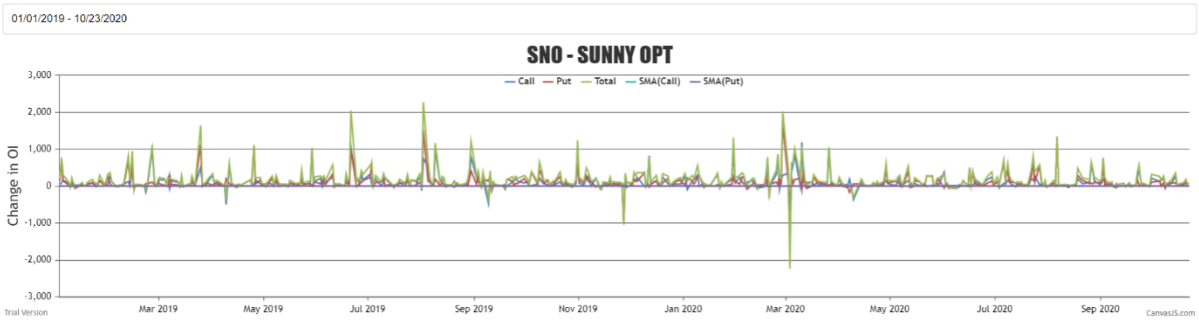
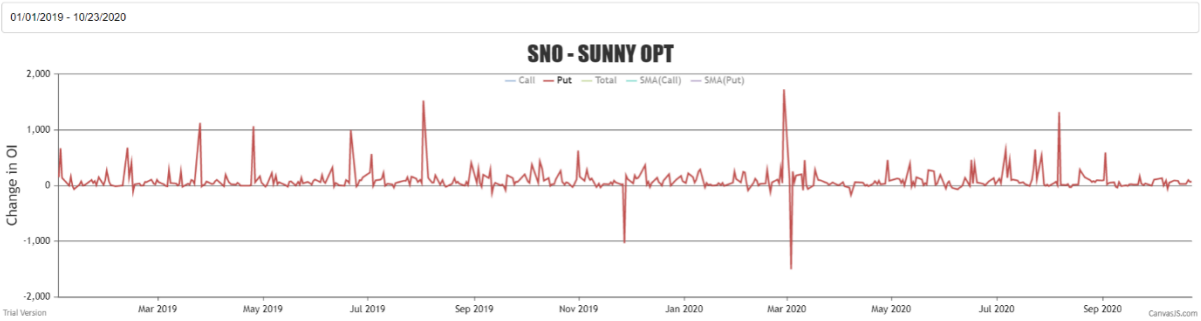
https://brendanlui.azurewebsites.net/

