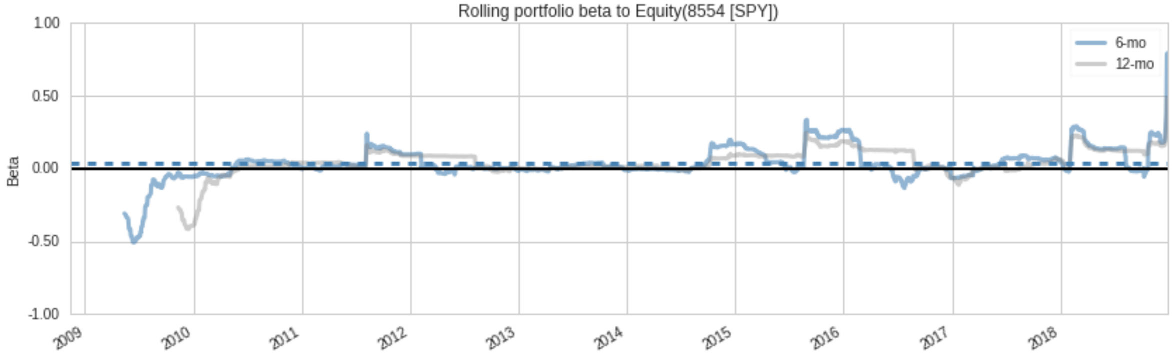

Cumulative returns
Equity(8554 [SPY])
Backtest
Cumulative returns
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018


Cumulative returns volatility matched to benchmark
Cumulative returns
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018

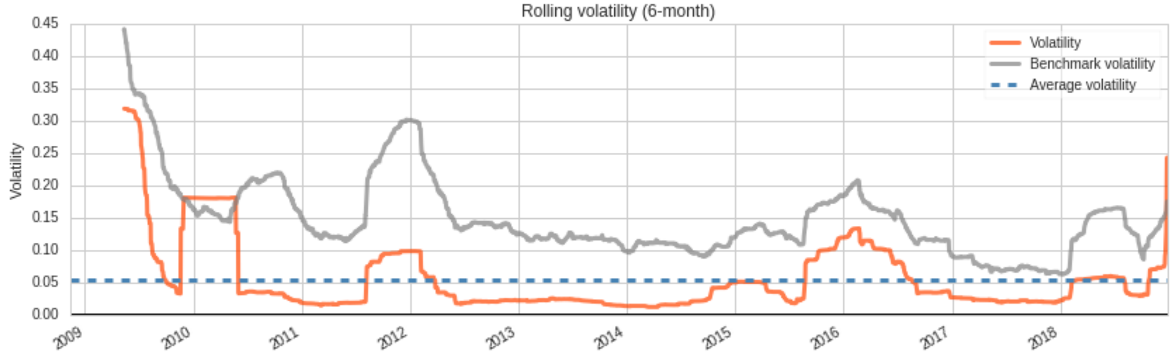

Cumulative returns on logarithmic scale
Equity(8554 [SPY])
Backtest
Cumulative returns
10.00
1.00
0.10
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018


Returns
Returns
0.15
0.10
0.05
0.00

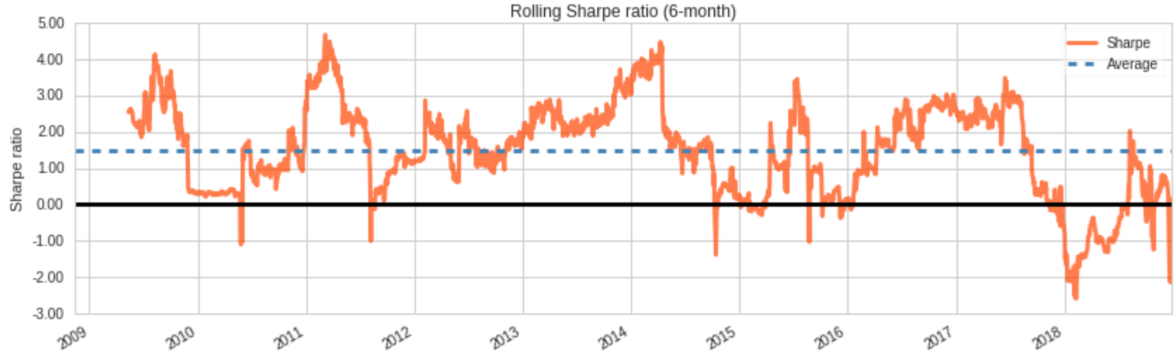
Rolling portfolio beta to Equity(8554 [SPY])



