

Pairs trading

邱政揚

DATA: 隨機400檔台股

Time: 2013-2020

back test: finlab

1. normalize all stock
2. calculate euclidean distance of each possible pairs
3. format pairs with 10 smallest spread
4. trade

trade

Trading Period II

- Generating trading signals



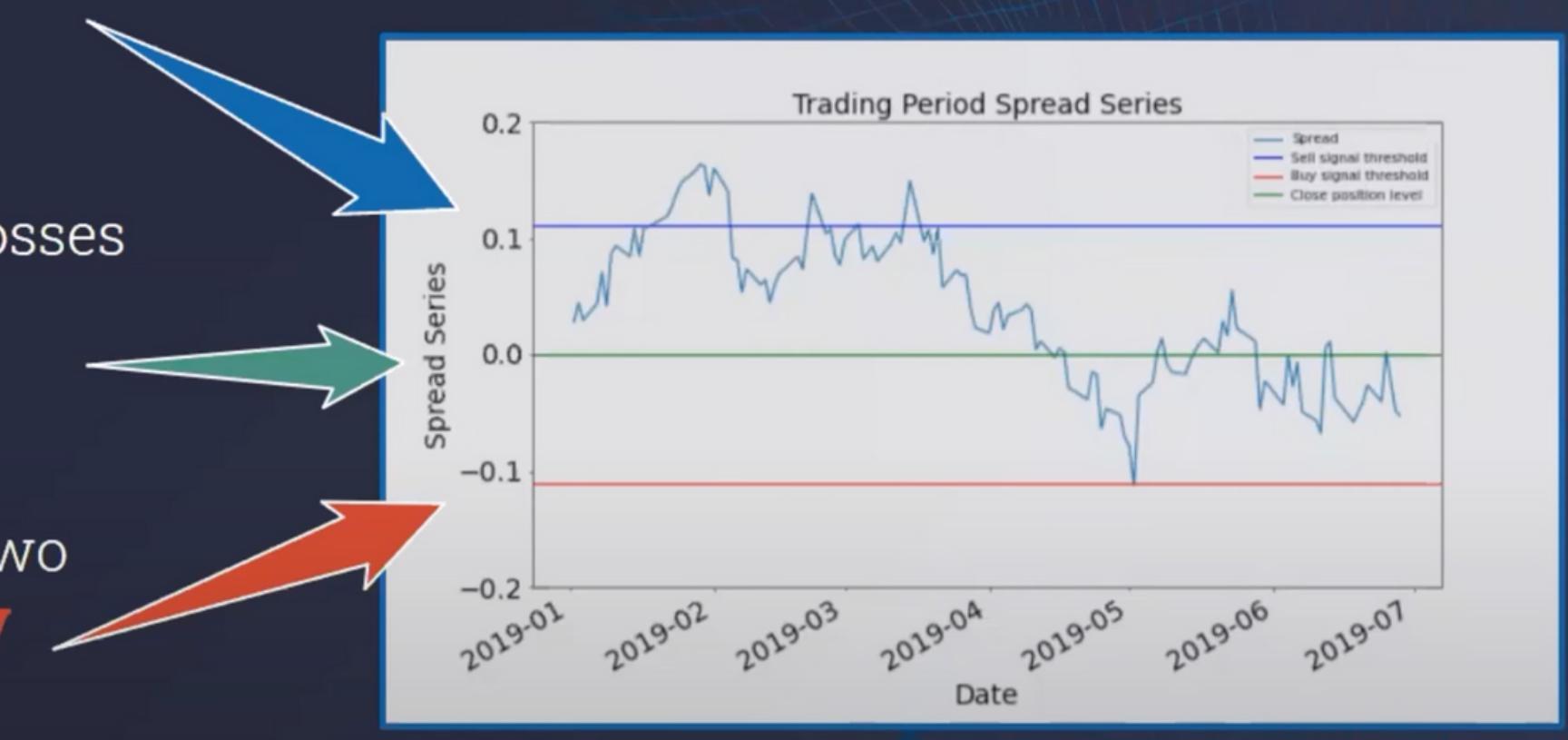
If the spread value exceeds two historical deviations, generate a **sell** signal



