Fidelity INVESTMENTS

A Fidelity Investments Webinar Series

Getting Started with Technical Analysis

BROKERAGE: TECHNICAL ANALYSIS

Upcoming Webinars

Getting Started with Technical Analysis

Learn the assumptions that guide technical analysis, and get to know the basics of trend trading.

Understanding Indicators in Technical Analysis

Identify the various types of technical indicators including, trend, momentum, volume, and support and resistance.

Identifying Chart Patterns with Technical Analysis

Use charts and learn chart patterns through specific examples of important patterns in bar and candlestick charts.

Managing Risk with Technical Analysis

Manage your trading risk with a range of confirmation methods.

About Our Co-Author

Charles D. Kirkpatrick II, CMT

Charles D. Kirkpatrick II, CMT, is president of Kirkpatrick & Company, Inc., a technical analysis research firm that publishes the Market Strategist investment newsletter. A past instructor in finance at the School of Business Administration, Fort Lewis College and Adjunct Professor of Finance at Brandeis University International Business School, he is a two-time winner of the Market Technicians Association's prestigious Charles H. Dow Award for research in technical analysis, winner of the MTA Annual Award in 2008 for "outstanding contributions to the field of technical analysis," and winner in 2012 of the Mike Epstein Award from the MTA Educational Foundation for "long-term sponsorship of Technical Analysis in Academia."

He is a Chartered Market Technician, a past member of the board of directors of the Market Technicians Association, past editor of the Journal of Technical Analysis, past board member and vice-president of the Market Technicians Association Educational Foundation and a member of the American Association of Professional Technicians (AAPTA). He co-authored Technical Analysis: The Complete Source for Financial Market Technicians, the primary textbook for the CMT program and for university graduate courses on technical analysis, authored Beat the Market, and most recently, Time the Markets: Using Technical Analysis to Interpret Economic Data.

He is a graduate of Phillips Exeter Academy, Harvard College (AB) and the Wharton School (MBA) and lives with his wife in Maine.

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Defining Technical Analysis

Charts, Chart Types, and Chart Construction

Best Practices for Trend Traders

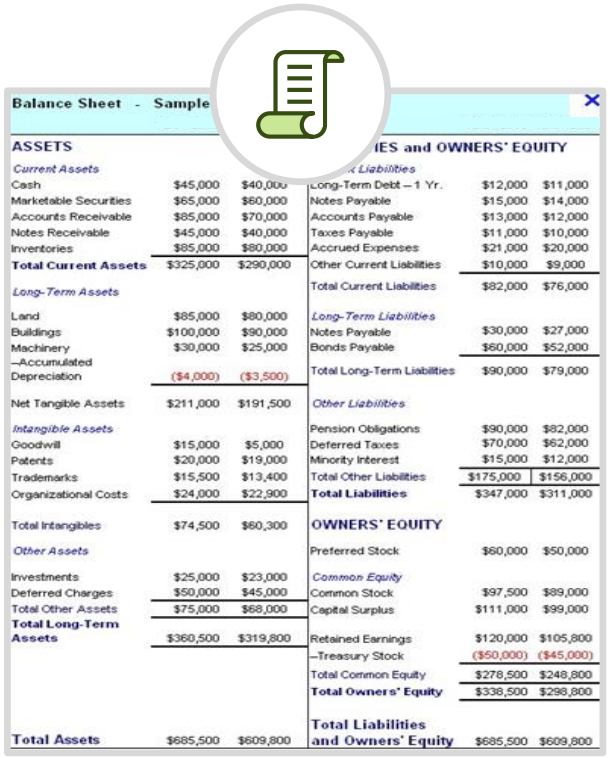
Basics of Trend Analysis

Agenda

Defining Technical Analysis

Fundamental Analysis &Technical Analysis

Two Common Types of Analysis



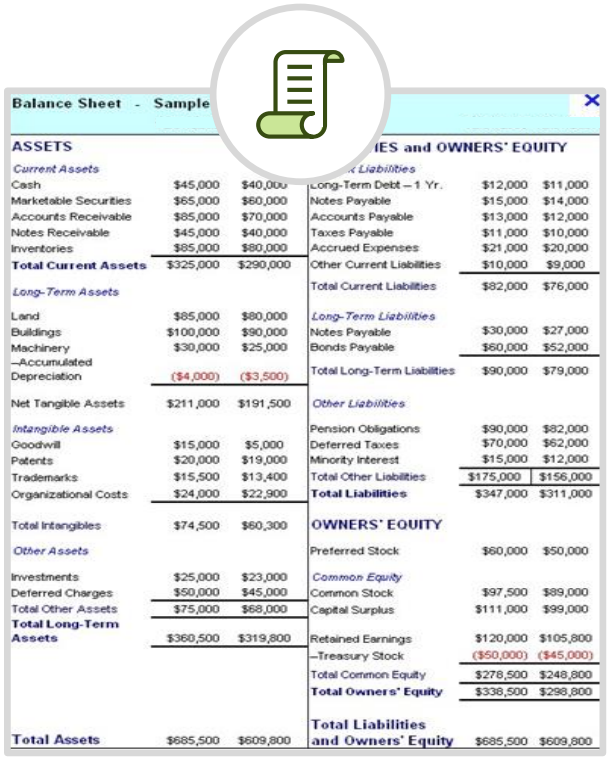
Balance Sheet - Sample

ASSETS			IES and OWNERS' EQUITY		
Current Assets			*t Liabilities*		
Cash	$45,000	$40,000	Long-Term Debt – 1 Yr.	$12,000	$11,000
Marketable Securities	$65,000	$60,000	Notes Payable	$15,000	$14,000
Accounts Receivable	$85,000	$70,000	Accounts Payable	$13,000	$12,000
Notes Receivable	$45,000	$40,000	Taxes Payable	$11,000	$10,000
Inventories	$85,000	$80,000	Accrued Expenses	$21,000	$20,000
Total Current Assets	$325,000	$290,000	Other Current Liabilities	$10,000	$9,000
			Total Current Liabilities	$82,000	$76,000
Long-Term Assets					
Land	$85,000	$80,000	*Long-Term Liabilities*		
Buildings	$100,000	$90,000	Notes Payable	$30,000	$27,000
Machinery	$30,000	$25,000	Bonds Payable	$60,000	$52,000
–Accumulated Depreciation	($4,000)	($3,500)	Total Long-Term Liabilities	$90,000	$79,000
Net Tangible Assets	$211,000	$191,500	*Other Liabilities*		
Intangible Assets			Pension Obligations	$90,000	$82,000
Goodwill	$15,000	$5,000	Deferred Taxes	$70,000	$62,000
Patents	$20,000	$19,000	Minority Interest	$15,000	$12,000
Trademarks	$15,500	$13,400	Total Other Liabilities	$175,000	$156,000
Organizational Costs	$24,000	$22,900	**Total Liabilities**	$347,000	$311,000
Total Intangibles	$74,500	$60,300	**OWNERS' EQUITY**		
Other Assets			Preferred Stock	$60,000	$50,000
Investments	$25,000	$23,000	*Common Equity*		
Deferred Charges	$50,000	$45,000	Common Stock	$97,500	$89,000
Total Other Assets	$75,000	$68,000	Capital Surplus	$111,000	$99,000
Total Long-Term Assets	$360,500	$319,800	Retained Earnings	$120,000	$105,800
			–Treasury Stock	($50,000)	($45,000)
			Total Common Equity	$278,500	$248,800
			Total Owners' Equity	$338,500	$298,800
Total Assets	$685,500	$609,800	**Total Liabilities and Owners' Equity**	$685,500	$609,800

Fundamental Analysis

Technical Analysis

Defining Fundamental Analysis



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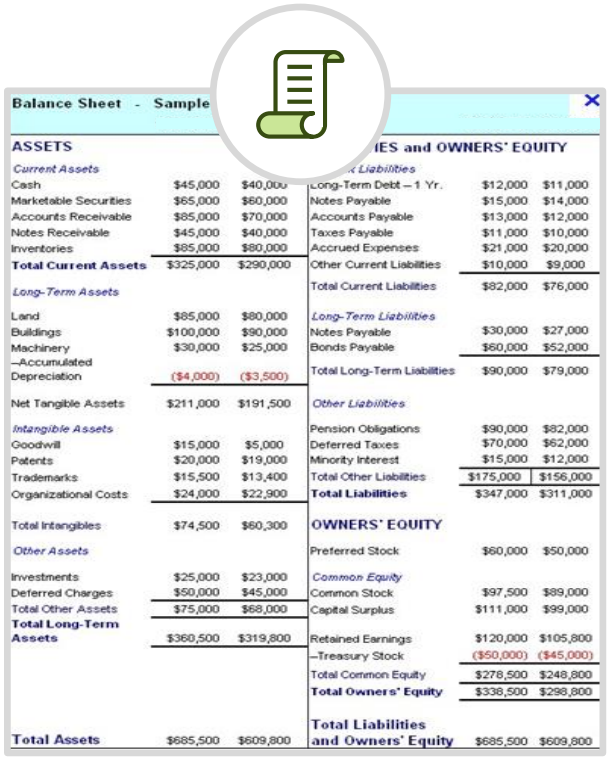
Definition

Fundamental analysts study companies using measures such as:

- Quality of management
- Labor relations
- Inventory control
- PE ratio and EPS growth rates
- Return on equity and assets

Defining Fundamental Analysis



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Limits

Fundamental analysis does not help you with:

- Timing of the investment
- Making the selling decision
- Quantifying the risk vs. reward

Defining Technical Analysis

Definition

Technical analysis primarily studies historical market data. It also:

- Focuses on the supply-and-demand dynamic expressed via stock prices
- Visualizes shifts in supply-and-demand which can be seen in chart patterns
- Accounts for the emotional aspects of the marketplace
- Quantifies the capital risk of trading and investment decisions
- Does not try to predict the future

Defining Technical Analysis

Limits

Technical analysis is still not a perfect investment method and has limits:

- Patterns, trends, and indicators are never precise, and charts require human interpretation
- Technical traders are susceptible to the same emotions and cognitive biases as all other investors

Defining Technical Analysis

Assumptions

- Prices in freely traded markets are determined by the economic principles of supply-and-demand
- Price discounts everything
- Prices are nonrandom but not necessarily predictable
- Prices have direction and tend to travel in observable trends
- Behavior and history in the marketplace will repeat itself
- Price patterns summarizing behavior are “fractal”

Charts, Chart Types, and Chart Construction

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Charts, Chart Types, & Chart Construction

Overview

Analyze price behavior

Easily visualize the patterns and trends within data

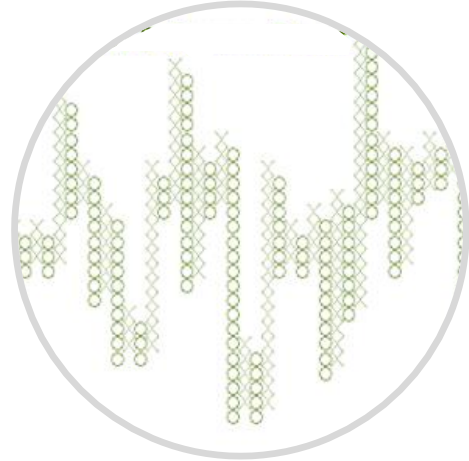
Charts, Chart Types, & Chart Construction

Overview

Line Chart

Bar Chart

Candlestick Chart



Point & Figure Chart

Chart Types

Bar Charts

Visualizes

- Open, High, Low, Close
- Volume for a specific time interval

Advantages

- Most common
- Easy to read
- Provides full range of trading for time interval

Chart Types

Candlestick Charts

Visualizes

- Open, High, Low, Close
- Volume for a specific time interval

Advantages

- Gaining popularity
- More visual than a bar chart
- Uses color to show differences between open and close prices

Chart Construction

Reversal Points

When a price is rising, stops, and then declines, the price at which the rise halted is a "reversal point."

- In this situation, the reversal point is called a **"peak"** and is important because it is where buyers were overcome by sellers.
- When a price is declining, stops, and then rises, the price at which the decline halted is a reversal point called a **"trough."** It is the price at which sellers were overcome by buyers.
- Reversal points are the foundations of trends, trend lines, channels, patterns, and support and resistance.

The Value of Reversal Points

The longer the trend, the more important the reversal point

Reversal point importance is determined by the length of the trend before and after the peak or trough.

Basics of Trend Analysis

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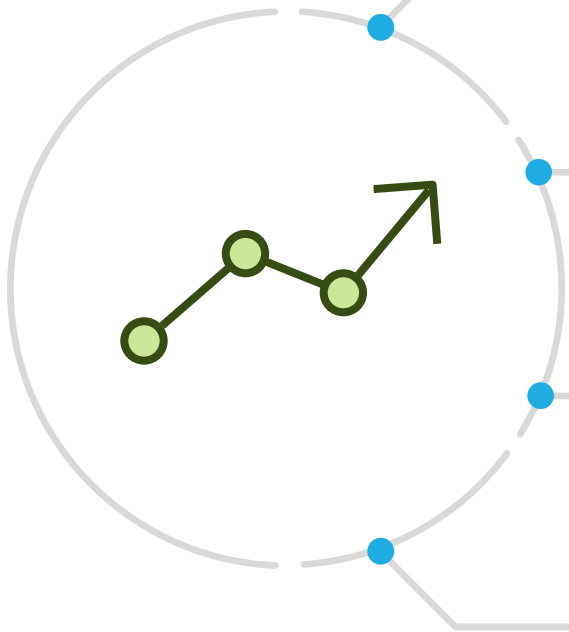
The Value of Trends



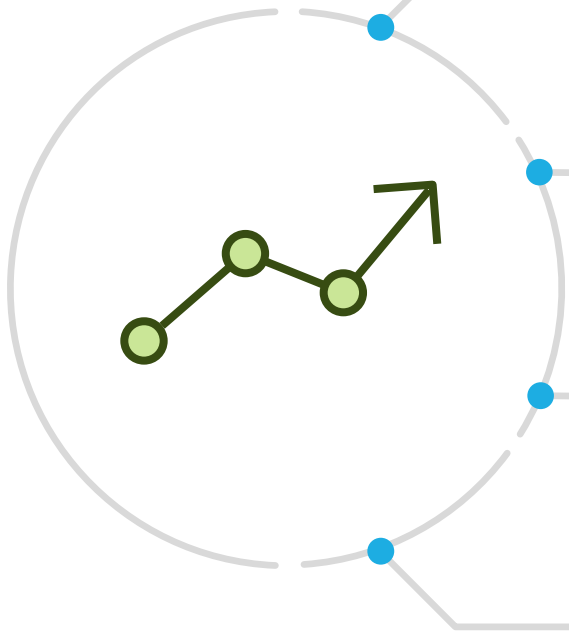
Technical analysis is based on the principles of trends

Trends arise from the interaction of buyers and sellers

Profit is made from a trend in prices

A trend's direction is described by the relative location of peaks and troughs

Assumptions about Trends



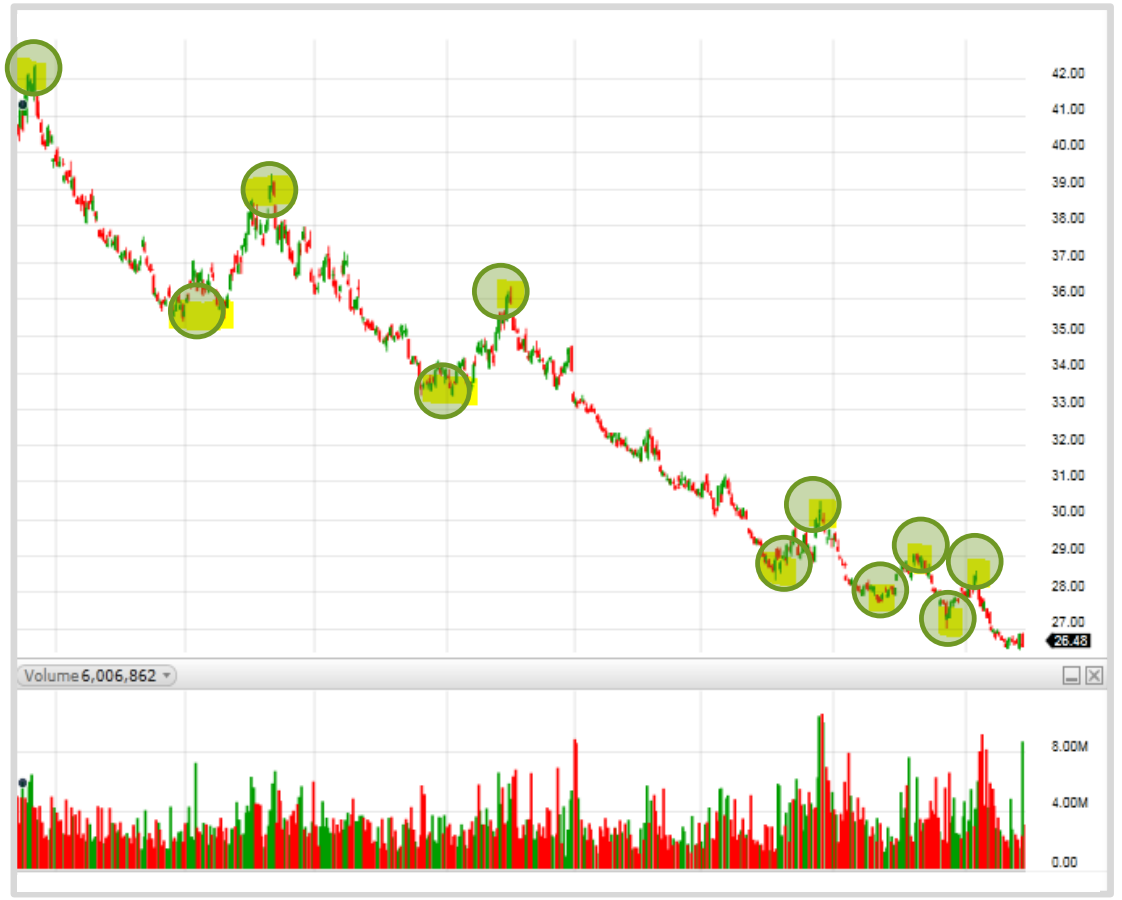
- Trends continue rather than reverse
- Trends are influenced by the next longer and the next shorter trend
- Trends are fractal, meaning that although they occur over different time periods, their behavior is the same
- Trends are not mechanical methods that can easily be programmed and tested on computers

Uptrend

An uptrend has successively higher peaks and higher troughs.

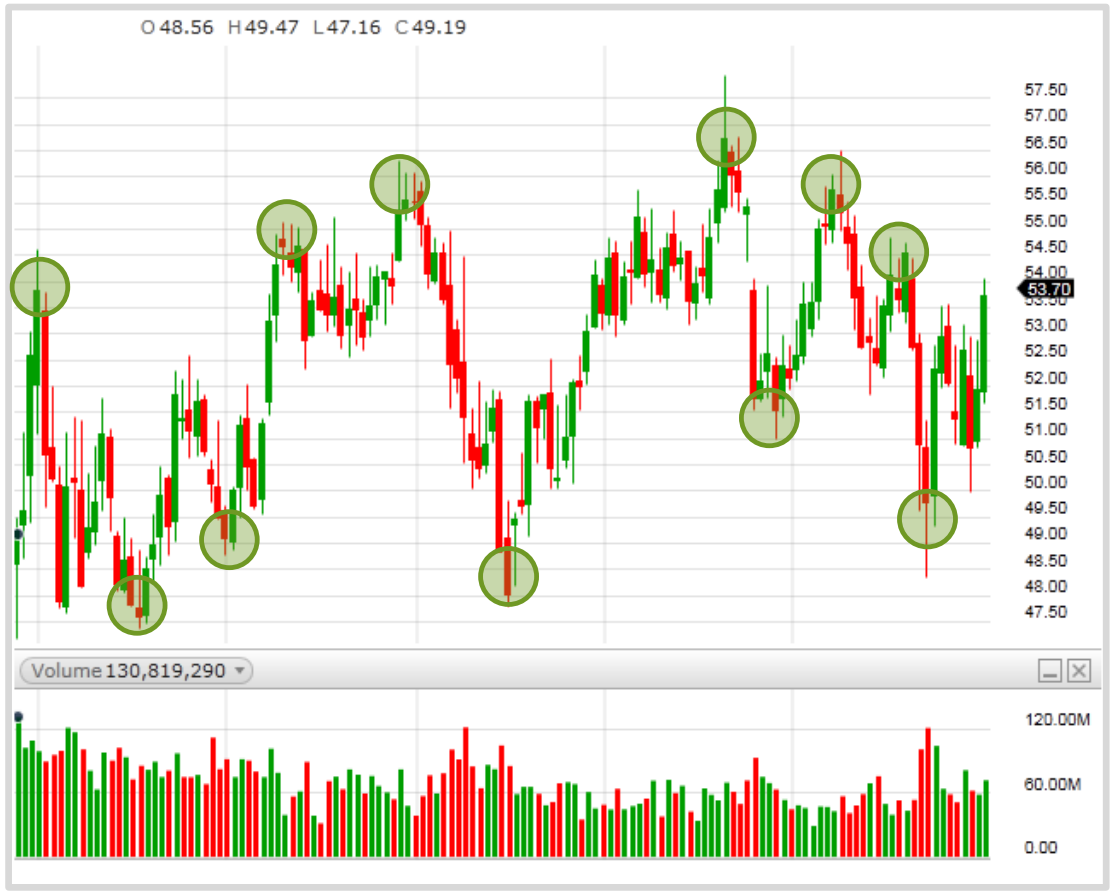
Downtrend

A downward trend has successively lower peaks and lower troughs.



