The THREE RISING VALLEYS pattern

A series of three lows with specific characteristics marks bullish trend changes. Find out how the pattern has performed in the past and how to find good trade candidates in the future.

BY THOMAS N. BULKOWSKI

In the book *Candlesticks, Fibonacci, and Chart Pattern Trading Tools,* author Robert Fischer describes the three rising valleys chart pattern as a reliable and stable three-point chart formation. The pattern consists of three consecutive higher lows, or valleys, that have the same approximate shape or structure. A potential up move and long trade is signaled when price closes above the highest high established since the first low of the pattern. The following analysis provides several insights about this pattern's characteristics and odds of success.

Figure 1 (below) shows an example of the three rising valley (3RV) pattern on a daily chart. After a long downtrend, the first valley occurred when price bottomed in late July on a day that spiked lower but closed near the intraday high — a one-day pattern that signals a potential short-term price reversal (point 1). This low was followed by a brief up move, after which price turned back down and bottomed again, forming the second trough with the higher low at point 2. The higher low in late August (point 3) was the final valley of the 3RV pattern.

Two days after the spike-low bar at point 3, price gapped up and validated the pattern by closing above the highest high of the pattern, which in this case was the August high. From there the stock continued to rally, eventually topping out in late October near 32.

FIGURE 1 EASY AS 1-2-3

The three rising valleys (3RV) pattern consists of three higher lows that share the same shape or characteristics. In this case the lows are "narrow," consisting primarily of single spike-low days.

Source: Proprietary software (Thomas Bulkowski)

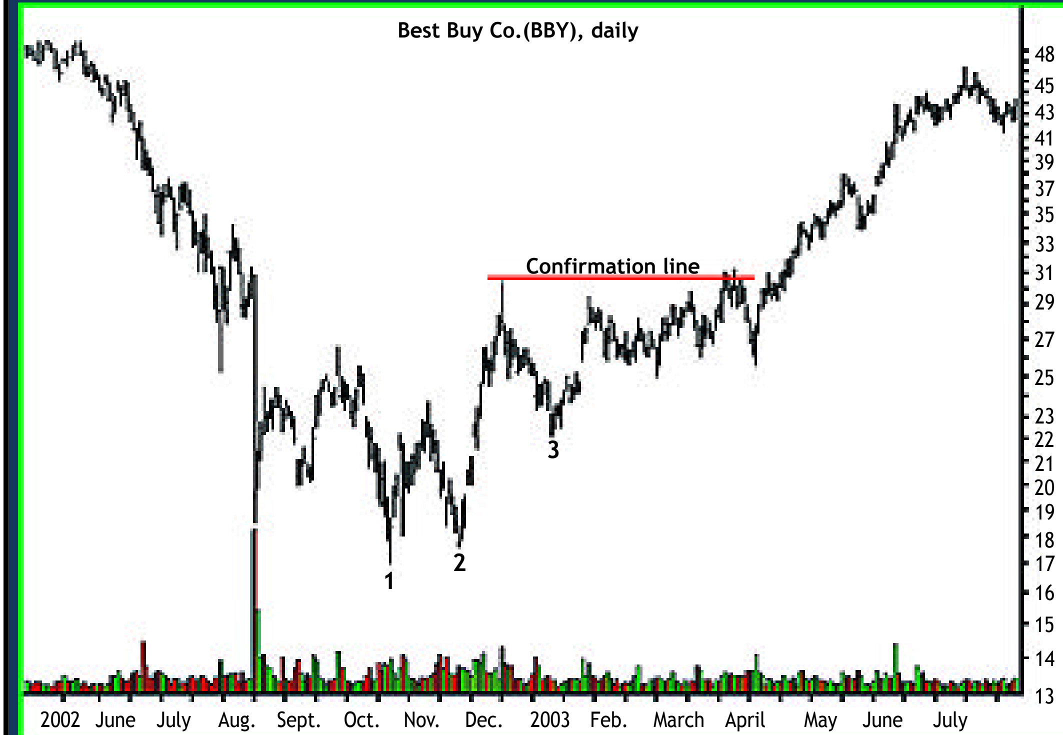
Pattern characteristics

Table 1 (opposite page) contains the identification guidelines used to analyze 3RV patterns in this study. Patterns were analyzed only on daily price data — no intraday or weekly examples were studied. The pattern usually acts as a continuation of the prevailing price trend, so you'll find a series of them in a rising price trend or at the bottom of a trend reversal.

