

THE **3** DIMENSIONS OF THE MARKETS

PRICE

TIME

VOLUME



**CHEETAH
INVESTORS**



Aaron Valley



The 3 DIMENSIONS OF A STOCK MARKET

Financial markets exist in 3 dimensions – price, time, and volume.

Market Dimensions

MARKET DIMENSION #1 - PRICE

The first and foremost consideration for any exchange instrument is its pricing. A consensus between sellers and buyers led to the current pricing. The price is often located in the vertical chart axis.

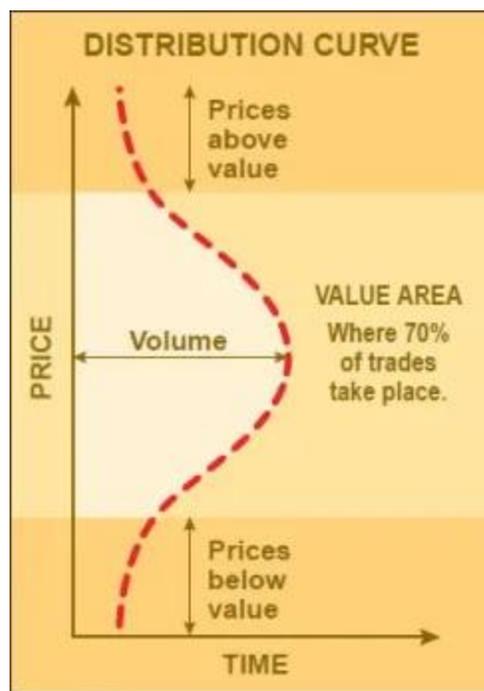
MARKET DIMENSION #2- TIME

Most exchange charts depict a price change specifically over time. Timeframes bring clarity and a deeper understanding of the price. The time is often located in the horizontal chart axis.

MARKET DIMENSION #3 - VOLUME

Many trading systems have very limited volume analysis functionality, which quickly deprives traders of crucial knowledge. Volume is a fully-developed but sometimes underappreciated market dimension.

