Playing the Investment Piano With Both Hands - Part 2

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BI Online Chapter

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The Roles of Fundamental Analysis and Technical Analysis

- Using fundamental analysis and a growth methodology, we follow BetterInvesting principles to buy and sell shares of companies that meet BI selection criteria or fail to do so
- However, as described in Part 1 of this series, the fundamental data needed to analyze a company is only updated quarterly and is often otherwise stale, fundamentals don't account for psychological market pressures
- Technical analysis helps overcome such issues and thereby supplements the primary fundamental based analysis we use
- In other words, fundamental analysis helps identify the companies whose shares we want to buy or sell while technical analysis plays a supporting role and assists us in deciding when to buy or sell shares of a company

Charts and Patterns

- In Part 1 of this series, we looked at moving averages and trend lines on these types of charts
  - Line Charts
  - Bar Charts
  - Candlestick Charts
  - Point & Figure Charts
- Now we'll discuss a few key patterns that appear on these types of charts (not PnF)
- Chart patterns are of two general types: reversal or continuation
- Why use chart patterns?
  - They often repeat in a consistent manner, hence they have predictive usefulness

Topics

- In this presentation, I will discuss:
  - Bar chart patterns
  - Candlestick chart patterns
  - Individual Stock Indicators
  - Support and resistance
  - Confirmation

StockCharts.com

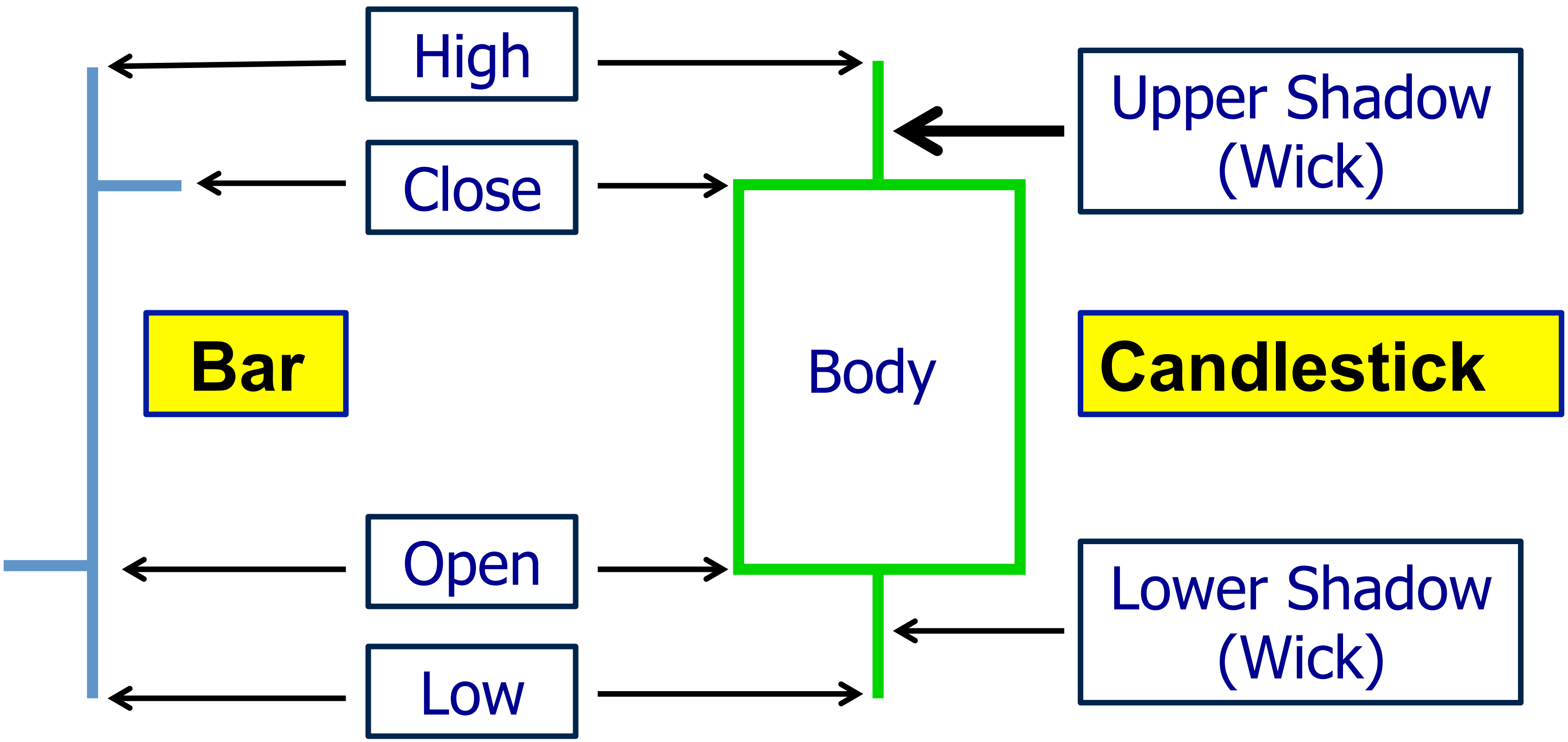
- Stockcharts.com is a technical analysis site open to the public
- I'll use their charts and some other features here
- StockCharts has a free portion and three levels of paid subscriptions available
- The free portion of StockCharts is excellent, offering a meaningful amount of capability without charge
- ChartSchool is free and useful, especially for TA beginners

Chart Patterns

- There are hundreds of chart patterns; no single pattern is infallible
- The most popular patterns appear on charts more frequently, exhibiting the most consistent, correct results
- A continuation pattern means that the current trend will continue relatively unchanged while a reversal pattern means that the trend will reverse itself
- However, the appearance of a continuation or reversal pattern is not a guaranty that price will continue or reverse
- Except for candlesticks, pattern usage is no longer as popular as it once was due to a marked increase in the use of indicators made possible by easy access to the Internet, computers and significant reference material

Bar vs. Candlestick Attributes

Bar vs. candle elements showing info visually for both types of charts



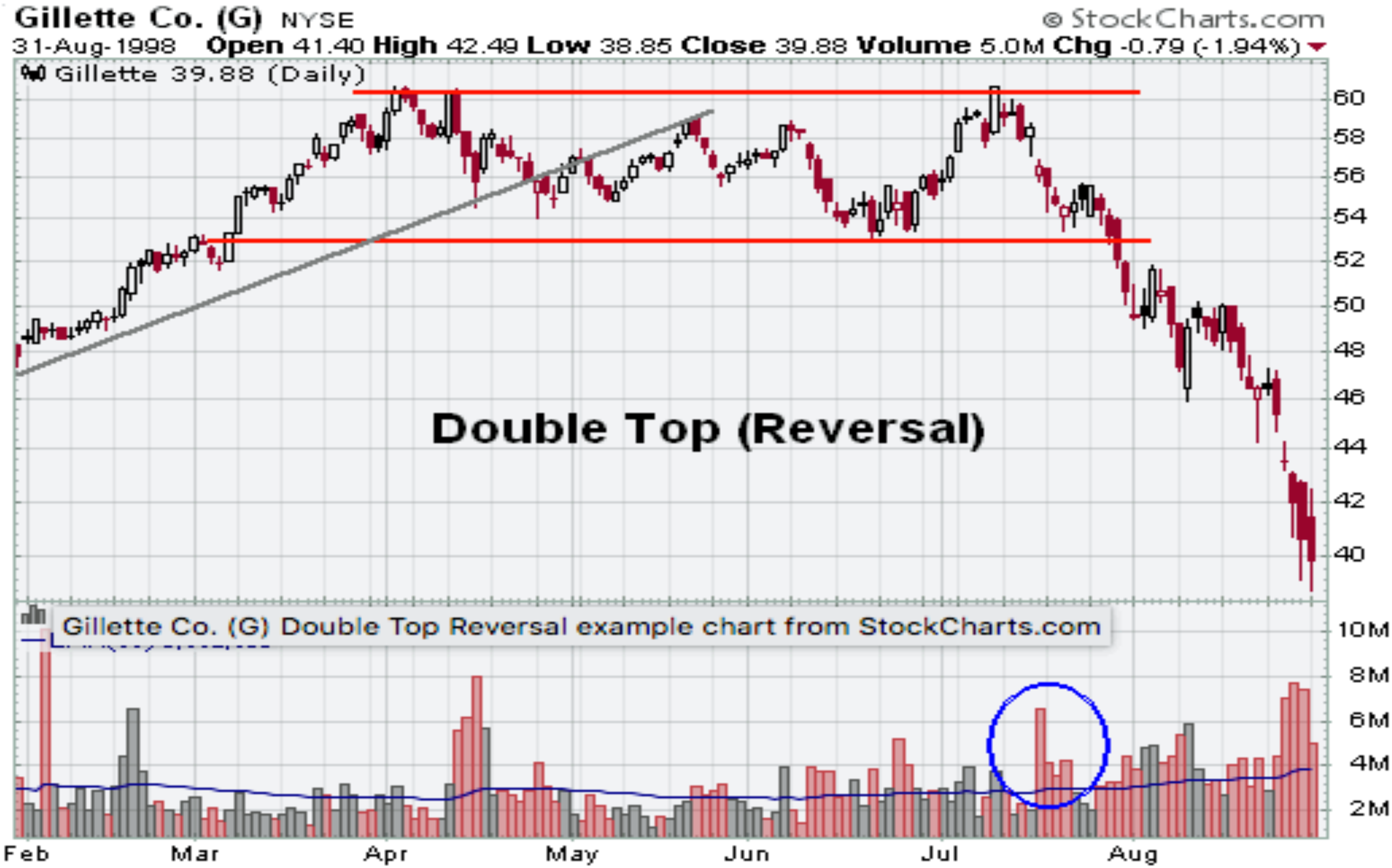
Bar Chart for SUNW

Typical bar chart showing how SUNW performed over 3 months in early 2000; up days shown in black, down days in red

