中證500資料分析

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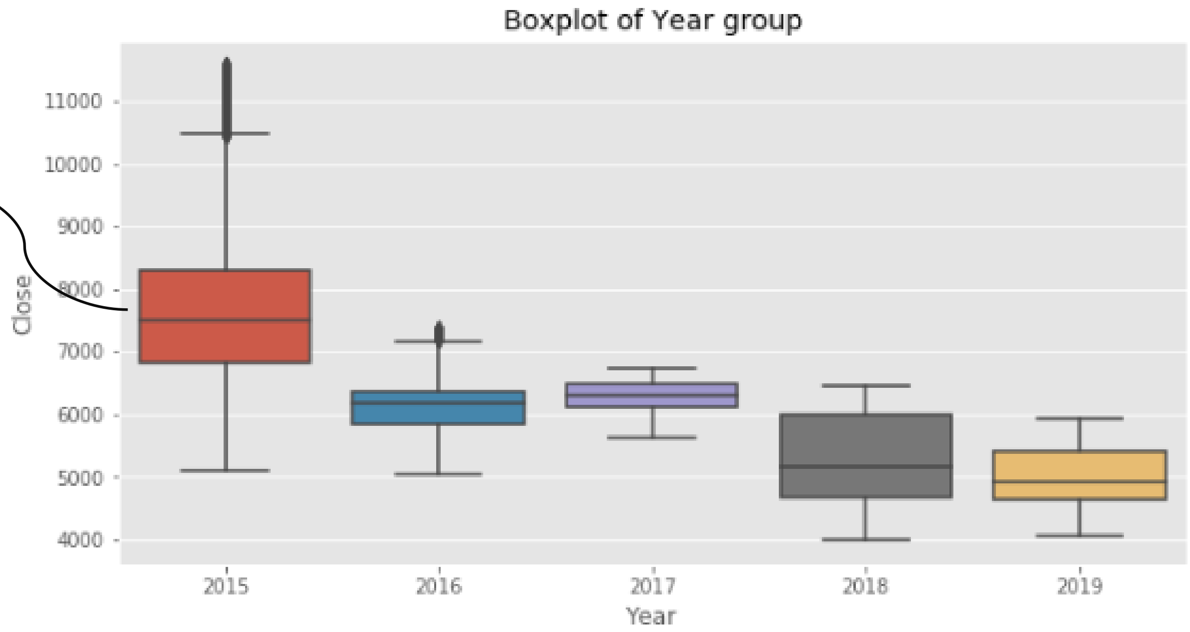
Mentor: 劉百耀

中證500

Underlying Bond	CSI 500 Index
Contract Multiplier	CNY 200
Unit	Index point
Tick Size	0.2 point
Contract Months	Monthly: current month, next month, next two calendar quarters (four total)
Trading Hours	09:30 am - 11:30 am, 01:00 pm - 03:00 pm 4小時
Limit Up/Down	±10% of the settlement price on the previous trading day
Minimum Margin Requirement	8% of the contract value
Last Trading Day	Third Friday of the contract month, postponed to the next business day if it falls on a public holiday
Delivery Day	Third Friday, same as "Last Trading Day"
Settlement Method	cash settlement
Transaction Code	IC
Exchange	China Financial Futures Exchange

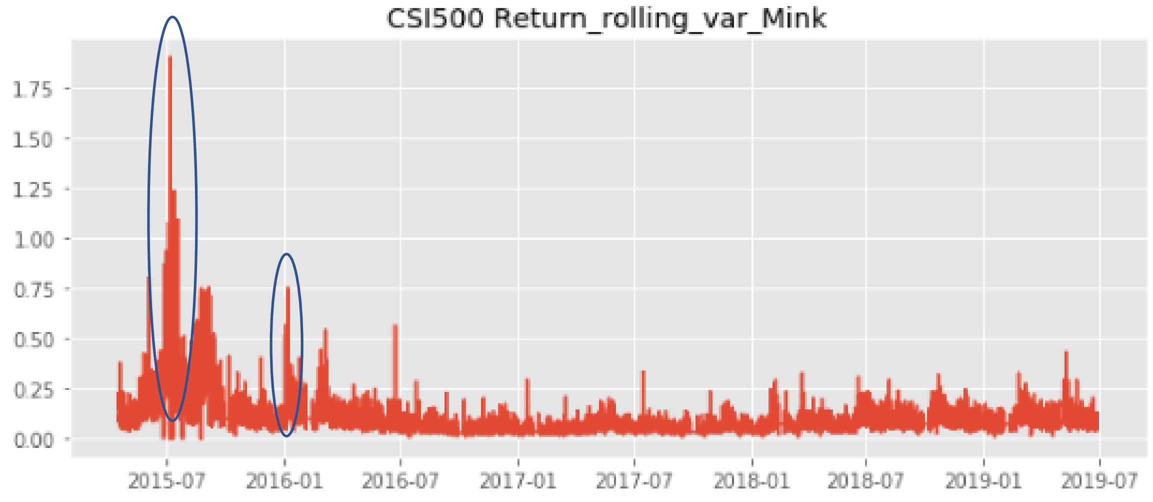
資料盒鬚圖

中國股災

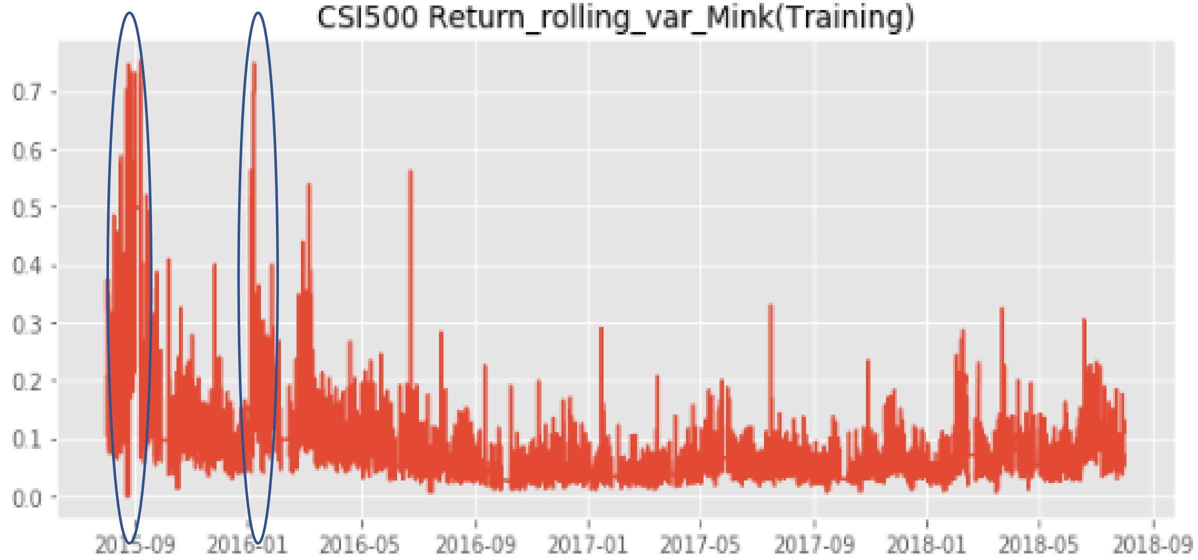


Boxplot of Year group
Close
11000
10000
9000
8000
7000
6000
5000
4000
2015
2016
2017
2018
2019
Year

