



recognia®

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# USING TECHNICAL ANALYSIS FOR ETF TRADING

Peter Ashton  
VP, Retail and Self-Directed Investing



# Agenda



- The Value of Technical Analysis
- Types of Events
  - Short-term patterns
  - Classic patterns
  - Indicators and oscillators
- Using Recognia Events in ETF Trading
  - New Recognia ETF Newsletter
- Q&A

# Disclaimer

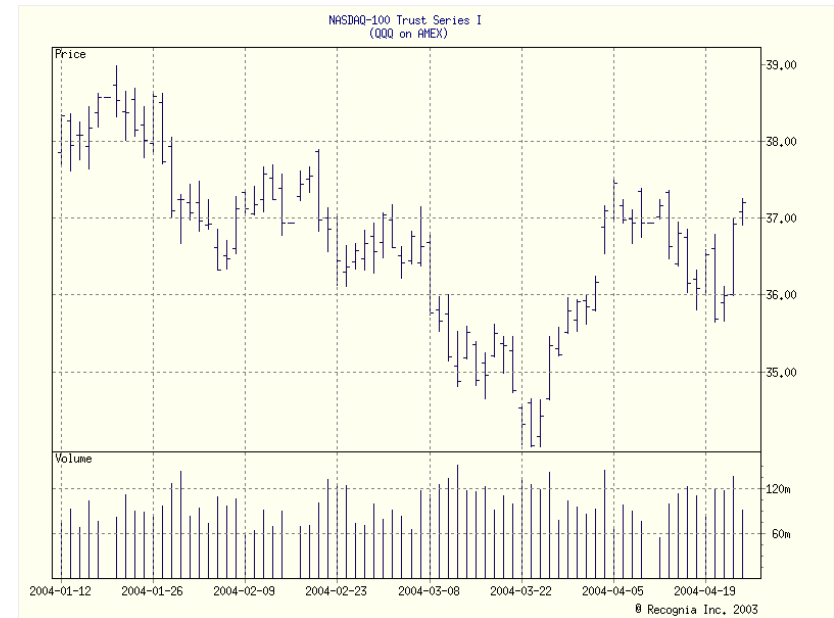


*The information presented here is for educational and informational purposes only. The inclusion of any specific securities detailed is for illustrative purposes only. No information contained in this presentation is intended to constitute a recommendation by Recognia to buy, sell, or hold any stock, ETF, or other securities.*

# What is Technical Analysis?



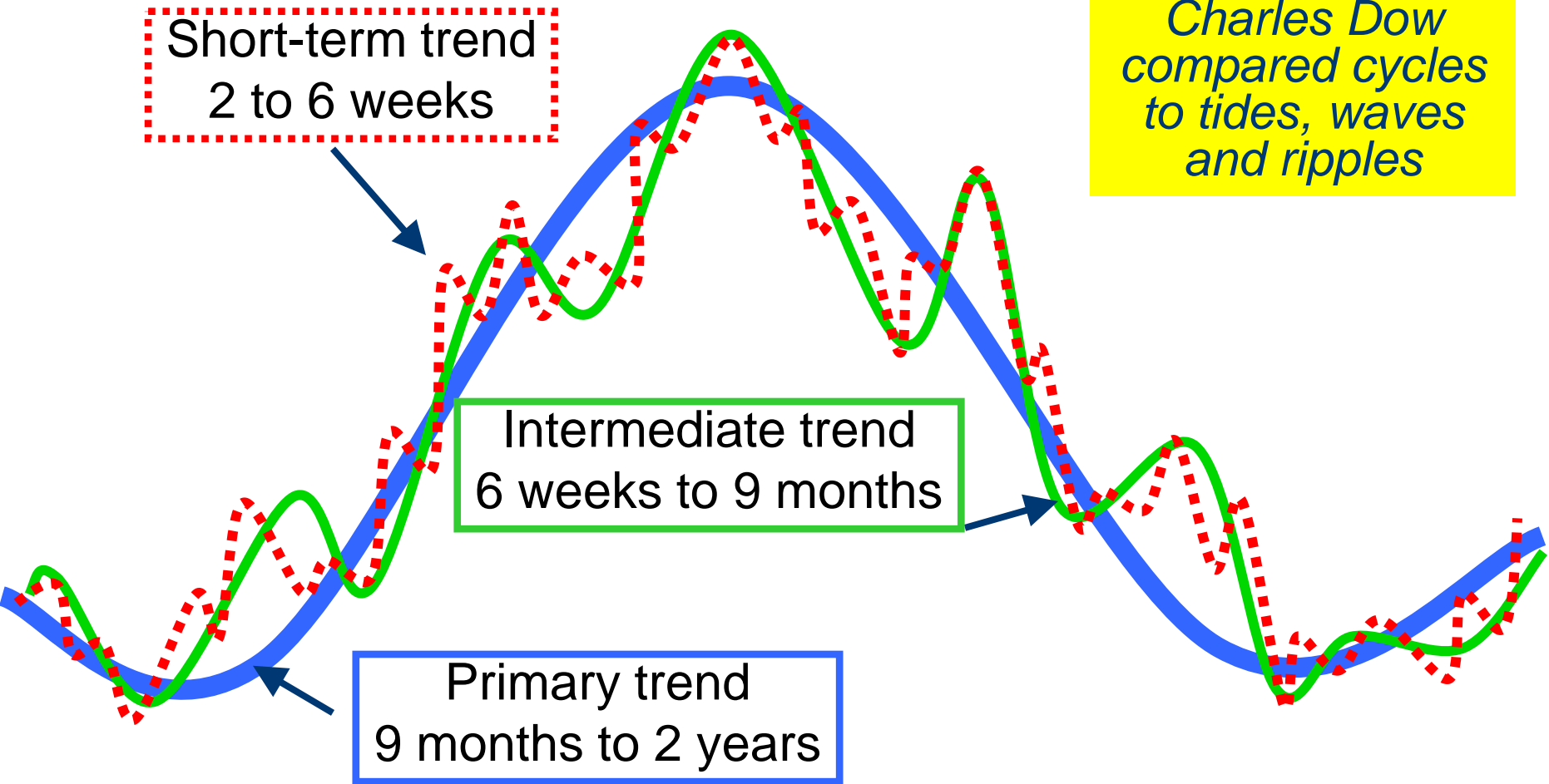
- Looking for patterns and relationships in price and volume history that identify attitudes of buyers and sellers
- Shifts in the balance of supply and demand
- To assist in making investment and trading decisions



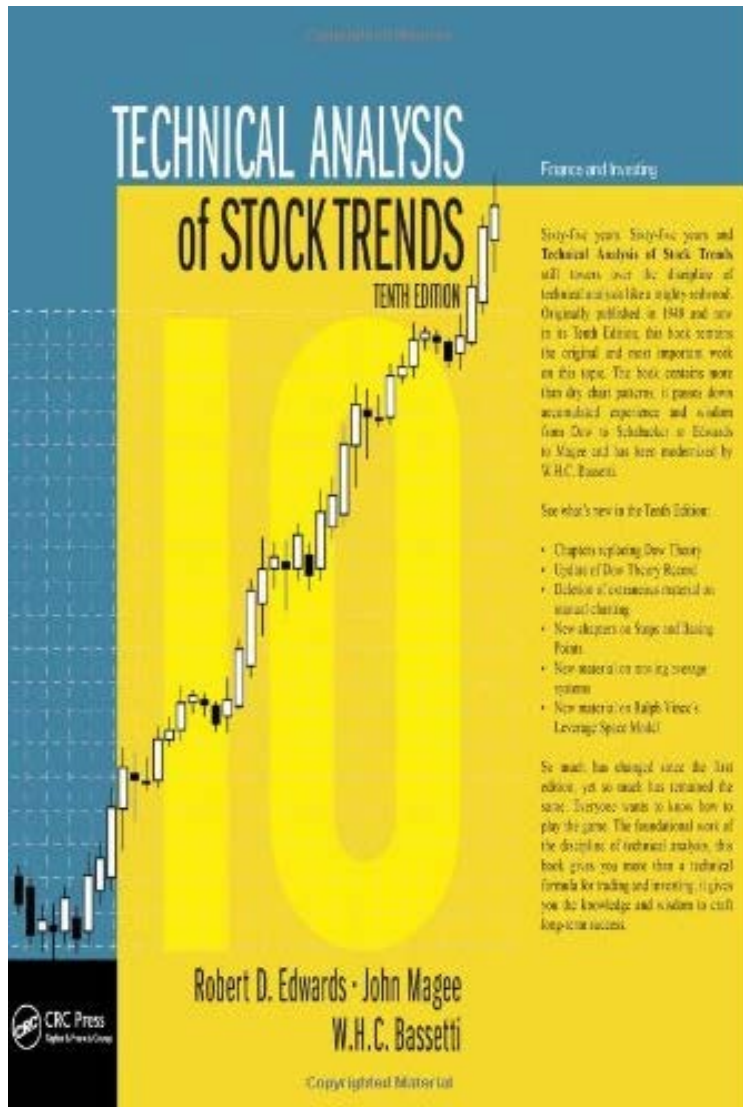
# Market Cycles



*Charles Dow compared cycles to tides, waves and ripples*

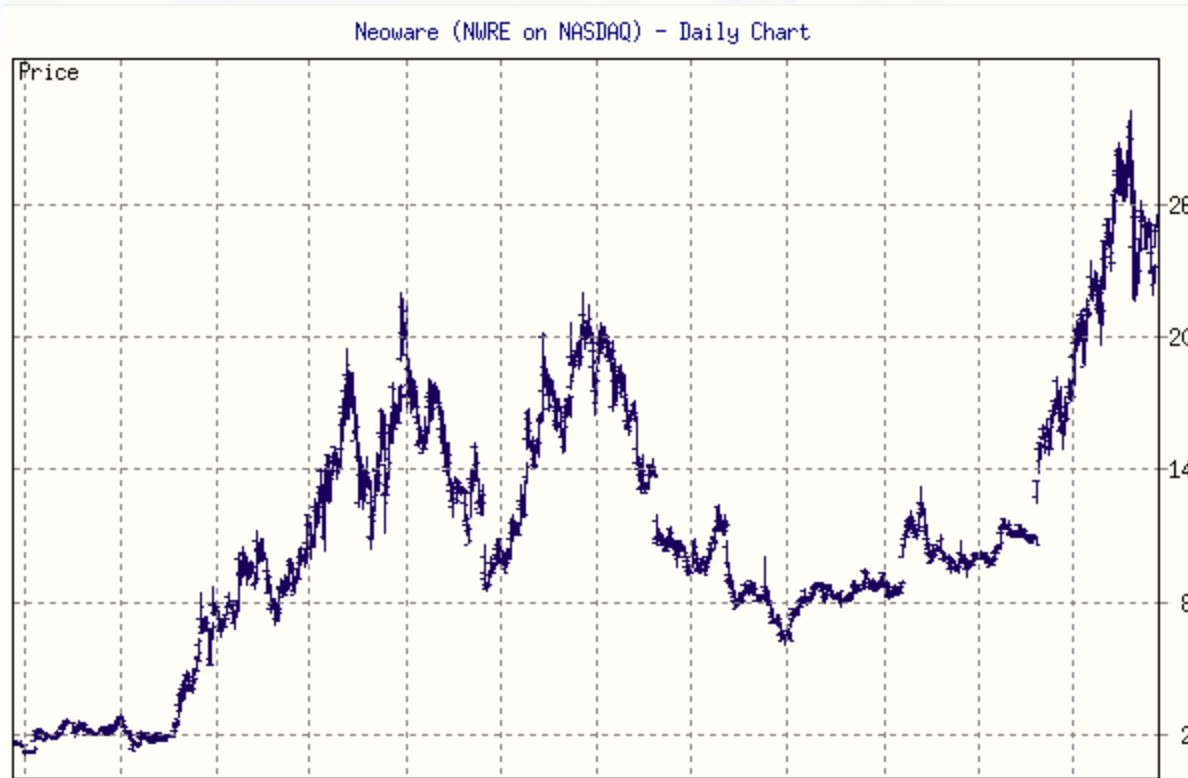


# Why Study Price?



“The market price reflects...the hopes and fears and guesses and moods, rational and irrational, of hundreds of potential buyers and sellers... Price is the only figure that counts.”

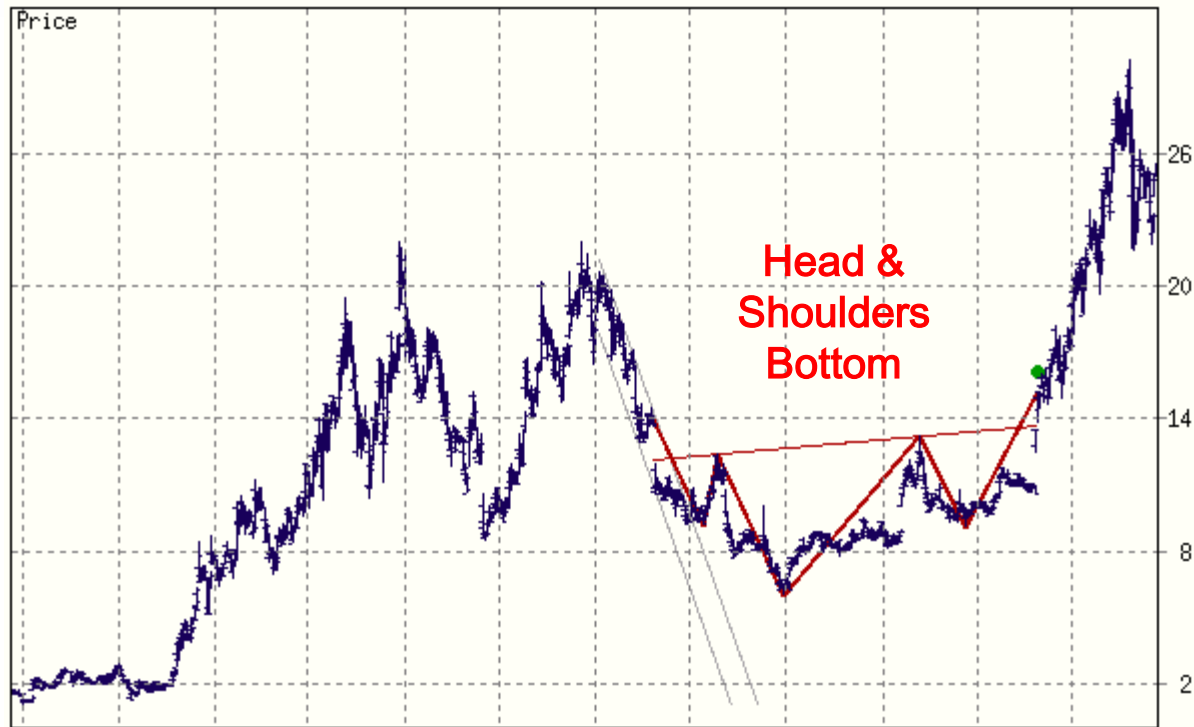
# An Example...



