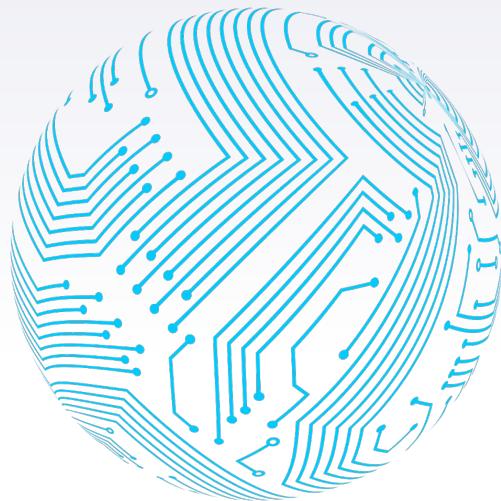


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Quantamental Analysis Terms part 1

Quantamental Analysis is a Methodology that combines Fundamental Analysis and Quantitative Analysis.

In this 220 Slide Data Science Report, we dig into many of the terms used in relation to Quantamental Analysis.

This Report is presented without bias and is being published in it's original form without edit.

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► Adverse Development Cover

- Adverse Development Cover (ADC) seeks to protect the insurer when losses exceed an agreed amount
- Adverse Development Cover often covers an entire business book
- The ADC protects an insurer from great deterioration of run-off business

► American Depository Receipt

- ▶ It is also referred as **ADR**.
- ▶ It is a **certificate** issued by US bank that represent shares in foreign stocks.
- ▶ ADR trade on American Stock Exchanges.
- ▶ Investors willing to invest in ADR can purchase them from brokers/dealers.
- ▶ The brokers obtain ADR by buying already issued ADR in US financial markets or create new.
- ▶ Already issued ADR is found in NASDAQ or NYSE.
- ▶ Creating a new ADR involves buying stocks of foreign company in issuer home market and deposit acquired share in overseas depository bank.
- ▶ The bank then issue ADR that are equal to share deposited which can be traded in US financial markets.

American Depository Receipt

- ▶ ADR and their dividends are priced in **US dollars**.
- ▶ ADR represent an easy ,liquid way for US investors to own foreign stocks.
- ▶ TYPES: Sponsored ADR, Non-Sponsored ADR.
- ▶ In **Sponsored ADR** the foreign company issuing shares to public comes in agreement with US bank to sell its share in US markets.They are listed exchanges.
- ▶ In **Non-Sponsored ADR** the ADR is created by brokers/dealers without the cooperation of foreign company issuing shares.They are traded only on over-the counter market.
- ▶ There are three levels in ADR depending on the extent to which the foreign company has accessed US markets.

American Depository Receipt

- ▶ **Level 1** ADR is the most basic type where foreign companies do not qualify or do not want to have their ADR listed on an exchange and are found only in over-the counter market.
- ▶ They are riskier for investors ,but are easy for the foreign company to gauge the level of US investors interest in their securities.
- ▶ **Level 2** ADR is used to establish trading presence on the stock exchange but can't be used to raise capitals.
- ▶ **Level 3** ADR are most prestigious as issuer floats a public offering of ADR on US exchange.
- ▶ They can used to establish the trading presence in US market and helps in raising capital of the foreign issuer.

American Depository Receipt

American Depository Receipts

American Depository Receipts (ADRs) are the stocks of the foreign companies which are traded in the American markets.



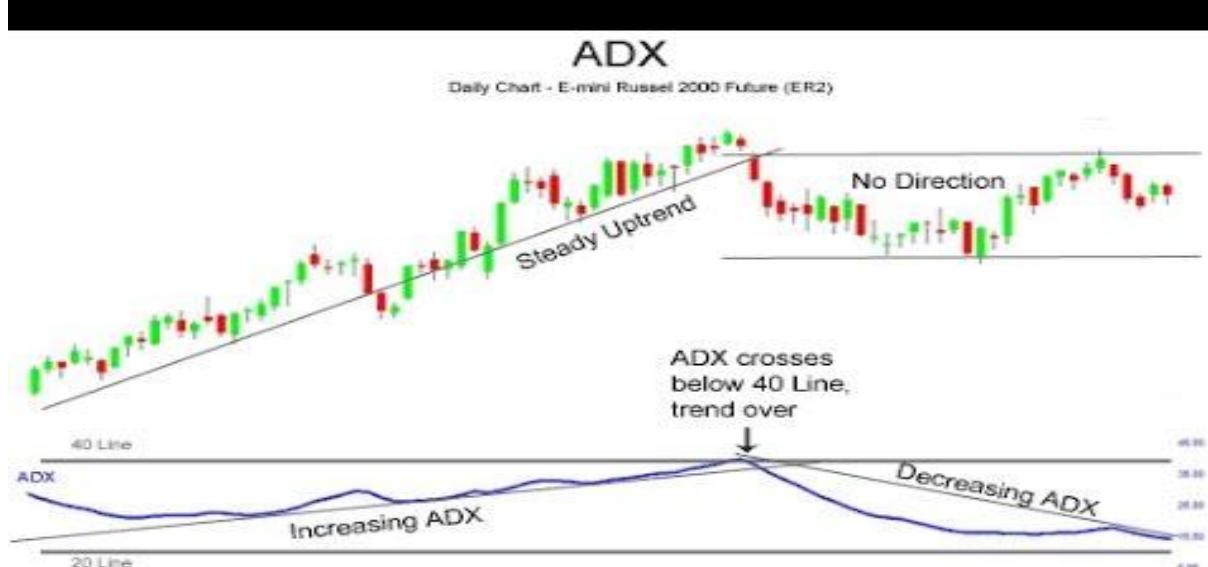
Auction rate security

- Auction rate security (ARS) refers to a variable-rate financial instrument or security that is sold through a Dutch auction.
- In a Dutch auction, investors bids for the number of shares they are willing to buy and the price they are willing to pay
- An Auction rate security is often a preferred share of stock or a bond with a long-term maturity
- The interest rate often resets every 7, 14, 28, or 35 days

Average Directional Index

- ▶ It is also referred as **ADX**.
- ▶ It is a line which is a component in DMI.
- ▶ While +DMI and -DMI determines the direction of price movement ,ADX focuses on **strength** of the uptrend and downtrend .
- ▶ The crossover between +DI and -DI produces **trade signals**.
- ▶ If +DMI is above -DMI and ADX is **above 20,or ideally 25** ,it is a potential **buy** signal.i.e)long trade.
- ▶ If -DMI is above +DMI and ADX is above 20 or 25,it is an ideal to enter potential **short** trade.
- ▶ When ADX is below 20 ,the price is trendless and it is not ideal time to enter into trade.