實體k棒報酬率 Rolling variance



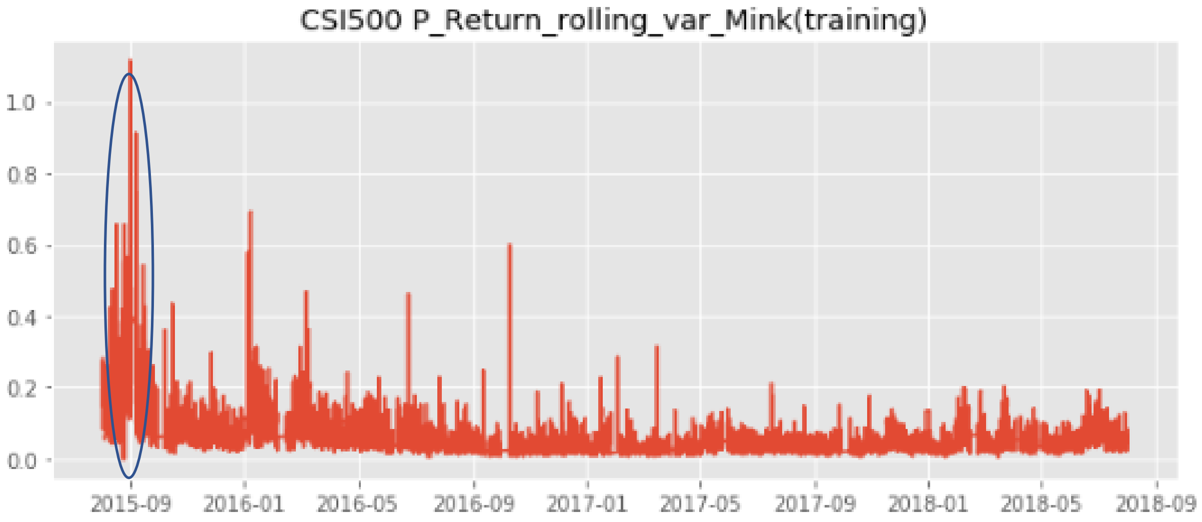
實體k棒報酬率: (Close – Open) / Open



CSI500 strategy

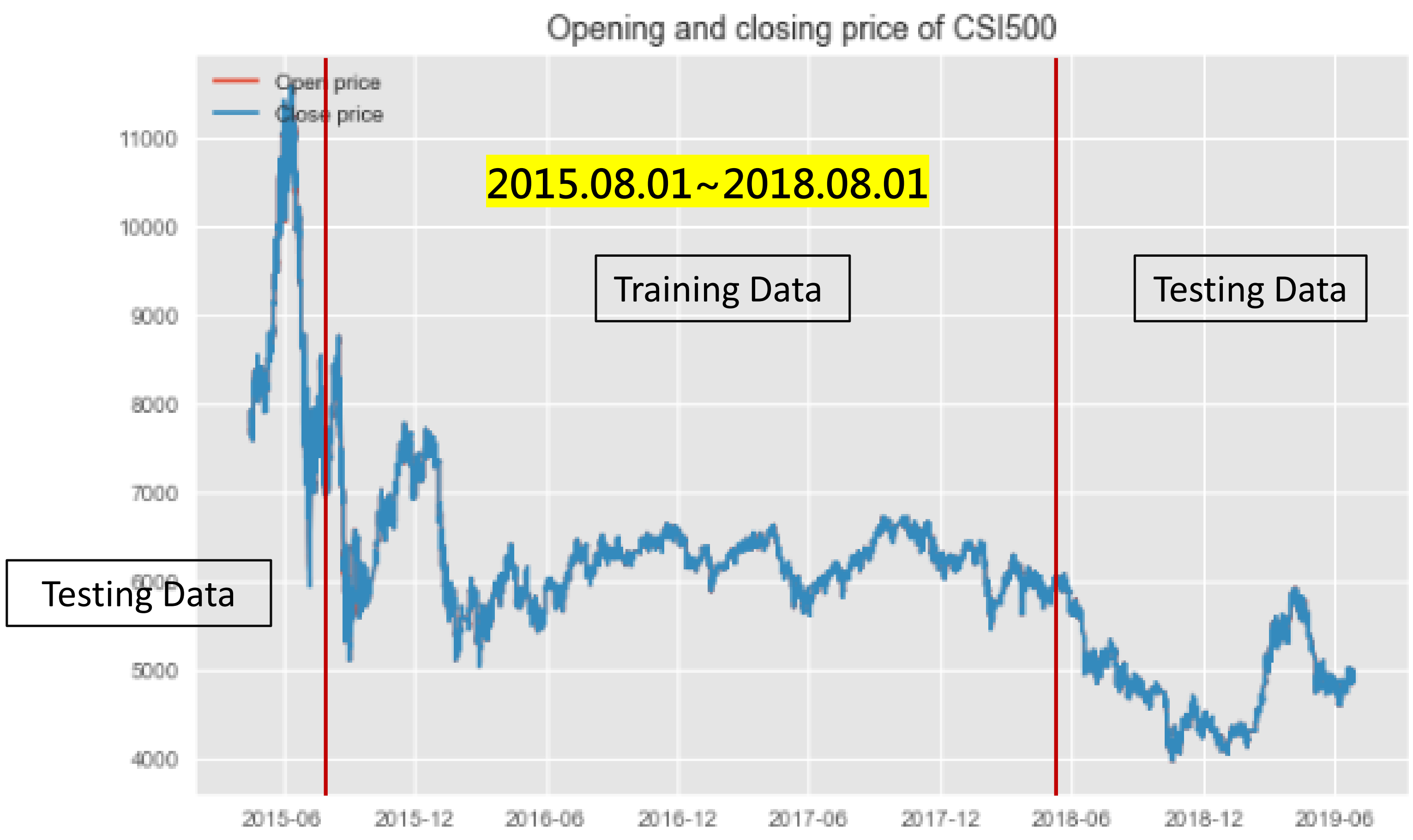
樂觀報酬率 Rolling variance

樂觀報酬率: (High – Low) / Low

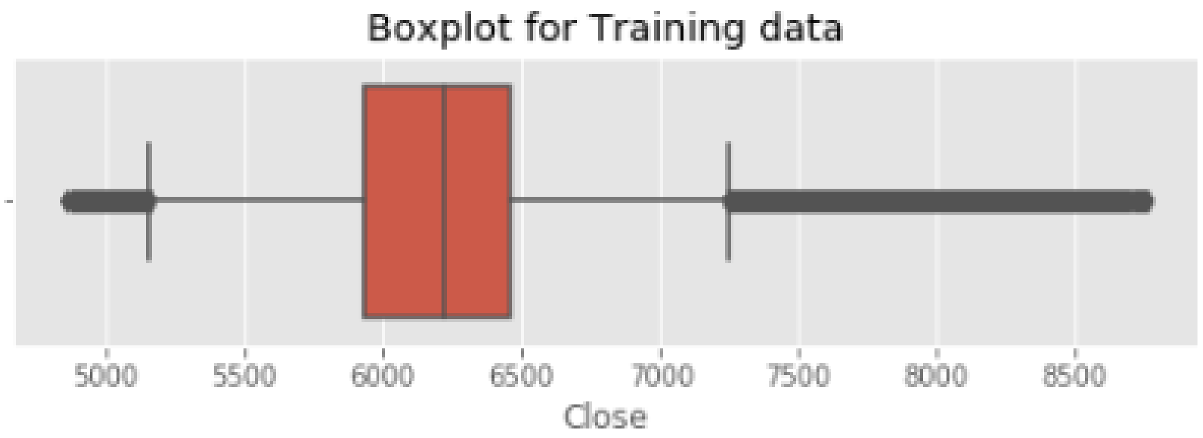


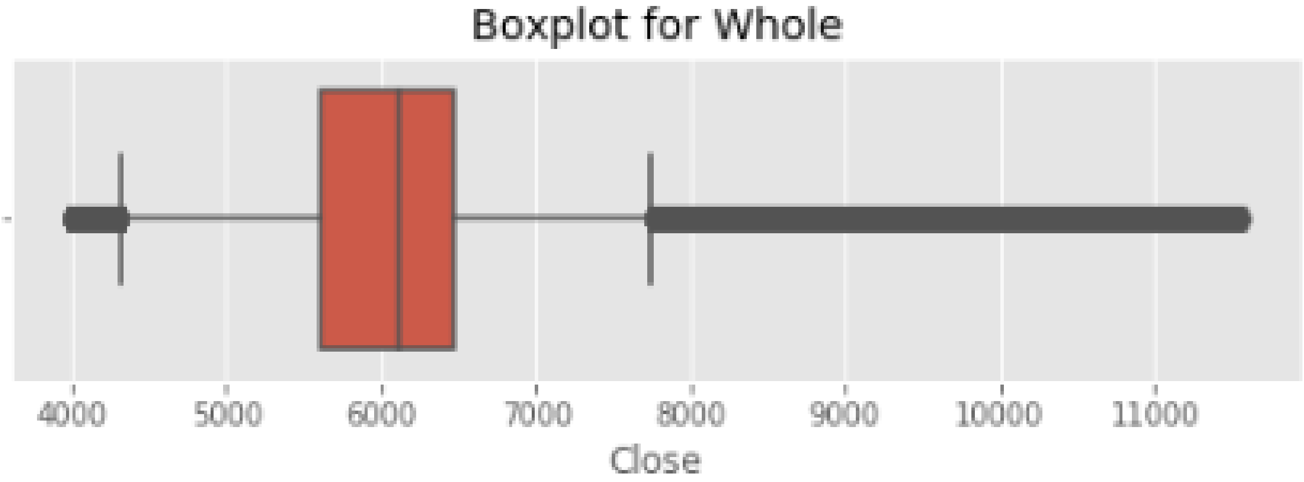
CSI500 strategy

樣本切割


Opening and closing price of CSI500
Open price
Close price
2015.08.01~2018.08.01
Training Data
Testing Data
Testing Data
11000
10000
9000
8000
7000
6000
5000
4000
2015-06
2015-12
2016-06
2016-12
2017-06
2017-12
2018-06
2018-12
2019-06

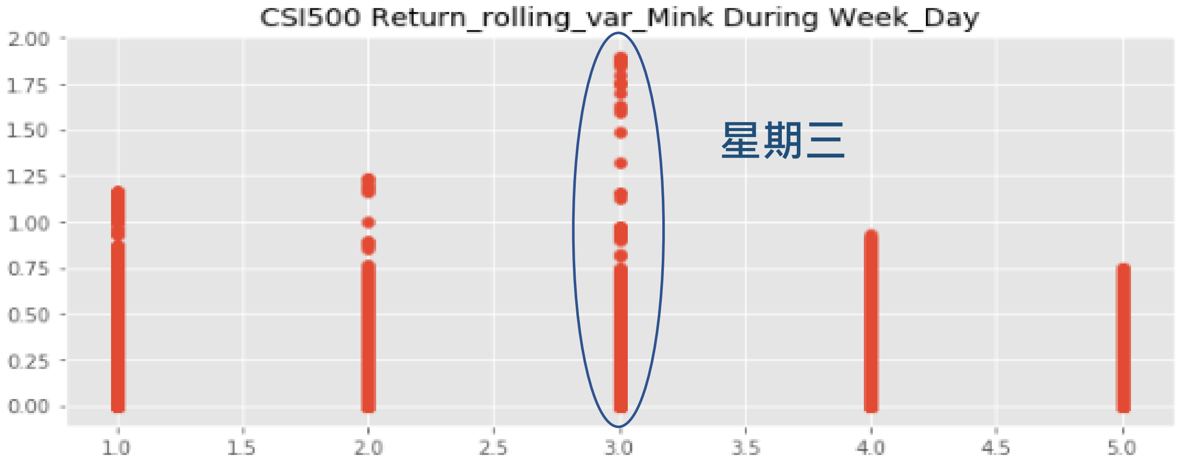
資料盒鬚圖

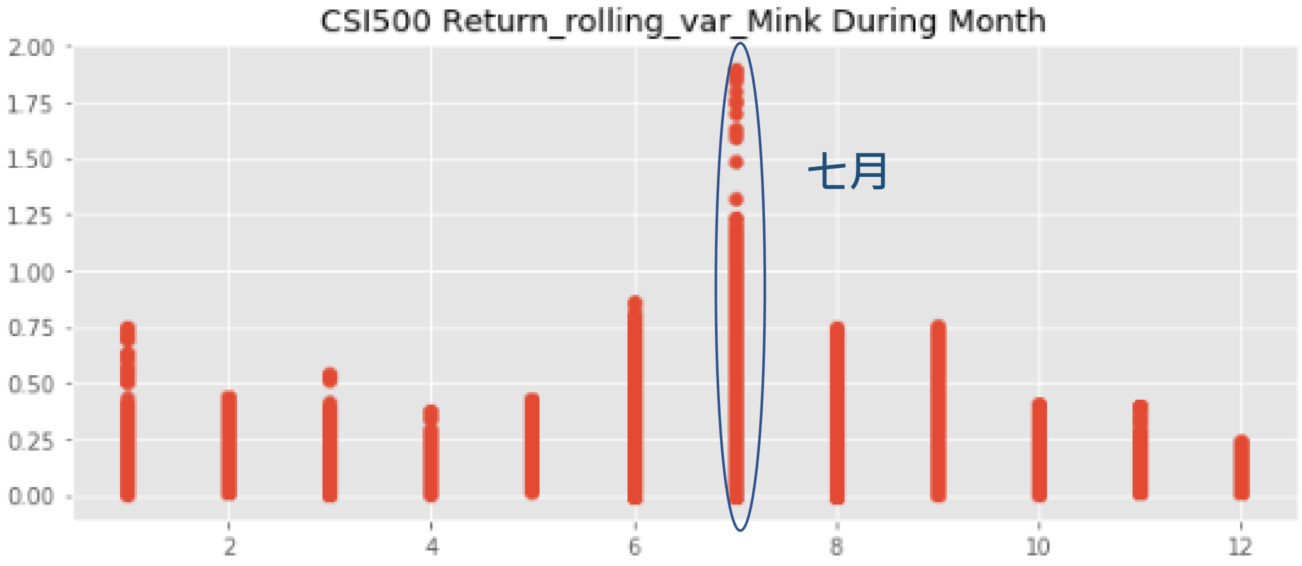


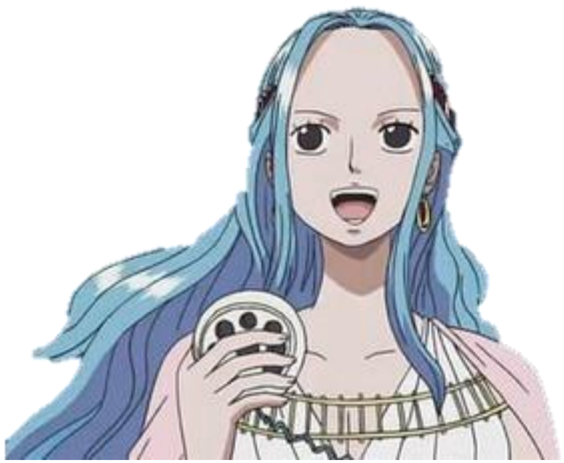


CSI500 strategy

日內報酬率 Rolling variance – Month & Weekday

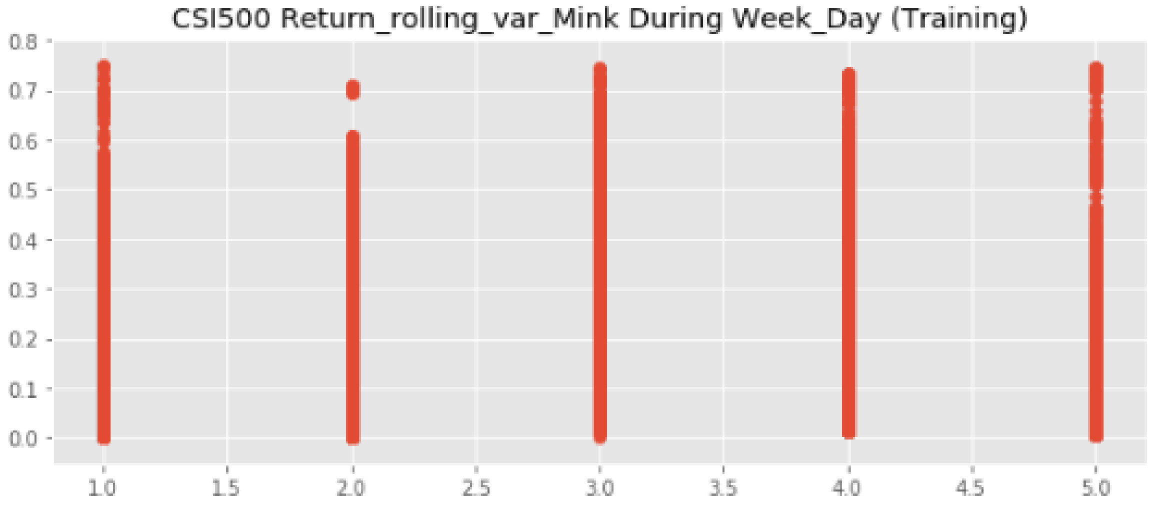


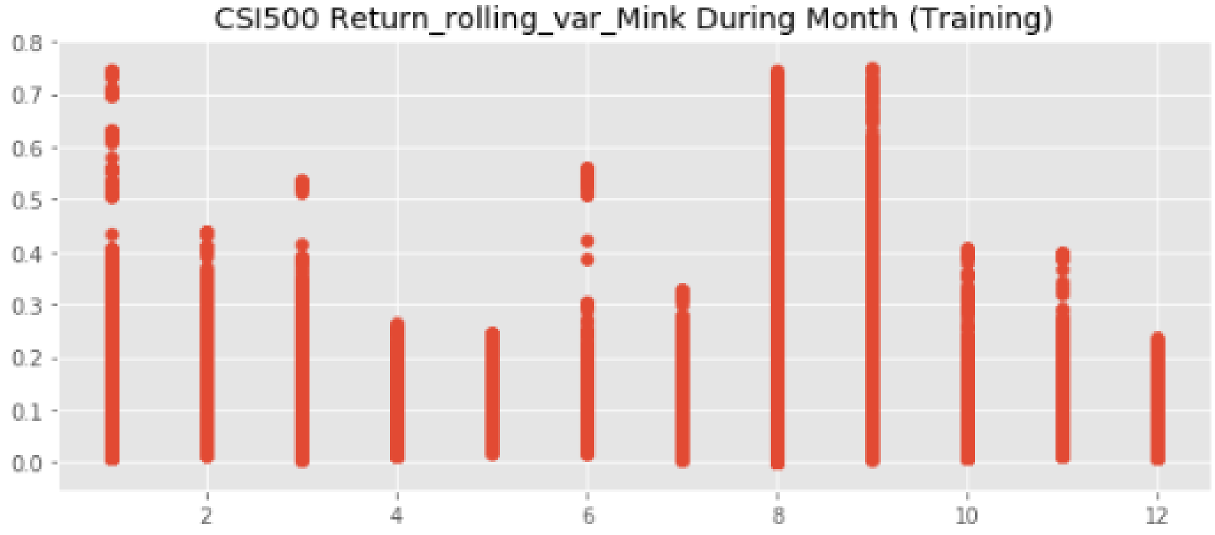




CSI500 strategy

日內報酬率 Rolling variance – Month & Weekday (Training Data)