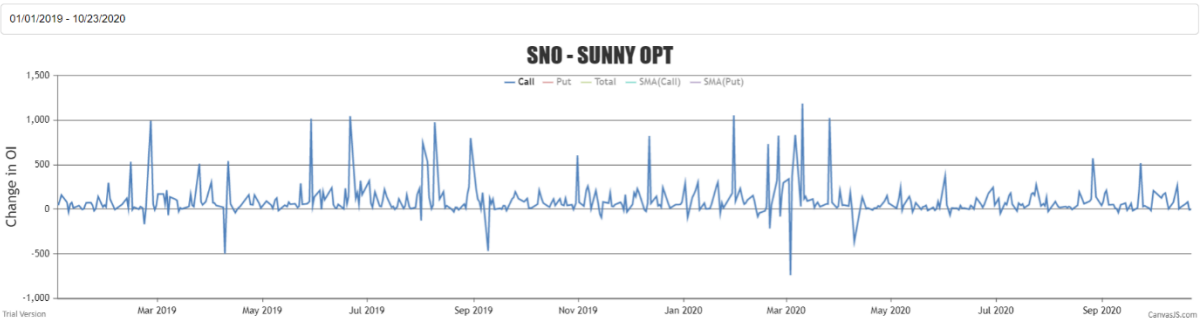
Diagram 1: Change in OI



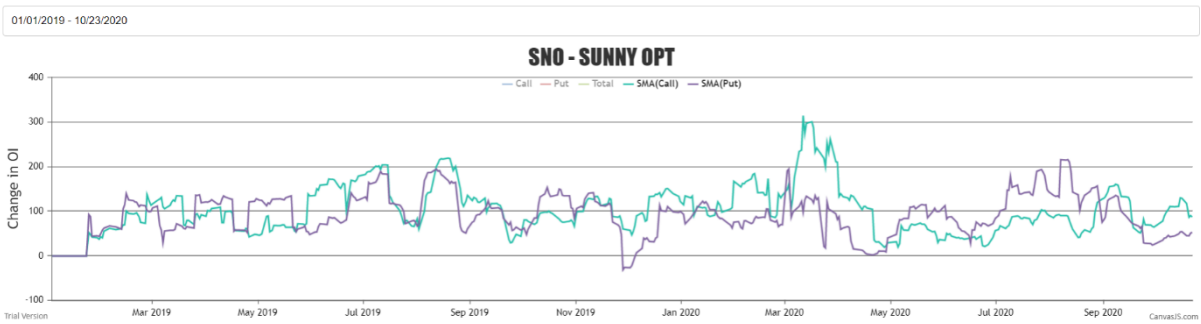
Show the sum of the number of the **change of open interest** per day when strike price is less than close price in PUT option which will be expired after a month.



Show the sum of the number of the **change of open interest** per day when strike price is larger than close price in CALL option which will be expired after a month.



Show the SMA of the **change of open interest** in CALL & PUT option



After inputting the SMA days, click the button to generate the signals if PUT SMA crosses CALL SMA.

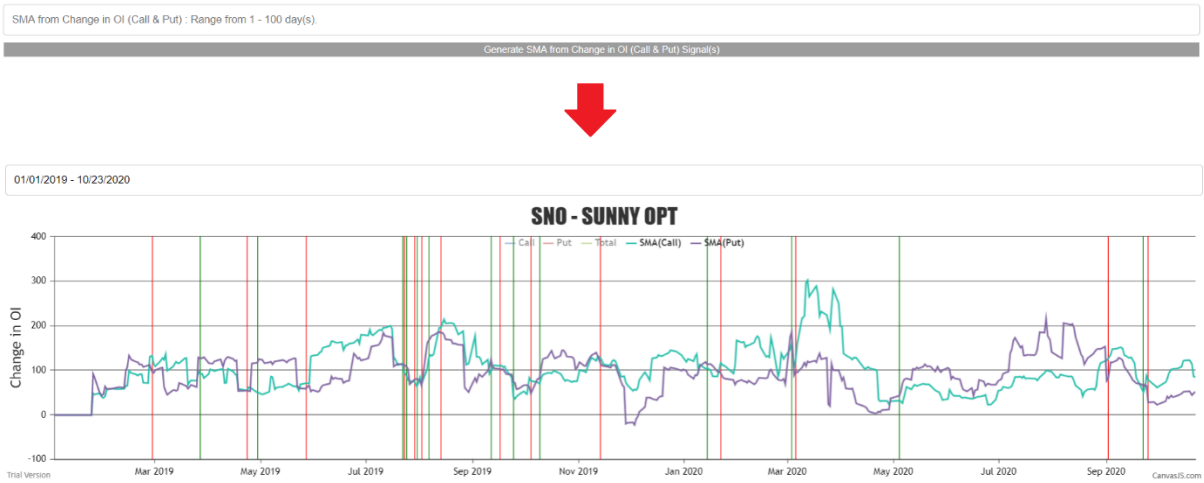
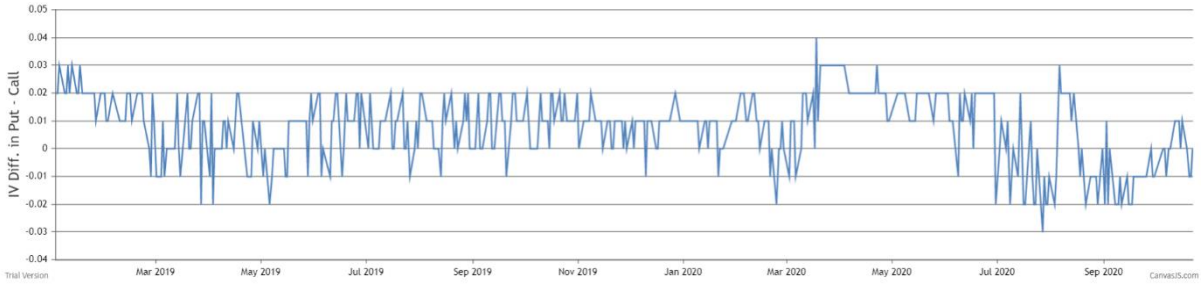
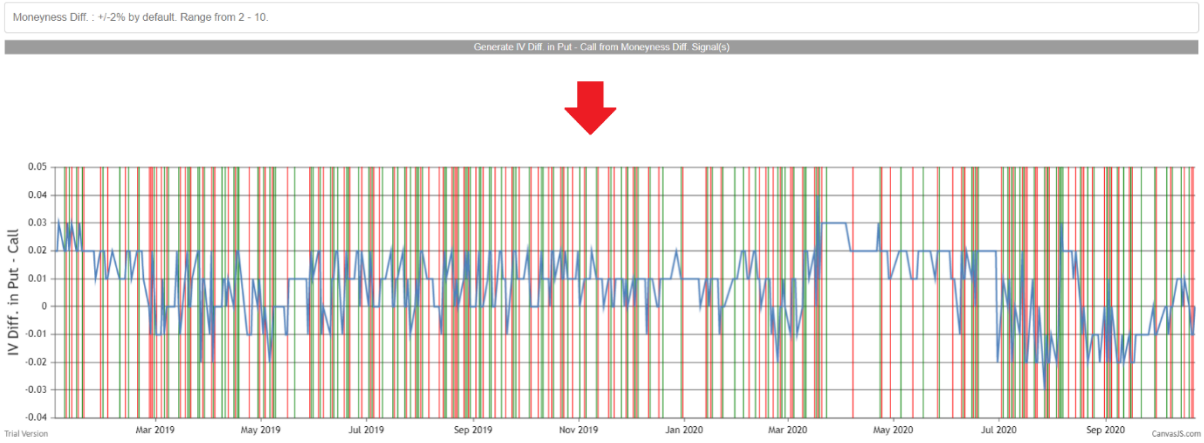