Average Directional Index



B Shares

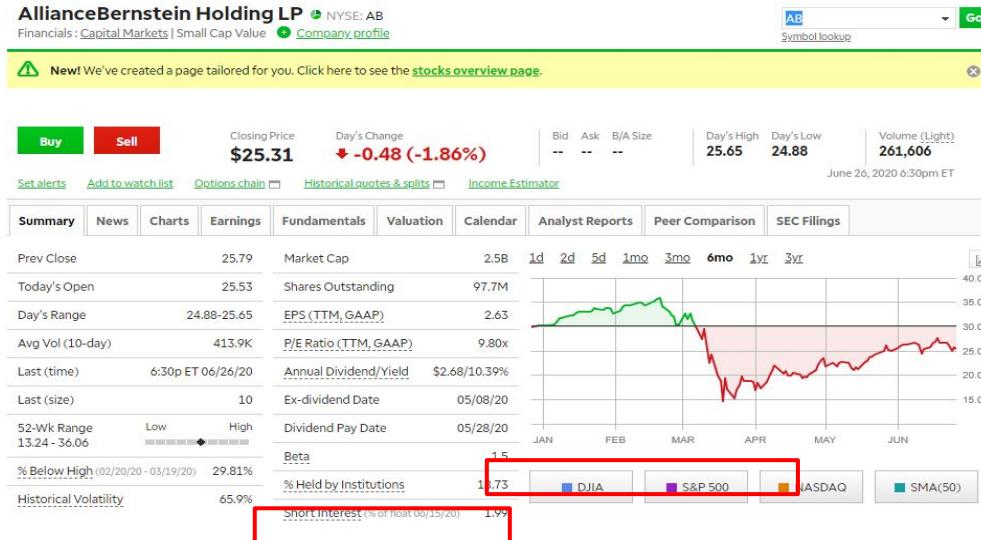
- B Shares are one of the mutual fund shares with a back-end load structure.
- They differ from A Shares and C Shares by their load structure
- When an investor sells the share, a commission is deducted
- B Shares allows investors to invest a full initial amount
- Therefore, an investor does not receive the full amount
- An expense ratio of less than 1% is considered to be reasonable

Beta Score

- **Beta** could be calculated by dividing the Standard Deviation by the S&P 500 of returns.
- This tells us how volatile our stock is in comparison to the overall market.
- As long term investors **we typically look for Beta Scores under 2**.
- A Beta score of 2, can be interpreted as this Stock changes value twice as much as the S & P 500.

Beta Score

- The Higher the Beta Score the more Volatile the Stock is.
- Typically look for a Volatility score under 70%



Block Trade

- ▶ The sale or purchase of a **very large number of financial assets**, either shares of stock or bonds. Most trading involves the equity and debt markets.
- ▶ The *New York Stock Exchange's Rule 127.10*, defines a block trade as one which involves **at least 10,000 shares** of stock or a market **value of \$200000**, whichever is less.
- ▶ The trade almost always conducted by **institutional investors** such as funds or corporations.
- ▶ A block trade can be made **outside the open market** through a private purchase agreement to avoid market instability.
- ▶ The trade usually conducted through an intermediary known as **blockhouse** (a type of brokerage firm)

Block Trade

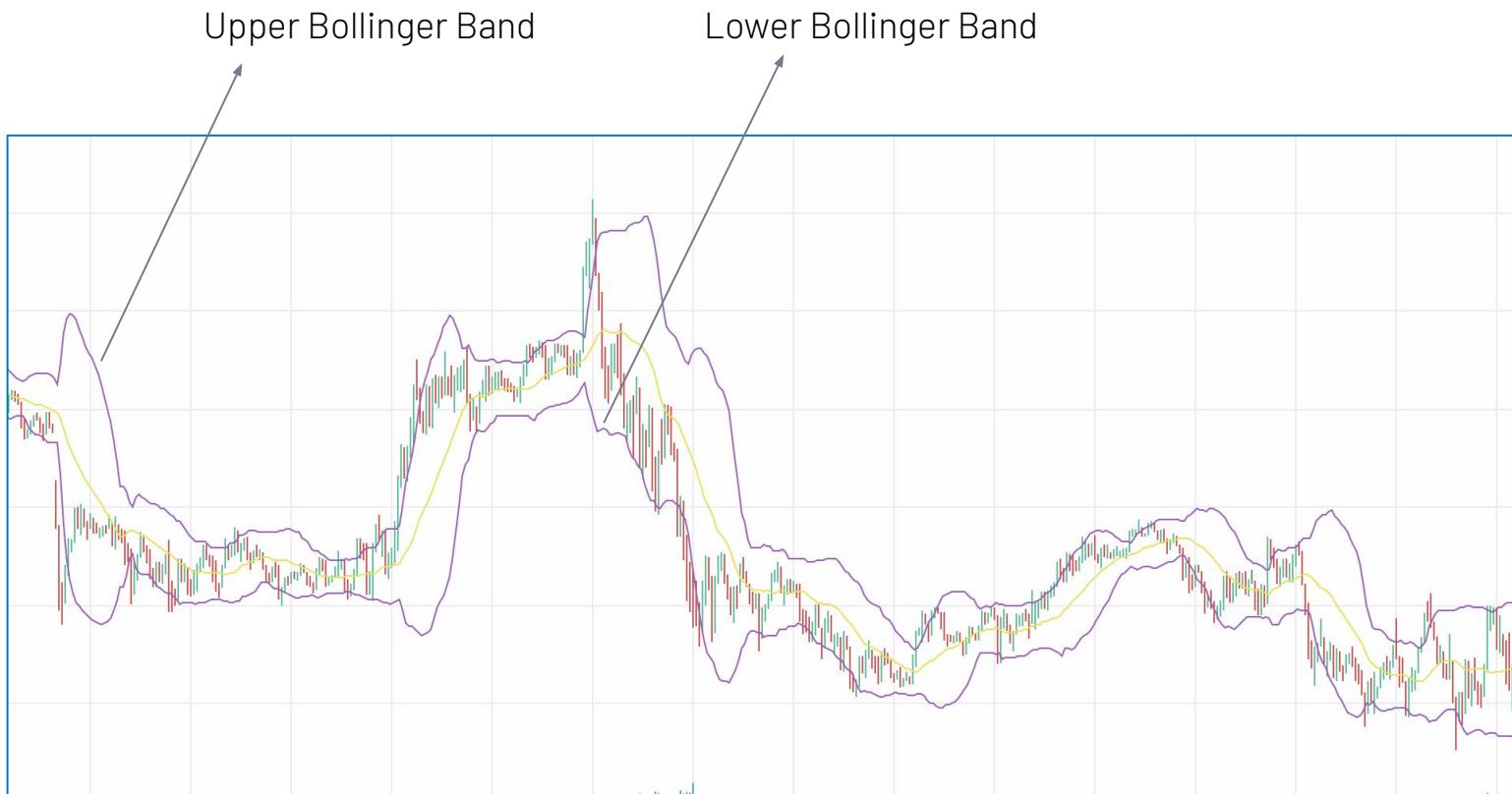
- ▶ Disadvantage: A sudden large movement of asset can cause **market instability** and inaccurate pricing in the stock. It also can cause “**slippage**”, where the prices progressively get worse. Major financial markets have specific rules to avoid this problem.
- ▶ For example: A hedge fund wants to sell 500K shares. The first 20K might be sold at the initial price. The **price might fall** for the next lot.
- ▶ Advantage: Allows sales or purchase of large numbers of shares simultaneously and at a **single price**.