Sideways Trend

A sideways trend is a period with no clear direction in prices.



Trend Influence

Keep time frame in mind while considering the importance of a trend.

From Trend to Trend Line

Definition

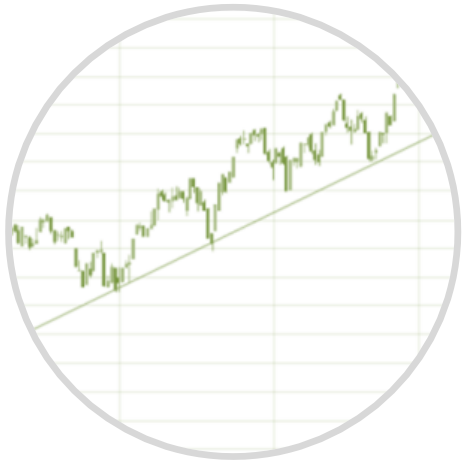
A trend is a direction; a trend line is an attempt to define and use that direction.

How do we draw trend lines?

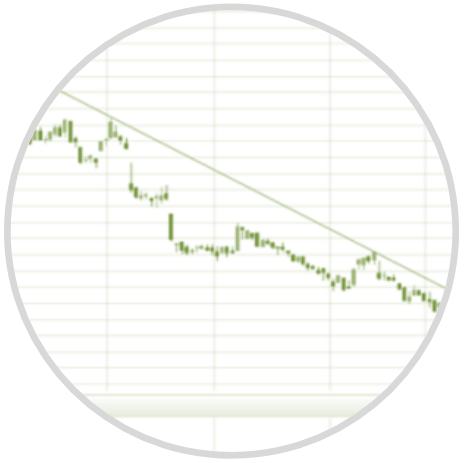
- From peak to peak
- From trough to trough

Types of Trend Lines

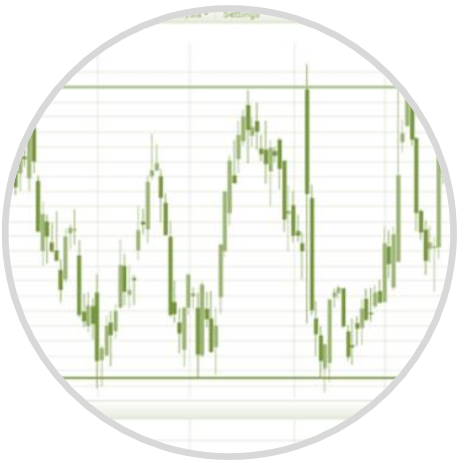
Overview



Upward Sloping



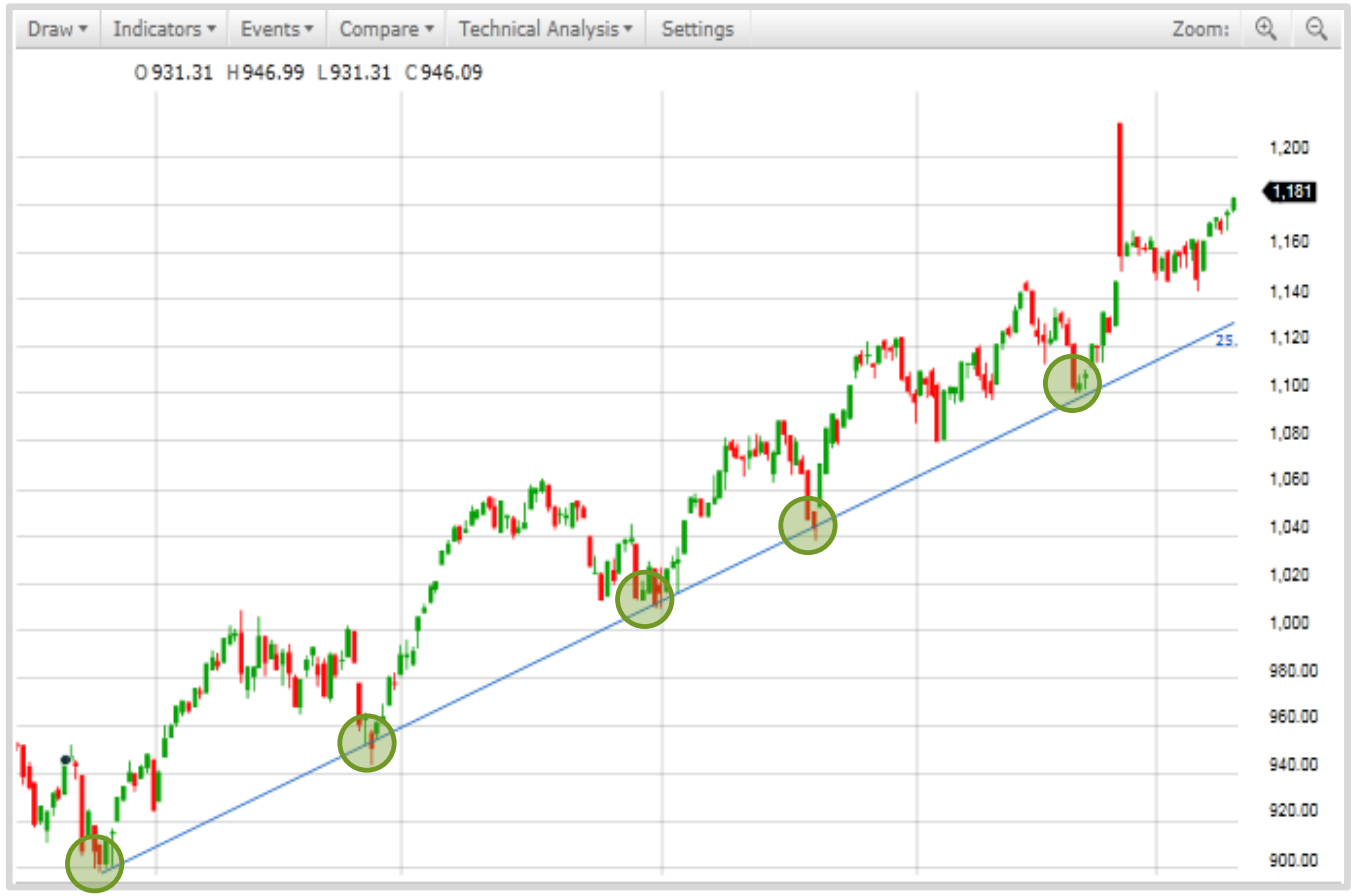
Downward Sloping



Support and Resistance

Upward Sloping

A line connecting trough to higher trough



Downward Sloping

A line connecting peak to lower peak

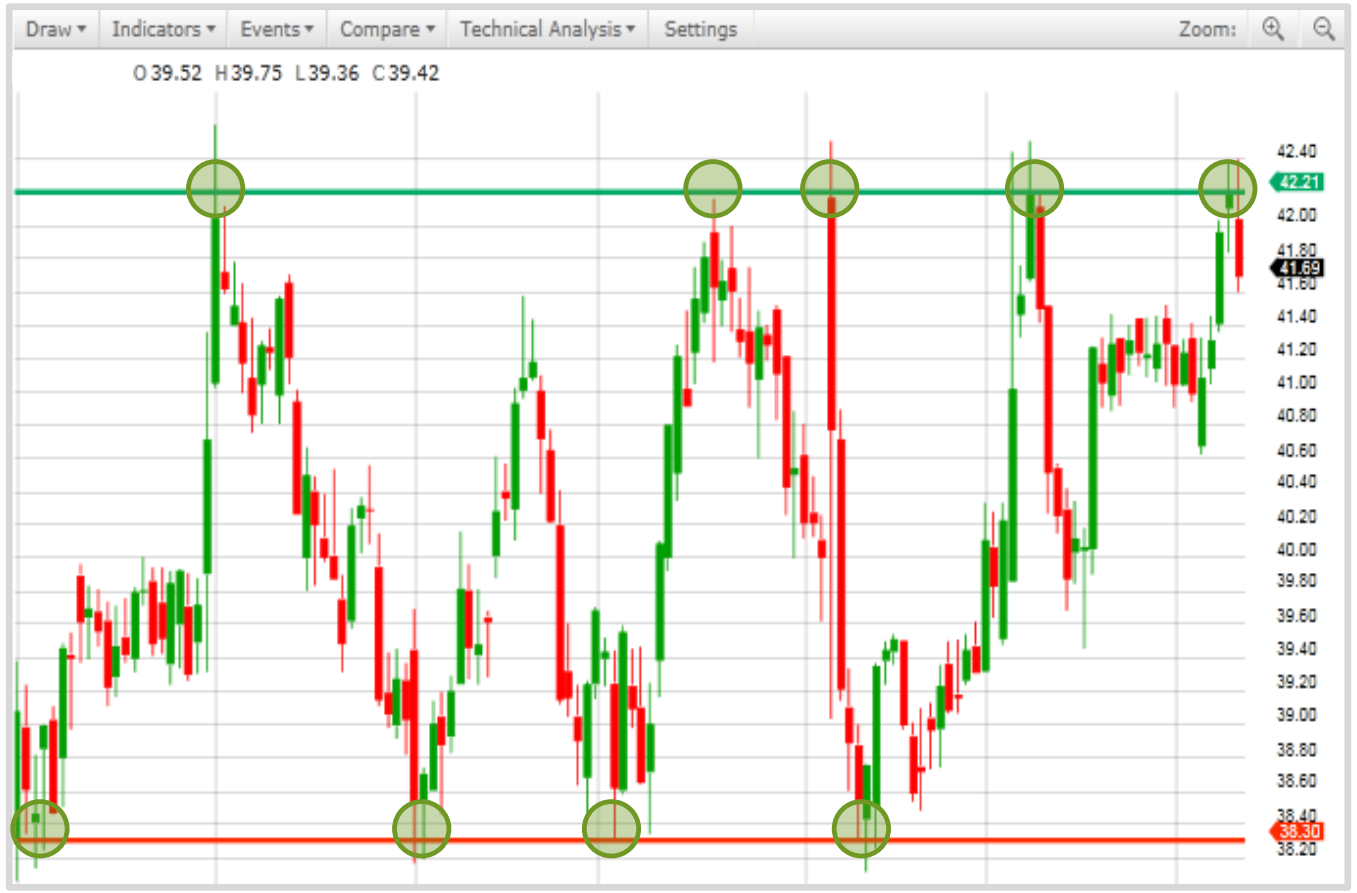
Support and Resistance

Support

Horizontal line drawn through troughs at the same price level

Resistance

Horizontal line drawn through peaks at the same price level



Profiting from a Trading Range

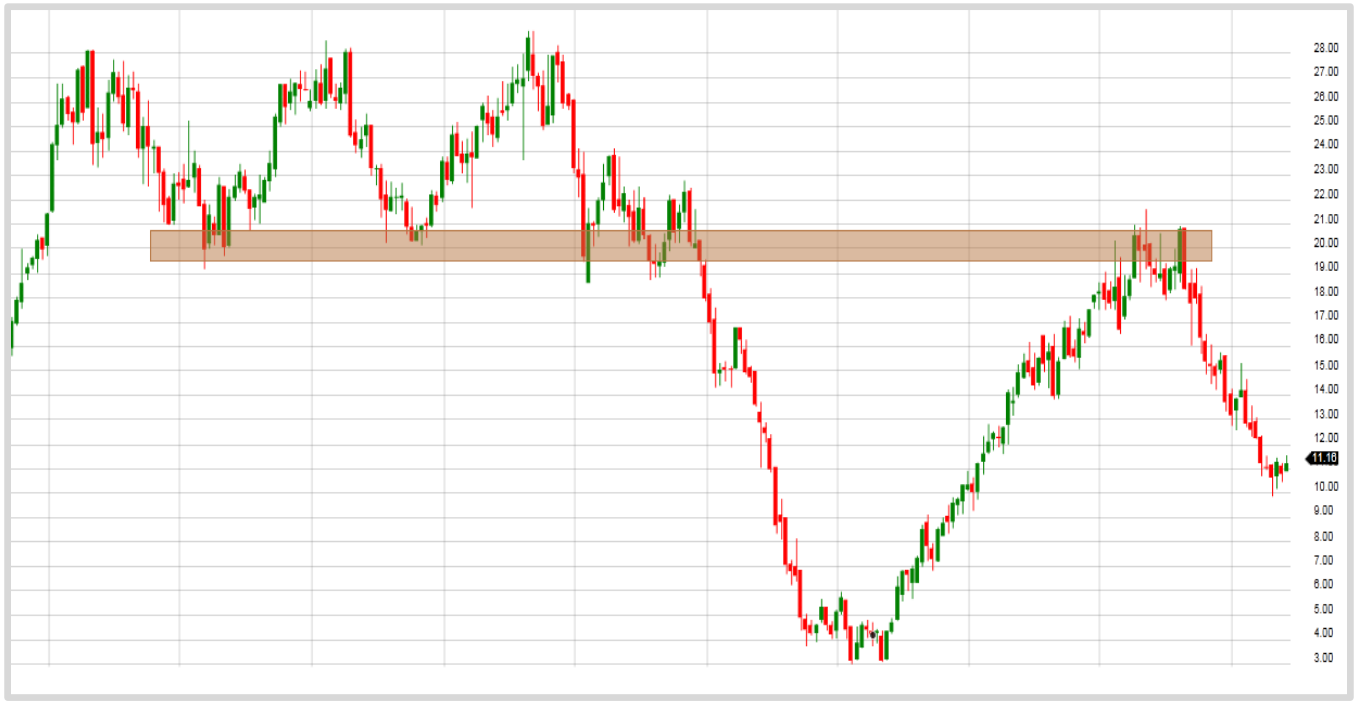
Green points are candles that hit support and resistance levels on close.

Red are intraday and do not close at support and resistance.

When Support Becomes Resistance

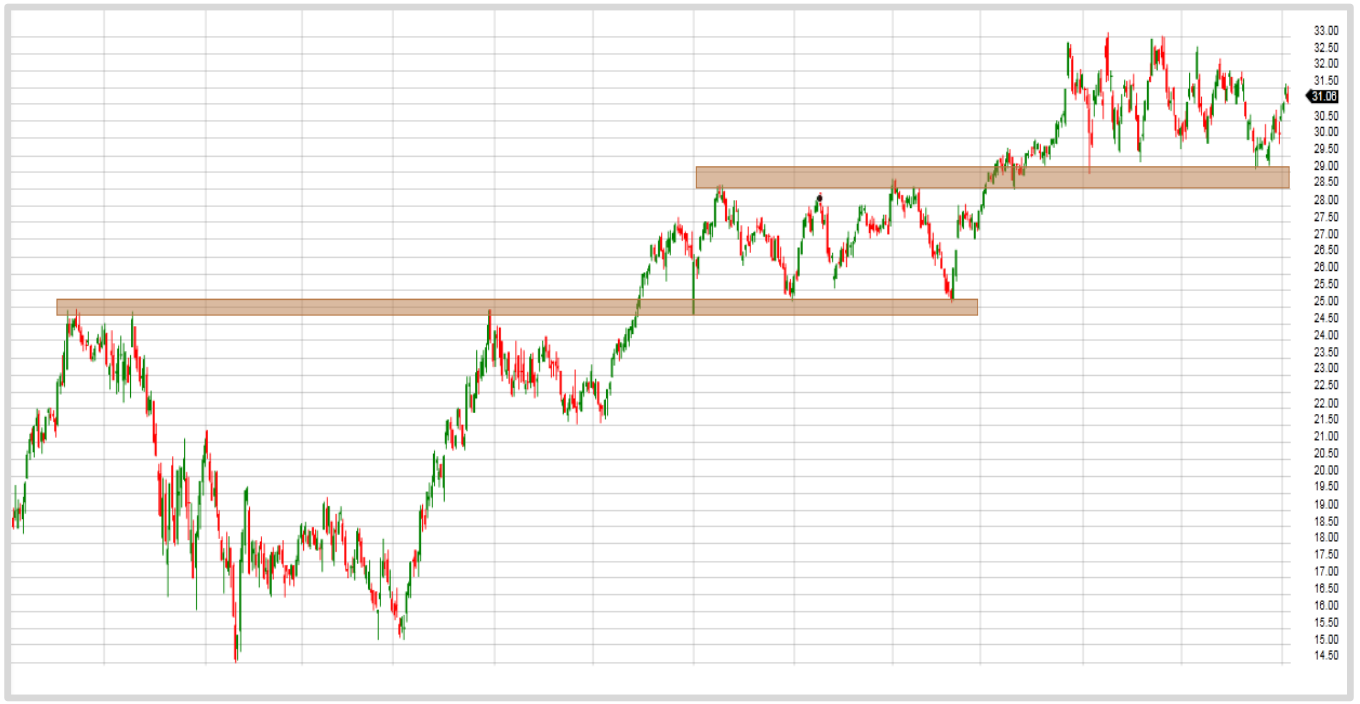
Once the price breaks through support, that support becomes future resistance.

When the price eventually rallies back to that level, it hits selling pressure and reverses back down again.



When Resistance Becomes Support

When resistance is penetrated, it can become support



Best Practices for Trend Traders

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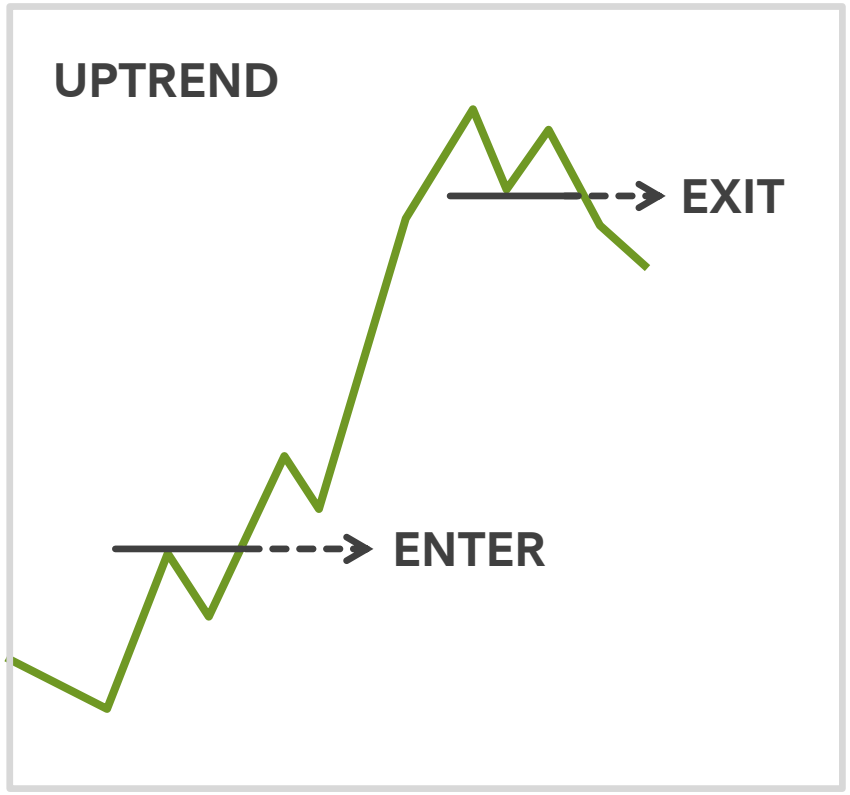
Trend Trading

Best Practices

Determine:

- Strategy and conditions for entering/exiting trade
- Need of confirmation
- Triggers that will cause the entry to be executed
- Specific risk involved

Strategies for Trend Investors



Entry and Exit Strategies

Entry strategy

- Consider buying when chart patterns demonstrate a new trend

Exit strategy

- Consider selling when the trend reverses or appears to have ended

When investors using technical analysis execute these two strategies successfully, they may make a profit.

