報告範例

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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 ~ 2023-03-13（4個月）
- 手續費：百萬分之3（原百萬分之2加20元）

解釋指標

使用指標

- 威廉指標(Williams %R)

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

- Talib
    - PercentR = Williams %R - 100
    - (收盤價越接近最近n天最高價數值越大)

搭配範例

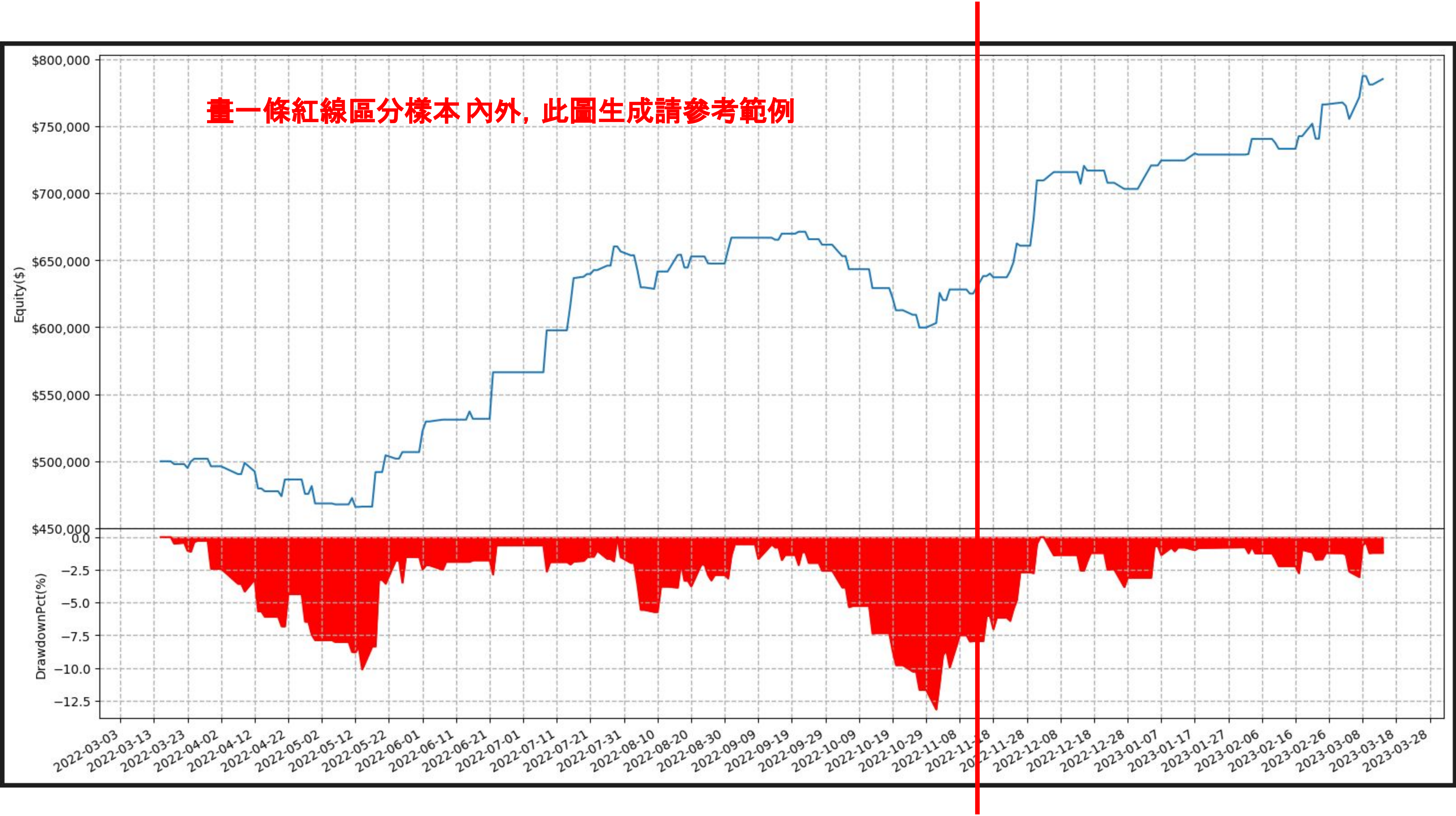
$$\text{Wiliams } \%R = \frac{\text{Highest High} - \text{Close}}{\text{Highest High} - \text{Lowest Low}}$$

```
WL = 65
OB = -30
```

