

# Flag Pattern Formations

## Introduction

Flag pattern formations as well as pennants are often referred to as the hand tools of a swing and day trader. Flags are considered a consolidation formation. A flag pattern formation consists of two movements: (1) a drastic increase in price, often associated with more bullish candlesticks such as Marabozu; and (2) an adjacent, less drastic increase or decrease in price with indications of an emerging consolidation. (1) is commonly referred to as the flagpole while (2) is the flag.

The flag consists primarily of two types: The bullish flag formation and the bearish flag pattern. An example of a bullish flag is provided in Exhibit 1 which displays a stock price increase, and a secondary downwards price movement. Exhibit 2 displays a bearish flag which has in this case, the exact opposite price characteristics of the bull flag.

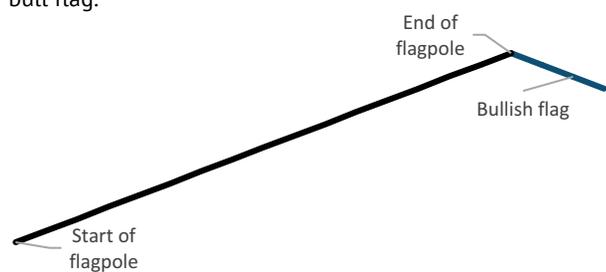


Exhibit 1: Bullish Flag formation. Source: LINC R&A.

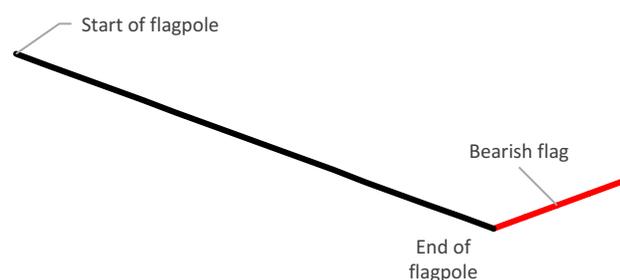


Exhibit 2: Bearish flag formation. Source: LINC R&A

## How to identify a flag

Flags are different from pennants, in that they create rectangles while pennants are subsequent wedges. There are a few conditions which must be met in order for the flag to be a tradable formation: (1) The flag must be aligned to a flagpole; (2) The length of the flag is 3 weeks or less; and (3) the flag must be either within a rectangle or a pennant pattern formation.

Volume is lower 80 % of the time during the creation of the flag pattern, which indicates a lessened strength in the trend. A breakout occurs when the stock trades below or above the flag formation.



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## How to measure the flag

37 % of flags tend to be confirmed with a sudden change in price accompanied with increasing volume. The average rise of a confirmed flag is 26 % according to Thomas Bulkowskis research in *After the Buy* (2016). The general rule of thumb as provided in exhibit 3, is to add the flag poles length on top of the end of the flag pole, as an estimate of where the target price of a confirmed outbreak from a flag pattern formation could head.

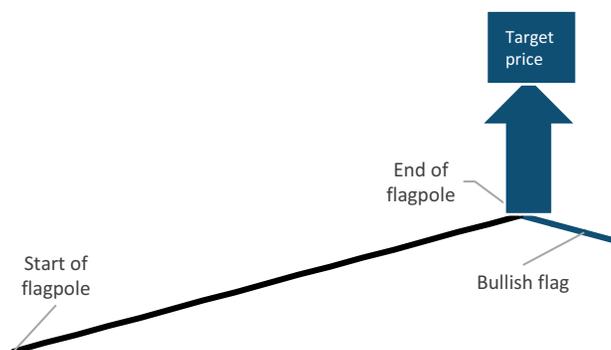


Exhibit 3: Bullish flag formation. Source: LINC R&A

## Good risk/reward

Research provided in the book *After the Buy* (2016) written by Thomas Bulkowski, shows that a flag formation tends in a bull market to break out on the upside 84 % of observed cases, while breaking out downwards in 16 %. For a bear market, the statistics are reversed: 18 % of observations tend to break out on the upside, while 82 % break out on the downside. This depicts a different picture than declaring bullish flag bullish and bearish flag bearish and instead declares flags indication of price movement, a product of the underlying market sentiment.