Bollinger Bands®

- ▶ Bollinger Bands are a technical trading tools used to observe the market volatility.
- ▶ Created by a famous technical trader John Bollinger.
- ▶ Created by plotting the moving average of the prices along with two bands above and below.
- ▶ These bands are created by simply adding and subtracting one Standard Deviation from the moving average.

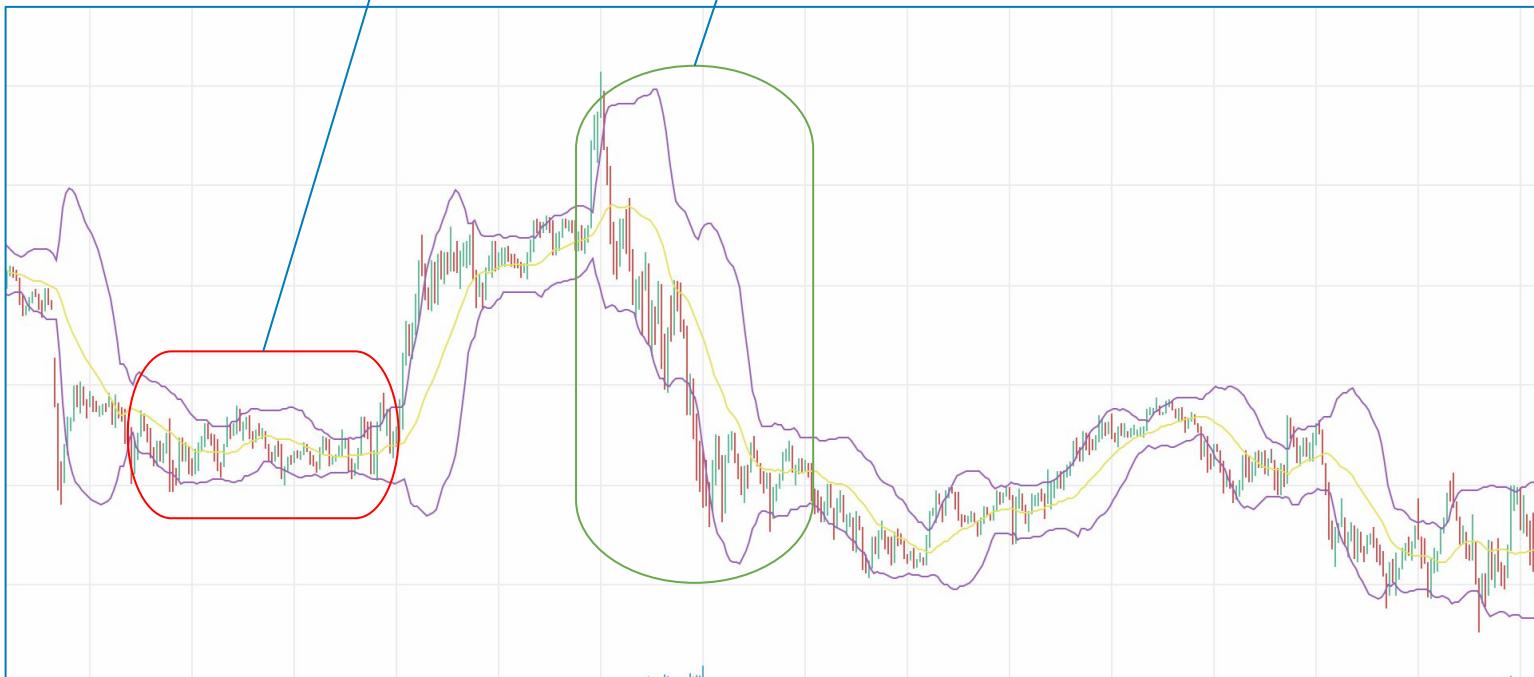
Bollinger Bands®

- ▶ Standard Deviation is a common measure of volatility.
- ▶ The price of the market always trade within the bands.
- ▶ If the market has high volatility the bands are expanded and if there is a tight trade the markets are contracted.
- ▶ Generally a 20 day Simple Moving Average is used.



Low Volatility or Tight Trading

High Volatility



Bollinger Bands® Bandwidth

- ▶ A Bollinger Bands bandwidth is nothing but a Bollinger Band indicator.
- ▶ Used to measure the volatility.
- ▶ Generally present at the bottom of the chart.



Bollinger Bands® Bandwidth

- ▶ It shows the volatility relative to the market price movement.
- ▶ Low Volatility when bandwidth contracts.
- ▶ High Volatility when bandwidth expands.



Bond Rating



A bond rating: a letter-based credit scoring system to determine the quality and creditworthiness of a bond.



Investment grade bonds are assigned “AAA” to “BBB–” ratings from Standard & Poor's and “Aaa” to “Baa3” ratings from Moody's.



Junk bonds have lower ratings. The lower a bond's rating, the higher its interest rate will be (all else equal).

