

# the technical analyst

The publication for trading and investment professionals

[www.technicalanalyst.co.uk](http://www.technicalanalyst.co.uk)



## The January Barometer

An early predictor for stocks?

### Outlook for CAD

Long-term view remains bearish

### Fine-tuning Fibonacci

Identifying when reversals are likely

### Behavioural Finance

Investor psychology & the charts

# QUANTIFYING MARKET DECEPTION WITH THE HIKKAKE PATTERN

by Daniel L. Chesler

A savvy old timer once described Wall Street as "the only place where they put prices up when they are having a sale." Indeed, deception is a feature of most competitive fields including politics, biological systems, financial markets and sports. Take for instance the 'dummy move' commonly used in football. The idea is to move in one direction, thus unbalancing your opponent, before moving away quickly in a different direction. The hikkake pattern is the market's version of the dummy move. Hikkake is a Japanese verb meaning 'to trap' or 'to ensnare.' In western terminology, the proper name for this pattern would be 'inside day false breakout.'



## Background

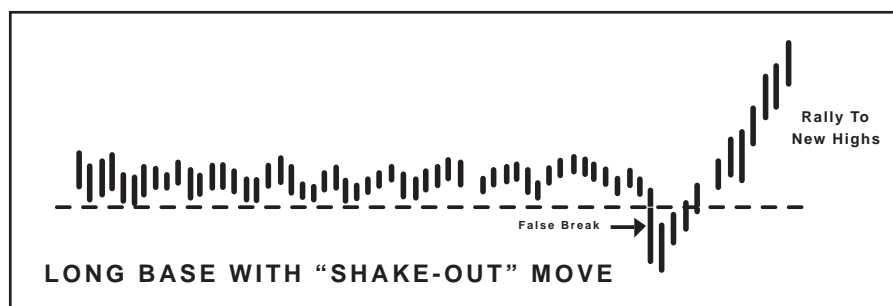
The pattern concept is that of a brief pause in market action as defined by a decrement in volatility, followed by a false directional move. Volatility is measured simply as the (hourly, daily, or weekly, etc.) high to low range. Academics might say the hikkake plays on the short-term mean reversion properties of markets, by identifying situations where prices have been stretched past their short-term equilibrium value. Momentum is generated in the early stages of the reversal path, causing prices to return to and eventually through their prior equilibrium level. Technicians on the other hand, should recognize the hikkake pattern as a quantified compressed-time version of the traditional "shake-out" pattern (see Figure 1).

The rationale for why the hikkake concept should have any effectiveness may be due to the behavioral tendencies of small traders. Research by

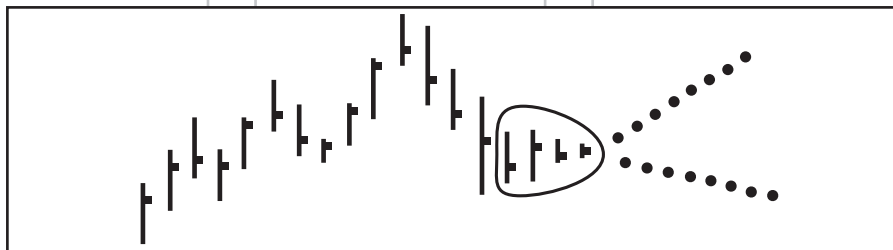
Goetzmann and Massa suggest that individuals (i.e., the public) are predisposed to "chasing" performance on a short-term basis, and are equally predisposed to reversing their decisions when the market moves against them. In other words, individuals tend to be short-term performance trend followers. In the case of the hikkake pattern, perhaps it is the initial breakout that attracts smaller participants into the

market. Another source of buying and selling comes from technicians and system traders. Buying and selling around predefined narrow ranges is an extremely popular concept that goes back at least to the early 1900s (see Figure 2). In fact, strategies based on this idea gained in popularity following articles and books written by fund manager Toby Crabel in the late 1980s.

However, if prices fail to gener- →



**Figure 1.** This graphic, from William Jiller's classic 1962 book on charting, illustrates the traditional style "shake-out" pattern, which has also been described by authors such as Schabacker, Wyckoff, and Edward & Magee. Hikkake patterns differ from this traditional "false move" schematic primarily in respect to time.



