

報告

108062313黃允暘

使用資料

- 台指期
- 日盤
- 樣本內：2022-03-14 ~ 2022-11-14(8個月)
- 樣本外：2022-11-14 ~ 2023-03-17(4個月)
- 手續費：百萬分之三

使用指標

- 威廉指標(Williams %R)

$$\text{Williams \%R} = \frac{\text{Highest High} - \text{Close}}{\text{Highest High} - \text{Lowest Low}}$$

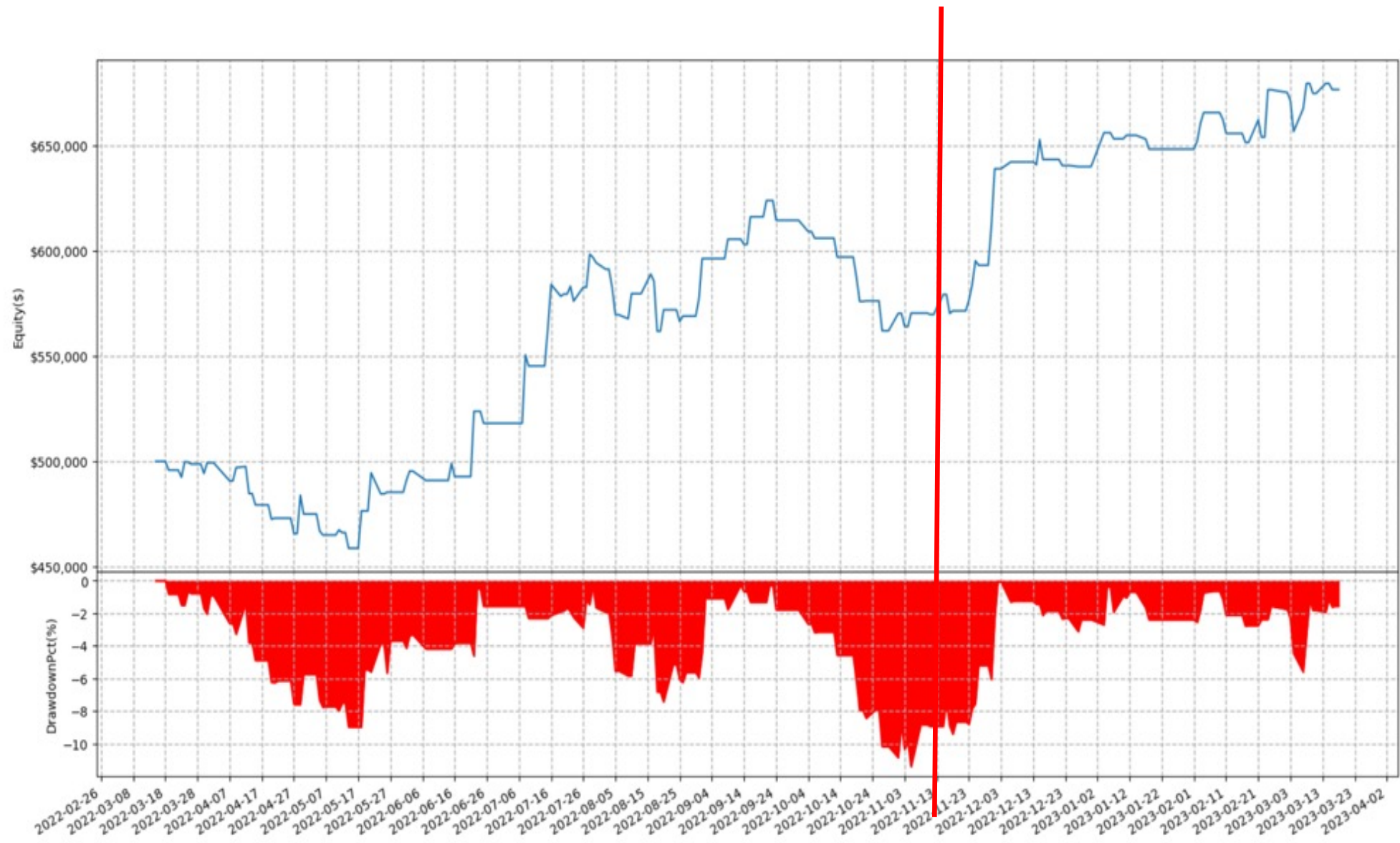
- Talib

WL = 65
OB = -30
stop_pct = 1 #表示0.1%

策略

多單策略：

- 進場：
 - WR向上超越超買區(-30)
 - 開盤15分鐘後進場
- 出場：
 - 百分比停損 0.1%
 - 跌破3根低點停利停損
 - WR跌出超買區
 - 13.30平倉