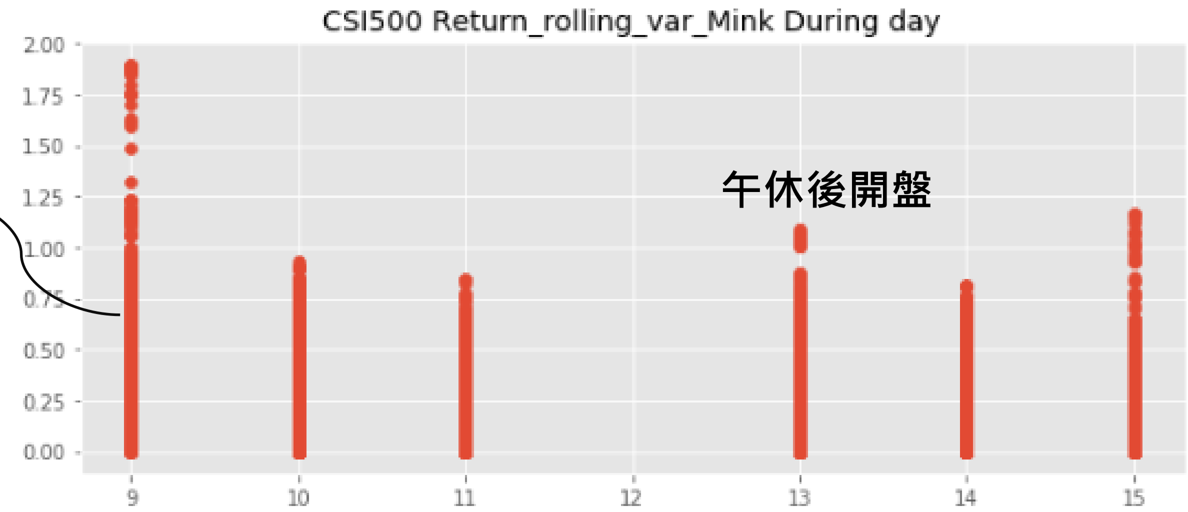




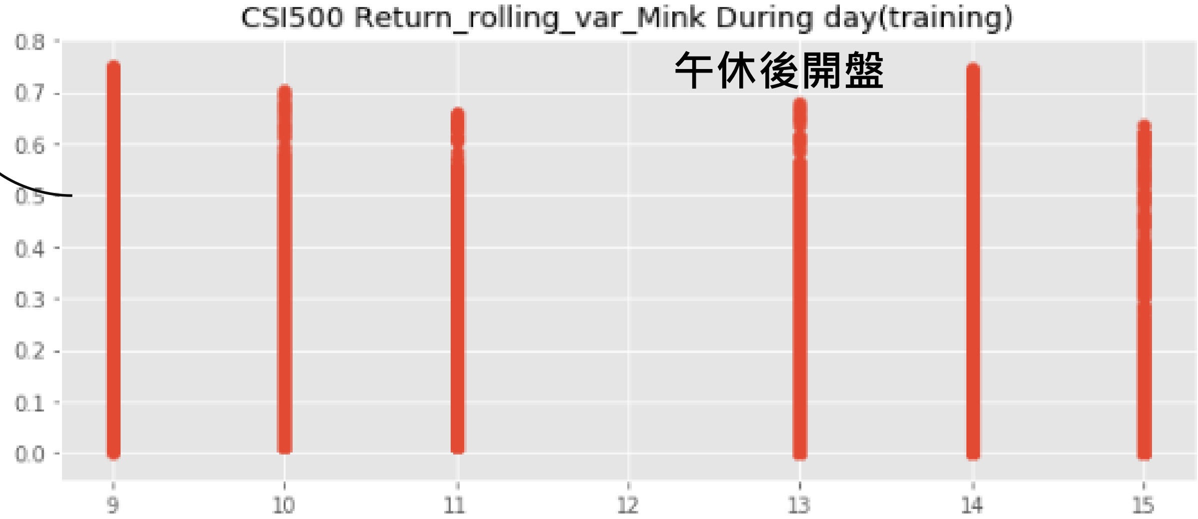
CSI500 strategy

日內報酬率 Rolling variance - Hour

早上開盤



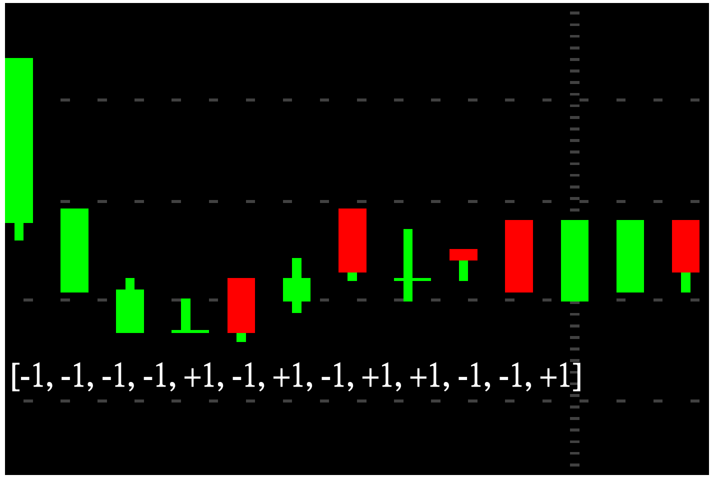
早上開盤



CSI500 strategy

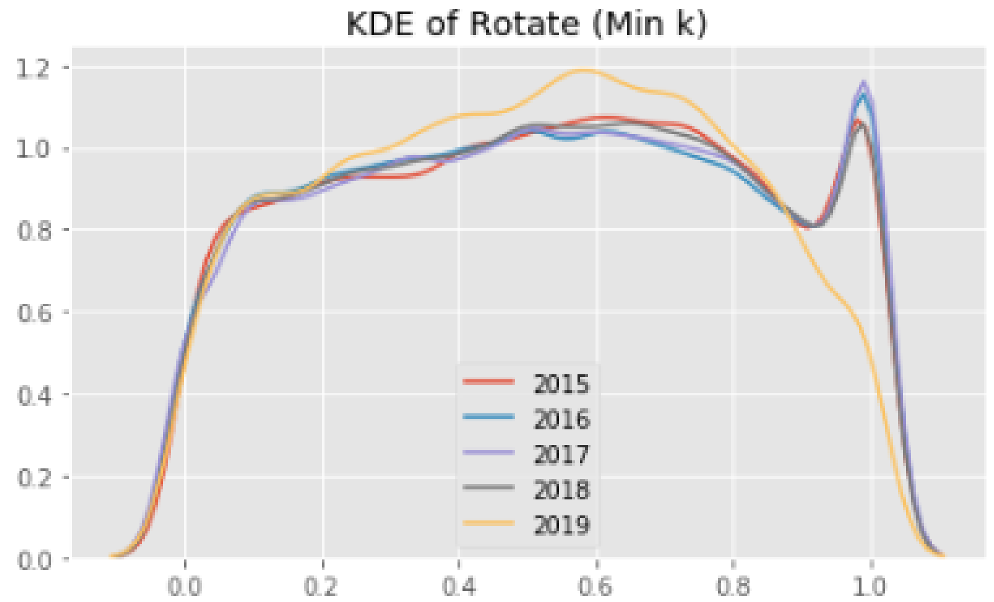
順逆勢判斷

```python
def Go_up_num(Series):
    positive_list = []
    longest = 0
    current = 0
    for i in Series:
        if i == 1:
            current += 1
        else:
            longest = max(longest, current)
            positive_list.append(longest)
            current = 0
    return positive_list

def Go_down_num(Series):
    negative_list = []
    longest = 0
    current = 0
    for i in Series:
        if i == -1:
            current += 1
        else:
            longest = max(longest, current)
            negative_list.append(longest)
            current = 0
    return negative_list
```



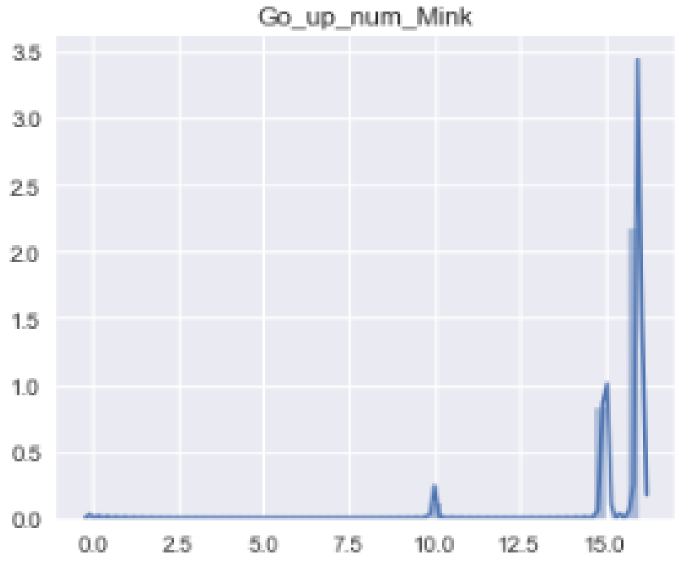
- 計算連續紅棒、綠棒次數，以上圖為例
- **-1:** [4, 1, 1, 2]
- **+1:** [1, 1, 2, 1]
- 0 : 開收盤價相同則填入0

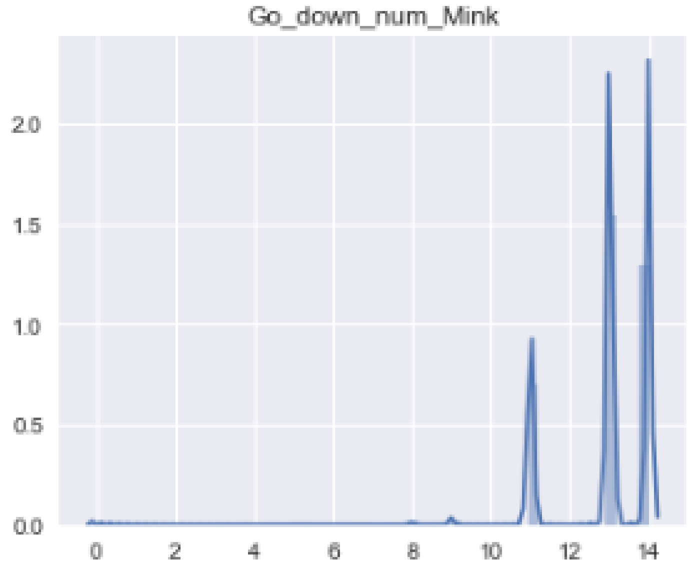
順逆勢判斷




```
CSI500['Range'] = CSI500['High'] - CSI500['Low']
CSI500['Diff'] = CSI500['Close'] - CSI500['Open']
CSI500['Rotate'] = abs(CSI500['Diff']) / CSI500['Range']
```

- 計算連續向上、向下k棒分布，發現都呈現右偏**順勢**分布
- 最高最低距離和以實體k棒的比率，去繪製KDE圖
- 從分K和小時K可以看出，它們是靠向右端，表示向上甩高、向下甩低的比例很多，是**順勢**的好兆頭

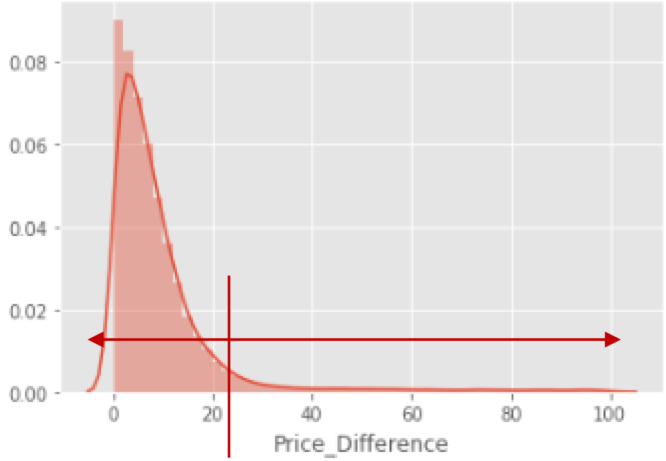




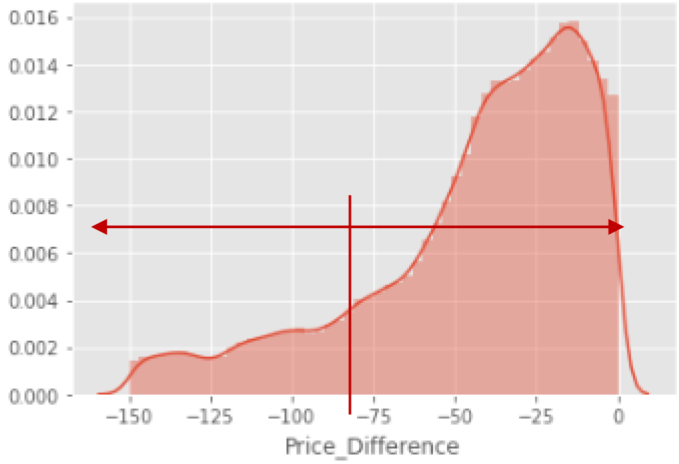
主邏輯

價差

```
In [12]: CSI500_SSE.loc[CSI500_SSE['Price_Difference'] > 0,'Price_Difference'].describe()

Out[12]: count    25471.000000
         mean        23.058546
         std         60.564933
         min          0.010000
         25%          3.010000
         50%          6.680000
         75%         12.740000
         max        564.620000
         Name: Price_Difference, dtype: float64
```




```
In [13]: CSI500_SSE.loc[CSI500_SSE['Price_Difference'] < 0,'Price_Difference'].describe()

Out[13]: count    217854.000000
         mean        -79.912086
         std         100.807606
         min        -889.950000
         25%         -95.470000
         50%         -42.280000
         75%         -20.410000
         max          -0.010000
         Name: Price_Difference, dtype: float64
```