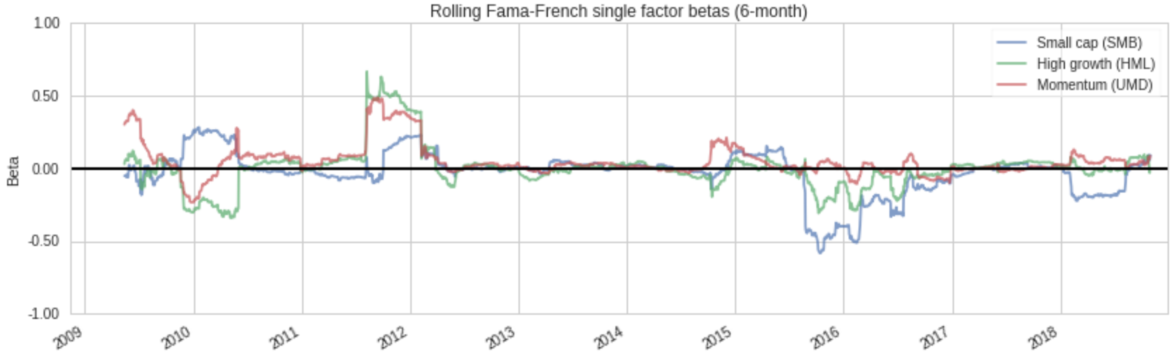
Rolling volatility (6-month)

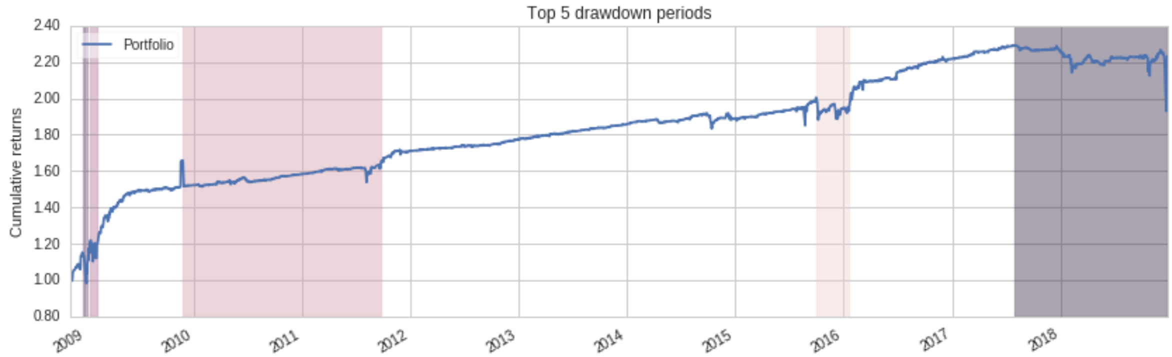


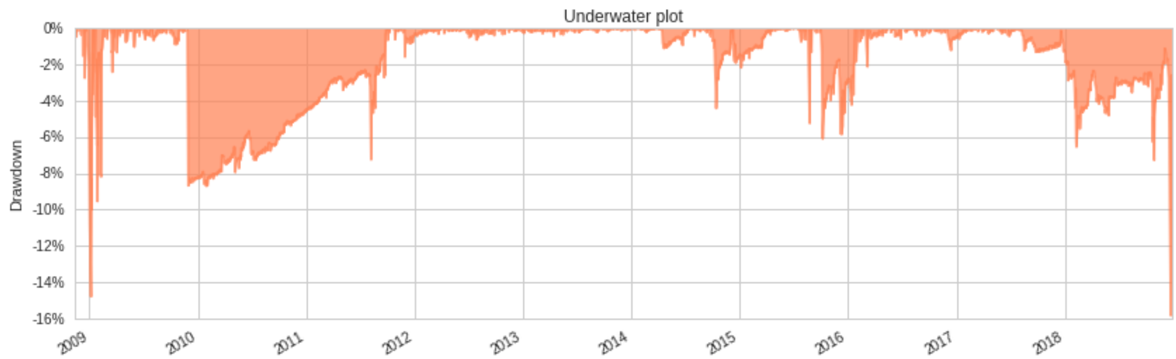
Rolling Sharpe ratio (6-month)

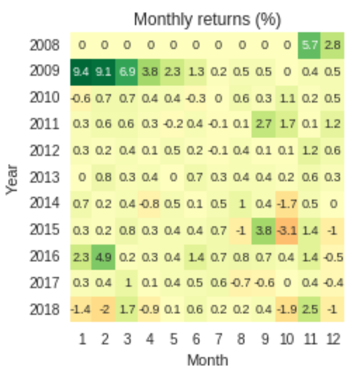


Rolling Fama-French single factor betas (6-month)