Bell Curve/Normal Distribution



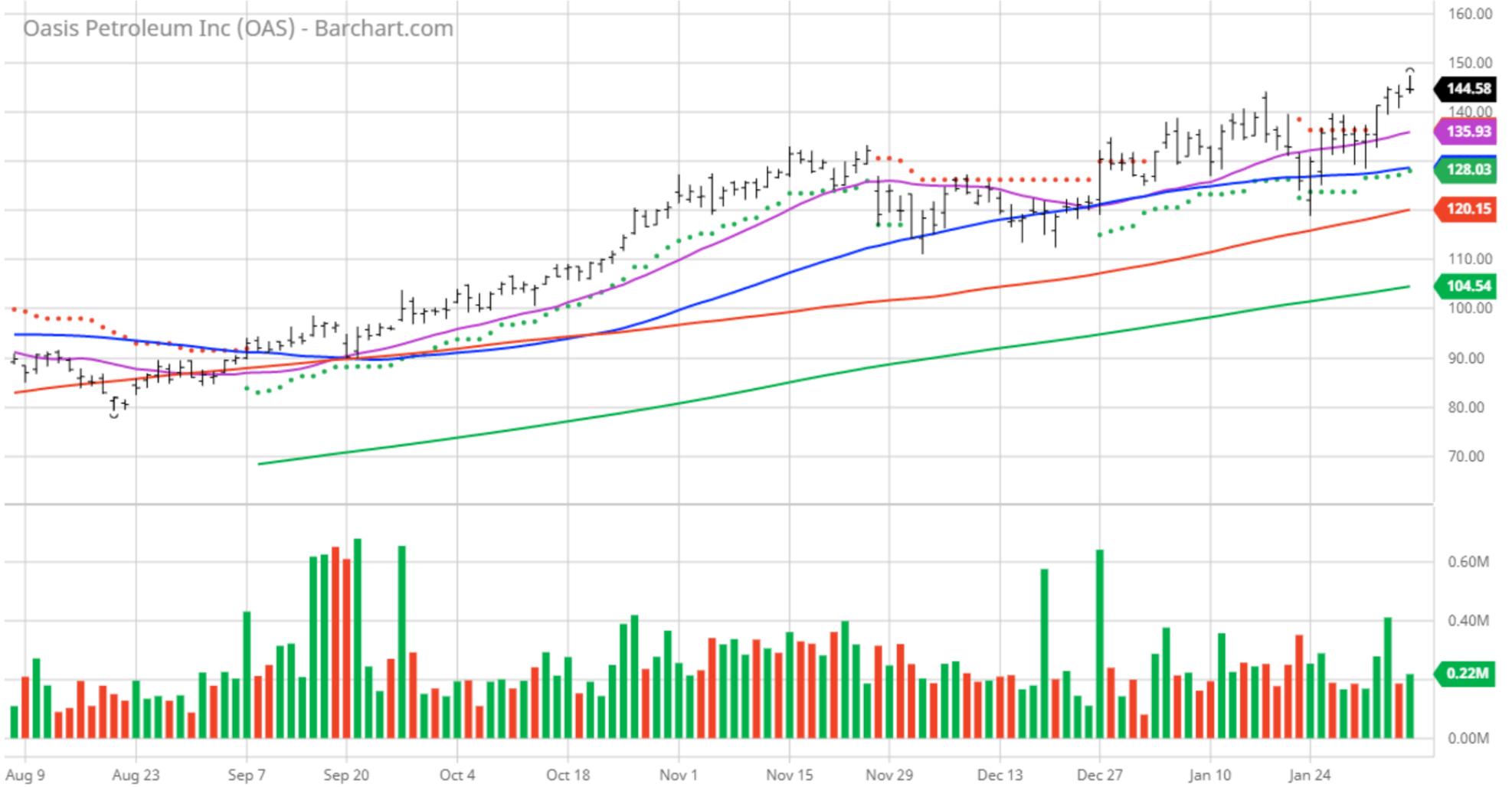
Value Area

70% of all trades take place where price, time, and volume converge and peak. Take note that this is an area where **value** exists which is what is attracting buyers, traders, or investors. If this value area doesn't actually have value, it will fall as quickly as it rose.

Market Value - the amount for which something can be sold on a given market.

Intrinsic Value - true value; what an asset is actually worth; often called