Diagram 2: IV Diff. in Put - Call

If the input value moneyness difference is 10, it will put the **IV** in PUT option to minus the **IV** in CALL option, which will be expire after a month, with both **out of money** (10% **moneyness difference**).



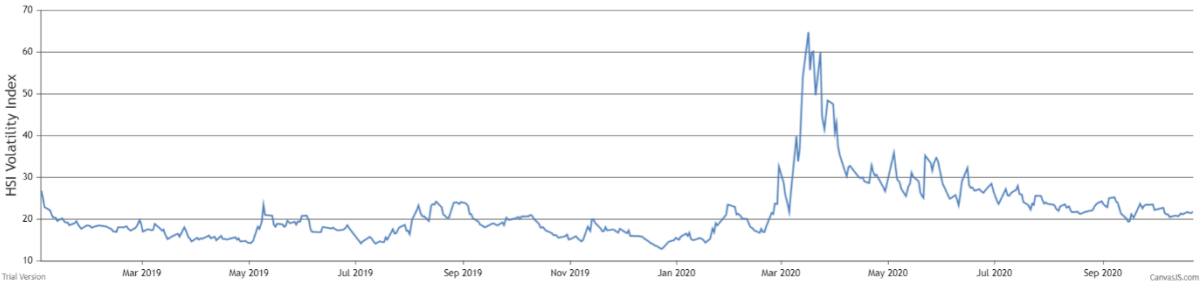
After inputting the moneyness difference value, click the button to generate the signals if today's value is larger than yesterday's value.



After inputting two SMA days and moneyness difference value, click the button to generate the signals if 1st SMA crosses 2nd SMA.

After inputting the range, click the button to loop through all possibility to get parameters in the global optimum solution.

Diagram 3: HSI Volatility Index



We can use this data to set some conditions to screen out the signals.

Diagram 4: Volatility

Show an average **IV** and **HV** in PUT option and CALL option, which will be expire after a month, with **at the money** (0% **moneyness difference**).