**Figure 2.** This graphic illustrates a technique for trading based on the narrow-range phenomenon (volatility expansion-contraction). From A. W. Wetsel's (Wetsel Market Bureau, Inc.) *A Course in Trading*, 1933, with permission from Donald Mack.

ate the expected trending behavior following a breakout, a potential pool of "trapped" new commitments is created. Increased buying or selling pressure from the unwinding of these losing positions is one possible reason why prices continue moving in the opposite direction of a failed breakout. Another possible source of fuel propelling the market after a false breakout is the opening of new positions in the direction of the true trend. For example, many popular breakout strategies advocate placing stop and reverse orders after an entry.

### Description

The basic hikkake pattern is formed by the combination of two price bars (two hourly bars, two daily bars, two weekly bars, etc.). The first bar must be an "inside" bar, which is defined as any bar that is completely encapsulated by the previous bar's range. The second bar in the pattern must have both a higher high and a higher low than the previous (inside) bar for a bearish hikkake set up, or a lower low and a lower high than the previous (inside) bar for a bullish hikkake set up. Note that the hikkake

pattern ignores the positions of the open and close, known as the "real body" in candlestick terminology. This is not atypical; other traditional candlestick patterns such as tweezers, hanging-man lines and hammers also ignore the open to close relationship.

Once a hikkake pattern has formed, the pattern is confirmed after prices return up through the high of the inside bar (for a bullish set up) or down through the low of the inside bar (for a bearish set up). Confirmation also serves as the entry trigger when using the pattern for trading purposes. Normally I look for confirmation to occur within three bars following the initial, two-bar hikkake pattern. Upon entering a position, risk is defined by using the highest high (for shorts) or lowest low (for longs) within the pattern as a stop out point. This is not necessarily the low (or high) of the false move following the inside bar, since the lowest low (or highest high) can also occur anytime within the three bar period allotted prior to entry. The test results presented in this article are based strictly on the foregoing entry and stop placement rules.

### Examples

Unlike most price patterns that fall into either "continuation" or "reversal" categories, the standard hikkake pattern plays both roles equally well depending on where it occurs within a trend. In order to help the reader understand how one pattern can play two very different roles, bullish chart examples will be presented. All charts are from the current year. Bearish examples will not be presented due to space, but are mirror opposites of the bullish examples.

In April, June bond futures were in a powerful downtrend. The market was making new multi-month lows, long-term moving averages were pointing down, and directional movement studies were showing that the strength of the downtrend was actually increasing (these indicators are not displayed for sake of clarity). On April 26 an inside day formed, giving us the first half of a potential hikkake pattern (leftmost point 1 in Figure 3). The next day (point 2), a bar with both a higher high and a higher low formed, completing the bearish hikkake setup. Confirmation came quickly, on April 28, as the market traded below the low of the inside day. A second bearish hikkake pattern formed between April 30 and May 3, and was confirmed when the market fell below the low of the inside bar on May 4. Both of these examples were found in the context of an existing downtrend and demonstrate how a bearish hikkake pattern functions in a continuation role.

Next we will look at an example of a bearish hikkake functioning as a reversal pattern. The EUR/USD currency pair peaked in early 2004. After correcting down into May, the EUR/USD

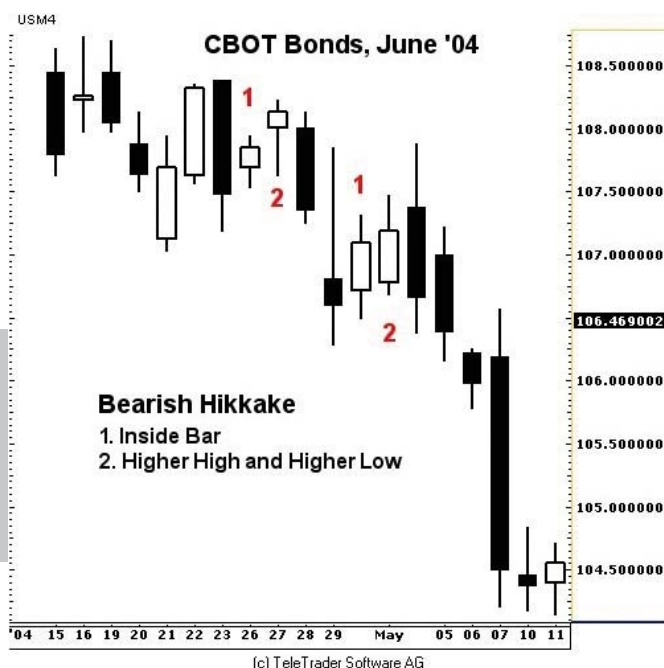


Figure 3.