Close open position when spread crosses the zero mark



If the spread value is below minus two historical deviations, generate a **buy** signal



12 months pairs formation period

6 months trading period



Picking top 20 pairs of stocks



Using 2 historical deviations threshold to enter a trade

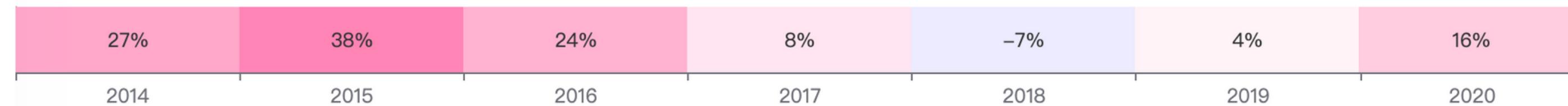
stop loss

1. 要換pair 之前會全部平倉
2. 當 $\text{spread} > 2\text{std}$ or $\text{spread} < -2\text{std}$ 做停損

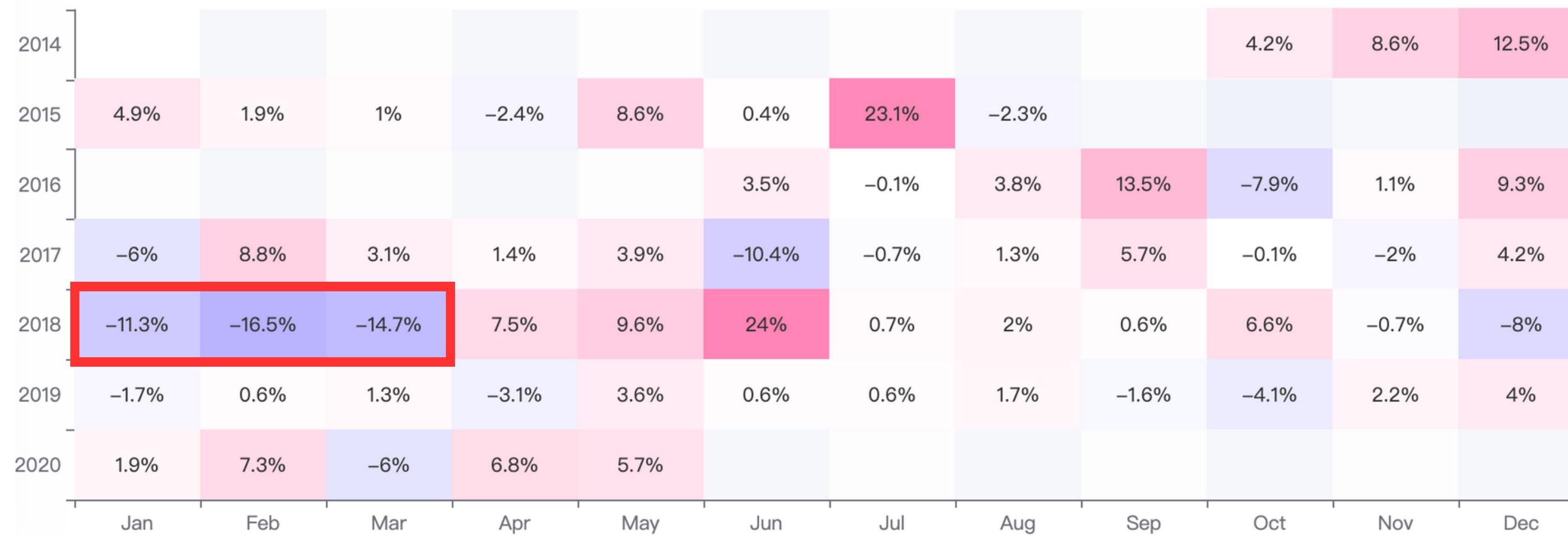
portfolio



年報酬

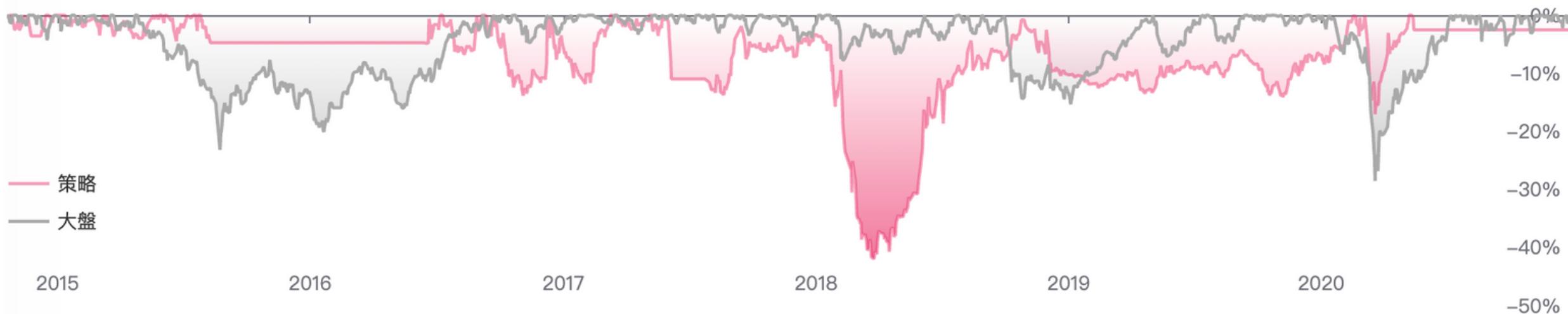


月報酬



MDD

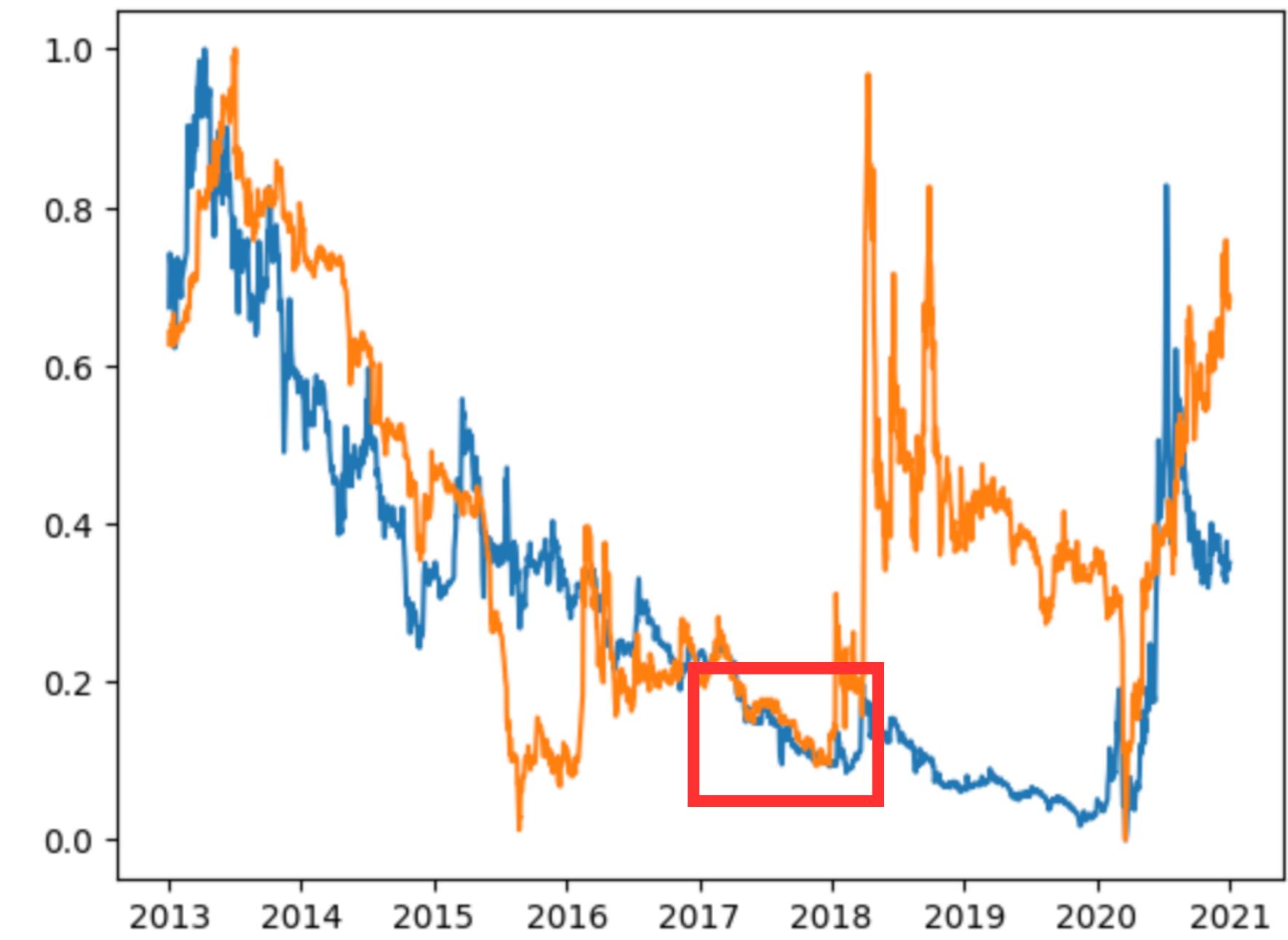
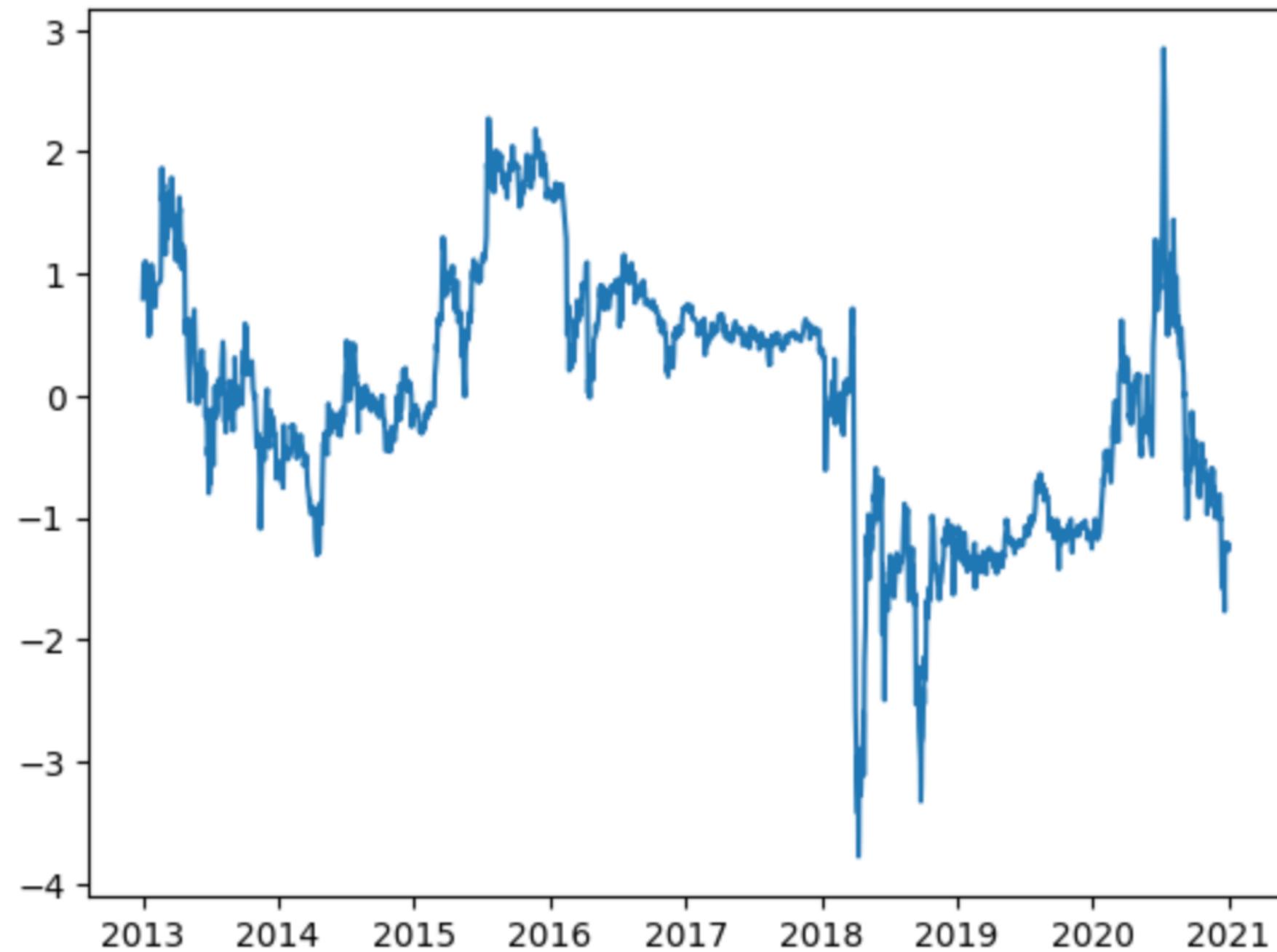
下跌幅度