**Prices move in trends until ...**

**Something changes to affect supply and demand**

Neoware (NWRE on NASDAQ) - Daily Chart



**Prices move in trends until ...**

**Something changes to affect supply and demand**

**Marked by patterns in price and volume history**





# *Types of Technical Events*

# Technical Event Classes



- **Short-term Patterns**

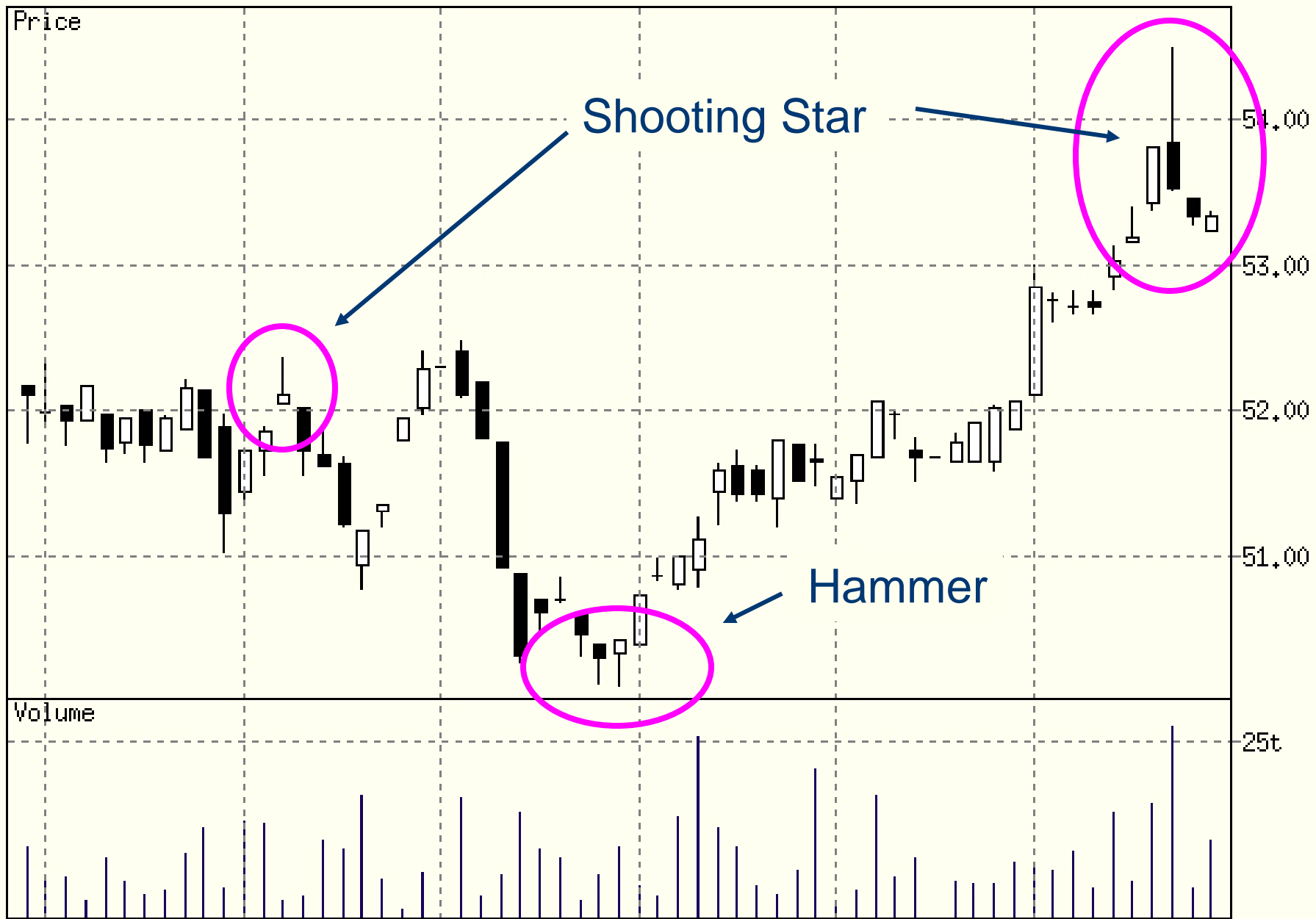
- Based on the shape and relationship of candlesticks or price bars

- Indicators & Oscillators

- Classic Patterns

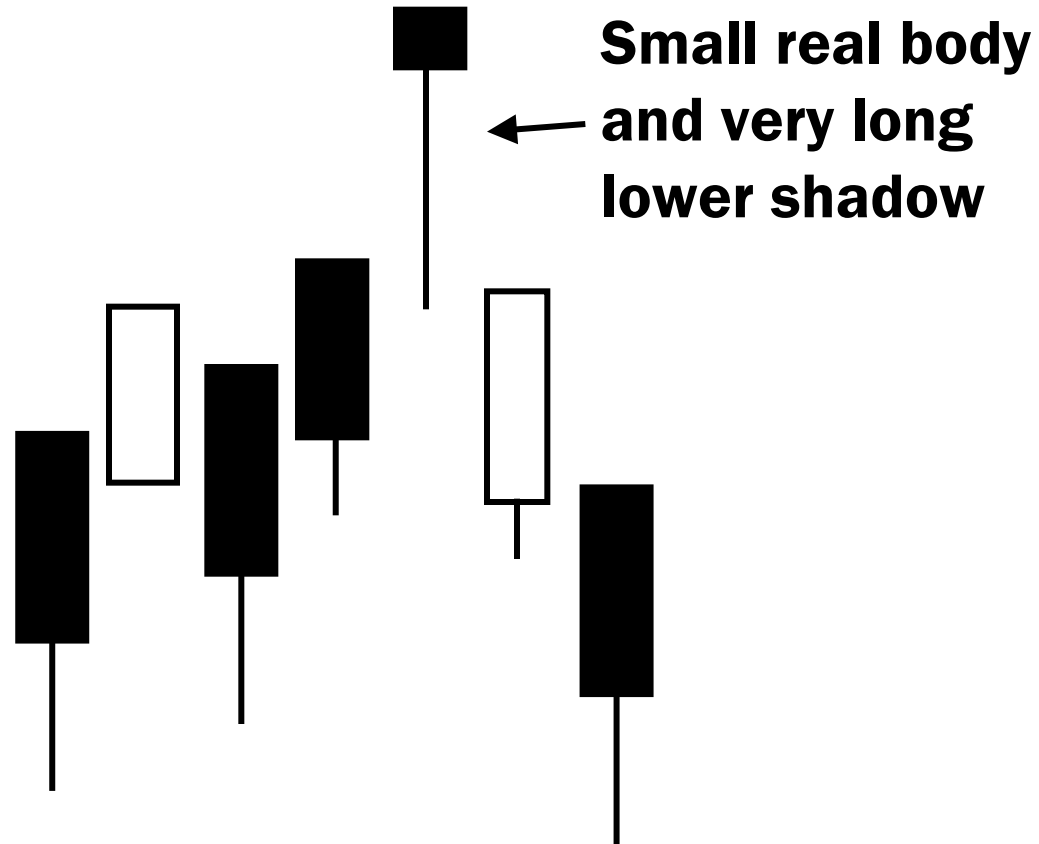




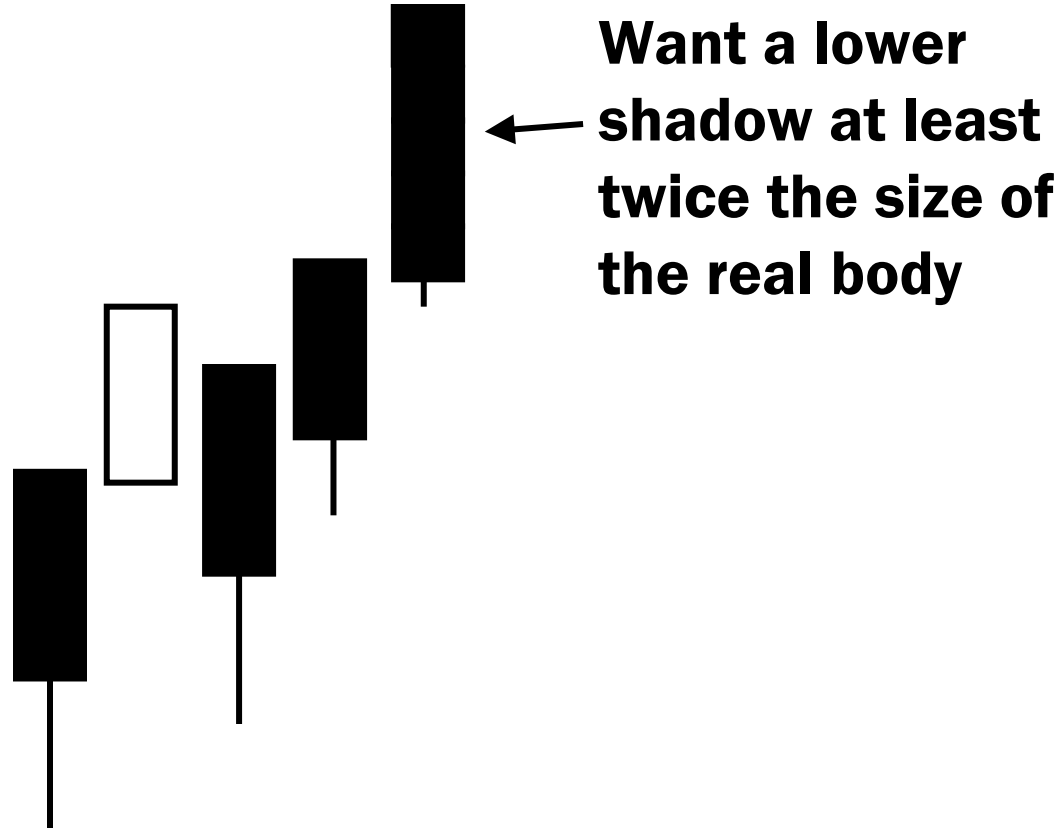


# *Hanging Man*

*A bearish reversal pattern*



# *Hanging Man*



# *Hanging Man*



**Two hanging men; which is the more significant?**



*A*



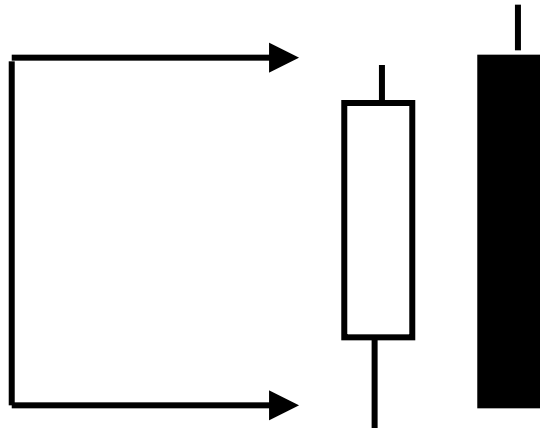
*B*



# *Bearish Engulfing Pattern*



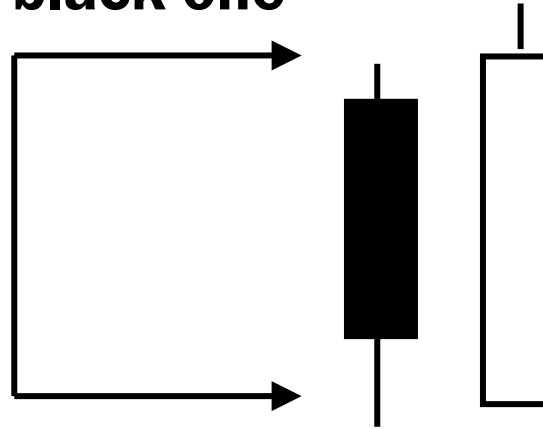
**Black  
candle's real  
body  
completely  
"engulfs" the  
white one**