Figure 4.

began a gradual, low-momentum recovery. On July 15 an inside bar formed (point 1, Figure 4). The next day, July 16, the market formed a higher high and a higher low (point 2), fulfilling the requirements for a bearish hikkake. Confirmation came within two bars, on July 20, as the market fell below the low of the inside day.

### Testing method and results

Tests were not aimed at determining whether the hikkake has any value as a stand alone system, but rather to find out how often confirmed hikkake patterns represented valid false breakouts. The ensuing moves were counted and categorized by their magnitude. This information should tell us whether the hikkake pattern adds value as an analytical tool and can be used to guide our entry and exit points.

For each valid hikkake pattern that is confirmed within three bars following pattern formation, a trade is entered either long or short. The amount of capital risked on each trade is defined as the difference between the highest high (or lowest low) of the confirmed pattern and the entry price (either the low or the high of the inside bar).

The test uses a static protective stop that remains in its original location and does not trail up or down as the trade matures. The test then counted how many times the ensuing move equaled:

1. Less than 100% of initial risk before being stopped out.
2. 100% to 200% of initial risk before being stopped out.
3. 200% to 300% of initial risk before being stopped out.
4. Greater than 300% of initial risk before being stopped out. →

LONG & SHORT COMBINED STATISTICS							RATIO
PERIOD	MARKET	STOPPED	100%-200%	200%-300%	>300%	WIN/LOSS	200+300 VS 100
01/02/90 - 08/15/04	DJI	64	21	14	42	1.20	2.72
01/02/80 - 08/15/04	GOLD	131	52	32	88	1.31	2.33
07/01/94 - 08/15/04	RUSSELL 2K	22	15	7	26	2.18	2.35
01/01/90 - 08/15/04	BONDS	60	26	7	48	1.35	2.17
01/05/98 - 08/15/04	USDJPY	22	8	10	18	1.64	3.70
01/05/98 - 08/15/04	EURUSD	28	12	4	19	1.25	2.02
04/30/90 - 08/15/04	NAT GAS	37	27	10	38	2.03	1.85
08/14/84 - 08/15/04	CRUDE	68	32	18	45	1.40	2.01
01/02/90 - 08/15/04	GE	44	17	5	23	1.23	2.25
01/02/90 - 08/15/04	MSFT	41	13	13	32	1.41	3.57

Table 1.

This information should give us some idea as to the average magnitude of moves following a confirmed pattern and gives us some basis for setting profit targets and for moving up stops on open positions.

Markets tested include the Dow Jones Industrial Index, Russell 2000 Index, CBOT Bonds, COMEX Gold, NYMEX Crude and Natural Gas, USD/JPY and EUR/USD currency pairs, and individual equities General Electric and Microsoft. Test results do

not include trading costs or slippage. TradeStation daily data was used for all tests. Continuous contracts were used in the case of futures markets, which may or may not accurately reflect the results of testing on individual futures contract data.

The results of the test show that over fairly lengthy periods, ranging from eight years in the currency pairs to twenty-four years in gold, the hikkake pattern produced an average win loss ratio (number of winning trades versus stopped out trades) of slightly better than 1:1.

Table 1 shows the combined results of all trades long and short. However, we note from data compiled during testing, that winning versus losing trades for some markets fared much better than the average combined performance, such as long natural gas (3.2:1), short USD/JPY (3:1) and short Russell 2000 (2.6:1). Less impressive markets included short Dow Jones Industrials (0.9:1), short bonds (1:1), short EUR/USD (0.9:1) and long USD/JPY (1:1). (A full breakdown of

individual long and short results is available from the author).