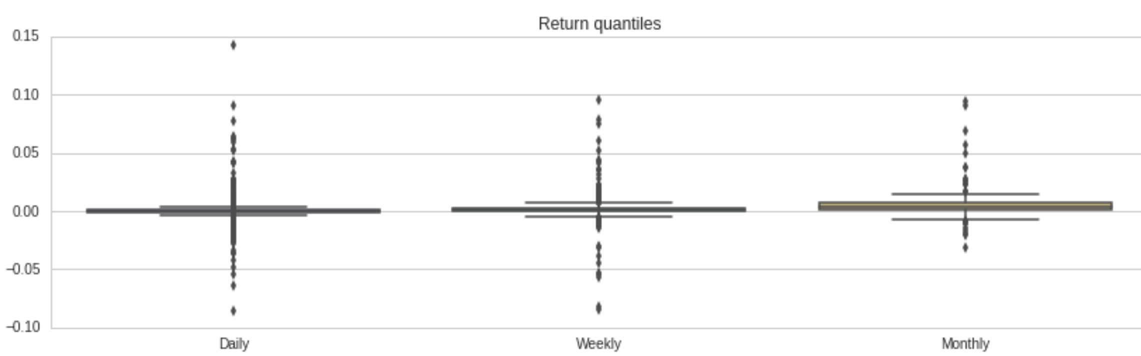

Top 5 drawdown periods
Portfolio
Cumulative returns
2.40
2.20
2.00
1.80
1.60
1.40
1.20
1.00
0.80
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018


Underwater plot
Drawdown
0%
-2%
-4%
-6%
-8%
-10%
-12%
-14%
-16%
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018

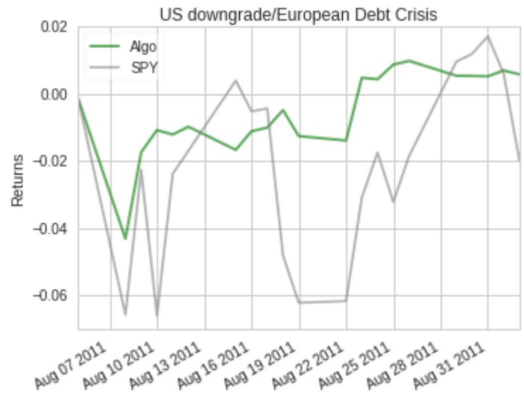

Monthly returns (%)
Year
2008 0 0 0 0 0 0 0 0 0 0 5.7 2.8
2009 9.4 9.1 6.9 3.8 2.3 1.3 0.2 0.5 0.5 0 0.4 0.5
2010 -0.6 0.7 0.7 0.4 0.4 -0.3 0 0.6 0.3 1.1 0.2 0.5
2011 0.3 0.6 0.6 0.3 -0.2 0.4 -0.1 0.1 2.7 1.7 0.1 1.2
2012 0.3 0.2 0.4 0.1 0.5 0.2 -0.1 0.4 0.1 0.1 1.2 0.6
2013 0 0.8 0.3 0.4 0 0.7 0.3 0.4 0.4 0.2 0.6 0.3
2014 0.7 0.2 0.4 -0.8 0.5 0.1 0.5 1 0.4 -1.7 0.5 0
2015 0.3 0.2 0.8 0.3 0.4 0.4 0.7 -1 3.8 -3.1 1.4 -1
2016 2.3 4.9 0.2 0.3 0.4 1.4 0.7 0.8 0.7 0.4 1.4 -0.5
2017 0.3 0.4 1 0.1 0.4 0.5 0.6 -0.7 -0.6 0 0.4 -0.4
2018 -1.4 -2 1.7 -0.9 0.1 0.6 0.2 0.2 0.4 -1.9 2.5 -1
1 2 3 4 5 6 7 8 9 10 11 12
Month

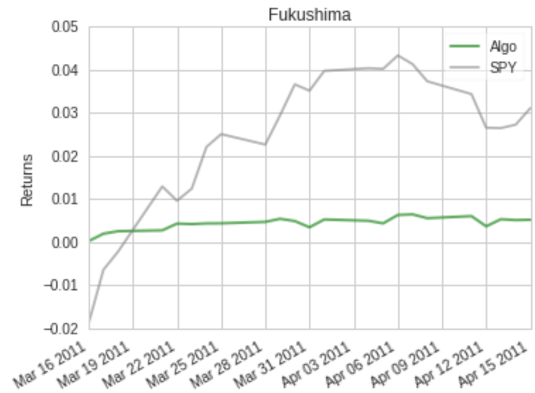

Annual returns
Mean
Year
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
-10% 0% 10% 20% 30% 40% 50%
Returns

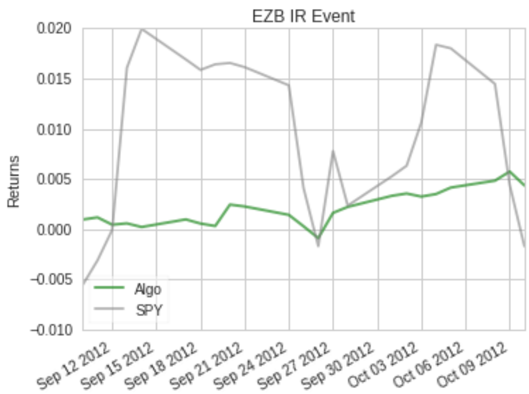

Distribution of monthly returns
Mean
Number of months
70
60
50
40
30
20
10
0
-4% -2% 0% 2% 4% 6% 8% 10%
Returns