寫清楚多空單，進出場條件，參數截圖放右上角

多單策略

- 開盤15分後進場:
  - WR 向上穿越 超買區
- 出場:
  - 跌破3根低點停利停損
  - WR 向下穿越 超買區
  - 當沖13:30平倉


畫一條紅線區分樣本 內外，此圖生成請參考範例
Equity($)
$800,000
$750,000
$700,000
$650,000
$600,000
$550,000
$500,000
$450,000
DrawdownPct(%)
0.0
−2.5
−5.0
−7.5
−10.0
−12.5
2022-03-03
2022-03-13
2022-03-23
2022-04-02
2022-04-12
2022-04-22
2022-05-02
2022-05-12
2022-05-22
2022-06-01
2022-06-11
2022-06-21
2022-07-01
2022-07-11
2022-07-21
2022-07-31
2022-08-10
2022-08-20
2022-08-30
2022-09-09
2022-09-19
2022-09-29
2022-10-09
2022-10-19
2022-10-29
2022-11-08
2022-11-18
2022-11-28
2022-12-08
2022-12-18
2022-12-28
2023-01-07
2023-01-17
2023-01-27
2023-02-06
2023-02-16
2023-02-26
2023-03-08
2023-03-18
2023-03-28

改進方向

右邊貼上績效圖

1. MDD在 2022 / 10 達到-13%，增加固定停損

條列觀察到的問題以及改進方向

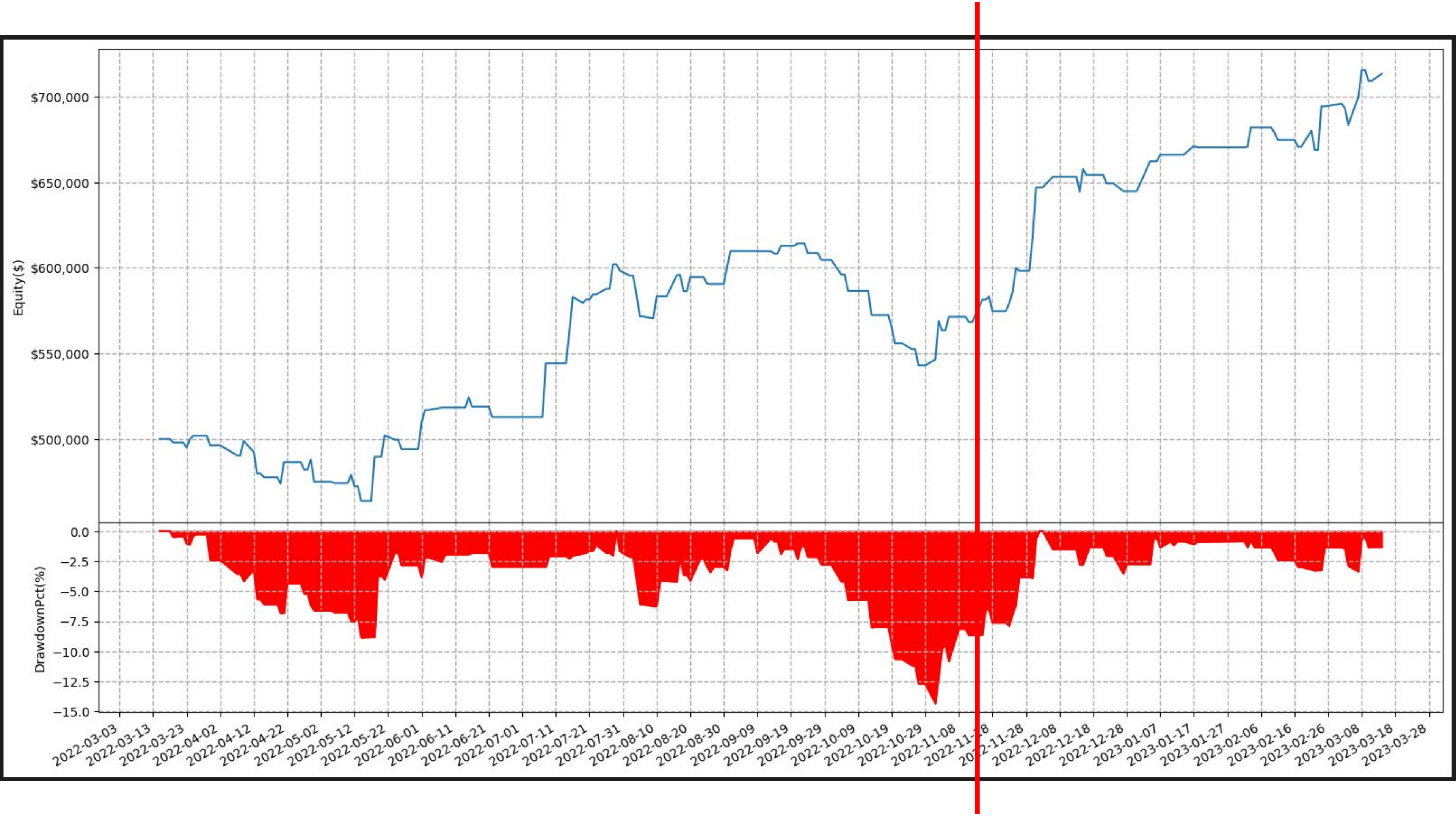
Start	2022-03-14 08:50:00
End	2023-03-13 13:50:00
Duration	364 days 05:00:00
Exposure Time [%]	14.740661
Equity Final [$]	785208.12
Equity Peak [$]	790585.916
Return [%]	57.041624
Buy & Hold Return [%]	-10.237131
Return (Ann.) [%]	59.382815
Volatility (Ann.) [%]	29.507406
Sharpe Ratio	2.012472
Sortino Ratio	7.285292
Calmar Ratio	4.510521
Max. Drawdown [%]	-13.165401
Avg. Drawdown [%]	-1.214109
Max. Drawdown Duration	75 days 00:55:00
Avg. Drawdown Duration	5 days 02:51:00
# Trades	221
Win Rate [%]	33.031674
Best Trade [%]	1.144572
Worst Trade [%]	-0.3215
Avg. Trade [%]	0.04255
Max. Trade Duration	0 days 04:05:00
Avg. Trade Duration	0 days 00:45:00
Profit Factor	1.724902
Expectancy [%]	0.04285
SQN	2.640423
_strategy	WL
_equity_curve	...
_trades	Size Entry...
dtype: object	

