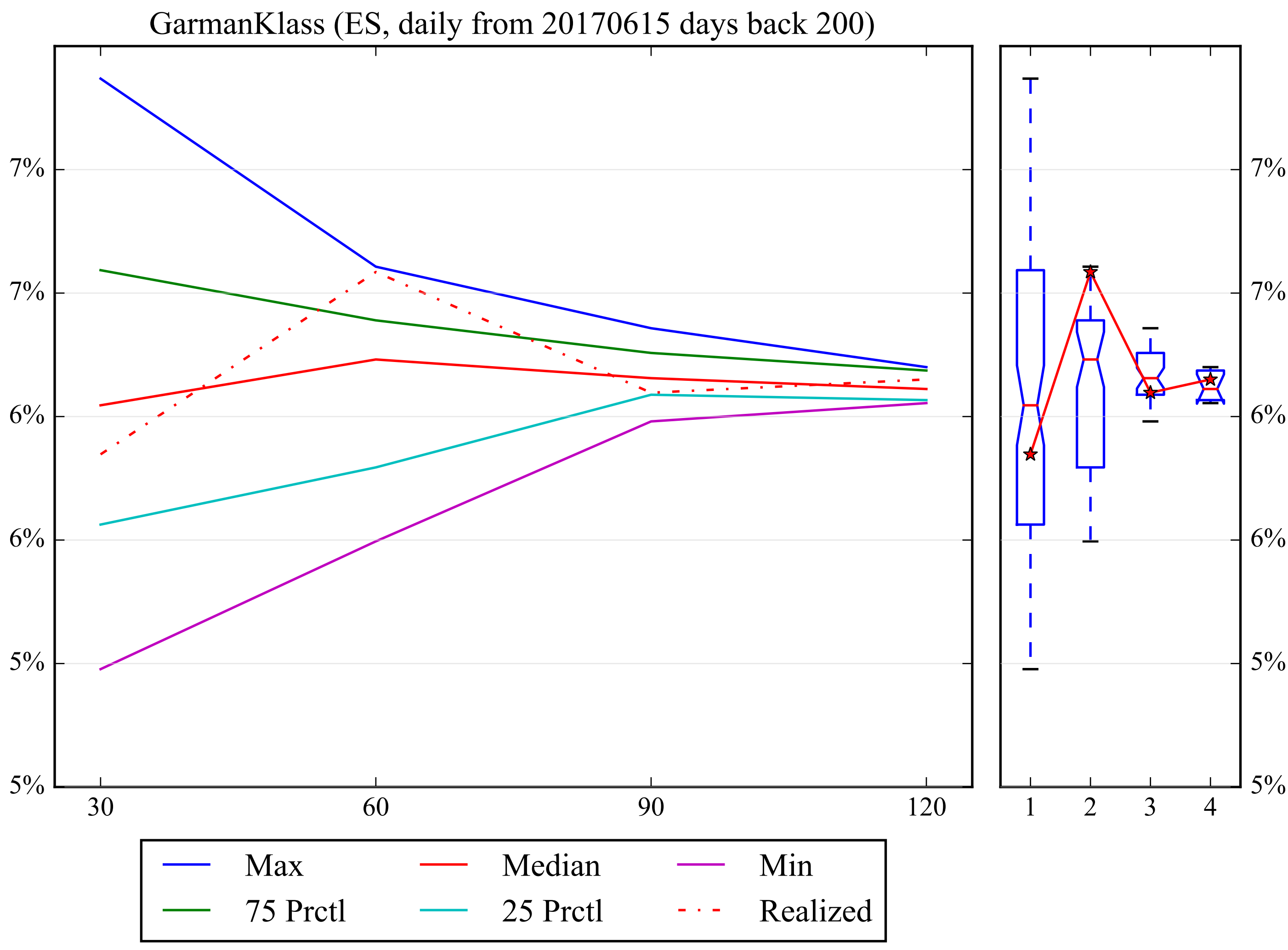
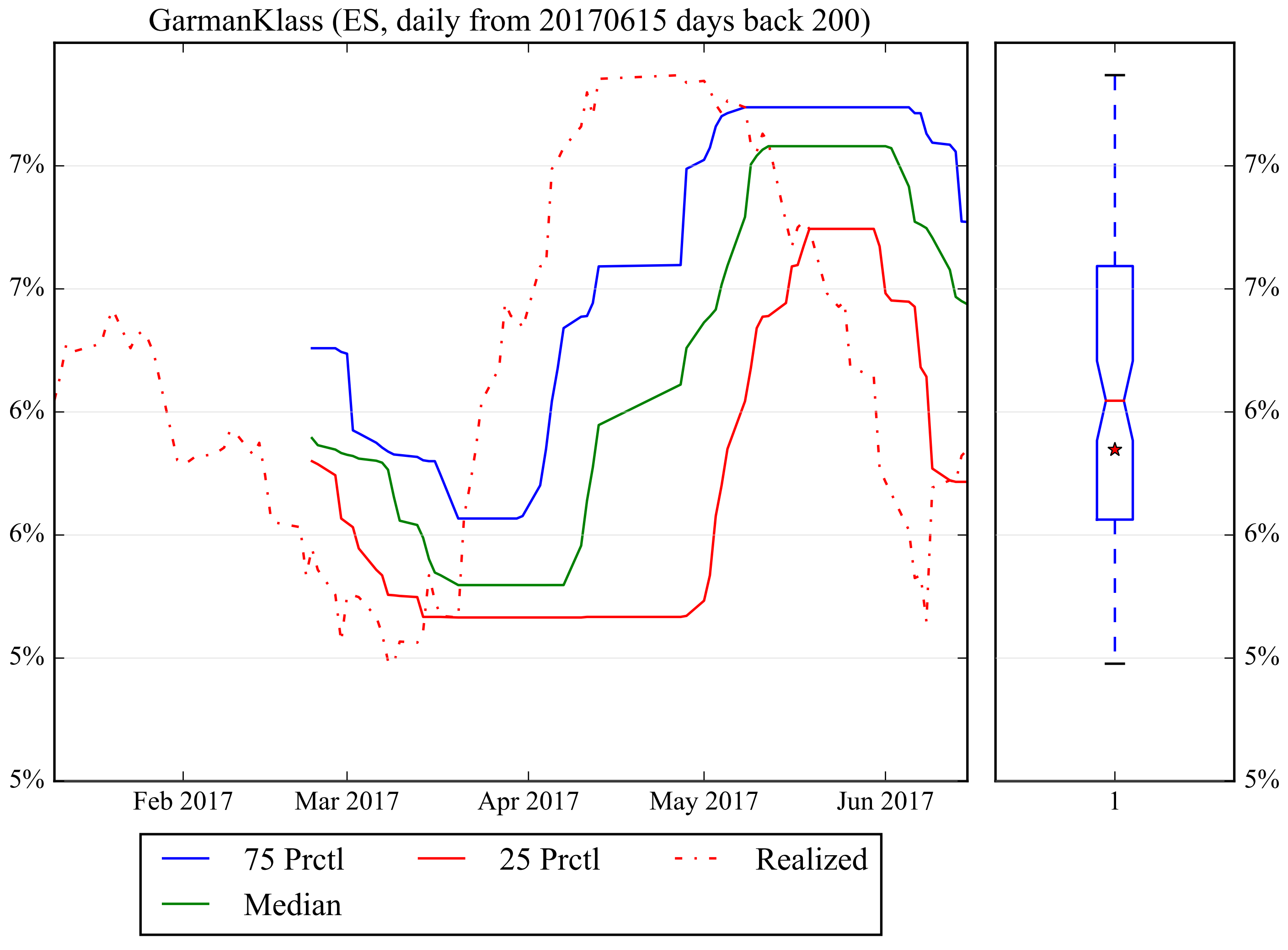
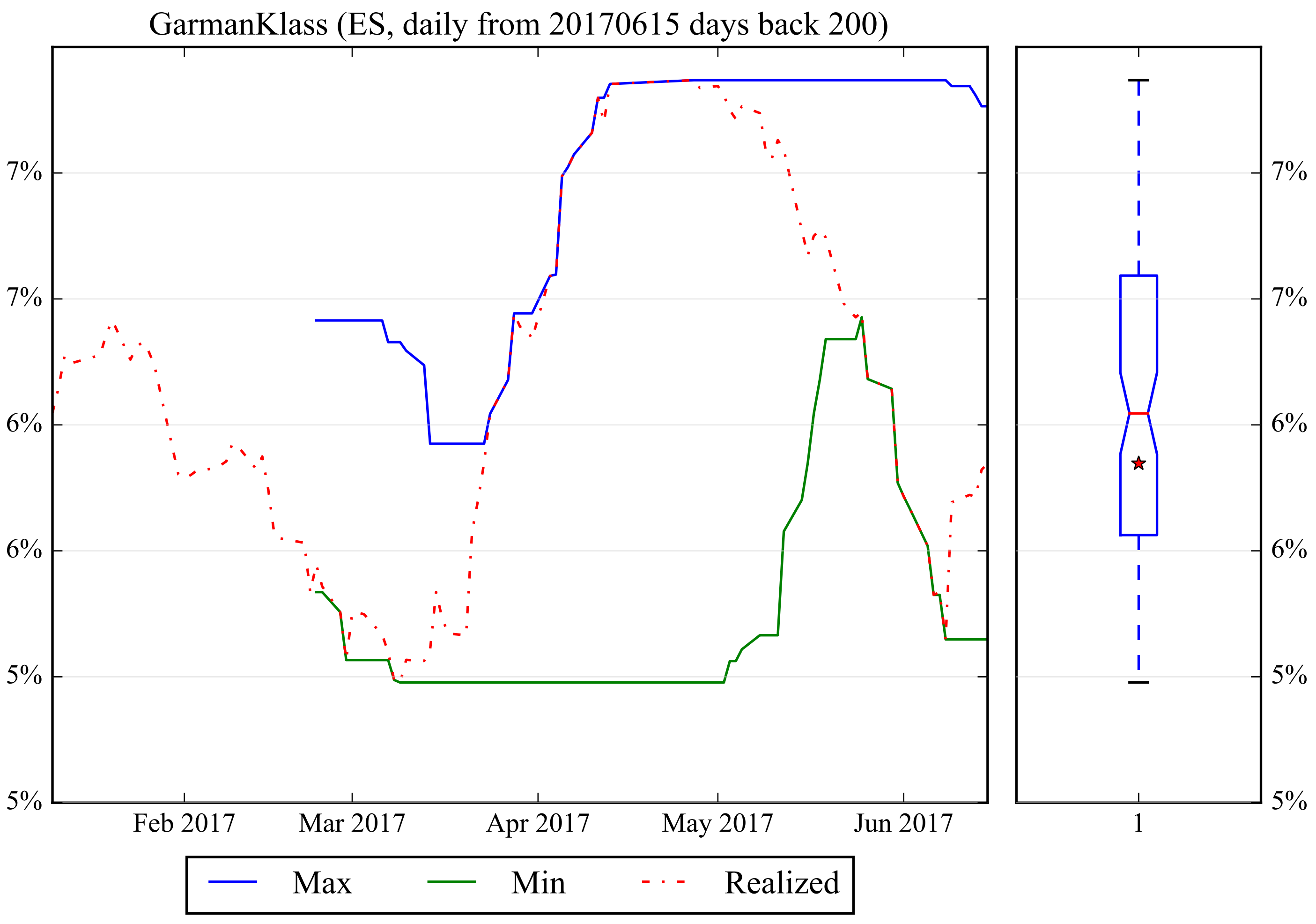
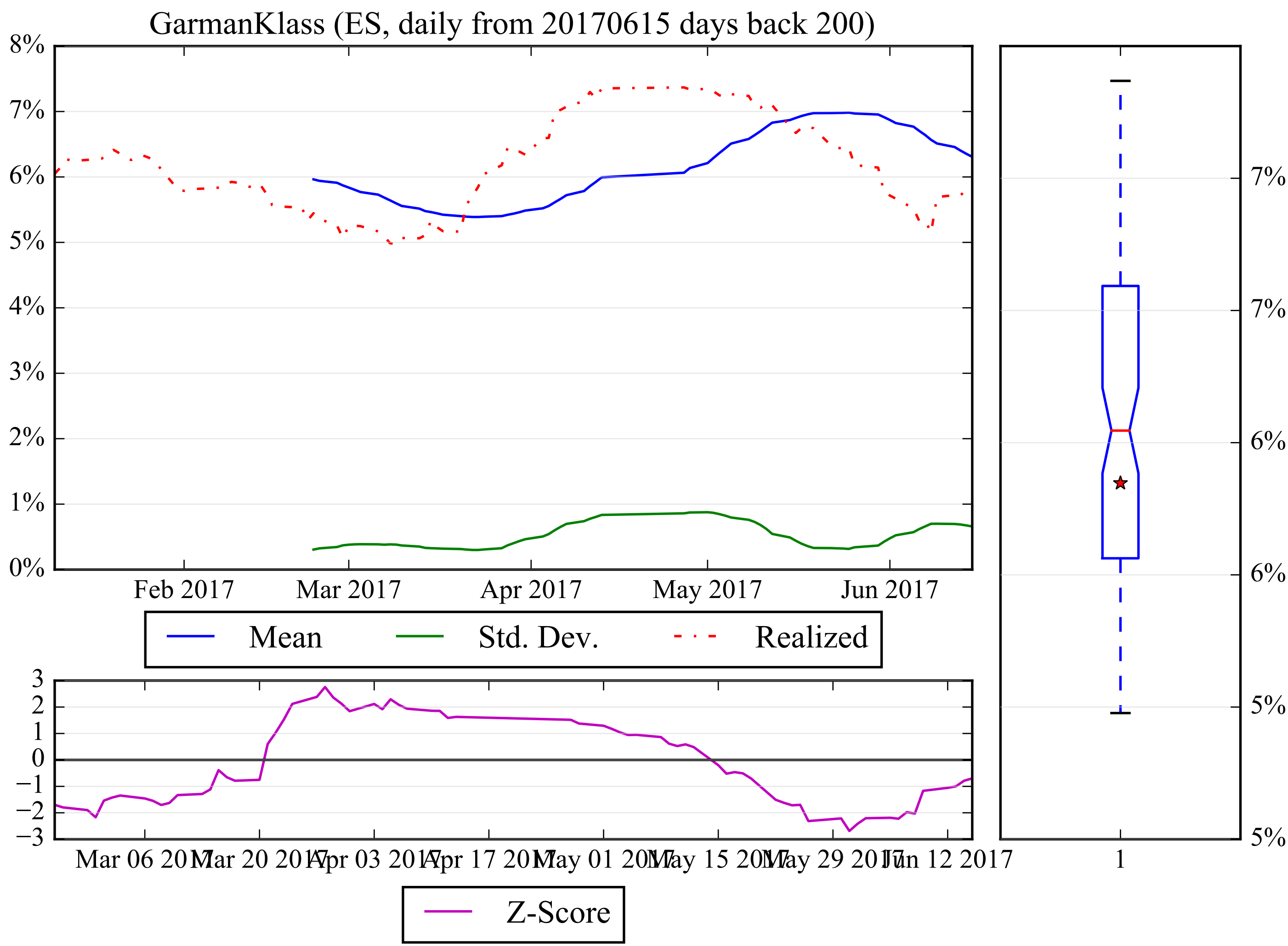


GarmanKlass (ES, daily from 20170615 days back 200)
7%
7%
6%
6%
5%
5%
30
60
90
120
1
2
3
4
Max
Median
Min
75 Prctl
25 Prctl
Realized

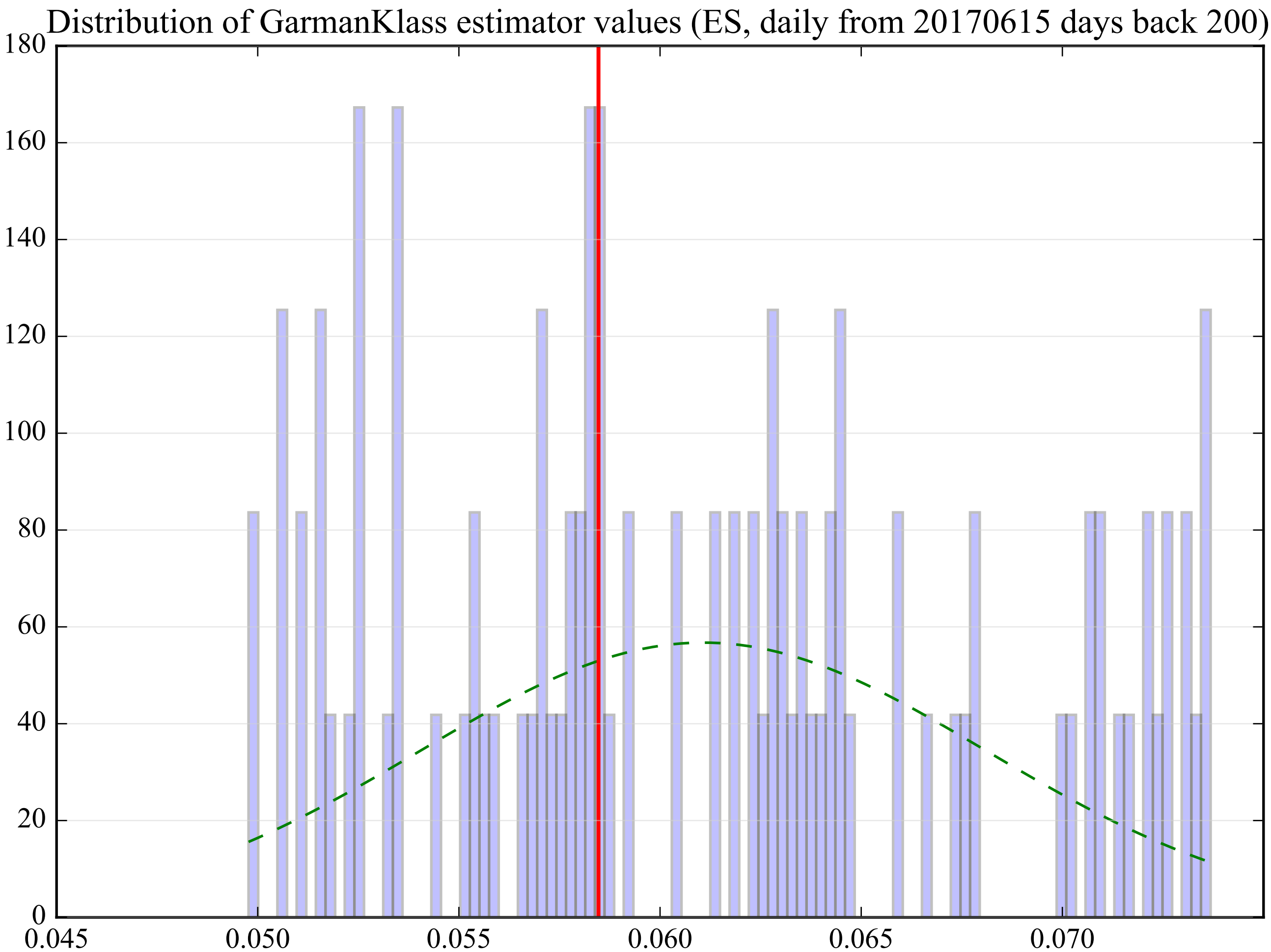


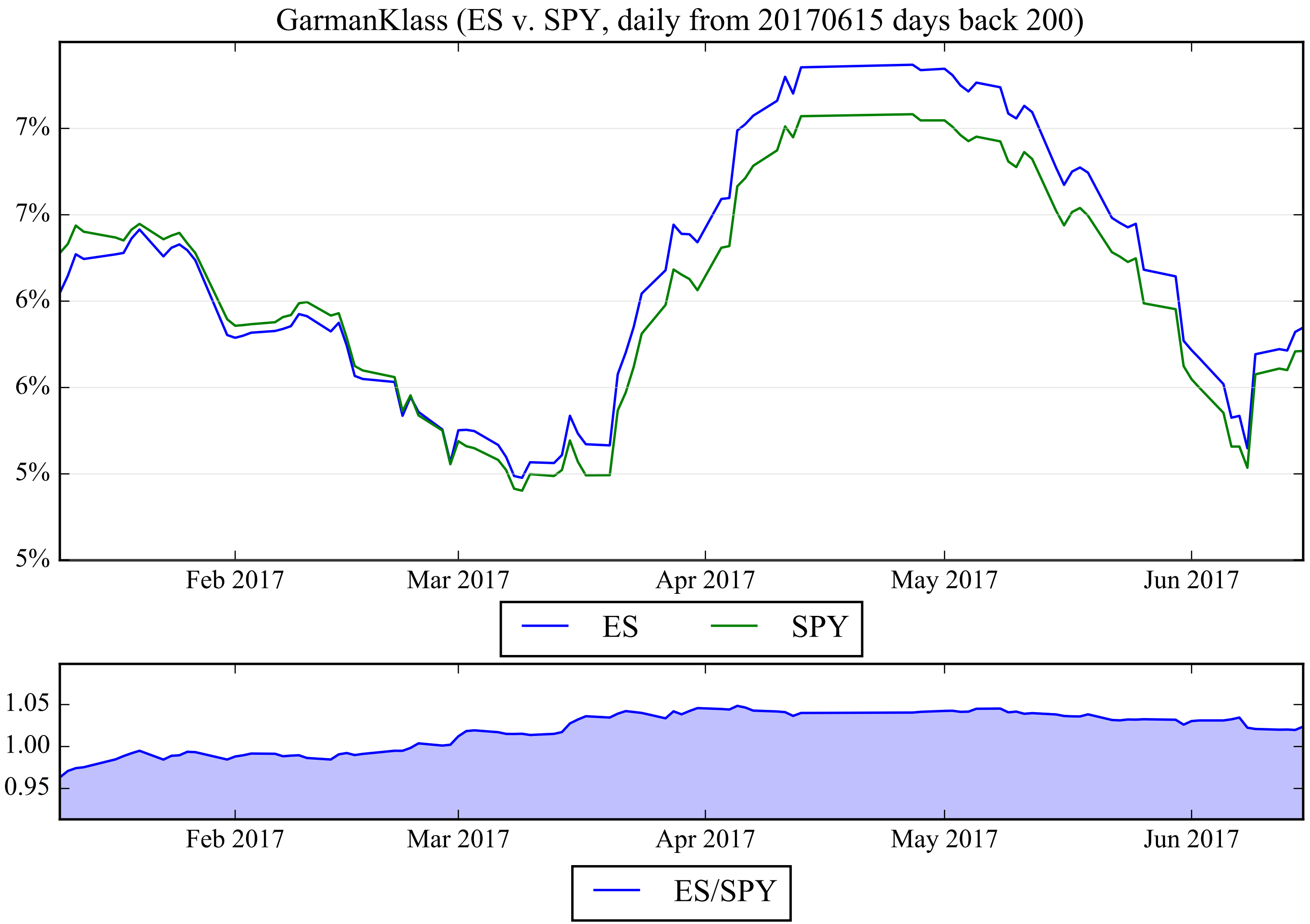
GarmanKlass (ES, daily from 20170615 days back 200)
7%
7%
6%
6%
5%
5%