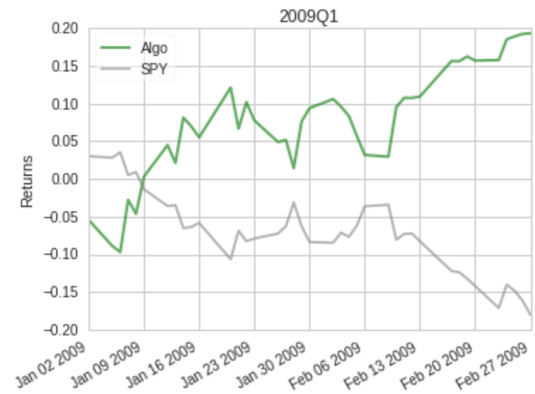

Return quantiles
0.15
0.10
0.05
0.00
−0.05
−0.10
Daily
Weekly
Monthly

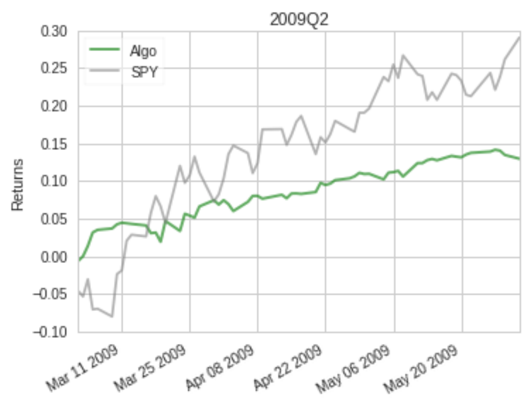
Stress Events	mean	min	max
US downgrade/European Debt Crisis	0.03%	-4.18%	2.69%
Fukushima	0.02%	-0.24%	0.19%
EZB IR Event	0.02%	-0.14%	0.25%
2009Q1	0.51%	-5.44%	7.69%
2009Q2	0.19%	-1.26%	2.70%
Flash Crash	-0.23%	-0.85%	0.59%
Apr14	-0.04%	-0.36%	0.24%
Oct14	-0.07%	-1.33%	1.04%
Fall2015	0.09%	-2.73%	4.05%
GFC Crash	0.36%	-5.44%	7.69%
Recovery	0.03%	-8.60%	9.12%
New Normal	0.02%	-6.46%	14.30%