Buy-Sell Rating Ratio



The insider stock buy-sell ratio takes the volume of orders/ shares sold by insiders and divides it by the volume of orders/ shares bought by insiders



If the ratio is less than 1, then insiders are purchasing more shares than selling, which is a positive sign for the investor-analyst, indicating employees expect the company to overperform soon



If the ratio is more than 1, then insiders are selling more shares than purchasing, which is a negative sign for the investor-analyst, indicating employees expect the company to underperform soon

Call Warrant

- ▶ Call warrants are securities that gives the holder the right but not obligation to **buy** certain securities before certain time at certain price.
- ▶ The price at which the warrant holder can buy the underlying stock is called as **exercise price or strike price**.
- ▶ The strike price is fixed certain percentage above current trading price of underlying stock.
- ▶ The inclusion of call warrant feature may enable the company to lower its debt.
- ▶ If stock price is **up** ,call warrant price is **up** and when stock price falls call warrant price also falls.

Callable Bond

- ▶ A **bond** is a fixed income that represents a loan made by an investor to a borrower. Bonds have maturity dates at which point the principal amount must be paid back in full or risk default.
- ▶ A **callable bond** is a bond that the issuer may redeem before it reaches the stated maturity date.
- ▶ A callable bond allows companies to pay off their debt early and benefit from favorable interest rate drops.

Pros	Cons
Pay a higher interest rate than non-callable bond.	Investors must replace called bonds with lower rate products.
Helps companies raise capital.	Investors cannot take advantage when market rates rise.

Call Warrant and Put Warrant

China Index warrant			
Warrant Name	Warrant Type	Exercise Level	Expiry Date
	Call Warrant	11,000	28 August 2015
	Call Warrant	12,500	28 August 2015
	Put Warrant	10,500	28 August 2015
	Put Warrant	12,000	28 August 2015

Source: Various

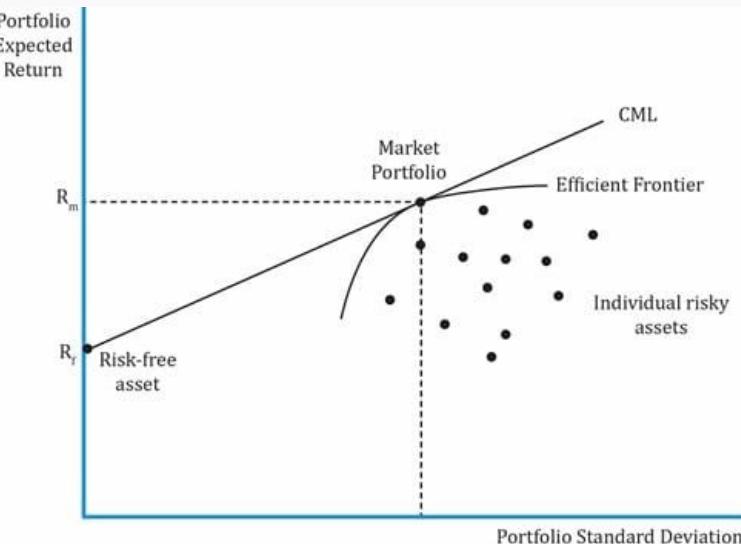


Factor	Call warrant price	Put warrant price
Underlying asset price ↑	↑	↓
Underlying volatility ↑	↑	↑
Time to expiry ↓	↓	↓
Interest rate ↑	↑	↓
Expected dividends ↑	↓	↑

Note: ↑ increase; ↓ decrease, assuming other factors remain unchanged

Capital Market Line (CML)

- ▶ The CML represents portfolios that maximize the return for a certain level of risk.
- ▶ The intercept point of CML and efficient frontier represents the most efficient portfolio.



CFRA STARS®



- CFRA = Center for Financial Research and Analysis
 - Provides independent research and analytics to subscribers
 - Forensic accounting research, Fundamental research on companies and funds, Bespoke solutions
- STARS® = Stock Appreciation Ranking System
 - A proprietary **qualitative** equity research methodology by CFRA
 - Used to cover over 1,100 U.S. and over 450 non-U.S. stocks
 - Determined and assigned by equity analysts

CFRA STARS®



Grade	Comparing to Benchmark (over 1 year)	Stock Price Prediction
1 Star	Underperforms by wide margin	Falls on an absolute basis
2 Stars	Underperforms	Not expected to show a gain
3 Stars	Closely approximate	Rises on an absolute basis
4 Stars	Outperforms	Rises on an absolute basis
5 Stars	Outperforms by wide margin	Rises on an absolute basis

Current Price

- ▶ Current Price is the price of the last recorded print on that stock or market.
- ▶ It represents the current value of a stock or a share of a commodity, index, bond and any other securities.
- ▶ It isn't constant and always changes with time due to supply and demand, Government regulations, Economy ...
- ▶ Current Price can be used to measure GDP, inflation and variation of asset prices with time.
- ▶ It provides an overview of the market performance and the supply and demand in the market.
- ▶ An investor or analyst keep track of the current price and previous prices to take a decision on investing or buying the stocks or shares in a market.

Current Price

- ▶ If the current price falls below the previous price it doesn't mean that the market price tends to go down.
- ▶ If the current price rises above the previous price it doesn't mean the market price tends to rise up all the way.
- ▶ Many factors influence the current price like news, earnings announcements, pre earnings announcements, government regulations, supply and demand and many more.

► Collateralized Loan Obligation

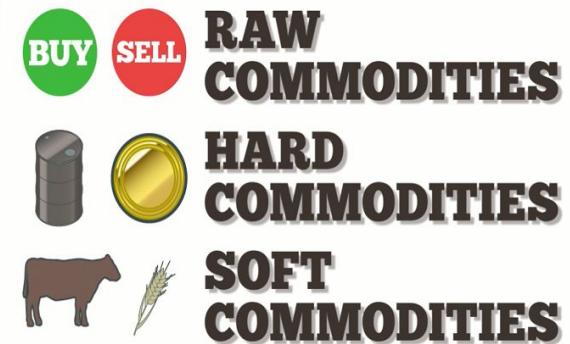
- Collateralized loan obligations are actively managed financial instruments
- Collateralized loan obligations are often backed by high-grade collateral

► Collateralized Loan Obligation

- A collateralized loan obligation (CLO) is a financial instrument or security funded by a pool of debt
- Collateralized loan obligations are often funded by loans with low credit ratings
- The investor receives scheduled debt payments from the underlying loans

Commodity

- Commodities are hard assets you can touch.
- Hard Commodities: natural resources that must be mined or extracted—such as gold, rubber, and oil
- Soft Commodities: agricultural products or livestock—such as corn, wheat, coffee, sugar, soybeans, and pork



Commodity market



- A physical or virtual marketplace for buying, selling, and trading raw or primary products.
- Investors trade commodities through
 - Futures & Options contracts
 - Stocks in companies whose business relies on commodities prices , as well as funds that have a focus on these companies
- Around 50 major commodity markets worldwide, around 100 primary commodities being traded
- Major U.S. commodity exchanges:
 - Chicago Board of Trade, Chicago Mercantile Exchange
 - New York Board of Trade, New York Mercantile Exchange.