CSI500 strategy

程式碼

期貨 現貨

```
INPUT: DataSeries1(C OF DATA1), DataSeries2(C OF DATA2),UP(100), DN(100),
       PercentB(1.0),PercentS(1.0),PercentB2(1.0),PercentS2(1.0), BEGINTIME(0930), ENDTIME(1200);
VARS: RANGE(0);

// Value Setting
RANGE = HIGHD(1) - LOWD(1);

VALUE1 = OPEND(0) + (RANGE * PercentB);
VALUE2 = OPEND(0) - (RANGE * PercentS);

VALUE3 = DataSeries1- DataSeries2;

VALUE4 = OPEND(0) + (RANGE * PercentB2);
VALUE5 = OPEND(0) - (RANGE * PercentS2);
```

名稱	數值
DataSeries1	c of data1
DataSeries2	c of data2
UP	105
DN	94
PercentB	0.5
PercentS	0.2
PercentB2	1
PercentS2	0.9
BEGINTIME	930
ENDTIME	1200

CSI500 strategy

程式碼

```
// Time Condition
CONDITION1 = TIME > BEGINTIME;
CONDITION2 = TIME < ENDTIME;

// Price Diff Condition
CONDITION3 = VALUE3 CROSS OVER DN AND VALUE3 < UP;
CONDITION4 = VALUE3 CROSS UNDER -DN AND VALUE3 > -UP;

// Price Diff Enter
IF CONDITION1 AND CONDITION3 AND ENTRIESTODAY(DATE) = 0 THEN BUY("BPD") NEXT BAR MARKET;
IF CONDITION1 AND CONDITION4 AND ENTRIESTODAY(DATE) = 0 THEN SELLSHORT("SPD") NEXT BAR MARKET;

// ORB Enter
IF CONDITION1 AND CONDITION2 AND ENTRIESTODAY(DATE) = 0 THEN BEGIN
       BUY("BORB") NEXT BAR AT VALUE1 STOP;
       SELLSHORT("SORB") NEXT BAR AT VALUE2 STOP;
END;
```

程式碼

```
// Exit
IF MARKETPOSITION <> 0 THEN BEGIN
       SELL NEXT BAR AT VALUE5 STOP;
       BUYTOCOVER NEXT BAR AT VALUE4 STOP;
END;

// Day Close Exit
IF TIME >= 1455 THEN BEGIN
       SELL NEXT BAR MARKET;
       BUYTOCOVER NEXT BAR MARKET;
END;
```

ORB + 價差 (樣本內)

2015.08.01~2018.08.01

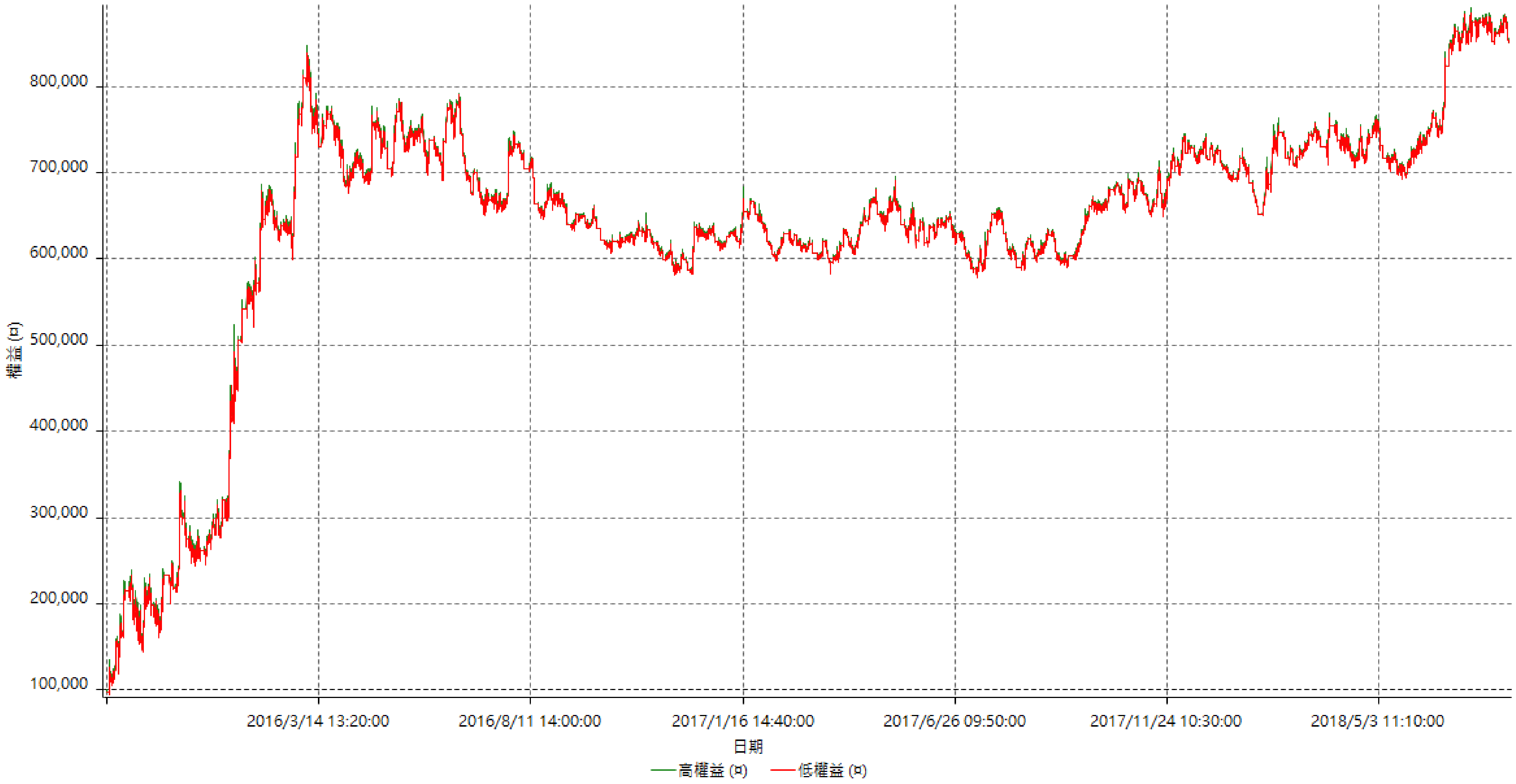
名稱	數值
DataSeries1	c of data1
DataSeries2	c of data2
UP	105
DN	94
PercentB	0.5
PercentS	0.2
PercentB2	1
PercentS2	0.9
BEGINTIME	930
ENDTIME	1200

樣本內績效

	所有交易	多單	空單
淨利	¤750840	¤248640	¤502200
毛利	¤3483120	¤818560	¤2664560
毛損	(¤2732280)	(¤569920)	(¤2162360)
調整後淨利	¤378095.05	¤87536.59	¤163765.78
調整後毛利	¤3273079.96	¤727608.89	¤2473255.74
調整後毛損	(¤2894984.91)	(¤640072.3)	(¤2309489.96)
特定淨利	¤438240	¤185080	¤253160
特定毛利	¤2158600	¤577840	¤1580760
特定毛損	(¤1720360)	(¤392760)	(¤1327600)
帳戶所需金額	¤251480	¤75800	¤247840
帳戶報酬	298.57%	328.02%	202.63%
初始資本報酬	750.84%	248.64%	502.2%
最大策略虧損	(¤269200)	(¤92000)	(¤273280)
最大策略虧損 (%)	(39.59%)	(25.53%)	(69.32%)
最大平倉交易虧損	(¤251480)	(¤75800)	(¤247840)
最大平倉交易虧損 (%)	(30.14%)	(19.54%)	(56.91%)
最大的策略虧損報酬	2.79	2.7	1.84
獲利因子	1.27	1.44	1.23
調整獲利因子	1.13	1.14	1.07
特定獲利因子	1.25	1.47	1.19
最大持有契約數量	1	1	1
滑價支付	¤558000	¤148000	¤410000
佣金支付	¤0	¤0	¤0
未平倉部位損益	n/a	n/a	n/a
年報酬率	266.98%	88.41%	178.57%
月報酬率	22.25%	7.37%	14.88%
買進持有績效	(¤18932.91)	(¤18932.91)	(¤24308.68)