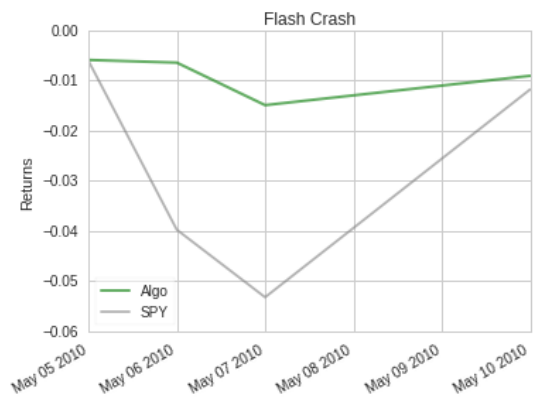

US downgrade/European Debt Crisis
Algo
SPY
Returns

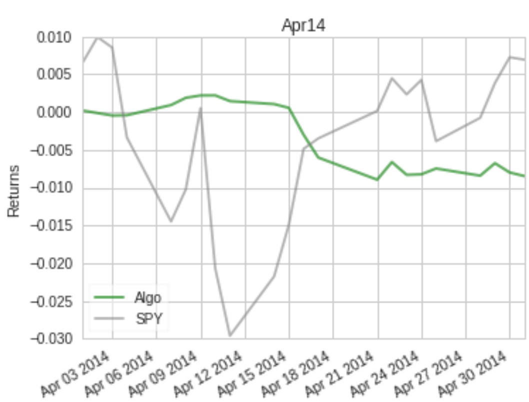

Fukushima
Algo
SPY
Returns

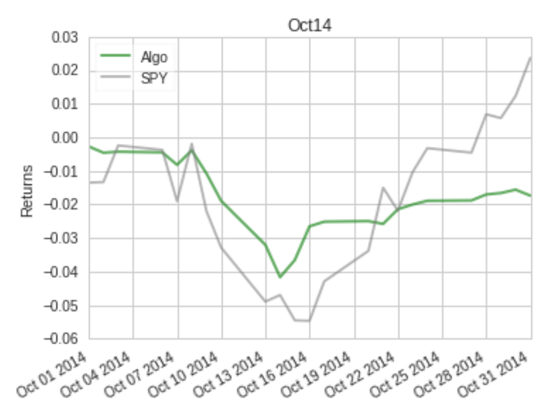

EZB IR Event
Algo
SPY
Returns

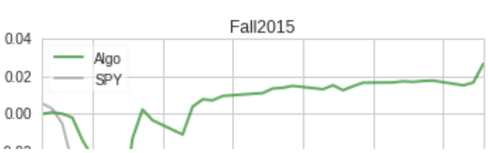

2009Q1
Algo
SPY
Returns

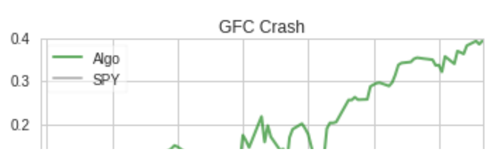

2009Q2
Algo
SPY
Returns

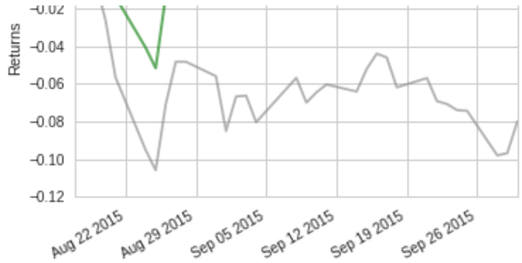

Flash Crash
Algo
SPY
Returns

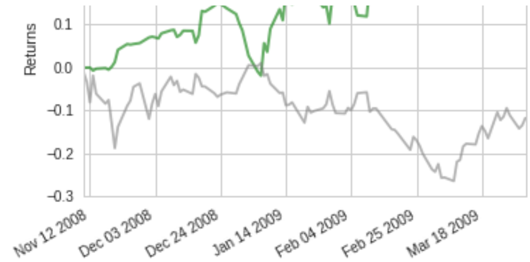

Apr14
Algo
SPY
Returns