Consumer Price Index (CPI)

- ▶ CPI is a measure that examines the weighted average of prices of a basket of consumer goods and services, such as transportation, food, and medical care.
- ▶ CPI is used to identify periods of inflation or deflation.
- ▶ CPI is based on the index average for the period from 1982 through 1984 (inclusive) which was set to 100. A CPI reading of 100 means that inflation is back to the level that it was in 1984. Readings of 150 indicates a rise in the inflation level of 150%.

$$\text{CPI} = \frac{\text{Cost of Market Basket in Given Year}}{\text{Cost of Market Basket in Base Year}} \times 100$$

*A basket of consumer goods is a constant set of consumer products and services produced in an economy whose prices are tracked over time.

Convertible Bonds

- ▶ A convertible bond is a bond that can be converted into a predetermined amount of the company's equity shares or common stocks at certain times during its life, usually at the discretion of the bondholder.
- ▶ The conversion from the bond to stock happens at specific times during the bond's life and is usually at the discretion of the bondholder.
- ▶ Convertible bonds carry lower interest rates than non-convertible bonds due to the benefits gained when common share prices go up.

► Convertible Bonds

Example: Company X issued a convertible bond with \$2000 face value that pays 4% interest. The bond has a maturity of 9 years and a convertible ratio of 120 shares for every convertible bond.

The investor will receive \$2000 in principal plus \$80 in interest if bond is held until maturity.

If the company's share increases to \$20 per share, the 120 shares now worth \$2400 - more than the value of the bond.

The investor can convert the bond into stock and receive 120 shares, which can then be sold in the market for \$2400.

Credit Suisse



- A global wealth management, investment banking and financial services company founded and based in Switzerland. Headquartered in Zürich
- Founded in 1856 to fund the development of Switzerland's rail system
- One of the 9 "Bulge Bracket" banks (BofAML, Barclays, Citi, Credit Suisse, Deutsche Bank, Goldman Sachs, JPMorgan Chase, Morgan Stanley, UBS)
- Known for its strict bank-client confidentiality and banking secrecy practices
- CEO: Thomas Gottstein
- 2019 Revenue: \$35.8B, 4.7% increase from 2018
- 2019 Profit: \$3.48B, 67% increase from 2018

Debt To Capital Ratio

- ▶ This is one of the strongest data points to tell us about the financial health of a company
- ▶ The higher the ratio Total Debt/Total Capital the riskier we see the investment
- ▶ We use this metric because many companies are financed with a mixture of debt, equity
 - ▷ Interest-bearing debt (such as bank loans, notes payable, bonds payable)
 - ▷ Non-interest bearing debt ([accrued expenses](#), trade payable)

Debt To Capital Ratio

- We generally like to see a **Total Debt/Total Capital under 17%**
 - The closer to 0% the better of course (the lower the debt compared to the capital)
 - This means we are getting a good value and the company

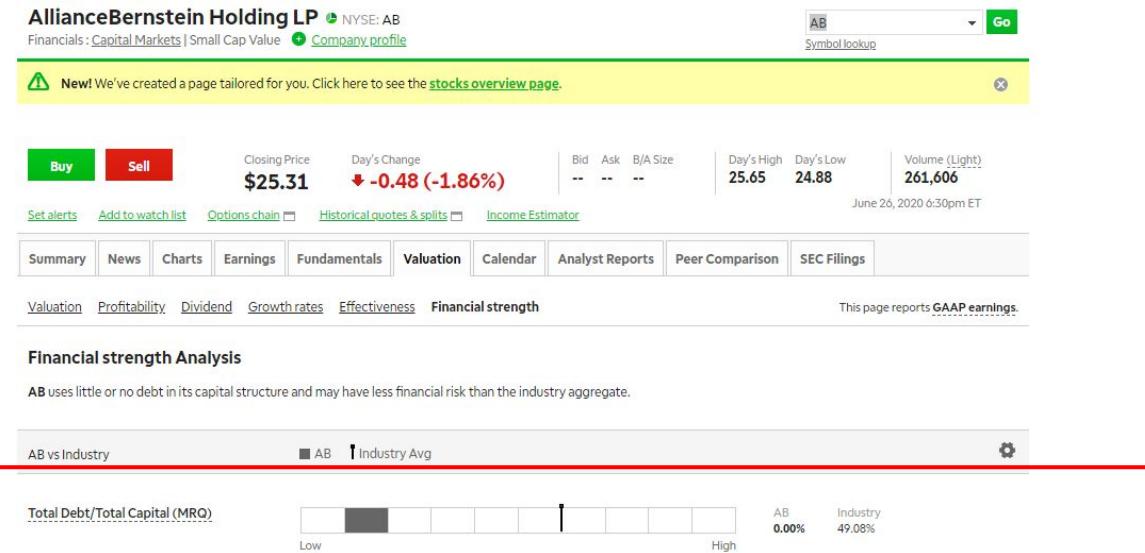


$$\text{Debt to Capital Ratio} = \frac{\text{Total Debt}}{\text{Total Debt + Equity}}$$



Debt To Capital Ratio

- We generally like to see a **Total Debt/Total Capital under 17%**
- The closer to 0% the better of course (the lower the debt compared to the capital)



Defensive Stocks

- The Stocks are considered Recession Proof and storage of wealth.
- These are stocks that will forever be commoditized!
 - Examples:
 - Food stocks (people need to eat)
 - Healthcare stocks (people need medicine)
 - Utility stocks (people need electricity)

Deferred Income Tax

- ▶ **Deferred income tax** is the difference between the income tax expense associated with the revenues and expenses reported on a corporation's income statements and the actual income tax appearing on the corporation's income tax returns.
- ▶ This difference occurs because the definition of income is not the same under GAAP (generally accepted accounting principles) and federal income tax regulations.
- ▶ **Deferred tax liability** is a tax that is assessed or is due for the current period but has not yet been paid.
- ▶ **A deferred tax asset** is an item on the balance sheet that results from overpayment or advance payment of taxes.