改進方向

1. 加入做空策略

Start	2022-03-14 08:50:00
End	2023-03-17 13:45:00
Duration	368 days 04:55:00
Exposure Time [%]	14.126344
Equity Final [\$]	676724.26
Equity Peak [\$]	687427.314
Return [%]	35.344852
Buy & Hold Return [%]	-10.949876
Return (Ann.) [%]	36.007159
Volatility (Ann.) [%]	26.600283
Sharpe Ratio	1.353638
Sortino Ratio	3.626603
Calmar Ratio	3.15569
Max. Drawdown [%]	-11.410234
Avg. Drawdown [%]	-1.453568
Max. Drawdown Duration	70 days 22:40:00
Avg. Drawdown Duration	6 days 17:47:00
# Trades	217
Win Rate [%]	28.571429
Best Trade [%]	1.159372
Worst Trade [%]	-0.539853
Avg. Trade [%]	0.027215
Max. Trade Duration	0 days 04:25:00
Avg. Trade Duration	0 days 00:44:00
Profit Factor	1.409071
Expectancy [%]	0.027514
SQN	1.64433
_strategy	WL
_equity_curve	...
_trades	Size Entry...
dtype:	object

WL = 65
OB = -30
stop_pct = 1 #表示0.1%
OS = -75

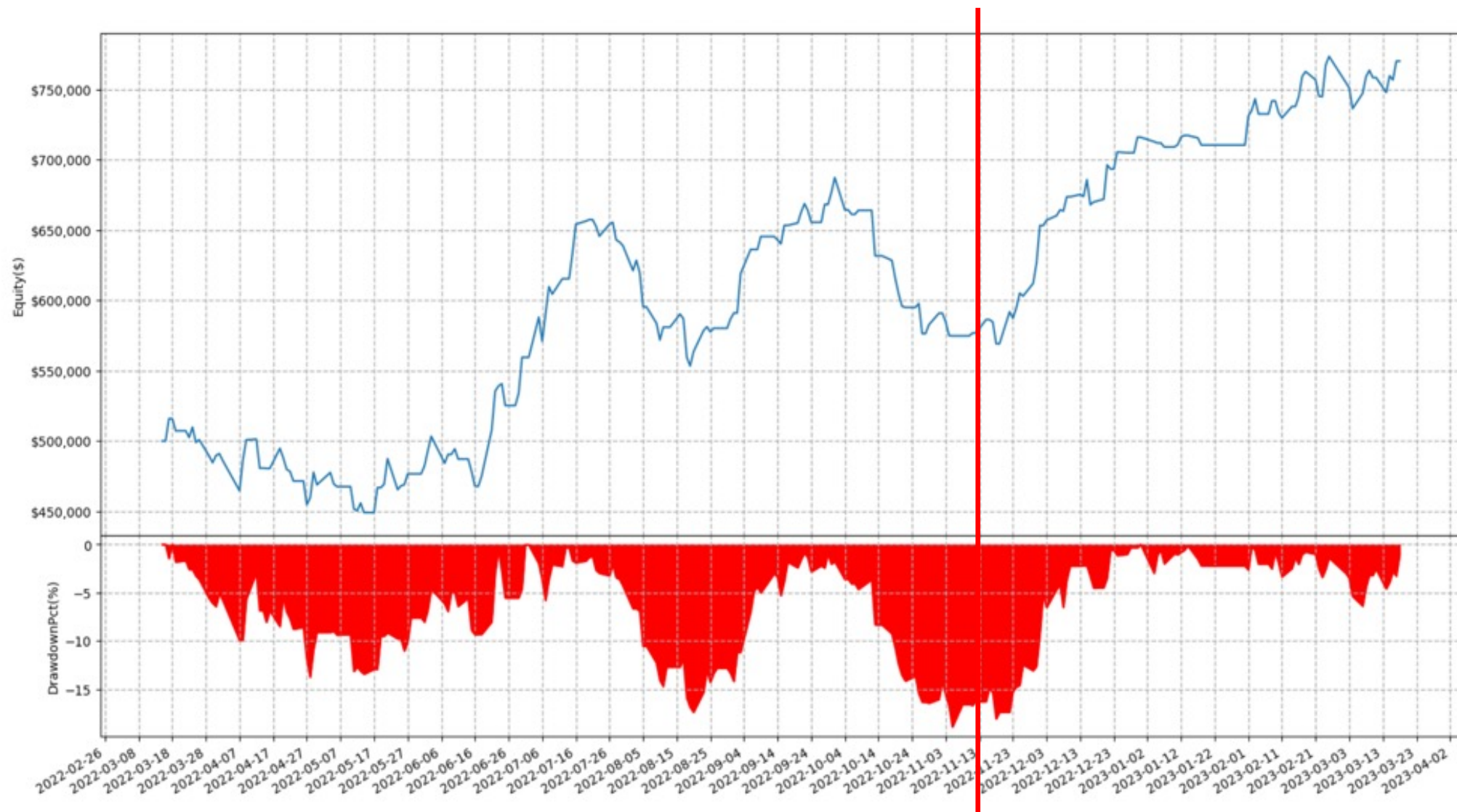
策略

多單策略：

- 進場：
 - WR向上超越超買區(-30)
 - 開盤15分鐘後進場
- 出場：
 - 百分比停損 0.1%