fundamental value, financial analysis uses **future cash flow** to determine the intrinsic value of a company, stock, or asset. So from a fundamental (mathematical/statistical/financial) perspective, if an asset has no cash flow it doesn't have intrinsic value. If value doesn't increase over time, creating a **future value**, then an intrinsic value doesn't exist.

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PRICE

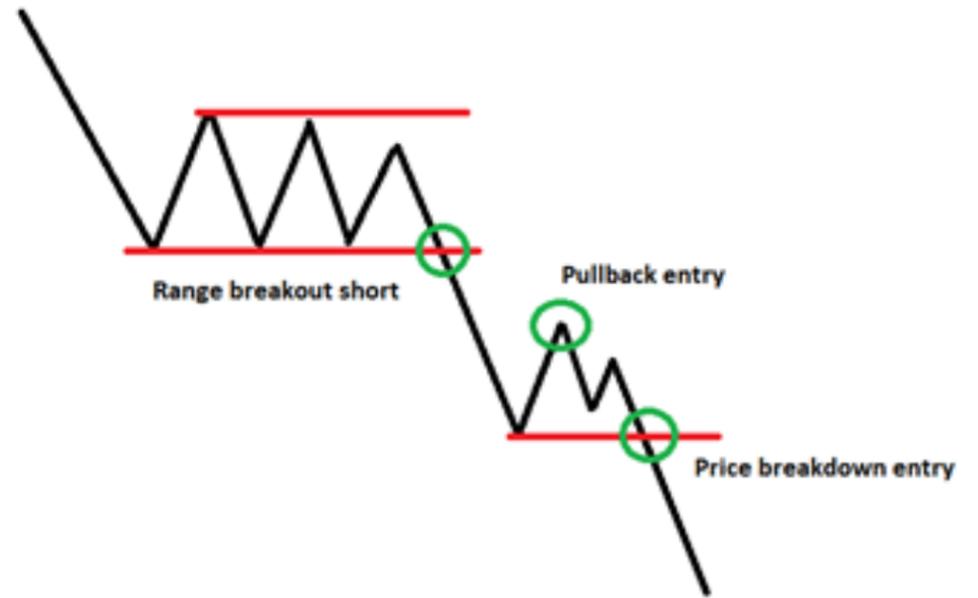
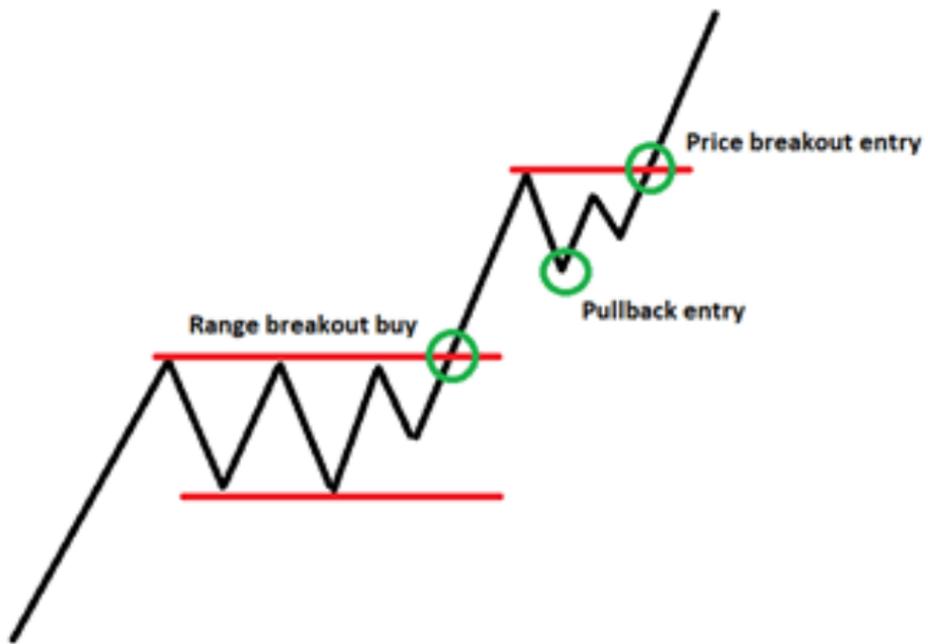
Dow Theory