Bar Chart Patterns

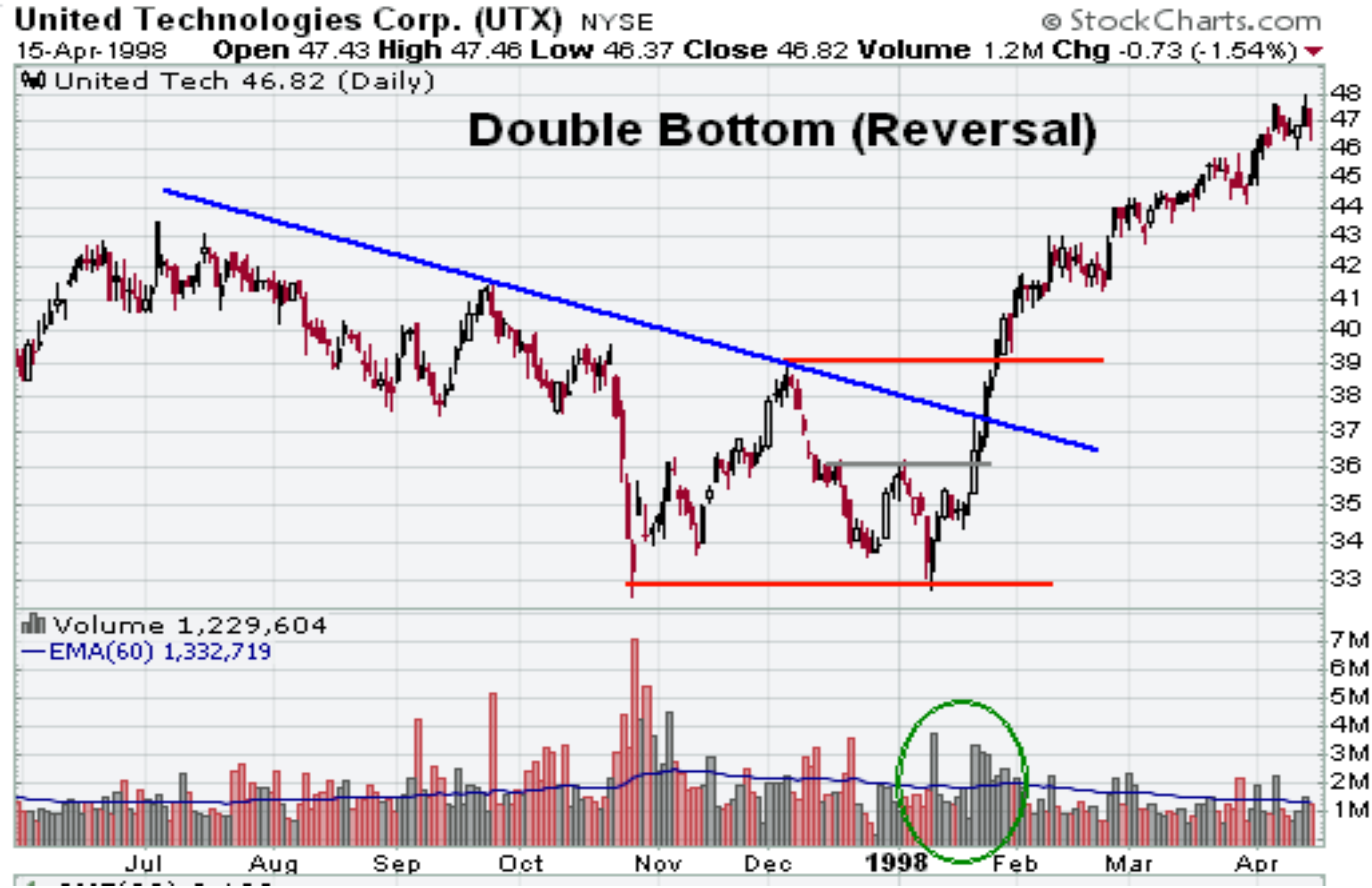
- Double Top and Double Bottom
- Head and Shoulders Top and Head and Shoulders Bottom
- Cup With Handle (IBD favorite)
- Many other patterns are used in TA
- Explanations for these three chart and other chart patterns are found in ChartSchool

Double Top

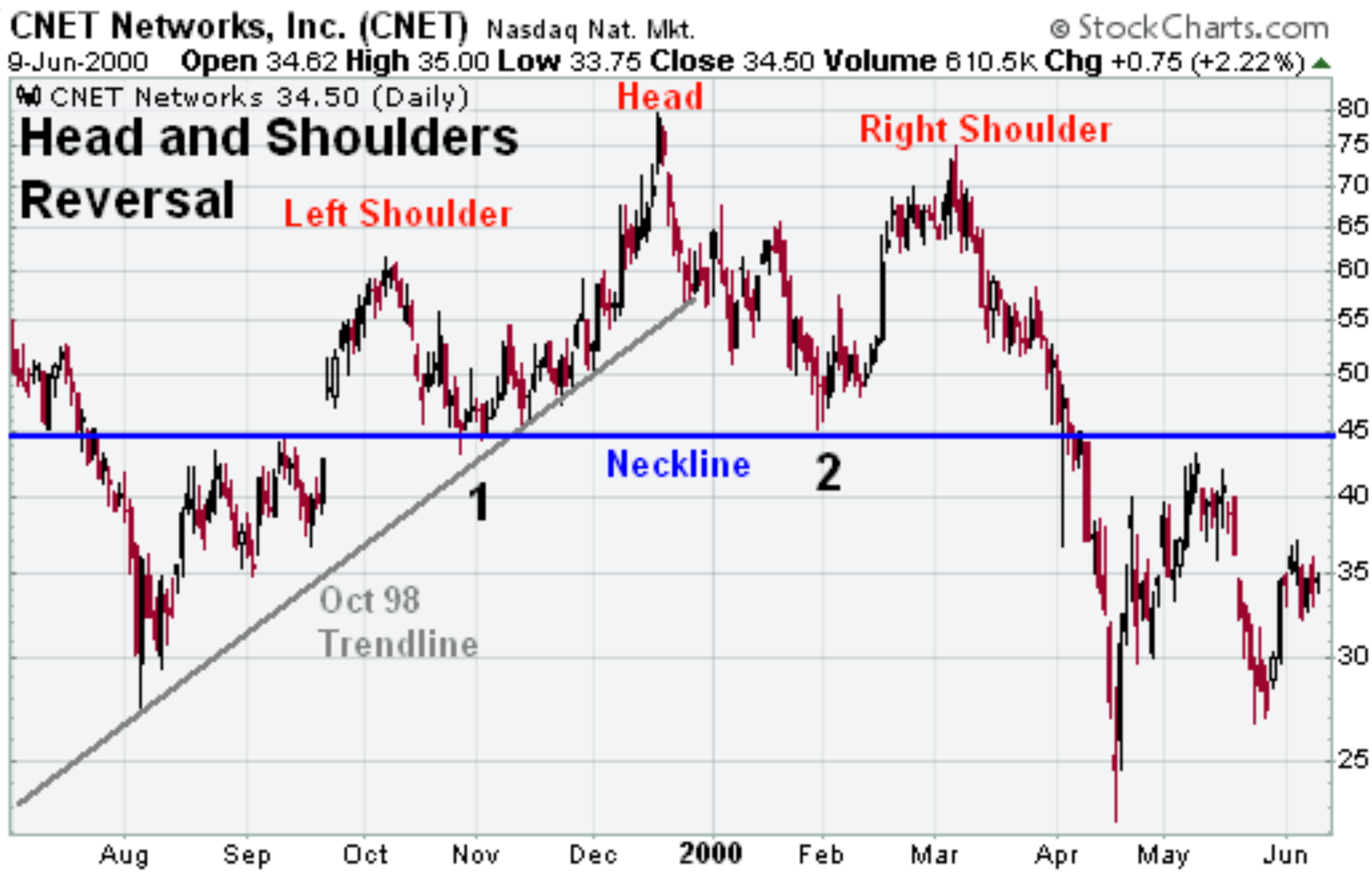


Gillette Co. (G) NYSE
© StockCharts.com
31-Aug-1998 Open 41.40 High 42.49 Low 38.85 Close 39.88 Volume 5.0M Chg -0.79 (-1.94%)
Gillette 39.88 (Daily)
Double Top (Reversal)
Gillette Co. (G) Double Top Reversal example chart from StockCharts.com
60
58
56
54
52
50
48
46
44
42
40
10M
8M
6M
4M
2M
Feb
Mar
Apr
May
Jun
Jul
Aug