## Busted flags also good risk/reward

Once a breakout is confirmed but on the opposite side of the theoretical one, the pattern is considered busted. However, the price action tends to be minor and also tends to generate a larger succeeding price movement coherent with the theoretics of the flag. The risk/reward tends to be good in terms of potential upside versus potential downside, even when the pattern is busted.

# The Inverted Ascending Scallop formation

## Introduction

The scallop formation is a chart pattern that has a few alternative shapes that can be ascending or descending, and inverted or not. The inverted ascending scallop however, also commonly known as the inverted J formation stands out as it gives best statistical edge with a whopping average return of 37 % in a bull market and 26 % in a bear market.



Exhibit 1: Bonava B, LC Stockholmsbörsen. Source: Investing

## How to identify the formation

The shape required to make this scallop formation is an upside down letter J where (1) the chart has an initial move up; (2) then curves down; (3) retraces less than 100% of the upmove, usually around 50%; and (4) continues upwards. Only when it closes above the previous high from the rounded top can the pattern be confirmed. As seen from exhibit 1, the first formation was confirmed while the second one was not. The formation can not be called a legitimate inverted ascending scallop, despite the resemblance.

## Volume plays its role

Analyzing volume with the formation could prove fruitful as the pattern is strengthened when the volume makes the opposite shape to the chart. That is, as the chart curves down, the volume curves up. Because it is rare to see the volume make this specific shape in combination with this specific scallop formation, simply recognizing that the volume is trending upwards during the formation gives an

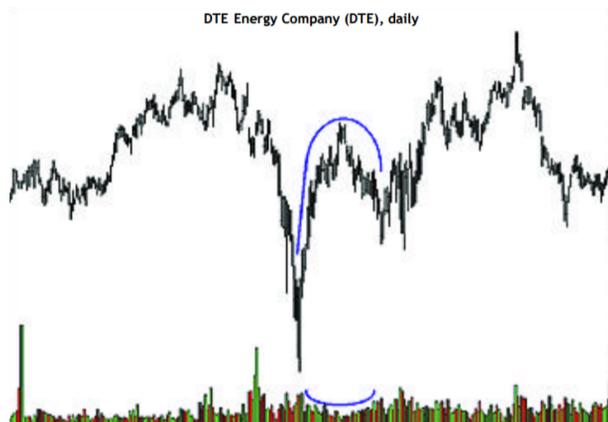


Exhibit 2: DTE Energy, NYSE. Source: Bulkowski



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## Interesting statistics

Bulkowski has studied 447 of these patterns from 200 common American stocks and he has split up the results for bull and bear markets. By bull and bear markets Bulkowski refers to the trend of relevant indices, where bull market spanned from 1997 to 2000 and the bear market from 2000 to 2003. Once the pattern has been confirmed and has closed above the previous highs as explained in the article, Bulkowski calculated the average percental move to the next top, prior to a 20% decline. The move, calculated from the rounded top highs, were less than +5 % in only 4 % of cases in a bull market. This implies that in 96 % of the patterns observed, the price rallied further.

Rally	Amount of patterns (bull market)	Amount of patterns (bear market)
<5%	4%	6%
<10%	16%	13%
<15%	26%	28%
>45%	35%	21%
<b>37%   26%</b>	<b>Average</b>	<b>Average</b>

Exhibit 3: Frequency of rallies after confirmation of inverted ascending scallop formation. Source: Bulkowski

## The importance of the general trend

The average move for bull markets was +37 % whereas it was 26 % in a bear market, indicating that to maintain greater edge, it is advisable to have an eye on the overall market performance. On average, these highs were reached 3 months after the confirmation of the pattern. The conditions leading up to the pattern can differ in terms of whether the stock was moving up into this pattern making it a continuation pattern or if the stock was in a downtrend prior to the pattern emerging. The study showed no difference in the average return between continuation and reversal patterns. Worth noting is that stocks could have more inverted ascending scallop formations following each other. Bulkowski discovered that the higher up in the trend the scallop formation occurs, the narrower it typically is. In 59 % of the observed cases the second scallop was narrower, and typically associated with a lower performance the higher up in the trend they occurred.

## Summary

The inverted ascending scallop can be profitable and is associated with a minor failure rate when confirmed. In combination with the volume, market trend and width of the formation, an investor can further strengthen the edge.