To find a 3RV pattern, first select a low point on a chart, and then look for two subsequent higher minor lows (valleys) with

FIGURE 2 THE CONFIRMATION LEVEL

A 3RV pattern is confirmed by a close above the pattern's highest high. In this case, confirmation did not occur until three months after the third valley (point 3), and nearly six months after the first (point 1).



Source: Proprietary software (Thomas Bulkowski)

the same general appearance as the first — i.e., they should all be relatively "wide" (rounded, consisting of multiple bars with lows that are fairly close together) or relatively "narrow" (sharp and brief) — not a mixture of the two. In Figure 1, all three valleys are narrow, each consisting of only one or two bars with lows that are much lower than their surrounding bars.

If the first apparent valley low on a chart is wide, and followed by three consecutive narrow but higher minor lows, ignore the first wide low and base the pattern analysis on the three narrow lows.

However, there is an important exception to the similarity rule: It is acceptable for the three valleys to progressively narrow, which they sometimes do.

The last identification guideline in Table 1 is actually a rule used in the study to weed out complex, overlapping patterns. It required that one 3RV pattern be complete before the next one began — there were no overlapping or "nested" patterns allowed.

Pattern confirmation and trade entry

The 3RV pattern is confirmed when price closes above the pattern's highest high. Take a long position only after this validation has occurred. All too often, a 3RV pattern never confirms and price tumbles. Taking a long position before the pattern confirms is a sure way to the poorhouse.

Figure 2 (above) shows another 3RV example. After the low at point 1, two subsequent higher lows (points 2 and 3) similar in shape appear. Notice the pattern did not confirm quickly after forming the third valley. Price did not close above the highest high until three months after point 3. Also, after confirming the pattern, price dipped to support around 26 before recovering to make new highs over the course of a nearly four-month rally.

A handy guide to selecting the lows for a 3RV pattern is to look at the top of a V-shaped valley. Is the top wide or narrow? Are the other valleys similar to it? Sometimes, you'll see a "tail" or spike on the bottom and there won't be a V-shape to the minor low. Since all three valleys should be similar in width, consider ignoring these formations. In other words, avoid mixing sharp, one-day declines with wider, V-shaped valleys.

Figure 3 (p. 30) illustrates a situation you may run across. After a downward

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TABLE 1 THREE RISING VALLEY CRITERIA USED IN STUDY

Criterion	Guideline
Time frame	Daily price data.
Preceding price action	Usually found in uptrends or at a trend change from down to up.
Chart low	Begin counting valleys from the lowest minor low.
Shape	The shape of each minor low should be similar: all wide valleys or all narrow ones. Sometimes, the minor lows narrow as price ascends.
Valleys	Find three consecutive higher lows.
Confirmation	Always wait for price to close above the highest high in the pattern before trading.
Multiple patterns	Don't "nest" multiple patterns. That is, don't use a second pattern that is part of another pattern.