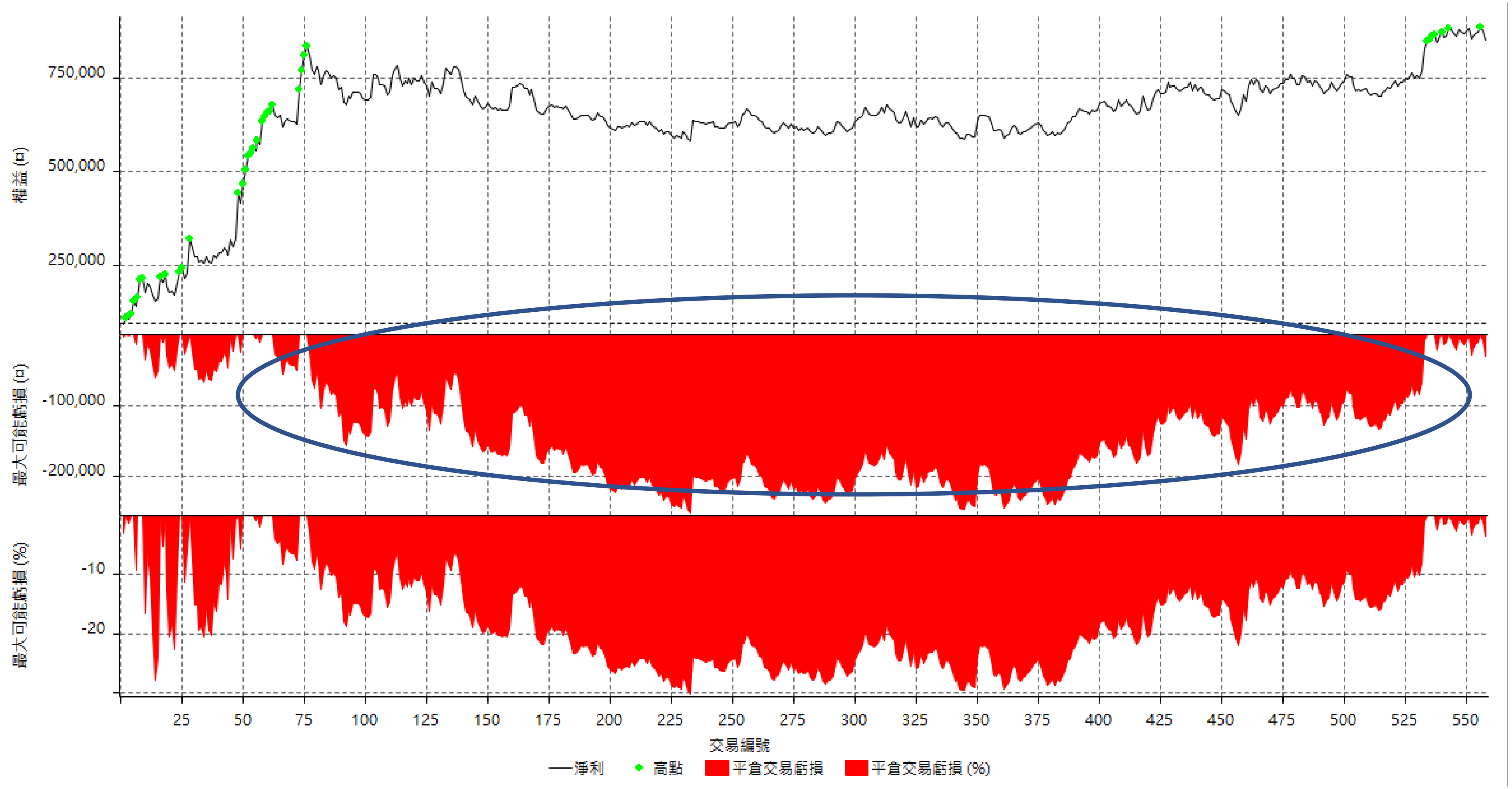
CSI500 strategy

樣本內績效



CSI500 strategy

樣本內績效



CSI500 strategy

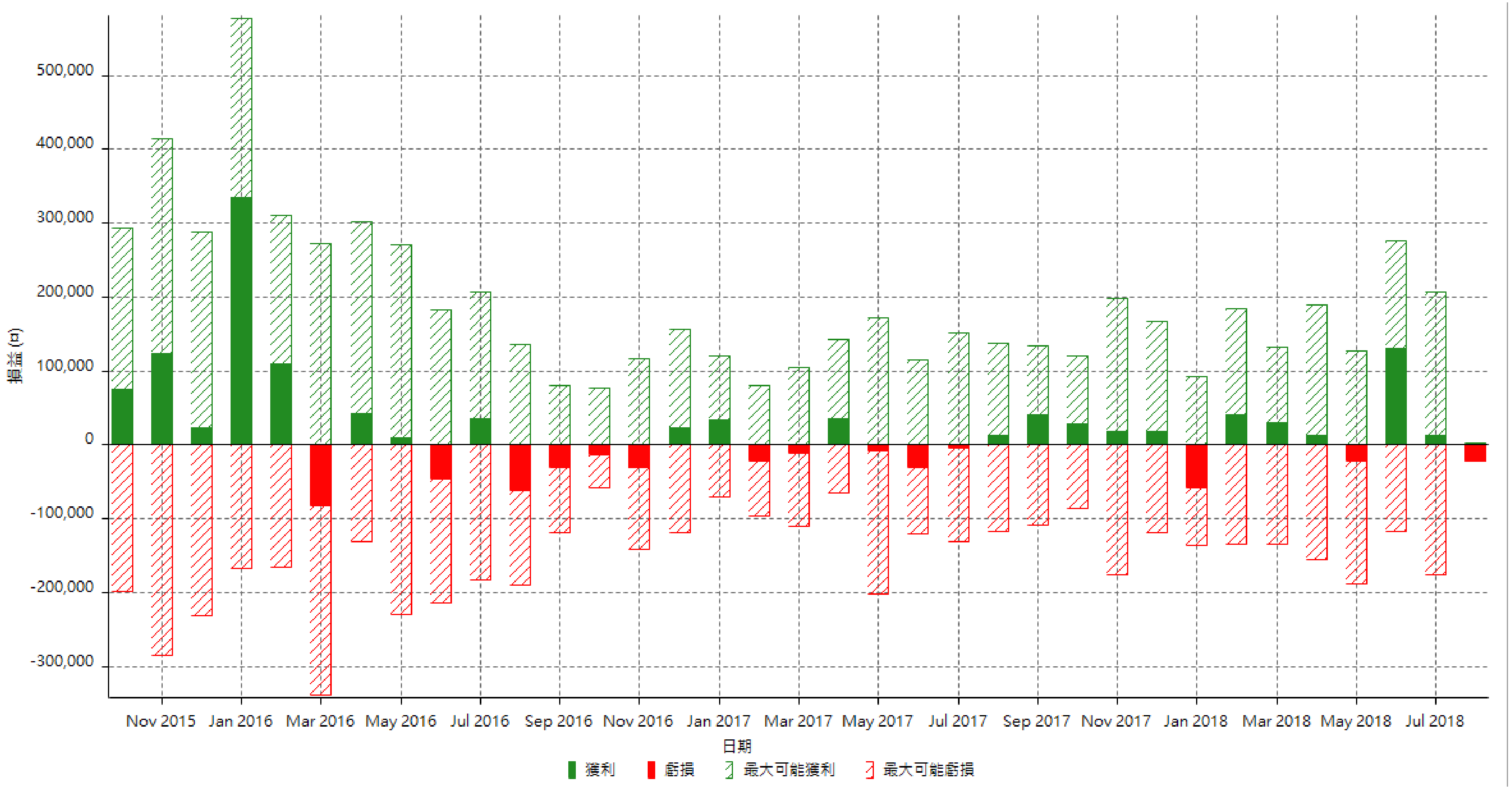
樣本內績效

期間	獲利		毛利	毛損	交易次數	勝率
	¤	%				
2018	¤125760	17.34%	¤661720	(¤535960)	116	54.31%
2017	¤109880	17.86%	¤877640	(¤767760)	196	51.02%
2016	¤293480	91.22%	¤1391920	(¤1098440)	199	44.72%
2015	¤221720	221.72%	¤551840	(¤330120)	47	48.94%

	所有交易	多單	空單
交易總次數	558	148	410
未平倉交易總數量	0	0	0
獲利交易次數	275	81	194
虧損交易次數	282	66	216
勝率	49.28%	54.73%	47.32%
平均交易(獲利 虧損)	¤1345.59	¤1680	¤1224.88
平均獲利交易	¤12665.89	¤10105.68	¤13734.85
平均虧損交易	(¤9688.94)	(¤8635.15)	(¤10010.93)
平均獲利/平均虧損 比率	1.31	1.17	1.37
最大的交易獲利	¤121480	¤55360	¤121480
最大的交易虧損	(¤41040)	(¤28760)	(¤41040)
平倉交易的平均K棒數	40.6	39.3	41
獲利平倉交易的平均K棒數	42.8	40.2	43.8
虧損平倉交易的平均K棒數	38.4	38.2	38.5
平倉交易間的平均K棒數	43	43	n/a
獲利平倉交易間的平均K棒數	84.8	392.8	136.9
虧損平倉交易間的平均K棒數	86	493.2	123.9

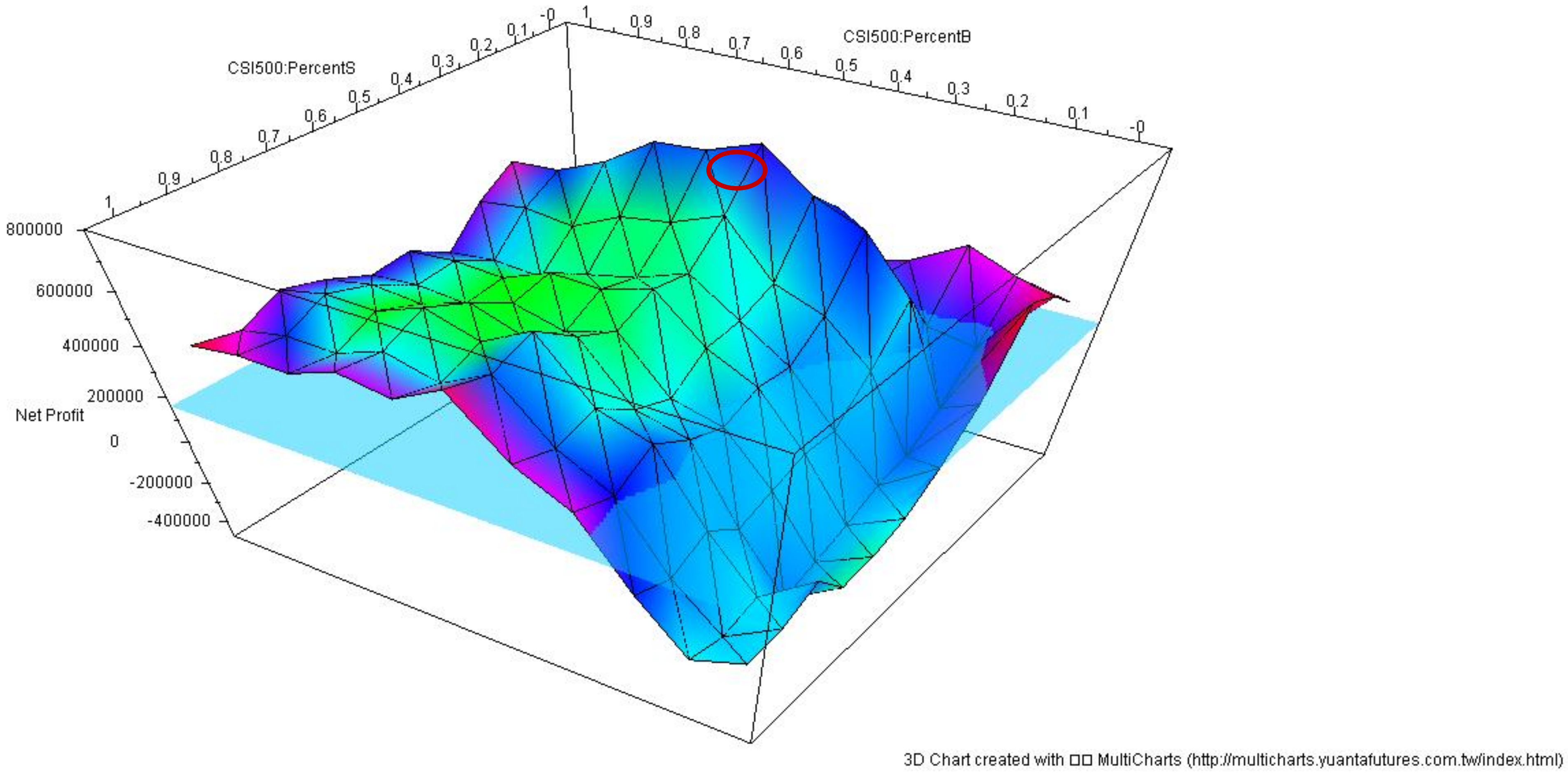
CSI500 strategy

樣本內績效



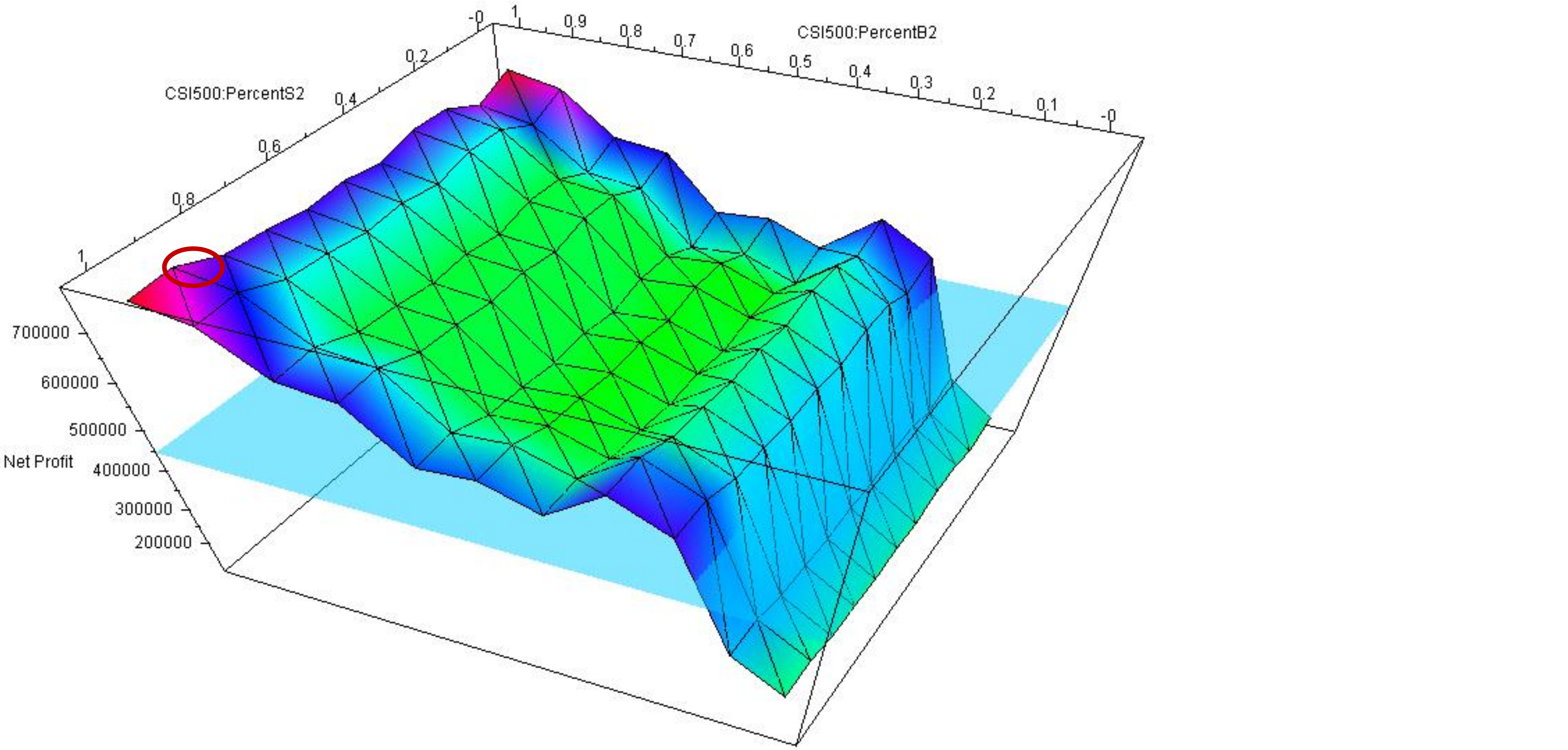
CSI500 strategy

最佳化- 進場開口比率



CSI500 strategy

最佳化- 出場開口比率



CSI500 strategy

ORB + 價差 (全樣本)

2015.01.01~2019.06.28

名稱	數值
DataSeries1	c of data1
DataSeries2	c of data2
UP	105
DN	94
PercentB	0.5
PercentS	0.2
PercentB2	1
PercentS2	0.9
BEGINTIME	930
ENDTIME	1200

全樣本績效 - ORB + 價差

	所有交易	多單	空單
淨利	¤1775640	¤448240	¤1327400
毛利	¤7137400	¤1782880	¤5354520
毛損	(¤5361760)	(¤1334640)	(¤4027120)
調整後淨利	¤1167286.98	¤154010.95	¤793665.16
調整後毛利	¤6789130.54	¤1620800	¤5044860.11
調整後毛損	(¤5621843.56)	(¤1466789.05)	(¤4251194.95)
特定淨利	¤408400	¤368120	¤40280
特定毛利	¤3902640	¤1164640	¤2738000
特定毛損	(¤3494240)	(¤796520)	(¤2697720)
帳戶所需金額	¤343880	¤326320	¤247840
帳戶報酬	516.35%	137.36%	535.59%
初始資本報酬	1775.64%	448.24%	1327.4%
最大策略虧損	(¤442720)	(¤404840)	(¤298360)
最大策略虧損 (%)	(108.02%)	(86.83%)	(148.72%)
最大平倉交易虧損	(¤343880)	(¤326320)	(¤247840)
最大平倉交易虧損 (%)	(98.39%)	(82.57%)	(136.03%)
最大的策略虧損報酬	4.01	1.11	4.45
獲利因子	1.33	1.34	1.33
調整獲利因子	1.21	1.1	1.19
特定獲利因子	1.12	1.46	1.01
最大持有契約數量	1	1	1
滑價支付	¤847000	¤224000	¤623000
佣金支付	¤0	¤0	¤0
未平倉部位損益	n/a	n/a	n/a
年報酬率	423.83%	106.99%	316.84%
月報酬率	35.32%	8.92%	26.4%