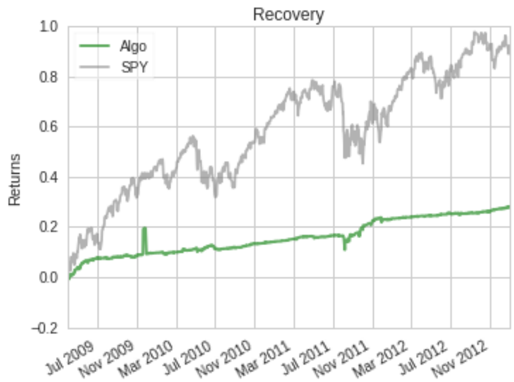

Oct14
Algo
SPY
Returns

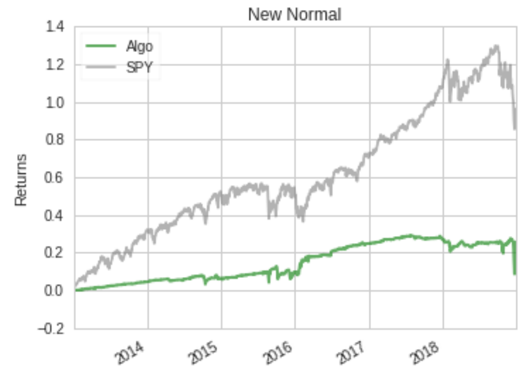

Fall2015
Algo
SPY


GFC Crash
Algo
SPY







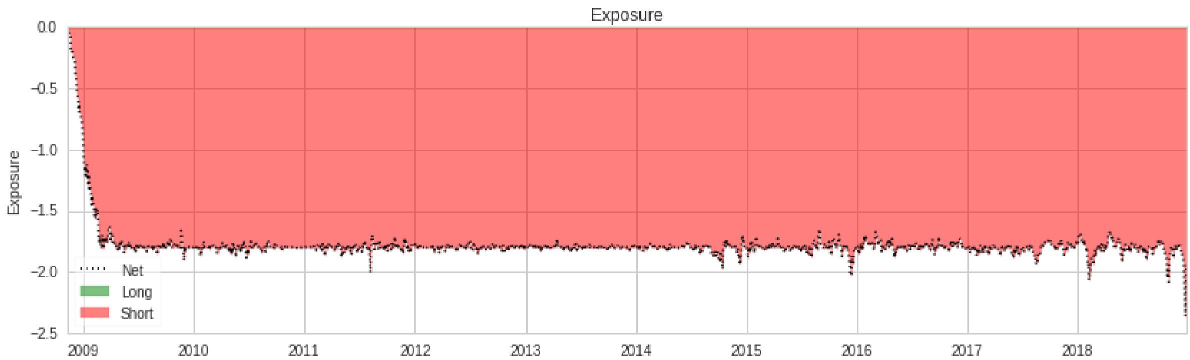


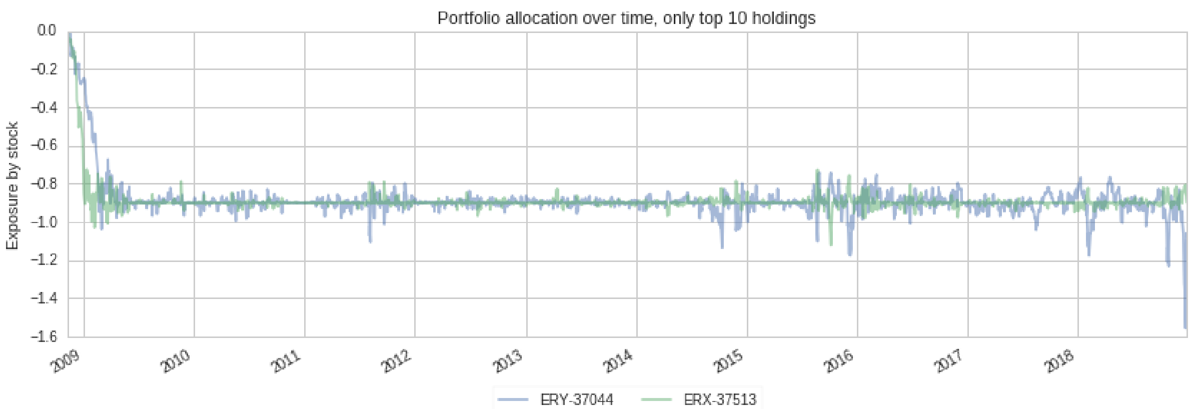
Top 10 long positions of all time	max

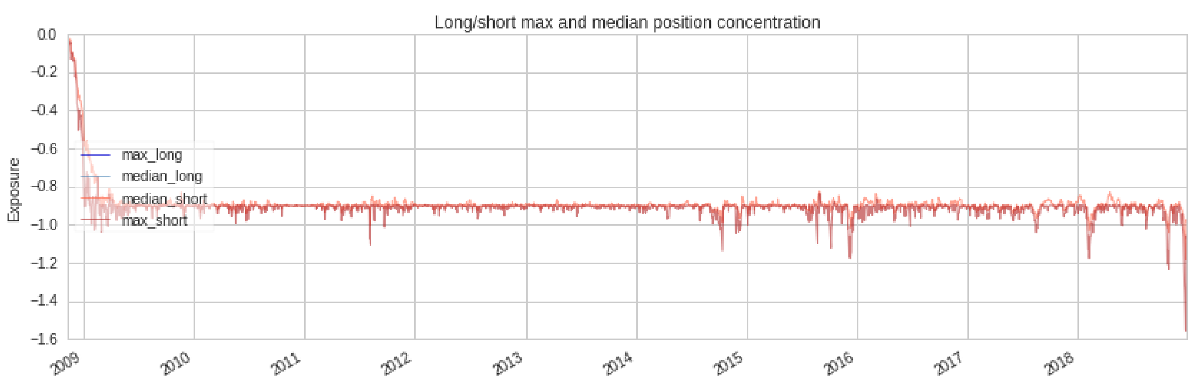
Top 10 short positions of all time	max
ERY-37044	-155.69%
ERX-37513	-112.24%

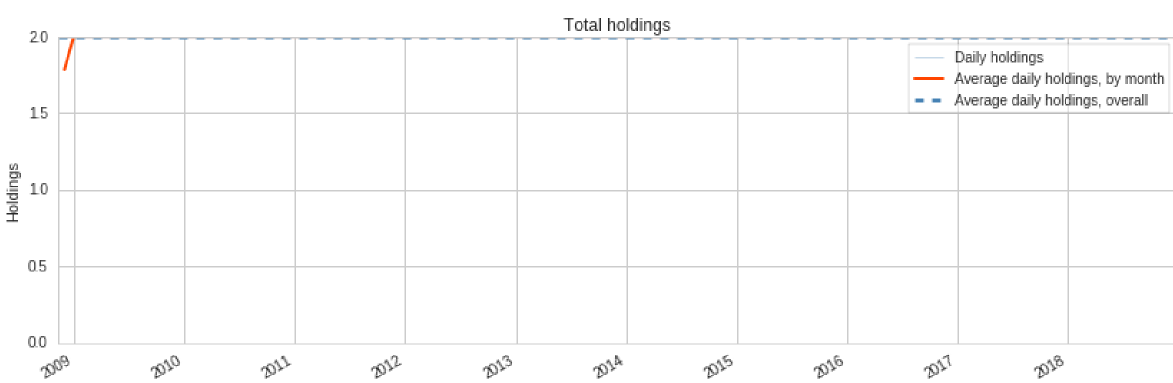
Top 10 positions of all time	max
ERY-37044	155.69%
ERX-37513	112.24%

