

USING TIME WINDOWS TO PREDICT FUTURE EQUITY PRICES

INTRODUCTION:

It is well known that many successful hedge fund managers (see M. Coval, "Trend Following") base their equity purchases strictly on the behavior of past price trends with little regard for fundamentals such as earnings and price earnings ratios. This action flies in the face of the majority of investors opinion who, like B.Malkiel("A Random Walk Down Wall Street"), find that there is no correlation between earlier stock price trends and future price behavior. This difference in views leaves open the question of why a price trend approach works at all and is not just the equivalent of tea-leaf reading. It is our purpose here to show, via several examples, why a trend approach using no fundamentals works to sometimes produce huge profits.

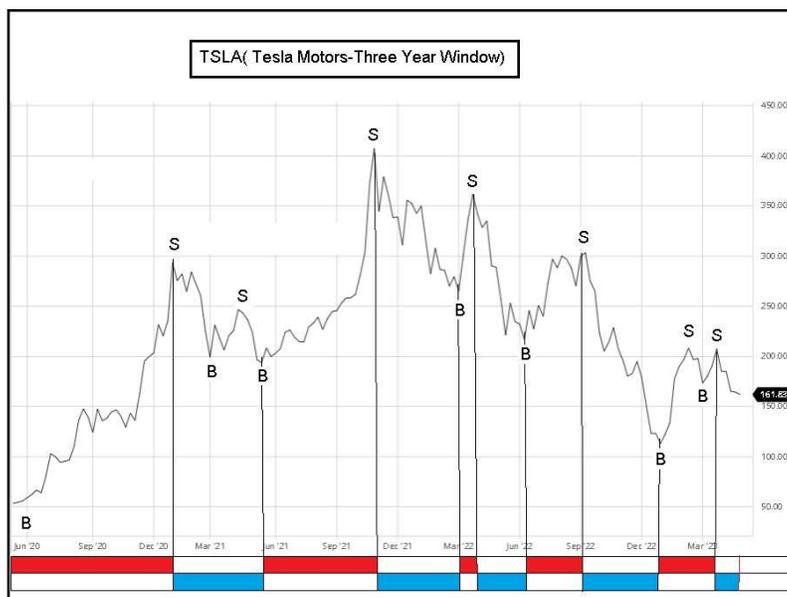
PICKING A TIME WINDOW AND ITS B AND S TRANSACTION POINTS:

We begin by choosing a time window extending from the present to n years in the past. Several different time windows can be considered ranging from as long as $n=30$ years to as short as one year. The chart information for a given time window can be gotten by going to Barcharts.com . One looks at several different time windows and then picks the one most clearly showing about six local highs(S for Sell)and six local lows(B for Buy). Typically this constraint requires a three to five year time window. Once the time window has been chosen, one marks the local sell(S) and buy(B)points and then draws vertical lines going from S or B down to a long thin two row box with those marked in red as long positions(B to S) and those in blue as short positions(S to B). One next waits until the first B signal appears to buy a given stock. One holds on to this stock until the Next S signal appears. It is not known in general how wide the red box will be until S is reached. For shorting one starts with the first S to the right and holds things short until the next B is reached.

BUY AND SELL POINTS FOR TESLA STOCK:

We begin by applying our price trend approach to TESLA stock. Here we choose a three year window in order to get a sufficient number of buy and sell points.

TESLA'S modified price history extending over three years is shown in the following graph-



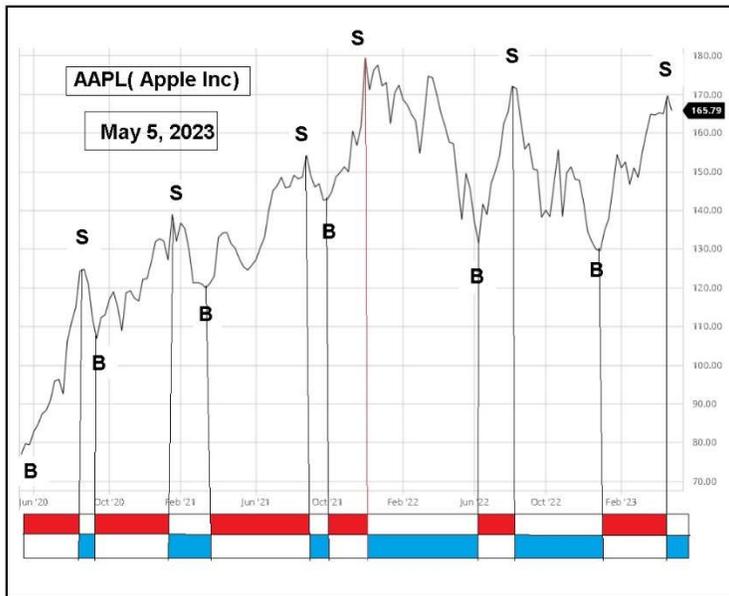
It is seen that there are definite buy and sell points with the condition that one be-