Entry Strategy

Exit Strategy

The trend line crosses previous troughs.

A trigger could be a breakout below the rising trend line.

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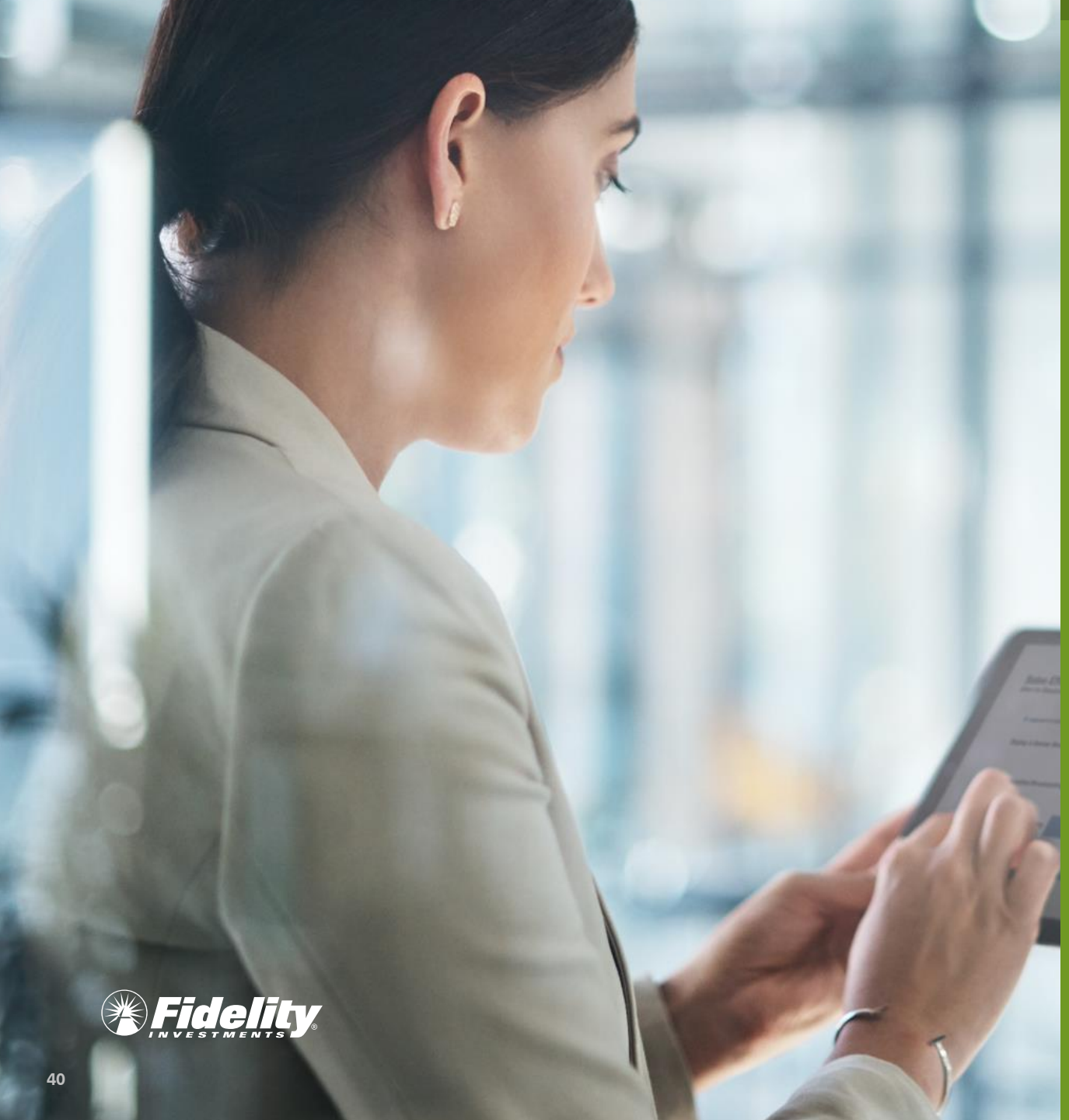

Visit the Fidelity Learning Center

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Read: Access the Technical Indicator Guide

Watch: Check out videos that define core technical concepts

Attend: Register for monthly webinars

Thank You

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Important Information

Any screenshots, charts, or company trading symbols mentioned, are provided for illustrative purposes only and should not be considered an offer to sell, a solicitation of an offer to buy, or a recommendation for the security.

Investing involves risk, including risk of loss.

Technical analysis focuses on market action – specifically, volume and price. Technical analysis is only one approach to analyzing stocks. When considering what stocks to buy or sell, you should use the approach that you're most comfortable with. As with all your investments, you must make your own determination whether an investment in any particular security or securities is right for you based on your investment objectives, risk tolerance, and financial situation. Past performance is no guarantee of future results.

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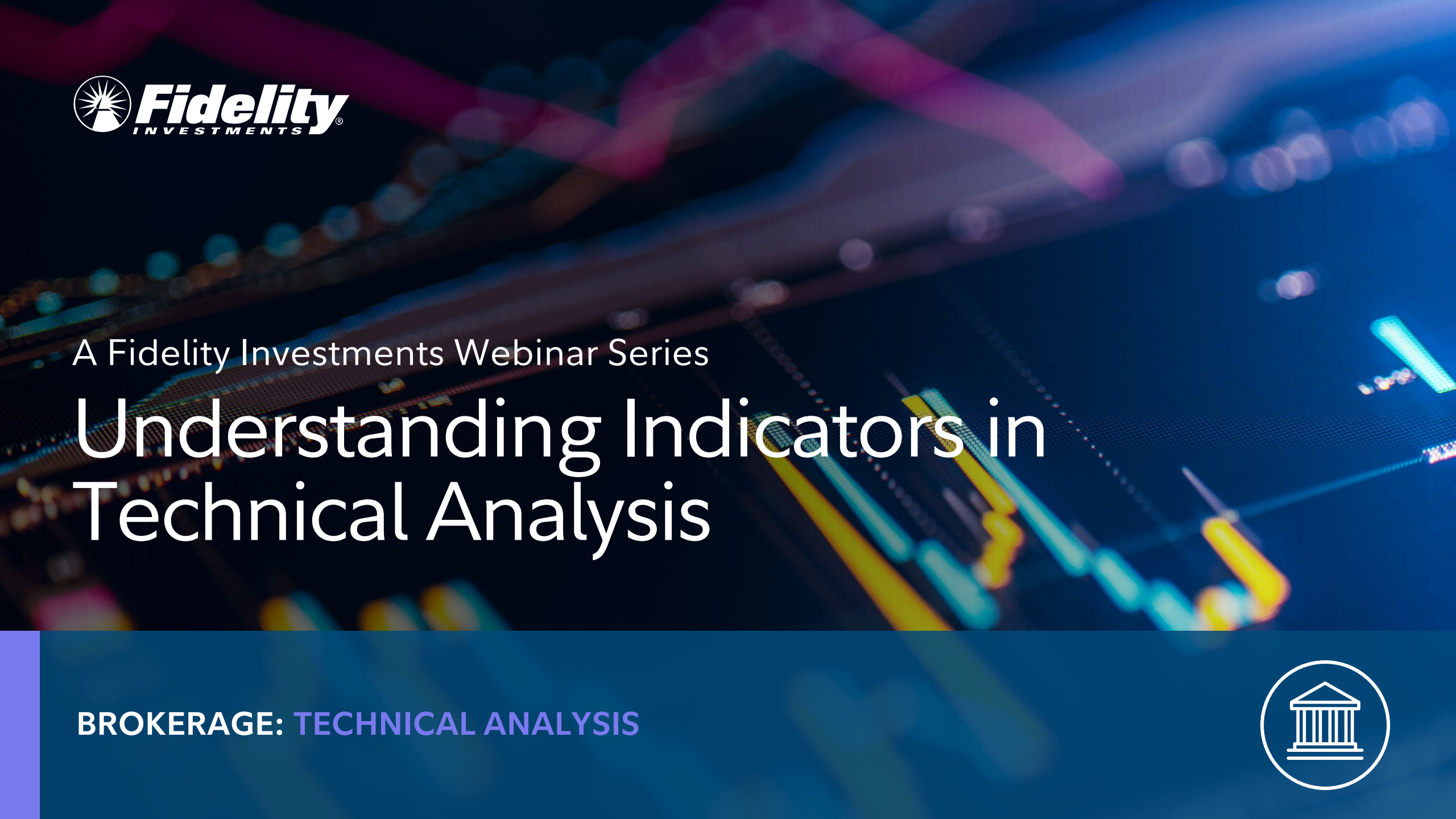

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Support & Resistance Indicators

Technical Indicators Basics

Volatility Indicators

Trend Indicators

Volume Indicators

Momentum Indicators

Agenda

Technical Indicator Basics

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What Is a Technical Indicator?

A technical indicator is a mathematical calculation based on historic price or volume.

Types of Technical Indicators

Trend Indicators

Simple Moving Average (SMA), Exponential Moving Average (EMA), Moving Average Convergence/Divergence (MACD), Average Directional Movement Index (ADX)

Momentum Indicators

Stochastic Oscillator, Relative Strength Index (RSI)

Volume Indicators

On Balance Volume (OBV), Money Flow Index (MFI), Accumulation/Distribution

Volatility Indicators

Bollinger Bands®, Average True Range (ATR)

Support and Resistance Indicator

Fibonacci Retracements

Trend Indicators

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Simple Moving Average

Simple Moving Average (SMA)

This is the easiest moving average to construct. It is calculated as the average price over the specified period. The average is called "moving" because it is plotted on the chart bar by bar, forming a line that moves along the chart as the average value changes.

How It Works

Determine trend direction

- If the SMA is positively sloping, the trend is up.
- If the SMA is negatively sloping, the trend is down.

Determine trend duration

- 200-bar SMAs are common proxies for long-term trends.
- 50-bar SMAs are typically used to gauge intermediate trends.
- Shorter-period SMAs can be used to determine short-term trends.

Determine trading signals via price crosses

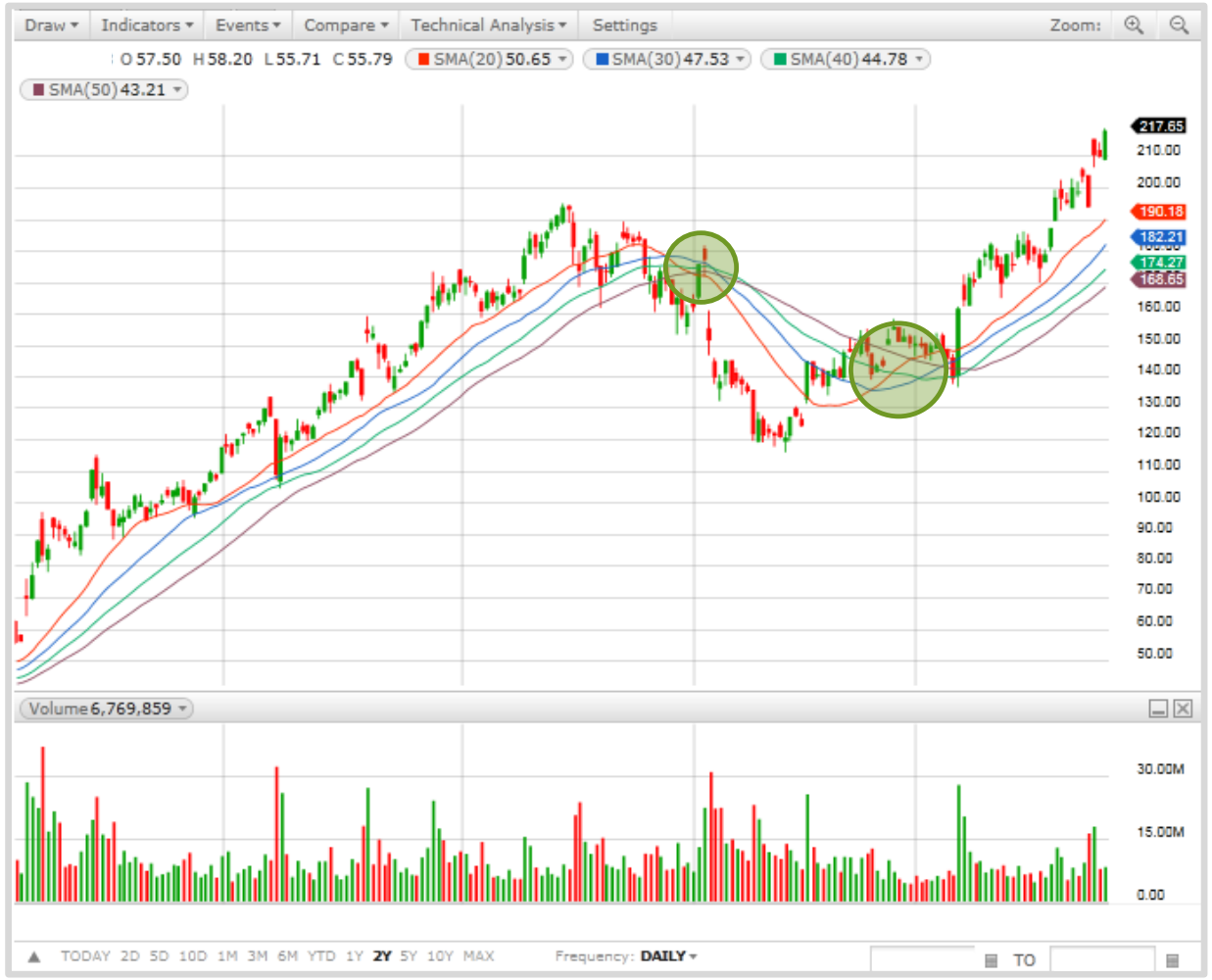
- When prices cross above the SMA, you may want to go long or cover short.
- When prices cross below the SMA, you may want to go short or exit long.

Simple Moving Average

Using moving average crossovers to generate trading signals

When a more sensitive (faster) SMA crosses above a less sensitive (slower) SMA from below, it is considered bullish.

When a more sensitive (faster) SMA crosses below a less sensitive (slower) SMA from above, it is considered bearish.



Exponential Moving Average

Exponential Moving Average (EMA)

The EMA measures trend direction over a period of time. It applies more weight to data that is more current. Because of its unique calculation, EMA will follow prices more closely than a corresponding SMA.

How It Works

Identify trends earlier

- Use the same rules that apply to SMAs when interpreting EMAs. Keep in mind that EMAs are generally more sensitive to nearer-term price movement.

Determine trend direction

- When the EMA rises, you may want to consider buying when prices dip near or just below the EMA. When the EMA falls, you may consider selling when prices rally toward or just above the EMA.

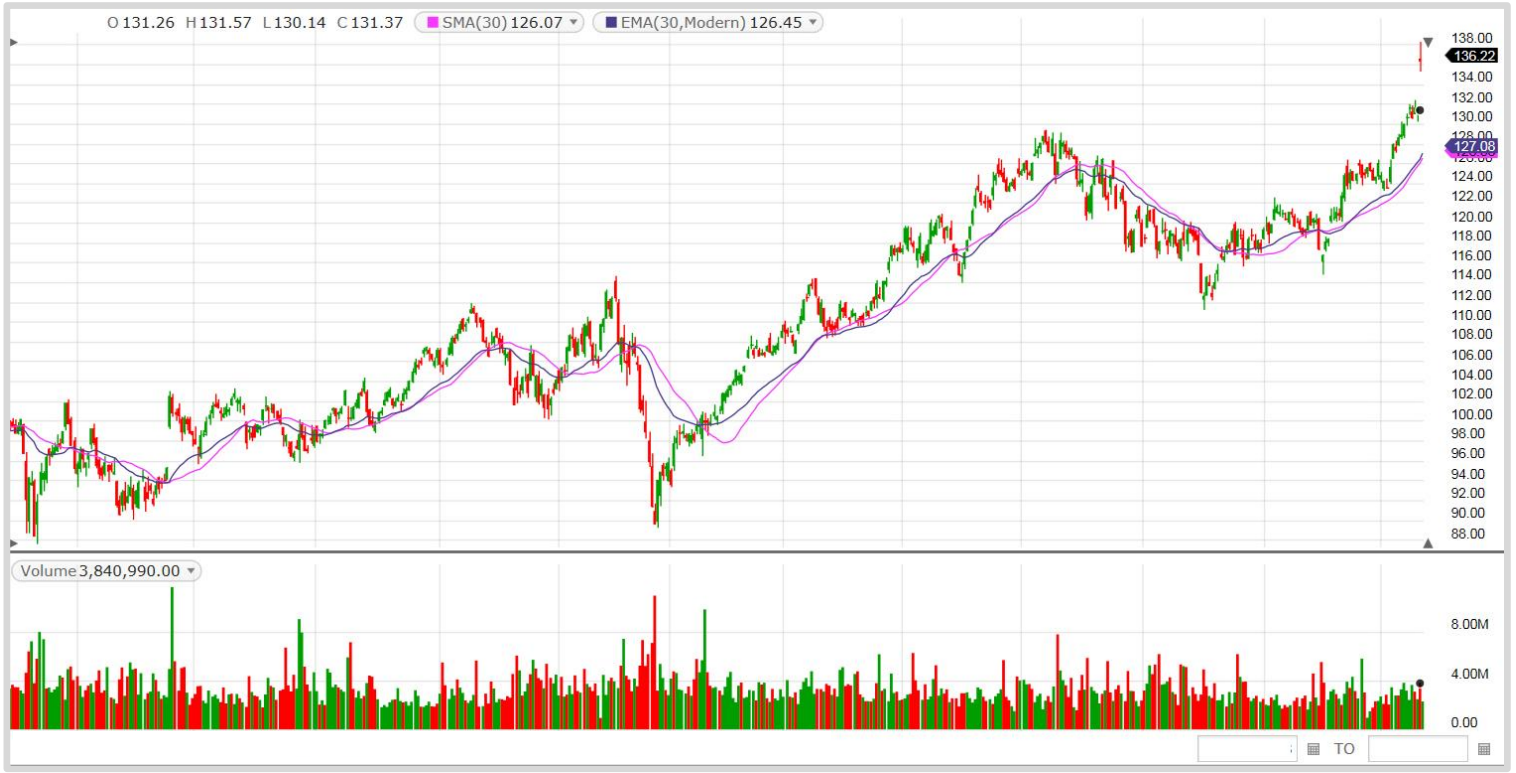
Indicate support and resistance areas

- A rising EMA tends to support the price action, while a falling EMA tends to provide resistance to price action.

Exponential Moving Average

Both the EMA and the SMA here represent 30 days.

EMA reacts faster to the first pullback and the subsequent rally.



Moving Average Convergence/Divergence

Moving Average Convergence/ Divergence (MACD)

MACD is a momentum oscillator primarily used to trade trends.

How It Works

Determine bullish or bearish

- MACD crossing above the zero line is considered bullish, while crossing below the zero line is bearish. When MACD turns up from below the zero line, it is considered bullish. When it turns down from above the zero line, it is considered bearish.
- When the MACD line crosses from below to above the signal line, the indicator is considered bullish. The further below the zero line this cross occurs, the stronger the signal.
- When the MACD line crosses from above to below the signal line, the indicator is considered bearish. The further above the zero line this cross occurs, the stronger the signal.