Deferred Tax Item

- ▶ Deferred tax items (asset and liability) refers to the tax that is overpaid or owed to the tax officials by the company.
- ▶ **A deferred tax liability** means that taxable income will be higher in future years than income reported in the accounting records. Depreciation expenses can generate deferred tax liabilities.
- ▶ **A deferred tax asset** means that the business will have more expenses on the tax return in future years, when compared to the accounting records. More expense not only reduces taxable income, but also future tax liability.

Deferred Tax Item

- ▶ Some of the **transactions** that generate deferred tax asset and liability balances are..
 - ▷ Warranties
 - ▷ Leases
 - ▷ Inventories
 - ▷ Pensions
 - ▷ Depreciable assets

Deferred Tax Item

A deferred tax is a balance sheet item resulting from the advanced payment/ overpayment of taxes.

May arise when there is a difference in tax/ accounting rules or a carryover of tax losses

Derivative Contracts



Derivative: a contract whose value is based on an underlying financial asset, index, or security on which two or more parties agreed.



Commonly used derivatives include forward contracts, futures contracts, swaps, options, and warrants.



Derivatives can be used to either mitigate risk (hedging) or assume risk with the expectation of commensurate reward (speculation).

Depreciation

- Depreciation shows by how much an asset has lost its value
- Depreciation allows a company to reduce an asset's value over some time.
- Assets can be expensive, so instead of recording the whole cost in one year, companies tend to spread out the cost by depreciating assets

Depreciation

Types of Depreciation

- Straight-Line
 - This method depreciates an asset using the straight-line method results in equal depreciation expense each year
- Declining Balance
 - This is an accelerated depreciation method which depreciates an asset at a constant depression rate/percentage
 - Depreciation expense decreases throughout an asset useful life

Depreciation

- Double Declining Balance (DDB)
 - The Double Declining Balance is an accelerated method which depreciates an asset value at twice the rate of the straight-line method.
- Units of Production
 - Depreciation expense is calculated based on estimated total units an asset is likely to produce over its useful life

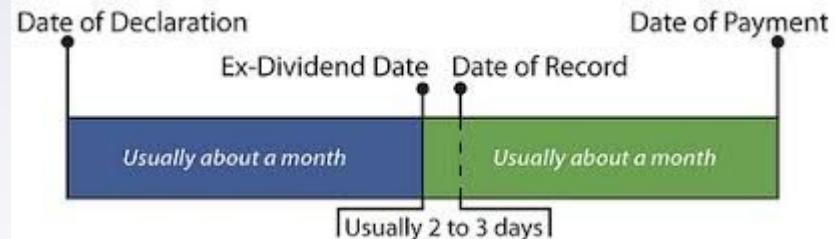
Directional Movement Indicator

Directional Movement Indicator (DMI)

Daily Chart - E-mini Russell 2000 Future (ER2)



Dividend Dates



- Ex-dividend Date: all shares bought and sold on this date no longer come attached with the right to be paid the most recently declared dividend → investors must own a stock before the ex-dividend date in order to receive the incoming dividend
- Record Date: the day when the company checks its records to identify shareholders of the company. An investor must be listed on that date to be eligible for a dividend payout.
- Payment / Pay date: the day when the dividend is paid to shareholders

Dividend Frequency

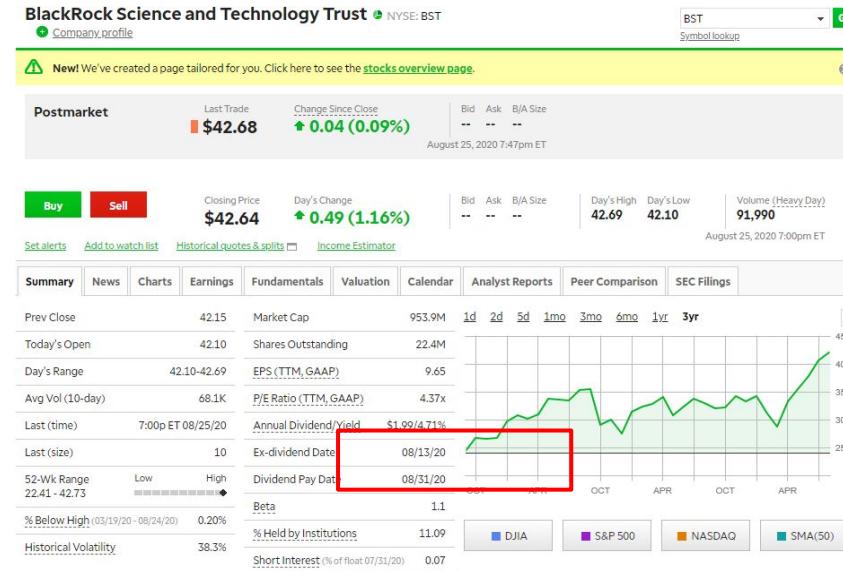
- The yearly amount in a percentage the investor gets paid as a Dividend
- **No Dividends**
 - When a company is having financial issues they may not issue a dividend.
 - Some companies vote on no dividends and Some companies do not issue dividends at all.
- **Annual Dividends** = 1 payment a year (unless designated otherwise)
- **Semi-Annual Dividends** = 2 payments a year (unless designated otherwise)
- **Quarterly Dividends** = 4 payments a year (unless designated otherwise)
- **Monthly Dividends** = 12 payments a year (unless designated otherwise)

Dividend Frequency

- **We typically look for Stocks that pay Monthly!**
- This means we get a Dividend every month we own the stock.
- We even can get a Dividend after we sell a stock as long as we own it by the **ex-dividend date**.
- **Ex-Dividend Date** — This is the date to let Shareholders know if you sell before this date you will not receive the dividend for that month. If you sell your shares on or after this date, you can still receive a dividend.

Dividend Frequency

- This means if you buy a stock on August 3 (it can take 3 days to process), you will be added to the books on August 6-7. The Ex Dividend Date is August 13 and the Dividend Date is August 31st. This means you will receive a payment or dividend on August 31st (only 28 days later)!



