Improve Your Trading Using Modified Candlesticks

Markets exist in three states: uptrends, downtrends, and consolidations. Although the last one is a series of these three states, though of a lesser amplitude, a trader is mainly interested in trends. The charting technique described previously in "Heikin-ashi – New Ways of Charting" (Traders' Magazine May-June 2004) showed that using simple tools, we can determine easily, trend elements, such as direction and strength. This article will focus on how to use better Heikin-ashi / modified candlesticks for trading.

Refreshing the Memory

For those still unfamiliar with this charting and trading technique, here is a crash course that will be useful to understand and apply quickly for your trading.

Heikin-ashi, or modified candlesticks, is a visual trend charting technique based on alteration of regular Open, High, Low, and Close (OHLC) values for the timeframe used.

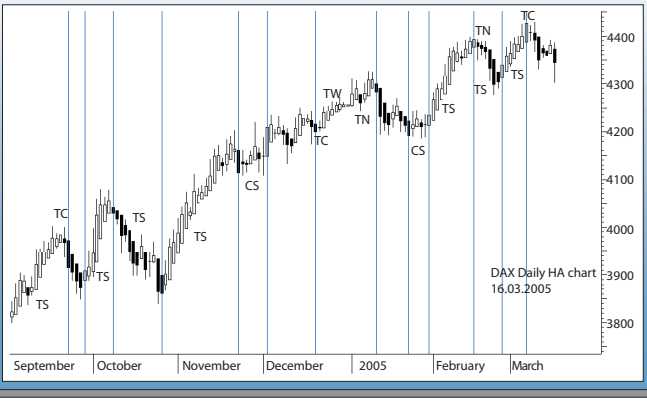
As a result, it becomes also a smoothing method to reduce the price noise due to gaps and small variations during shorter periods of time. The computation rules are simple and described in Table 1. They can also be implemented using most technical analysis software packages.

Almost everyone uses traditional candlesticks charts and may wonder why this new approach should be better. A first reason is that Heikin-ashi is a simple visual method to assess at a glance, trend direction and its strength. It does not require solid expertise as do traditional Japanese candlesticks. The second reason is that modified candlesticks can be quantified with the help of very simple technical indicators. Did anybody try to do the same thing for traditional candlesticks? Most of the answers will be negative, although there are some attempts in this direction, which are complex and require time and energy. Last but not least is the lack of a number of periods to compute the basic Heikin-ashi indicator. Almost all indicators known today take into account a number of time bars which vary, must be fine-tuned, and in many cases, fitted to serve the purpose (which is incorrect). Once the period is not there, the indicators keep their purity, improving accuracy.

T1) Computation of modified OHLC values

Symbol	Heikin-ashi Computation Rule
haOpen	(haOpen previous bar + haClose previous bar)/2
haHigh	Highest of (High, haOpen, haClose)
haLow	Lowest of (Low, haOpen, haClose)
haClose	(Open+High+Low+Close)/4

F1) German DAX: Reading a Heikin-Ashi Chart



T2) Rules to understand a modified candlesticks chart

	Trend Description	Uptrend	Downtrend
TN	Normal	Rising empty candle bodies	Falling dark candle bodies
TS	Stronger	Rising empty long candle bodies with no lower shadow	Falling dark long candle bodies with no higher shadow
TW	Weaker	Rising empty smaller candle bodies with no lower shadow	Falling dark smaller candle bodies with no lower shadow
CS	Consolidation	Sequence of small candle bodies with both upper- and lower shadows	Sequence of small candle bodies with both upper- and lower shadows
TC	Change	A single very small body with both upper- and lower shadows (unreliable)	A single very small body with both upper- and lower shadows (unreliable)

Table 2 describes the simple set of rules used to translate a Heikin-ashi chart. Since no single indicator gives very reliable signals, it is recommended to employ Heikin-ashi with other indicators, techniques, and patterns.

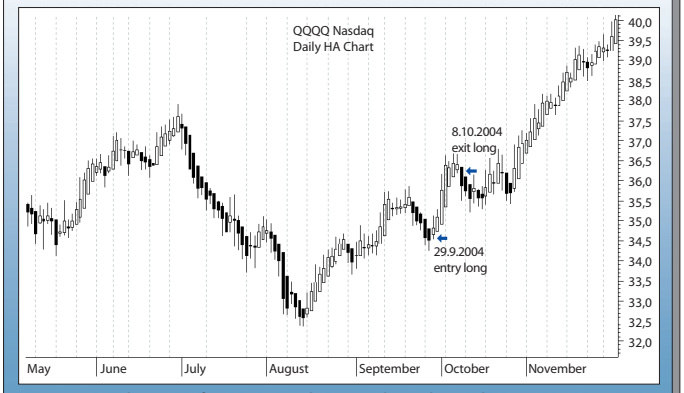
The Heikin-ashi chart for the German DAX in figure 1 identifies these five rules. It's simple, reliable, and quick – exactly what a trader needs! In most cases, the trends are well-defined, with the exception of the last period on the chart where black candles alternate with white ones, causing some confusion. The overall trend for the past six days is obviously bearish, but difficult to identify using only this technique. The consolidation CS in November 2004 starts with a candle having a small body and long upper and lower shadows. As a result of the long uptrend it seemed to be an indication for a change of trend TC, but in fact it was the start of consolidation CS which was followed by a new uptrend.