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

改進策略後，進出場條件一樣寫清楚

多單策略

- 開盤15分後進場：
  - WR 向上穿越 超買區
- 出場：
  - 百分比停損 0.1%
  - 跌破3根低點停利停損
  - WR 向下穿越 超買區
  - 當沖13:30平倉



$700,000
$650,000
$600,000
$550,000
$500,000
Equity($)
0.0
−2.5
−5.0
−7.5
−10.0
−12.5
−15.0
DrawdownPct(%)
2022-03-03
2022-03-13
2022-03-23
2022-04-02
2022-04-12
2022-04-22
2022-05-02
2022-05-12
2022-05-22
2022-06-01
2022-06-11
2022-06-21
2022-07-01
2022-07-11
2022-07-21
2022-07-31
2022-08-10
2022-08-20
2022-08-30
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2022-11-28
2022-12-08
2022-12-18
2022-12-28
2023-01-07
2023-01-17
2023-01-27
2023-02-06
2023-02-16
2023-02-26
2023-03-08
2023-03-18
2023-03-28

改進方向

1. 沒有用，Worst Trade 還是-0.29%
2. 改成stop單
3. 觀察發現有重複進場問題(停損了又進場)
4. 改變進場條件

Start	2022-03-14 08:50:00
End	2023-03-13 13:50:00
Duration	364 days 05:00:00
Exposure Time [%]	13.396936
Equity Final [$]	713408.12
Equity Peak [$]	718785.916
Return [%]	42.681624
Buy & Hold Return [%]	-10.237131
Return (Ann.) [%]	44.354156
Volatility (Ann.) [%]	26.879203
Sharpe Ratio	1.650129
Sortino Ratio	5.059592
Calmar Ratio	3.093109
Max. Drawdown [%]	-14.339667
Avg. Drawdown [%]	-1.428737
Max. Drawdown Duration	75 days 23:10:00
Avg. Drawdown Duration	6 days 04:44:00
# Trades	221
Win Rate [%]	30.316742
Best Trade [%]	1.112657
Worst Trade [%]	-0.296948
Avg. Trade [%]	0.031948
Max. Trade Duration	0 days 04:05:00
Avg. Trade Duration	0 days 00:41:00
Profit Factor	1.526899
Expectancy [%]	0.032217
SQN	2.091874
_strategy	WL
_equity_curve	...
_trades	Size Entry...
dtype: object	

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

多單策略

- 開盤15分後進場:
  - WR 前一根向上穿越 超買區, 當根>-50
- 出場:
  - 百分比停損 0.1%(改成stop單)
  - 跌破3根低點停利停損
  - WR 向下穿越 超買區
  - 當沖13:30平倉

……以此類推