### Research ideas

Due to its simplicity, the hikkake pattern lends itself well to adaptations. One version, which I have found effective at identifying trend reversals, takes the standard pattern and applies the following set of requirements to the bar immediately preceding the "inside" bar:

1. The bar must close at the top of its range (for top reversals) or the low of its range (for bottom reversals).
2. The bar's range must be less than the range of the previous bar.

Note that since this version functions primarily as a trend reversal pattern, it occurs less frequently in the data than the standard hikkake pattern.

The hikkake pattern is not limited to traditional bar or candle charts. Point and figure and tick-based charts, which use a variable time axis, also exhibit

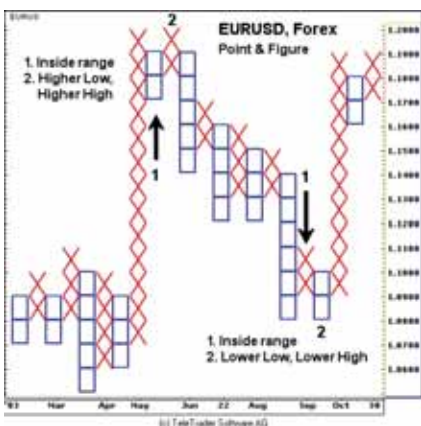


Figure 5.

# “UNLIKE MOST PRICE PATTERNS THAT FALL INTO EITHER ‘CONTINUATION’ OR ‘REVERSAL’ CATEGORIES, THE STANDARD HIKKAKE PATTERN PLAYS BOTH ROLES EQUALLY WELL .”

hikkake patterns. Figure 5 displays an example of both a bearish and a bullish hikkake reversal pattern in the EUR/USD, from May and September respectively.

## Final thoughts

I have a prejudice that says most technical indicators and methods are simply different ways of reflecting the same, or very similar, information. The common threads that bind indicators, patterns and methods are therefore more interesting to me than are their apparent differences. In my own work, I have always attempted to build models that isolate these common elements.

My first attempt at this resulted in a less subjective way of identifying classical chart patterns by distilling patterns into separate volatility and cyclic components (see references). By compressing the traditional, detail-rich view of classical chart patterns down to just two main components, I discovered a way to increase the method's robustness and improve its ability to generalize for unseen cases.

What patterns and concepts were dis-

tilled in order to arrive at the hikkake pattern? Does the hikkake subsume the minutia of other approaches? Earlier in this article it was shown how the hikkake concept overlaps with traditional shakeout patterns. Elliotticians should find much in common between hikkake reversal patterns and fifth-wave terminations. Lastly, oscillator enthusiasts will find that momentum divergences on a lower time frame chart will often correspond with hikkake reversals on a higher time frame.

In sum, chart patterns put traders in a position to capture outsized moves, while giving a defined structure for setting risk parameters and exit targets. Patterns help us develop a case for either a bearish or bullish outlook in conjunction with other inputs. Chart patterns add context that statistics do not capture. The hikkake pattern serves all of these purposes.

---

**Daniel L. Chesler, CMT, CTA, is a charter member of the American Association of Professional Technical Analysts (AAPTA). He provides strategic technical fore-**

**casts for commodity and financial markets to proprietary traders, risk managers and brokers. E-mail: dan@chartricks.com**

## References

- Toby Crabel (1990), *Day Trading with Short Term Price Patterns & Opening Range Breakout*. Traders Press, Inc.
- William L. Jiler (1962), *How Charts Can Help You in the Stock Market*. Trendline, Division of Standard & Poor's Corporation.
- Daniel L. Chesler (1997), "Identifying Significant Chart Formations", *Technical Analysis of Stocks & Commodities*, Volume 15.
- William N. Goetzmann and Massimo Massa (2003), "Index Funds and Stock Market Growth", *Journal of Business*, Vol. 76, No. 1, 1-28.
- Richard D. Wyckoff (1910), *Studies in Tape Reading*. Fraser Publishing.
- Richard W. Schabacker (1930), *Stock Market Theory and Practice*. B. C. Forbes Publishing Co.

## Acknowledgement

The author wishes to thank Yohey Arakawa, Associate Professor of Japanese, Tokyo University of Foreign Studies, for his help in finding the right Japanese verb to describe this pattern.