# *Bullish Engulfing Pattern*

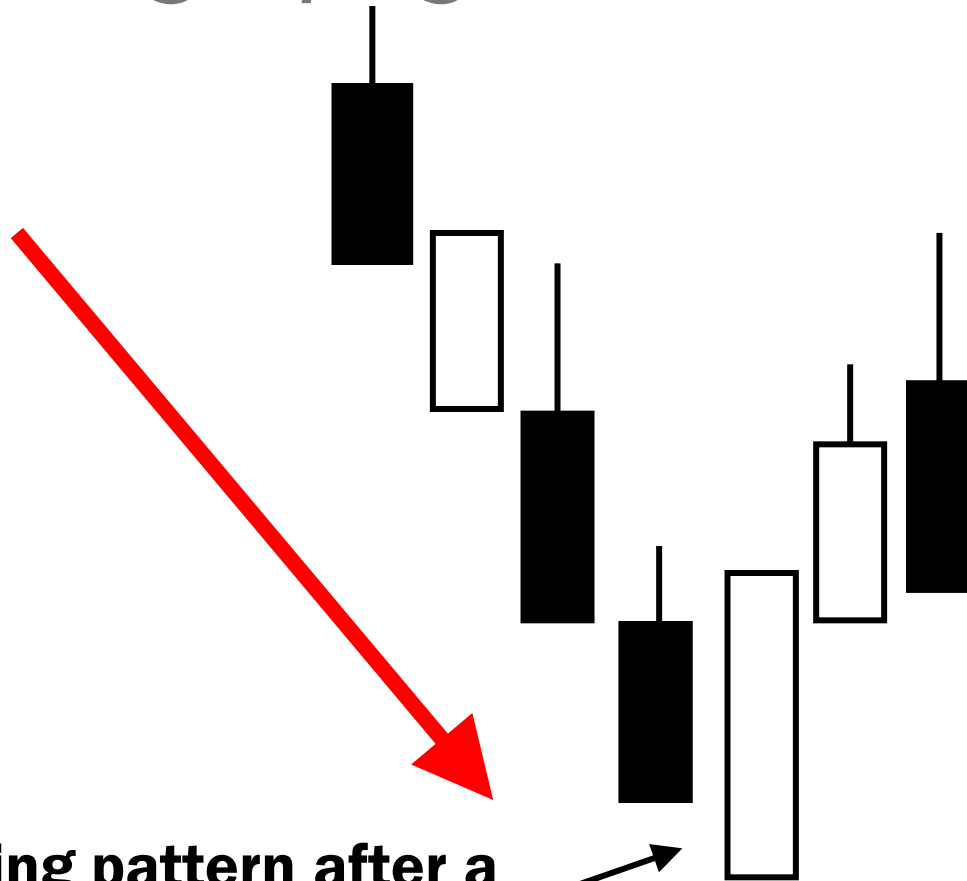


**White candle's real  
body completely  
"engulfs" the black one**



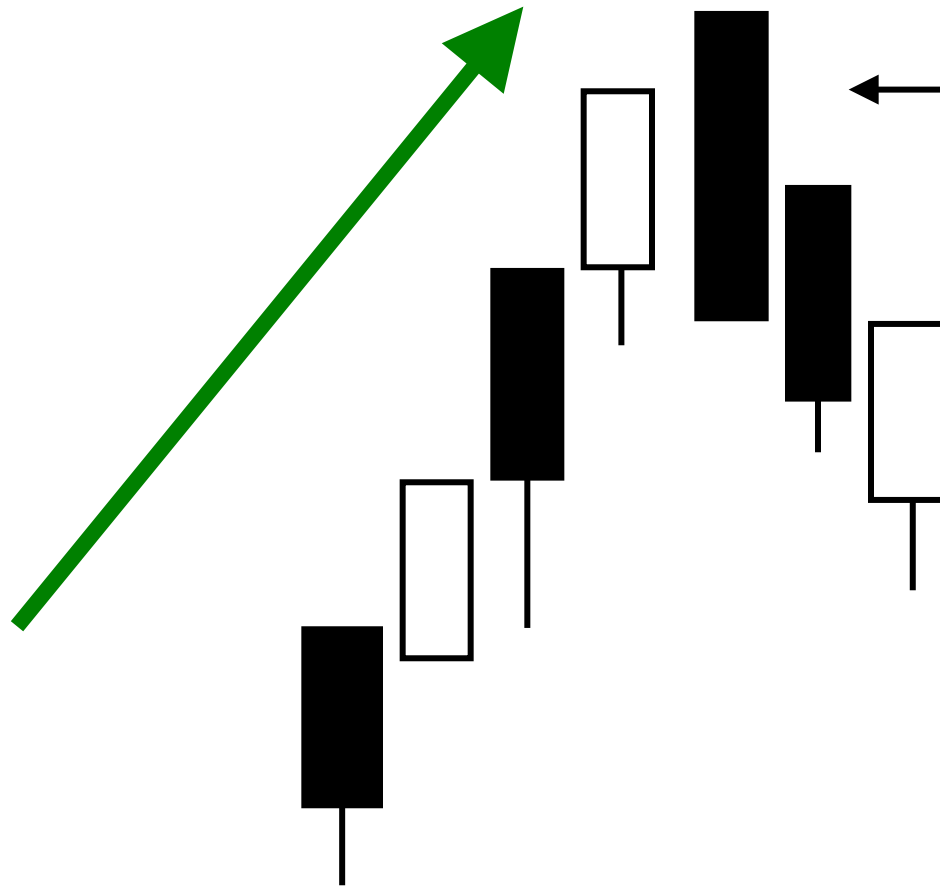
**Bullish Engulfing Pattern**

# *Bullish Engulfing Pattern*



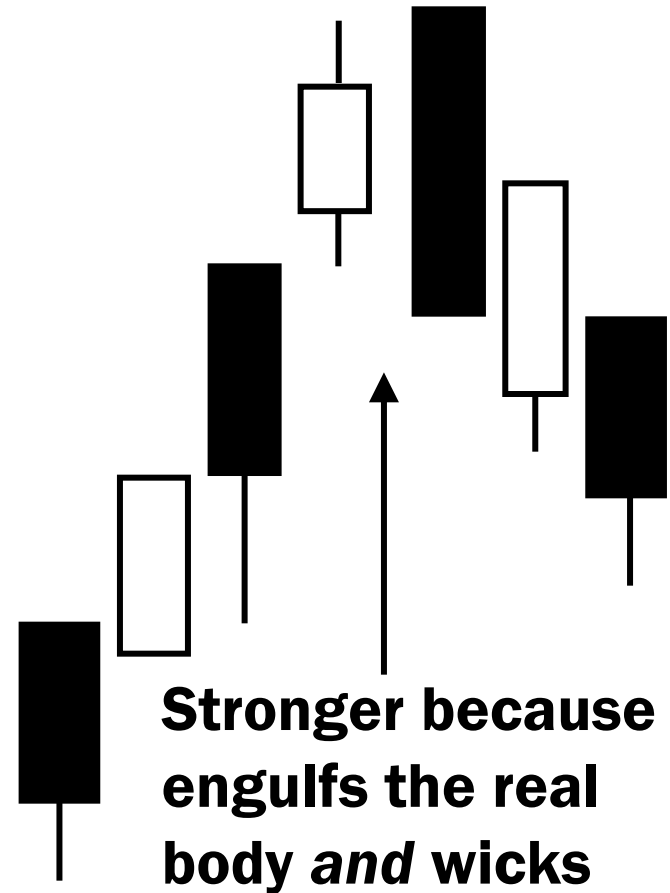
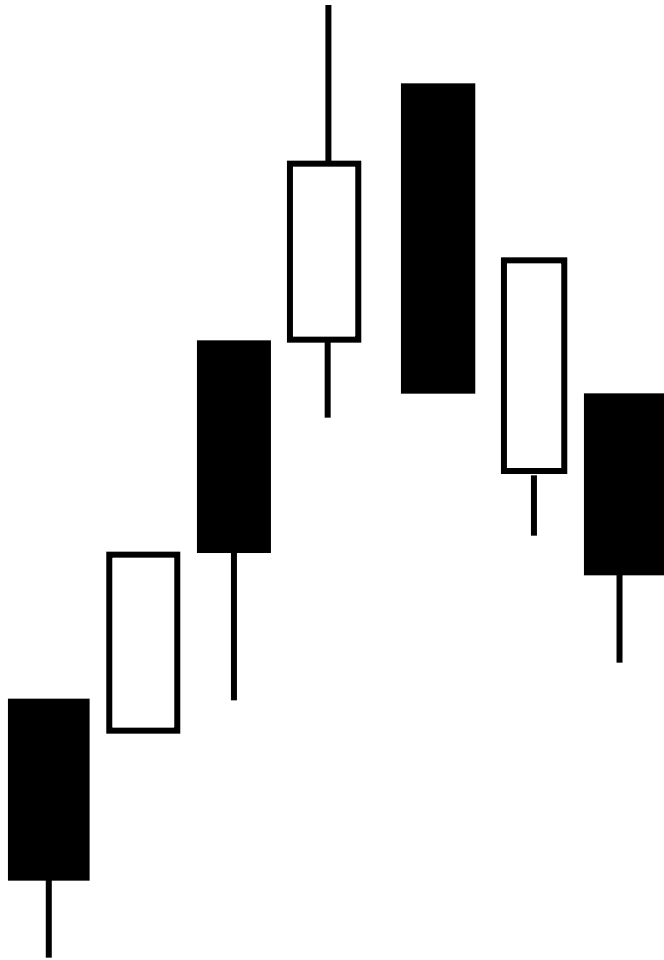
**Engulfing pattern after a sharp decline is usually more effective**

# *Bearish Engulfing Pattern*



**Engulfing pattern  
after a sharp rally  
is usually more  
effective**

# Engulfing Patterns



# Technical Event Classes



- Short-term Patterns
  - Based on the shape and relationship of candlesticks or price bars
- **Indicators & Oscillators**
  - Based on moving averages and various mathematical functions
- Classic Patterns
  - Distinct price swings forming shape on chart

# Indicators and Oscillators

- These are numerical calculations that help understand and anticipate price moves
  - Determine if prices are in a trend or whether they are in a trading range
  - Identify extreme points of the price movement
  - Identify points where prices might be expected to reverse

# Various Types



- Trend following
  - Smooths price so trends can be seen as lines
- Momentum
  - Measures the speed or direction of price changes
- Stochastics
  - Measures the position of the close price relative to the recent highs and lows



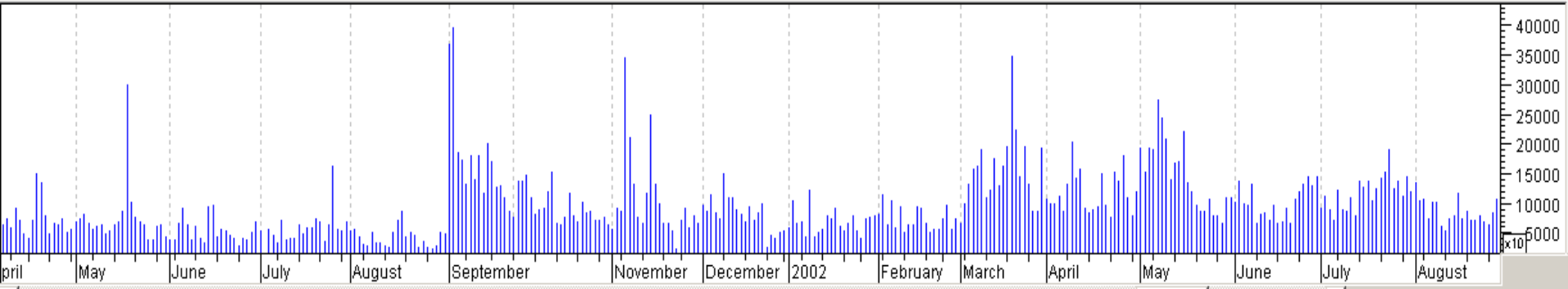
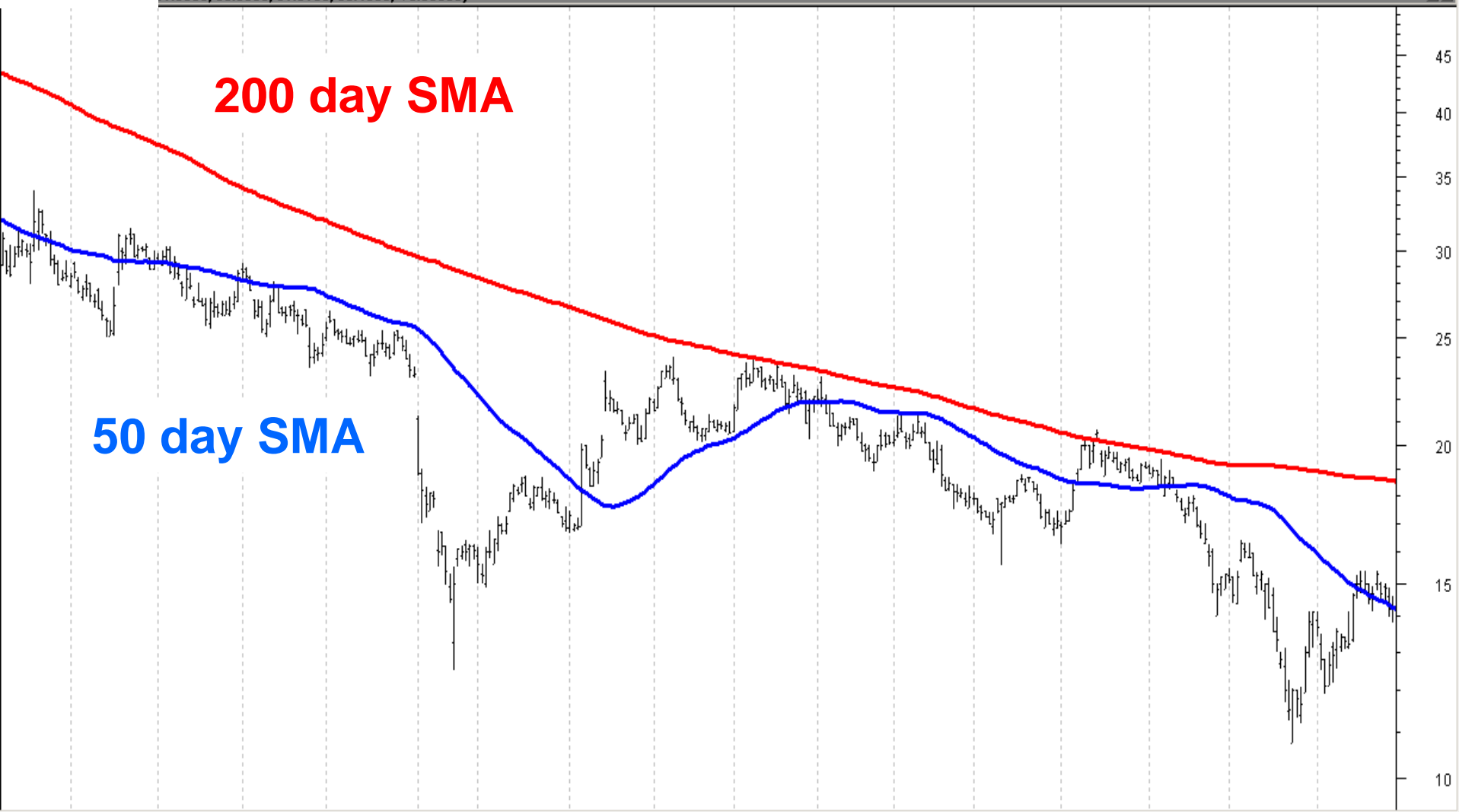
# Moving Averages

- Simple Moving Average is defined to be the average price over last  $N$  days
  - Also Exponential MA, Weighted MA, Adaptive MA, etc.
- Work best in trending markets
- Time frames are relative
  - 200 day moving average used in silver because Kodak used it to monitor inventory levels
  - 4 month moving average used for soybeans because that is the shelf life of margarine

(7.9000, 18.5600, 17.8700, 18.4500, +0.59000)

**200 day SMA**

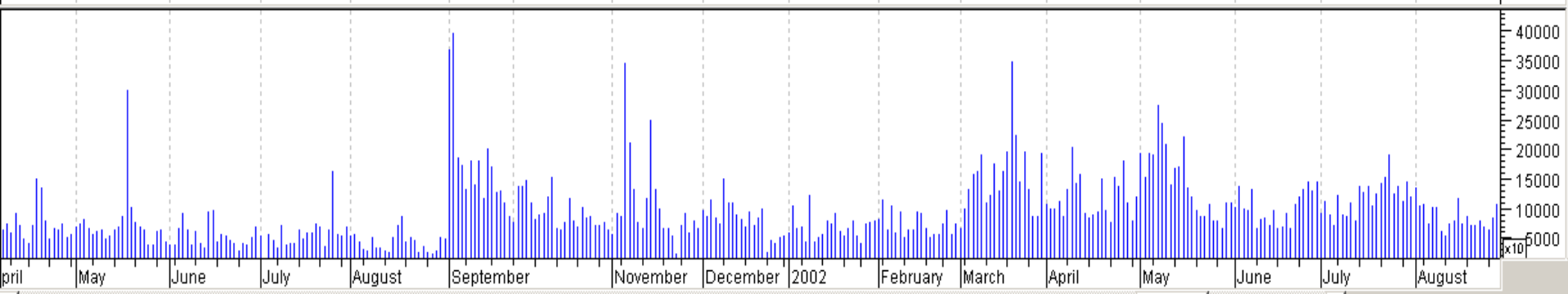
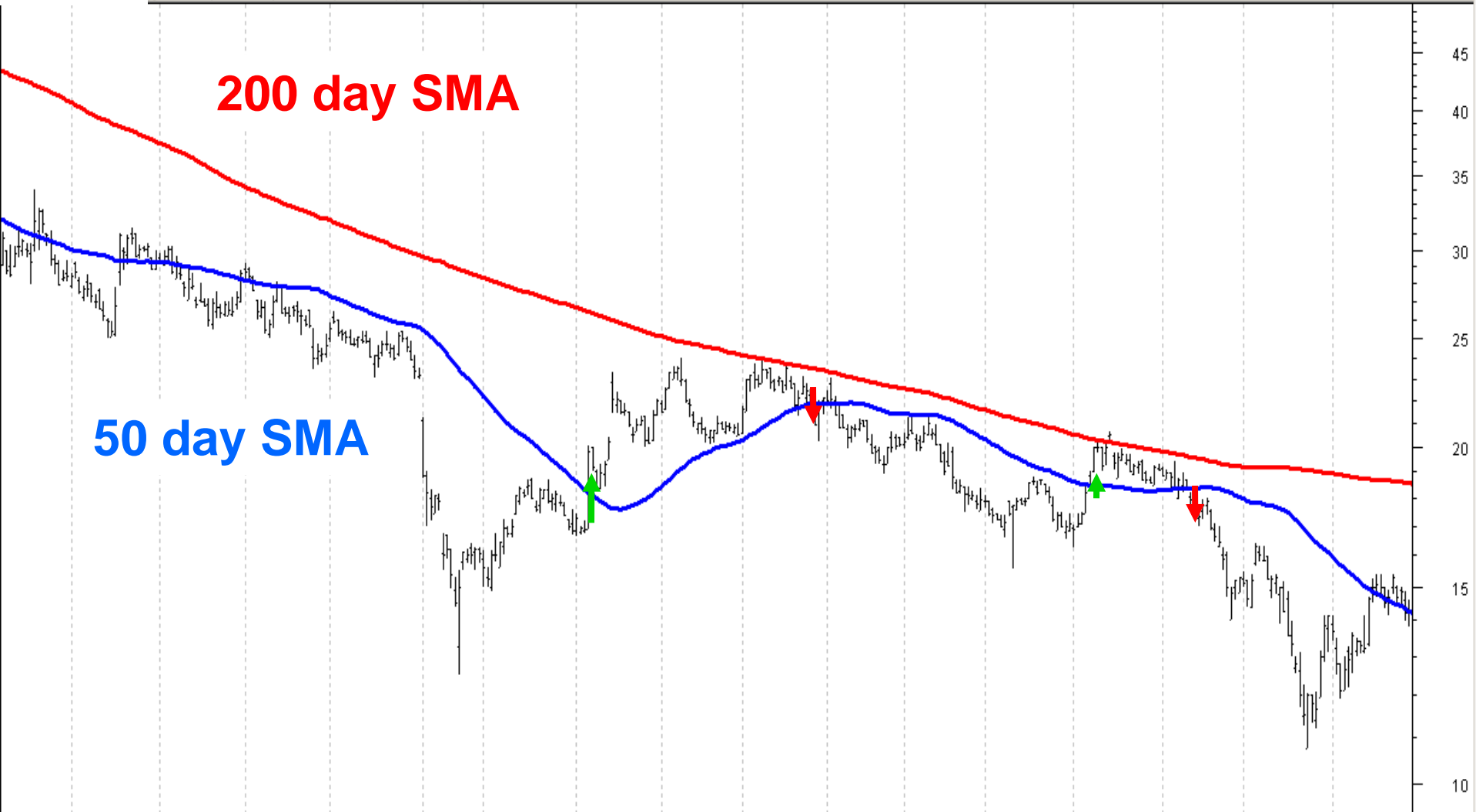
**50 day SMA**



(17.9000, 18.5600, 17.8700, 18.4500, +0.59000)

**200 day SMA**

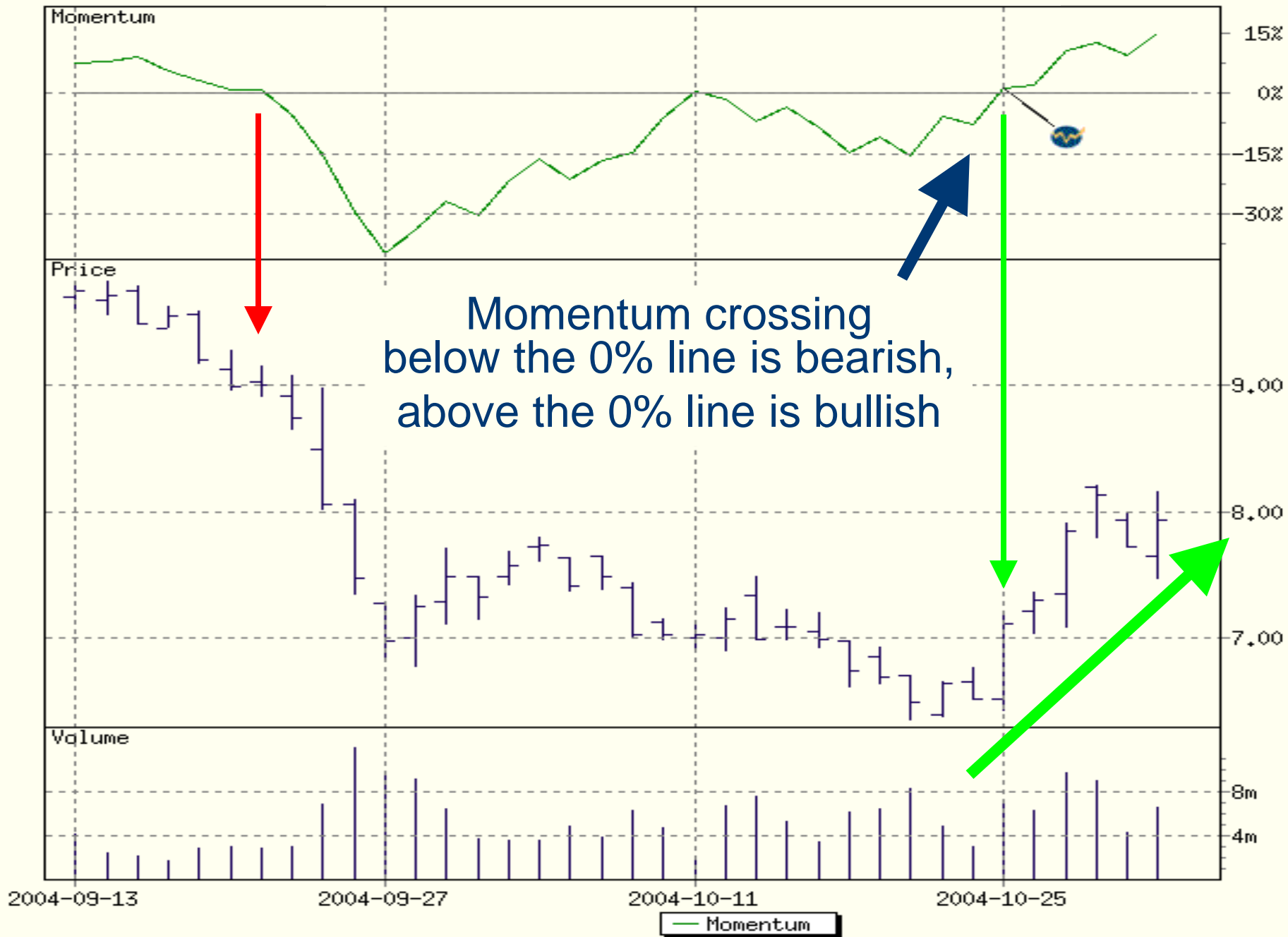
**50 day SMA**



# Momentum Oscillators



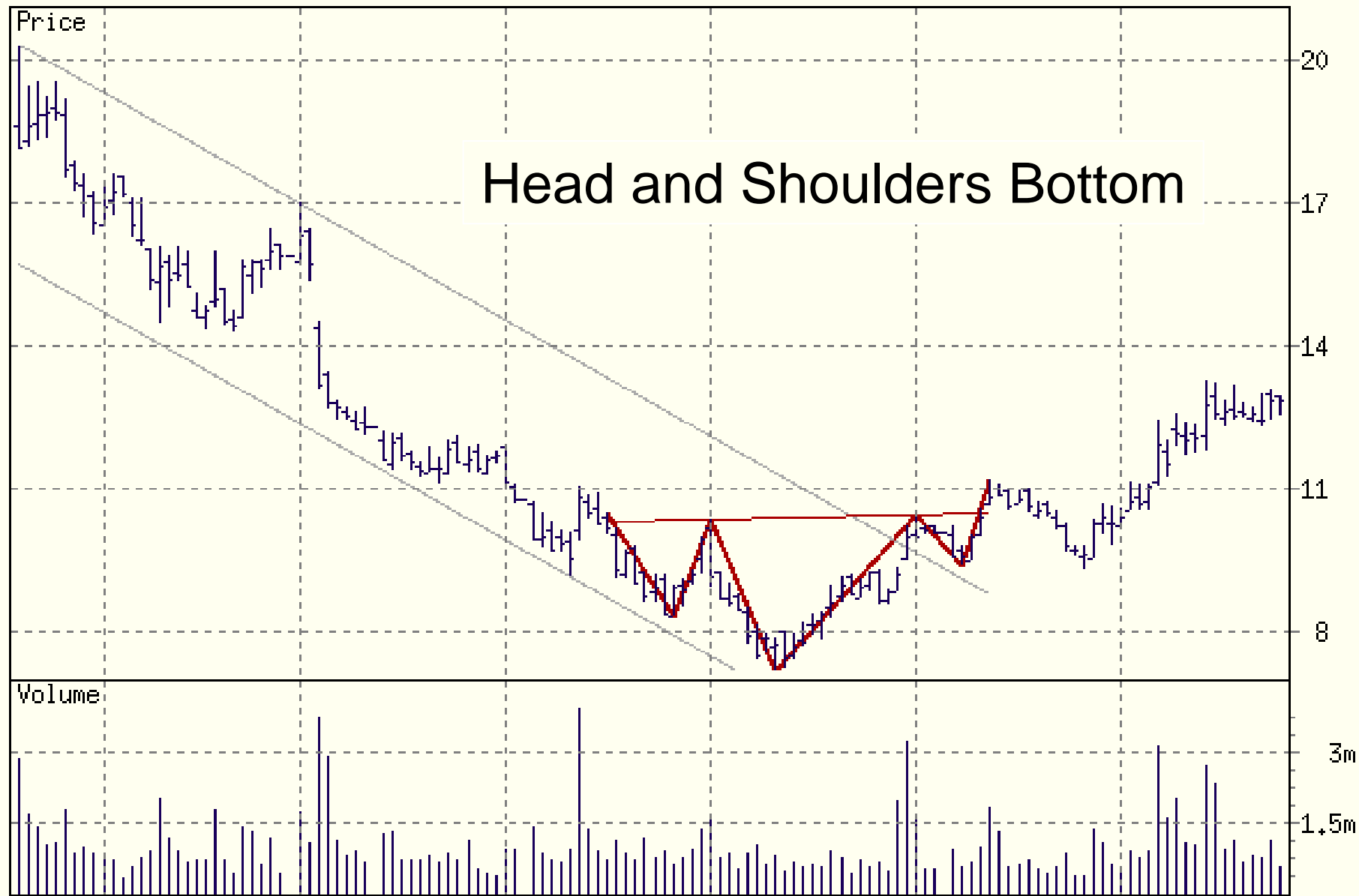
- Measures the rate-of-change of a price relative to a price  $N$ -days ago
- Scale is a numeric range rather than price
  - e.g. 0 to 100, or -1 to +1, etc.
- Includes
  - Rate of Change (ROC) indicator
  - Relative Strength Index (RSI)
- Extremes represent overbought and oversold conditions

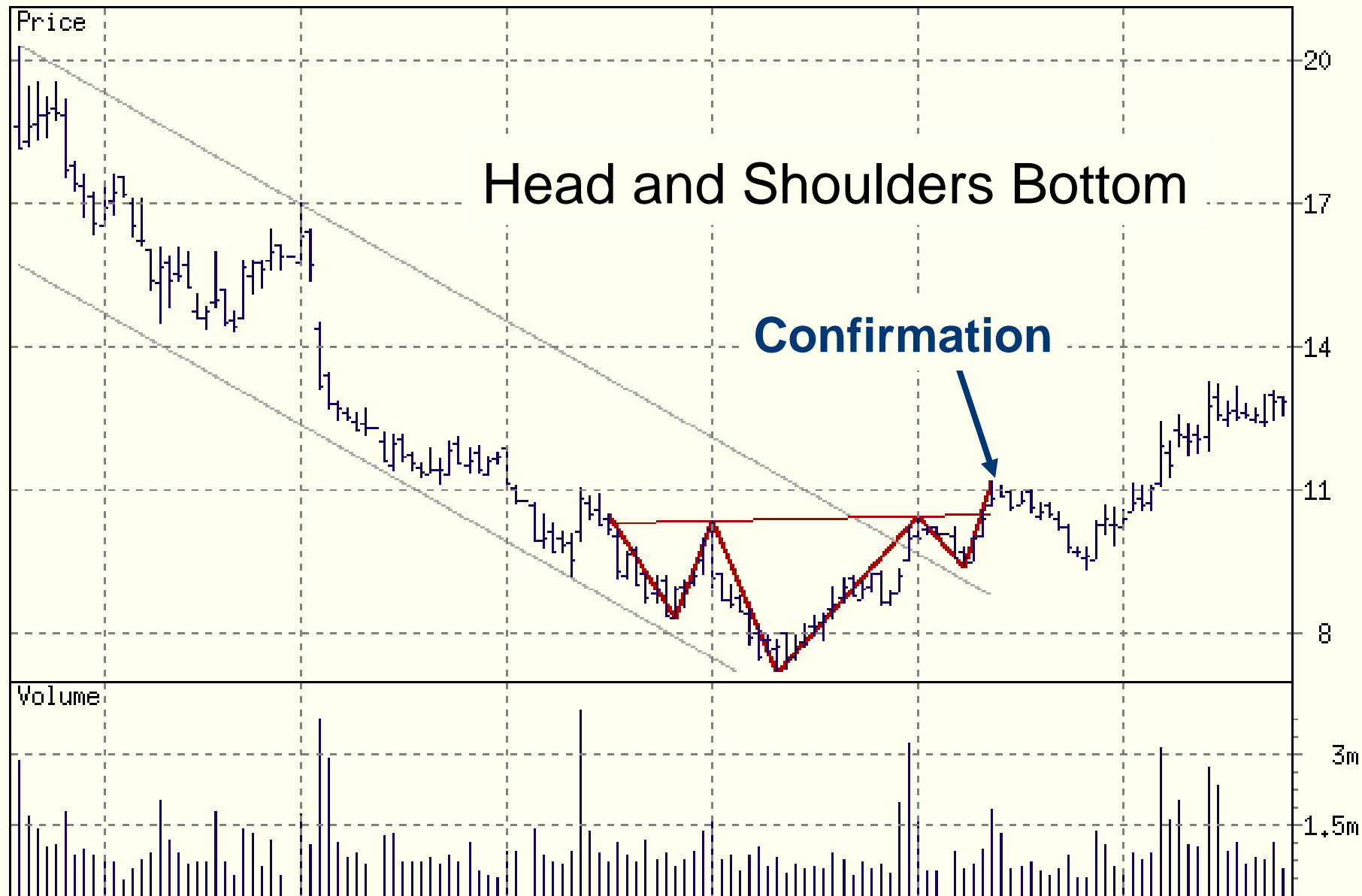


# Technical Event Classes

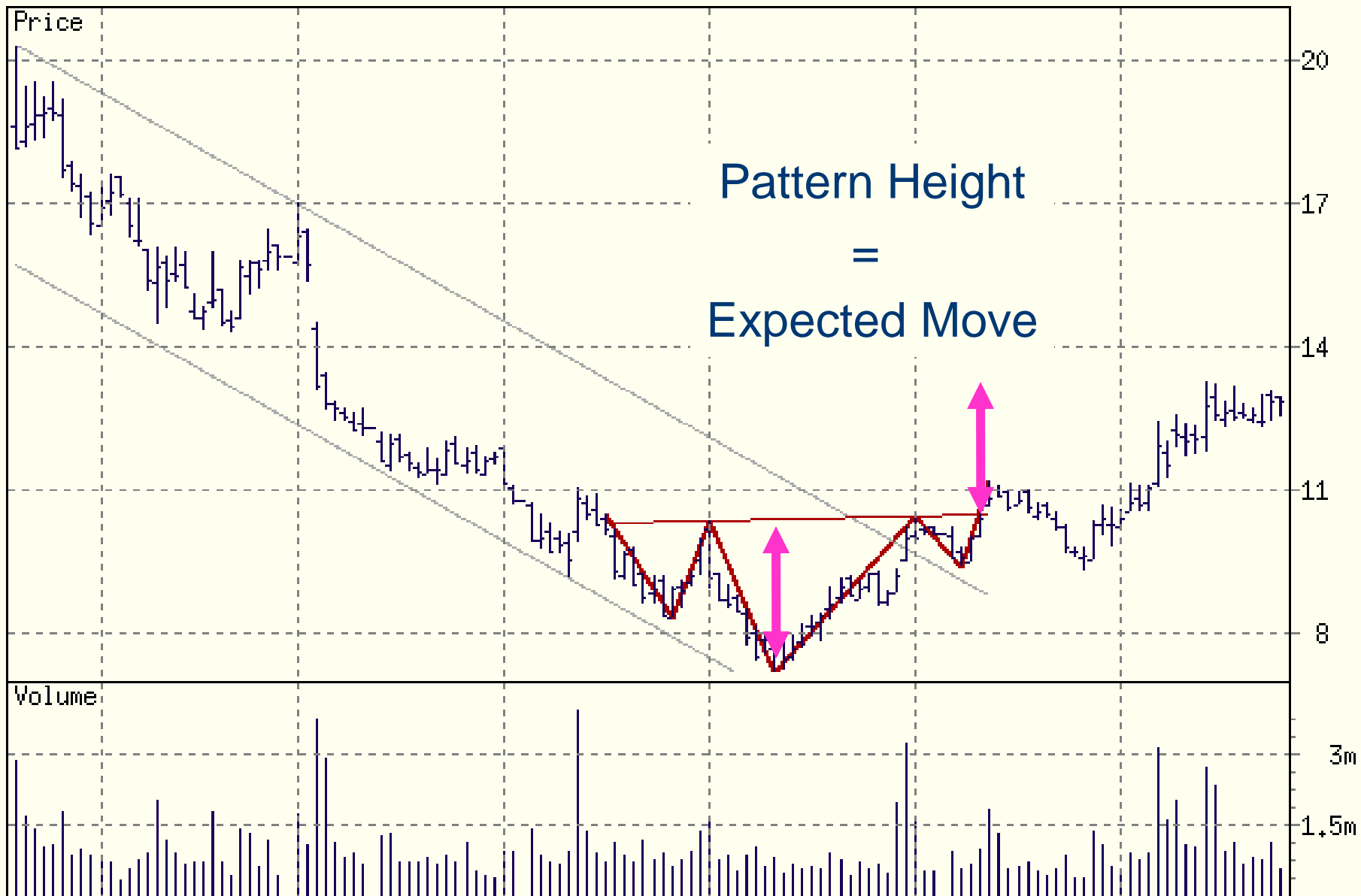


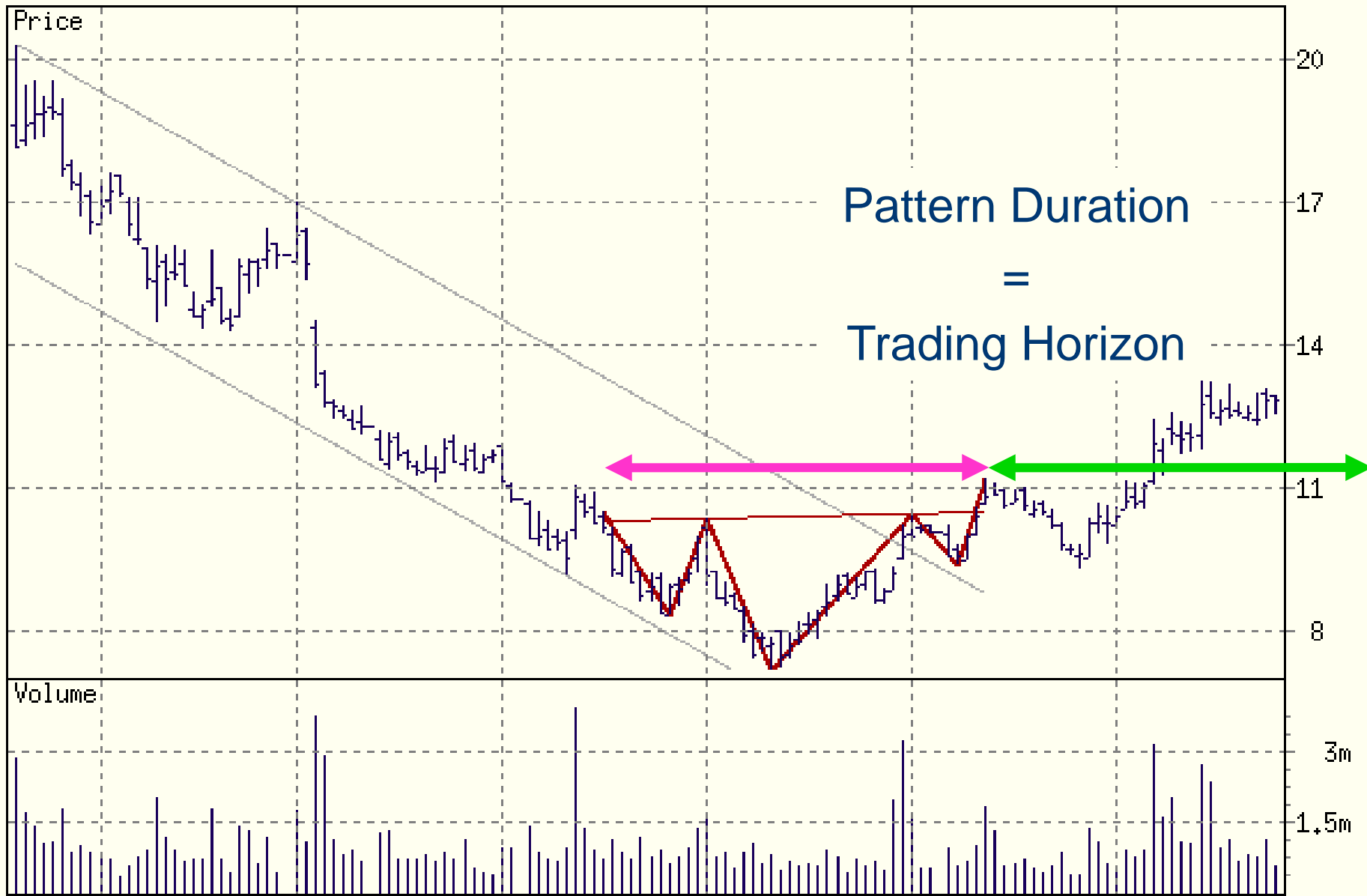
- Short-term Patterns
  - Based on the shape and relationship of candlesticks or price bars
- Indicators & Oscillators
- **Classic Patterns**
  - Distinct price swings forming shape on chart











# Triple Bottoms / Tops



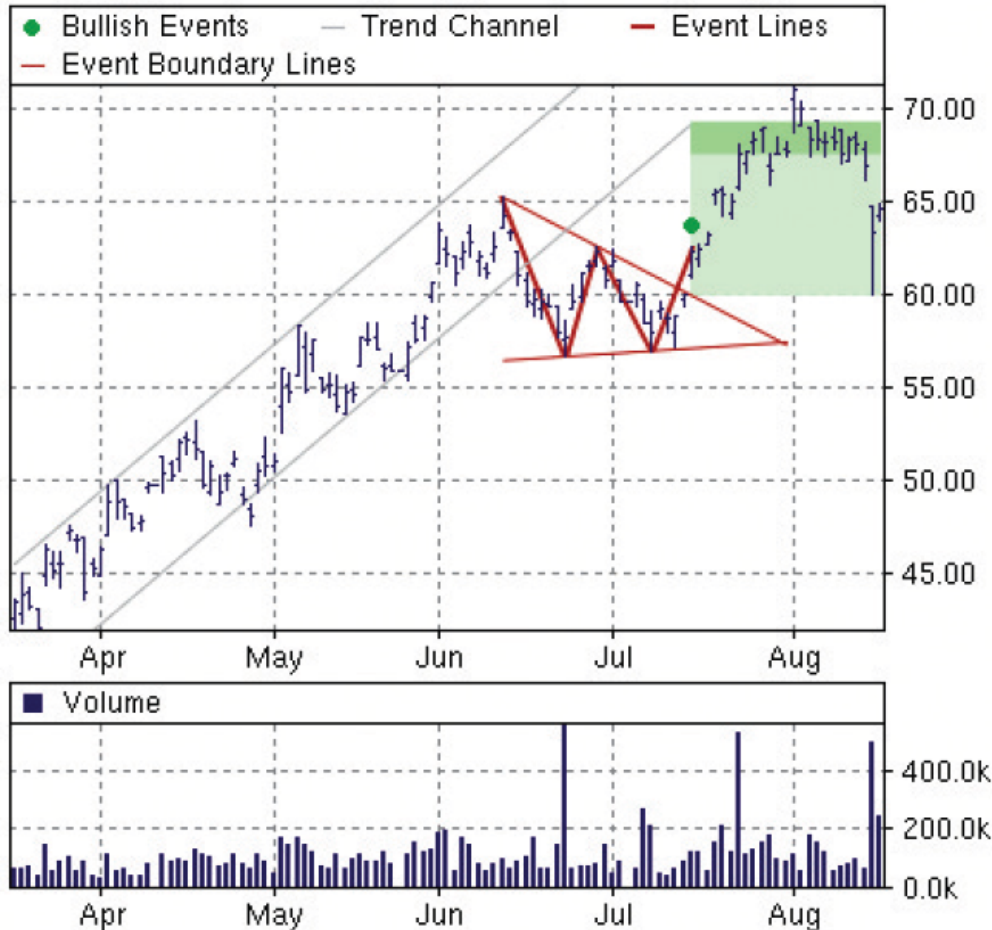
- *The Triple Bottom starts with prices moving downward followed by three sharp lows*
- *Volume decreases with each successive low and finally bursts as the price rises above the highest high confirming a bullish price reversal*
- *Bearish counterpart is the Triple Top*

# Double Bottoms / Tops



- *The Double Bottom pattern marks the reversal of a prior downtrend*
- *The price form two distinct lows are roughly the same level*
- *Price finally breaks upward above the highest high to confirm the bullish signal*
- *Bearish counterpart is the Double Top*

# Triangles



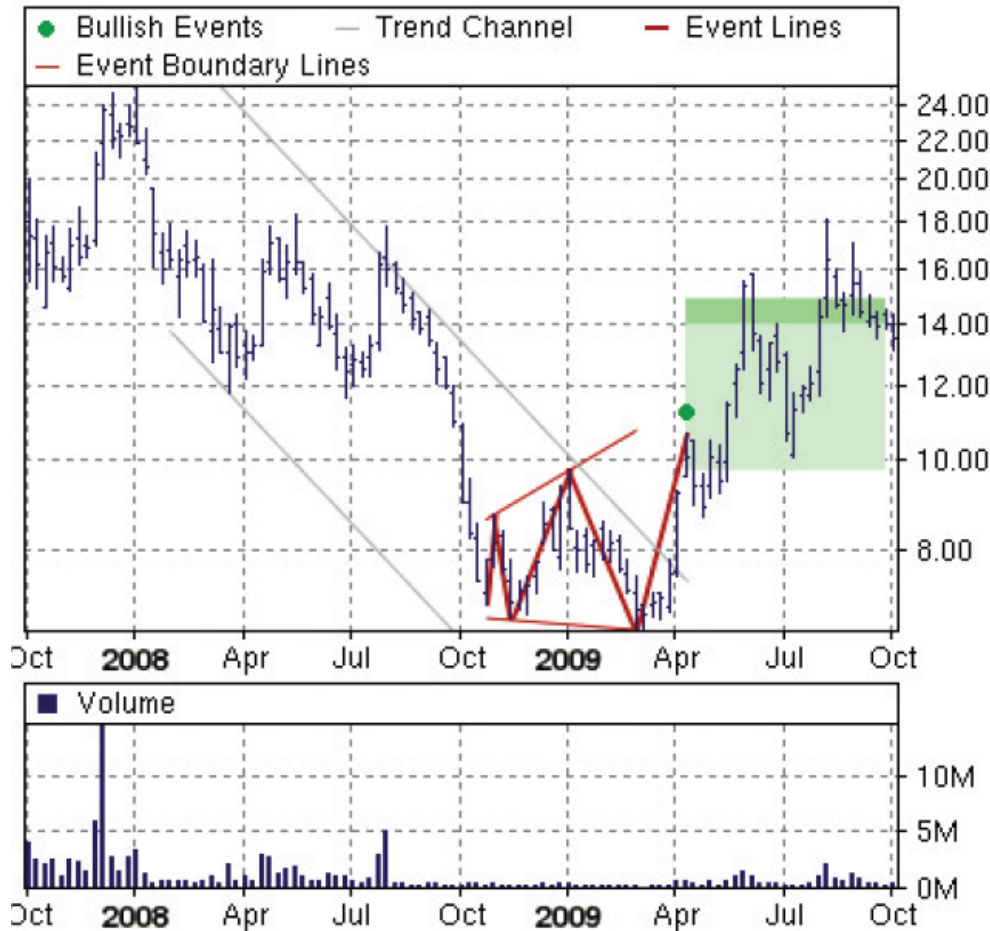
- *The bullish triangle is characterized by two converging trendlines as prices reach lower highs and higher lows*
- *At roughly 2/3 to 3/4 of the distance to the apex, the price breaks upward above the upper trendline with a noticeable increase in volume*
- *Types of triangles include: top triangles, bottom triangles and bullish/bearish continuation triangles*

# Upside / Downside Breakouts



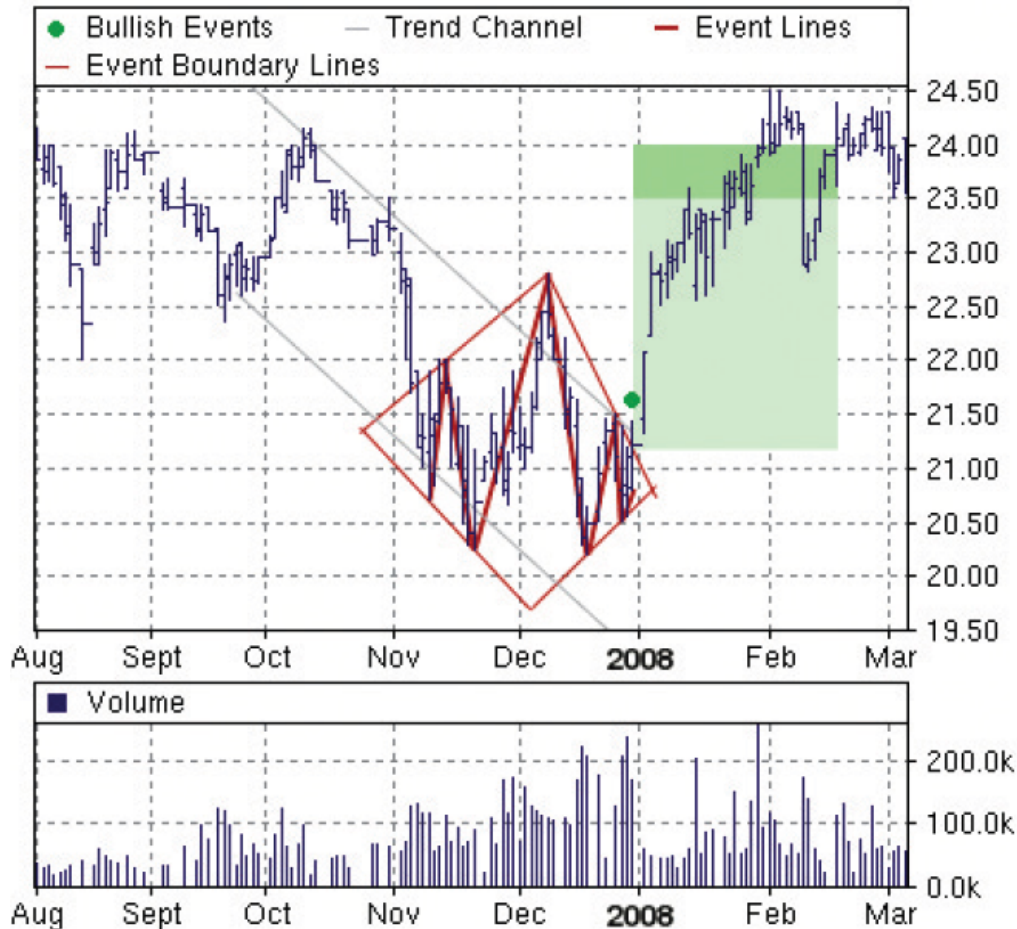
- *The Upside Breakout pattern occurs when the price breaks upward through the top of a trading range marked by horizontal trendlines*
- *This bullish pattern indicates a change in sentiment amongst traders*
- *Bearish counterpart is the Downside Breakout*

# Megaphone Bottom / Top



- *The rare Megaphone Bottom (a.k.a. Broadening Pattern) is characterized by its successively higher highs and lower lows which form after a downward move*
- *The bullish pattern is confirmed when the price breaks upward above the highest high and fails to fall below this level again*
- *The bearish counterpart is the Megaphone Top*

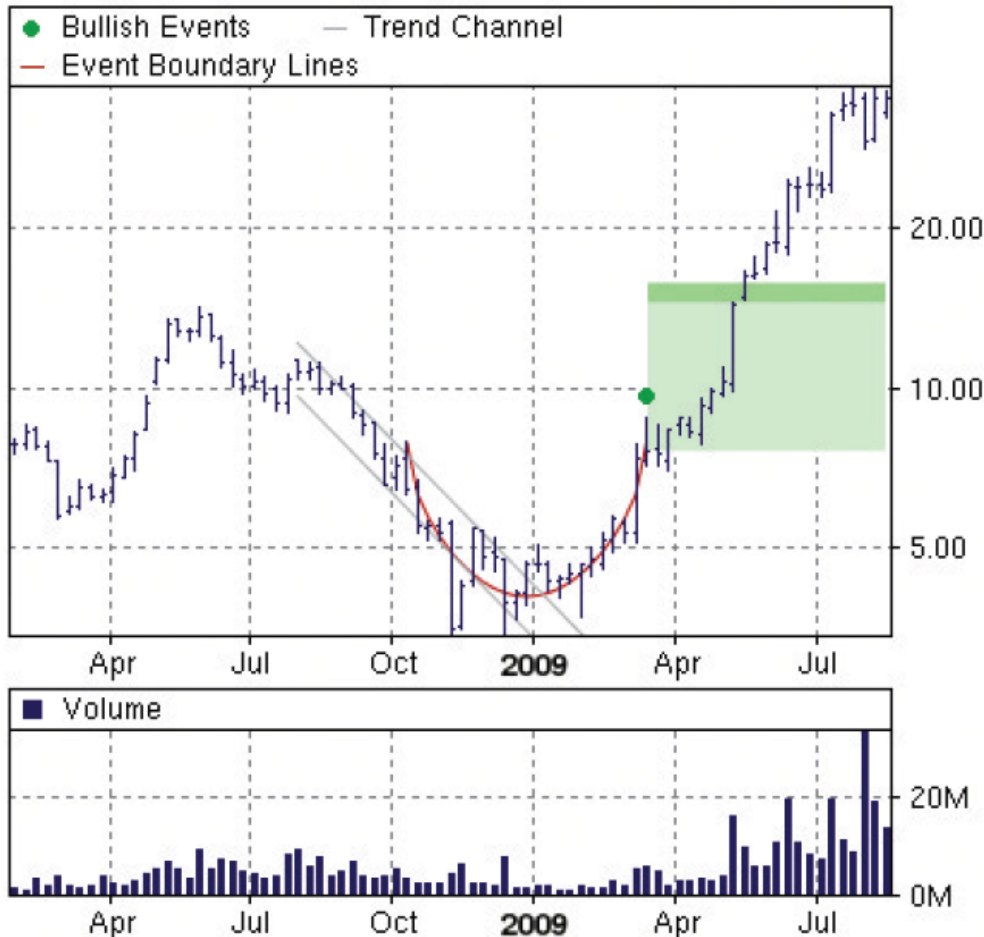
# Diamonds



- A *bullish Diamond pattern* is characterized by prices forming higher high and lower lows in a broadening pattern. The trading range then narrows with lower highs and higher lows forming
- The price breaks upward above the upper trendline signaling the formation of a new trend
- Volume may remain high during the formation of a Diamond pattern
- Types of Diamonds include: *Diamond Bottom, Diamond Top, Bullish/Bearish Continuation Diamond*



# Rounded Bottoms / Tops



- *A Rounded Bottom follows a downtrend forming a gradual bowl-shape reflecting a shift in the balance of supply and demand. Volume tends to mirror the price pattern*
- *As sentiment turns, the price starts to move upward and volume begins to increase*
- *The bullish pattern is confirmed when the price crosses above its moving average*
- *Bearish counterpart is the Rounded Top*

# Recognia Technical Events...



## Short-term Patterns

- Gap ups and downs
- Hammers
- Shooting stars
- Bullish engulfing line
- Bearish engulfing lines
- Gravestones
- Hanging man
- Inverted hammers
- Island bottoms
- Island tops
- Shooting stars
- And more...

## Classic Chart Patterns

- Head and shoulders tops and bottoms
- Symmetrical continuation triangles
- Double tops and bottoms
- Ascending continuation triangles
- Descending continuation triangles
- Bottom triangles / wedges
- Top triangles / wedges
- Continuation diamonds
- Continuation wedges
- Diamond tops and bottoms
- Megaphone tops and bottoms
- Triple tops and bottoms
- Upside breakouts
- Downside breakouts
- And more...

## Indicators and Oscillators

- Price Crosses Moving Average
- Double moving average crossovers
- Triple moving average crossovers
- MACD (Moving average convergence divergence)
- Momentum
- Relative strength indicator (RSI)
- Short-term KST
- Intermediate-term KST
- Long-term KST
- And more...

# Do Patterns Work?

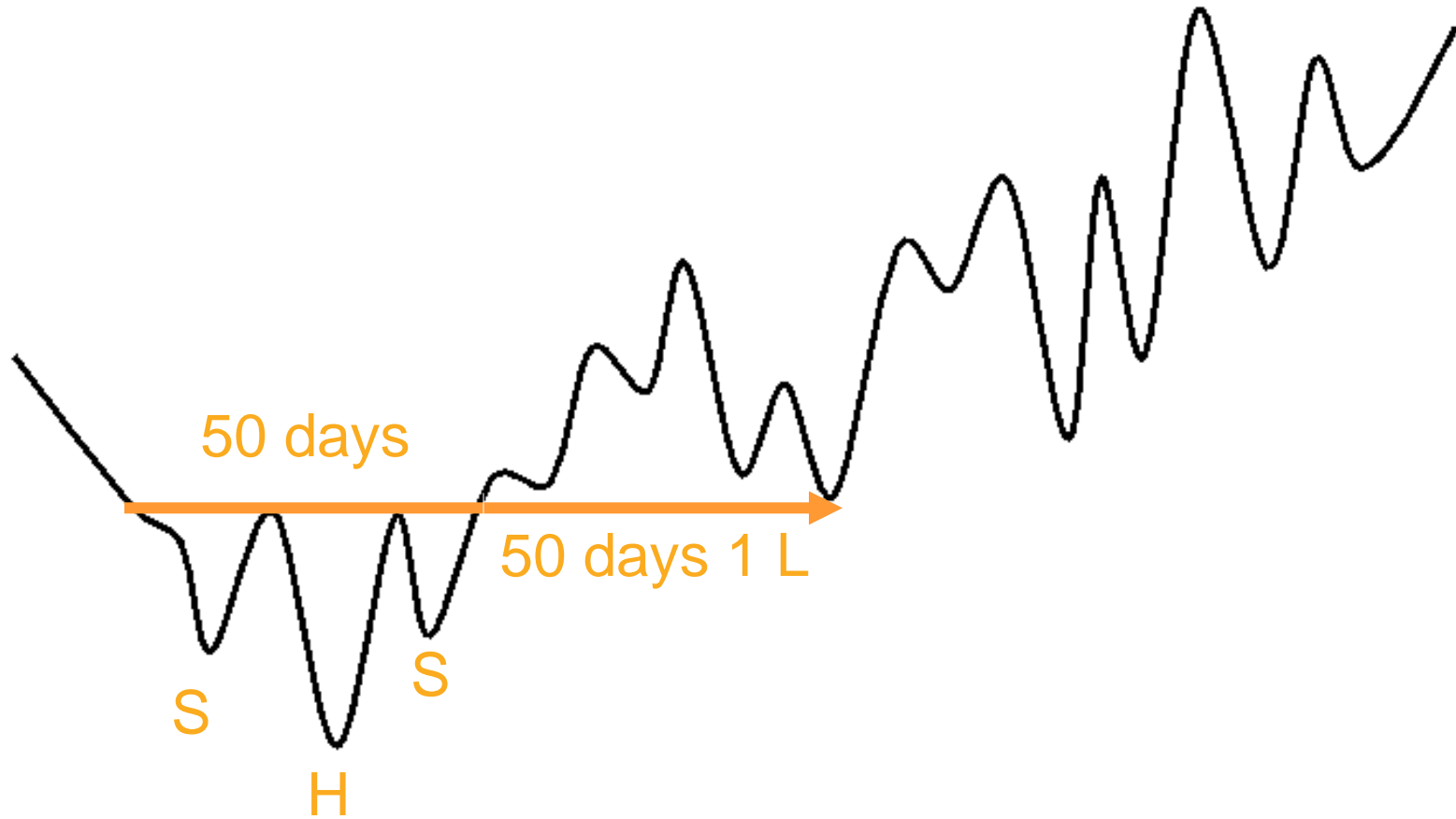


- Study performed by Martin Pring, author, *Technical Analysis Explained*, and printed in his book, *Martin Pring on Price Patterns*
- Over 5,000 patterns were tested from Recognia's historical database
  - Automation allows for large historical representation meeting consistent and objective criteria
- Financial, Energy, Transportation, and Retail sectors were tested between 1982-2003
- Primary bull and bear markets were identified for each sector
- Failed patterns were allowed to run their course (no benefit of stop loss)

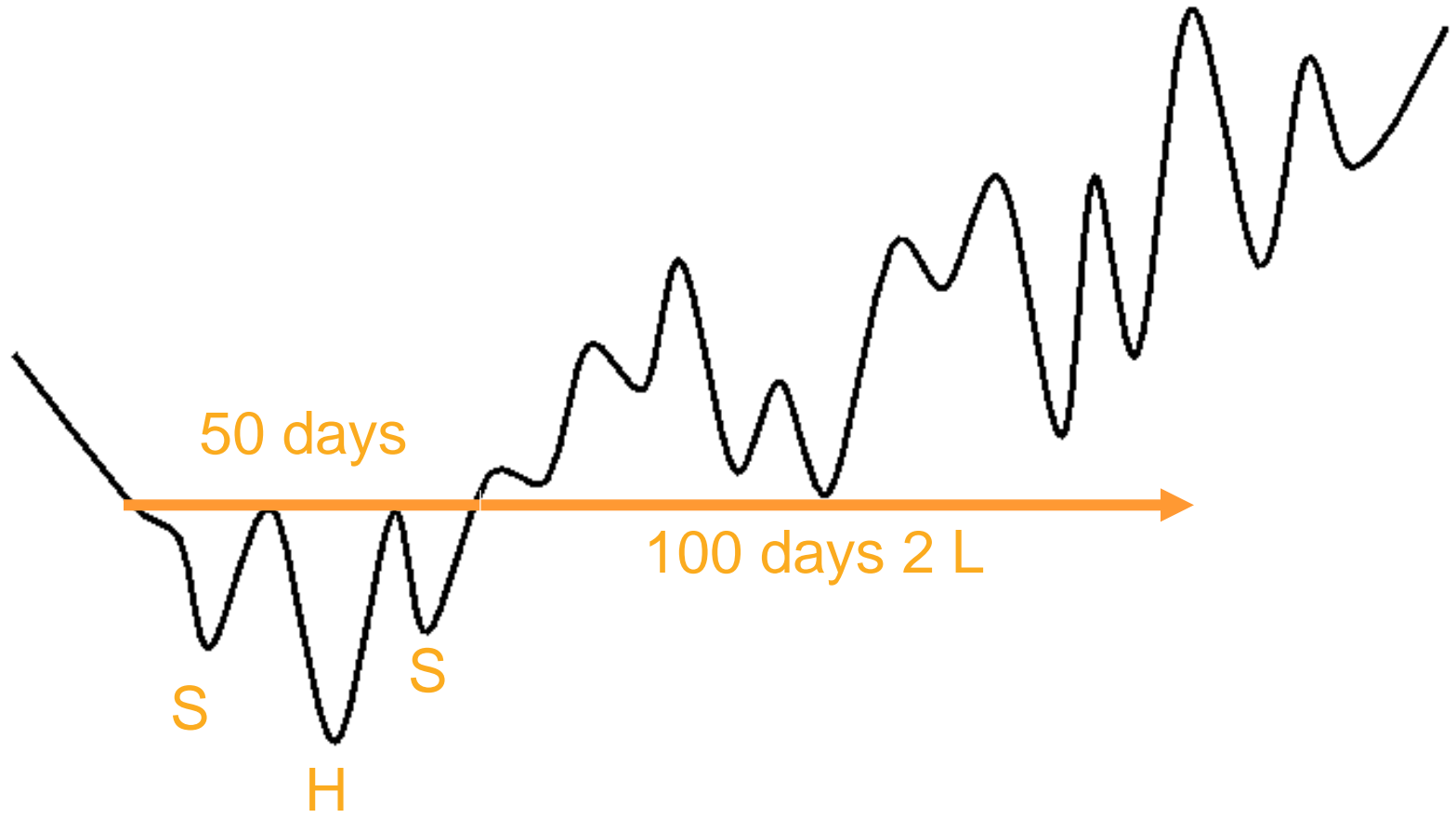
# Pattern Length (L)



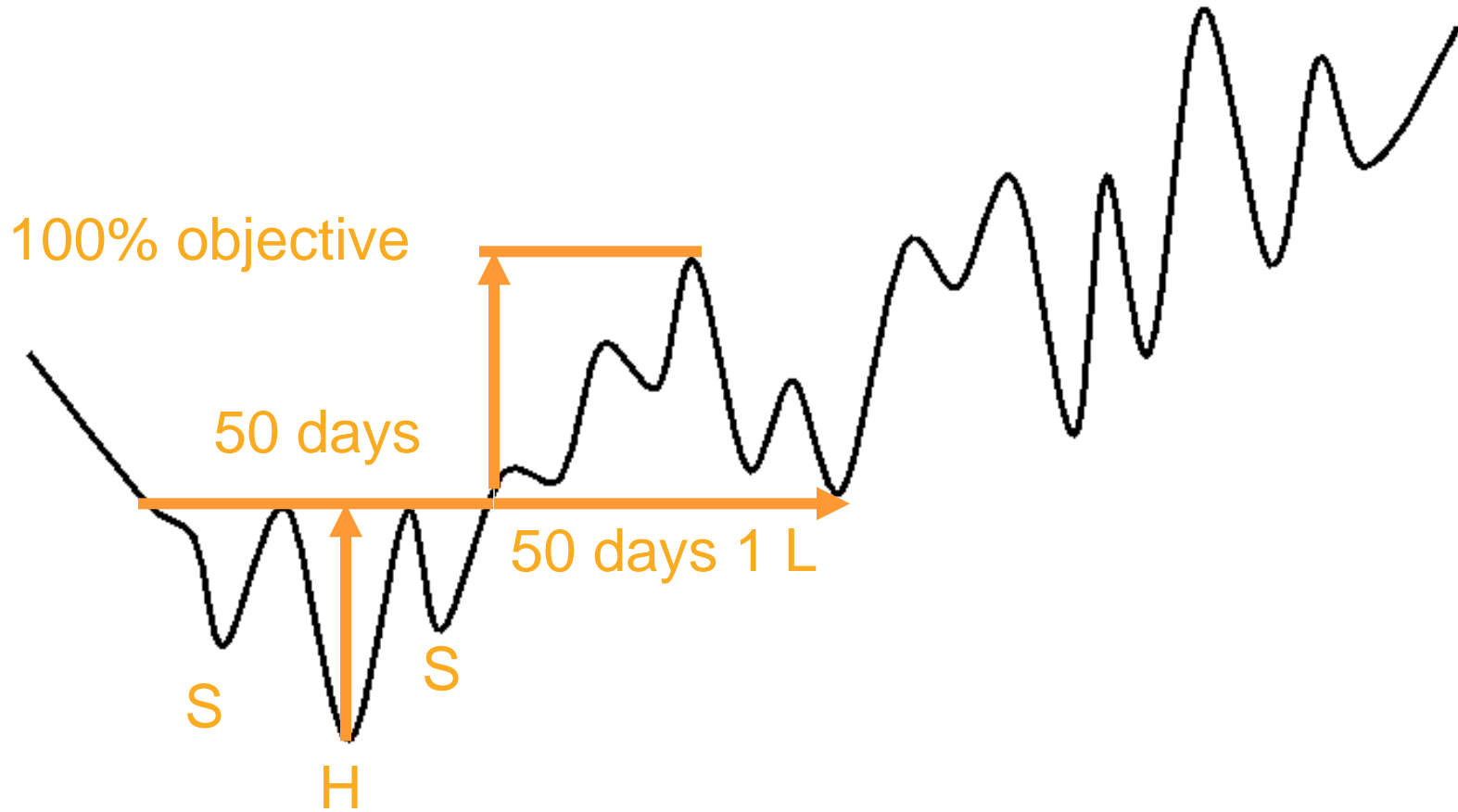
# Pattern Length (L)