All positions ever held	max
ERY-37044	155.69%
ERX-37513	112.24%

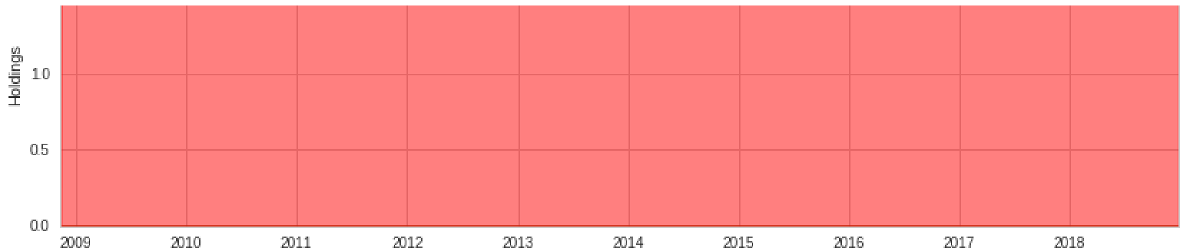

Exposure
Exposure
Net
Long
Short


Portfolio allocation over time, only top 10 holdings
Exposure by stock
ERY-37044
ERX-37513

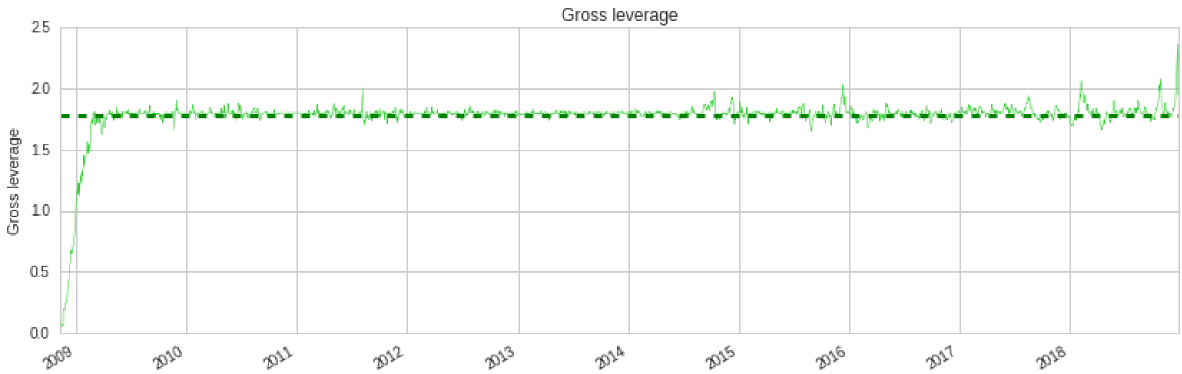

Long/short max and median position concentration
Exposure
max_long
median_long
median_short
max_short


Total holdings
Holdings
Daily holdings
Average daily holdings, by month
Average daily holdings, overall