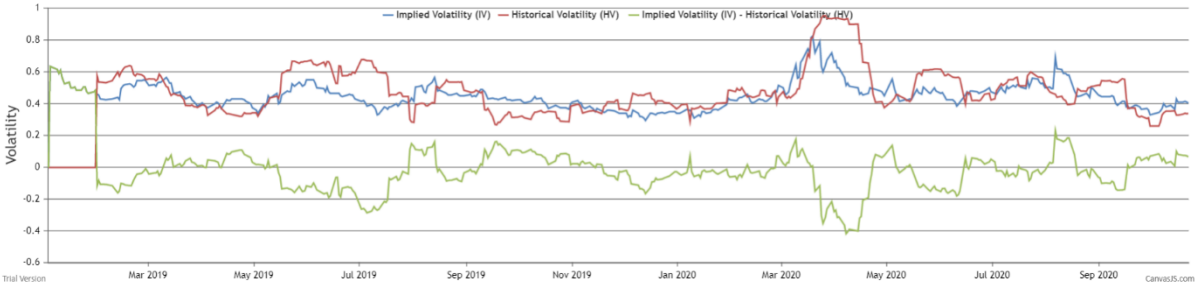


Diagram 5: Linear Relationship (1)

Daily Percentage Change in this Stock Price

VS

Daily Change in Implied Volatility (IV) - Historical Volatility (HV)

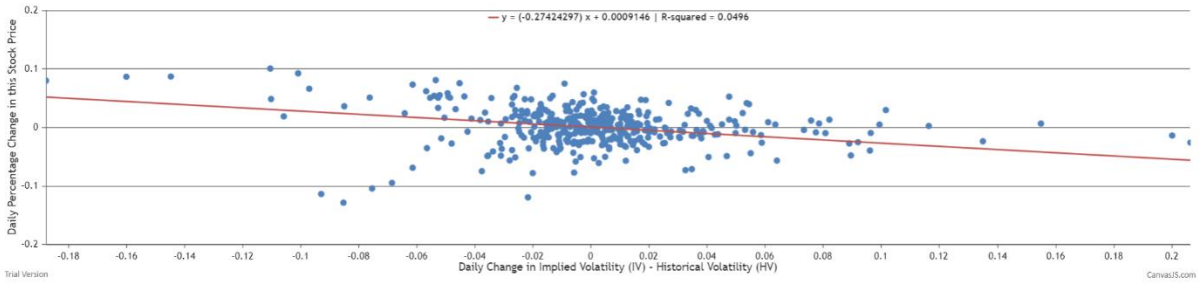


Diagram 6: Linear Relationship (2)

