

The All-Time High Stock System

Profit with Winners



Traders and investors are always on the look out for the strongest equities the market can offer. The best way to find them is by testing historical data with a trading system, the aim being the utilisation of bull markets and the omission of bear and sideways markets. This enables you to be fully invested when markets are headed higher and protecting profits when markets are either foggy or the bottom drops out.

In Search of the Bull Trend

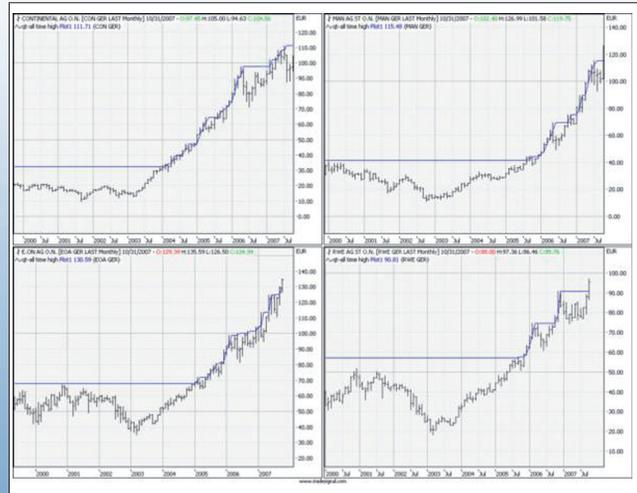
It is never hard to see higher highs and higher lows on a chart in hindsight, even beginners can identify upward trends. However, the art of trading consists of recognising whether a trend could develop and opening a timely position based on that opinion. There are numerous indicators for finding emerging trends, each with its own advantages and disadvantages. For our purposes I will completely omit indicators as such and base the trading system on technical aspects on the chart alone. If you look at charts of successful stocks over the last few years you will notice a common pattern in all of them. Sooner or later all of them make new all-time highs and typically the bull trend really begins to heat up once that high is taken out. Look at figure 1 to see what happens when past all time highs are bested. After the bull market of 1999 many stocks languished. Neither trend following methods

nor countertrend strategies earned money during this phase. That changed as securities began moving past old highs. This once again drew mass attention to the stock market. Those who were not invested felt the pain of missed profits and were drawn into the market. Buyers pushed price upward so that as the old highs were reached new impetus came into the market. But in fact, a slew of new investors gripped by greed, dollar signs in their eyes, is the best prerequisite for finding someone who will eagerly buy the stocks you purchased at the old highs. This is the basis for the trading system introduced here.

Dragnet

The system's initial concept is to buy all securities which have reached new all time highs. In that way difficult market phases where money is hard to earn are automatically left out. If you focus on the all time

F1) New All-Time Highs Signal the Bull Trend



Companies that deliver good results, are takeover candidates or are strong for other reasons reach all-time highs sooner or later (blue line). Now more than ever the security becomes interesting to a wide public. Typically analyst ratings and positive ad hoc announcements increase and the bull trend feeds on itself growing in dynamic. New and greedy market participants push prices higher. These are the times when simple trend following methods work best. (Clockwise from top: Continental, MAN, Eon, RWE.)

F2) The Hunt for New All-Time Highs



This shows a list of S&P500 stocks sorted according to the distance from their all-time high expressed in average-true-range (ATR). The average true range was developed by Wells Wilder, the inventor of the RSI. ATR measures the average volatility of a stock per day/week. Commerce Bancorp is currently 0.55 average true ranges away from its old all-time high. It is therefore very possible that it will reach the old high in the next week. When it does the issue will become part of the portfolio.

high then you can be relatively sure the stock is not caught in a sideways or downward trend. Strong bull phases are also the phases in which trend-following trading systems work best.

Of course it looks easy on paper but in practice the method confronts you with a rather tough problem. If you want to use the system on a large basket of stocks such as the S&P500, you could have to place as many as 500 buy-stop orders on a daily basis. After all any one of the stocks could be reaching its old high today.

Besides the trading costs involved that would be too much work for me, which is why I selected a more intelligent approach. By selecting only those stocks which have a real chance of reaching old highs within a short period of time you drastically reduce the number of buy-stop orders needed – reducing expenses, not to mention the work load, to an acceptable amount.

