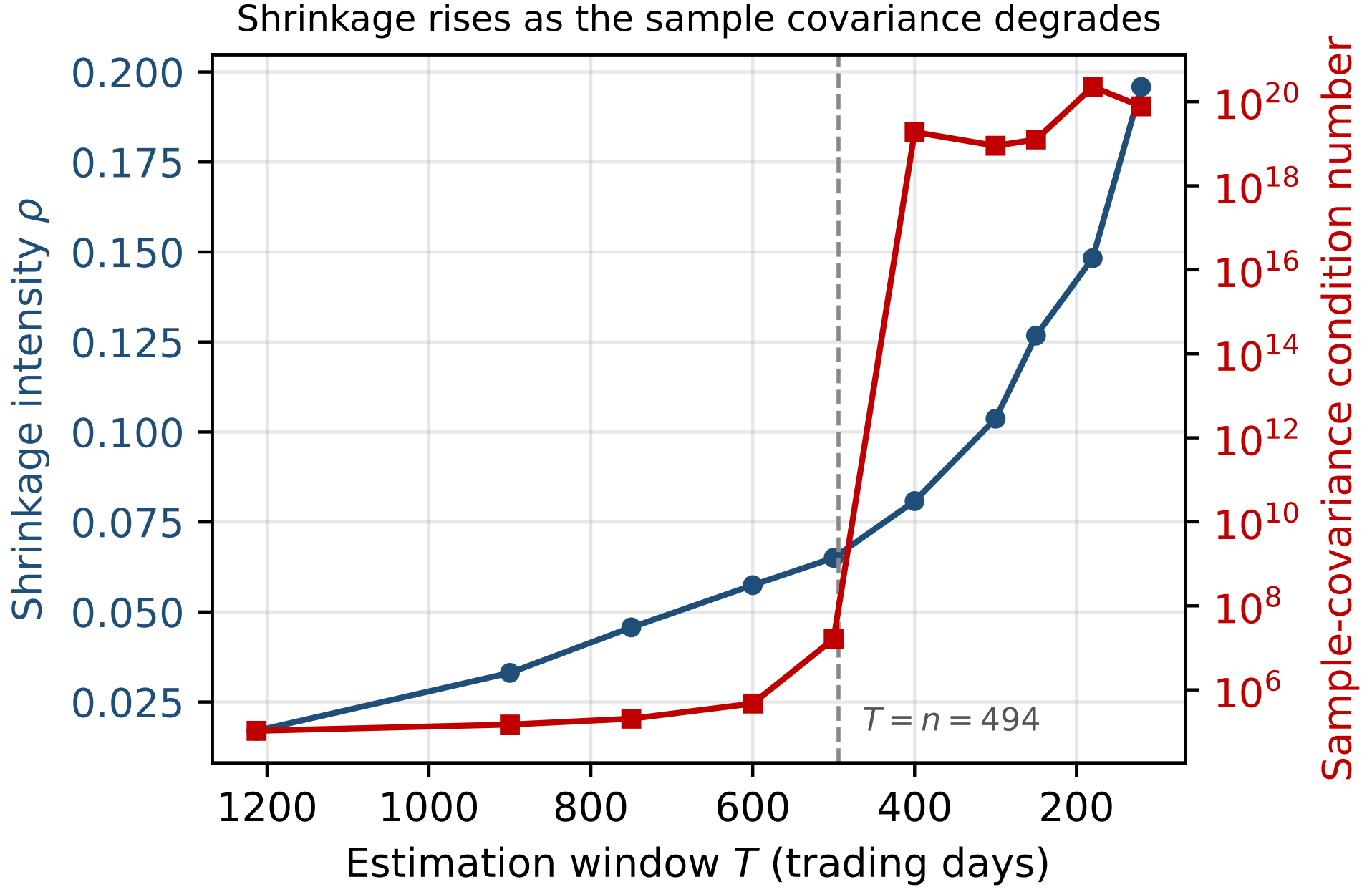

Shrinkage rises as the sample covariance degrades
Shrinkage intensity ρ
0.200
0.175
0.150
0.125
0.100
0.075
0.050
0.025
Sample-covariance condition number
10^20
10^18
10^16
10^14
10^12
10^10
10^8
10^6
T = n = 494
1200
1000
800
600
400
200
Estimation window T (trading days)