Feb 2017
Mar 2017
Apr 2017
May 2017
Jun 2017
1
75 Prctl
25 Prctl
Realized
Median

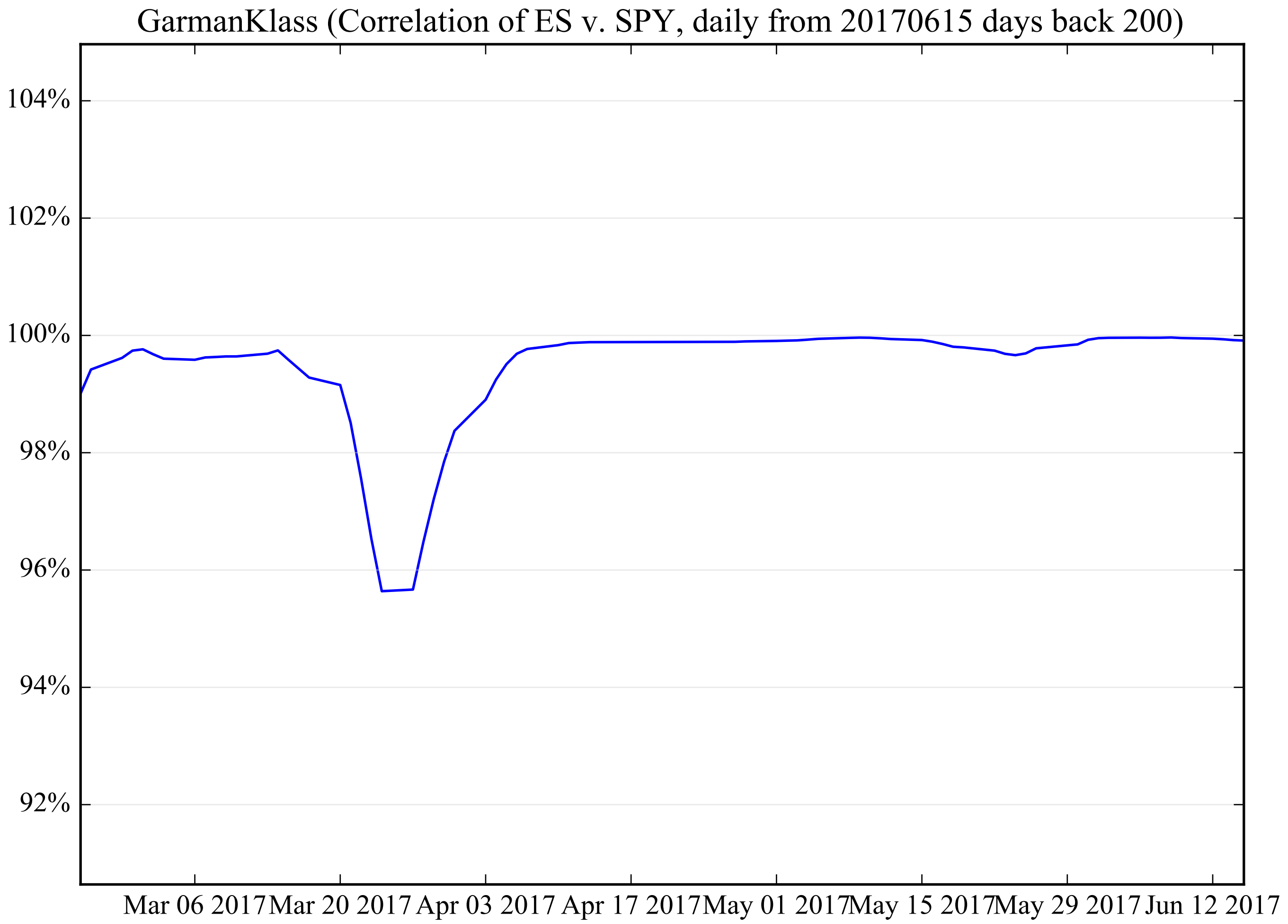

GarmanKlass (ES, daily from 20170615 days back 200)
7%
7%
6%
6%
5%
5%
Feb 2017
Mar 2017
Apr 2017
May 2017
Jun 2017
1
Max
Min
Realized



GarmanKlass (ES, daily from 20170615 days back 200)
8%
7%
6%
5%
4%
3%
2%
1%
0%
Feb 2017
Mar 2017
Apr 2017
May 2017
Jun 2017
Mean
Std. Dev.
Realized
3
2
1
0
−1
−2
−3
Mar 06 2017
Mar 20 2017