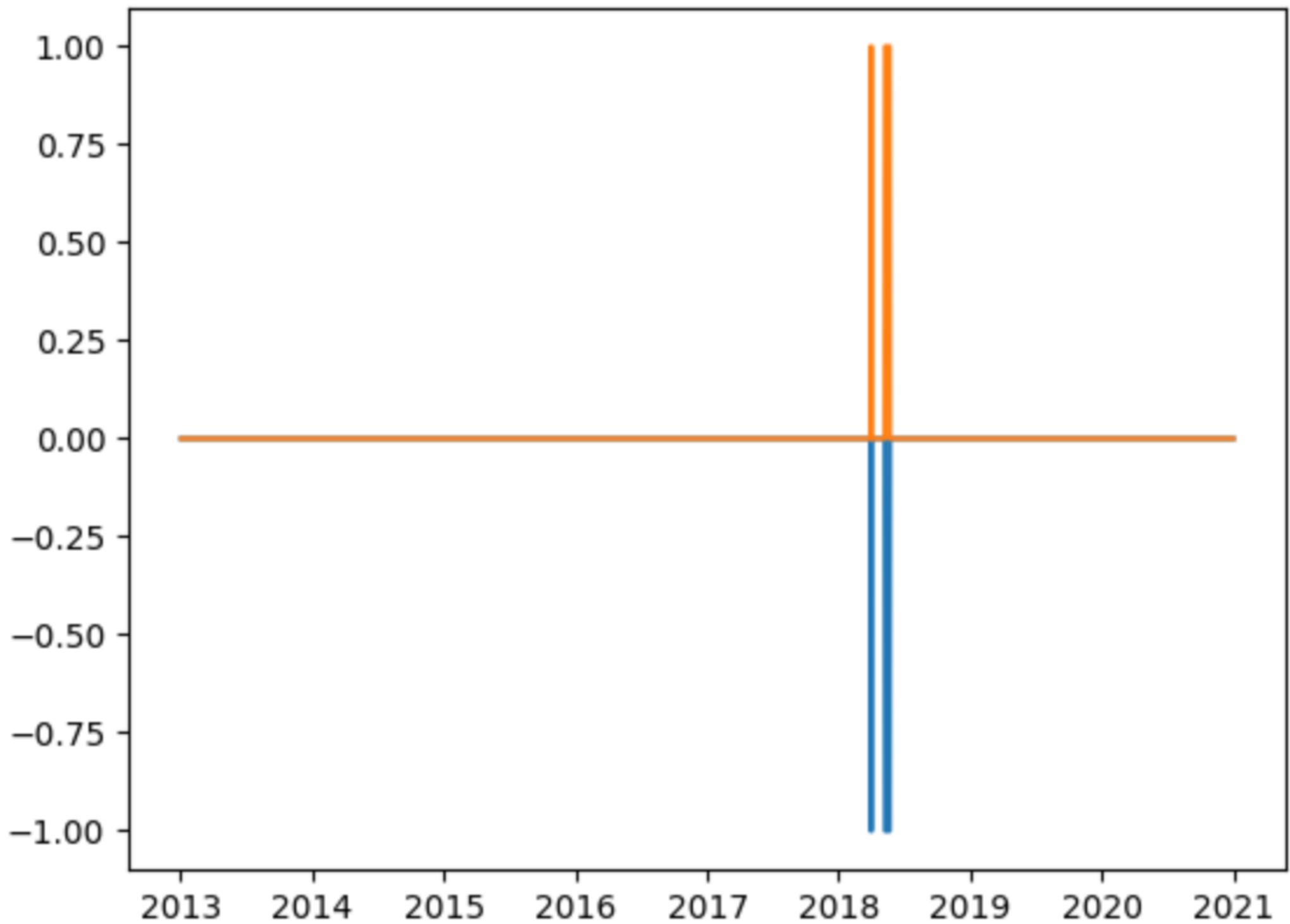


歷史最大下跌風險

起始時間	虧損程度	時間長度
2016-07-12	-6.8%	49 天
2016-09-22	-13.8%	78 天
2016-12-16	-11.8%	84 天
2017-05-25	-42%	998 天
2020-03-05	-17%	63 天