Before Market Close

In general, it is strongly recommended to act on confirmations in terms of entry and exit. But sometimes a good sense of anticipation helps to add or to reduce positions. Heikin-ashi technique helps to anticipate before the market close, today, a possible move for tomorrow. This technique is suitable for swingtraders, but it can be also be used for trading in a smaller timeframe. Here is how it works:

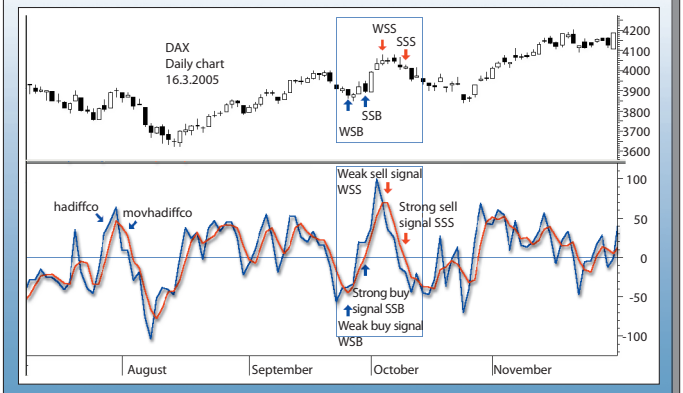
Let's assume we are half an hour before the market close and we want to have a reliable indication about the trend tomorrow (next time bar). As we discussed before, the color and the length of the modified candlesticks are a clear indication about trend direction and strength. At this hour, T-30, there is a decent indication about the final closing price C

F2) QQQQ: Nasdaq



100 Trust - Planning for entry and exit with Heikin-ashi.

F3) German DAX



Weak and strong buy/sell using Heikin-ashi indicators.

and the value of haClose(0) can be easily computed (see Table 1, haClose):

haClose(0) = (O+H+L+C)/4

On the other hand, haOpen(0) is already known as the midpoint of the previous modified candle body.

So with 30 minutes remaining before the final bell, we are able to know whether today's candle has a different colour from yesterday's. If this is the case, there are very good chances/estimates that a change in trend will occur starting today and we have time to act before the close. If the color is left unchanged, then we do not act.

Let's take QQQQ [NASDAQ] as an example and see how this strategy works. The date is September 29, 2004 and the time is T-30. At that hour, we knew the following values:

- haOpen = 34.65
- haClose = (34.54+35.12+34.53+ est.35.00)/4 = 34.79

(the real close C was 35.05).

We observe that haClose is above haOpen and the current modified candle body becomes white. Since the color is different from that of the previous candle, we can assume that a new uptrend, small or bigger, will emerge. With these findings we have about half an hour to decide on an entry before the final bell and a stop-loss just under the low of the previous day, September 28. We enter at a value close to 35 and during subsequent days we repeat the same procedure at T-30 every day until we find a first black body on October 8 and exit around 35.50 with the assumption that the uptrend will change direction. For the greedy traders the gains may not mean too much, but this was only one example of using Heikin-ashi to anticipate a trend change and take positions accordingly. There are many other turning points where a similar strategy would have brought larger gains. In trading it is paramount to have a trading plan which brings small, but consistent gains with very small losses.

How to Quantify and Trade With Modified Candlesticks

Since the direction and strength of the trend are given by the modified values of OHLC and gaps are already incorporated into this technique, it is easy to measure direction and intensity of the trend.

The indicators hadiffco and movhadifco are the main tools to translate these candles into numbers. They are described later in the section "Computation of Heikin-ashi indicators". The first indicator is very 'clean', with no number of periods taken into account, contrary to what most of the technical indicators do. For this reason, it appears as a rough line in several cases. Whenever hadiffco is positive, it corresponds to a white bullish candle body. Negative values represent days/time bars with a negative bias. Starting with this observation, we can say that

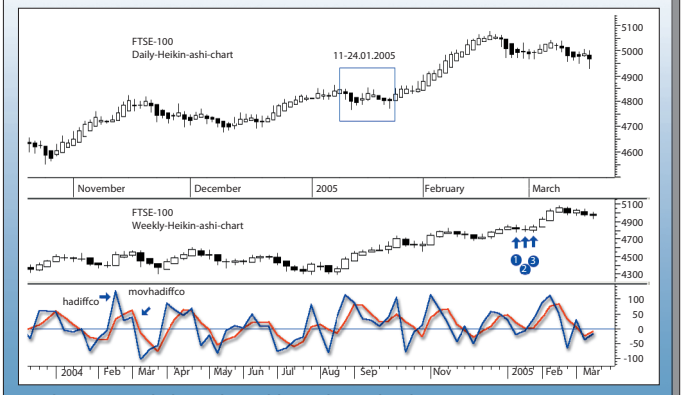
- hadiffco > 0: ascending trend
- hadiffco < 0: descending trend
- hadiffco = 0: ready to change the trend or start of a consolidation period

The classic way to make an indicator smoother is to apply a moving average and this is exactly what movhadiffco does. It is a short moving average (3 bars) and the crossovers between the indicator and its moving average are weak signals WS for entry and exit.

Although a moving average introduces a lag, movhadiffco works very well at crossovers with zero-line. They generate strong signals, SS for buy and sell.

- Movhadiffco crossing above zero-line: ascending trend, strong signal

F4) London FTSE-100



Trading using daily and weekly Heikin-ashi charts.