Systematic\_Testing\_of\_Indicator\_Part1\_181110TM. DRAFT for Author’s Personal Use ONLY

A comprehensive unconventional indicator is currently being developed to represent the application of different aspects of the Apiary Alignment Strategy and various other aspects of Fractal Price Behavior.

The design and testing of this indicator is being undertaken in two parts, the first of which (as documented here) covers short-term behavior over periods up to about 20 bars. The second part, covering periods of > 20 bars will be constructed, tested and documented separately, and then the two parts will subsequently be combined to make the final indicator in due course.

The short-term part of the indicator is described now.

Within its logic, this custom-designed indicator included all of the following items, expressed as ratios to the total number of bars in intervals ranging between the most recent 3 bars and most recent 16 bars.

1. Micro-fractal noise, represented by the number of fractal reversals compared to total bars.
2. Bar direction reversal noise, represented by the number of changes of candlestick bar direction.
3. Body vs Bar Range ratio, represented by the average ratio of Open-Close to High-Low ranges.
4. Doji count noise, represented by number of small-body (doji) bars or level of market indecision.
5. Opening gap count noise, represented by number of gaps counter to prevailing trend direction.
6. R-squared smoothness. Uses correlation-based R2 to measure the smoothness of price trends.
7. Momentum, over various time-scales, based on price change (magnitude and direction) relative to ATR which thereby allows comparison between different securities. This corresponds to the slope of the trend in price change per bar normalized with respect to ATR units.

Note that this indicator effectively considers the short-term part but NOT the long-term part of behavior consistent with the application of Apiary’s “Alignment Strategy”, plus also a consideration of multi-fractal price behavior of financial securities. Testing was based not only on FX pairs but also on other financial securities, consistent with Stridsman’s concept that: “… whether a strategy is market specific or not, it is still a good idea to make sure that it works in as many markets as possible”. (Reference: Thomas Stridsman, “Trading Systems That Work: Building and Evaluating Effective Trading Systems”, McGraw-Hill, 2001).

The longer-term component of the final indicator will be tested separately and then added soon to complete the construction of the planned comprehensive indicator. However prior to doing that, the short-term portion was tested on its own. The results obtained were somewhat surprising and are documented below.

Using the short-term indicator as described above, total number of securities tested = 100, consisting of a random selection of 50 stocks (US & Australian, mixture of large cap and small cap, industrials and resources /mining stocks) , 20 stock market indices, 15 futures contracts, and 15 FX currency pairs (including gold & silver). Each of these 100 securities was then tested using two different variations of exit using only indicator rules, both of which were based on price action characteristics rather than stops. Results in each case were simply defined as either “success” = profitable result excluding transaction costs, or “unsuccessful” = un-profitable, i.e. loss-making. The results for the total of 200 samples were analyzed and are summarized here.

Stock Indices: success rate = 70% to 80% (depending on exit type). A very favorable result.

Stocks (US & Aust): success rate = 58%. Only marginally better than 50:50 = random.

Futures: success rate = 33% to 47 %, depending on exit method used. Not a good result.

FX Currencies: success rate = 27%. Definitely a very poor result in general.

Of the FX results, the ONLY successful pairs were: EURJPY, GBPJPY, NZDJPY, USDJPY (all of which are available Apiary/Alveo pairs) and XAUJPY (gold vs JPY, which is not available as an Apiary/Alveo pair).

Note that, of the FX pairs, ALL pairs involving JPY were successful, while NONE of the other currency pairs were successful. The clear difference between JPY and non-JPY pairs was very surprising!

Of the 15 futures contracts examined, 3 were currencies (AD, BP and JY) and, of these 3, again it was only JY (corresponding to FX JPY) that was successful.

 Summary: The limited results available so far for the short-term part of the indicator indicate that

1. Stock indices are generally (70 – 80%) successful, whereas individual stocks in general are only marginally (58%) successful.
2. Futures and FX are generally NOT successful (33-47%, and only 27%) respectively.
3. The clear exception to this very unsuccessful result for FX is any pairs involving JPY, of which ALL of the JPY pairs were successful. This was also supported by the result obtained for JY with currency futures.
4. Result a) was as expected, results b) and c) were surprising, and even more surprising was the very strong difference between JPY and non- JPY FX pairs. Based on EOD data, there appears to be a very clear difference between JPY pairs (100% successful) and all other FX pairs not involving JPY (0% successful).

Conclusions:

The short-term part of the indicator appears to be favorable for trading Stock Indices, but only marginally better than taking a 50:50 chance for individual stocks. It is generally unsuccessful for futures and definitely unsuccessful for FX in general. However there is a very clear and unambiguous exception in the case of JPY pairs in which the short-term part of the indicator very highly successful for all JPY pairs tested.

With the caveat that test results were based on EOD data excluding transaction costs, and entry & exit on indicator rules only (not using SL or TP stops), the use of the short-term part of the indicator for Alignment Strategy and Fractal Price Behavior is recommended and appears highly promising for all FX pairs involving JPY, but is not as yet suitable for other FX pairs. Final results await the completion of the long-term part of the indicator and then the combination of both parts.

Recommendation:

Even on its own, the currently available short-term part of the indicator appears to be highly promising for trading stock indices (but not necessarily individual stocks) and for any FX pairs involving JPY as part of the pair.

Display: A chart display of this short-term part of the indicator is shown for the USDJPY FX pair for daily bars over the last year to date. Green/Red = Buy/Sell, pale Green/Pink = optional Hold Long/ Hold Short.