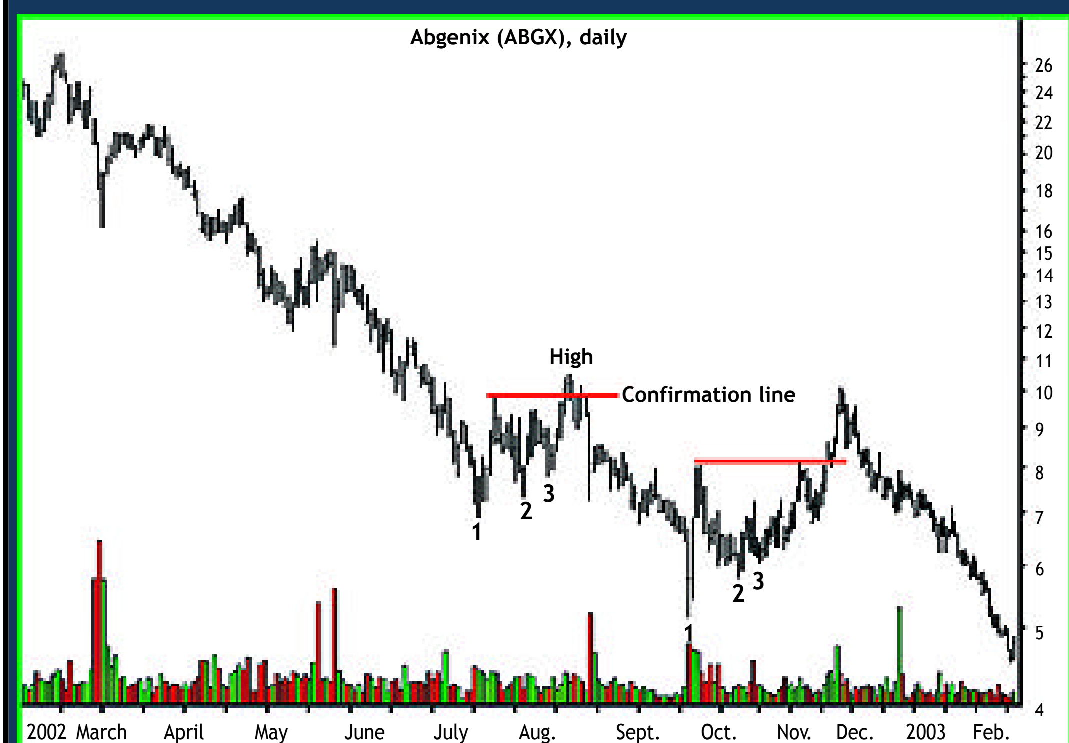
FIGURE 3 **FAILURE TO CONFIRM**

This pattern failed to confirm because price made a lower low (point 4) before closing above the confirmation level. A brief rally developed when price finally moved above the confirmation level, but the stock soon tumbled dramatically.

Source: Proprietary software (Thomas Bulkowski)

FIGURE 4 **TRADING COMPLICATIONS**

Price rose seven percent after the July 3RV pattern and 25 percent after the October pattern, but both these trades were stymied by overhead resistance from former chart patterns.



Source: Proprietary software (Thomas Bulkowski)

price trend, what looks like a 3RV pattern occurs: The three lows appear similar in shape, each low is higher than the preceding low and the stock closed above the confirmation level on the last day of October.

It looks like a valid pattern, except for one problem: Before price closed above the highest high, it had dropped to a new, lower minor low in early October (point 4). This calls into question the rising price trend and invalidates the pattern.

Clues to poor trade setups

The 3RV pattern's failure rates (the number of times it fails to produce a rally of a certain magnitude — e.g., five percent, 10 percent) are comparatively low, but sometimes the pattern fails to produce the expected rally. A few things contribute to this, some of which you can factor into your analysis before you reach the trade-entry stage.

Figure 4 (left) shows two 3RV examples. In the first, three higher lows formed in an established downtrend and retraced part of the decline. This series of minor lows started in July at point 1, which was slightly wider than the two subsequent lows. As mentioned earlier, progressively narrowing lows are acceptable.

Price confirmed the pattern in August when it closed above the July peak, just above $10. This up move stopped when price rose to a resistance level formed in late 1999 (not shown).

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The July pattern climbed 7 percent above the confirmation level before reversing; the October pattern did better, staging a 25-percent post-breakout rally.

In both cases, overhead resistance repelled the advance. To avoid lower-probability patterns, look for nearby support and resistance levels to gauge how far price may drop or rise after the breakout before placing a trade. If you can determine the potential loss or gain, you can decide if the trade is worth the risk. Many times it isn't. The 3RV pattern forms frequently, so it pays to shop around for the best setups. Pick the pattern with the best characteristics and confirm it with other trading tools before placing a trade.