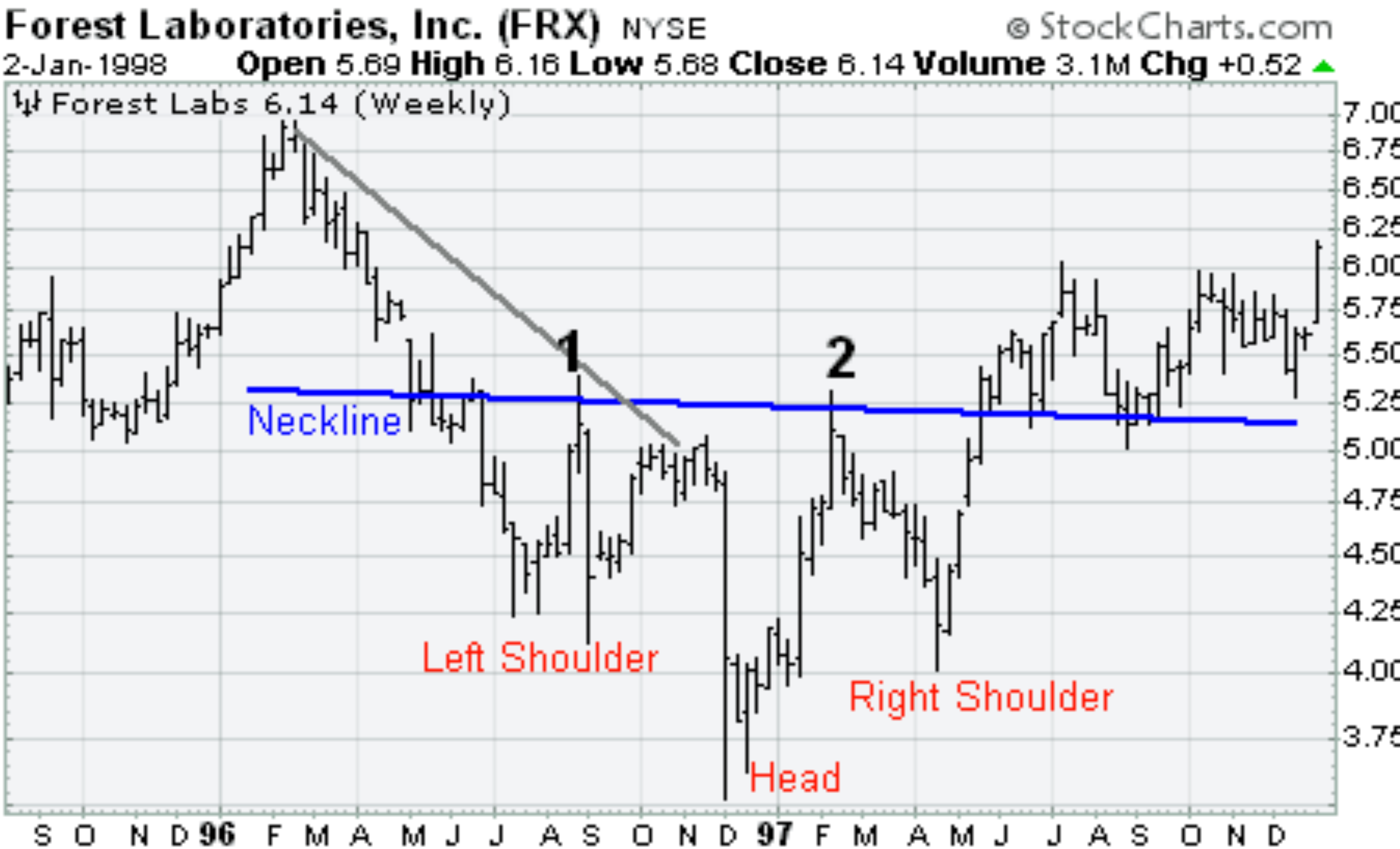
Double Bottom



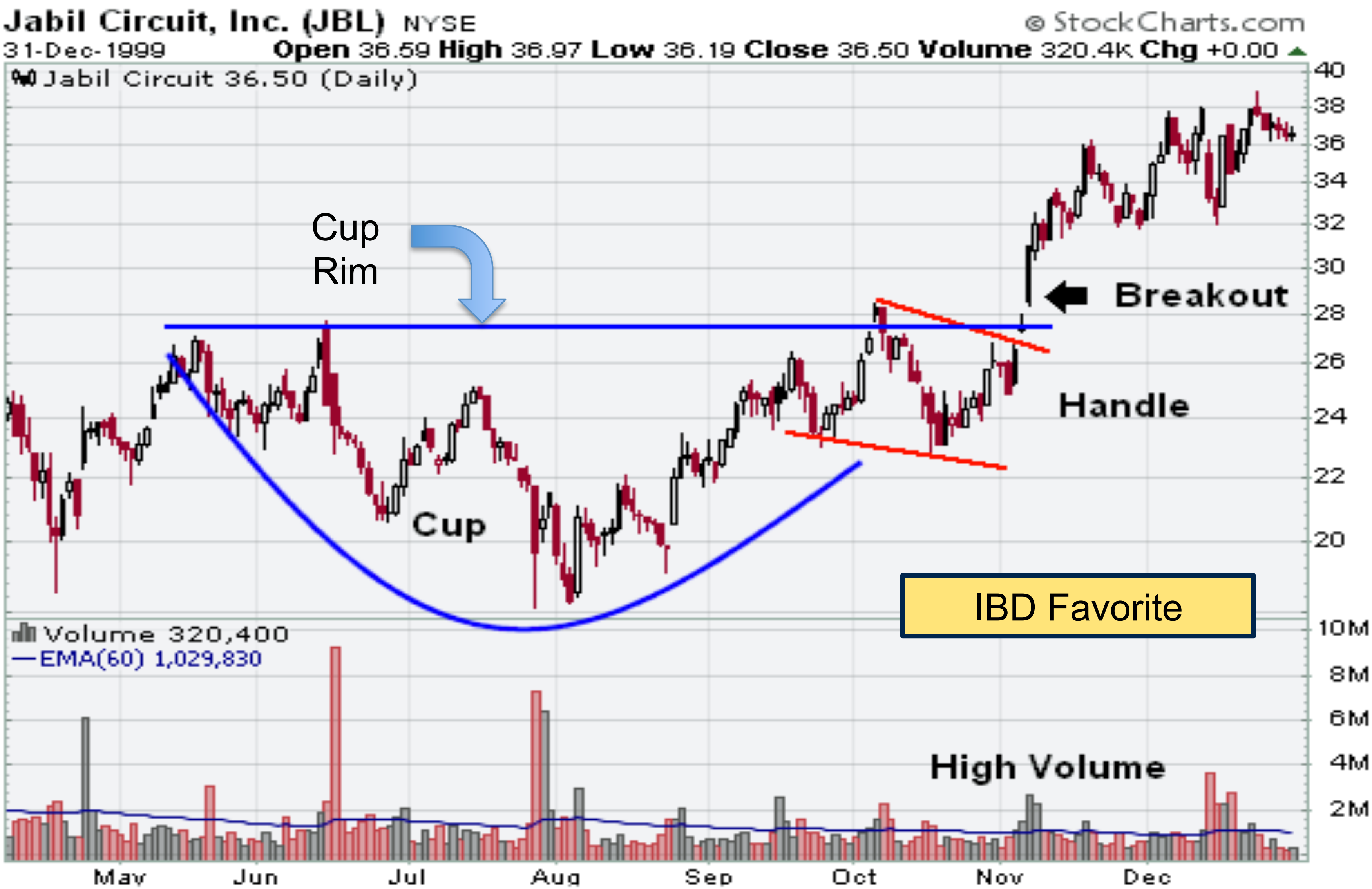
Head & Shoulders Top



Head & Shoulders Bottom



Cup With Handle



Use Of Bar Chart Patterns

- The analysis of popular bar chart patterns can be helpful as a supporting basis for making buy and sell decisions with respect to fundamental analysis
- However, even today, using appropriate TA analysis platforms and relying on very fast computers, rigorous chart pattern review remains time consuming and demanding
- The availability of chart pattern recognition software helps, but fails to eliminate all errors or reduce the burden of having to review many charts in a relatively short time period while adding extra cost

Candlestick Chart for SUNW

Typical candle chart showing how SUNW performed over same period as the prior bar chart: up days in white, down days in red or black

