

## 1. Financial Vocabulary

Open Price – The price when US stock market opens at 9:30am Eastern time

Close Price - The price when US stock market closes at 4:00pm Eastern time

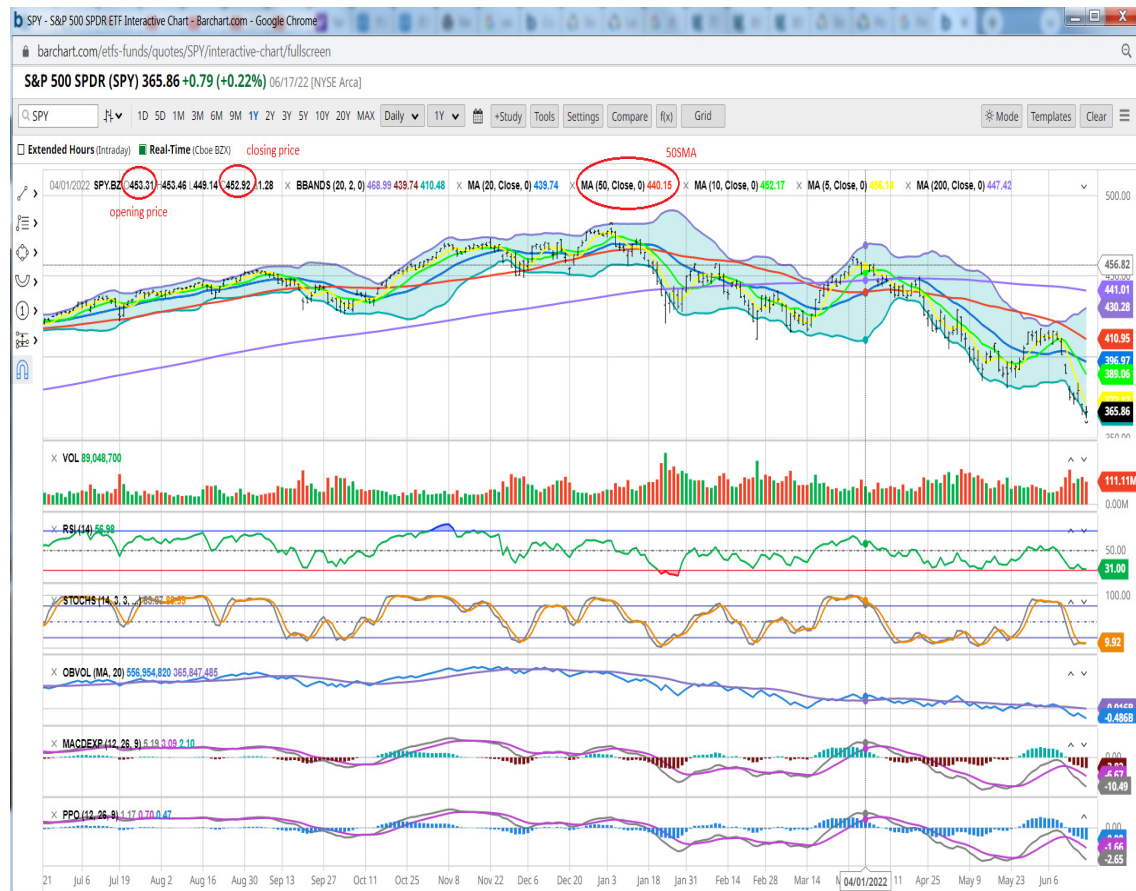
50SMA – Stock 50-day moving average. The average of last 50 trading days

