

Human Annotation Guidelines Component of Project 1

Identifying Continuation Patterns

- General Rule: Longer pattern continues and the larger the price difference within the pattern = more significant move above or below continuation area
- Each pattern characteristic that influences the risk score will be rated 0 to 5 points. 0 points if the characteristic is not alarmingly prevalent and 5 points if it is.

1. Pennants: Two trend lines that eventually converge

- In order to connect these continuation patterns to a risk score, pennants will be classified as bearish or bullish. Also assessed based on clarity of the pattern.
- Bullish Pennants** (Potential Future Increase) → Low Risk
- Bearish Pennants** (Potential Future Decrease) → High Risk

2. Patterns Characteristics Influencing Risk Score

- Remember: For Bullish Pennants, higher scores that show high prevalence of these patterns indicates a lower risk score to invest. While for Bearish Pennants, it's a higher risk score regarding your investment.
- Duration and Formation: Occur over an appropriate time frame such as one to three months are more dependable.
- Size of Flagpole: A longer flagpole suggests stronger initial momentum, which can reduce risk.
- Breakout Confirmation: The price action post breakout is also an immediate continuation in the breakout direction. Basically the price increases higher than the first flagpole peak.

3. Historical Bullish Pennant Stocks Examples

a. Apple (March to May 2020)

i. Flagpole

- Formation: Sharp increase from \$200 around late March to mid-April at around \$300. Score: 5/5

ii. Pennant Formation

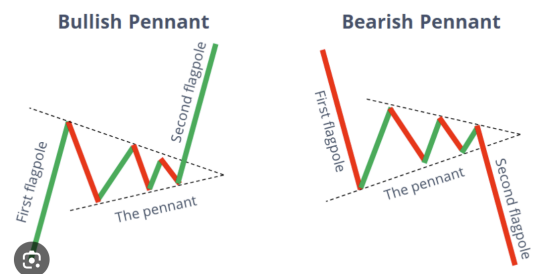
- Trendlines: Converging upper and lower trend lines formed a symmetrical triangle, characteristic of a pennant. Score: 4/5

iii. Breakout

- Outcome: The stock continued its upward trajectory, reaching new highs in the following months. Score: 4/5

b. NVIDIA (May to July 2016)

i. Flagpole



1. Formation: Upward move support by high volume went from \$35 in early May to \$50 in early July. Score: 4/5
- ii. Pennant Formation
 1. Trendlines: Converging high and low price formed the pennant. Score: 4/5
- iii. Breakout
 1. Outcome: In early July, broke out above the trendline and continued on its upward trend.

4. Historical Bearish Pennant Stocks Examples

- a. Cisco (200 to 2001)
 - i. Flagpole: Sharp decline due to reduced demand for telecom equipment.
 - ii. Pennant: Brief consolidation period.
 - iii. Breakout: Ongoing decline leading to significant losses.
- b. Exxon Mobil (2015)
 - i. Flagpole: Price drop as oil prices fell.
 - ii. Pennant: Consolidation with a bearish pennant shape.
 - iii. Breakout: Further declines following the pattern.

5. Flags: Identifiable by two parallel lines that can slope up, down, or sideways.

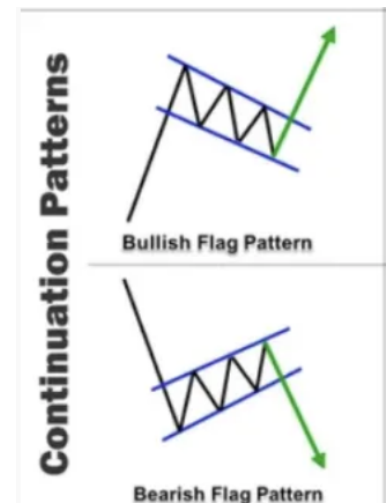
- a. Upward Slope Flag (bearish) → Low Risk
- b. Downward Slope Flag (bullish) → High Risk

6. Patterns and Characteristics Influencing Risk Score

- a. In this case, witnessing these patterns and giving a higher score means the risk score is higher but represents a lower risk. This occurs within a clear downtrend, making it safer to trade in the trend's direction
- b. Flagpole: Flags usually form over one to three weeks on daily charts. If the drop in price happened within one month we can determine as being reliable, while more than one month or shorter than a week are unreliable. (0 to 5 points)
- c. Sloping Flag Formation: A steeper angle of the flag's slope indicates a stronger momentum.
- d. Breakout Confirmation: Breakout should be in the same direction as the preceding trend.

7. Historical Upward Flags Stocks Examples

- a. Tesla (Feb. to March 2020)
 - i. Flagpole: Tesla's stock price dropped sharply from around \$900 in mid-February to approximately \$500 by late February. Score: 5/5
 - ii. Sloping Flag Formation: Late February to early March saw the price continuously move downward at a steep decline. Score: 5/5



- iii. Breakout Confirmation: In early March the stock broke the lower trendline. 5/5

b. Bank of America (Oct. 2007 to Jan. 2008)

- i. Flagpole: Declined from \$52 in October to \$44 in November. While this is within a reasonable period, because it's not as significant a drop as Tesla we will score it lower. Score: 4/5
- ii. Upward Sloping Flag Formation: Slight upward trend in December but the slope of the flag has already been clearly formed. Score: 4/5
- iii. Breakout Confirmation: Price broke below lower trendline in December and continued to decline. Score: 5/5

8. **Historical Downward Flag Stocks Examples**

a. Microsoft (2019)

- **Flagpole:**
 - **Formation:** Microsoft's stock price rose from around \$98 in early January to \$108 by late January.
 - **Volume:** The rise was supported by increased volume.
- **Downward Flag Formation:**
 - **Consolidation:** From late January to mid-February, the price moved downward within a channel.
 - **Trendlines:** The flag was formed by downward sloping trendlines.
- **Breakout:**
 - **Price Movement:** In mid-February, MSFT broke above the upper trendline.
 - **Volume:** The breakout was accompanied by higher volume.
- **Outcome:** The stock continued its upward trajectory, reaching over \$120 by March