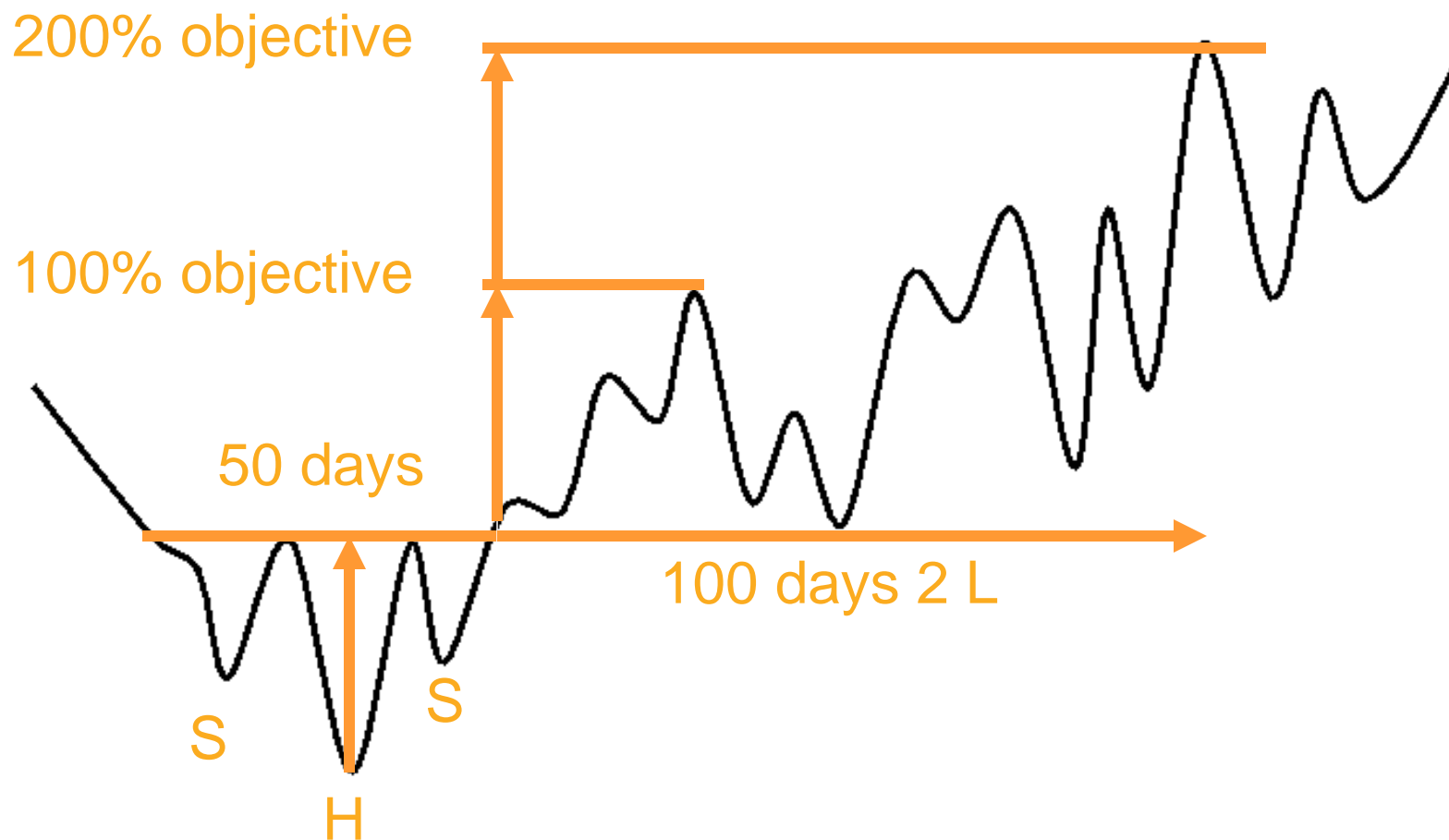
# Pattern Length (L)



# Percent of Objective Achieved



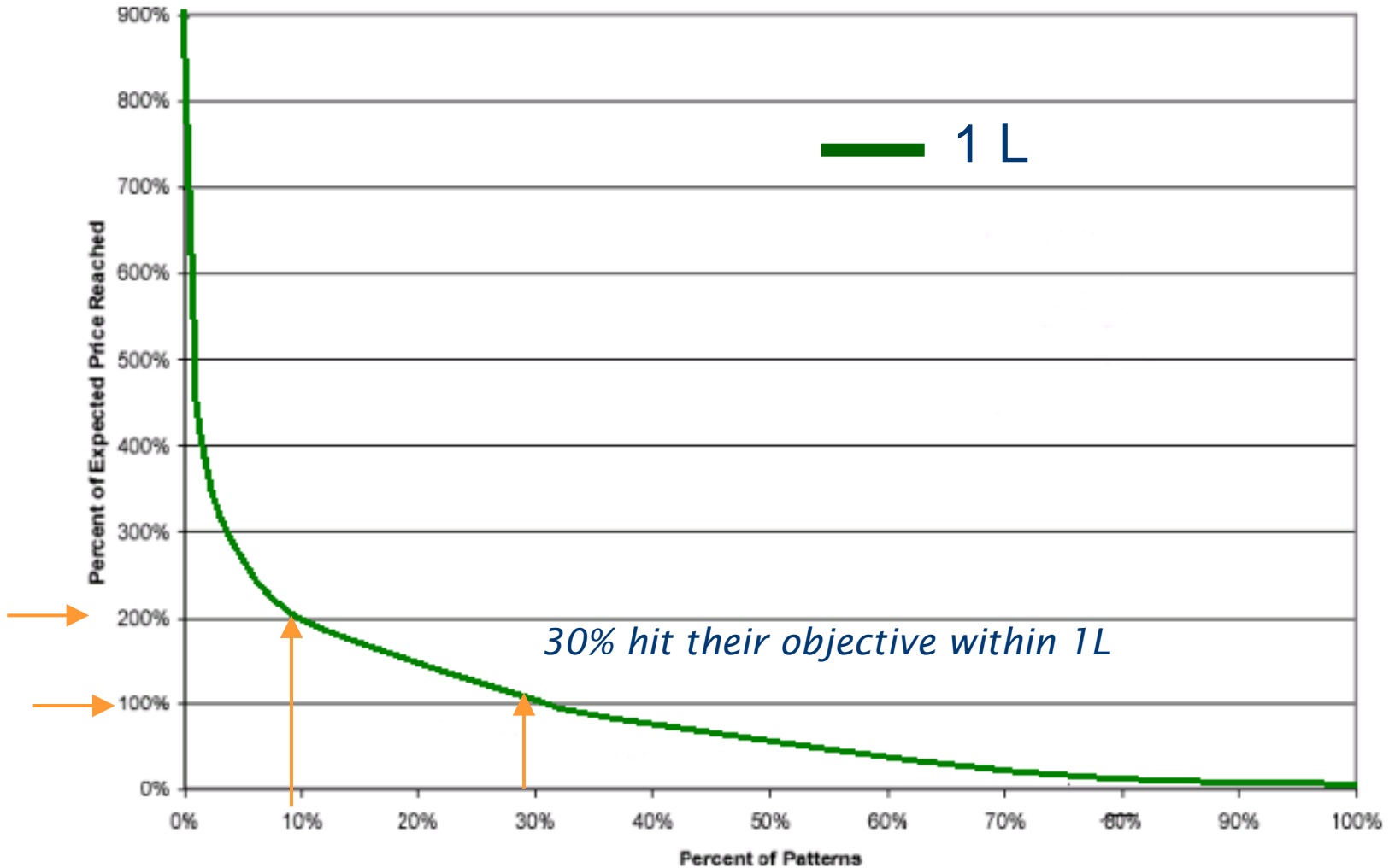
# Percent of Objective Achieved



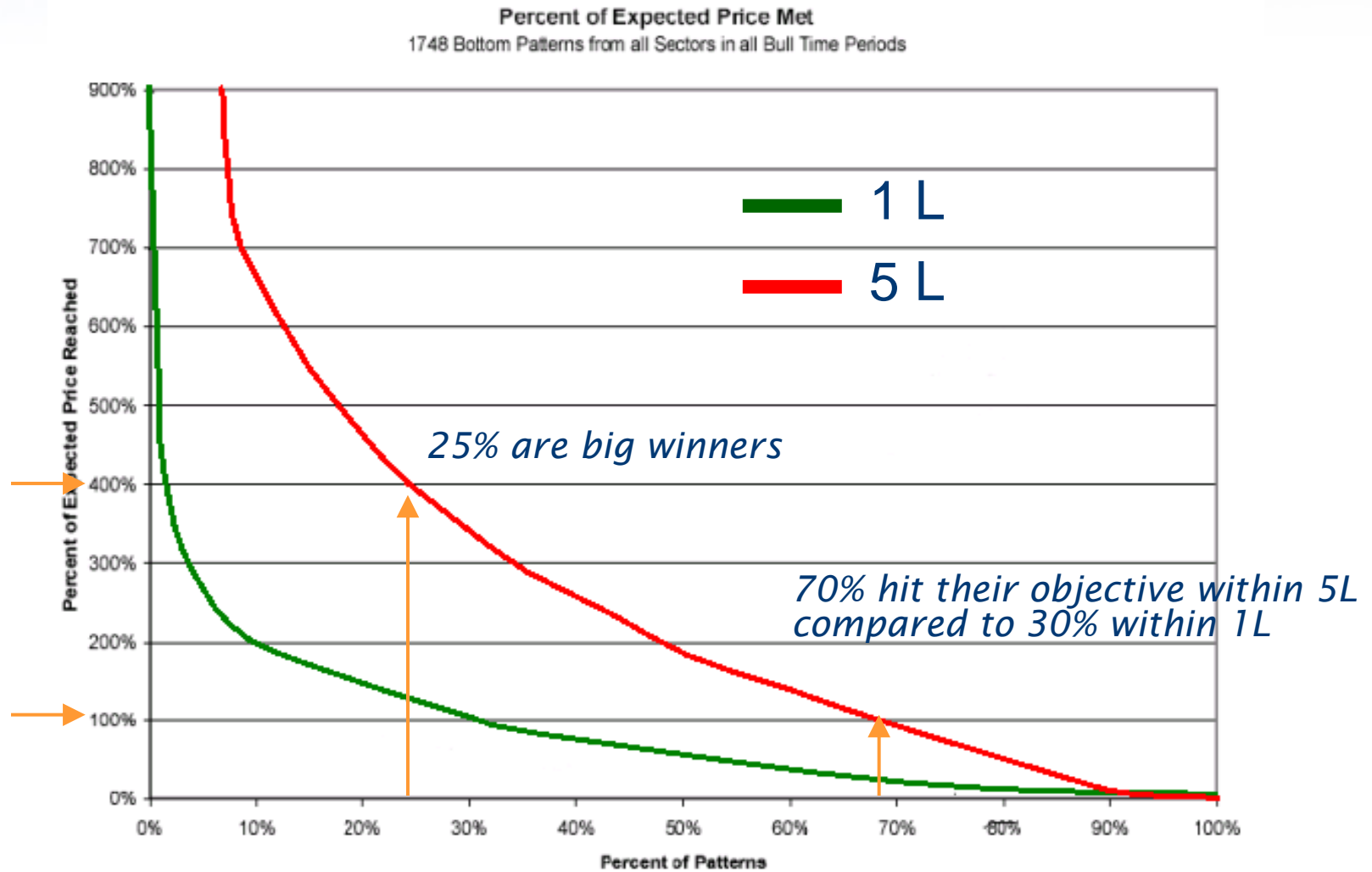


# Bullish Patterns in Bull Markets

Percent of Expected Price Met  
1748 Bottom Patterns from all Sectors in all Bull Time Periods