3RV historical performance

Table 2 (above right) shows the results of a six-year, 50-stock study of the 3RV pattern. The bull market examples occurred during the three years up to March 24, 2000, the day the S&P 500 index reached its all-time high. The bear examples formed in the following three years

Even though both study periods are the same length, the 3RV pattern appeared more often in the bull period than the bear period, and it reversed a price trend approximately half as often as it acted to continue the trend or lead to a consolidation. This means the pattern usually appears in an existing, rising price trend more often than at the end of a declining price trend. If you see a 3RV pattern after a long decline, be wary of trading it. Use other indicators to support a bullish trade argument.

The 3RV pattern's failure rates start small then increase dramatically as the percentage price move increases. The "5% failure rate" row in Table 2 shows five percent of 3RV patterns in the bull market period and eight percent in the bear period failed to produce rallies larger than five percent. The 10-percent failure rate (17 percent) for bull-period patterns is more than triple the five-percent failure rate. Patterns in the bear market did better, posting a 14-percent failure rate. Both of these figures nearly doubled for the 15-percent failure rate.

The good news is a substantial segment of patterns — more than one-third of the bull-period patterns and just less than a quarter of the bear-period ones — were

TABLE 2 THREE RISING VALLEY PERFORMANCE STATISTICS

Description	Bull	Bear
Number of patterns studied	187	128
Followed by reversal	67	47
Followed by continuation	120	81
5% failure rate	5%	8%
10% failure rate	17%	14%
15% failure rate	25%	29%
Rises over 45%	35%	24%
Average gain	42%	27%
Days to ultimate high	127	90
Gain for wide patterns	39%	28%
Gain for narrow patterns	45%	25%
Median width, days	41	42

followed by rallies of 45 percent or more. The average gain, measured from the confirmation (breakout) price to the ultimate high (the highest high before a 20-percent decline, measured from high to close), is 42 percent for bull market patterns and 27 percent for bear market patterns.

These numbers suggest the 3RV pattern fails less frequently and results in larger gains in bull markets than it does in bear markets. Finally, Table 2 shows it takes longer for price to reach the ultimate high in a bull market (127 days) than it does in a bear market (90 days).

Sorting the patterns by median length, measured from the first valley low to the third valley low, produces confusing results. Longer-term patterns (more than 41 days) result in post-breakout rallies (on average) of 39 percent in bull markets while shorter-term patterns (41 days or less) produce an average rally of 45 percent.

In bear markets, the results reverse: Longer-term patterns do better than shorter-term ones, with 42 days as the median width.

The general rule for most chart formations is the longer the pattern, the bigger the move that follows it. Perhaps this rule is valid for only bull markets, or maybe more pattern samples are needed to draw reliable conclusions.

Be selective

The three rising valleys pattern appears regularly and is easy to spot on daily charts. However, you can improve performance by focusing on those patterns that form in favorable conditions (overall, the pattern performs better in bull markets than bear), and by confirming trade signals — especially reversal signals — with other trading tools.

In bull market conditions, expect large gains after the 3RV pattern, but beware of quick reversals, such as the ones in Figure 4. Before placing a trade, check for evidence of chart resistance that might limit the trade's upside potential.

For information on the author see p. 12.

Additional reading

Books:

Encyclopedia of Chart Patterns by Thomas Bulkowski (John Wiley & Sons, 2000)

Trading Classic Chart Patterns by Thomas Bulkowski (John Wiley & Sons, 2002)

Candlesticks, Fibonacci, and Chart Pattern Trading Tools by Robert Fischer (John Wiley & Sons, 2003)

***Active Trader* articles:**

"Pipe bottom reversals," November 2003, p. 28

"Grabbing the bull by the horns," September 2003, p. 46

"Head-and-shoulders bottoms: More than meets the eye," August 2003, p. 32

"Tom Bulkowski's scientific approach," September 2002, p. 32

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