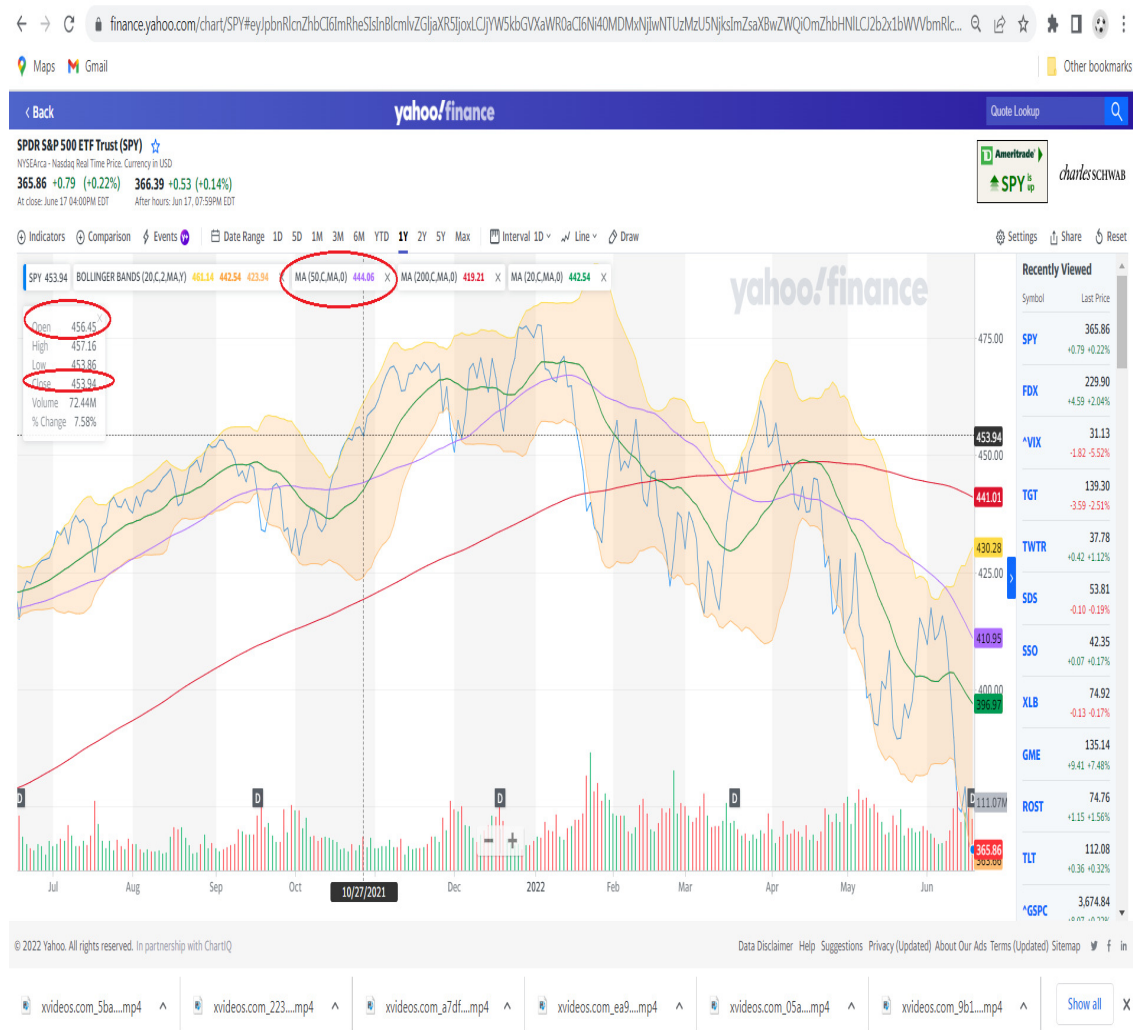
Trending up – Current SMA price is higher than previous day

Trending down – Current SMA price is lower than previous day

## 2. Data Source

This can be found on any financial websites, like barchart.com or Yahoo Finance.com





These are the places to retrieve financial data.

### 3. Trend Investment Algorithm

The investment algorithm is based on trend. This is the set of rules:

1. When stock price is above 50SMA and 50SMA is trending up, stay on the market
2. If stock price is below 50SMA or 50SMA is trending down. Wait for a grace period of  $N(0,1,2,3, \dots)$  days, sell at open price next day and stay away from market
3. When to get back in? Condition 1 is satisfied, wait for a grace period of  $N(0,1,2,3, \dots)$  days, if condition is still satisfied, reinvest at next day open price.