Candlestick Charting

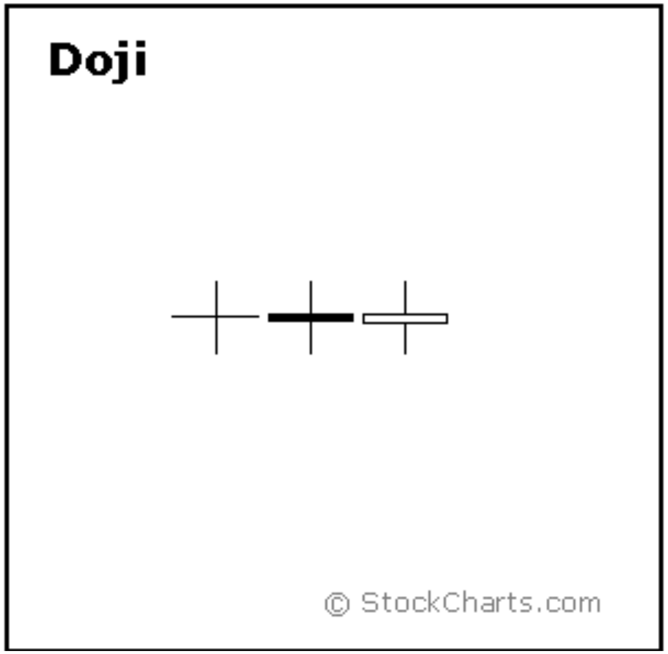
- Candlestick charts became highly popular around 1989 when Steve Nison returned from extensive study in Japan and then released his 1991 book on Candlestick Charting
- Candlesticks pictorially reflect the continuing battle between supply and demand
- Candlesticks can be applied to any tradeable that has an open, close, high and low
- Candlesticks, by their nature, reflect and reveal psychological market factors
- Candlesticks can be reliably combined with western technical analysis

Candlestick Patterns

- Candlesticks represent price action over a single period which can be measured by minutes, hours, days, weeks, etc.
- Only one candlestick per period, multiple periods are needed for compound candlestick patterns
- Candlestick patterns can represent a single period or be formed from a combination of multiple periods
- Candlestick patterns tend to stay valid for short periods, paused by a continuation pattern or when contradicted by a reversal pattern
- Reversal patterns occur about 40 times more frequently than continuation patterns and account for about 75% of all candlestick patterns

Doji

A doji is a continuation candlestick that has equal or almost equal opening and closing prices. Dojis are important at the top or bottom of a trend, but not as much when they occur in a trend



Doji

- In its most common form, opening and closing prices are nearly the same for a doji although these prices are sometimes equal; means candle has no body or thin body
- Doji candle lines get a lot of attention even though they convey indecision
- By themselves, doji are usually not sufficient to signal a reversal, but always warrant investigation, especially in an “aging” trend
- While doji are warning signals, they don’t guarantee that price is about to change

Doji (Cont’d)

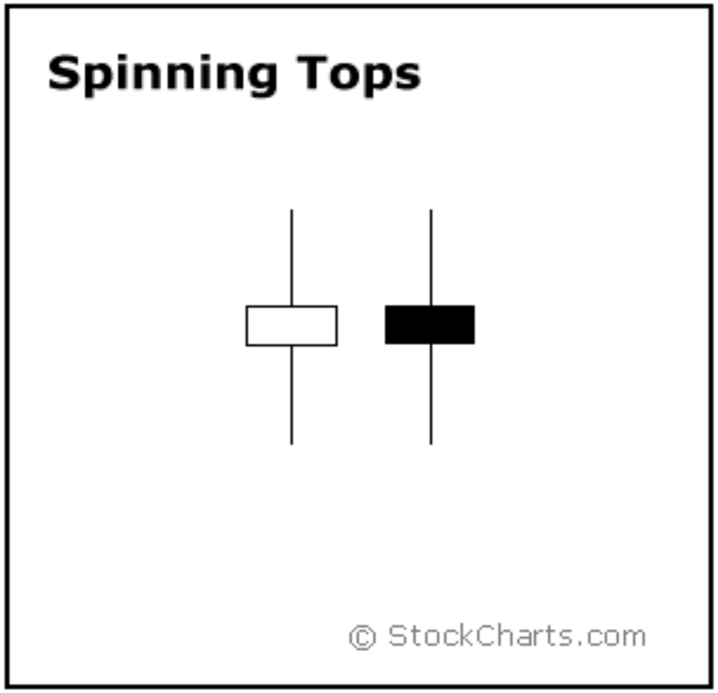
- The relevance of a doji depends on the preceding trend or preceding candlesticks; it often takes meaning from its context
- After an advance or in combination with a long white candlestick, a doji signals that buying pressure may be starting to weaken
- After a decline or in combination with a long black candlestick, a doji signals that selling pressure may be starting to diminish
- A Doji indicates that the forces of supply and demand have become more evenly matched and that a change in trend may be near

Spinning Tops

- Spinning tops, like doji, also represent indecision
- Spinning tops can also form parts of other candlestick patterns; e.g. morning and evening stars, hammers
- The small real body, whether white or black, indicates there has been little price movement from open to close
- The length of the shadows indicate the extent to which bulls and bears were active during the session
- Even though prices moved significantly higher and lower in the period, neither buyers or sellers could gain the upper hand so the result was a relative standoff for the session

Spinning Tops

A spinning top is a candlestick that has a small black or white body in comparison to its shadows. Nison says it is the size of the body, not the shadows, that is important.

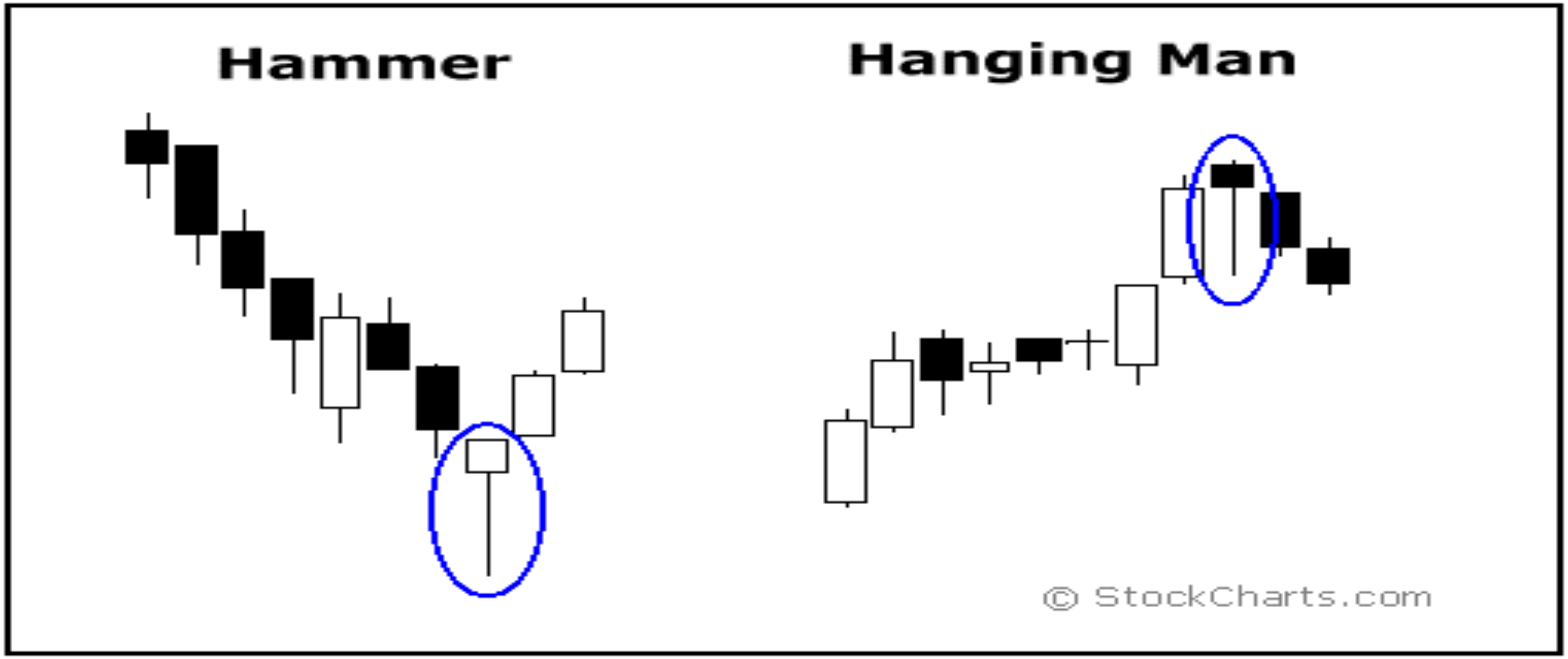


Hammer & Hanging Man

- The Hammer is a bullish reversal pattern formed after a price decline
- Hammers can indicate bottoms or support levels; buying pressure is building
- Volume, especially heavy volume, confirms Hammer message
- The Hanging Man is a bearish reversal pattern that forms following an advance
- The Hanging Man candle can indicate a top or a resistance level
- Hammer and Hanging Man identified by where they appear in an uptrend or downtrend