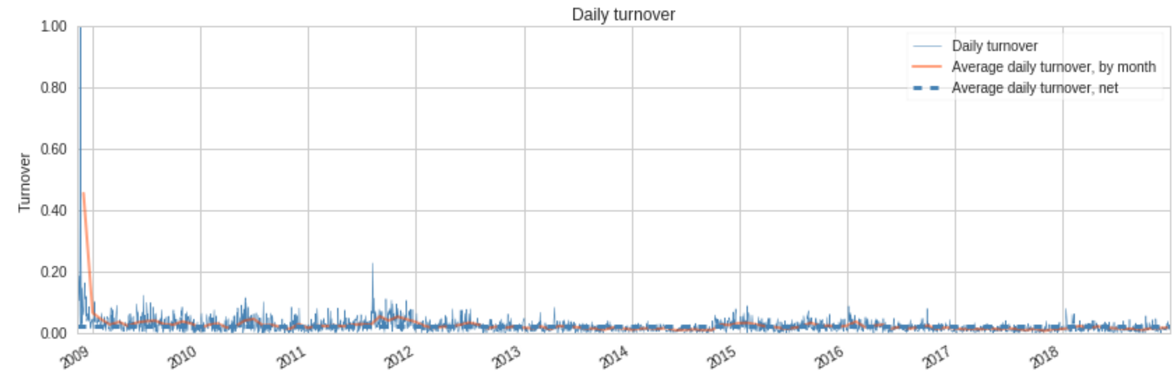

Long and short holdings
Long (max: 0, min: 0)
Short (max: 2, min: 0)
Overlap

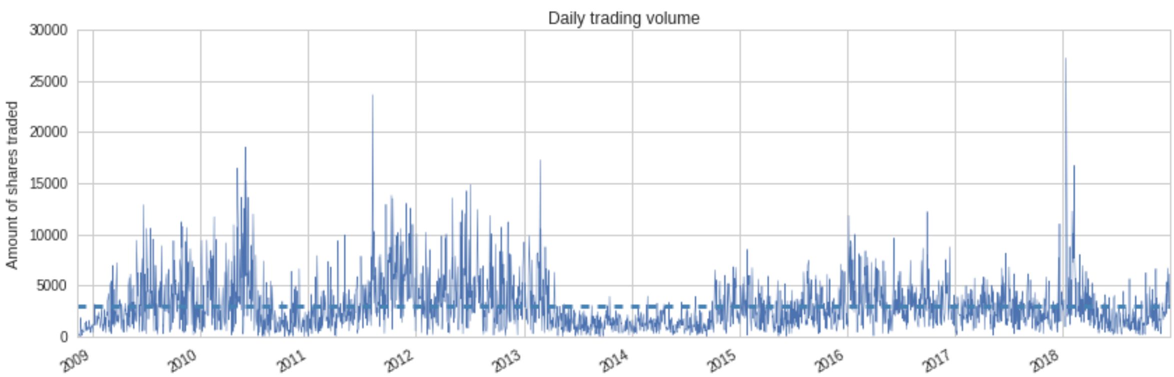


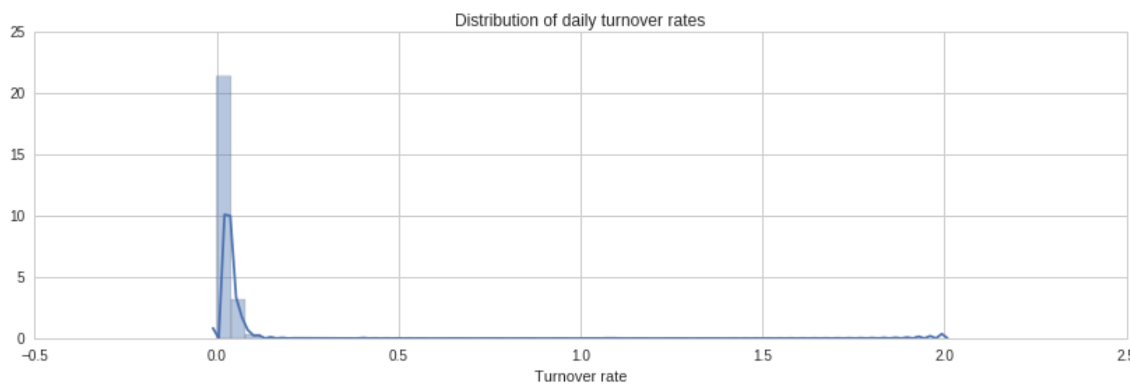
Holdings
1.0
0.5
0.0
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018

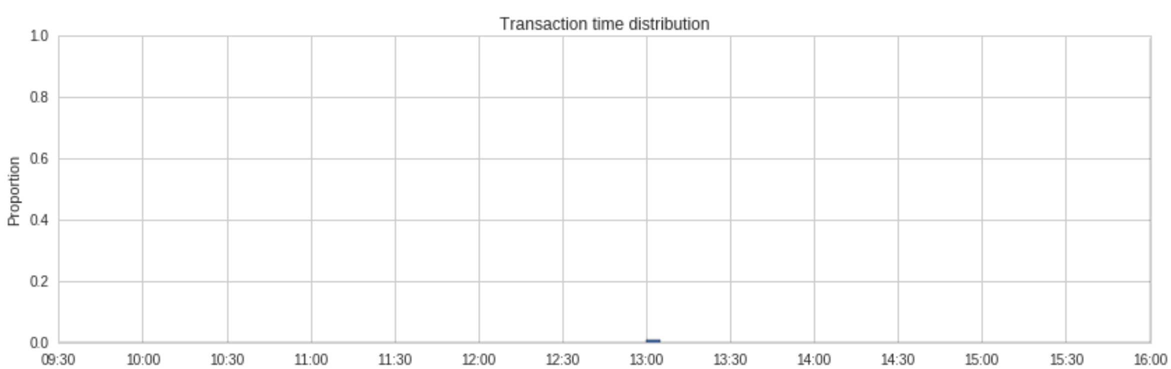


Gross leverage
Gross leverage
2.5
2.0
1.5
1.0
0.5
0.0
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018


Daily turnover
Daily turnover
Average daily turnover, by month
Average daily turnover, net
Turnover
1.00
0.80
0.60
0.40
0.20
0.00
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018


Daily trading volume
Amount of shares traded
30000
25000
20000
15000
10000
5000
0
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018


Distribution of daily turnover rates
25
20
15
10
5
0
−0.5
0.0
0.5
1.0
1.5
2.0
2.5
Turnover rate


Transaction time distribution
Proportion
1.0
0.8
0.6
0.4
0.2
0.0
09:30
10:00
10:30
11:00
11:30
12:00
12:30
13:00
13:30
14:00
14:30
15:00
15:30
16:00

In [ ]: