

Kagi Charts [ChartSchool]

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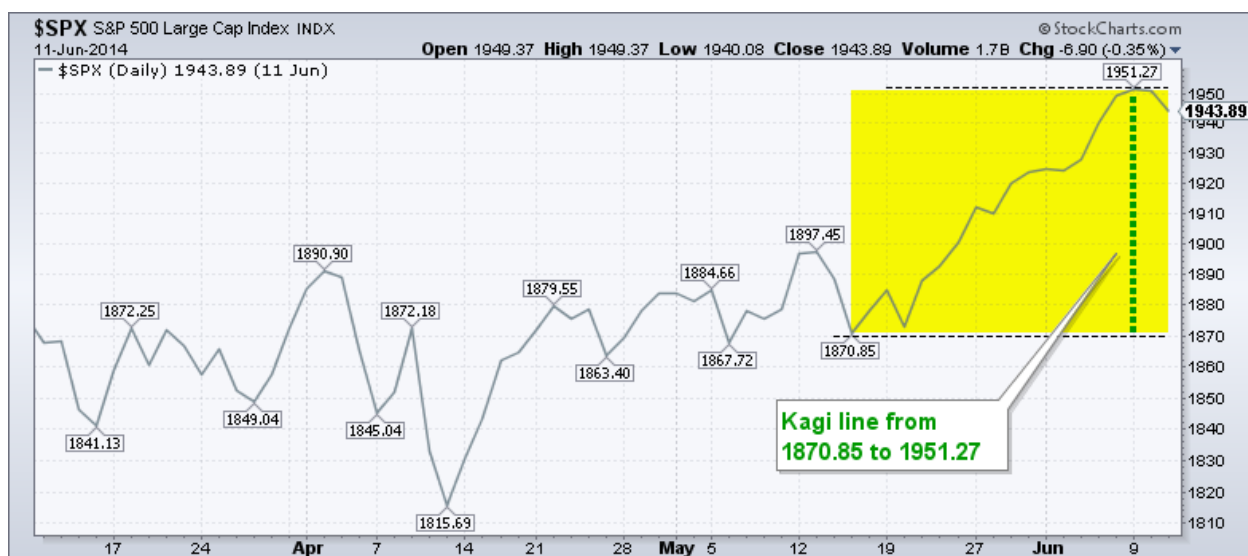
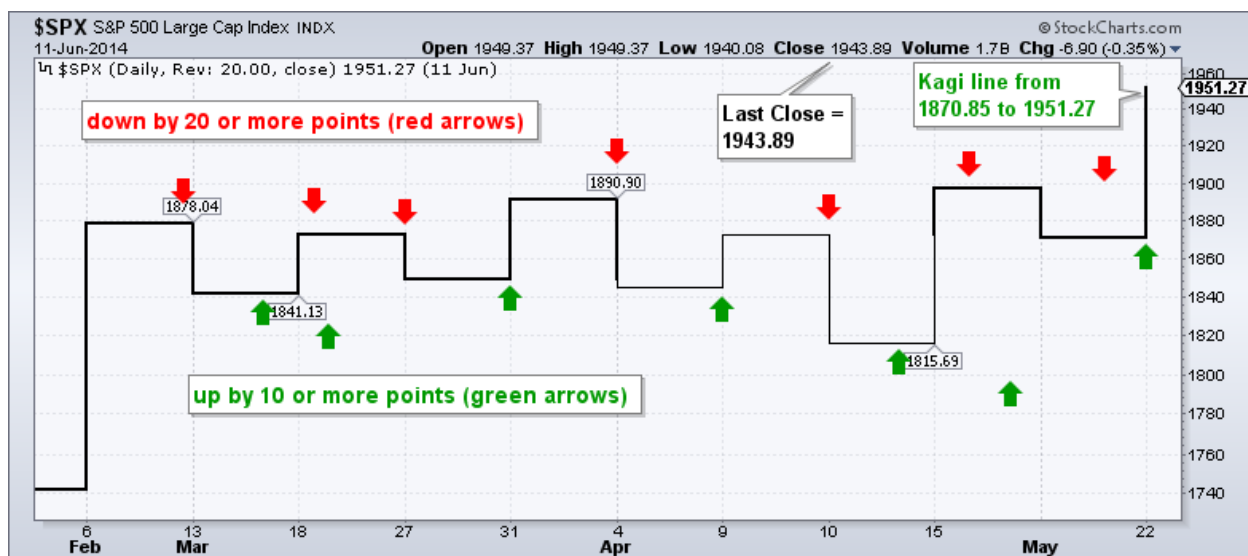
Introduction

As with Point & Figure charts, Kagi charts are based strictly on price action and ignore time. According to Steve Nison, author of *Beyond Candlesticks*, Kagi charts were invented in the late 19th century in Japan. Instead of X-Columns and O-Columns, Kagi charts are simply line charts that change direction when prices move a required amount. There is also the added aspect of yin and yang as the lines change thickness when prices break above a prior high or below a prior low.

Reversal Amount

Kagi charts are all about reversals and chartists must first set the reversal amount. This can be a fixed number of points, a set percentage or a variable Average True Range (ATR). Note that this reversal amount can also be based on closing prices or the high-low range. The following examples will use closing prices for simplicity. Chartists looking for more sensitivity and more reversals can opt for the high-low range.

The reversal amount is the minimum price change required for the Kagi line to reverse direction. Let's start with an example using a close-only chart for the S&P 500 and a 20 point reversal amount. If the Kagi line is rising and the S&P 500 reaches 1951, the Kagi line will not reverse until the S&P 500 declines to 1931 or lower (20 or more points). Conversely, if the Kagi line is falling and the S&P 500 declines to 1900, the Kagi line will not reverse until the S&P 500 advances to 1920 or higher (20 or more points). The example below shows the upside reversals with green arrows and the downside reversals with red arrows. The last Kagi value (1951.27) is marked with the y-axis label. The S&P 500, however, is currently at 1943.89, which is below the high of the Kagi line. Again, the Kagi line will not reverse until the index moves below 1931 (20 points).



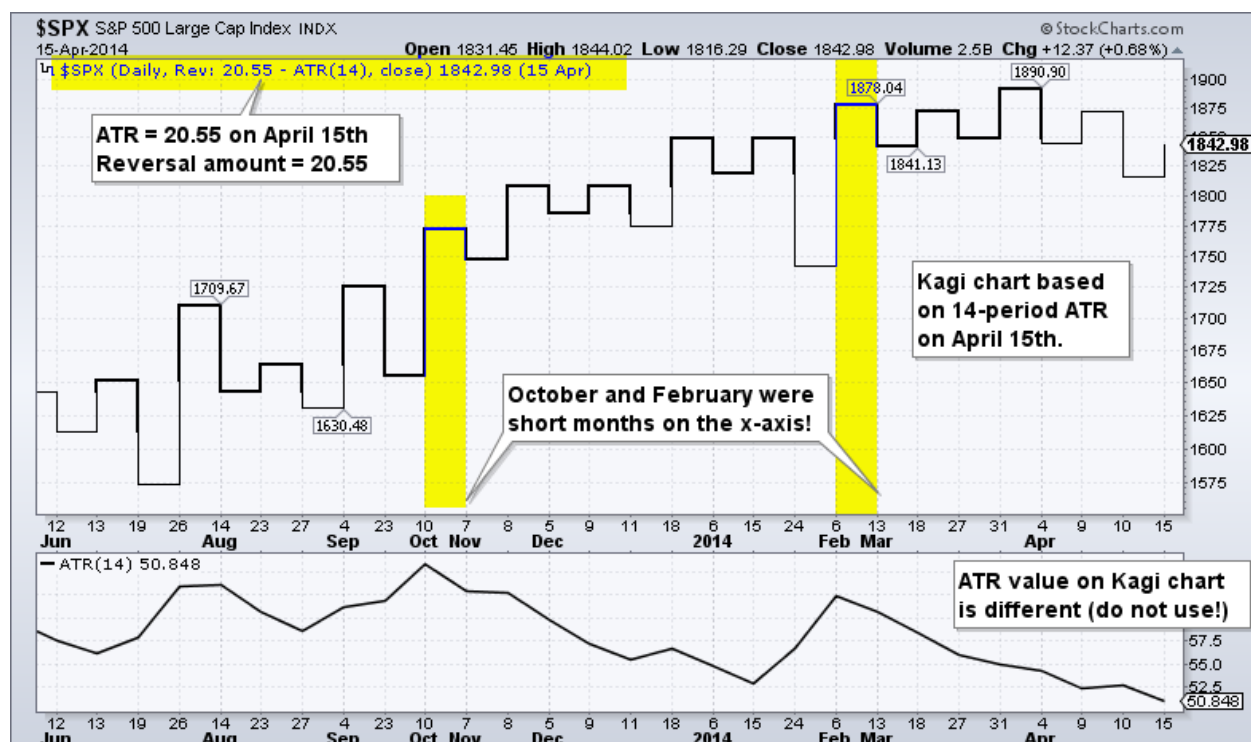
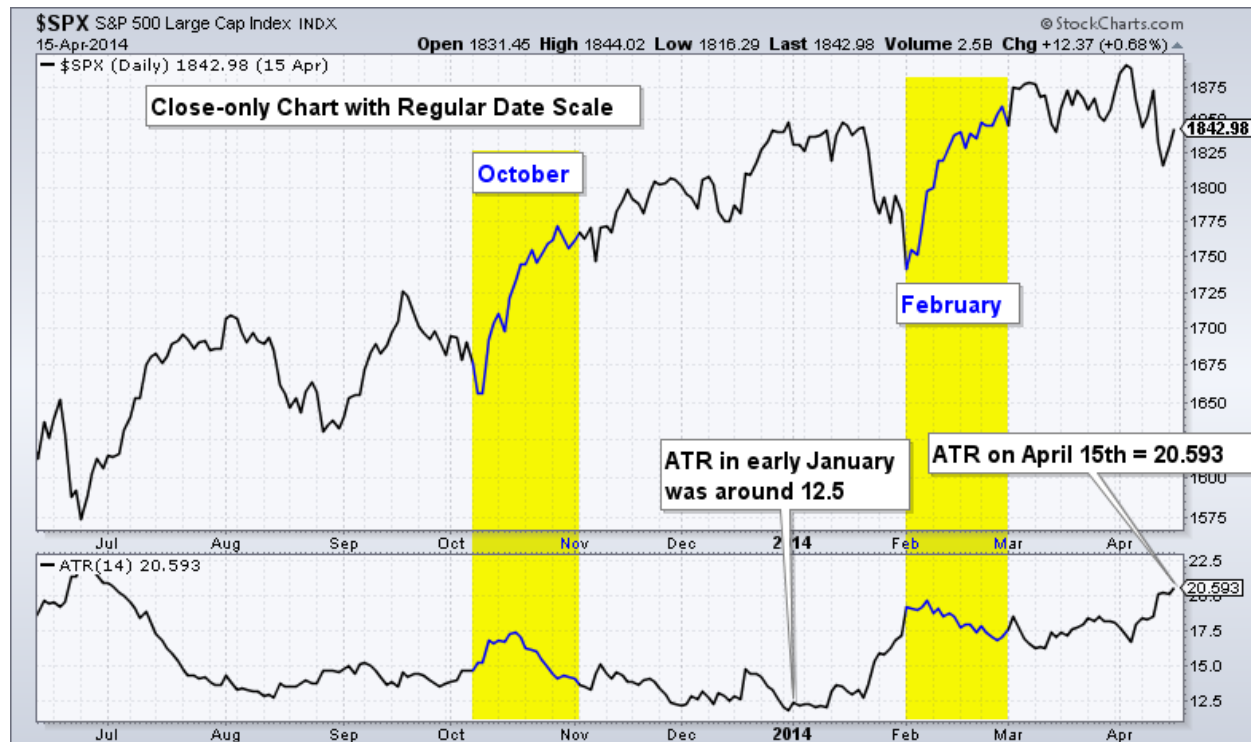
The chart under the Kagi chart shows daily close-only prices for the S&P 500. Notice that the advance from 1870.85 to 1951.27 looks different because it extends from May 15th to June 11th (yellow area). The Kagi line simply ignored the date changes and went straight up because it is based purely on price. This price focus means the x-axis (date range) will be different, and irregular, on the Kagi chart. A line or bar chart has a uniform x-axis with price data for each day. The date on the Kagi chart does not change until there is a reversal. Should the S&P 500 fall to 1930, which is more than 20 points from the Kagi high, a small horizontal line would be drawn at 1951.27 and a down line would be drawn to 1930. This new line would then warrant a date marker on the x-axis.

Fixed Amount versus ATR

The reversal amount can also be set as a percentage or based on the Average True Range (ATR). The percentage is a fixed amount that will not change as new data is incorporated into the chart. In other words, new price data is added every trading day and the reversal amount will remain constant when using points or percentage.

The reversal amount is subject to change when using the Average True Range (ATR), which is a volatility measure. The default ATR is based on 14 periods and the Average True Range fluctuates along with price volatility. Also, note that the ATR value changes as new days and data points come into play. The reversal amount is based on the ATR value at the

time the chart is created. Should the ATR value change in the following days or weeks, this new ATR value would then be used as the reversal amount, which means the look of the Kagi chart will also change. Also note that ATR values on a line or bar chart are based on the actual trading periods (14 days, 14 weeks, 14 months etc.). ATR values on a Kagi chart, therefore, will not match ATR values on a chart with a uniform date axis.

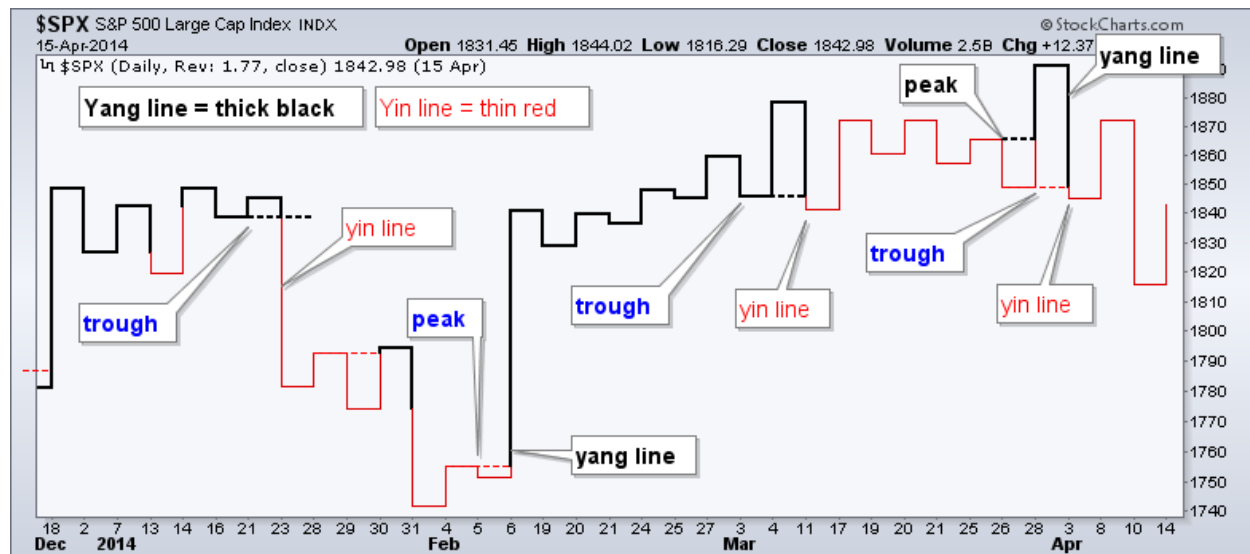


The first example shows a regular close-only chart ending on April 15th and the second example shows a Kagi chart created on April 15th, which is also the last date. First, notice that the ATR value on the Kagi chart is much different than the ATR value on the close-only chart. Second, notice that the ATR value from the close-only chart is used to set the reversal amount on the Kagi chart. If this Kagi chart was created in early January, the ATR

reversal value would be around 12.5 and this chart would look different. Keep in mind that ATR reversal amounts will change as new data is added to the chart. Reversal amounts based on points and percentage are fixed.

Yin and Yang

The prior Kagi charts used one color to focus on the reversals. The following Kagi charts show thick black lines for the yang lines and thin red lines for the yin lines. Note that a Kagi peak or trough forms whenever there is a reversal, which is marked by a small horizontal line. A yang line forms when a Kagi line breaks above the prior peak. A yin line forms when a Kagi line breaks below the prior trough.

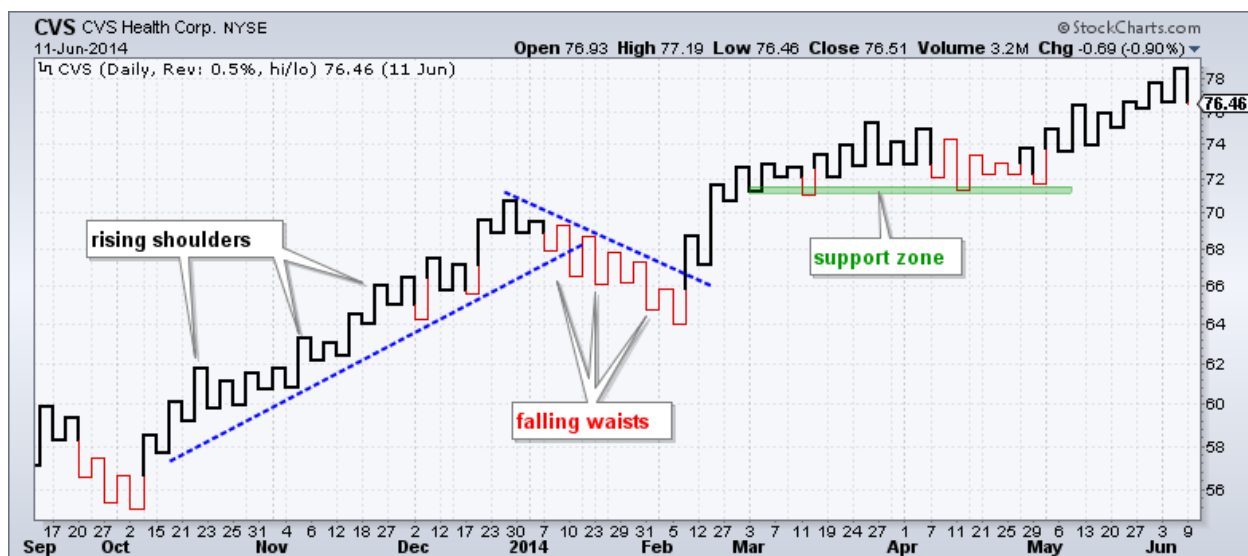


The chart above shows some examples of yang lines and yin lines. Note that a peak can form with a thick black line or a thin red line. A thick black line (yang) remains in play until a break below the most recent trough. The thick black line turns into a thin red line at the break point. This thin red line (yin) remains in play until a break above the most recent peak. The thin red line then changes into a thick black line at the break point.

