

## TECHNICAL ANALYSIS

Technical analysis is a method of evaluating securities by charting *prices, trendlines, trading volume, open interest*, etc. Technical analysts believe that they can predict the future price of a security by looking at its historical prices and other trading variables. Technical analysts decide *when* to purchase a security (timing).

### Trendlines

Trendlines are used by technical analysts to track the *direction* of the security. The price of a stock will usually follow its trendline.



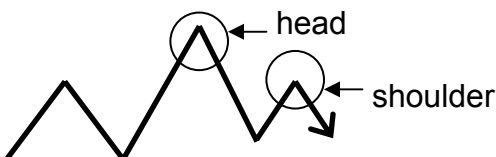
**Bullish** (increasing)



**Bearish** (decreasing)

### Head and Shoulders Pattern

A head and shoulders pattern indicates that the previous trend is *reversing*. The head portion of the pattern is supposed to indicate the high or low for the security before it starts going the other direction.



**Top Formation**

**Bearish**  
**Reversal of a Bullish Trend**



**Bottom (inverted) Formation**

**Bullish**  
**Reversal of a Bearish Trend**

### Saucer

A saucer pattern indicates that the previous trend is *gradually reversing*.



**Inverted Saucer**

**Bearish**

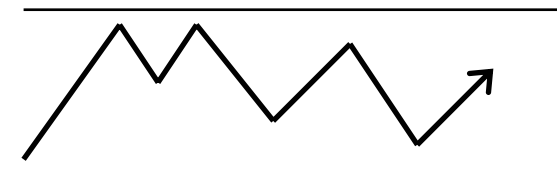


**Saucer**

**Bullish**

### Consolidation

When the price of a stock is generally moving *sideways*, it is said to be consolidating. A stock is consolidating if it is staying within a *small trading range* (for example between 40 and 40.50).



**Resistance** - *upper* portion of the trading range.

**Support** - *lower* portion of the trading range.

*TIP - To remember which is the support and which is the resistance, remember that the floor is supporting you.*

**Breakout** - occurs when the price breaks out of the normal trading range (breaks through the support or resistance by at least 3%).

### Advance - Decline Ratio

The advance-decline ratio indicates the *breadth* (momentum) of the market. This is considered the *best indicator of market movement*.

- If more stocks go *up* than *down* - *Bullish*
- If more stocks go *down* than *up* - *Bearish*

### Odd Lot Theory

The odd lot theory states that the *small* investor is *usually wrong*. If a lot of smaller investors are buying a particular security, it might be a good time to sell.

- As odd lot volume *increases* - *Bearish*
- As odd lot volume *decreases* - *Bullish*

### Short Interest Theory

This theory is based on the number of *short sales*. Short sellers must eventually buy the stock to close out their position.

- If short interest *increases* - *Bullish*
- If short interest *decreases* - *Bearish*

### Random Walk (Dartboard) Theory

The dartboard theory assumes that the market is *perfectly efficient* and there are no undervalued securities in the market. Every security is trading where it should be trading based on the analysis already publicly available.

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**Beta Coefficient** - measures the *volatility* of a stock in relation to the overall market.

- If  $\beta = 1$  - the stock is *equally volatile* as the market
- If  $\beta > 1$  - the stock is *more volatile* than the market
- If  $\beta < 1$  - the stock is *less volatile* than the market

**NOTE** - If the beta of a stock is negative, the stock moves opposite of the market.

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### **Risk Adjusted Return (Alpha Sharpe ratio)**

The *rate of return* on an investment compared to the *market risk* of the security. To determine the risk-adjusted return, divide the *percentage return* on the investment by the *security's beta*.

EX: If an investor purchases a security that has a return of 10% and a beta of 1.2, what is the risk-adjusted return?

$$\text{Risk Adjusted Return} = \frac{\text{Return on Investment}}{\text{Beta}} = \frac{10\%}{1.2} = 8.33\%$$

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## **INDEXES**

Indexes are used by technical analysts to measure the *performance* of the market or an industry.

### **Broad Based**

Broad based indexes indicate the performance of the *overall market*. There must be *several different types of stocks* from *several different industries* in a broad-based index. Some examples are S&P 100, S&P 500, and the major market index.

- **S&P 500** - Standard and Poor's 500 *listed and OTC common stocks*.
- **S&P 100** - 100 of the S&P 500 stocks that have the *largest capitalization*.
- **Wilshire 5000 Equity Index** – An index which includes *all NYSE* (New York Stock Exchange) *and AMEX* (American Stock Exchange) stocks and the *most actively traded OTC* (Over The Counter) stocks.
- **Russell 2000** – An index that measures the performance of the *smallest 2,000* companies included in the Russell 3000 Index of the 3,000 largest U.S. companies in terms of market capitalization.

**NOTE** - All of the indices (indexes) mentioned in this chapter are weighted towards the larger companies. Price changes in the larger companies have a larger impact on the index than price changes on the smaller companies.

### Narrow Based

Narrow based indexes indicate the performance of a *particular industry* (i.e., PHLX Semiconductor Index).

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### Dow Jones Composite - 65 NYSE listed common stocks

1. **Industrial** - 30 stocks - *Dow Jones Industrial Average (DJIA)* - Most commonly used index to indicate the performance of the market.
2. **Transportation** - 20 stocks
3. **Utilities** - 15 stocks

**Circuit Breakers (NYSE Rule 80)** - The NYSE will restrict trading if the *Dow Jones Industrial Average (DJIA)* changes up or down by a dramatic amount.

**Rule 80A** – restricts use of *program trading* (computerized trading) if the DJIA *changes* (increases or decreases) by at least 2% from average closing value of the last month of the previous quarter.

**Rule 80B** – *all trading on exchanges* is halted for a period of time due to dramatic *declines* in the DJIA.

- **Level 1** – halt occurs when DJIA *declines* by at least 10% from the average closing value in the last month of the previous quarter

*Before 2PM EST – 1 hour*

*From 2PM up until before 2:30PM – 30 minutes*

*2:30PM and after – no halt*

- **Level 2** – halt occurs when DJIA *declines* by at least 20% from the average closing value in the last month of the previous quarter.

*Before 1PM EST – 2 hours*

*From 1PM up until before 2PM – 1 hour*

*2PM and after – rest of the day*

- **Level 3** - halt occurs when DJIA *declines* by at least 30% from the average closing value in the last month of the previous quarter.

Exchange halts for the *remainder of the day*