why



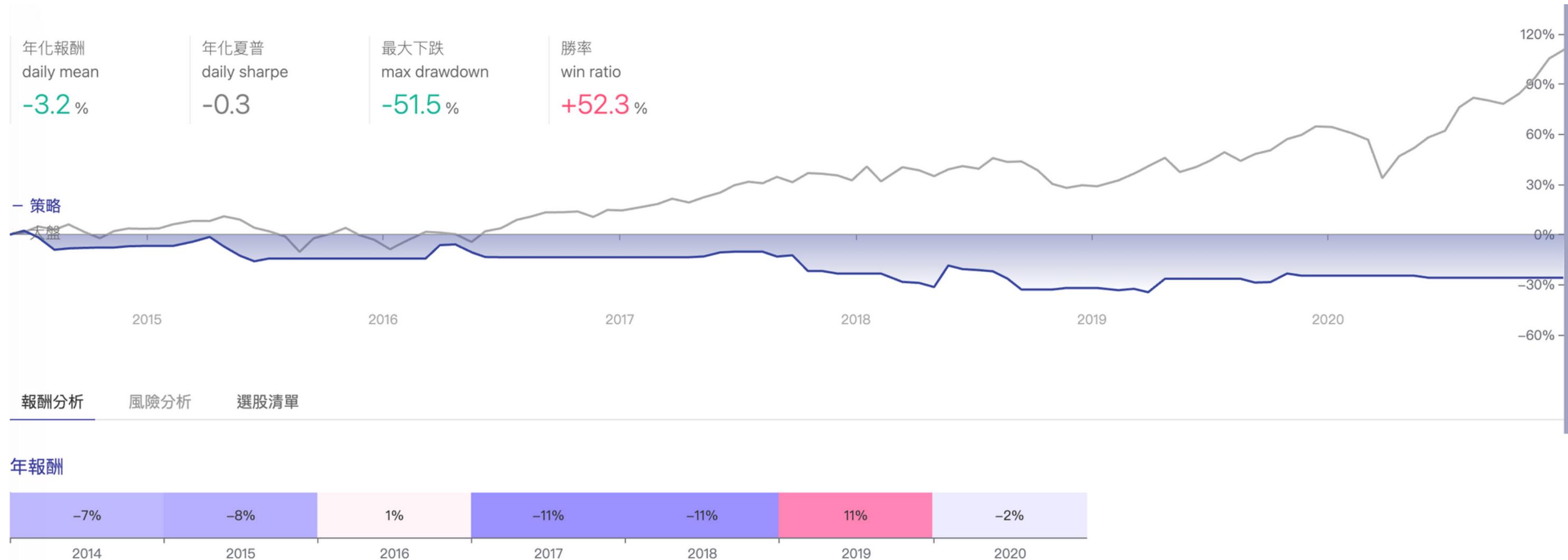


停損後經過震盪又再度
買入，造成停損兩次

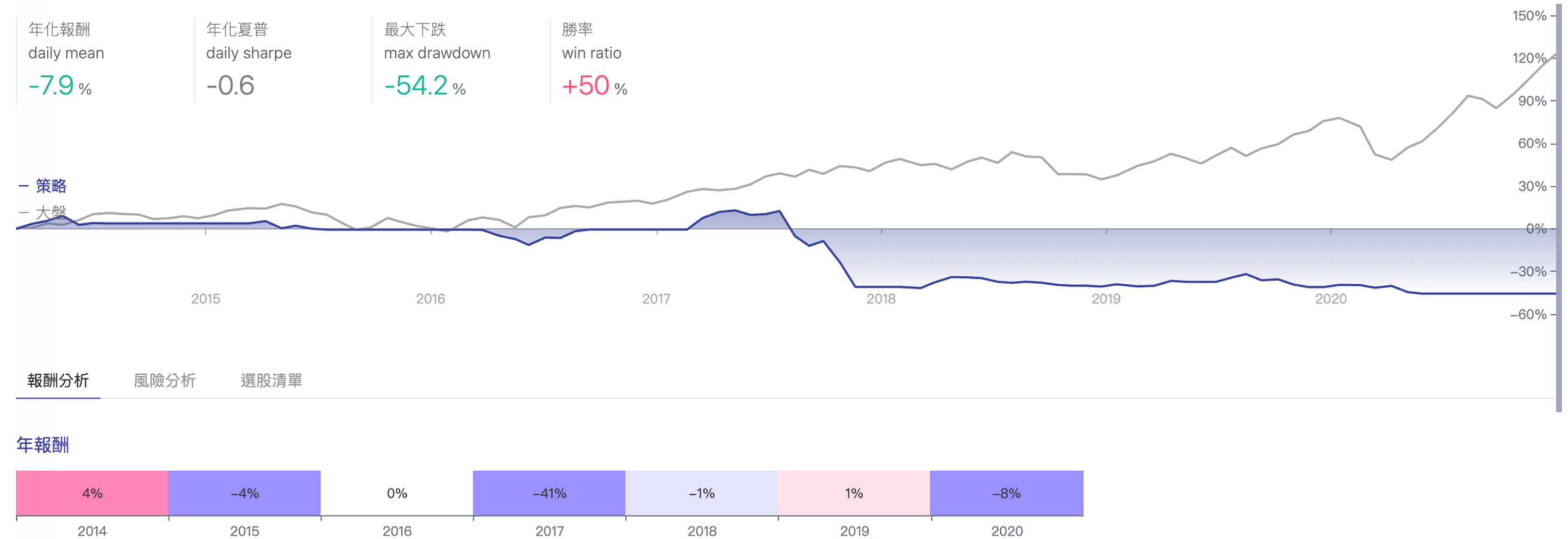
solution