 - 跌破3根低點停利停損
 - WR跌出超買區
 - 13.30平倉

空單策略：

- 進場：
 - WR向下超越超賣區(-75)
 - 開盤15分鐘後進場
- 出場：
 - 百分比停損 0.1%
 - WR向上超出超賣區
 - 13.30平倉



改進方向

1. 對其中OB, OS, stop_pct的數值做優化

Start	2022-03-14 08:50:00
End	2023-03-17 13:45:00
Duration	368 days 04:55:00
Exposure Time [%]	31.297043
Equity Final [\$]	770172.56
Equity Peak [\$]	778258.588
Return [%]	54.034512
Buy & Hold Return [%]	-10.949876
Return (Ann.) [%]	55.111549
Volatility (Ann.) [%]	44.930982
Sharpe Ratio	1.226582
Sortino Ratio	3.07276
Calmar Ratio	2.911607
Max. Drawdown [%]	-18.928224
Avg. Drawdown [%]	-1.694909
Max. Drawdown Duration	95 days 00:05:00
Avg. Drawdown Duration	4 days 21:05:00
# Trades	481
Win Rate [%]	55.301455
Best Trade [%]	1.159372
Worst Trade [%]	-0.78568
Avg. Trade [%]	0.018313
Max. Trade Duration	0 days 04:25:00
Avg. Trade Duration	0 days 00:44:00
Profit Factor	1.247765
Expectancy [%]	0.018606
SQN	1.710575
_strategy	WL
_equity_curve	...
_trades	Size Entry...
dtype: object	