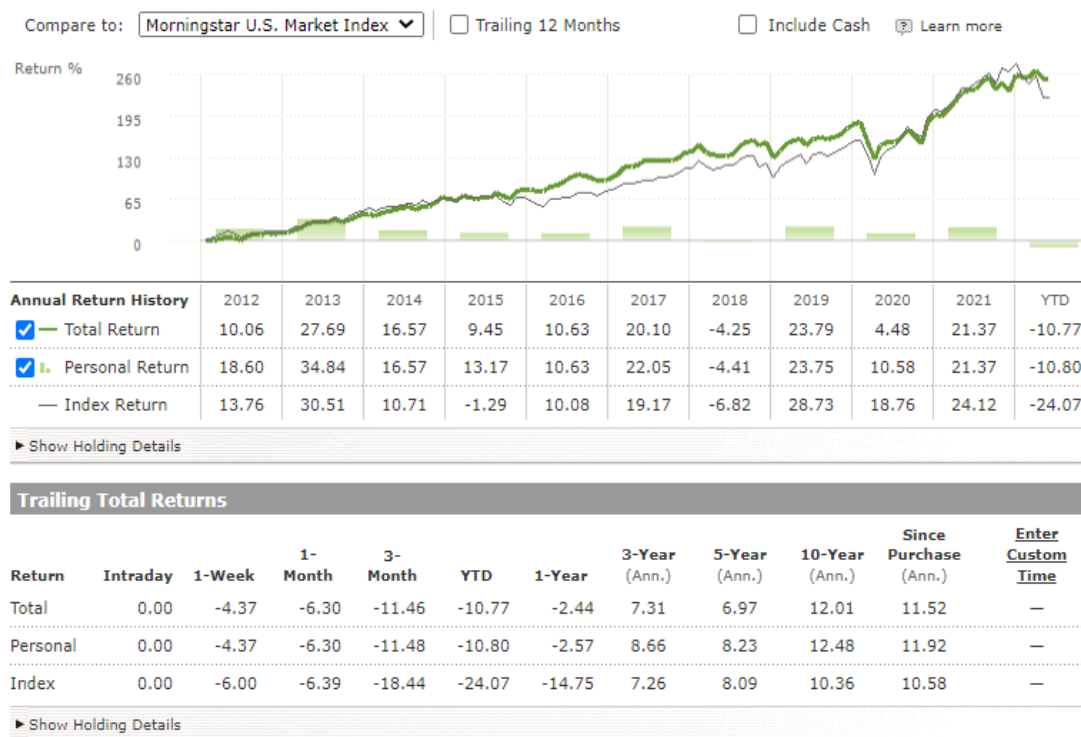
### 4. Back Test

Back Test will be based on 1 Year, 2 Year, 3 Year, 5 Year, 10 Year performance.

It is based on \$100,000 hypothetical amount to invest on day 1.

Back test should provide total gain(loss) at end of period as well as max gain, max loss in this period.

Provide a line graph chart (This algorithm vs SP500) on performance comparison. This is an example



And produce a trading record similar to this spread sheet.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Date		Price		Shares		Market Value		Remaining Amount		\$100,000.00		Actions	
2														
3	01/02/2018		\$27.54		3631		\$99,997.74		\$2.26		\$100,000.00		Buy	
4	02/06/2018		\$25.77		3631		\$93,570.87		\$2.26		\$93,573.13		Sell	
5														
6	02/16/2018		\$28.19		3319		\$93,562.61		\$10.52		\$93,573.13		Buy	
7	02/17/2018		\$28.11		3319		\$93,297.09		\$10.52		\$93,307.61		Sell	
8														
9	02/26/2018		\$28.91		3227		\$93,292.57		\$15.04		\$93,307.61		Buy	
10	03/01/2018		\$27.97		3227		\$90,259.19		\$15.04		\$90,274.23		Sell	
11														
12	03/12/2018		\$29.55		3054		\$90,245.70		\$28.53		\$90,274.23		Buy	
13	03/15/2018		\$28.84		3054		\$88,077.36		\$28.53		\$88,105.89		Sell	
14														
15	04/19/2018		\$27.49		3205		\$88,105.45		\$0.44		\$88,105.89		Buy	
16	04/20/2018		\$27.34		3205		\$87,624.70		\$0.44		\$87,625.14		Sell	
17														
18	05/10/2018		\$27.59		3175		\$87,598.25		\$26.89		\$87,625.14		Buy	
19	05/17/2018		\$27.88		3175		\$88,519.00		\$26.89		\$88,545.89		Sell	
20														
21	06/05/2018		\$28.46		3111		\$88,539.06		\$6.83		\$88,545.89		Buy	
22	06/26/2018		\$27.90		3111		\$86,796.90		\$6.83		\$86,803.73		Sell	
23														
24	07/06/2018		\$28.18		3080		\$86,794.40		\$9.33		\$86,803.73		Buy	
25	10/10/2018		\$31.00		3080		\$95,480.00		\$9.33		\$95,489.33		Sell	
26														
27	02/06/2019		\$27.43		3481		\$95,483.83		\$5.50		\$95,489.33		Buy	
28	02/13/2019		\$27.87		3481		\$97,015.47		\$5.50		\$97,020.97		Sell	
29														
30	02/20/2019		\$28.41		3415		\$97,020.15		\$0.82		\$97,020.97		Buy	
31	05/14/2019		\$29.76		3415		\$101,630.40		\$0.82		\$101,631.22		Sell	
32														
33	05/17/2019		\$29.75		3416		\$101,626.00		\$5.22		\$101,631.22		Buy	
34	05/20/2019		\$29.53		3416		\$100,874.48		\$5.22		\$100,879.70		Sell	
35														
36	06/11/2019		\$30.88		3266		\$100,854.08		\$25.62		\$100,879.70		Buy	
37	08/05/2019		\$30.29		3266		\$98,927.14		\$25.62		\$98,952.76		Sell	
38														
39	09/06/2019		\$32.21		3072		\$98,949.12		\$3.64		\$98,952.76		Buy	
40	09/24/2019		\$32.17		3072		\$98,826.24		\$3.64		\$98,829.88		Sell	