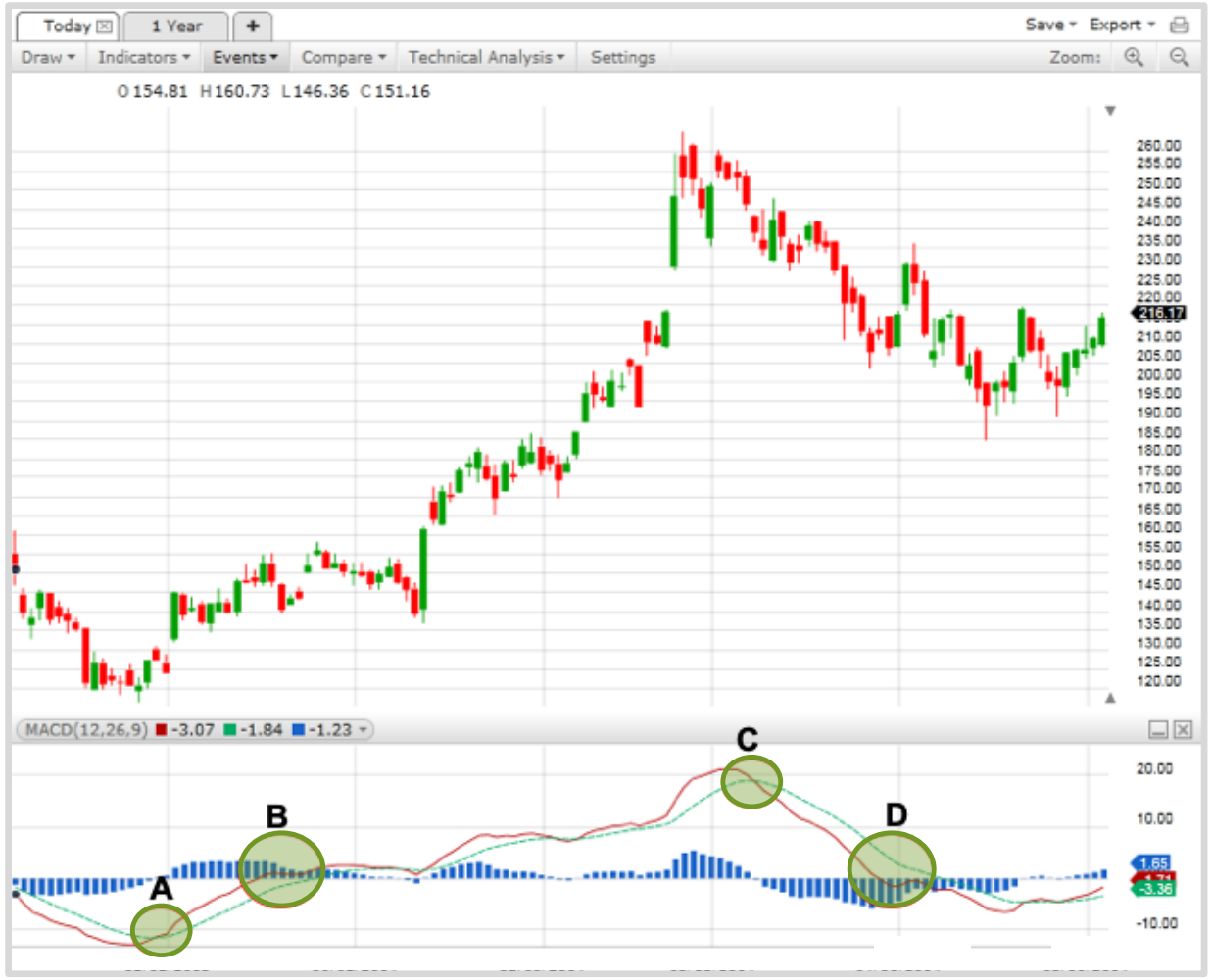
Moving Average Convergence/Divergence

A. Bullish

B. Bullish

C. Bearish

D. Bearish



Average Directional Movement Index

Average Directional Movement Index (ADX)

ADX can be used to help measure the overall strength of a trend.

How It Works

Measure strength of trend

- A strong trend is present when ADX is above 25; no trend is present when ADX is below 20.
- If the ADX is declining, it could indicate that the current trend is weakening.
- If the ADX is rising, it could indicate a strengthening trend.
- The ADX indicator incorporates two different components in its construction which are commonly plotted along with the ADX.
  - Positive Directional Indicator (+DMI) shows the difference between today's high price and yesterday's high price. These values are then added up from the past 14 periods and then plotted.
  - Negative Directional Indicator (–DMI) shows the difference between today's low price and yesterday's low price. These values are then summed up from the past 14 periods and plotted.

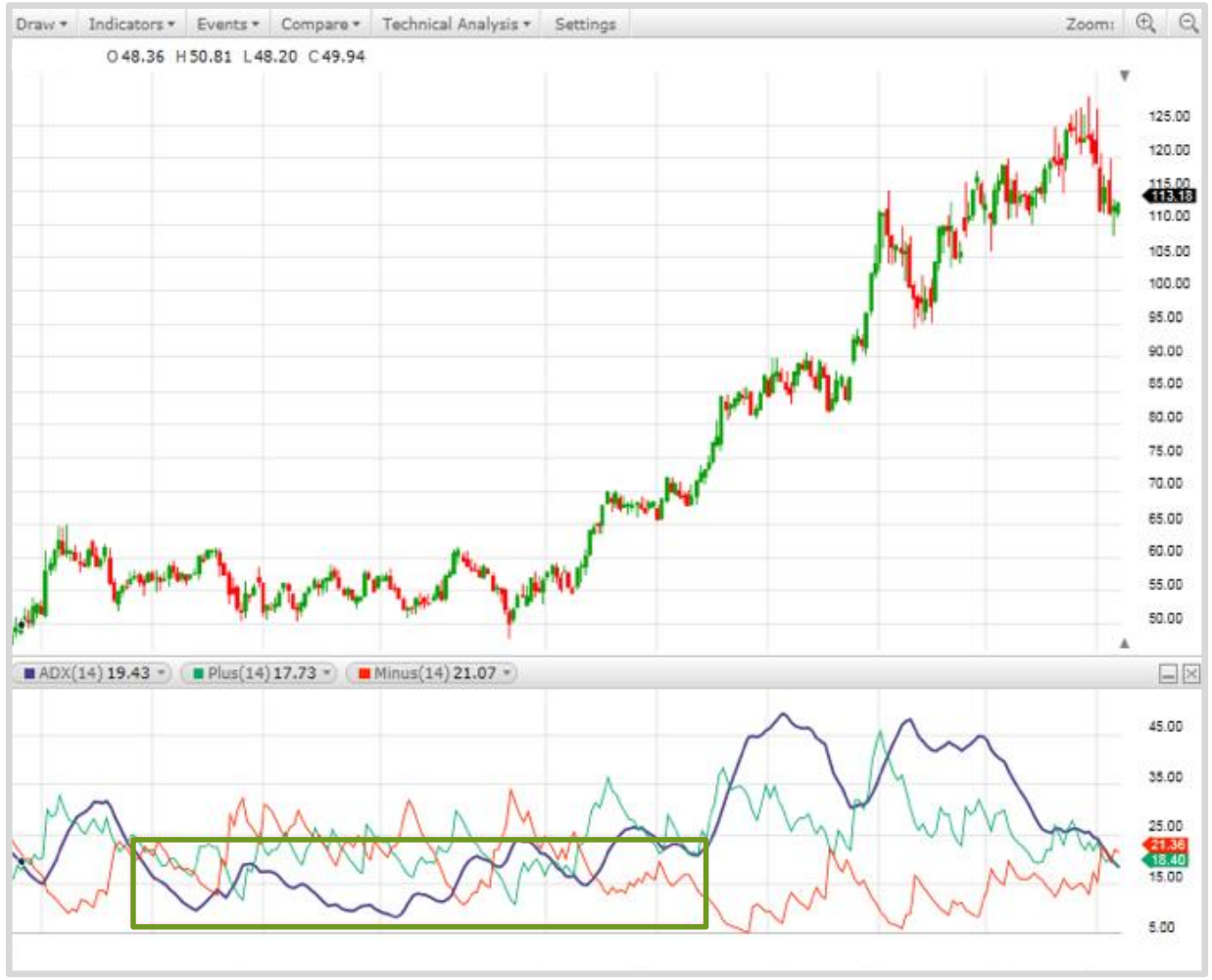
Average Directional Movement Index

ADX is less then 25 on the left side of the chart.

+DM is greater than -DMI throughout the uptrend, though this is not a requirement.

ADX has fallen below 25 on the right side of the chart and -DM has crossed up above +DM.

Remember that ADX shows trend show trend strength – not direction.



Momentum Indicators

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Overbought/Oversold in Oscillators

- In bounded indicators, also called "oscillators," a limit exists as to how high or low they can reach.
- When the oscillator reaches a zone close to its highest bound, it is called "overbought."
- When it reaches a zone close to its lowest bound, it is called "oversold."
- An oscillator value in these zones indicate that the market is vulnerable to reversal. A signal often occurs when the oscillator exits one of these zones.
- In some cases, the reaching of extreme levels indicates that a new trend has begun. In these instances, the oscillator will remain in a zone for the period of the trend and will give many false signals on corrections to the trend.
- The interpretation of oscillator oversold and overbought is thus dependent on the underlying trend.
- They don't work when a trend is strong, but excel in trading range markets.

Stochastic Oscillator

Stochastic Oscillator

The Stochastic Oscillator is a momentum indicator that shows the location of the close relative to the high-low range over a set number of periods. The indicator can range from 0 to 100. Stochastic Oscillators are most effective in broad trading ranges or slow moving trends.

How It Works

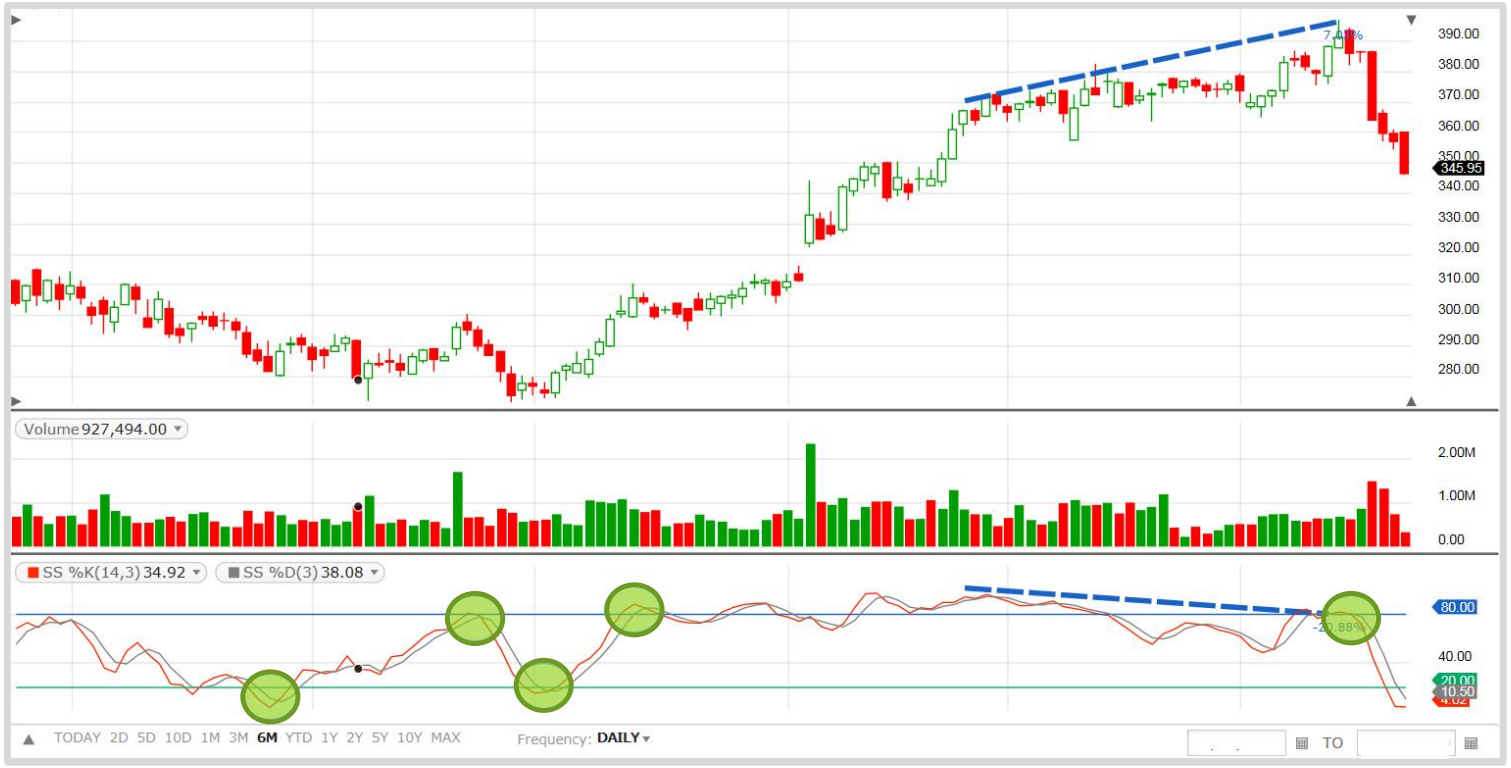
Determine exit and entry

- Generally, the area above 80 indicates an overbought region, while the area below 20 is considered an oversold region.
- A sell signal is given when the oscillator is above the 80 level and then crosses back below 80. Conversely, a buy signal is given when the oscillator is below 20 and then crosses back above 20.
- A crossover signal occurs when the two lines cross in the overbought or oversold region.
- Divergences form when a new high or low in price is not confirmed by the Stochastic Oscillator.

Stochastic Oscillator

This example is using a Slow Stochastic; note the effectiveness of the signals during the sideways trend.

Divergences between price and oscillators can also generate signals.



Relative Strength Index

Relative Strength Index (RSI)

RSI measures the speed and change of price movements.

How It Works

Determine the speed and change of price

- The RSI oscillates from zero and 100. Traditionally, the RSI is considered overbought when above 70 and oversold when below 30.
- In an uptrend or bull market, the RSI tends to remain in the 40-90 range with the 40-50 zone acting as support.
- During a downtrend or bear market, the RSI tends to stay in the 10-60 range with the 50-60 zone acting as resistance.
- If underlying prices make a new high or low that isn't confirmed by the RSI, this divergence can signal a price reversal.

Relative Strength Index

Overbought and oversold signals on the chart indicate price movement in the short term.

Volume Indicators

General Rules of Volume Theory

Increasing volume reinforces the trend direction.

Declining volume diminishes the trend direction.

A price peak or trough on ultrahigh volume is often an important reversal point in a trend.

Volume indicators should be considered warnings but not signals of change in trend direction.

On Balance Volume

On Balance Volume (OBV)

OBV measures buying and selling pressure as a cumulative indicator that adds volume on up days and subtracts volume on down days.

How It Works

- The actual value of the OBV is unimportant; concentrate on its direction.
- When price continues to make higher peaks and OBV fails to make higher peaks, the upward trend is likely to stall or fail. This is called a negative divergence.
- When price continues to make lower troughs and OBV fails to make lower troughs, the downward trend is likely to stall or fail. This is called a positive divergence.

On Balance Volume

Bearish divergence: OBV is not confirming the higher peaks in price, which preceded the selloff.

Money Flow Index

Money Flow Index (MFI)

MFI is a volume indicator that measures the flow of money into and out of a security over a specified period of time. It is related to the Relative Strength Index (RSI) but incorporates volume, whereas the RSI only considers price.

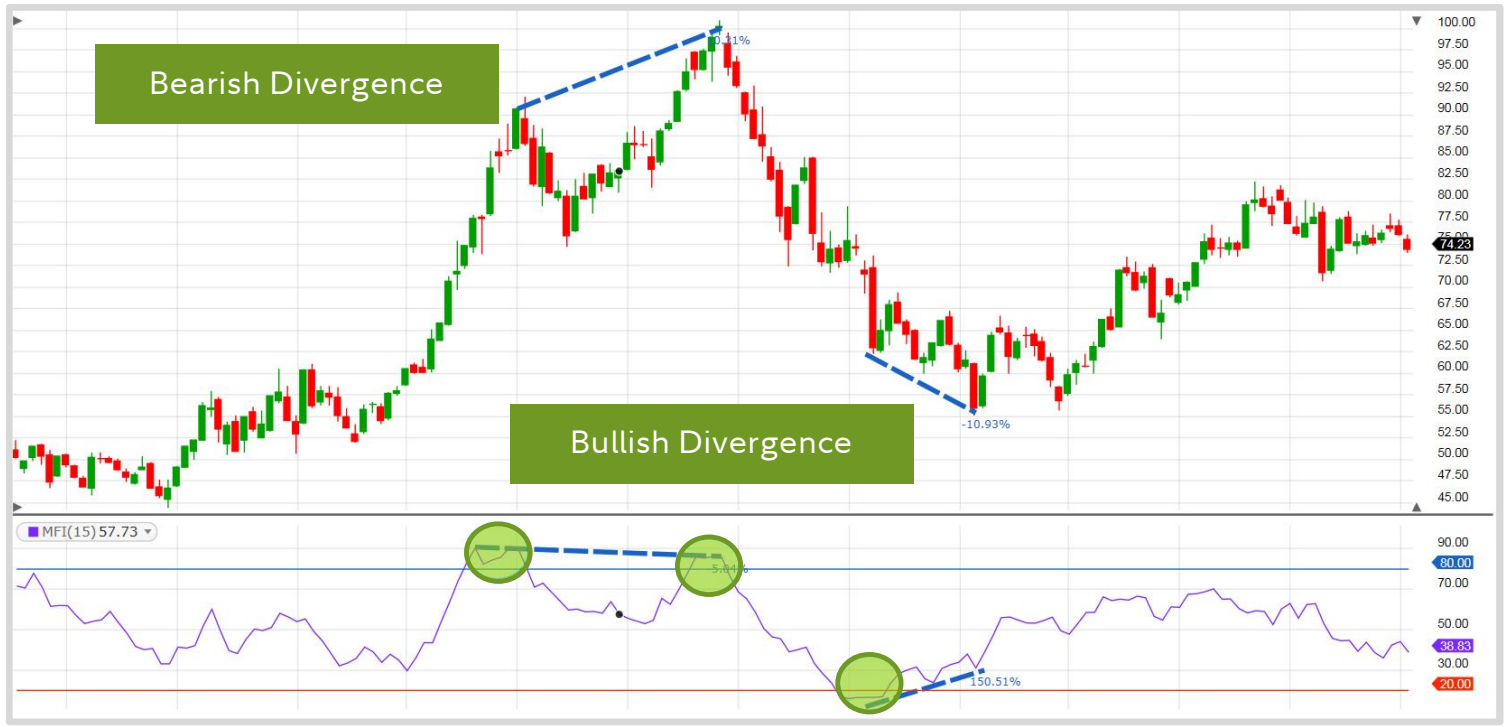
How It Works

- Oversold levels typically occur below 20 and overbought levels typically occur above 80. These levels may change depending on market conditions.
- Oversold or overbought levels are generally not reason enough to buy or sell and traders should consider additional technical analysis or research to confirm the security's turning point.
- If the underlying price makes a new high or low that isn't confirmed by the MFI, this divergence can signal a price reversal.

Money Flow Index

Bearish divergence: Price peak not confirmed by MFI.

Bullish divergence: Price trough is not confirmed by MFI.



Accumulation/Distribution

Accumulation/ Distribution

Accumulation/Distribution looks at the proximity of closing prices to their highs and lows to determine if accumulation or distribution is occurring in the market.

How It Works

Determine the direction of a trend

- When both price and Accumulation/Distribution are making higher peaks and higher troughs, the uptrend is likely to continue.
- When both price and Accumulation/Distribution are making lower peaks and lower troughs, the downtrend is likely to continue.
- When price continues to make higher peaks but Accumulation/Distribution fails to make higher peak, the uptrend is likely to stall or fail. This is known as a negative divergence.
- When price continues to make lower troughs and Accumulation/Distribution fails to make lower troughs, the downtrend is likely to stall or fail. This is known as a positive divergence.

Accumulation/Distribution

Negative divergence between price and Accumulation Distribution

Volatility Indicators

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Bollinger Bands®

Bollinger Bands

Bollinger Bands are a type of price envelope plotted at a standard deviation level above and below a Simple Moving Average of the price. Bollinger Bands help determine whether prices are high or low on a relative basis.