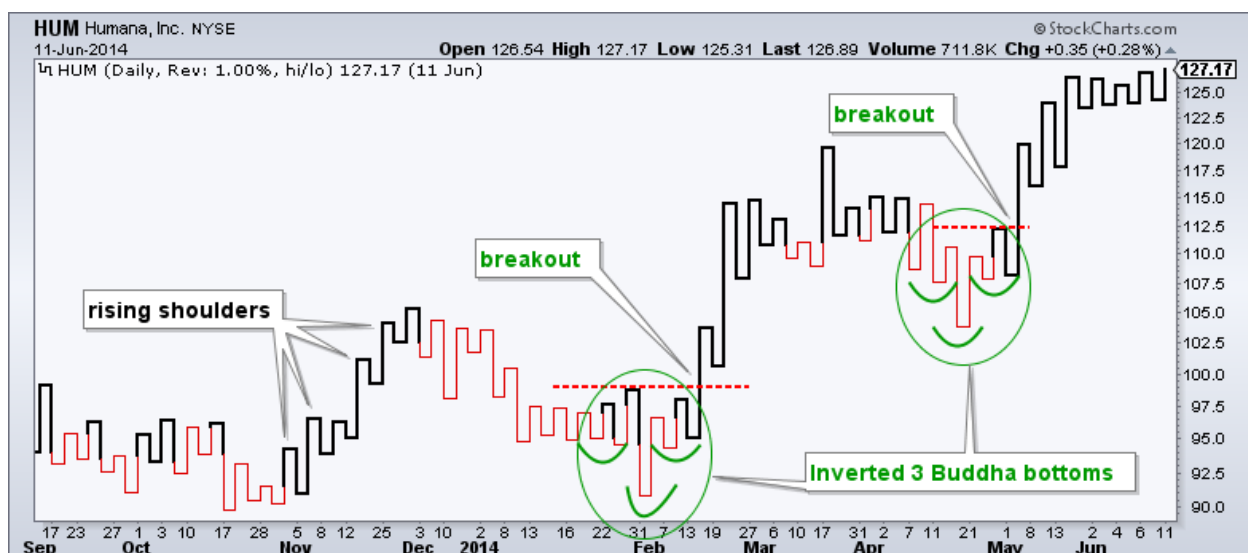
Signals

In his book, *Beyond Candlesticks*, Steve Nison highlights several signals and setups using Kagi charts. These include buy on a new yang line, sell on a new yin line, buy rising shoulders, sell falling waists, multi-level breaks, double windows, trend line breaks, tweezers, three Buddha reversals and record sessions. Rather than cover every setup in his great book, this article will highlight a few setups with some chart examples.

The next three Kagi charts use percentage for reversal amount and the high-low range for the price field. A peak on a Kagi chart is also called a shoulder, while a trough is called a waist. Nison notes that a series of rising shoulders defines an advance, while a series of falling waists defines a decline. The CVS chart below shows a steady advance in October-November and a decline in January. Notice how trend lines can be drawn on these charts. We can also use the troughs to mark a support. The March-April waists (troughs) are used to mark a support zone.



The Humana chart below shows a pair of inverted three Buddha bottoms. As the name implies, these look like inverse head-and-shoulders patterns. The left waist forms the first low, the Buddha head forms the middle low and the right waist forms the third low. The Buddha low is clearly the lowest of the three, while the other two are relatively equal. A break above resistance confirms the reversal.



Kagi peaks (shoulders) and troughs (waists) are also referred to as levels. A series of shoulders can mark a resistance zone, while a series of waists can mark a support zone. Chartists can look for a break of two or more levels to trigger a trend change. The example below shows KLA-Tencor (KLAC) with a few trend line breaks and some multi-level breaks. Notice how the stock broke above three levels and broke the October trend line in February. After advancing above 71, the stock broke below the early February trend line and below three levels in early April. The far right side of the chart shows the stock breaking another trend line and moving above three levels with a surge above 64.