Charles Henry Dow is widely considered to be the Father of Technical Analysis. In 1897, he developed two broad market **averages**. The "Industrial Average" included 12 blue-chip stocks and the "Rail Average" was comprised of 20 railroad enterprises. These are now known as the Dow Jones Industrial Average and the Dow Jones Transportation Average.

Charles Dow also created the Wall Street Journal and published a series of articles on The Dow Theory between 1900 and 1902. The Dow Theory is a financial theory that says the market is in an upward trend if one of its **averages** (i.e. industrials or transportation) advances above a previous important high and is accompanied or followed by a similar advance in the other average. Even though Dow Theory is over 100 years old it is still relevant and accurate.

6 Tenets of Dow Theory

	TENET	APPLICATION
1	The Market Discounts Everything	Efficient Markets Hypothesis: share prices reflect all information
2	There Are Three Primary Market Trends	Primary, Secondary, & Minor
3	Primary Trends Have Three Phases	Accumulation, Participation, Distribution
4	Indices Must Confirm Each Other	DJI, SPX, NDX, RUS
5	Volume Must Confirm the Trend	OBV, VPT, MFI, NVI
6	Trends Persist Until Reversal Occurs	The Break (Breakout, Breakdown)





Price Action Strategy

Price Action Strategy - a methodology for market speculation that consists of the analysis of basic price action (movement) across time.

Price (asset or market) - The most recent selling price that's traded on an exchange and is the most reliable indicator of that security's present value; also known as market value.

Price Action - the movement of a security's price plotted over time; how price changes is the 'action' of price.

Trend - the overall direction of a price

1. The **Primary Trend**: It can be as long as years and is the 'main movement' of the market.
2. The **Intermediate Trend**: lasting between 3 weeks to several months, retraces the last primary move by some 33-66% and is difficult to decipher.
3. The **Minor Trend**: is least reliable, lasting from several days to a few hours, constitutes noise in the market, and may be subject to manipulation.

Trendline - a line drawn to show the prevailing direction of price; trendlines are identified when price action is making a set of swing highs for an uptrend or a set of swing lows for a downtrend.