How It Works

Determine relative price

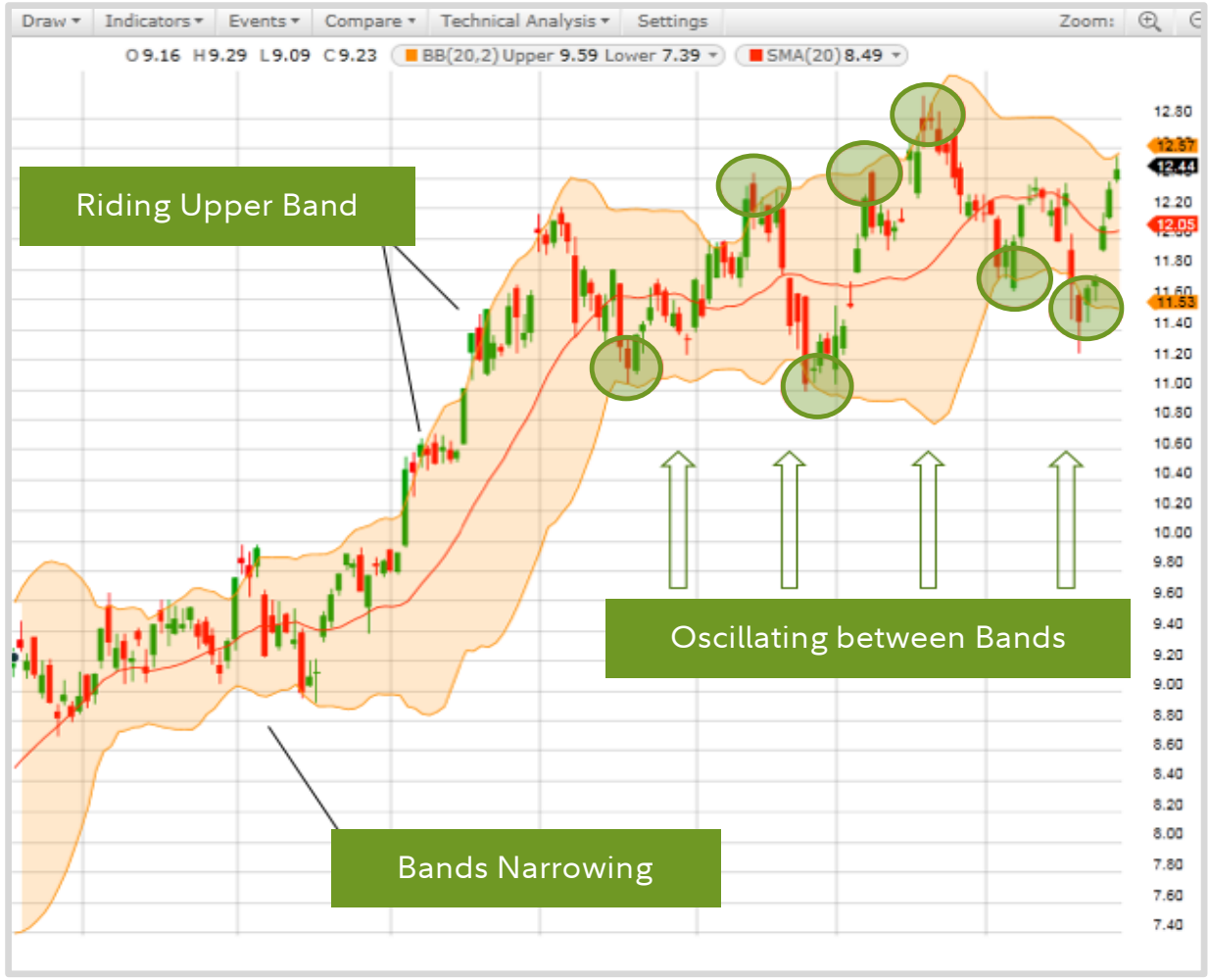
- When the bands tighten during a period of low volatility, it raises the likelihood of a sharp price move in either direction.
- When the bands separate by an unusually large amount, volatility increases and any existing trend may be ending.
- Use swings within the band's envelopes to help identify potential profit targets.

Bollinger Bands®

Riding Upper Band

Oscillating between Bands

Bands Narrowing



Average True Range

Average True Range (ATR)

ATR is the average of true ranges over a specified period. ATR measures volatility, taking into account any gaps in the price movement.

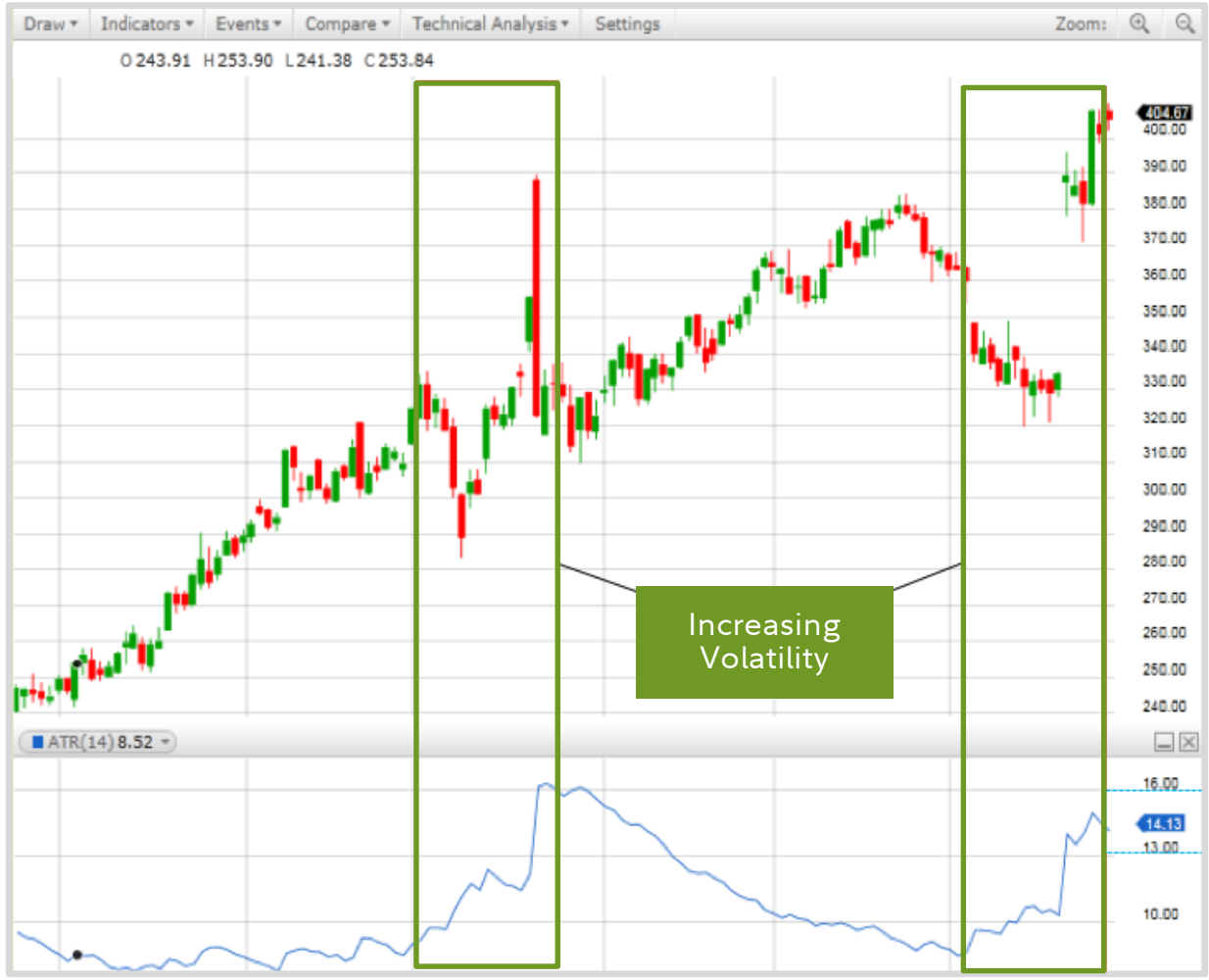
How It Works

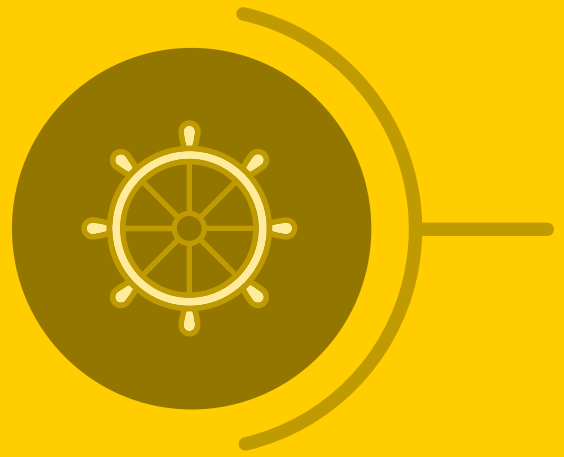
Determine market volatility

- An expanding ATR indicates increased volatility, whether that's selling or buying pressure.
- A low ATR value indicates decreased volatility, a series of periods with small ranges.
- ATR is useful for stops or entry triggers, signaling changes in volatility.

Average True Range

Periods of increased volatility are clearly identified by ATR.





Support and Resistance Indicators

Fibonacci Retracements

Fibonacci Retracements

Plot percentage retracement lines based on the mathematical relationship within the Fibonacci sequence. These retracement levels provide support and resistance levels that can be used to target price objectives.

How It Works

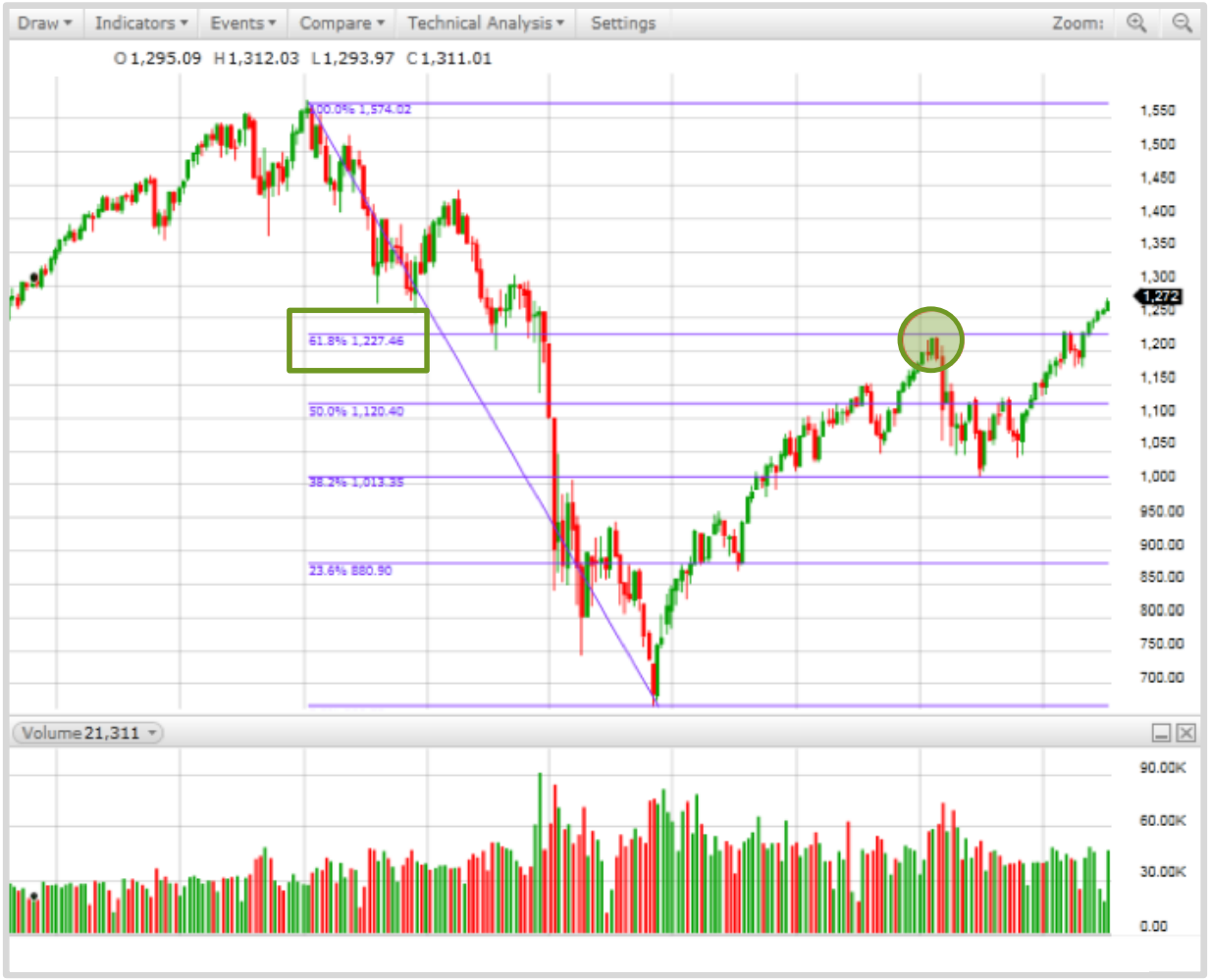
Provide support and resistance levels

- Applying these percentages to the difference between the high and low price for the period selected creates a set of price objectives.
- Depending on the direction of the market, up or down, prices will often retrace a significant portion of the previous trend before resuming the move in the original direction.
- These countertrend moves tend to fall into certain parameters, which are often the Fibonacci Retracement levels.

Fibonacci Retracements

Here, we have drawn a down sloping Fibonacci Retracement line from the absolute peak to the absolute trough to determine levels of resistance we may meet.

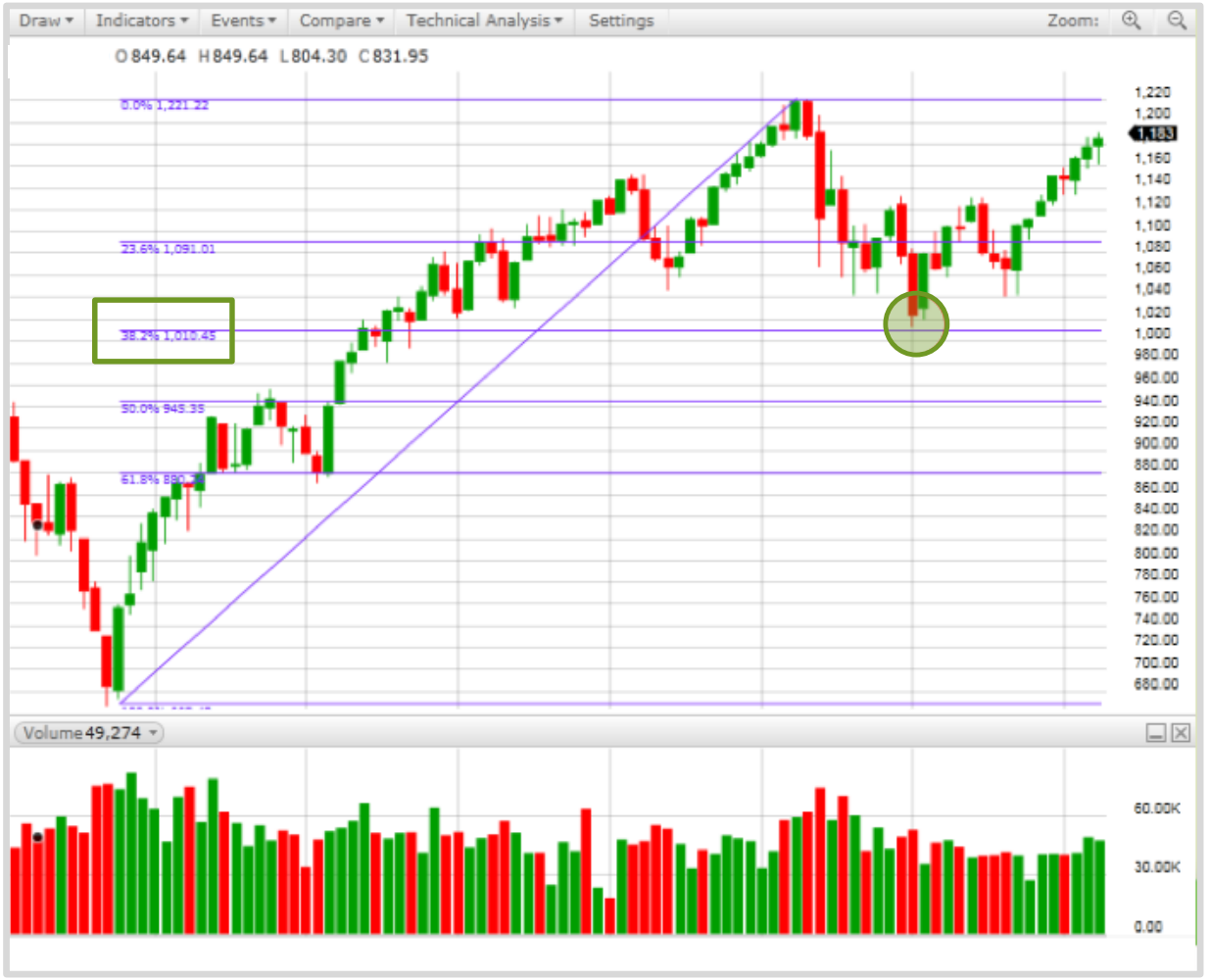
In this example, the first major correction occurred at 61.8% retracement.



Fibonacci Retracements

In this example, we have drawn a Fibonacci Retracement line from the trough to the peak of the price move for which we're trying to determine retracement levels.

In this instance, we found support at 38.2% retracement.



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About Our Coauthor

Charles D. Kirkpatrick II, CMT

Charles D. Kirkpatrick II, CMT, is president of Kirkpatrick & Company, Inc., a technical analysis research firm that publishes the *Market Strategist* investment newsletter. A past instructor in finance at the School of Business Administration at Fort Lewis College and adjunct professor of finance at Brandeis University International Business School, he is a two-time winner of the Chartered Market Technicians Association's prestigious Charles H. Dow Award for research in technical analysis, winner of the MTA Annual Award in 2008 for "Outstanding Contributions to the Field of Technical Analysis," and winner in 2012 of the Mike Epstein Award from the MTA Educational Foundation for "Long-Term sponsorship of Technical Analysis in Academia."

He is a Chartered Market Technician, a past member of the board of directors of the Market Technicians Association, past editor of the *Journal of Technical Analysis*, past board member and vice president of the CMT Association Educational Foundation and a member of the American Association of Professional Technicians (AAPTA). He coauthored *Technical Analysis: The Complete Source for Financial Market Technicians*, the primary textbook for the CMT program and for university graduate courses on technical analysis, authored *Beat the Market* and, most recently, *Time the Markets: Using Technical Analysis to Interpret Economic Data.*

He is a graduate of Phillips Exeter Academy, Harvard College (AB), and the Wharton School (MBA) and lives with his wife in Maine.

Techniques for Trading Patterns

Understanding Patterns and Their Limits

Construction of Common Chart Patterns

Agenda

Understanding Patterns and Their Limits

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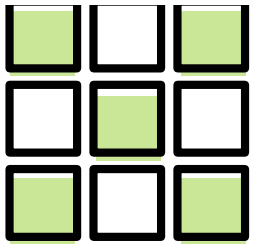
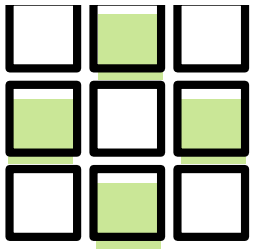
Defining Patterns



- A pattern is bounded by at least two trend lines (straight or curved)
- All patterns have a combination of entry and exit points
- Patterns can be continuation patterns or reversal patterns
- Patterns are fractal, meaning that they can be seen in any charting period (weekly, daily, minute, etc.)
- A pattern is not complete or activated until an actual breakout occurs

The Limits of Patterns



Keep in Mind

Some of our human tendencies can be dangerous for investors.