CSI500 strategy

全樣本績效 - 價差

	所有交易	多單	空單
淨利	(¤107400)	(¤168280)	¤60880
毛利	¤812480	¤50720	¤761760
毛損	(¤919880)	(¤219000)	(¤700880)
調整後淨利	(¤346425.94)	(¤373856.39)	(¤143930.57)
調整後毛利	¤699809.3	¤0	¤655092.26
調整後毛損	(¤1046235.24)	(¤373856.39)	(¤799022.83)
特定淨利	¤29080	¤0	¤29080
特定毛利	¤401520	¤0	¤401520
特定毛損	(¤372440)	¤0	(¤372440)
帳戶所需金額	¤415840	¤219000	¤196840
帳戶報酬	(25.83%)	(76.84%)	30.93%
初始資本報酬	(107.4%)	(168.28%)	60.88%
最大策略虧損	(¤502560)	(¤222060)	(¤283560)
最大策略虧損 (%)	(220.75%)	(144.4%)	(160.26%)
最大平倉交易虧損	(¤415840)	(¤219000)	(¤196840)
最大平倉交易虧損 (%)	(271.72%)	(145.3%)	(192.38%)
最大的策略虧損報酬	(0.21)	(0.76)	0.21
獲利因子	(0.88)	(0.23)	1.09
調整獲利因子	(0.67)	0	(0.82)
特定獲利因子	1.08	0	1.08
最大持有契約數量	1	1	1
滑價支付	¤105000	¤3000	¤102000
佣金支付	¤0	¤0	¤0
未平倉部位損益	n/a	n/a	n/a
年報酬率	(25.64%)	(40.17%)	14.53%
月報酬率	(2.14%)	(3.35%)	1.21%
買進持有績效	(¤38000.61)	(¤51804.58)	(¤38000.61)

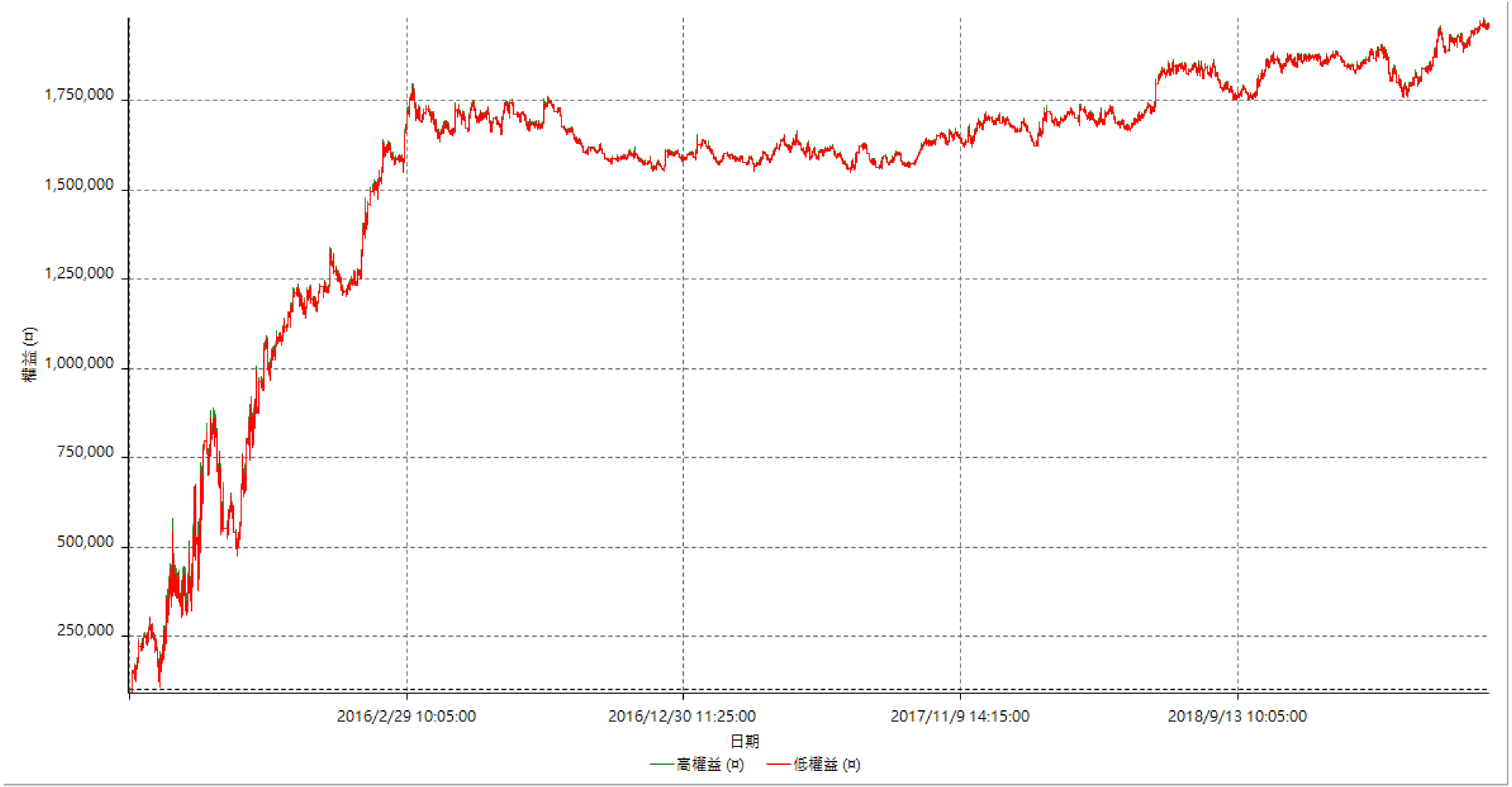
CSI500 strategy

全樣本績效 - ORB

	所有交易	多單	空單
淨利	¤1856640	¤528200	¤1328440
毛利	¤7036640	¤1798440	¤5238200
毛損	(¤5180000)	(¤1270240)	(¤3909760)
調整後淨利	¤1256367	¤242077.4	¤798948.81
調整後毛利	¤6689125.12	¤1636280.13	¤4928998.83
調整後毛損	(¤5432758.12)	(¤1394202.73)	(¤4130050.02)
特定淨利	¤463200	¤388240	¤74960
特定毛利	¤3870600	¤1230920	¤2639680
特定毛損	(¤3407400)	(¤842680)	(¤2564720)
帳戶所需金額	¤340680	¤215760	¤206760
帳戶報酬	544.98%	244.81%	642.5%
初始資本報酬	1856.64%	528.2%	1328.44%
最大策略虧損	(¤413080)	(¤294280)	(¤298360)
最大策略虧損 (%)	(64.38%)	(61.08%)	(101.62%)
最大平倉交易虧損	(¤340680)	(¤215760)	(¤206760)
最大平倉交易虧損 (%)	(55.4%)	(52.53%)	(89.13%)
最大的策略虧損報酬	4.49	1.79	4.45
獲利因子	1.36	1.42	1.34
調整獲利因子	1.23	1.17	1.19
特定獲利因子	1.14	1.46	1.03
最大持有契約數量	1	1	1
滑價支付	¤832000	¤229000	¤603000
佣金支付	¤0	¤0	¤0
未平倉部位損益	n/a	n/a	n/a
年報酬率	443.16%	126.08%	317.09%
月報酬率	36.93%	10.51%	26.42%
買進持有績效	(¤36606.5)	(¤36606.5)	(¤41572.39)