Daily Percentage Change in this Stock Price

VS

Daily Percentage Change in Stock (2800) Price

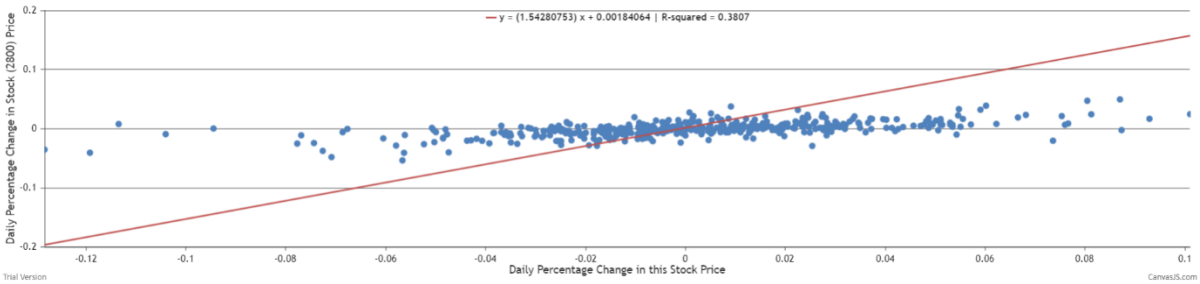
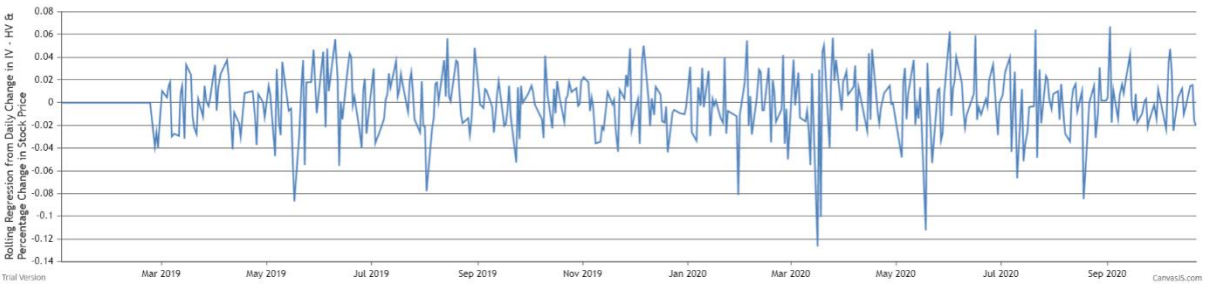
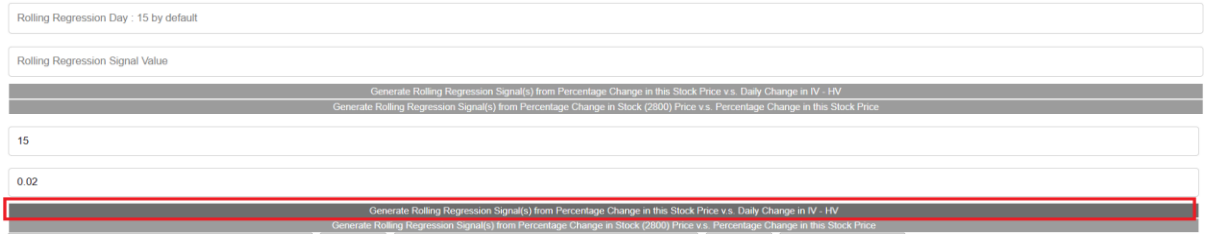


Diagram 7: Rolling Regression with above 2 linear relationship



After inputting the regression days and the bound value, click the button to generate the signals if rolling value exceeds the signal value range



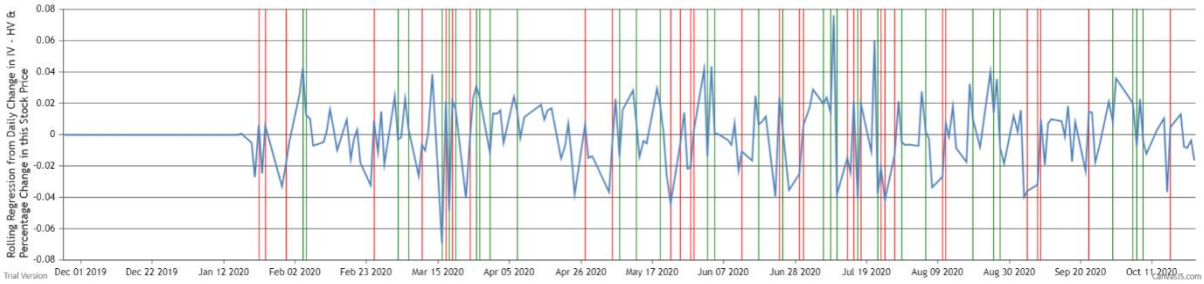
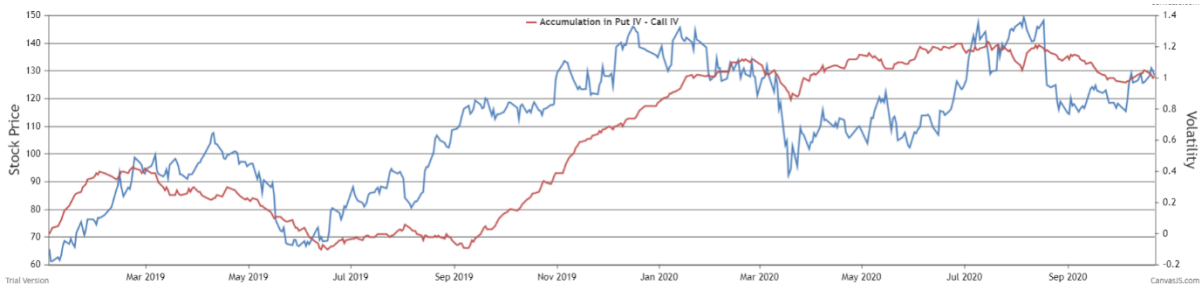
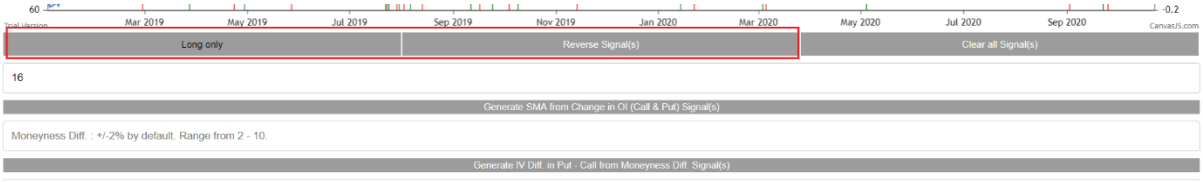