Hammer & Hanging Man

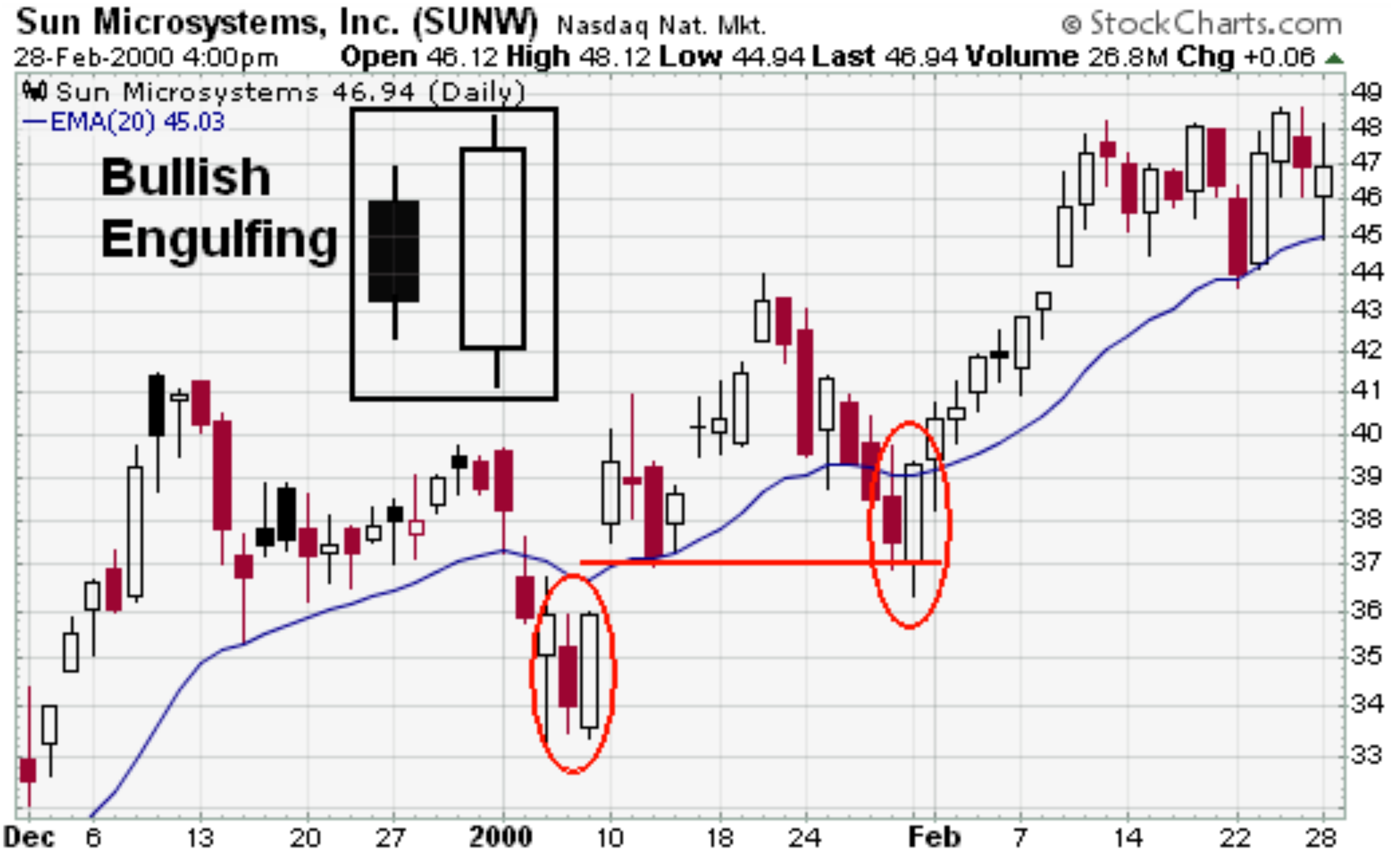
The Hammer and Hanging Man are alike except for the nature of their bodies and where they appear in a trend. Both have long lower shadows and slight to a lack of upper shadows; called a square lollipop



Bullish Engulfing Pattern

- The bullish engulfing pattern is made up of two candlesticks, the first candle is black, adjacent and to the left of a taller or engulfing white candle
- Generally, the larger the white candlestick and the greater the engulfing amount, the more bullish an ensuing reversal will be
- If buyers stay committed, bullish confirmation will occur as strength continues and prices will continue to rise

Bullish Engulfing Pattern



Bearish Engulfing Pattern

- The bearish engulfing pattern is made up of two candles, the first is a white candle that's adjacent to and on the left of a taller engulfing black candle
- Generally, the larger the black candlestick and the greater the degree of engulfing, the more bearish the ensuing reversal will be
- If sellers stay committed, bearish confirmation will occur as weakness continues and the price drop will persist going forward

Bearish Engulfing Pattern

MACD

- MACD or Moving Average Convergence Divergence is a favorite TA indicator; developed by Gerald Appel in late 70's
- MACD is a lagging, trend following indicator which means that it is best applied in a trending situation and will likely produce a greater number of whipsaws in a trendless or sideways market
- The big issue with MACD is not that it is a lagging indicator, but that it is often misused by being applied in a trendless market, a momentum indicator like RSI is better there
- MACD was created to reduce moving average lag and improve its responsiveness, but it still lags to some degree

Basis of MACD

- MACD is an unbounded oscillator that varies above and below a zero line
- It attempts to combine momentum and trend following characteristics into a single indicator to overcome typical moving average lag
- MACD produces buy and sell signals earlier than those resulting from the use of conventional moving averages, but it still is considered an overall lagging indicator
- MACD isn’t best for identifying overbought or oversold conditions; a TA analyst would use RSI, Stochastics or a momentum based indicator for that

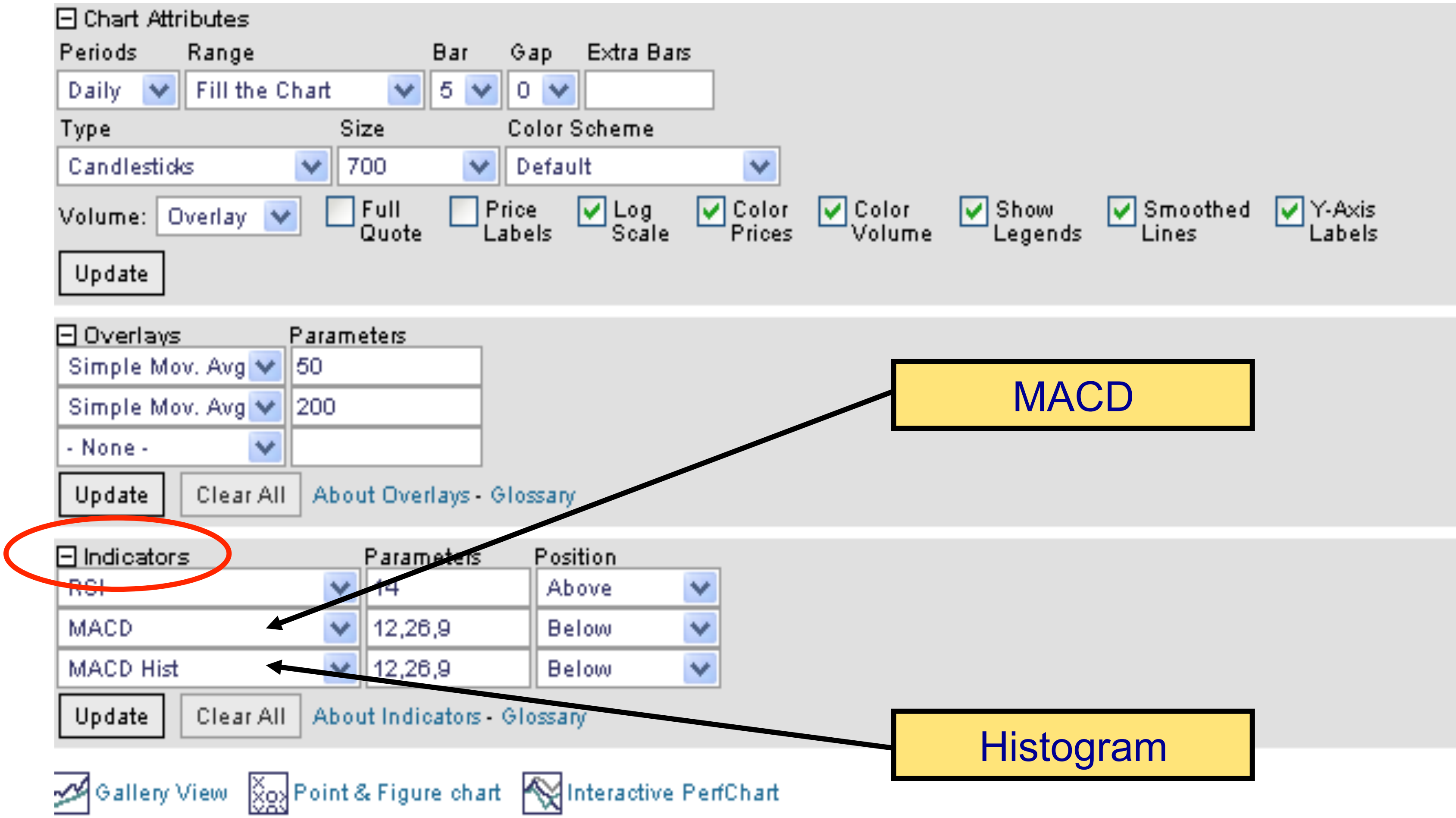
MACD Calculations

- MACD represents the arithmetic difference between two exponential moving averages
- The default MACD is created using a long EMA of 26 days and a short EMA of 12 days
- MACD is the value of the 12 day EMA minus the value of the 26 day EMA on the same day
- A 9 day EMA (signal generation line) is then plotted against the MACD line to create crossover signals and entries into and out of bullish or bearish areas