Dividend Yield

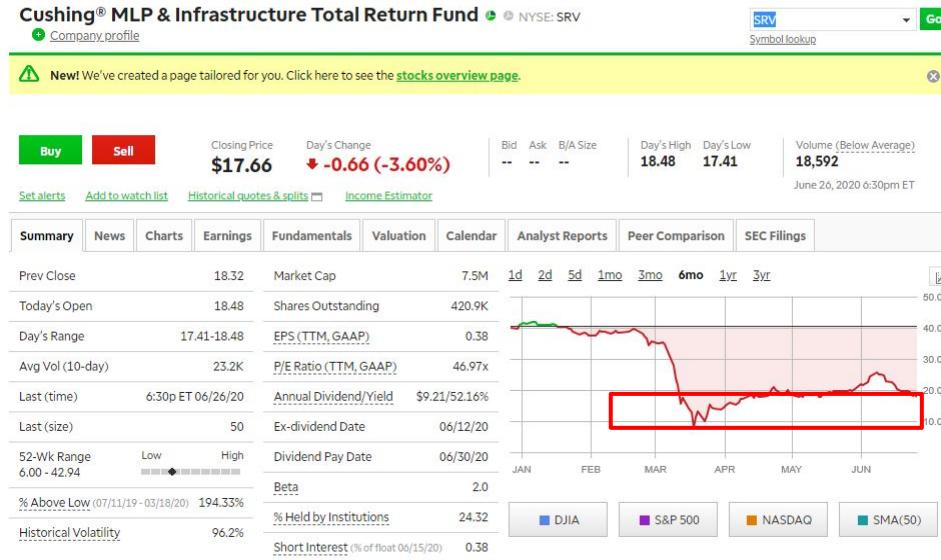
- **Dividend.com - Great source for Accurate Dividends**
- The yearly amount in a percentage the investor gets paid as a Dividend
- This % is the amount of money we look to make in a year.
- Each share you earn pays 4% back to you per year.
- Higher yielding dividend stocks have more income, but comes with higher risk and volatility.
- We tend to look at a **Annual yield of at least 4%**

Dividend Yield

- The tricky part is this can change every month relative to the stock price.
- It changes every month through a system called TTM = Trailing Twelve Months
- This means its updated everyday based on the last year exact to the day you are looking at it.

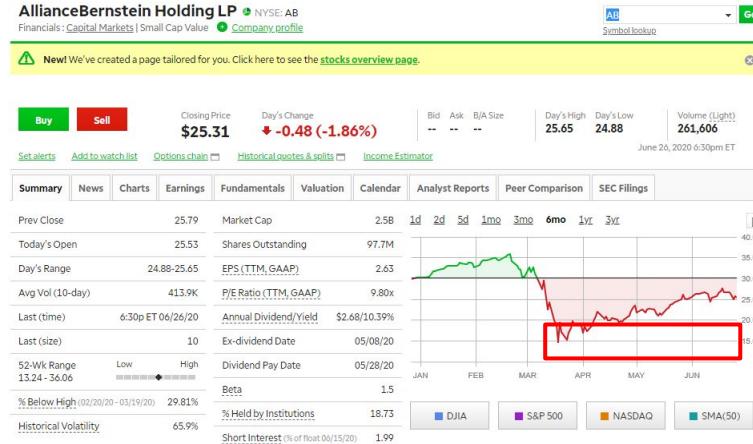
Dividend Yield

- ▷ This means for every stock you get paid 52% per year of the money you invested
- ▷ Every share you buy at \$17.66 expect \$9.21 back per year.



Dividend Yield

- ▷ Every share you buy at \$25.31 expect \$2.68 back per year, per share.
- ▷ 1000 shares in this example will get you \$2680 per year
- ▷ Lower yielding dividend stocks are often offered by more stable companies with a long record of consistent growth and steady payments.



Directional Movement Indicator

- ▶ Directional Movement indicator also referred as **DMI**.
- ▶ It was developed by **J.Welles**
- ▶ It is normally shown above or below the price charts .
- ▶ It is calculated by comparing current price with previous price range.
- ▶ DMI displays results as Upward Directional Index (+DMI)and Downward directional trend (-DMI).
- ▶ Both +DMI and -DMI helps in identifying the **direction** of price asset moving.
- ▶ If +DMI is above -DMI the price is moving **upwards** and is favourable to long trade.
- ▶ If -DMI is above +DMI the price is moving **downwards** and short trade is favourable.



Dividend 12-Month Totals

- Refers to a stock / fund's total trailing 12-month dividend payments
- This means the the dividends paid in 365 days

Dollar-cost averaging

- Dollar-cost averaging is a strategy that spreads an investment over time to lessen the effect of market volatility
- Dollar-cost averaging is also called an incremental trading
- It is mostly utilized by investors who seek to protect their investments against different market volatilities
- Dollar-cost averaging takes the emotions out of trading.
- An investment amount is broken down into smaller equal portions that are then invested using the same timeframe (daily, weekly, etc)

Dollar-Cost Averaging (DCA)

Dollar Cost Averaging Example				
Stock Name	Purchase Date	Amount	# of Shares	Share Price
CRDIT	1/01/2020	\$100	2	\$50
CRDIT	1/08/2020	\$100	2.08	\$48
CRDIT	1/15/2020	\$100	1.96	\$51
CRDIT	1/22/2020	\$100	2.12	\$47
CRDIT	1/29/2020	\$100	2.22	\$45

\$500 is split into 5 portions of \$100 that are then invested weekly to buy \$500 worth of CRDIT

Earnings Announcement

- ▶ Earnings Announcement is the public announcement of a company's earnings in a specific time period, quarterly or yearly.
- ▶ It consists of Sales and Revenue, Net Income, Profit Margin, Earnings Per Share and many more...
- ▶ This shows how a company is performing.
- ▶ By analysing different parameters investors can analyse how the company may perform in the future.
- ▶ This in turn affects the stock price. A good performance results in increase in stock price rather than a poor performing company.

Earning Per Share Growth (EPS)

- ▶ EPS growth shows the growth of earnings per share over time.
- ▶ EPS growth helps investors identify stocks that are increasing or decreasing in profitability.
- ▶ $\text{EPS Growth} = (\text{EPS this year}) / (\text{EPS last year}) - 1$

Example:

A company has an EPS of \$5.00 in 2018 and EPS of \$6.00 in 2019, the company has an EPS growth rate of $(\$6.00/\$5.00 - 1) * 100 = 20\%$ during fiscal year 2019.

Earnings Surprise

- ▶ It occurs when a company's Earnings Announcement is quite opposite from the view of technical analysts or investors.
- ▶ Suppose if a company's past quarterly results are doing well and suddenly the current quarterly results came out poorly.
- ▶ This can be of a positive surprise or a negative surprise.
- ▶ A positive surprise may increase the stock price to a higher value.
- ▶ A negative surprise may rapidly reduce the stock price after the announcement.
- ▶ To deal with this companies are using Earnings Preannouncement strategies.
- ▶ This include details like Profit Margin, Sales and Revenue and some others in which the company has higher confidence.