Diagram 8: Stock Price & Accumulation in Put IV -Call IV

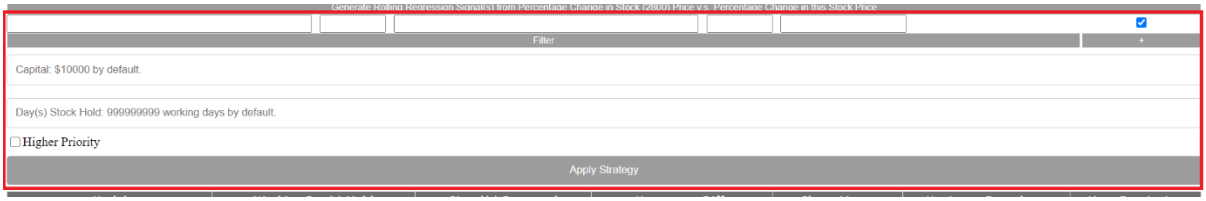


Back Test Function:

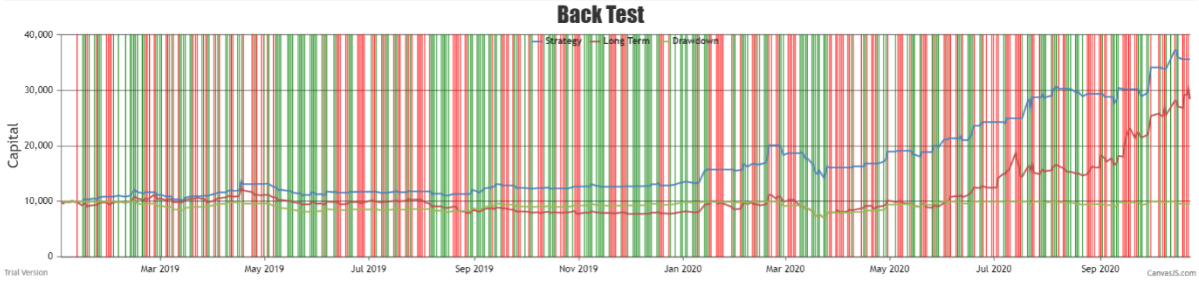
- Long / Short
- Signal direction
- Any filter to screen out the signals
- Capital value
- Holding day(s)
- Ignore the signals when the holding days is less than your input value?



After that, click “Apply Strategy”.