Apr 03 2017
Apr 17 2017
May 01 2017
May 15 2017
May 29 2017
Jun 12 2017
Z-Score
7%
7%
6%
6%
5%
5%
1


Distribution of GarmanKlass estimator values (ES, daily from 20170615 days back 200)
180
160
140
120
100
80
60
40
20
0
0.045
0.050
0.055
0.060
0.065
0.070


GarmanKlass (ES v. SPY, daily from 20170615 days back 200)
7%
7%
6%
6%
5%
5%
Feb 2017
Mar 2017
Apr 2017
May 2017
Jun 2017
ES
SPY
1.05
1.00
0.95
Feb 2017
Mar 2017
Apr 2017
May 2017
Jun 2017
ES/SPY


GarmanKlass (Correlation of ES v. SPY, daily from 20170615 days back 200)
104%
102%
100%
98%
96%
94%
92%
Mar 06 2017
Mar 20 2017
Apr 03 2017
Apr 17 2017
May 01 2017
May 15 2017
May 29 2017
Jun 12 2017

```
                        OLS Regression Results
==============================================================================
Dep. Variable:                      y   R-squared:                       0.999
Model:                            OLS   Adj. R-squared:                  0.999
Method:                 Least Squares   F-statistic:                 1.844e+05
Date:                Sun, 25 Jun 2017   Prob (F-statistic):          1.06e-163
Time:                        17:06:09   Log-Likelihood:                 513.53
No. Observations:                 100   AIC:                            -1025.
Df Residuals:                      99   BIC:                            -1022.
Df Model:                           1
Covariance Type:            nonrobust
==============================================================================
             coef    std err          t      P>|t|      [95.0% Conf. Int.]
------------------------------------------------------------------------------
x1          1.0199      0.002    429.385      0.000         1.015     1.025
==============================================================================
Omnibus:                       18.932   Durbin-Watson:                   0.025
Prob(Omnibus):                  0.000   Jarque-Bera (JB):                8.729
Skew:                          -0.520   Prob(JB):                       0.0127
Kurtosis:                       1.994   Cond. No.                         1.00
==============================================================================

Warnings:
[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
```