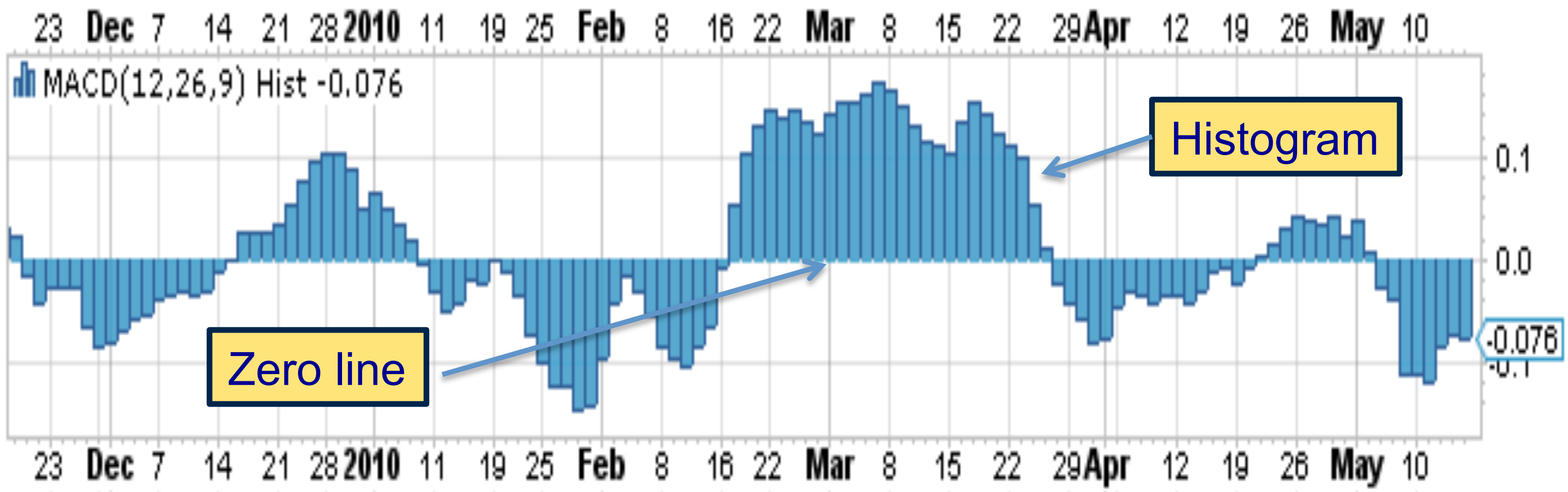
MACD Types

- In StockCharts, there are two MACD choices in the "Indicators" drop down menu
  - MACD
  - MACD Hist
- The "MACD" choice will show a chart having both the MACD and its signal line along with the MACD histogram, makes for a more crowded chart
- The "MACD Hist" choice shows only the histogram, yields a cleaner chart