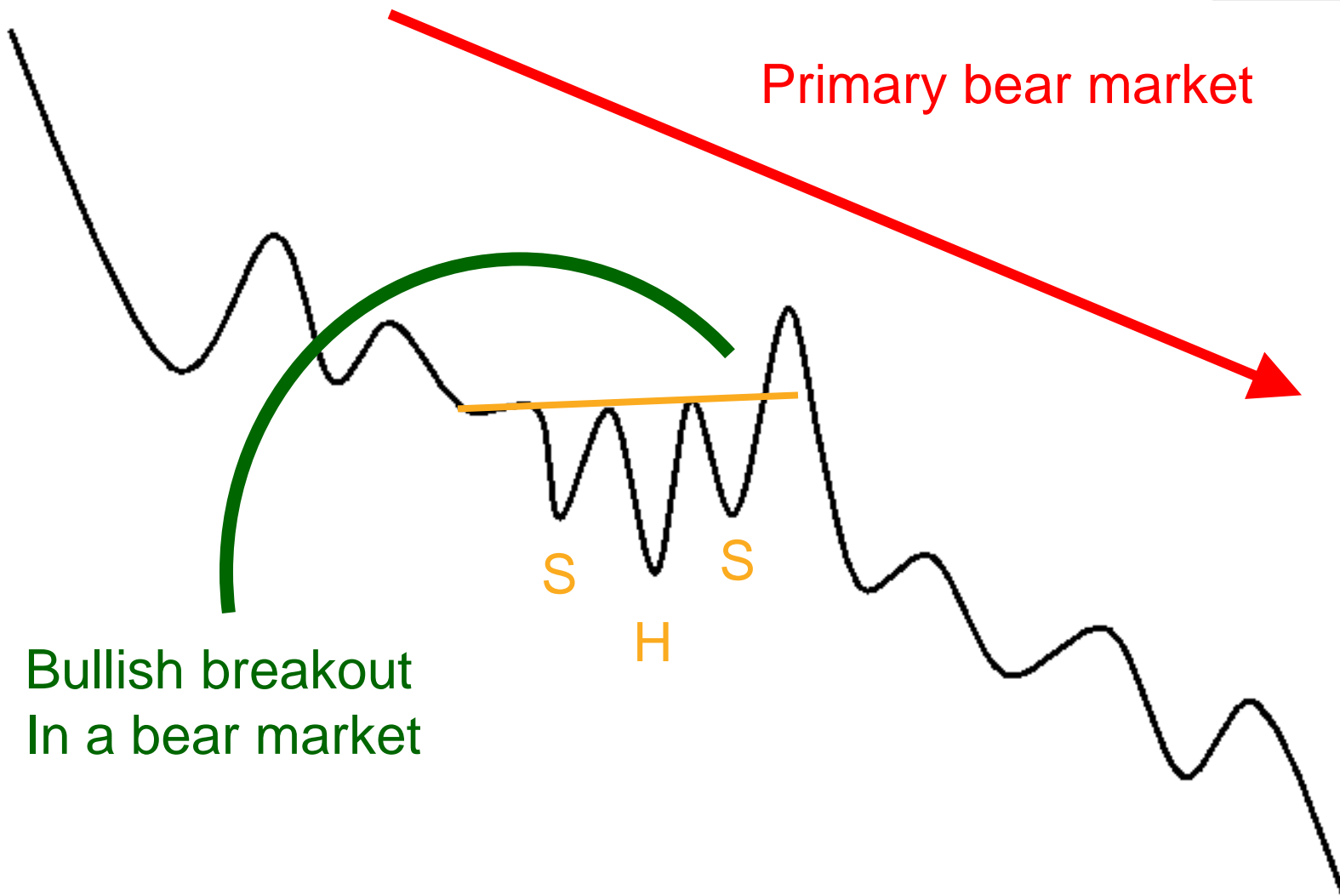
# Bullish Patterns in Bull Markets



Primary bear market

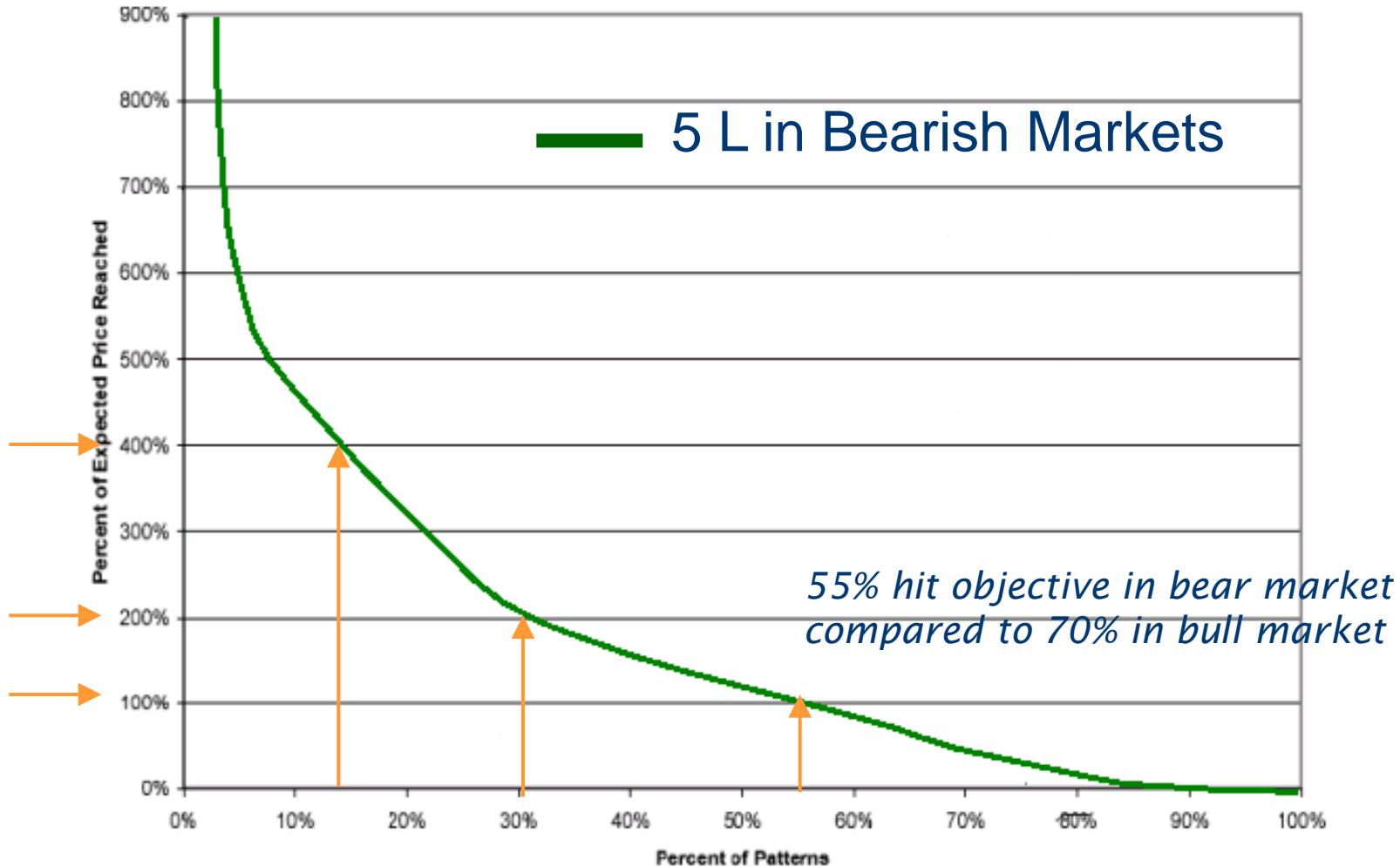
Bullish breakout  
In a bear market

S  
H  
S



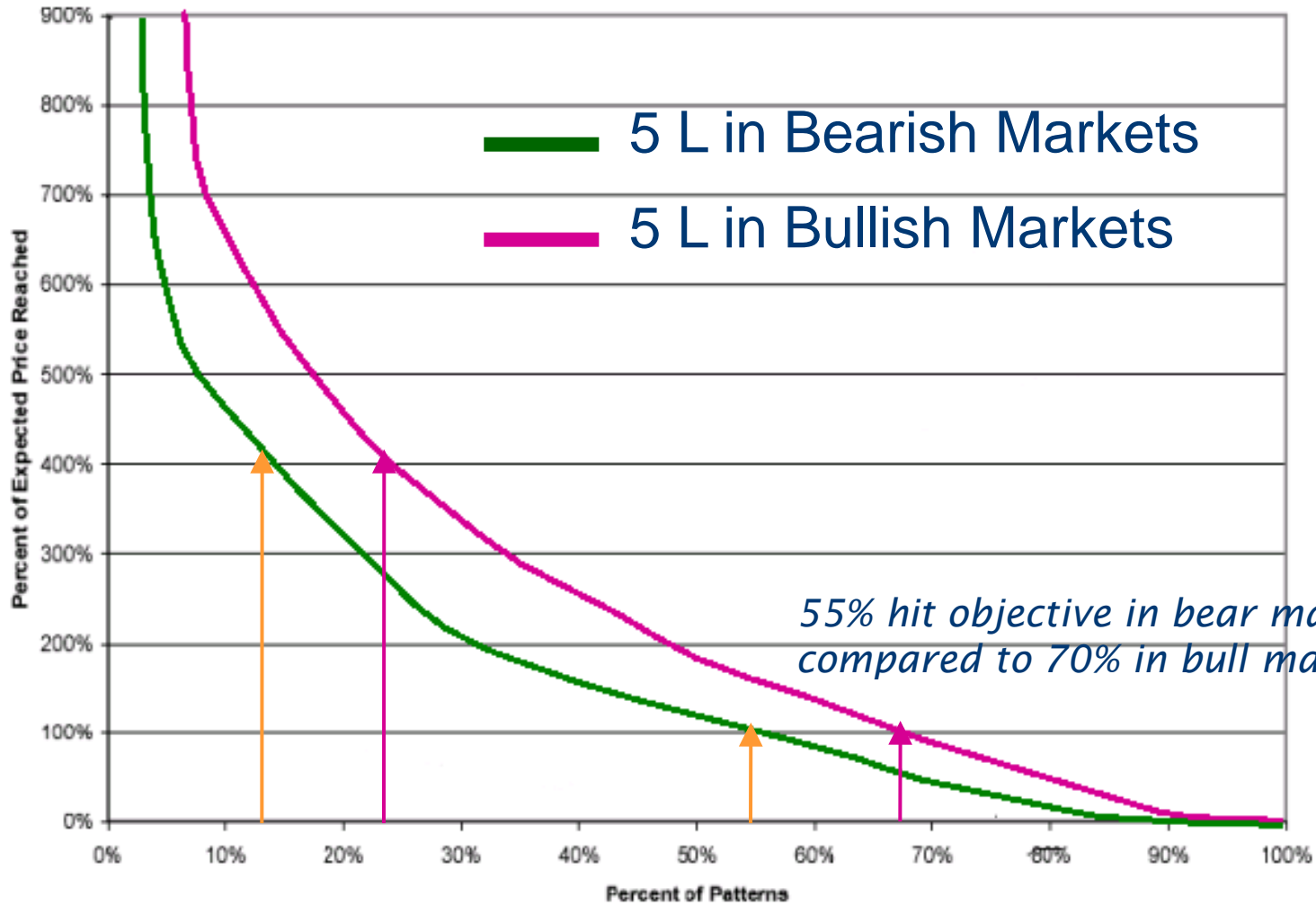
# Bullish Patterns in Bear Markets

Percent of Expected Price Met  
496 Bottom Patterns in a Bear Trend



# Bullish Patterns

Percent of Expected Price Met  
496 Bottom Patterns in a Bear Trend



# NEW Recognia ETF Newsletter



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**NOW YOU KNOW.**  
TRADE IDEAS AT YOUR FINGERTIPS.

**ETF TRADE IDEAS** March 16, 2017

This report provides you with today's trade ideas based on chart patterns that are automatically detected by Recognia®. These are starting points for your own research to identify opportunities that make sense for you. To take a closer look, click on the chart or the pattern name. Click the Trade button to access your account and do further research including the full power of Recognia tools. Feel free to forward this to a friend!

## TODAY'S TRADE IDEAS

### BULLISH

[iShares Russell 2000 ETF \(IWM:NYSE\)](#)

[iShares iBoxx \\$ High Yield Corporate Bond ETF \(HYG:NYSE\)](#)

[iShares Core MSCI Emerging Markets ETF \(IEMG:NYSE\)](#)

### BEARISH

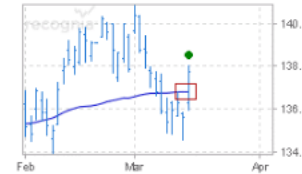
[VANGUARD FINANCIALS ETF \(VFH:NYSE\)](#)

[ISHARES EDGE MSCI MIN VOL EMERGING MARKETS ETF \(EEMV:NYSE\)](#)

[iShares Russell 1000 ETF \(IWB:NYSE\)](#)

## ISHARES RUSSELL 2000 ETF (IWM:NYSE)

### ▲ Price Crosses Moving Average



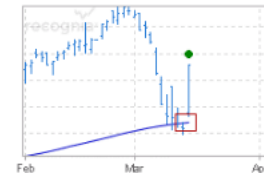
Trading closed at \$137.73 to confirm an Intermediate-Term Bullish Price Crosses Moving Average pattern

Tells Me: The price is generally in an established trend (bullish or bearish) for the time horizon represented by the moving average period (21, 50 or 200 bars).... [more details](#)

TRADE

## ISHARES IBOXX \$ HIGH YIELD CORPORATE BOND ETF (HYG:NYSE)

### ▲ Price Crosses Moving Average



Trading closed at \$87.30 to confirm a Long-Term Bullish Price Crosses Moving Average pattern

Tells Me: The price is generally in an established trend (bullish or bearish) for the time horizon represented by the moving average period (21, 50 or 200 bars).... [more details](#)

TRADE

## ISHARES CORE MSCI EMERGING MARKETS ETF (IEMG:NYSE)


### ▲ Price Crosses Moving Average



Trading closed at \$47.69 to confirm a Short-Term Bullish Price Crosses Moving Average pattern

Tells Me: The price is generally in an established trend (bullish or bearish) for the time horizon represented by the moving average period (21, 50 or 200 bars).... [more details](#)

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**NOW YOU KNOW.  
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**ETF TRADE IDEAS**

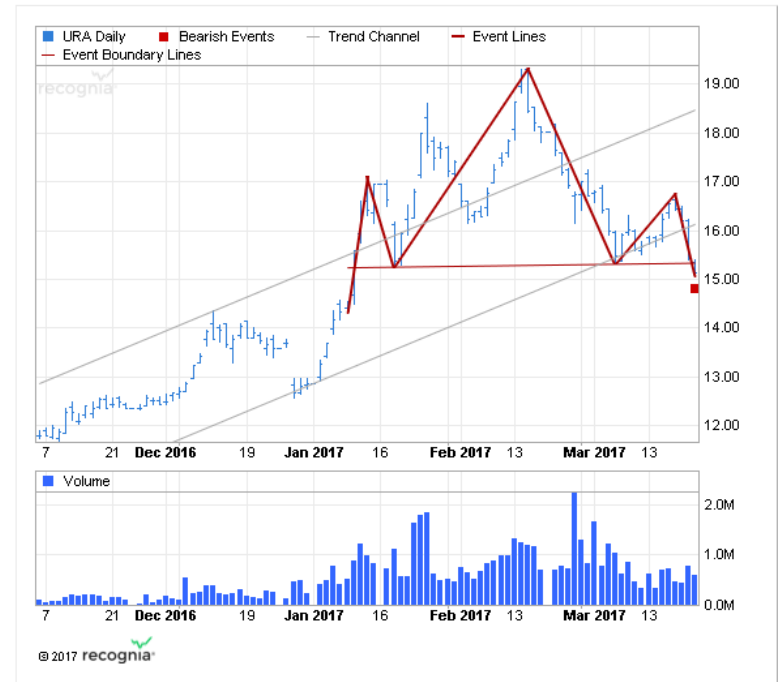
## Global X Uranium ETF forms bearish "Head and Shoulders Top" chart pattern

Mar 22, 2017

Recognia has detected a "Head and Shoulders Top" chart pattern formed on Global X Uranium ETF (URA:NYSE). This bearish signal indicates that the stock price may fall from the close of \$15.14 to the range of \$10.90 - \$11.70. The pattern formed over 52 days which is roughly the period of time in which the target price range may be achieved, according to standard principles of technical analysis.

**Tells Me:** The price seems to have reached the end of a period of "distribution" at the top of a major uptrend; the break down through support signals a reversal to a new downtrend. The Head and Shoulders Top is created by three successive rallies in the price following a significant uptrend. The highest high (head) is in the middle, flanked by two lower highs (shoulders) at roughly the same level. Volume is highest as the price makes the first two rallies, then diminishes through the right shoulder. Finally volume surges as the price closes below the neckline (drawn between the two lows) to confirm the reversal.

This bearish pattern can be seen on the following chart and was detected by Recognia proprietary pattern recognition technology.



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# To Subscribe...



The screenshot displays the Interactive Brokers (IB) desktop application interface. At the top, the menu bar includes 'IB Interactive Brokers', 'File', 'Account', and 'Help'. Below the menu bar, there are several buttons: 'New Window', 'Event Calendar', 'News', 'Analyst Research', and 'FYI' (with a red notification icon). The 'FYI' button is highlighted with a blue callout box.

The 'FYI Notifications' window is open, showing a list of notifications:

- Mar 16 Keep Ideas Organized in Trader's Journal (new feature)
- Mar 21 IB FYI: Free ETF Research Available

The notification for Mar 21 contains the following text:

Interactive Brokers and iShares® by BlackRock® invite you to join a free pilot of Recognia's new daily technical trading signal newsletter for ETFs.

This email newsletter leverages the same technical signals that Recognia has provided to active traders for years on stocks and forex. Join the tens of thousands of investors who receive free daily trade ideas from Recognia® to inspire their day's trading. Please click [here](#) to sign up.

At the bottom of the notification window, there is a 'Disclaimer' section and a toggle switch labeled 'ON' for 'Keep Sending Platform Use Suggestions Notifications'.

In the background, the 'Order Entry' window is visible, showing the symbol 'XSD' and a price of 'c59.38'. The 'BUY SELL' buttons are also visible.



# To Subscribe...



A promotional banner for recognia. It features a dark background with a hand holding a smartphone. The recognia logo is in the top left. The text 'NOW YOU KNOW. TRADE IDEAS AT YOUR FINGERTIPS.' is in green and white. A green bar at the bottom contains the text 'ETF TRADE IDEAS' in white.

Interactive Brokers and iShares by BlackRock invite you to join the tens of thousands of investors who receive free daily trade ideas from Recognia® to inspire their day's trading. Click [here](#) to see a sample.

Enter your email address:

## ABOUT TRADE IDEAS

Trade ideas are based on Technical Events identified by research provider Recognia Inc. Every financial instrument is analyzed after every market close to confirm whether a new chart pattern has formed or technical indicator has triggered a signal, giving immediate insight into the possible direction of the price. The analysis is done for you, with full commentary, so you can find out what the price action is telling you.

[https://site.recognia.com/ib\\_news/serve.shtml?page=add](https://site.recognia.com/ib_news/serve.shtml?page=add)

<https://goo.gl/hzMYxJ>

A promotional banner for iShares. The left side has a green background with white text: 'INSPIRED BY GLOBAL OPPORTUNITY. Shorten the journey from idea to investment with iShares 60+ country ETFs. EXPLORE &gt;'. The right side shows a busy street scene with many people and colorful signs. At the bottom left, it says 'INSPIRED TO BUILD. iShares by BLACKROCK'.



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## Q & A