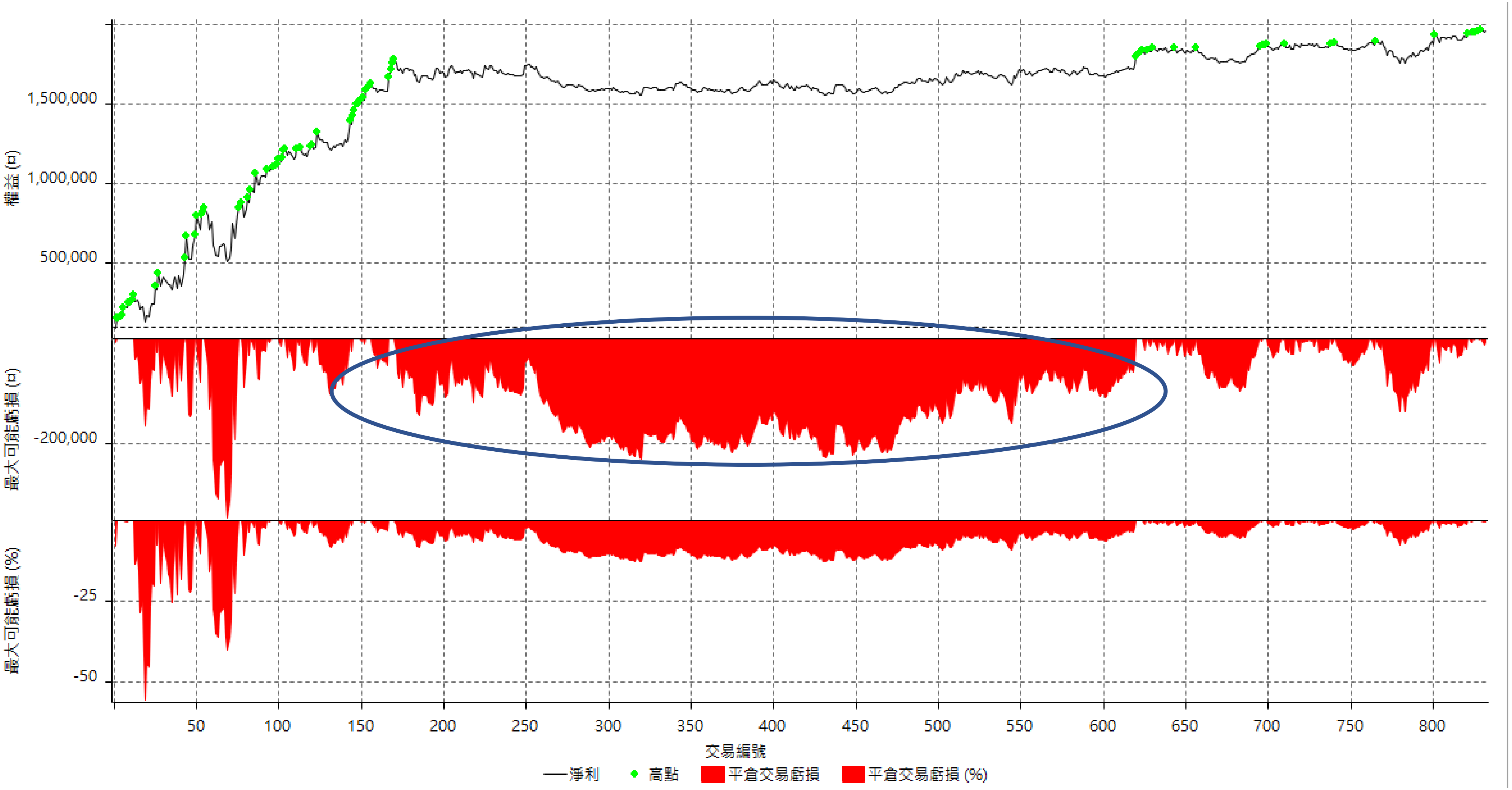
CSI500 strategy

全樣本績效



CSI500 strategy

全樣本績效



CSI500 strategy

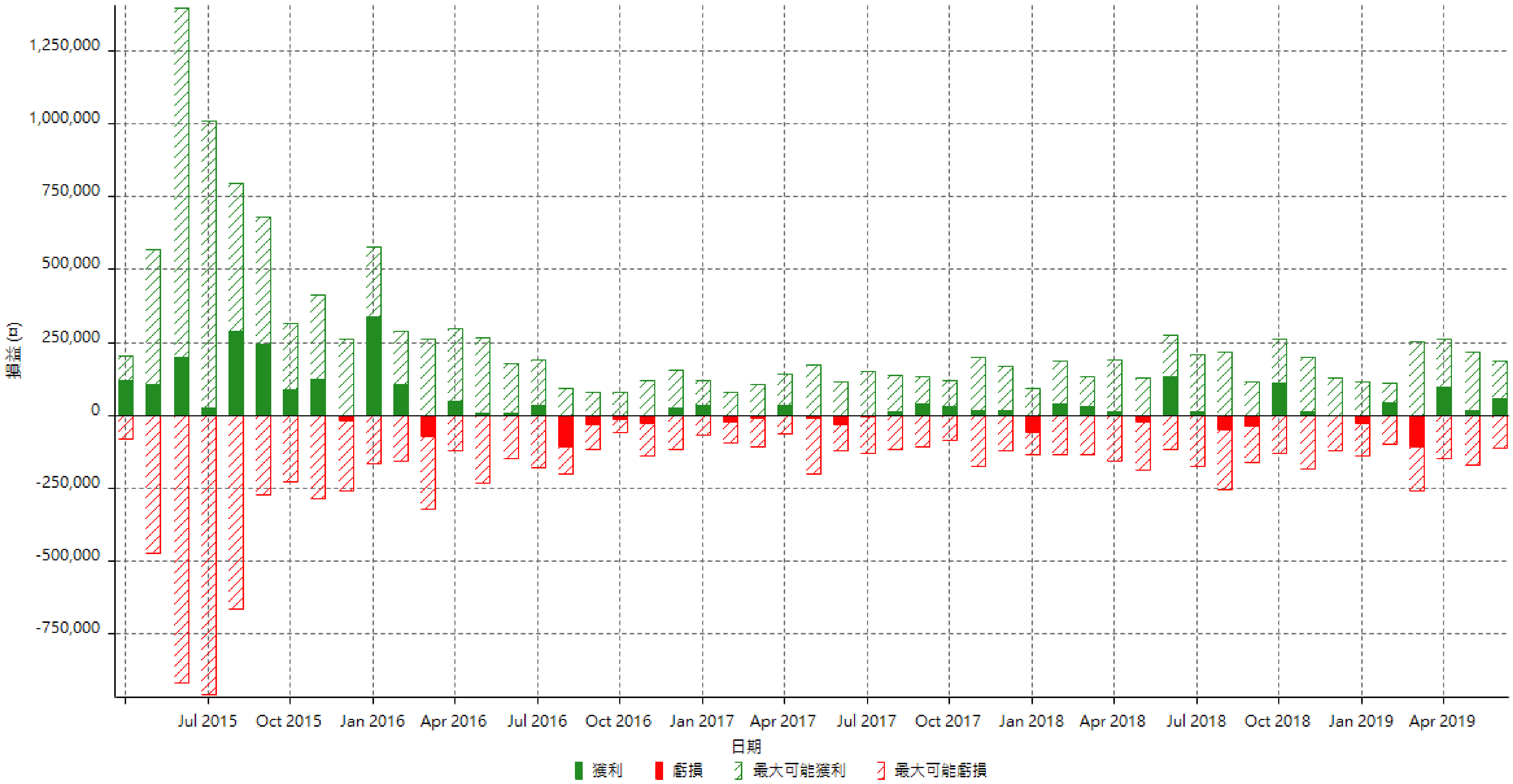
全樣本績效

期間	獲利		毛利	毛損	交易次數	勝率
	¤	%				
2019	¤80400	4.29%	¤597440	(¤517040)	95	44.21%
2018	¤179120	10.55%	¤1112280	(¤933160)	208	52.88%
2017	¤109880	6.92%	¤877640	(¤767760)	196	51.02%
2016	¤310480	24.32%	¤1359360	(¤1048880)	191	42.93%
2015	¤1176760	1176.76%	¤3089920	(¤1913160)	142	53.52%

	所有交易	多單	空單
交易總次數	832	229	603
未平倉交易總數量	0	0	0
獲利交易次數	410	123	287
虧損交易次數	420	105	315
勝率	49.28%	53.71%	47.6%
平均交易(獲利 虧損)	¤2231.54	¤2306.55	¤2203.05
平均獲利交易	¤17162.54	¤14621.46	¤18251.57
平均虧損交易	(¤12333.33)	(¤12097.52)	(¤12411.94)
平均獲利/平均虧損 比率	1.39	1.21	1.47
最大的交易獲利	¤168000	¤109720	¤168000
最大的交易虧損	(¤146040)	(¤146040)	(¤143520)
平倉交易的平均K棒數	40.3	38.8	40.9
獲利平倉交易的平均K棒數	42.5	39.8	43.6
虧損平倉交易的平均K棒數	38.2	37.6	38.4
平倉交易間的平均K棒數	42	43	41
獲利平倉交易間的平均K棒數	77.3	359.5	127.5
虧損平倉交易間的平均K棒數	78.7	430.2	117.5

CSI500 strategy

全樣本績效



CSI500 strategy

隨機森林 – Random Forest

隨機森林 - Random Forest

MACHINE
LEARNING

CSI500 strategy

Model

```python
# Handeling fee ratio
period_stock_data['handeling_fee_ratio'] = 1000 / (period_stock_data['Close_CSI500'] * 200)
```

```python
period_stock_data['handeling_fee_ratio'].describe()
```

```
count    50663.000000
mean         0.000845
std          0.000147
min          0.000432
25%          0.000775
50%          0.000819
75%          0.000897
max          0.001255
Name: handeling_fee_ratio, dtype: float64
```

Model

紅黑 k 報酬 (日內)

In [9]:
```
# Red k return
return_mask = period_stock_data['diff_1D'] > 0
period_stock_data.loc[return_mask,'return_1D'].describe()
```

Out[9]:
```
count    525.000000
mean       0.012921
std        0.014898
min        0.000030
25%        0.003879
50%        0.008030
75%        0.016751
max        0.099990
Name: return_1D, dtype: float64
```

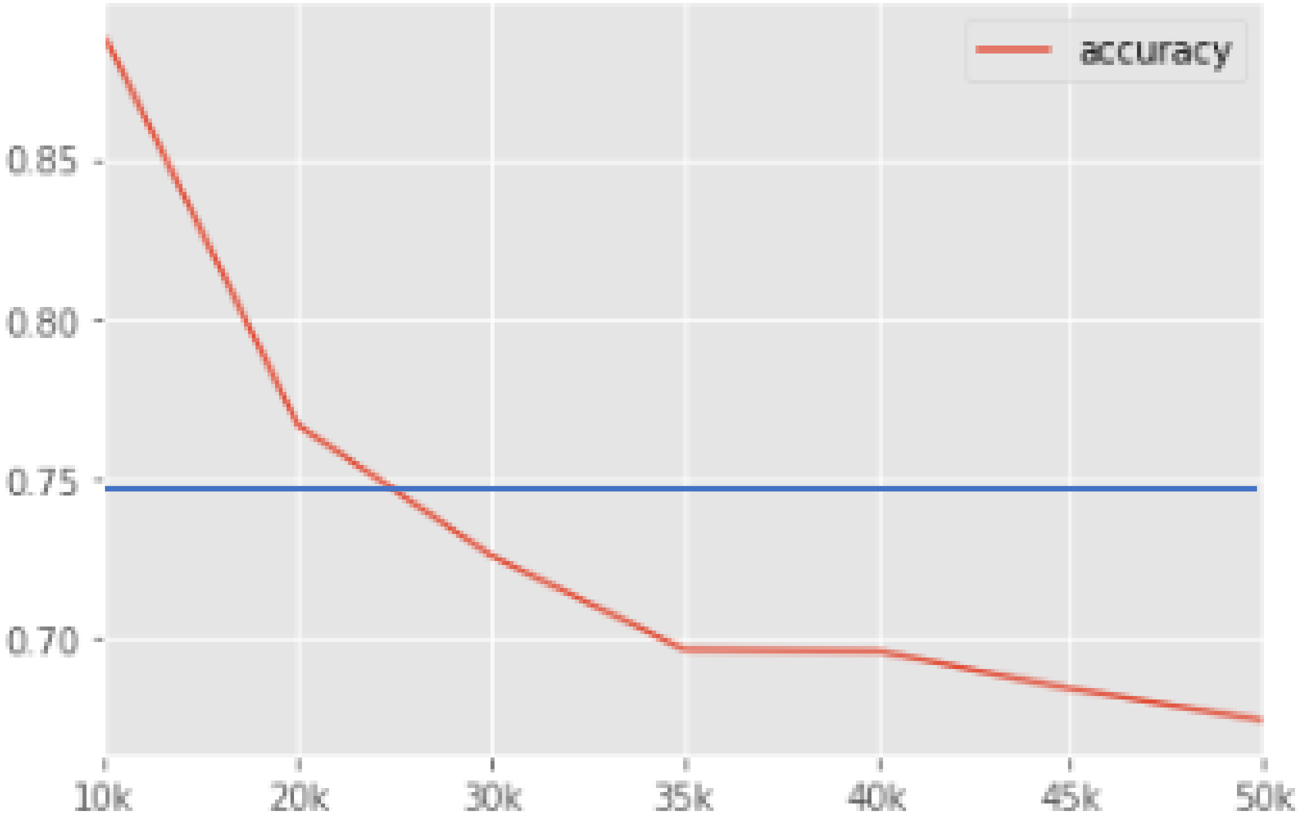
In [10]:
```
# Black k return
return_mask = period_stock_data['diff_1D'] < 0
period_stock_data.loc[return_mask,'return_1D'].describe()
```

Out[10]:
```
count    499.000000
mean      -0.014013
std        0.018349
min       -0.116022
25%       -0.016552
50%       -0.007695
75%       -0.003001
max       -0.000035
Name: return_1D, dtype: float64
```

Model

```
# Future Return cover handling fee (14%)
period_stock_data['future_Return_10_cov'] = period_stock_data['future_Return_10'].map(lambda x: 1 if abs(x) > 0.014 else 0)
period_stock_data['future_Return_20_cov'] = period_stock_data['future_Return_20'].map(lambda x: 1 if abs(x) > 0.014 else 0)
period_stock_data['future_Return_30_cov'] = period_stock_data['future_Return_30'].map(lambda x: 1 if abs(x) > 0.014 else 0)
period_stock_data['future_Return_35_cov'] = period_stock_data['future_Return_35'].map(lambda x: 1 if abs(x) > 0.014 else 0)
period_stock_data['future_Return_40_cov'] = period_stock_data['future_Return_40'].map(lambda x: 1 if abs(x) > 0.014 else 0)
period_stock_data['future_Return_45_cov'] = period_stock_data['future_Return_45'].map(lambda x: 1 if abs(x) > 0.014 else 0)
period_stock_data['future_Return_50_cov'] = period_stock_data['future_Return_50'].map(lambda x: 1 if abs(x) > 0.014 else 0)
```

Accuracy



CSI500 strategy

程式碼

```
INPUT: DataSeries1(C OF DATA1), DataSeries2(C OF DATA2),
       PercentB(1.0),PercentS(1.0),PercentB2(1.0),PercentS2(1.0), BEGINTIME(0930), ENDTIME(1200);
VARS: RANGE(0);

// Value Setting
RANGE = HIGHD(1) - LOWD(1);
VALUE1 = OPEND(0) + (RANGE * PercentB);
VALUE2 = OPEND(0) - (RANGE * PercentS);
VALUE4 = OPEND(0) + (RANGE * PercentB2);
VALUE5 = OPEND(0) - (RANGE * PercentS2);

// Time Condition
CONDITION1 = TIME > BEGINTIME;
CONDITION2 = TIME < ENDTIME;


// Random Forest Condition
CONDITION5 = (C OF DATA3) = 1;
CONDITION6 = (C OF DATA4) = 1;
CONDITION7 = (C OF DATA5) = 1;
```

CSI500 strategy

程式碼

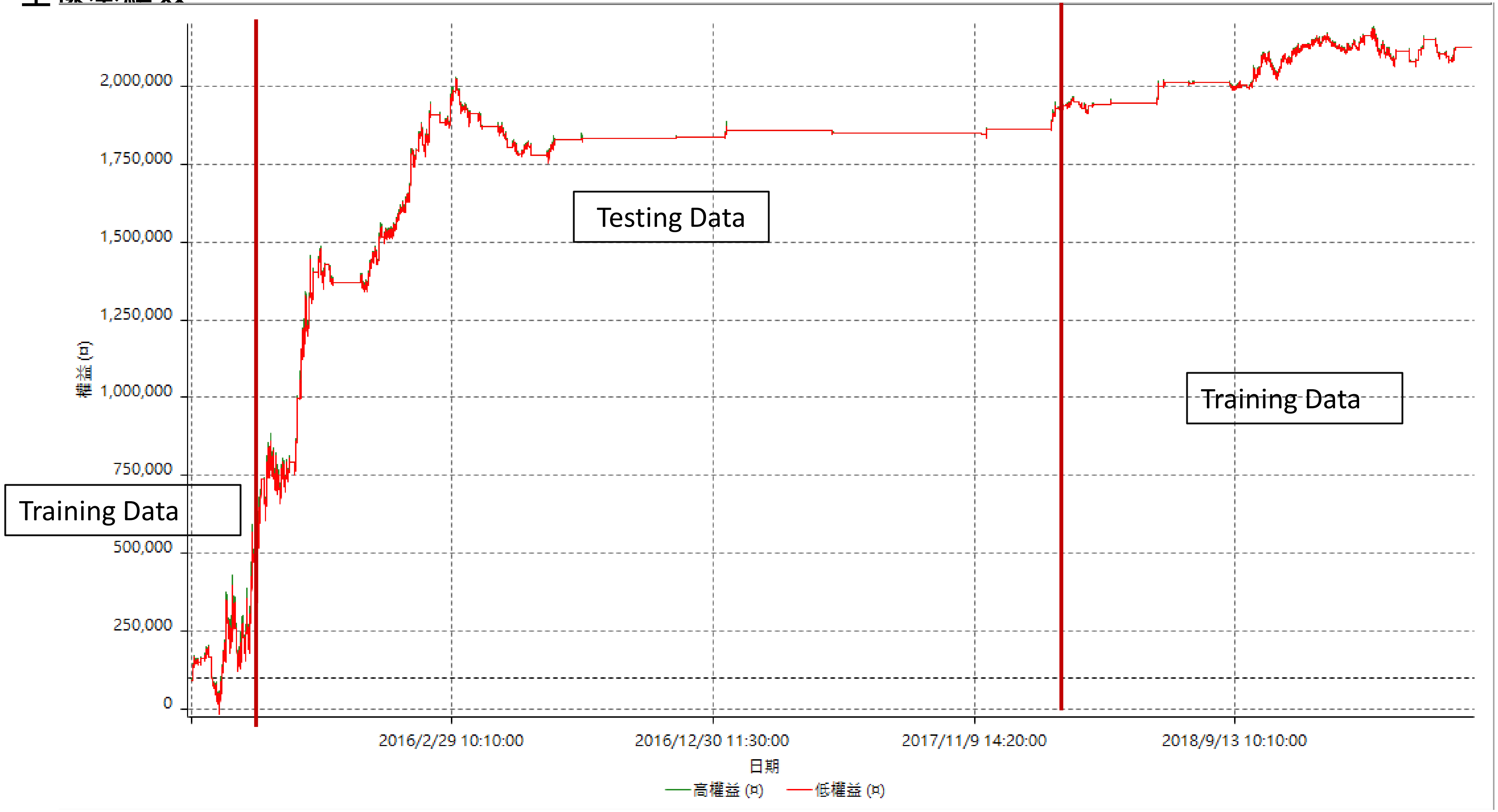
```
// Random Forest Enter
IF CONDITION1 AND CONDITION5 AND ENTRIESTODAY(DATE) = 0 THEN BEGIN
       BUY("B11") NEXT BAR AT VALUE1 STOP;
       SELLSHORT("S11") NEXT BAR AT VALUE2 STOP;
END;
IF CONDITION1 AND CONDITION6 AND ENTRIESTODAY(DATE) = 0 THEN BEGIN
       BUY("B12") NEXT BAR AT VALUE1 STOP;
       SELLSHORT("S12") NEXT BAR AT VALUE2 STOP;
END;

// Exit
IF MARKETPOSITION <> 0 THEN BEGIN
       SELL NEXT BAR AT VALUE5 STOP;
       BUYTOCOVER NEXT BAR AT VALUE4 STOP;
END;

// Day Close Exit
IF TIME >= 1455 THEN BEGIN
       SELL NEXT BAR MARKET;
       BUYTOCOVER NEXT BAR MARKET;
END;
```