- See patterns where there aren't any
- Believe "market lore," technical and fundamental, without evidence
- Look backwards rather than forward
- Stick with original price targets of patterns after conditions have changed

Techniques for Trading Patterns

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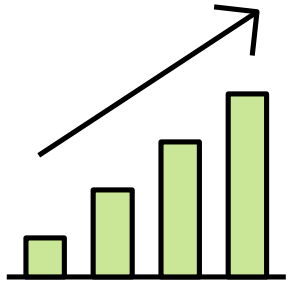
Techniques for Trading Patterns

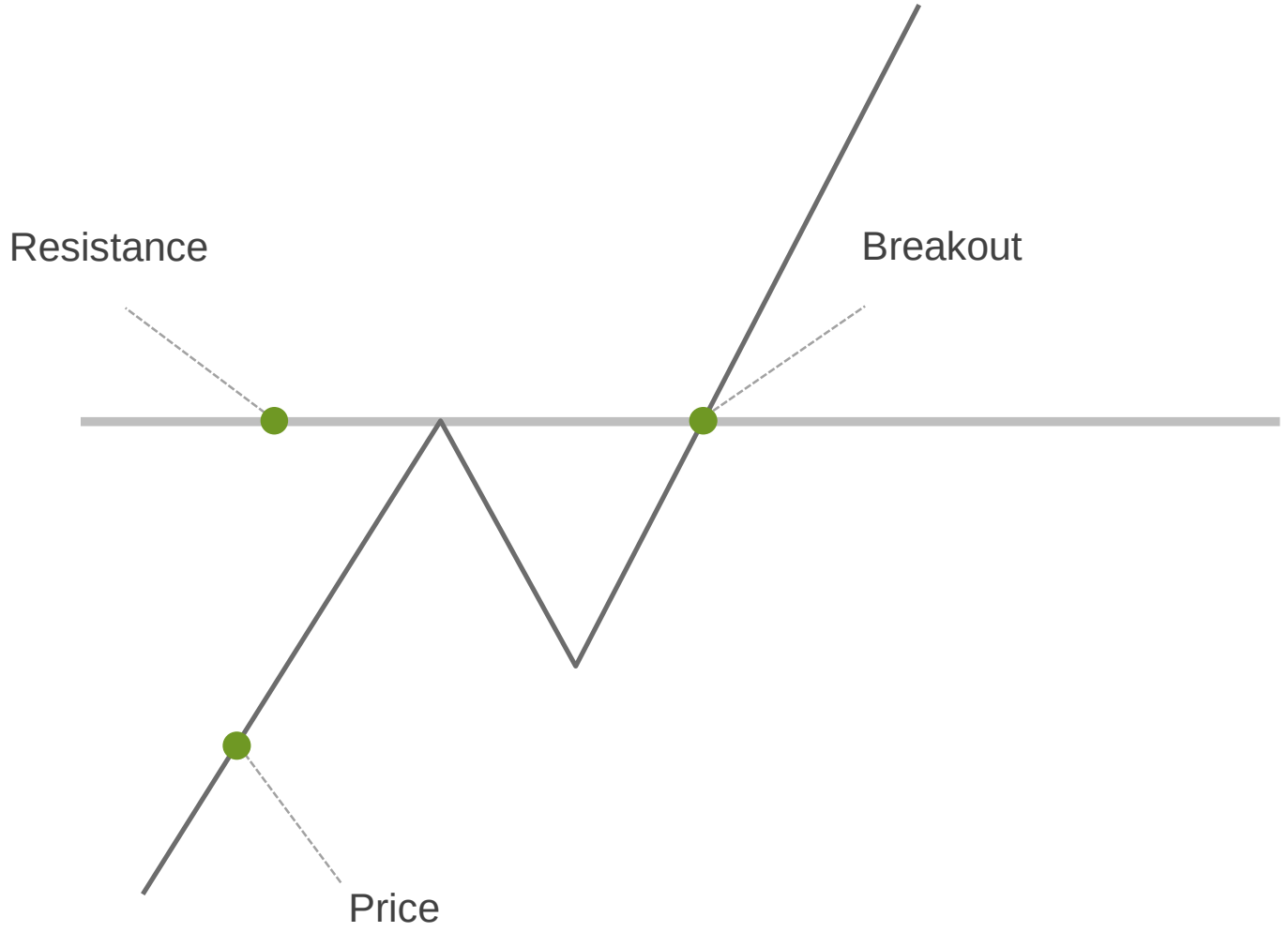


- Breakouts
- Entry Stops
- Protective Stops
- Retracements

Breakouts

Violation of Trend Line, Support or Resistance, or previous reversal point

It signifies that a change in buyer and seller behavior and signals the beginning or end of a trend.



Confirmation Filters

Confirmation Filters

Apply a confirmation filter to determine whether a breakout has taken place.

Types of Filters

- Intrabar
- Multiple closes
- Time
- Percentage or point
- Money

Entry Stops

Entry Stops

Buy stop orders are used to enter trades once the price breaks out.

False and Failed Breakouts

False Breakout

Price breaks out but almost immediately returns back through its breakout price.

Failed Breakout (Trap)

False breakout occurs and the price then breaks out in the opposite direction.

Protective Stops

Protects Capital

Determines the amount of capital risk before entry

Types of placement

- Filters, such as percent, points, or money
- Trend line, support or resistance level with filter

Trading False Breakouts Using Protective Stops

Example

- Enter on breakout
- Place protective stop outside breakout bar opposite from breakout direction
- Place entry stop at same level (called a "stop and reverse" order)
- If price continues in direction of breakout, profit from breakout entry
- If breakout is false, profit from stop and reverse

Retracements

Counter Trend Correction

Types

- Pullback (on breakout down)
- Throwback (on breakout up)

Waiting for

- Don't always occur
- Performance can suffer when they do

Construction of Common Chart Patterns

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Common Chart Patterns

Multi-Bar Patterns

Horizontal Congestion

- Double and Triple Tops/Bottoms
- Rectangles

Triangles

- Symmetrical
- Ascending and Descending
- Wedges

Other

- Head and Shoulders
- Cup and Handle

Candlestick Patterns

- Doji
- Harami
- Hanging Man/Hammer
- Shooting Star/Inverted Hammer
- Engulfing
- Dark Cloud/Piercing

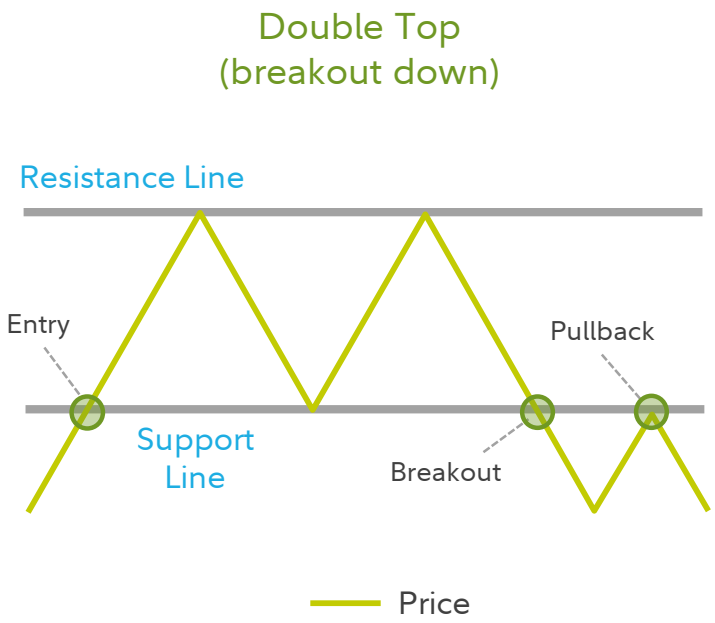
Short-Term Patterns

- Pennant/Flag
- Gaps
- Pipe Bottom
- Narrow Range

Horizontal Congestion: Double Top

Characteristics:

- Two successive peaks separated by an opposite reversal point
- Either rounded or pointed peaks that are usually at roughly the same price (resistance level)
- Price must break out of middle reversal point



Calculate target price:

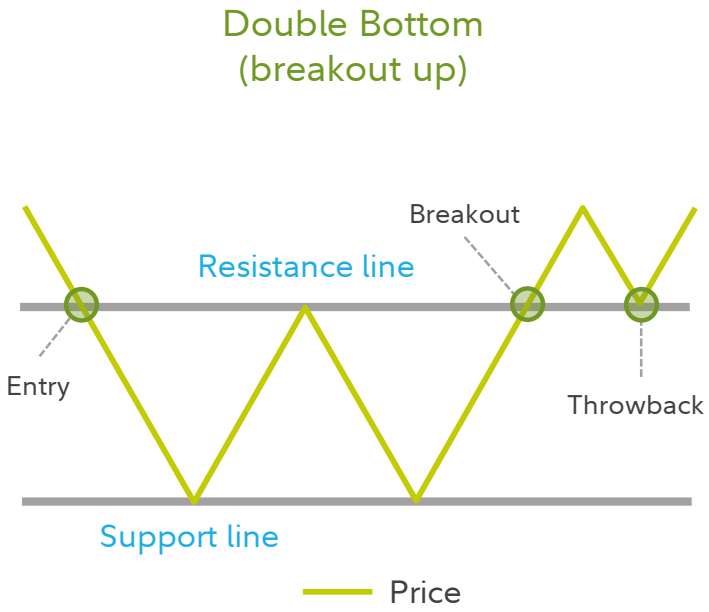
Taking the height from the highest peak to the trough and then subtracting the amount from the breakout price to the downside.

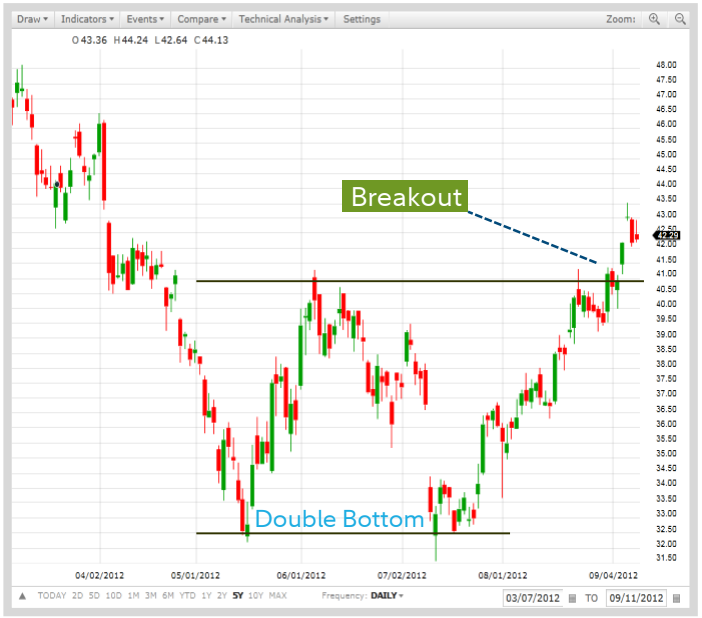
*Source: *Technical Analysis: the Complete Resource for Financial Market Technicians, 2nd ed.*

Horizontal Congestion: Double Bottom

Characteristics:

- Two successive troughs separated by a peak
- Either rounded or pointed troughs that are usually at roughly the same price (support level)
- Price must break out of middle peak





Calculate target price:

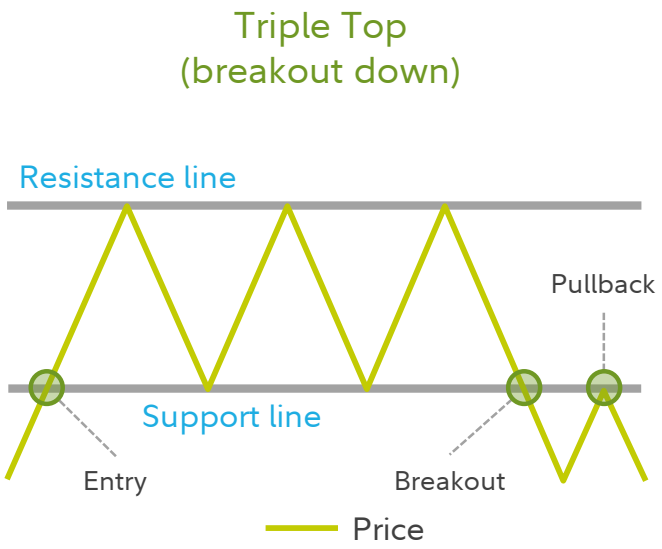
Taking the distance from the troughs to the peak and then adding that amount from the breakout price to the upside.

*Source: *Technical Analysis: the Complete Resource for Financial Market Technicians, 2nd ed.*

Horizontal Congestion: Triple Top

Characteristics:

- Three distinct peaks at roughly the same price level separated by two intermittent troughs
- Breakout occurs when price exceeds the extreme of the intermittent trough or a trend line connecting those points



Calculate target price:

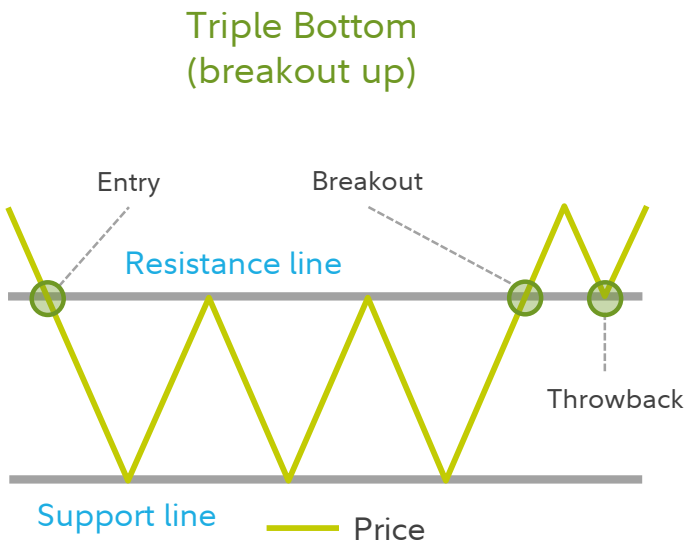
Take the height from the highest peak to the lowest trough in the pattern. Then subtract that amount from the lowest trough in the pattern to generate a price target.

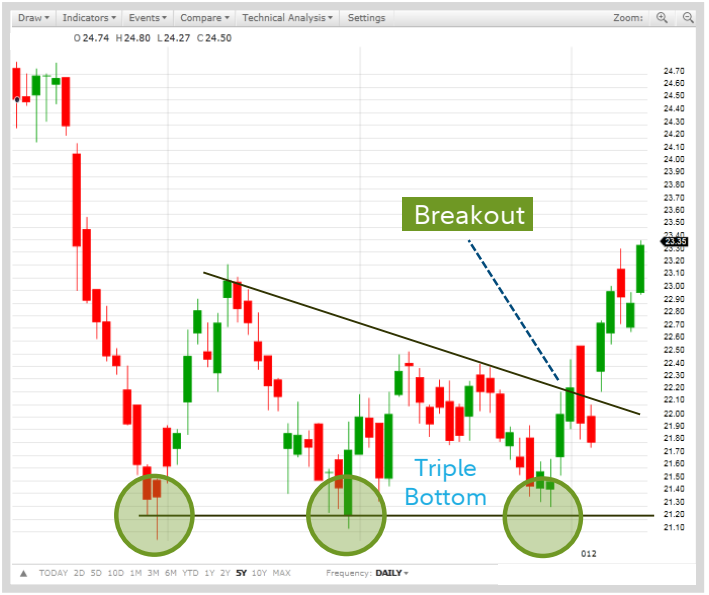
*Source: *Technical Analysis: the Complete Resource for Financial Market Technicians, 2nd ed.*

Horizontal Congestion: Triple Bottom

Characteristics:

- Three distinct troughs at roughly the same price level separated by two intermittent peaks at any level
- Breakout occurs when price exceeds the extreme of the intermittent peaks or a trend line connecting those points
- Best performance may be after a sustained decline*
- An average performance, but watch for failures*





Calculate target price:

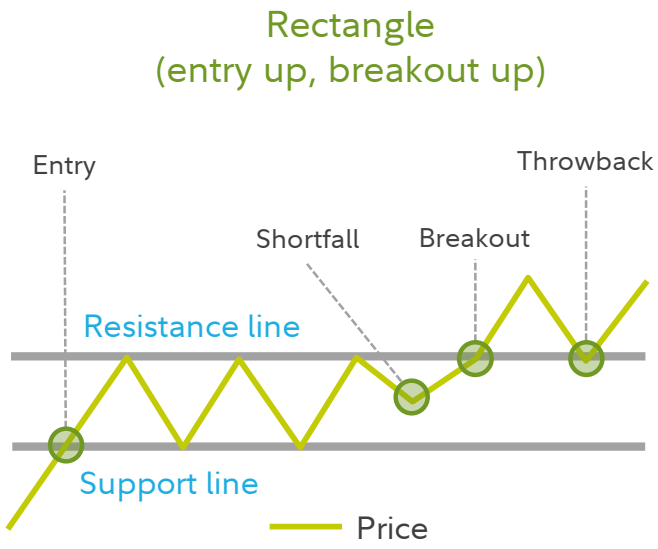
Take the height from the highest peak to the lowest trough in the pattern. Then add that amount to the highest peak in the pattern to generate a price target.

*Source: *Technical Analysis: the Complete Resource for Financial Market Technicians, 2nd ed.*

Horizontal Congestion: Rectangles

Characteristics:

- Trading range with support and resistance levels bounding price action
- Slight tilt, similar to horizontal channel
- Often has many false breakouts*
- Things to consider:
  - Confirm a breakout
  - "Shortfall" often indicator of eventual breakout direction
- Best occurrence may be bottom breaking upward*



Calculate target price:

Take the height from the resistance line to the support line. Then either add that amount to the resistance line to generate a price target for an upside breakout, OR subtract that amount from the support line to generate a price target for a downside breakout.

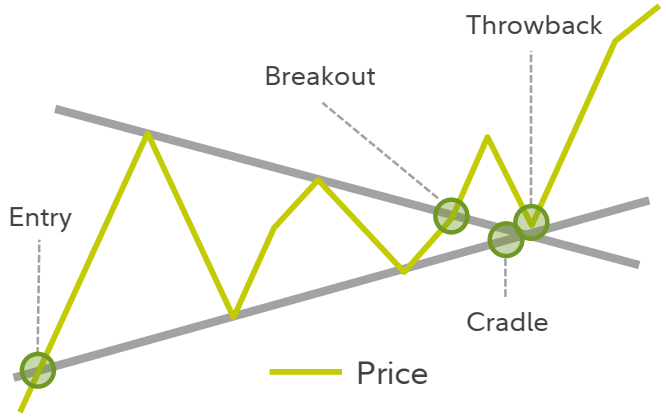
*Source: *Technical Analysis: the Complete Resource for Financial Market Technicians, 2nd ed.*

Triangle: Symmetrical

Characteristics:

- Bounded by a downward sloping upper trend line and an upward sloping lower trend line. Each bound is a straight trend line
- Prices must touch each bound at least twice. Many false breakouts. Moderately successful in performance
- Things to consider:
  - Confirm a breakout
- Best occurrence may be upward breaking out – above average for all patterns*

Symmetrical Triangle (breakout up)



Calculate target price:

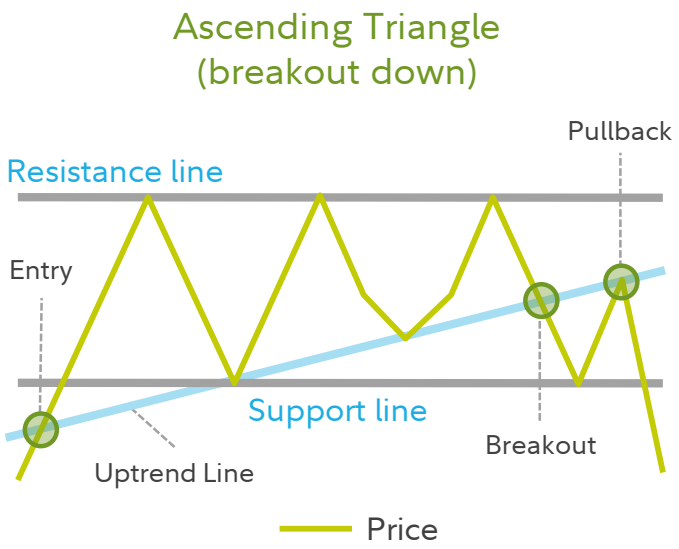
Take the height from the highest peak in the pattern to the lowest trough in the pattern. Then either add it (for upward breakouts) to the breakout price or subtract it (for downward breakouts) from the breakout price to generate a price target.