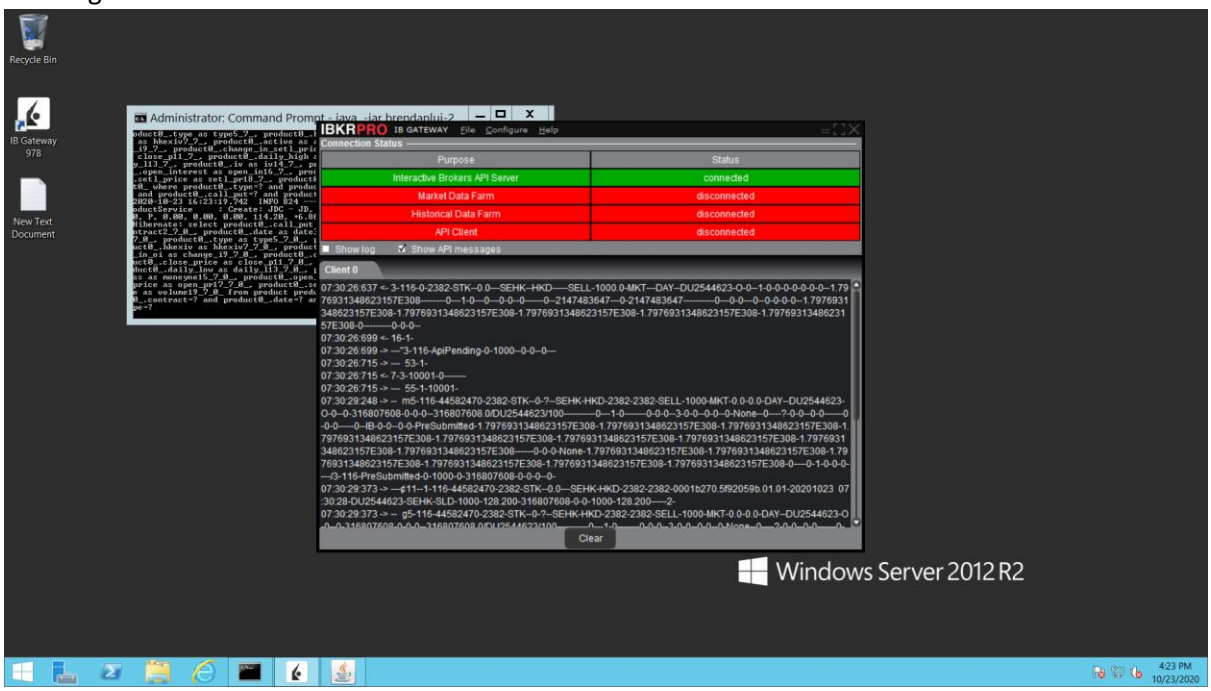


Model	Working Day(s) Hold	Signal(s) Reversed	Moneyness Diff.	Short / Long	Maximum Drawdown	Next Day Action
IV Diff. in Put - Call	999999999	False	+/-9%	Long only	-29.1%	SELL
Sharpe Ratio (Strategy)	**Sharpe Ratio (Long Term)**	**No. of Sell/Buy (Long)**	**No. of Sell/Buy (Short)**	**Win Rate (Long)**	**Win Rate (Short)**	**Win Rate**
0.938	0.224	69/69	0/0	63.8%	NaN%	63.8%



Forward Test:

Running in Azure VM.



Daily Trading EOD Report in Email

Strategy ID	Ticker	Request Time	Action	Average Price	Quantity	Commission	Stock Owned	Cash Owned	Capital	Profit
IVDIFF_SMA_2_3_10_R	2382	2020-10-23 15:30:26.46	SELL	128.2	1000	235.0	0	200529.1	200529.08	-0.22%

Strategy ID	Ticker	Stock Owned	Cash Owned	Capital	Profit
IVDIFF_SMA_1_7_10	27	0	96120.8	96120.79	0.0%
IVDIFF_SMA_18_19_5_R	27	1000	39596.3	93846.32	-0.58%
IVDIFF_SMA_2_3_10_R	2382	0	200529.1	200529.08	-0.22%
IVDIFF_SMA_3_6_8_R	175	5000	11279.6	92779.56	0.0%
IVDIFF_SMA_5_10_9_R	2628	0	98041.2	98041.2	0.0%
IVDIFF_SMA_5_18_8_R	1810	4000	8348.7	95748.73	-2.05%
IVDIFF_SMA_5_6_9	1211	0	107519.4	107519.41	0.0%
IVDIFF_SMA_7_10_6	2800	3500	11219.5	101169.47	0.49%
SMA_15_6D_R	2628	5000	5156.8	100556.75	2.24%

Capital (TD) :	HKD 986311.3
Capital (LTD) :	HKD 986606.3
Change :	HKD -295.0