WL = 65
OB = -15
stop_pct = 5 #表示0.5%
OS = -70

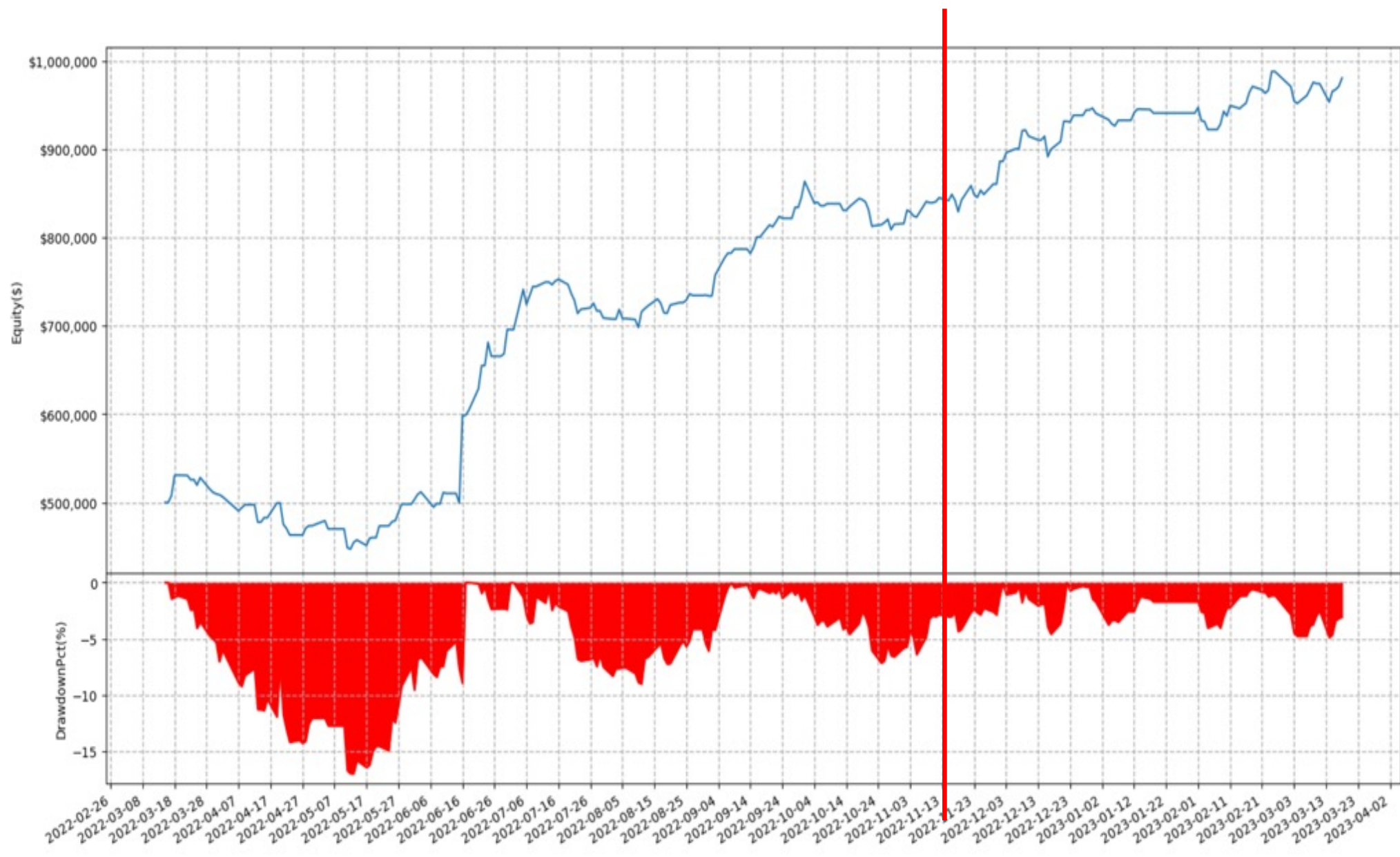
策略

多單策略：

- 進場：
 - WR向上超越超買區(-15)
 - 開盤15分鐘後進場
- 出場：
 - 百分比停損 0.5%
 - 跌破3根低點停利停損
 - WR跌出超買區
 - 13.30平倉

空單策略：

- 進場：
 - WR向下超越超賣區(-70)
 - 開盤15分鐘後進場
- 出場：
 - 百分比停損 0.5%
 - WR向上超出超賣區
 - 13.30平倉



Start	2022-03-14 08:50:00
End	2023-03-17 13:45:00
Duration	368 days 04:55:00
Exposure Time [%]	32.862903
Equity Final [\$]	980777.884
Equity Peak [\$]	999545.486
Return [%]	96.155577
Buy & Hold Return [%]	-10.949876
Return (Ann.) [%]	98.298772
Volatility (Ann.) [%]	60.010605
Sharpe Ratio	1.638023
Sortino Ratio	7.288265
Calmar Ratio	5.7988
Max. Drawdown [%]	-16.95157
Avg. Drawdown [%]	-0.937103
Max. Drawdown Duration	86 days 03:05:00
Avg. Drawdown Duration	3 days 01:46:00
# Trades	570
Win Rate [%]	59.122807
Best Trade [%]	3.116829
Worst Trade [%]	-0.777792
Avg. Trade [%]	0.027875
Max. Trade Duration	0 days 03:55:00
Avg. Trade Duration	0 days 00:38:00
Profit Factor	1.45872
Expectancy [%]	0.028177
SQN	2.684715
_strategy	WL
_equity_curve	...
_trades	Size Entry...
dtype: object	