Therefore stocks are filtered according to their distance from all time highs. But since stocks have various levels of volatility you cannot simply specify a distance of x percent or y points because that does not consider the different volatilities involved. If a high-tech security swings five percent on a daily basis, and another stock only two percent per day, then if the high tech-stock is five percent under its all time high it can be considered very close. However at five percent the other stock is probably a few days away from it.

In order to solve the problem I use Average-True-Range to describe a stock's volatility. Average-true-range tells us a stock's approximate price range per bar/candle. If you sort all the stocks of an index according to their distance from the all-time high using units of average true range you will quickly find the securities you need to observe closely. If you filter the S&P 500 stocks in this way using weekly data then currently you will find 87 securities which are closer than one average true range away from their all-time high. These are the equities to watch carefully in the next few weeks or if inclined enter a

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F3) Definition of a Trend



Generally speaking an upwards trend is defined as a series of higher highs and higher lows. The pattern is especially easy to see on a weekly or monthly chart. In lower time frames, market noise tends to dominate and the pattern is not as clearly visible. As far as trend definition is concerned a low is the low of a bar when it surrounded on both sides by bars with higher lows. This is also called a swing low or movement low. If a previous low is violated the trend is over for the time being and exiting a long trade is advisable.

buy stop order for them immediately. The remaining 413 index components need only be considered when they are closer than two average-true-ranges from their all time highs (see figure 2).

Entry and Exit

Once you have established potential new all-time high candidates, you place a buy stop order at the old all-time high. If during the next

F4) The All Time High System



The figure shows how the system works with monthly data. In January 2005 E.On rose above its all-time high and the system opened a long position at that point. Stops are placed at the previous move low. In May 2006 prices reached a previous swing low and the position was closed. In September 2006 E.on made a new all time high again and the system opened a new position. The red dots show the trailing stops. Whenever a new swing low forms the stop is moved up to that point on the following day. In this way trends are fully utilised and risk remains manageable.

few days the old high is bested you automatically take a position.

However before you can consider specific entries you must also be clear about potential risk. Stocks do not necessarily continue higher after hitting old highs. Some will only touch it before reversing and heading back down. Therefore the next step in the development of this system is the definition of an initial stop. The initial stop is the point at which the position will be closed if the trade does not go as planned. Now is when you need to consider how trends are identified. An intact upwards trend consist of a series higher highs and higher lows. If the pattern is broken, i.e. no new highs are formed or new lows appear, then the trend is considered broken. This definition will be used to determine sensible exit points.

The system is designed to utilise emerging trends after new all-time highs are attained opening positions once new highs are established. If however, a new low forms after the new high was reached then the trend has been broken and it is advisable to close the position with a small loss. If however after entry, higher highs and higher lows begin to form, then stops are moved up to the last low of the move in order to secure open profits. This way the position remains open until the trend ends.

This classic approach works best with weekly or monthly data, which has a strong trend component and displays less market noise than daily or intra-day data. Lows are also easier to define with longer-term time periods. For the system's first test I used the following definition for determining stop placement on the last low:

A significant low (swing low, movement low) is a low that lies between two higher bar lows. For instance if the low of the current weekly bar is 100, the low of the previous week is 99, and the low of the week before that is 101, then last week's low (99) is the low we are interested in. This is where the stop should be placed.

If this pattern appears again in the course of the trade and a higher low is established then the stop is pulled up to the new level. This results in a simple trailing stop. „Cut losses and let profits run“ is the old market adage on which this procedure is based. Figure 4 shows the process in action.

Position Size

Choosing the right position size is at least as important to a successful trading plan as the choice of good entry and exit points. So far the entry and exit is known. Entry occurs at the old all-time high, exit takes place at the low of the last price move. The difference between entry and exit represents trade-risk per share. Since it is impossible to know how each position will develop it is advisable to use the same risk for all positions. Thus position size is adjusted according to stop size; stop size is *not* adjusted to fit a constant position size. Figure 5 shows how this looks on the chart.