MACD Type Selection

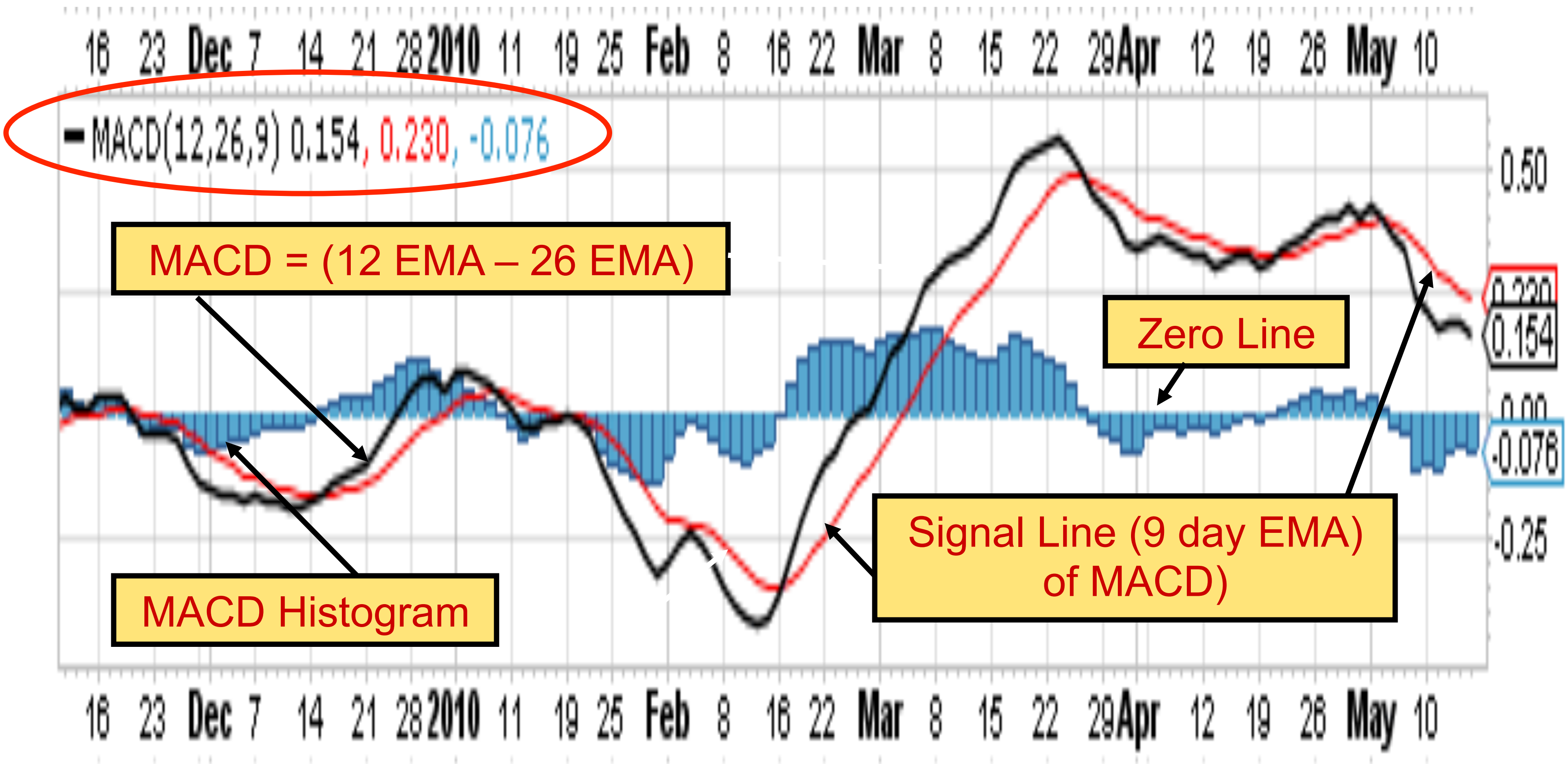


MACD - Histogram

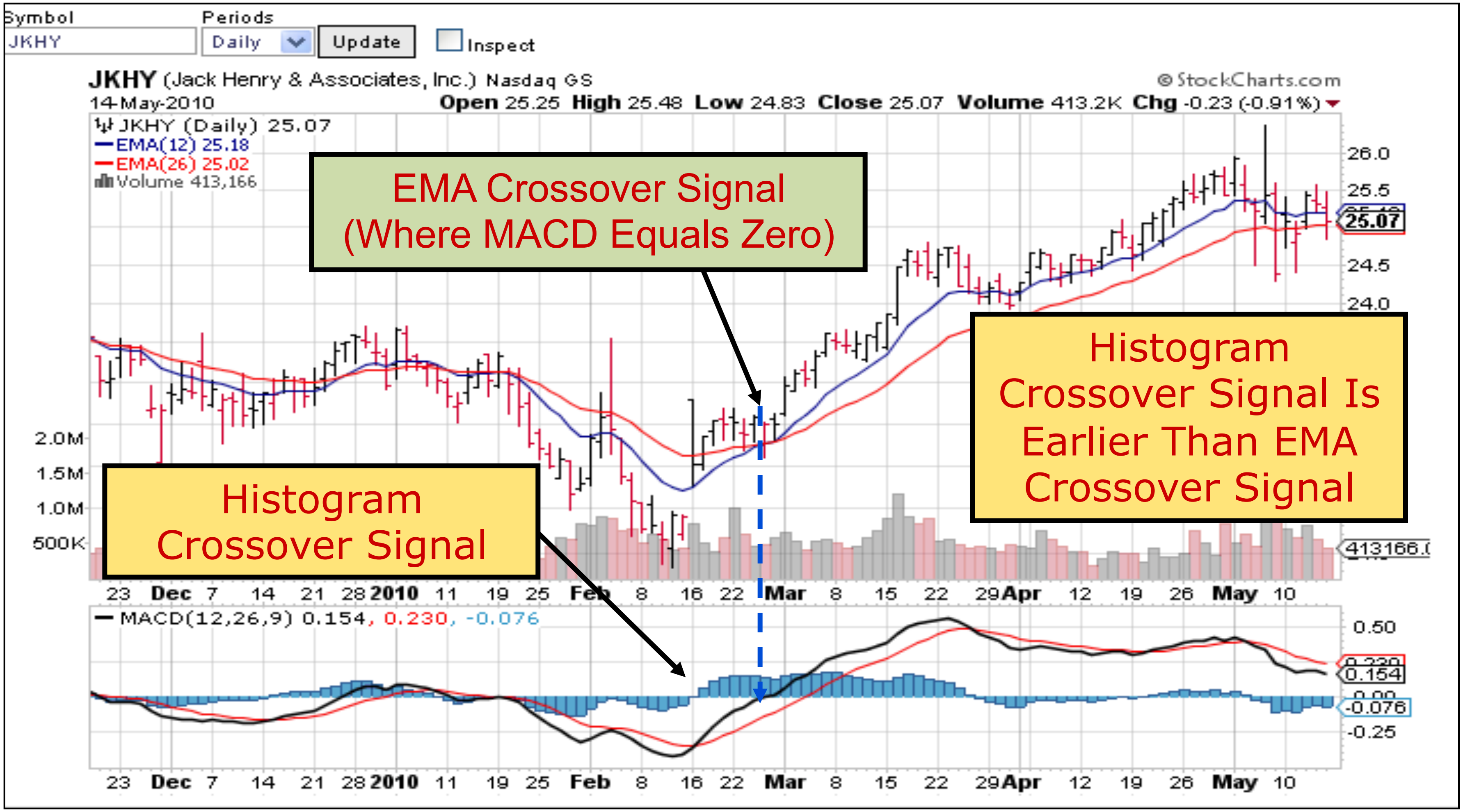


- A histogram is a representation of data point distribution using adjacent rectangles, where the height of each rectangle represents the value of each data point
- In the MACD histogram, the height of each rectangle is the difference between the MACD and signal lines
- The MACD histogram is both an informative and simplified graphic form of the MACD indicator

MACD Graph and Histogram



MACD Crossover vs. Histogram Crossover



MACD – Buy and Sell Signals

Buy and sell signals from MACD are derived in three different ways:

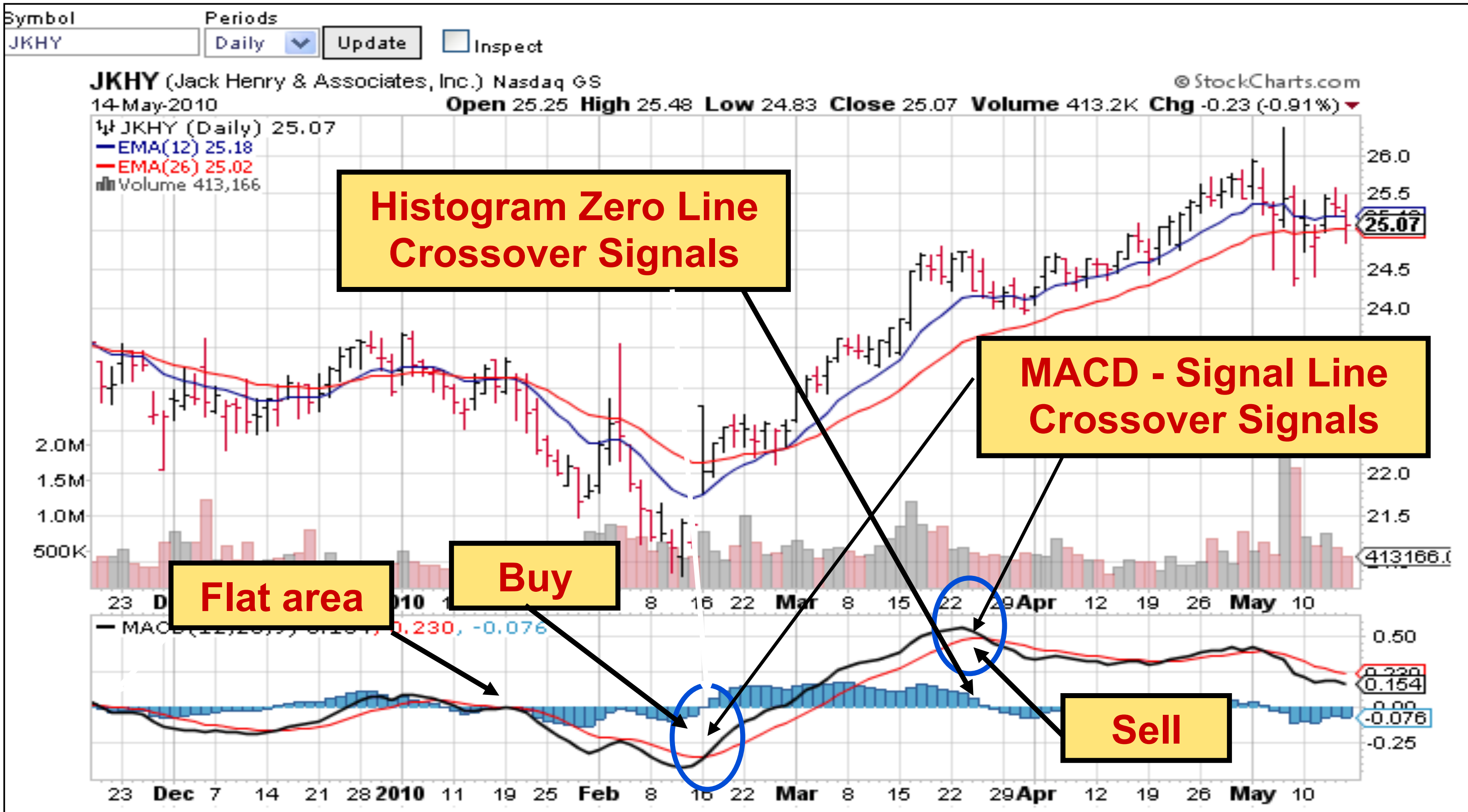
- Signal line crossovers of the MACD line, which are histogram zero line crossovers; while good, these signals are considered the least reliable MACD signals
- MACD line crossovers of the zero line, where the moving averages cross; these signals are considered the second most reliable signals produced by MACD
- Divergence between the histogram and the price line of the stock, ETF or index of interest; these are the most reliable signals produced using MACD although they do not occur frequently

MACD – Buy & Sell Signals

For signal line crossovers of the MACD line, when the MACD line value and the signal line are equal

- A sell signal is generated when the MACD line crosses from above to below the signal line
- A buy signal is generated when the MACD line crosses above the signal line from below
- Be wary of crossovers where the signal line and MACD lines are relatively flat producing whipsaws; look for confirmation from another source

MACD – Buy & Sell Signals



Basics of RSI

- RSI was created by R. Welles Wilder
- RSI is designed to oscillate between zero and 100
- RSI values above 70 are considered to signify an overbought condition while values below 30 are considered oversold, note that these values can remain over 70 or below 30 for extended periods; immediate action is not required
- A drop from above to below 70 is viewed as a sell signal, a rise from below to above 30 is considered to be a buy signal

Using RSI

- In addition to acting on RSI values above 70 or below 30, some traders use crossovers of the RSI 50 line as buy or sell signals depending on the direction of the cross
- RSI usually displayed against price chart
- RSI signals work best when prices move sideways
- RSI is often used as a confirming signal for other non-momentum indicators
- RSI (or any other indicator) should not be used by itself!
- Excellent trading signals arise from divergence between RSI and another indicator

RSI Chart

MCD (McDonalds Corp.) NYSE
© StockCharts.com
5-Mar-2008
Op 50.04 Hi 50.35 Lo 49.52 Cl 50.14 Vol 7.6M Chg +0.29 (+0.58%)
MCD (Daily) 50.14
MA(1) 50.14
RSI is based on closing prices. The pink like shows the closing prices.
(1) oversold reading and bottom two weeks later
(2) several overbought readings during strong uptrend
(3) oversold reading and bottom two weeks later
58
56
54
52
50
48
46
44
42
Aug
Sep
Oct
Nov
Dec
2008
Feb
Mar
RSI(14) 45.67
overbought
oversold
RSI
90
70
50
30
10