全樣本績效

	所有交易	多單	空單
淨利	¤2023960	¤574840	¤1449120
毛利	¤4907440	¤1402800	¤3504640
毛損	(¤2883480)	(¤827960)	(¤2055520)
調整後淨利	¤1464244.51	¤274670.33	¤975353.98
調整後毛利	¤4563850.48	¤1227450	¤3208443.86
調整後毛損	(¤3099605.96)	(¤952779.67)	(¤2233089.88)
特定淨利	¤902440	¤668360	¤234080
特定毛利	¤2509720	¤1046800	¤1462920
特定毛損	(¤1607280)	(¤378440)	(¤1228840)
帳戶所需金額	¤243840	¤349200	¤225480
帳戶報酬	830.04%	164.62%	642.68%
初始資本報酬	2023.96%	574.84%	1449.12%
最大策略虧損	(¤316400)	(¤376560)	(¤268040)
最大策略虧損 (%)	(108.49%)	(103.33%)	(184.5%)
最大平倉交易虧損	(¤243840)	(¤349200)	(¤225480)
最大平倉交易虧損 (%	(97.81%)	(99.87%)	(165.52%)
最大的策略虧損報酬	6.4	1.53	5.41
獲利因子	1.7	1.69	1.7
調整獲利因子	1.47	1.29	1.44
特定獲利因子	1.56	2.77	1.19
最大持有契約數量	1	1	1
滑價支付	¤382000	¤108000	¤274000
佣金支付	¤0	¤0	¤0
未平倉部位損益	n/a	n/a	n/a
年報酬率	483.1%	137.21%	345.89%
月報酬率	40.26%	11.43%	28.82%

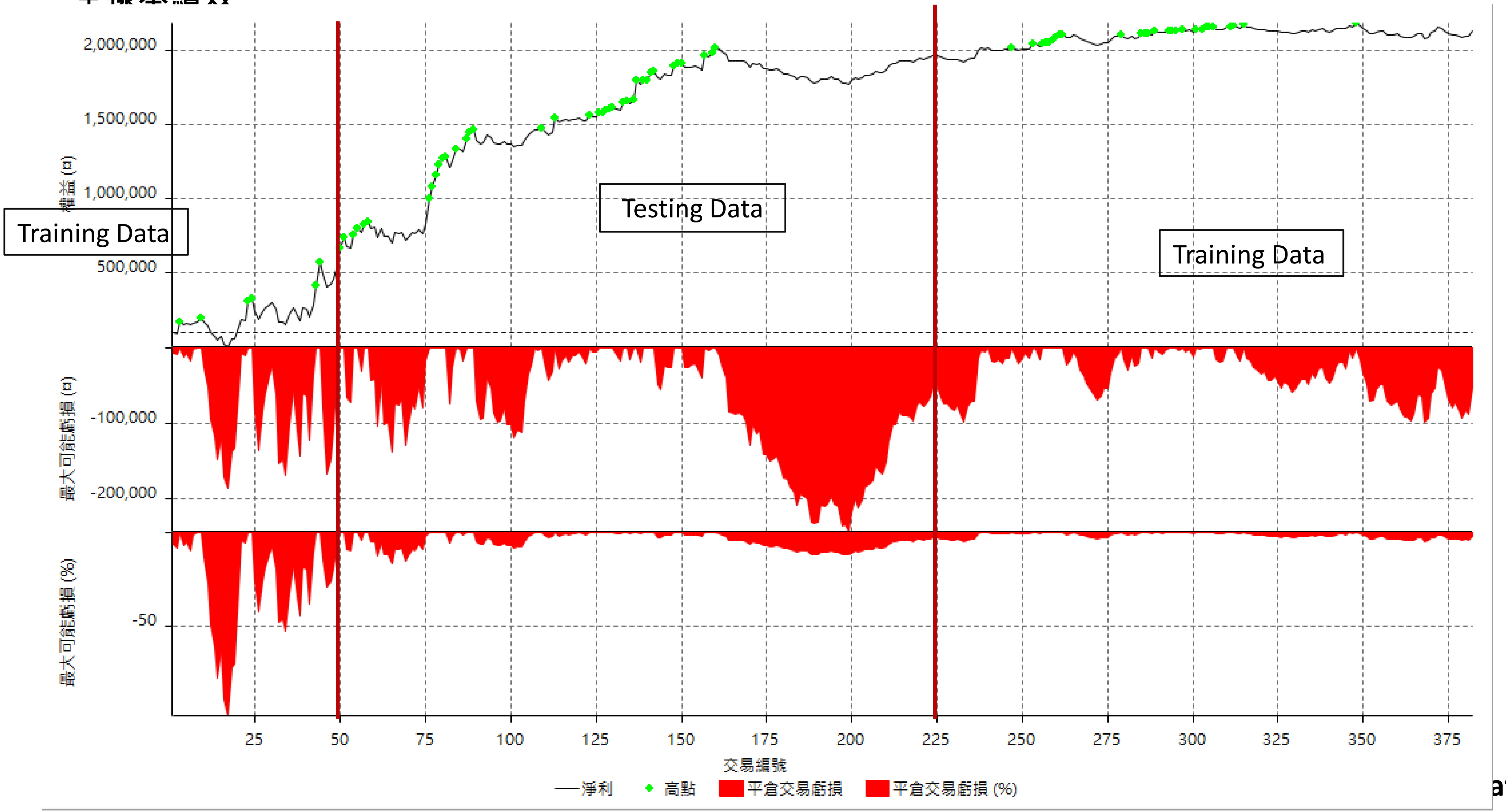
CSI500 strategy

全樣本績效



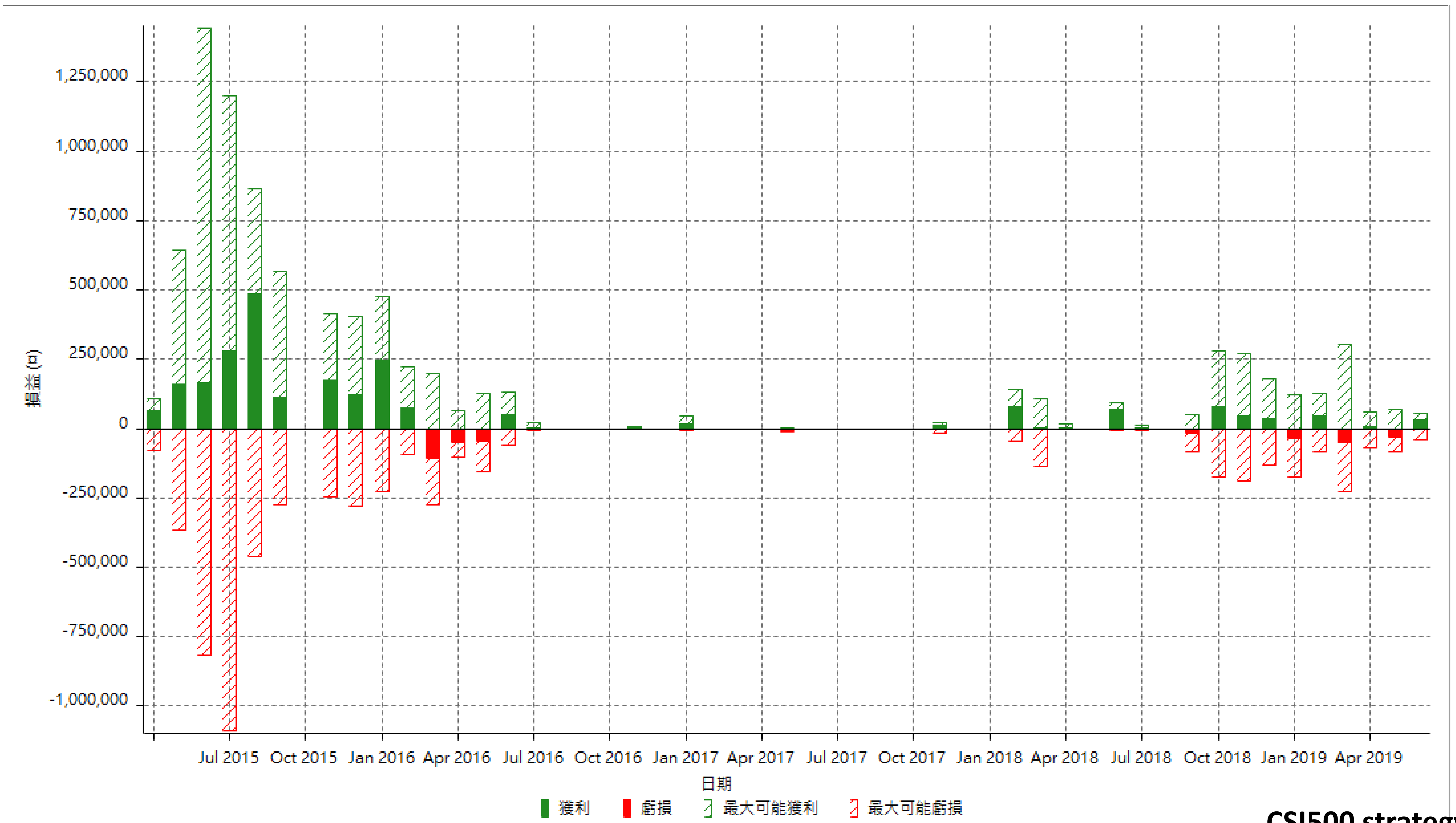
CSI500 strategy

全樣本績效



2,000,000
1,500,000
1,000,000
500,000
Training Data
Testing Data
Training Data
-100,000
-200,000
-50
最大可能虧損
25
50
75
100
125
150
175
200
225
250
275
300
325
350
375
交易編號
淨利
高點
平倉交易虧損
平倉交易虧損 (%)

ategy



CSI500 strategy

全樣本績效

期間	獲利		毛利	毛損	交易次數	勝率
	¤	%				
2019	(¤32400)	(1.5%)	¤346960	(¤379360)	71	43.66%
2018	¤294400	15.81%	¤629880	(¤335480)	101	58.42%
2017	¤23960	1.3%	¤34320	(¤10360)	4	50%
2016	¤176320	10.61%	¤650400	(¤474080)	70	47.14%
2015	¤1561680	1561.68%	¤3245880	(¤1684200)	136	58.09%

	所有交易	多單	空單
交易總次數	382	108	274
未平倉交易總數量	0	0	0
獲利交易次數	204	64	140
虧損交易次數	178	44	134
勝率	53.4%	59.26%	51.09%
平均交易(獲利 虧損)	¤5298.32	¤5322.59	¤5288.76
平均獲利交易	¤24056.08	¤21918.75	¤25033.14
平均虧損交易	(¤16199.33)	(¤18817.27)	(¤15339.7)
平均獲利/平均虧損 比率	1.49	1.16	1.63
最大的交易獲利	¤170560	¤90400	¤170560
最大的交易虧損	(¤90240)	(¤87720)	(¤90240)
平倉交易的平均K棒數	36.8	35	37.6
獲利平倉交易的平均K棒數	42.3	42.6	42.2
虧損平倉交易的平均K棒數	30.5	23.8	32.7
平倉交易間的平均K棒數	n/a	n/a	n/a
獲利平倉交易間的平均K棒數	198.4	724.8	308.6
虧損平倉交易間的平均K棒數	245.4	1092.5	333.9

CSI500 strategy

Thank you!