*Source: *Technical Analysis: the Complete Resource for Financial Market Technicians, 2nd ed.*

Triangle: Ascending

Characteristics:

- Bounded by a horizontal upper trend line and an upward sloping lower trend line. Each bound is a straight trend line
- Prices can break in either direction, but more commonly upward*
- Breakout usually occurs in pattern. About average failure rates but many small false breakouts*
- Post breakout performance average on upside but above average on downside*



Calculate target price:

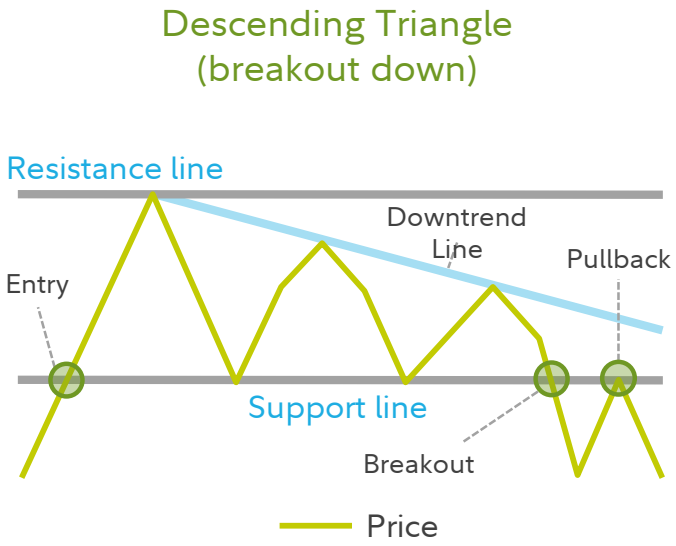
Take the height from the highest peak in the pattern to the lowest trough in the pattern. Then either add it (for upward breakouts) to the breakout price or subtract it (for downward breakouts) from the breakout price to generate a price target.

*Source: *Technical Analysis: the Complete Resource for Financial Market Technicians, 2nd ed.*

Triangle: Descending

Characteristics:

- Bounded by two trend lines; the lower is horizontal and the upper slopes downward
- Prices can break in either direction but most commonly downward*
- Above-average performance on upside break; retracements occur often*



Calculate target price:

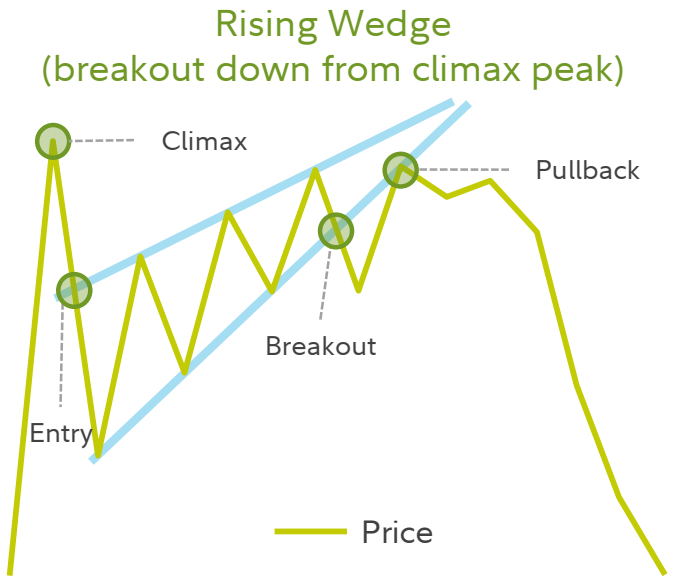
Take the height from the highest peak in the pattern to the lowest trough in the pattern. Then either add it (for upward breakouts) to the breakout price or subtract it (for downward breakouts) from the breakout price to generate a price target.

*Source: *Technical Analysis: the Complete Resource for Financial Market Technicians, 2nd ed.*

Triangle: Wedge

Characteristics:

- Bounded by two trend lines, each headed in the same direction; Price must touch a trend line at least five times (3 times on one and 2 times on the other) before a breakout
- Often occur following a panic (declining wedge) or bubble (rising wedge)
- Performance in both types is below average, and retracements are very common*



Calculate target price:

For downward breakout, the lowest trough in the pattern is the price target. For upward breakouts, take the height from the highest peak in the pattern to the lowest trough in the pattern and add that amount to the breakout price for a price target.

*Source: *Technical Analysis: the Complete Resource for Financial Market Technicians, 2nd ed.*

Head and Shoulders: Top

Characteristics:

- Three peaks with center peak higher than the other two
- Shoulders should be at approximately the same level and the head higher
- Line connecting the two throughs between the peaks is called the "neckline"
- Pattern is only complete on breaking the neckline
- Target is the distance from the head to the neckline projected from the neckline
- This is a standard pattern for tops and has one of the lowest failure rates

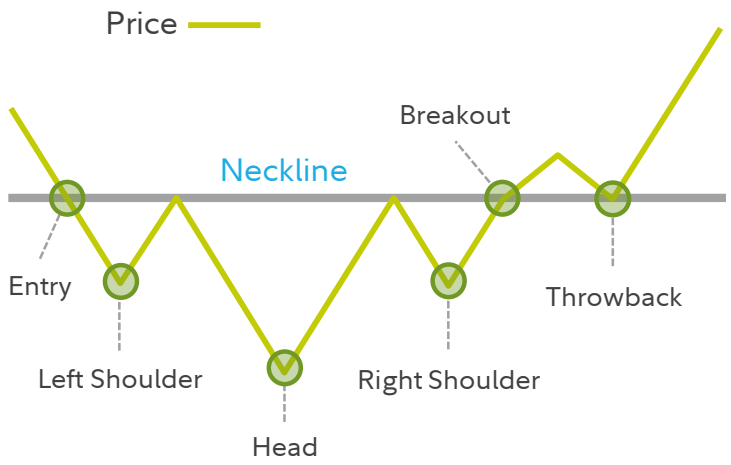
*Source: *Technical Analysis: the Complete Resource for Financial Market Technicians, 2nd ed.*

Head and Shoulders: Bottom (Inverse)

Characteristics:

- Inverted but otherwise identical to a top pattern except not as profitable*

Head and Shoulders Bottom (breakout up)

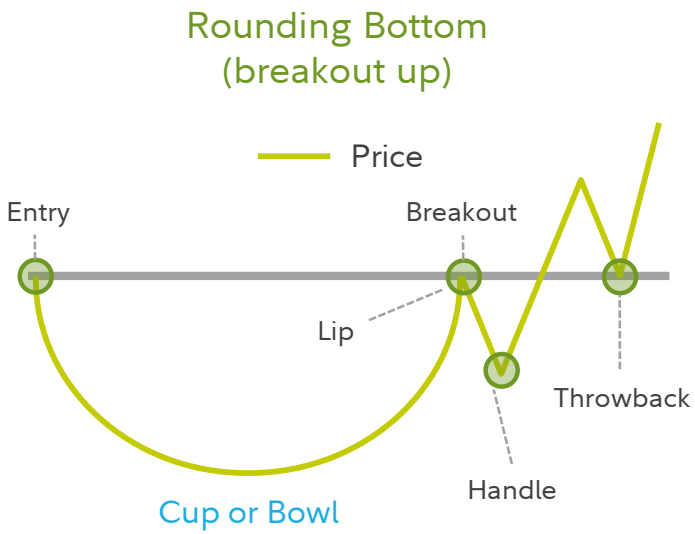


*Source: *Technical Analysis: the Complete Resource for Financial Market Technicians, 2nd ed.*

Cup and Handle (also "Saucer")

Characteristics:

- Pattern consists of a rounded bottom (not a "V" bottom), two "lips" at each end, and a "handle" (similar to a flag pattern) from the handle
- Pattern is complete with breakout above both lips
- Often have a throwback
- The pattern's performance ranks about average for bottom patterns*



Calculate target price:

Take the height of the right cup lip to the bottom of the cup, then add that amount to the breakout price.

*Source: *Technical Analysis: the Complete Resource for Financial Market Technicians, 2nd ed.*

Trading with Patterns

*Source: *Technical Analysis: the Complete Resource for Financial Market Technicians, 2nd ed.*

Best Multi-Bar Patterns

Upward Signals

- Descending Triangle
- Rectangle
- Pipe Bottom

Downward Signals

- Flag
- Head and Shoulders top
- Island Reversal

General Information about a Candlestick

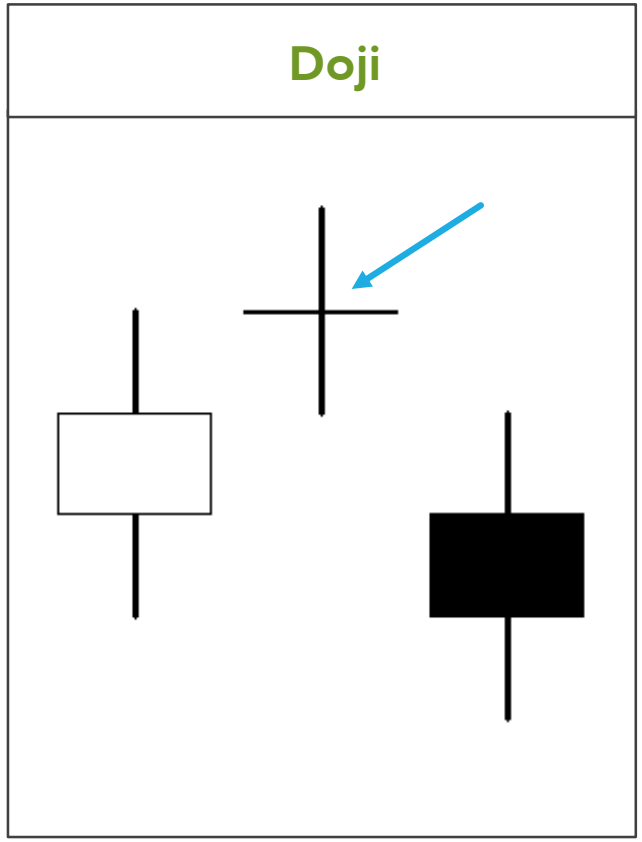
Characteristics:

- Traditionally, candlestick patterns are reversal patterns, meaning they are used to identify when a trend is ending
- Candlestick patterns are often used with longer-term trends, thus, upward reversal patterns after a correction in a longer upward trend show the best performance, and vice versa for downward reversal patterns in a long downward trend
- Be careful not to act on a perceived candle pattern until the pattern has formed and is activated by a breakout in a certain direction

Doji

Characteristics:

- A one-candle pattern formed when the open and close are the same price, and the high and low are roughly equidistant from the open and close
- Extremely common
- Indicates indecision in the marketplace and thus is a possible warning of price change

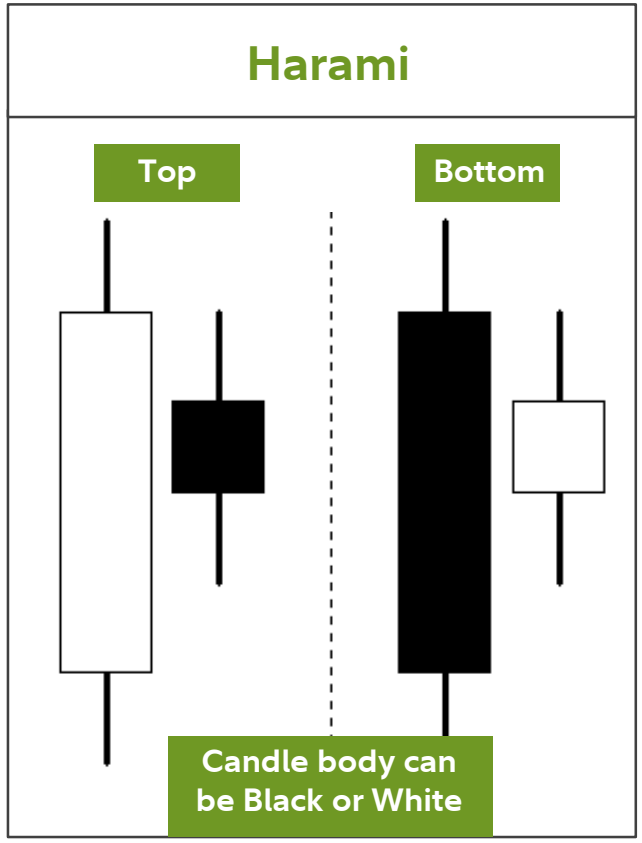


*Source: *Technical Analysis: the Complete Resource for Financial Market Technicians, 2nd ed.*

Harami

Characteristics:

- A two-candle pattern of a large body of either color followed by a small body of the opposite color; The second body is completely within the body of the large body and is called a "spinning top"
- Although common belief is that the harami is a reversal pattern, many report that is has the potential of breaking either way
- A variation that has a doji instead of a spinning top as the second candle has equally average performance and random breakout*

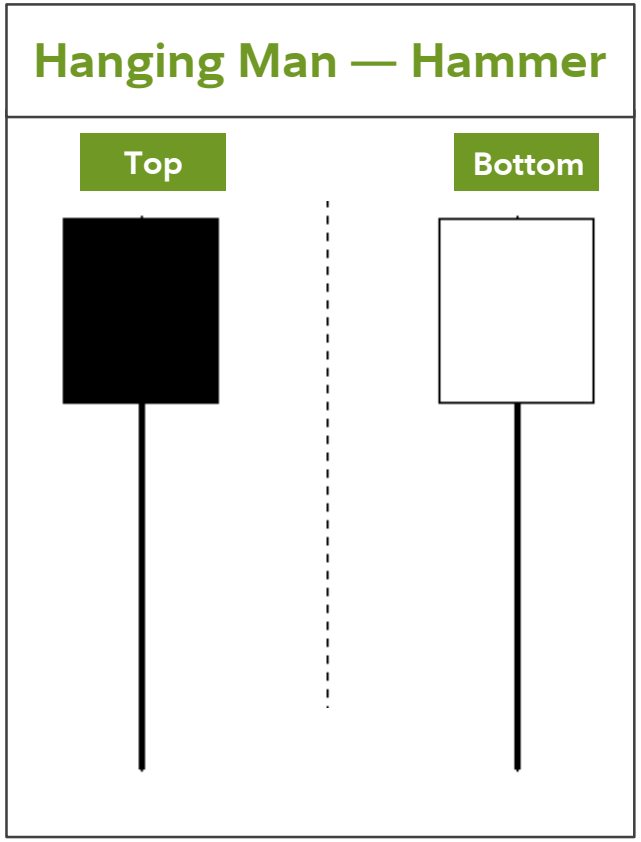


*Source: *Technical Analysis: the Complete Resource for Financial Market Technicians, 2nd ed.*

Hanging Man and Hammer

Characteristics:

- One-candle patterns differentiated by the color of the body. Each pattern has a high that coincides with either the opening or closing price
- Hanging man, thought to be a continuation pattern, actually breaks in either direction randomly with a slight upward bias. Its overall performance is below average*
- Hammers occur relatively frequently but have below-average performance*

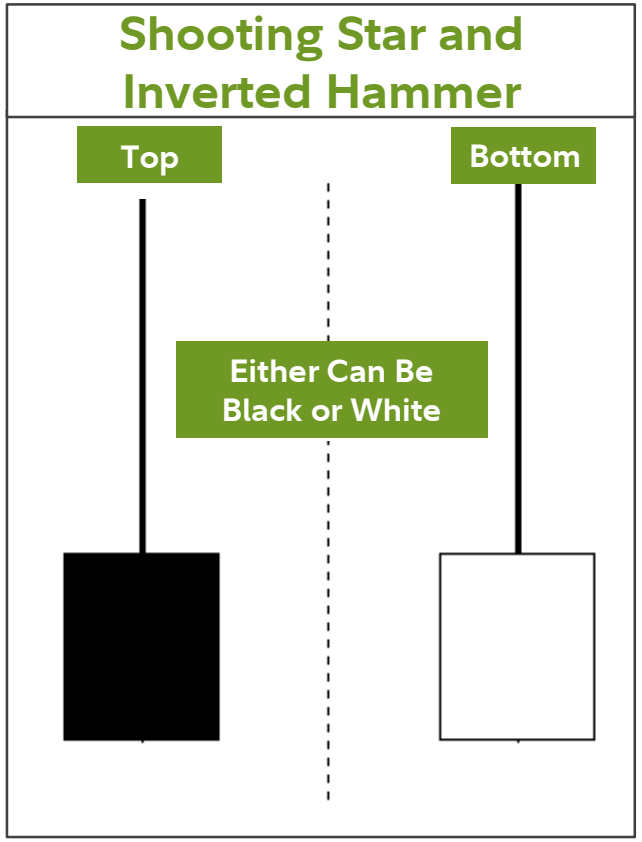


*Source: *Technical Analysis: the Complete Resource for Financial Market Technicians, 2nd ed.*

Shooting Star and Inverted Hammer

Characteristics:

- A one-candle inverted hanging man or hammer pattern. Hammers by themselves have white bodies and shooting stars have black bodies
- As a one-candle pattern, the shooting star has average performance. The same is true for the single inverted hammer*

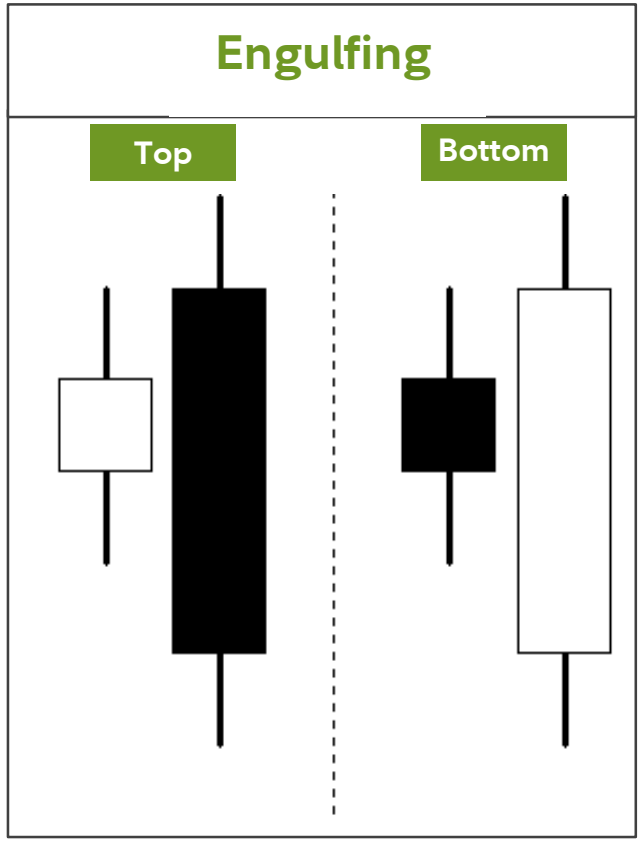


*Source: *Technical Analysis: the Complete Resource for Financial Market Technicians, 2nd ed.*

Engulfing

Characteristics:

- A two-bar pattern in which the second bar body completely engulfs the first bar body*
- A bottom engulfing pattern, with a short black body followed by a tall white body, is thought to be an upward reversal pattern and actually has very good performance on a downward breakout in a downward trend*