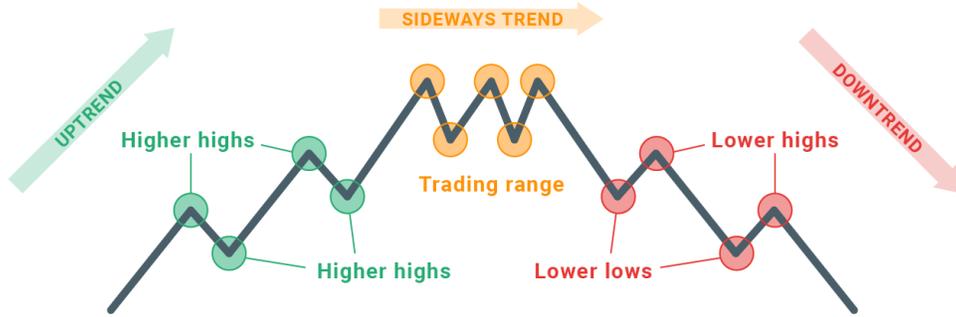
Uptrend - an overall upward trajectory in price; made and confirmed with 3 higher highs

Downtrend - an overall downward trajectory in price; made and confirmed with 3 lower lows

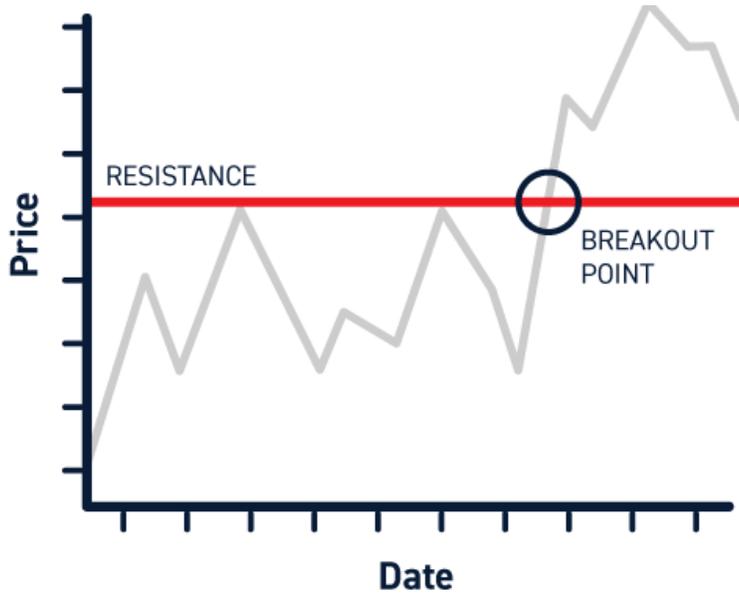
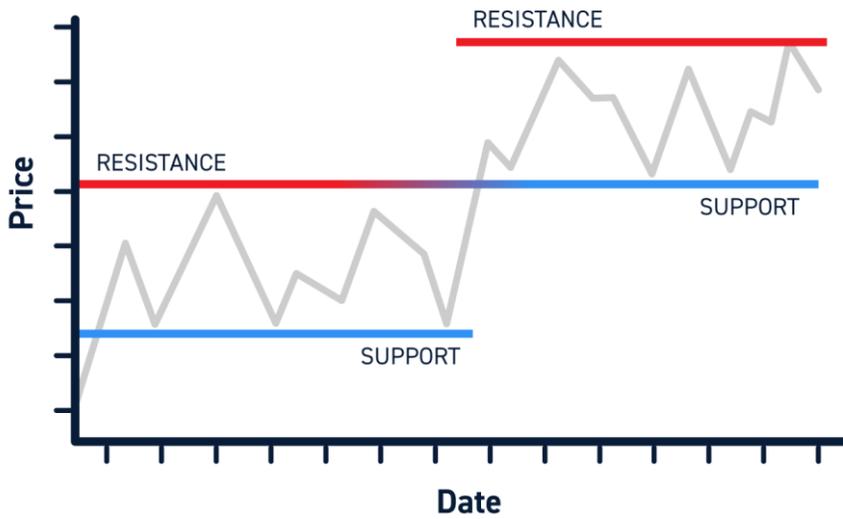
Sideways - the horizontal price movement that occurs when the forces of supply and demand are nearly equal.