Basics of CMF

- Created by Marc Chaikin, Chaikin Money Flow (CMF) measures the amount of money flow volume over a specified look-back time, usually 20 or 21 periods
- Instead of using a cumulative total as many other volume indicators do, CMF sums money flow volume
- This creates an indicator that fluctuates above and below a zero line between zero and one
- The calculations involved are a bit complex, but are explained in ChartSchool

Using CMF

- CMF measures buying and selling pressure as created by volume over the look back period
- When CMF moves above its zero line, it shows buying pressure, likely confirming an uptrend
- When CMF moves below its zero line, that shows selling pressure, likely confirming a downtrend
- Whipsaws around the CMF zero line are common, but these can be filtered out by setting the bullish threshold a little above zero (+0.05) and the bearish threshold a little below zero (-0.05); not perfect, but acceptable

CMF Chart

HOG (Harley Davidson Inc) NYSE
© StockCharts.com
20-Dec-2010
Open 34.57 High 34.60 Low 34.13 Last 34.38 Volume 1.4M Chg -0.12 (-0.35%)
HOG (Daily) 34.38
0.0%
38.2%
50.0%
61.8%
100.0%
CMF(20) 0.162
HL(0.05, -0.05)
whipsaw
CMF
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

Support and Resistance

- Lines and zones of support or resistance are key levels where supply and demand prevent price changes beyond the support or resistance levels
- Demand is synonymous with bullish excess
- Supply equates to bearish excess
- While support and resistance lines or zones act as barriers to price change, they can be pierce

Support

- Support is the level at which a floor under share price seems strong enough to keep price from dropping further
- The more often price touches a support line, the stronger support becomes
- However, support is not guaranteed and a drop below support indicates sellers are now willing to accept less for their shares; supply-demand equilibrium has changed
- A support break also indicates that buyers are no longer willing to enter into trades as high as the former support level

Support on Chart

Resistance

- Resistance is the level at which a ceiling above price is strong enough to keep price from rising further
- The more often price touches a resistance line, the stronger resistance becomes
- Resistance is not guaranteed and a rise above it indicates buyers are now willing to pay more for their shares; the supply-demand equilibrium has changed
- A resistance break also indicates that sellers are no longer willing to enter trades as low as the prior resistance level

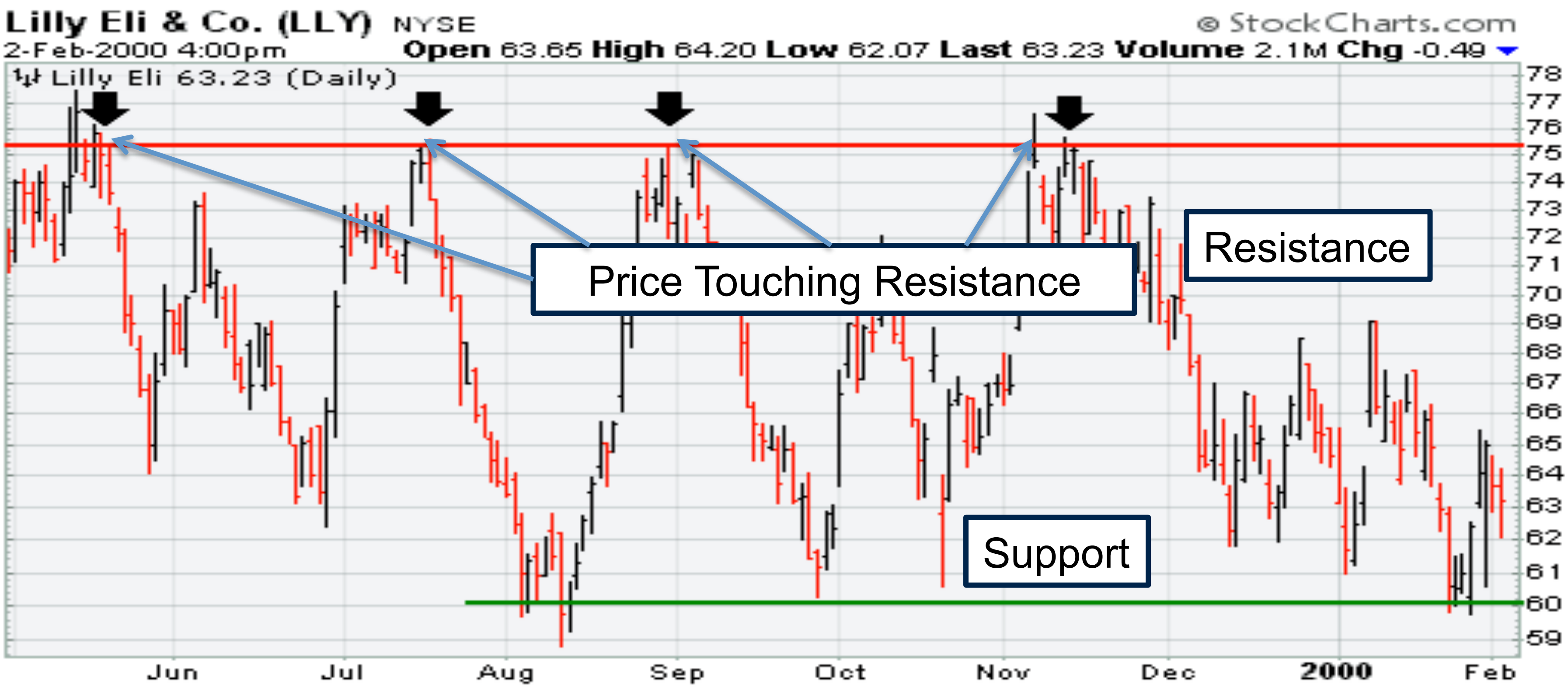
Resistance on Chart

Support ⟺ Resistance

- It is not unusual for support to become resistance or for resistance to become support
- The transformation from support to resistance or the reverse reflects a dramatic shift in supply-demand equilibrium
- Trading range is a time period on a chart where prices move between support and resistance

Support ⟷ Resistance

Trading Range



Know Your Indicator

- Multicollinearity is a statistical term for a problem that occurs when separate analysis is performed to derive “independent” results based on the same data
- Expert says that multicollinearity results when indicators are derived from the same data causing the outcome from each indicator to be redundant; results are not independent
- With indicators, it’s important to be aware of the manner in which they are best used to avoid potential redundancy
- A preferred set of indicators should include momentum, trend following and volume based indicator

Chart of Popular Indicators

Category	Indicators	
Momentum	Rate of Change (ROC)	Stochastics (%K, %D) Relative Strength Index (RSI) Commodity Channel Index (CCI) Williams %R (Wm%R) StochRSI TRIX Ultimate Oscillator Aroon
Trend	Moving Averages	Moving Average Convergence Divergence (MACD) Average True Range (ATR) Wilder's DMI (ADX) Price Oscillator (PPO)
Volume	Accumulation Distribution	Chaikin Money Flow (CMF) Volume Rate of Change Volume Oscillator (PVO) Demand Index On Balance Volume (OBV) Money Flow Index

HPQ HP Inc. NYSE
13-Dec-2018
© StockCharts.com
Open 22.44 High 22.72 Low 22.07 Close 22.10 Volume 11.5M Chg -0.26 (-1.15%)
HPQ (Daily) 22.10 (13 Dec)
26.75
26.50
26.25
26.00
25.75
25.50
25.25
25.00
24.75
24.50
24.25
24.00
23.75
23.50
23.25
23.00
22.75
22.50
22.25
22.00
20
27
Sep
10
17
24
Oct
8
15
22
29
Nov 5
12
19
26
Dec
10
RSI(14) 41.64
90
70
50
30
10
CCI(20) -76.20
200
100
0
-100
-200
Wm%R(14) -90.55
-20
-50
-80

Confirmation

- No matter how positive you are about your analysis or conclusions, any reversal or continuation signal needs to be confirmed!
- Confirmation requires an agreement between non-related or redundant indicators
- Consider market context when picking the indicators you will use for analysis
- Start your TA journey slowly and ramp up over time, but don't forget confirmation even when you start

Summary

- Pay attention to support and resistance especially when considering buying or selling
- Look for confirmation between patterns or indicators
- Divergence is a reliable, strong signal, look for instances in charts
- Avoid multicollinearity
- Keep a journal to track all investment decisions

Future Presentation

- Playing The Investment Piano – Part 3
  - Relative Strength
  - Market Sentiment Indicators
  - Divergence
  - Miscellaneous
  - Putting It All Together, FA+TA Example 1, FA+TA Example 2
- December 15, 2020

Helpful Reading

- Technical Analysis Plain and Simple, Third Edition (2010), FT Press, by Michael Kahn
- Why Technical Analysis Matters, April 2010, AAII Journal, Pgs. 7-11, by Michael Kahn
- Getting Started In Candlestick Charting, 2008, John Wiley & Sons, by Tina Logan

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Questions ?

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