This has the advantage a rendering a stock's individual volatility and price a non-issue. Only position risk is considered not the amount of capital needed to put on the position. Since the advent of CFDs and single-stock futures, the consideration of how much capital is needed to buy a stock is of lesser importance.

Performance

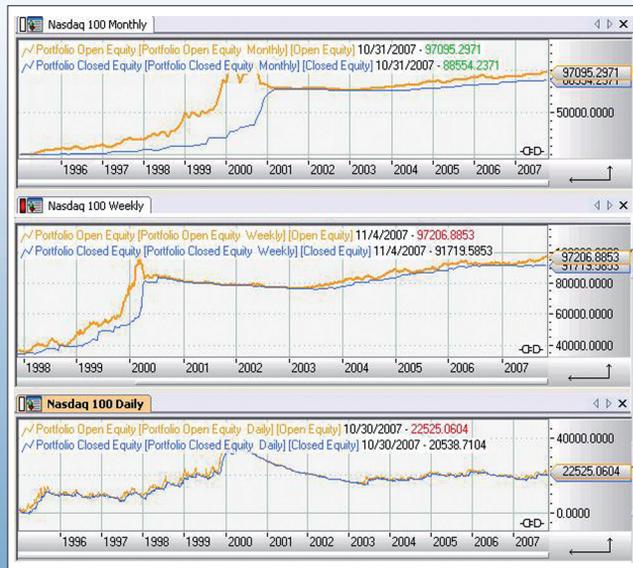
The performance evaluation of this system will tell if the approach delivers the goods. Firstly however you must decide which data to

F5) Position Size



A stop's distance from entry determines position size. Here an entry was made at the old all-time high at (49.57). The initial stop is placed at the previous swing low (44.26). This results in a risk per share of 5.31. For this example I chose to risk 200 USD on the trade. The resulting positions size is calculated using the formula: Risk per Trade / Risk per Share. This has the advantage of weighting all trades equally. Also, the stock's volatility or the shares absolute price is immaterial. Using CFDs instead of stocks helps to limit the otherwise high capital outlay for a portfolio considerably.

F6) System Performance



This shows the performance of the All-Time High System. The numbers are based on a risk of 150 USD per position. You can see that the system weathered the bursting of the Nasdaq bubble without any major damage. Using daily data is however not advisable. The system trades too frequently and the resulting trading expenses make the system less successful. The performance with weekly data shows a profit factor of 2.8 after expenses. A high profit factor indicates the stability of a trading approach, but overlooks minor errors in the implementation of the idea.

use for the evaluation. In order to test the system using a good number of stocks I selected the 100 securities listed in the Nasdaq 100 index (.IXIC). Generally Nasdaq shares trend well. Simultaneously the end of the bubble in mid-2000 is a good place to begin a test for a trading system that only invests on the long side.

The results of a test using 150 USD risk per position and 10 USD costs per trade are shown in figure 6. Notice immediately the stable performance with weekly and monthly data. Also the phase following the year 2000 did no major damage to the account. During the bear market the system was almost 100 percent in cash while in bullish phases it was strongly invested as you can see by the increasing equity curve. Results are noticeably different with daily data as market noise makes its presents known. Trades are stopped out too early with no chance of developing into winners. Contrary to the old rule that more work means more money, this shows a slower approach is more profitable. So just scan the market once a month or once a week instead of hoping for a new trade every day and falling into the trap of overtrading in the process.

Performance figures for the weekly data show a profit factor (after trading costs) of 2.86. Even when only 43% of trades were successful; an initial risk of 150 USD per trade is accompanied by an average profit of 313 USD per trade. Of the 100 stocks observe, 56 delivered positive results with weekly data, 77 with monthly data.

Finally

In essence the trading system shows that it pays to buy stocks at their all-time highs. The search for cheap stocks or low entries is not the

way to success in the markets. Instead the saying "buy high sell higher" comes to mind. Equities that manage to make new all time highs are usually strongly issues. The strict money management and stops based on technical price action help you to trade according to the chart and not rely on indicators.

The next part of this article will show how to improve the system. Currently it still has a few weak points, especially in aggressive trends stops are not pulled up fast enough. The position size algorithm can also be improved upon. Nevertheless we have demonstrated that even a very simple approach can lead to success.

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