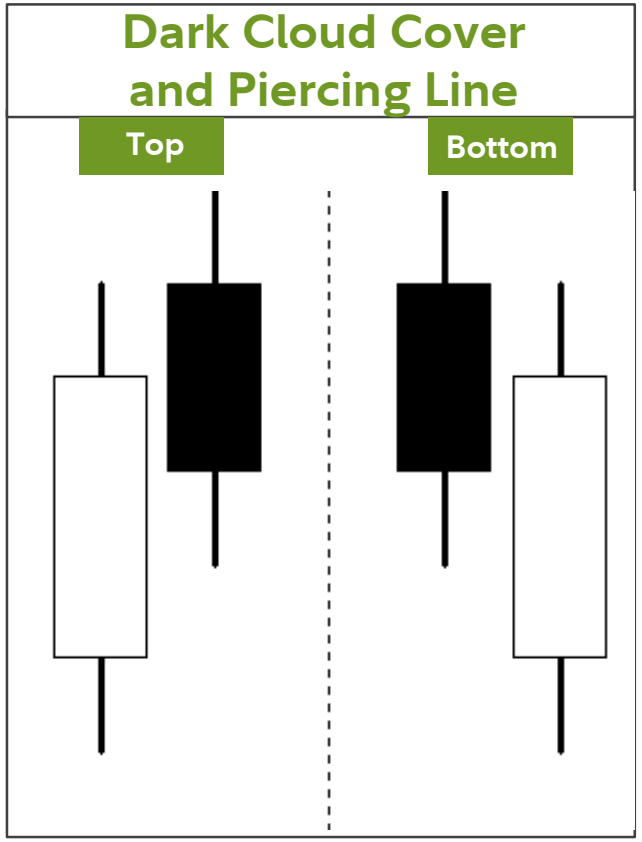


*Source: *Technical Analysis: the Complete Resource for Financial Market Technicians, 2nd ed.*

Dark Cloud Cover and Piercing Line

Characteristics:

- The dark cloud cover is a two-bar pattern where the second bar closes higher than the first and is black versus white in the first bar
- The piercing line is the opposite of the dark cloud cover in that the second bar is white and lower than the first bar which is black
- The dark cloud is thought to be a downward reversing pattern
- The piercing line pattern is thought to be an upward reversing pattern*



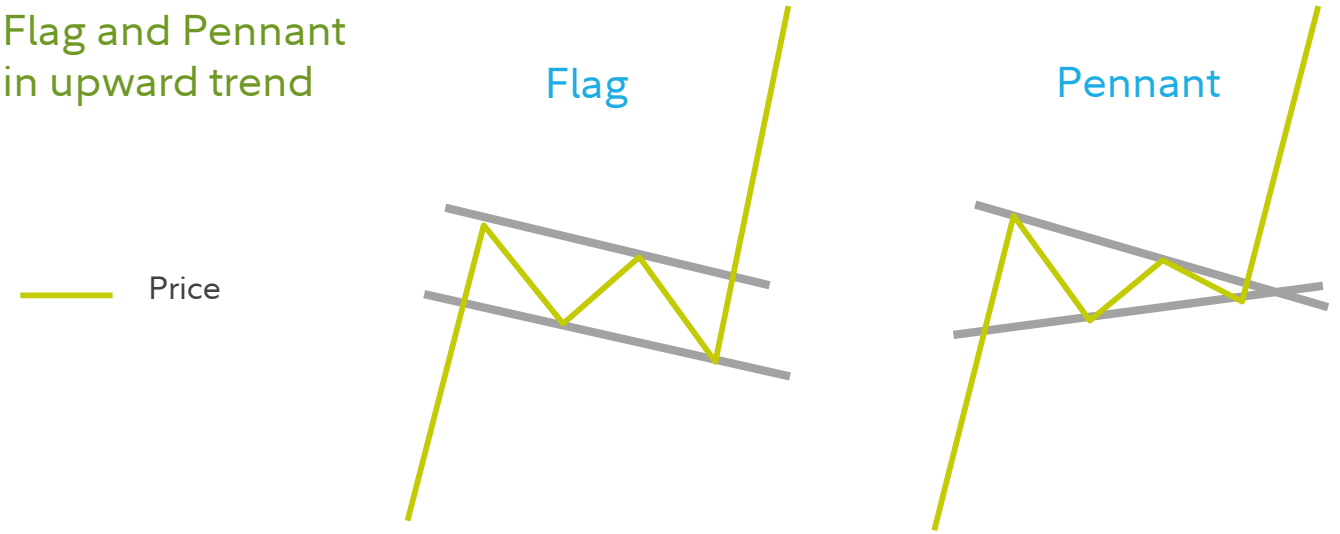
*Source: *Technical Analysis: the Complete Resource for Financial Market Technicians, 2nd ed.*

Pennant/Flag

Characteristics:

- Pennant and flag patterns are variations of the same pattern
- These patterns are often preceded by a steep, sharp price change, up or down, and form a short consolidation that appears like a triangle or flag. Generally, the pattern slopes slightly in the direction opposite from the trend
- The breakout in either direction is often followed by a move that equals the earlier steep, sharp price change into the pattern

Flag and Pennant in upward trend



Calculate target price:

Take the height from the start of the "flag pole" to the highest peak in the pennant. Add that amount to the bottom of the pennant for an upward price target.

*Source: *Technical Analysis: the Complete Resource for Financial Market Technicians, 2nd ed.*

Gaps

Characteristics

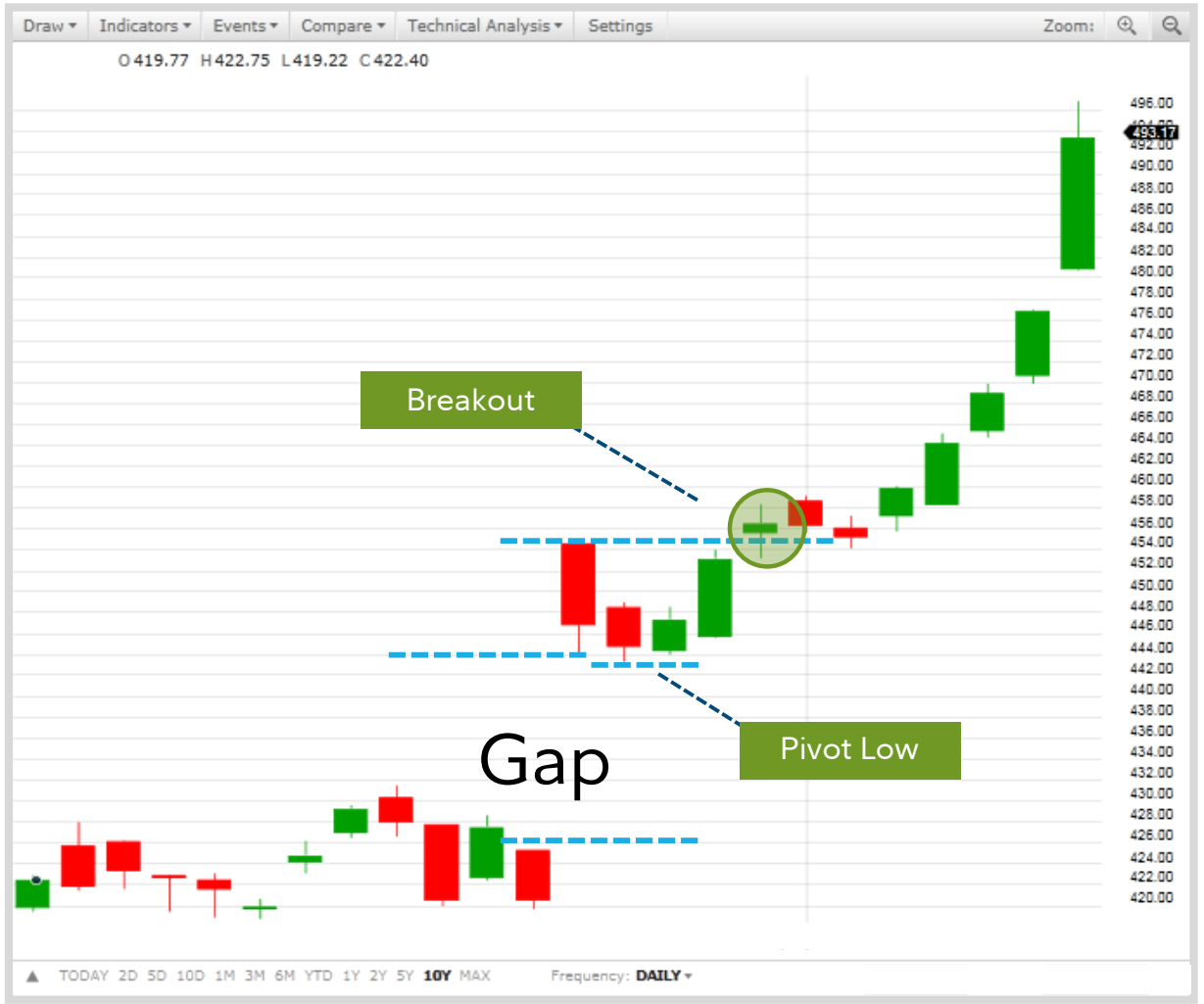
- Definition – no trading (gap) at specific prices
- Gaps can be considered "up" or "down"
- Gaps are caused by appreciable changes in supply and demand from one close to the following open

*Source: *Technical Analysis: the Complete Resource for Financial Market Technicians, 2nd ed.*

Gaps

Characteristics

- Gaps are generally profitable on breakouts from patterns, trends, support or resistance
- A method of trading a gap is the "explosion gap pivot." It assures that the gap is valid
- After the gap, wait for "throwback." If throwback "covers" the gap, no action. If the throwback stops, this is called the "pivot low." Place buy entry above high of the gap bar
- "Pivot" is the lowest level of the post-gap breakout
- Protective stops initially placed at gap low and then below pivot low

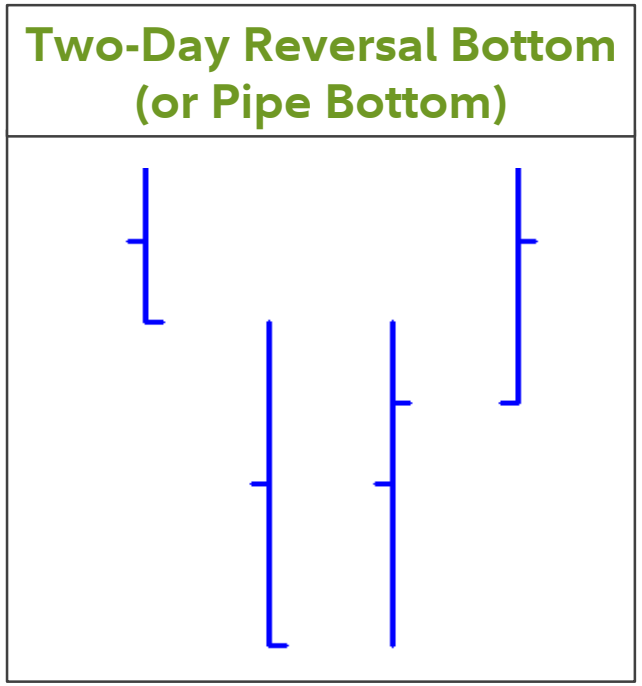


*Source: *Technical Analysis: the Complete Resource for Financial Market Technicians, 2nd ed.*

Two-Bar Reversal Button or Pipe Bottom

Characteristics:

- Two bars and occurs at the end of a large trend, up or down trend. Ideally, the first bar, in a bottom pattern, closes at the low, and the second bar closes in the upper half of the range. It is more reliable in weekly data
- Bar ranges are larger than preceding bar ranges
- Action occurs on breakout through second bar



Calculate target price:

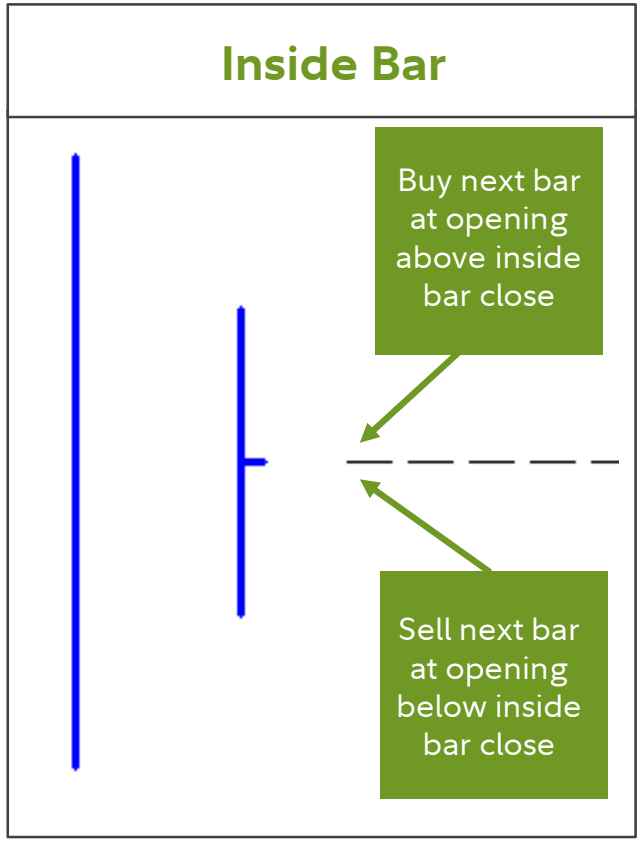
Take the height from the taller of the two bars to the lower of the two bars. Add that amount to the taller of the two bars to get a price target.

*Source: *Technical Analysis: the Complete Resource for Financial Market Technicians, 2nd ed.*

Volatility Patterns

Characteristics:

- Dull activity is known as "low volatility." New trends often begin from periods of low volatility
- One way to look at volatility is to observe the relationship between price bars
- "Range" is the spread between high and low in a price bar
- If a bar is followed by a bar with less range, volatility is declining; the second bar is called a "narrow range" bar
- When this second bar's range is contained within the range of its preceding bar, it is called an "inside bar."

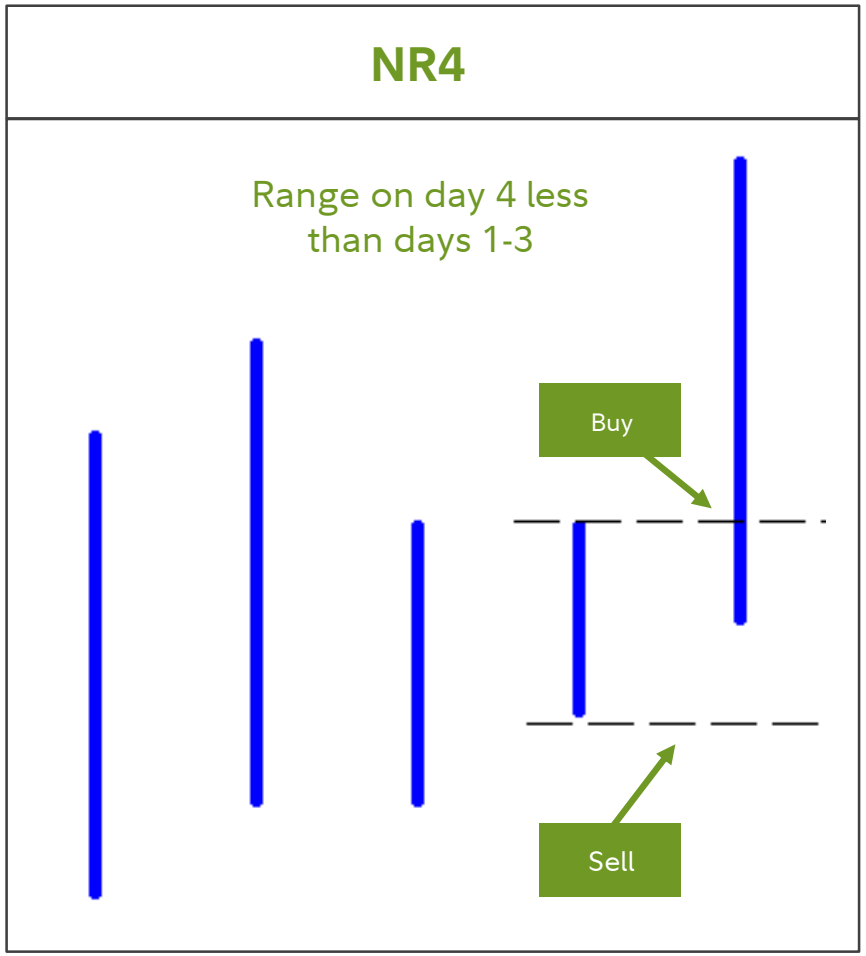


*Source: *Technical Analysis: the Complete Resource for Financial Market Technicians, 2nd ed.*

Narrow Range

Characteristics:

- One low volatility pattern is called a "Narrow Range" pattern and consists of a bar with a range narrower than its preceding bars
- The graph shows a four-bar, Narrow Range pattern (NR4) with four bars, the fourth bar having a narrower range than the preceding three bars
- The breakout occurs on a break above or below the high or low of the narrow range



*Source: *Technical Analysis: the Complete Resource for Financial Market Technicians, 2nd ed.*

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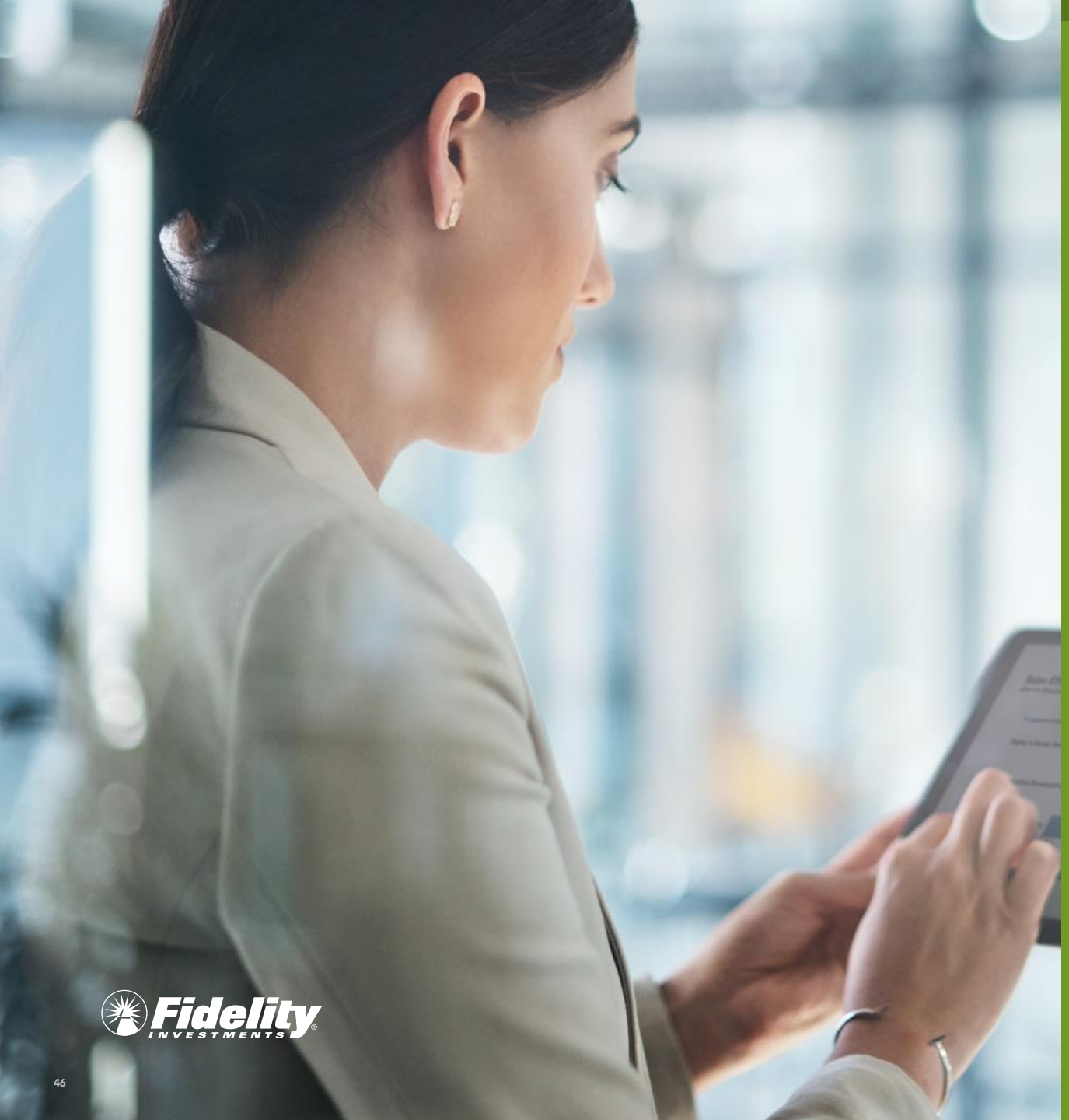

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