Trend Confirmation (Technical Analysis)

1. Trend Indicators - which direction the market is moving in and if there is a trend at all
2. Momentum Indicators - how strong the trend is and if a reversal is going to occur
3. Volatility Indicators - how much and how fast the price is changing in a given period
4. Volume Indicators - how volume is changing over time and how strong the move is

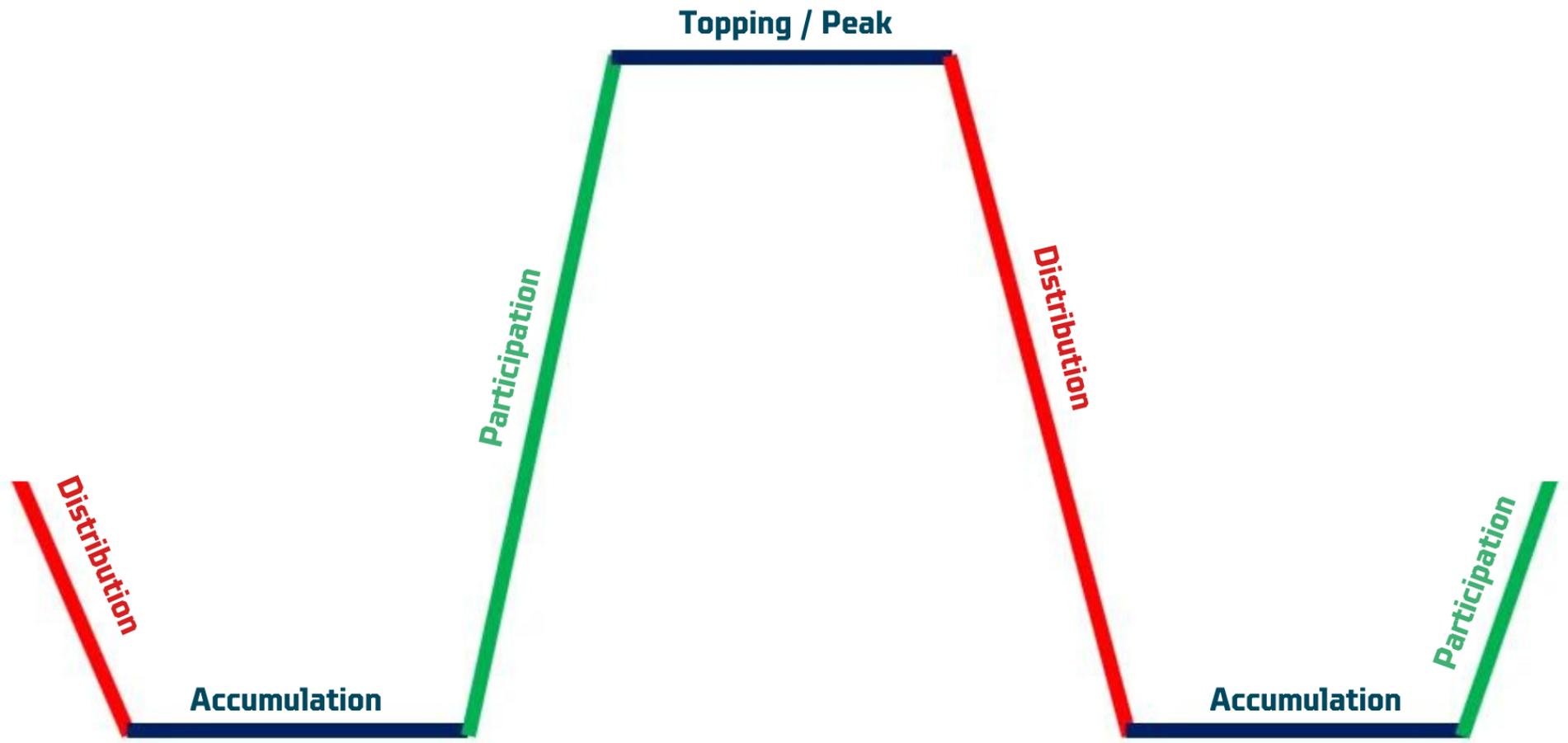


Resistance & Support Levels



4 Market Phases

Market Cycle







Global Market Schedule (Times are based on US EST)

5PM	Asian Markets Open (Zenba)
9PM	Asian Morning Session Ends
10:30PM	Asian Afternoon Session Starts (Guba)
1AM	Asian Markets Close
3AM	European Markets Open
8:30AM	U.S .Future Markets Open
9AM	European Markets Close
9:30AM	U.S. Markets Open; Futures continues trading
9:45AM	First reliable reversal/pullback period
9:50 - 10:10AM	First opportunity for new positions; reversals/pullbacks; bearish stocks resume trend
10:25AM - 10:35AM	Reliable reversal time
10:45AM	Final Bull or Bear rally before lunch
11:00AM	European Futures Markets end
11:20AM -1:20PM	Lunch; Erratic, unpredictable markets; volatile
1:30PM	U.S. Afternoon session starts to move
1:45PM	Time for pullbacks from session high or low
2:15PM	"The Second Coming" Stocks break out definitively; sentiment remains until close
2:30PM	Futures Markets close but continue trading
3:00PM	Bond Markets close; Trading positions shift; Asian Markets start trading U.S. Futures
3:20PM	Another position shift; Positions start closing
3:30PM	Mind Reversal
3:50PM	Final Reversal
4:00PM	U.S. Markets Close