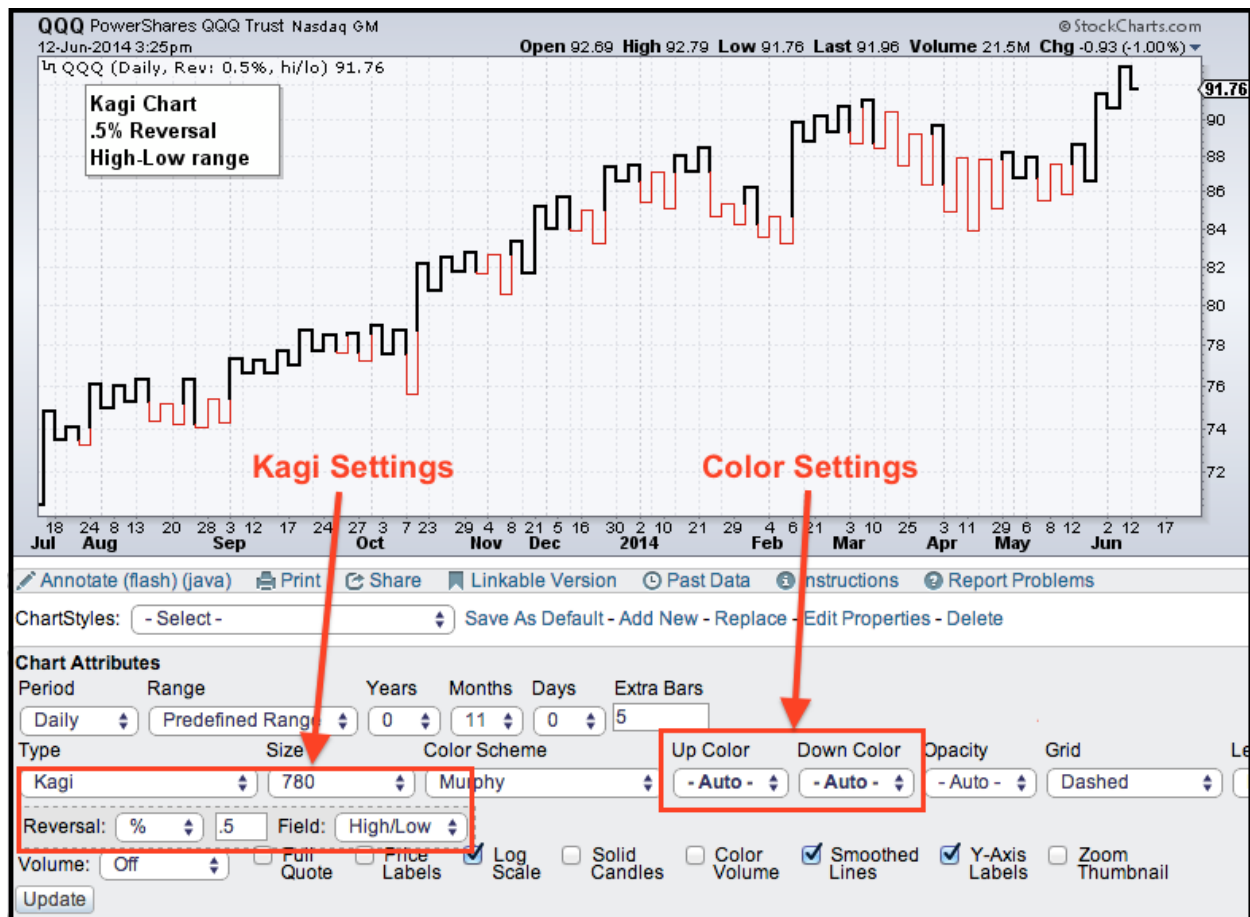


Conclusions

Like their Japanese cousins, Renko and Three Line Break, Kagi charts filter the noise by focusing on minimum price changes. Kagi lines do not reverse unless price changes by a minimum amount. Like Point & Figure charts, it is easy to spot important highs and lows, and identify key support and resistance levels. Armed with this information, chartists can define uptrends with higher highs and higher lows or downtrends with lower lows and lower highs. As with all charting techniques, chartists should employ other technical analysis tools to confirm or refute their findings on Kagi charts.

SharpCharts

Chartists can create Kagi charts by going to the “Chart Attributes” section and selecting Kagi as the chart “Type”. This section is just under the SharpChart on the left side. Users will then be able to choose points, percentage or ATR for the reversal amount. The “field” can be set at close or high-low range. Chartists looking for more sensitivity can choose the high-low range. Chartists looking to focus on end-of-day price data can choose the close. Yin and yang line colors can also be changed using the “up color” and “down color” drop down menus just below the SharpChart. [Click here](#) for a live example.



Further Study

Beyond Candlesticks, a book by Steve Nison, shows chartists advanced techniques for candlesticks and other technical analysis techniques from the Far East. Nison devotes an entire chapter to Kagi charts. Nison also covers Three Line Break charts, Renko charts and explains how Japanese traders use moving averages.

Beyond Candlesticks
Steve Nison

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