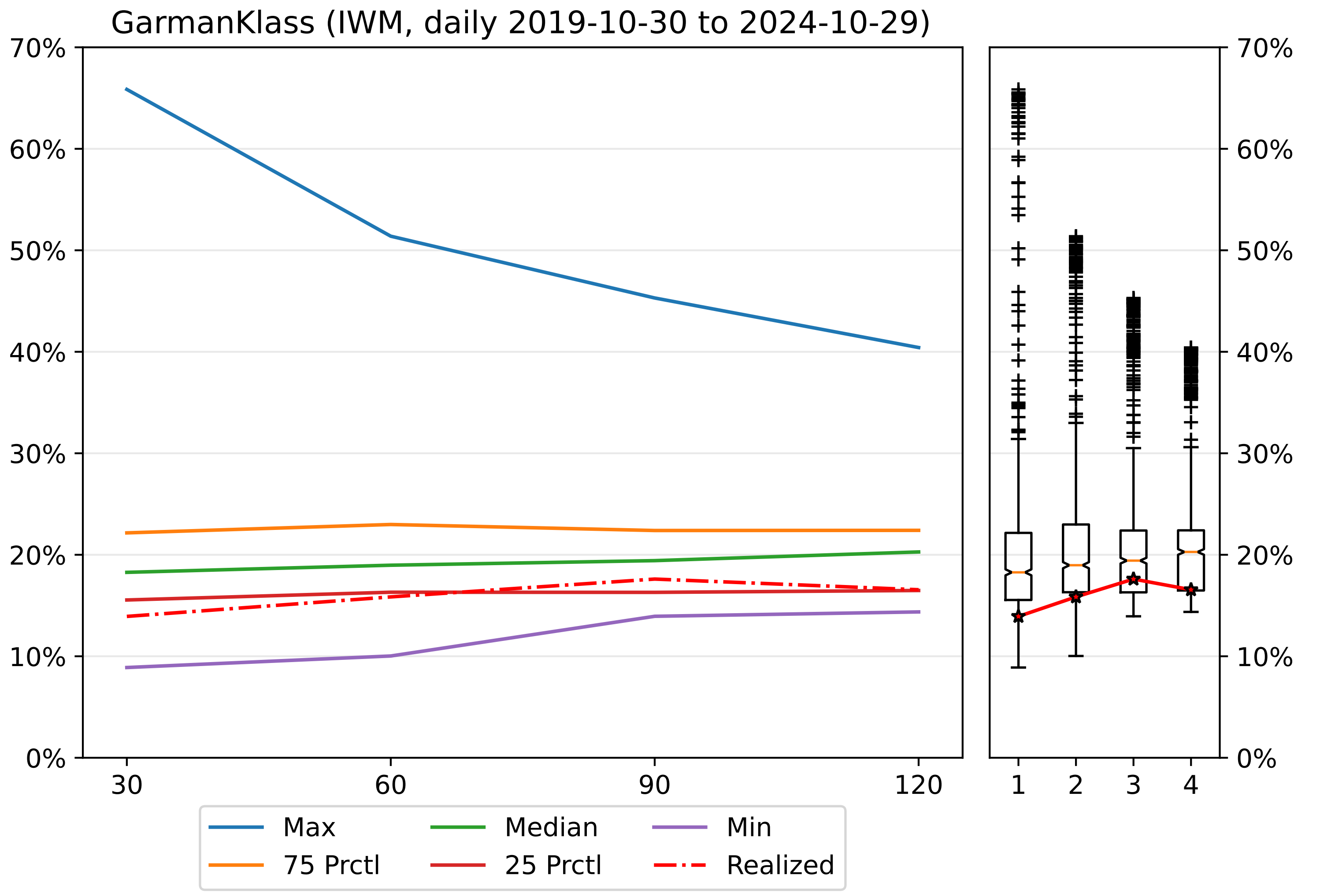
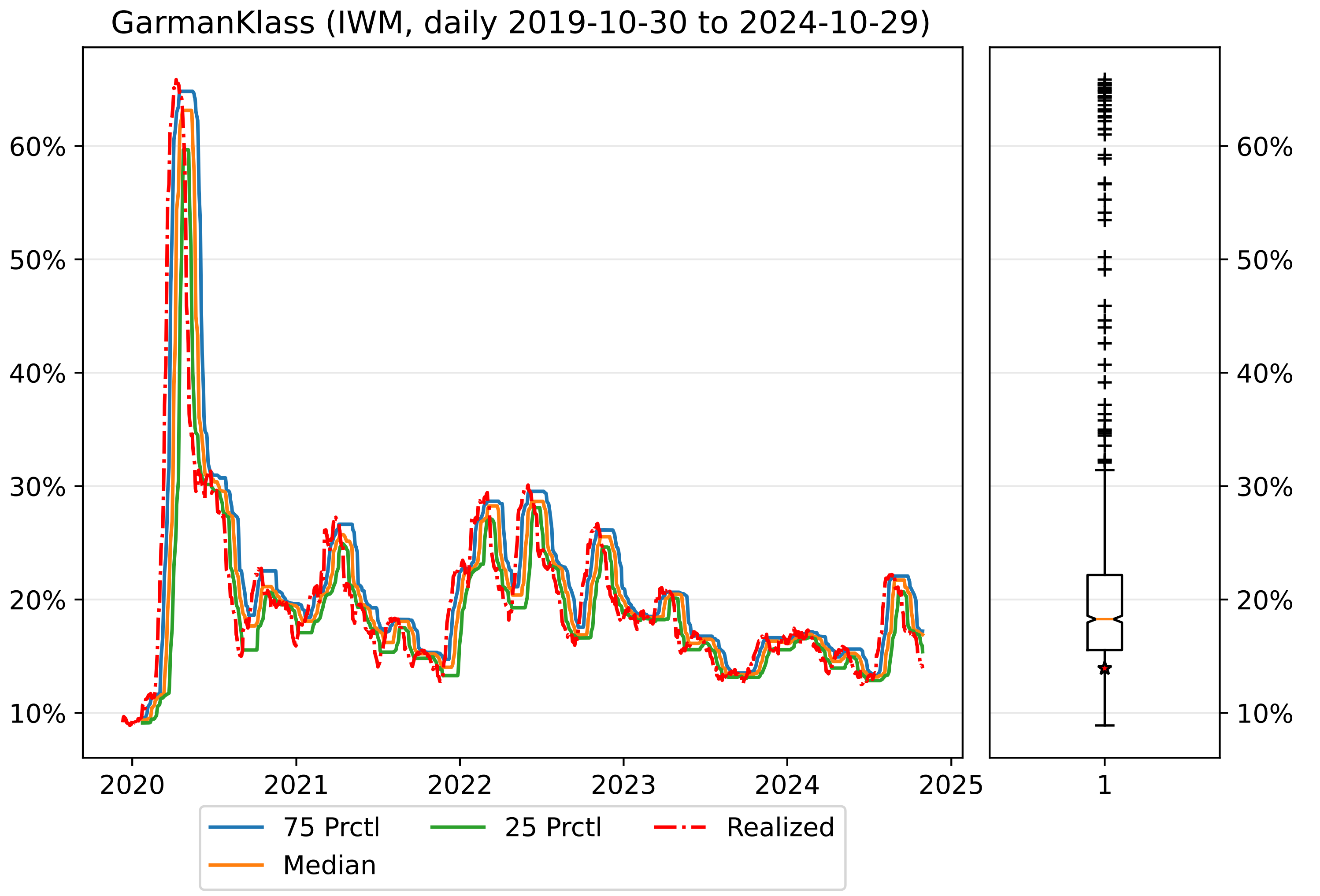
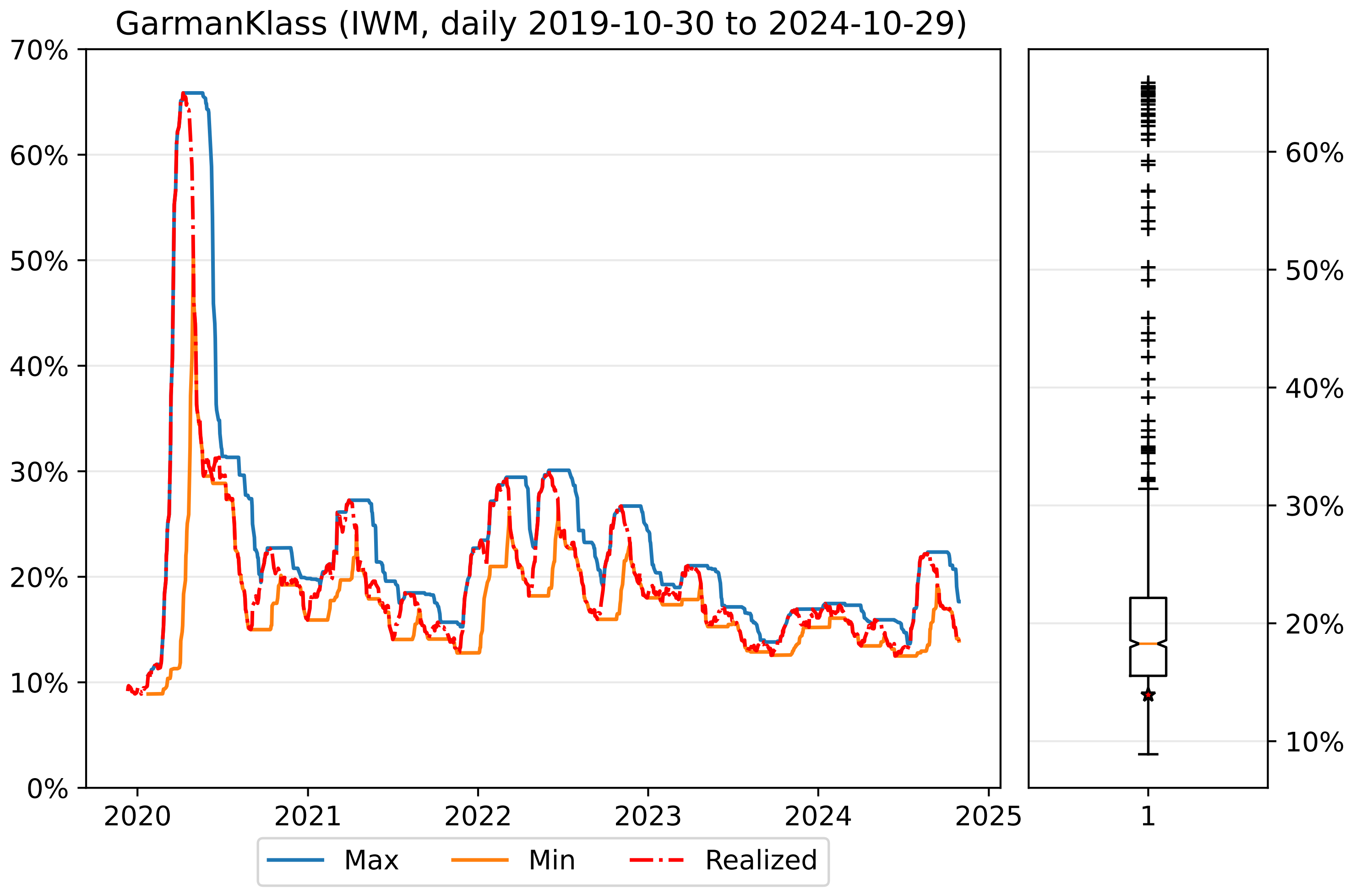
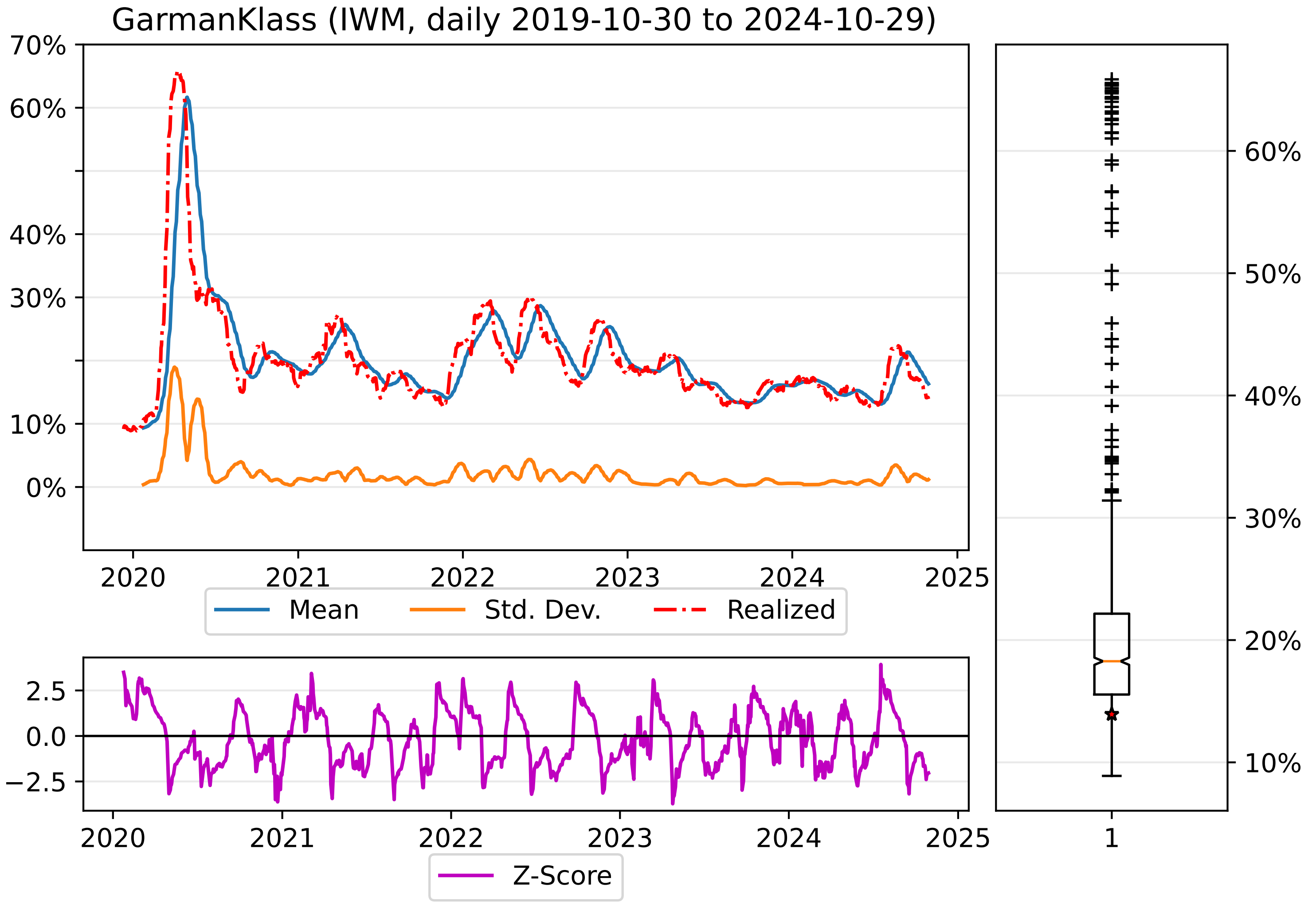
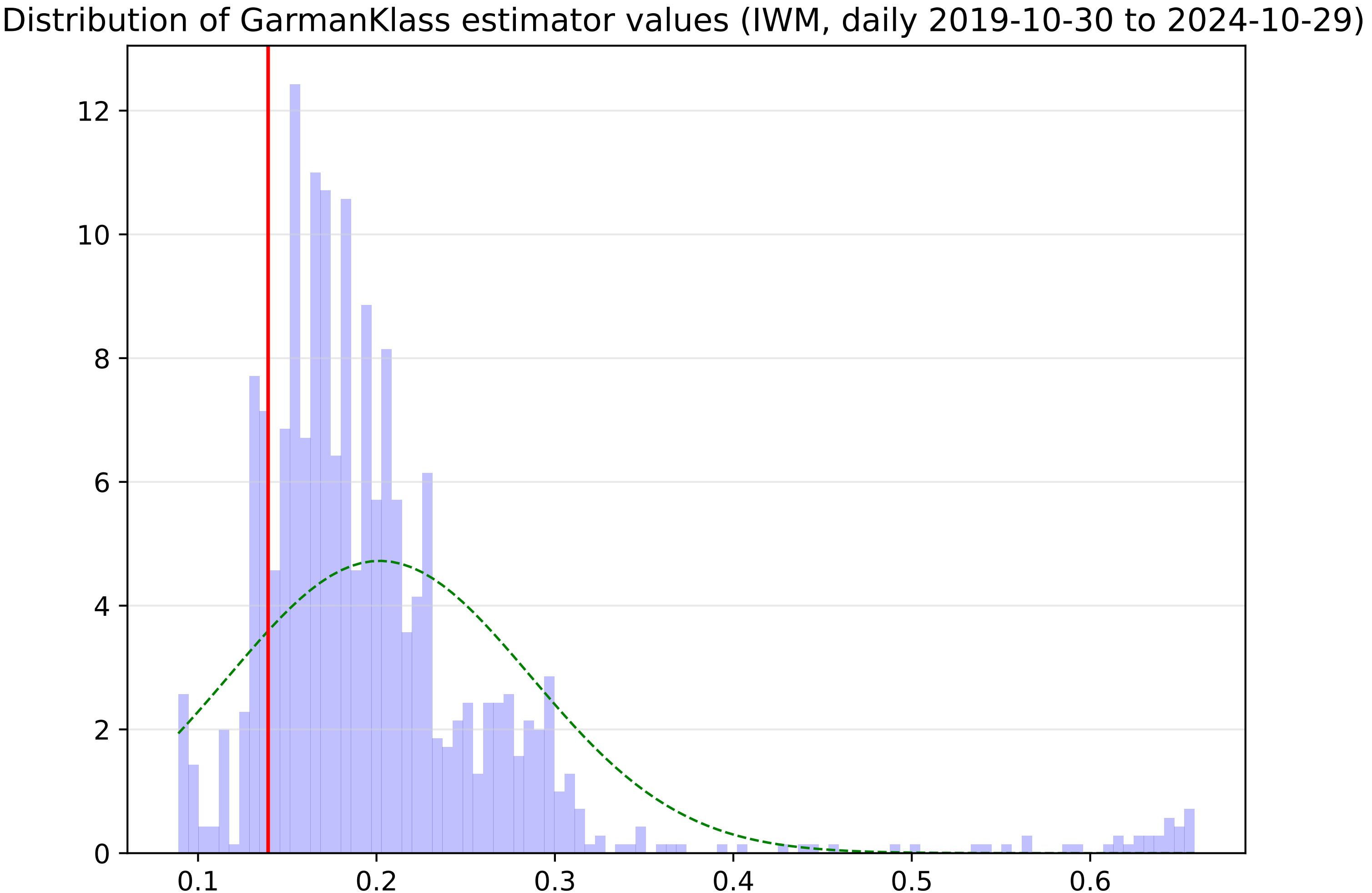
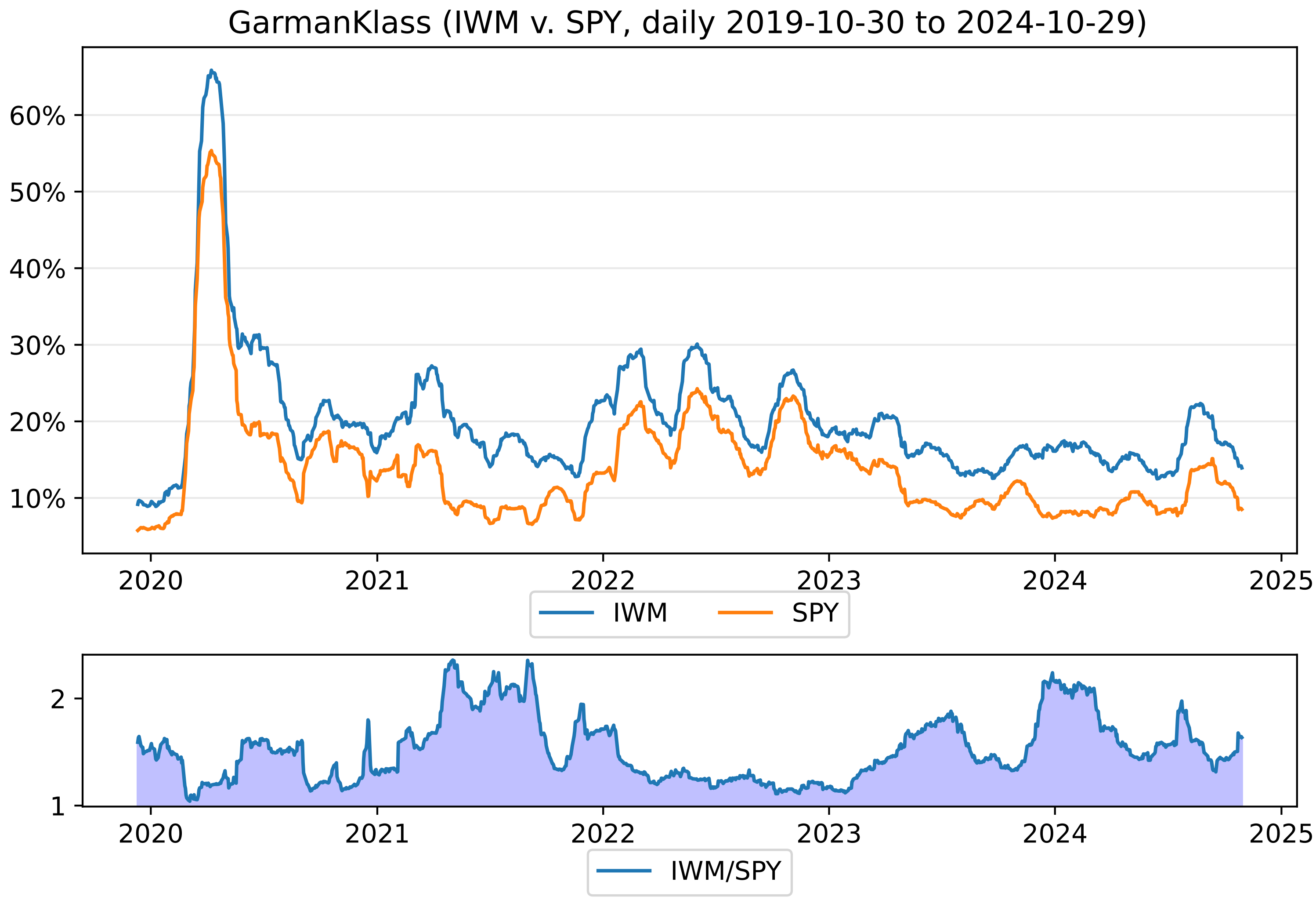

GarmanKlass (IWM, daily 2019-10-30 to 2024-10-29)
0%
10%
20%
30%
40%
50%
60%
70%
30
60
90
120
1
2
3
4
Max
75 Prctl
Median
25 Prctl
Min
Realized

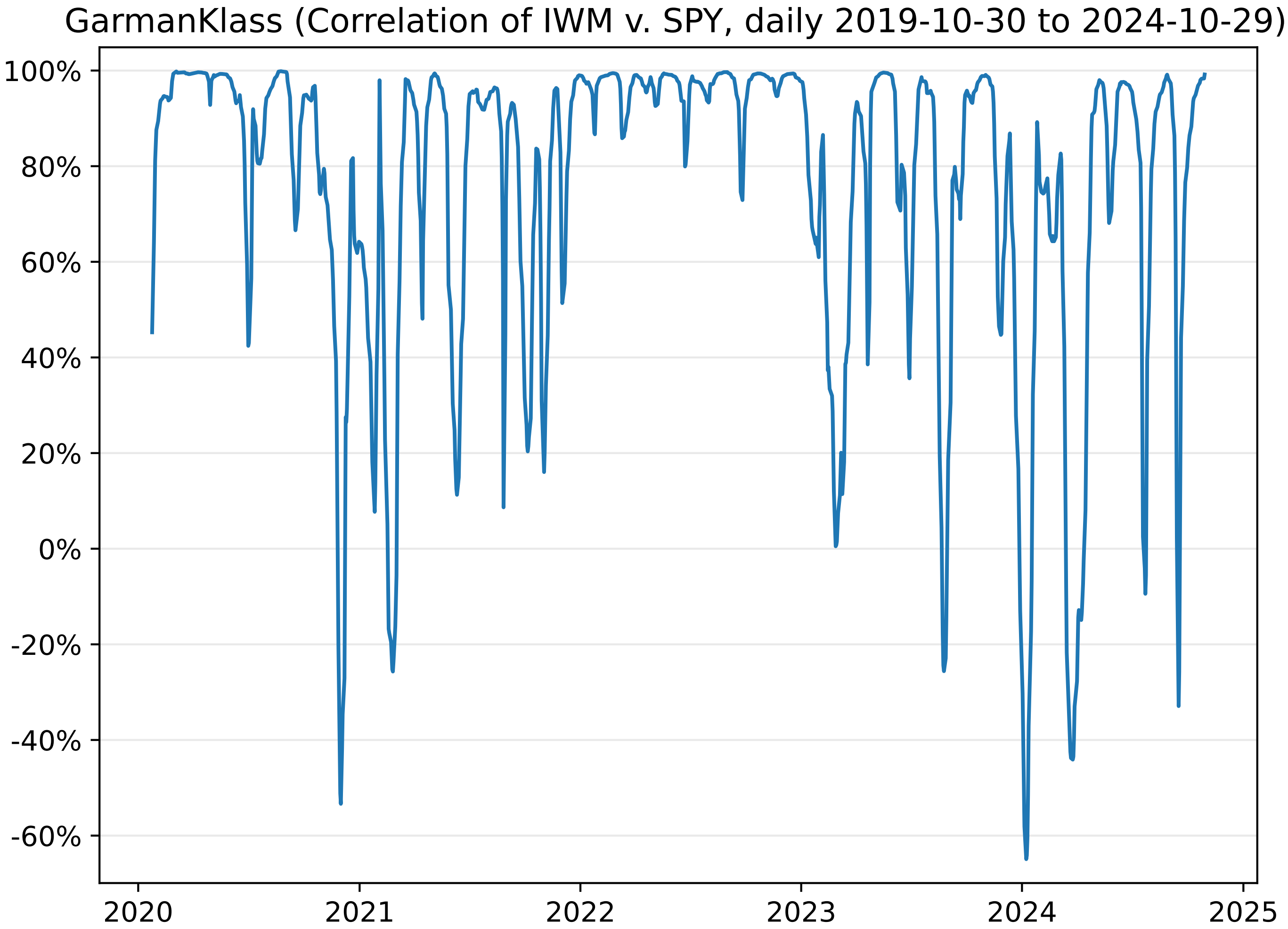