High Risk	Medium Risk	Low Risk
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Volume

Volume Strategy

Price/Volume Relationship

VOLUME	Number of shares traded at any given time. It indicates liquidity
LIQUIDITY	The ability (typically easily or quickly) to exchange an asset for cash
MOMENTUM	The speed at which price changes
VOLATILITY	The degree of price variation over time

Volume Guidelines

1. Liquidity Indicator

Volume is frequently used as a measure of liquidity since highly liquid stocks and markets are seen to be the best for short-term trading because they have a large number of buyers and sellers willing to transact at a range of prices.

2. Sentiment Indicator

Volume can be useful in identifying the sentiment of the markets. Combining volume with other analytics can help determine if the market will be bullish or bearish.

3. Price Reversals

Volume should increase in a rising market. Buyers must increase in number and enthusiasm to keep pushing prices higher. Increasing prices and decreasing volume may indicate a lack of interest, which could signal a reversal. Following a long price move higher or lower, if the price begins to range with little price movement and high volume, it may indicate that a reversal is underway and prices will change direction.

4. Trend Confirmation

Markets typically see rising volume in tandem with rising prices, implying that bullish moves are dependent on bullish volume. If an asset moves, but the market does not see a significant increase in volume, this could be a sign that the move is weak. As a result, we can apply this knowledge and proceed with caution, anticipating a change in trend.



5. Exhaustion Signals

Market exhaustion will appear in either a rising or falling market. These are generally sharp price moves accompanied by a sharp increase in volume, indicating the potential end of a trend. Falling prices eventually force out a large number of traders at a market bottom, resulting in increased volatility and volume. In these situations, we will see a decrease in volume after the spike, but how volume continues to play out over the next days, weeks, and months can be analyzed using the other volume guidelines.

6. Breakouts

A rise in volume on the initial breakout from a range or other chart pattern indicates strength in the move. Little or declining volume on a breakout indicates a lack of interest and a higher likelihood of a false breakout.

7. Volume History

Volume analysis is only accurate when compared to recent history. The more recent the data the more relevant the results.

Volume Analysis

Volume	Price	Interpretation	Conclusions
Increasing	Rising	Bullish	Strong uptrend; Look for long positions
Decreasing	Falling	Bullish	Uptrend weakening; Exit long positions
Increasing	Falling	Bearish	Strong downtrend; Look for short positions
Decreasing	Rising	Bearish	Downtrend weakening; Exit short positions

Volume Indicators

On Balance Volume (OBV)	Volume RSI	Accumulation/Distribution Line
Money Flow Index (MFI)	Volume Price Trend (VPT)	Negative Volume Index (NVI)

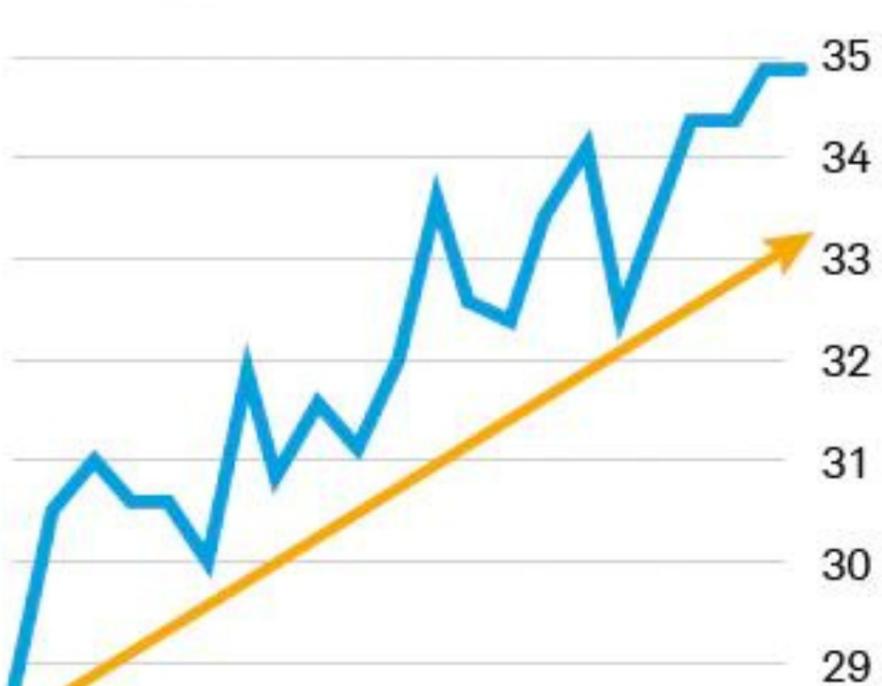
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Chart 1