Long when the box is red Short when the box is blue,

Price trends are indicated by the length of the local red and blue boxes. One does not know what the time width of a given colored box will be, but knows it is time to get out when the box color first changes. The chart pattern is seen to be not random and hence can be used to make profitable price predictions.

TREND APPROACH APPLIED TO AAPL:

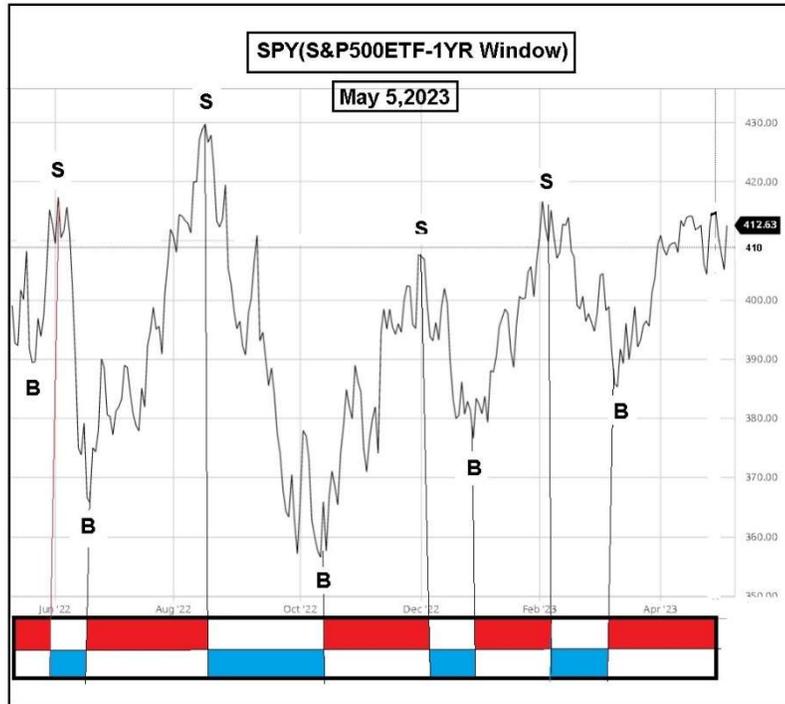
Another stock which clearly shows price trends is AAPL. Here is its modified graph extending over a three year time period-



One buys the stock long at the beginning of the red boxes and shorts things at the beginning of the blue boxes. Following the S and B signals and acting on them, a net return far exceeding a buy and hold policy will result. At the moment AAPL is a sell. Its last buy was in late 2022. Note that the buy points occur only near local B signals where the price is near its local minimum.

BUY POINTS FOR THE S&P 500 ETF KNOWN AS SPY:

If one wants to minimize the investment risk on any equity it is safest to deal with ETFs which represent a collection of stocks and thus will generally be less volatile than individual stocks. One of the better known of such ETFs is SPY. Plotting its stock price behavior over a one year time window produces the following-



We see at the moment the price of SPY is neutral near \$410/sh. If an S develops it could drop to 380 and if no S signal follows in a few weeks, it could rise to 430. What is again clear is that SPY shows definite trends and one can take advantage of them.

CONCLUDING REMARKS:

It has been shown via the three specific stock graphs above that trends for stock price do exist and that one can take advantage of these trends to be long when B is first observed. A stock should be shorted only after a S signal has been given. To reduce price volatility it is best to work mainly with ETFs.

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