GarmanKlass (IWM, daily 2019-10-30 to 2024-10-29)
60%
50%
40%
30%
20%
10%
2020
2021
2022
2023
2024
2025
1
75 Prctl
25 Prctl
Realized
Median


GarmanKlass (IWM, daily 2019-10-30 to 2024-10-29)
70%
60%
50%
40%
30%
20%
10%
0%
2020
2021
2022
2023
2024
2025
Max
Min
Realized
60%
50%
40%
30%
20%
10%
1


GarmanKlass (IWM, daily 2019-10-30 to 2024-10-29)
70%
60%
40%
30%
10%
0%
2020
2021
2022
2023
2024
2025
Mean
Std. Dev.
Realized
2.5
0.0
−2.5
Z-Score
60%
50%
40%
30%
20%
10%
1


Distribution of GarmanKlass estimator values (IWM, daily 2019-10-30 to 2024-10-29)
0
2
4
6
8
10
12
0.1
0.2
0.3
0.4
0.5
0.6


GarmanKlass (IWM v. SPY, daily 2019-10-30 to 2024-10-29)
60%
50%
40%
30%
20%
10%
2020
2021
2022
2023
2024
2025
IWM
SPY
2
1
IWM/SPY


GarmanKlass (Correlation of IWM v. SPY, daily 2019-10-30 to 2024-10-29)
100%
80%
60%
40%
20%
0%
-20%
-40%
-60%
2020
2021
2022
2023
2024
2025

```
                            OLS Regression Results
=======================================================================================
Dep. Variable:                      y   R-squared (uncentered):                   0.972
Model:                            OLS   Adj. R-squared (uncentered):              0.972
Method:                 Least Squares   F-statistic:                          4.231e+04
Date:                Tue, 29 Oct 2024   Prob (F-statistic):                        0.00
Time:                        23:54:04   Log-Likelihood:                          2316.9
No. Observations:                1229   AIC:                                     -4632.
Df Residuals:                    1228   BIC:                                     -4627.
Df Model:                           1
Covariance Type:            nonrobust
==============================================================================
                 coef    std err          t      P>|t|      [0.025      0.975]
------------------------------------------------------------------------------
x1             1.3387      0.007    205.697      0.000       1.326       1.351
==============================================================================
Omnibus:                       26.565   Durbin-Watson:                   0.014
Prob(Omnibus):                  0.000   Jarque-Bera (JB):               27.945
Skew:                          -0.369   Prob(JB):                     8.55e-07
Kurtosis:                       2.990   Cond. No.                         1.00
==============================================================================

Notes:
[1] R² is computed without centering (uncentered) since the model does not contain a constant.
[2] Standard Errors assume that the covariance matrix of the errors is correctly specified.
```