- 1.停損後表示這個pair 已嚴重脫鉤，所以要把這個 pair 踢出組合中
- 2.對股票做篩選，避免選到暴漲暴跌的股票

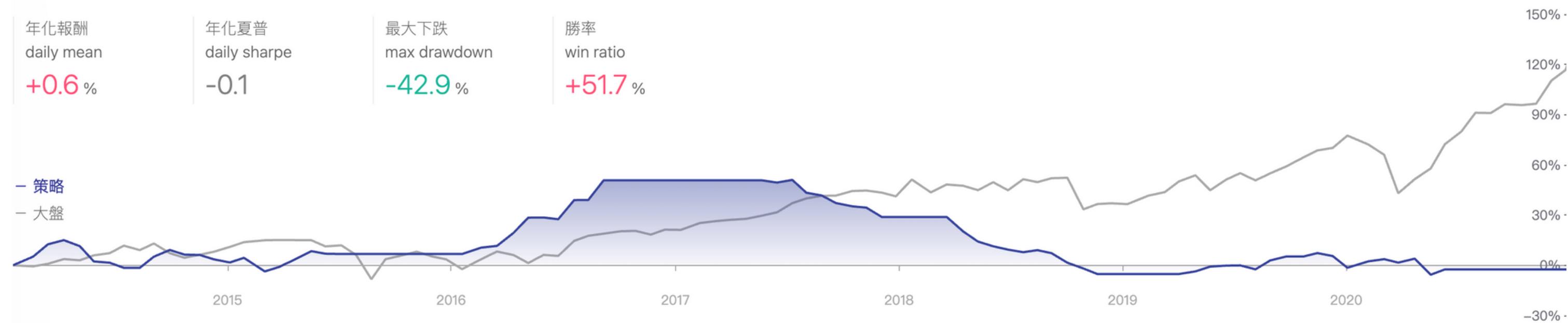
市值後400



市值中間400



市值前400



報酬分析 風險分析 選股清單

年報酬