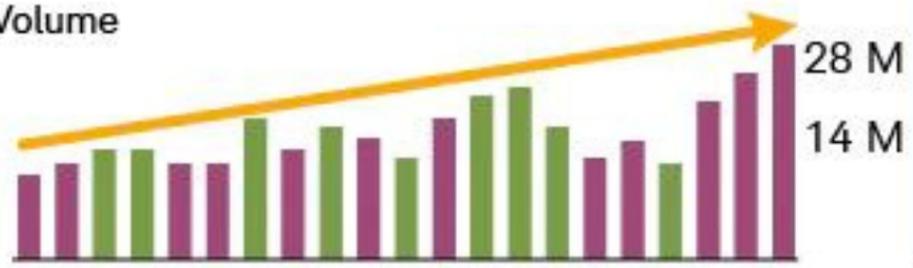


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Chart 2



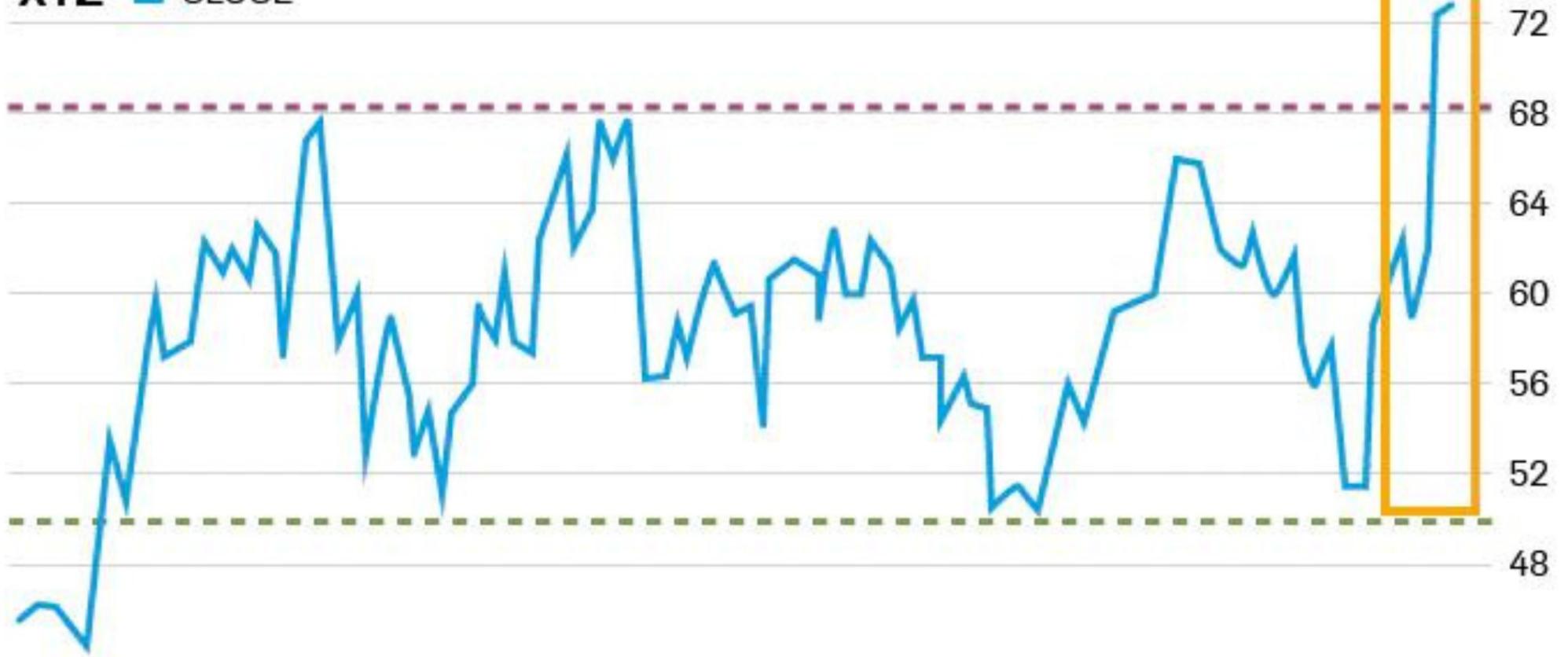
Volume



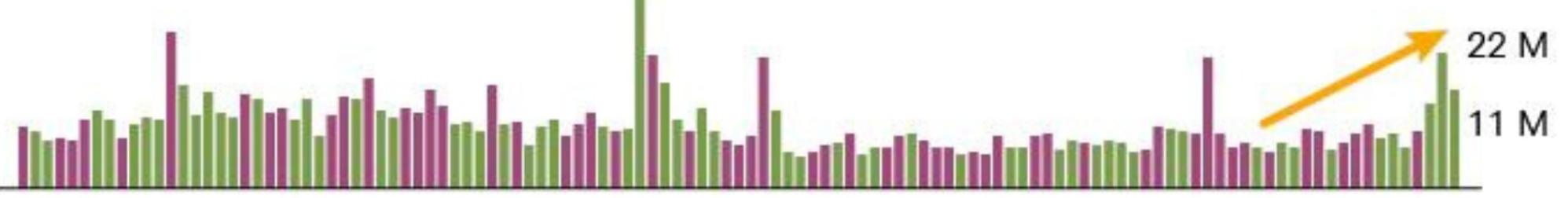
Volume



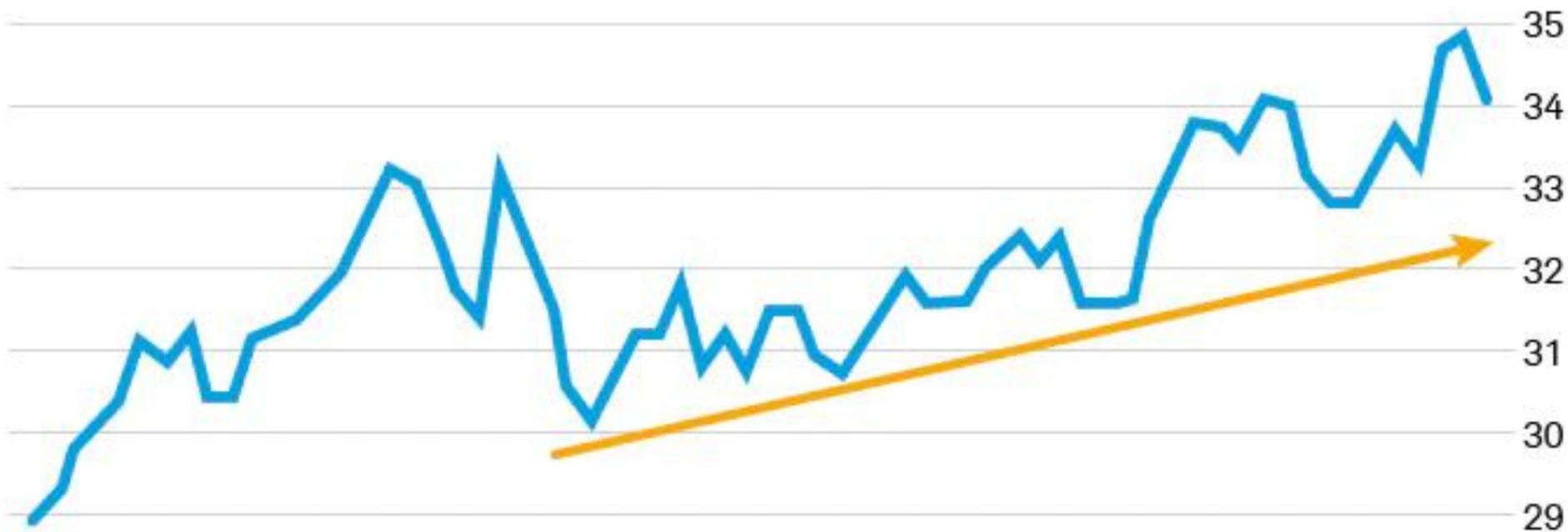
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Volume



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Volume