Equity Kicker

- ▶ Kicker: an extra incentive encouraging investors to purchase a debt security (e.g. a bond or preferred share)
- ▶ An embedded option of a bond, for example, would be considered a kicker if the bondholder can use it to buy equity at the issuing firm at a discounted price.
- ▶ A bond with a kicker allows the investor to benefit from any equity ownership value increase.



Equity Pull Option

- An equity pull option is a financial instrument that gives an investor the right (not an obligation) to sell shares at a specified future date at a specified price.
- The specified price at which the shares are sold is called the strike price
- The investor expects the price of the underlying asset (stock, ETFs, etc) to go down so that he/she can sell the security at a price higher than the market value, thus making a profit

Exchange

- ▶ A virtual market or a physical location where sellers and buyers trade existing securities.
- ▶ Hold by any institute or government where shares, stocks, futures, indexes, bonds, options, commodities and others are traded.
- ▶ The total amount traded or exchanged in a day by two parties is referred to Volume.
- ▶ Stock Exchange - A physical or electronic place where stocks, bonds and derivatives of listed companies are bought and sold.
- ▶ Before reaching out an Exchange platform, we need to look at various factors - transaction fee, security measures, type of baseline rules while listing a firm...
- ▶ There shouldn't be high latency while displaying the prices, which may lead to adverse effects.

Exchange

- ▶ New York Stock Exchange is one of the oldest exchange market which has some baseline rules when listing a company. A company need to satisfy a listing requirement.
- ▶ NYSE isn't fully electronic, it is a auction market.
- ▶ NASDAQ also places some regulations to list a company in its exchange.
- ▶ These baseline rules provide credibility and protection to the investors.
- ▶ Though those are the oldest stock exchanges, many new electronic exchanges are emerging with lower latency and investment protection methods.

Fed Funds Rate

Federal funds rate: the interest rate that banks charge other banks for lending excess cash to them overnight from their reserve balances.

Legally, banks must maintain a reserve equal to a specific percentage of their deposits in a Federal Reserve bank account.

The Federal Open Market Committee (FOMC) sets federal funds rate eight times a year, based on salient economic conditions, and can impact the stock market.

Financial Quota Share

Reinsurance occurs when multiple insurance companies share risk by purchasing insurance policies from other insurers to limit their own total loss in case of disaster.

- ▶ A financial quota share is a reinsurance treaty in which the ceding company is responsible for a portion of the loss associated with a claim.
- ▶ Financial quota shares do not require the ceding company to pay a deductible before coverage begins, as the company will always be responsible for a portion of the loss.

A ceding company is an insurance company that passes a portion or all of the risk associated with an insurance policy to another insurer.

Foreign Exchange Contract

Foreign exchange is the swapping of one currency for another.

- ▶ A foreign exchange contract is a legal arrangement in which the parties agree to transfer between them a certain amount of **foreign exchange** at a predetermined rate of exchange, and as of a predetermined date.
- ▶ These contracts are most used when an organization buys from a **foreign supplier** and wants to **hedge** against the risk of an unfavorable foreign exchange rate fluctuation before the payment is due.

A **hedge** is an action taken to offset the potential for an adverse price change in an asset.



Ford Motor Company (F)



- An American multinational automaker that has its main headquarters in Dearborn, Michigan. Founded in 1903 by Henry Ford
- 2nd largest U.S.-based automaker, 5th in the world
- Designs, manufactures, markets, and services a range of Ford cars, trucks, sport utility vehicles, electrified vehicles worldwide
- Introduced methods for large-scale manufacturing of cars and management of workforce using manufacturing sequences typified by moving assembly lines
- CEO: Jim Hackett
- 2019 revenue: \$155.9 billion, 3% decline from 2018
- Net income declined from \$3.6 billion in 2018 to \$47 million in 2019

First Call Consensus



- Thomson First Call compiles analyst reports and computes the average expectation for a company's quarterly per-share earnings.
- Investors then watch earnings reports to determine whether a company meets, beats or misses that average estimate.
- Instead of calling it a consensus, which implies that the analysts agreed on the number, First Call now describes the average of the analyst estimates as the "mean".

Gap Up / Gap Down

- ▶ Gaps relate to sharp rise or fall in the stock price typically when there's no occurrence of trading activity.
- ▶ Gaps occur due to news, company's announcements, buyers and sellers sentiment...
- ▶ Gaps are of 4 types:
 - ▷ Gap Up - Can be seen when the opening price is higher than the previous close price.
 - ▷ Partial Gap Up - Can be seen when the opening price is higher than the previous close price but not higher than the previous higher price.
 - ▷ Gap Down - When opening price is lower than the previous close price.
 - ▷ Partial Gap Down - When opening price is lower than the previous close price, but not below the previous day's lower price.

Gap Up / Gap Down

- ▶ Gaps can be categorized as follows:
 - ▷ Breakaway gap: Occurs at the end of the share's price pattern, usually signaling the beginning of a new trend. High volume trading is observed here.
 - ▷ Exhaustion gap: Occurs when there's a final attempt of a price pattern to reach new highs or lows. Low volume trading is observed here.
 - ▷ Common gap: Simple areas of price gaps in the market.
 - ▷ Continuation gap: Occurs in the middle of a stock's price pattern.
- ▶ There's a difference between Exhaustion and Continuation gaps which should be considered while trading gaps.

Gap Up / Gap Down

- ▶ Fading - when a price gap is filled within a day is known as Fading. The stock price comes to its original price after experiencing a gap during the day.
- ▶ Once a stock price starts to fill a gap, it won't stop i.e there will be little or no support or resistance in the market.
- ▶ Exhaustion gaps are more likely to be filled.
- ▶ When a company announcements tend to be positive, the market can experience a Gap Up.
- ▶ When there's a sudden change in economy, the markets can experience a Gap Down.

Hedge fund

- A hedge fund seeks to deliver healthy returns regardless of the market volatilities
- Hedge funds are often limited to qualified investors (investors with a net worth of more than \$1 million)
- A hedge fund is often a limited partnership that groups money from various investors to invest in high-risk securities.
- Hedge funds can specialize in one investment area (in stocks, bonds, real estate, etc)

Hedging

- Hedging is a risk management strategy to reduce the portfolio's exposure to different market risks
- Hedging strategy is utilized to offset potential losses in investments
- Risks are lessened by taking an opposite position in a similar security
- Hedging allows investors to still make a profit in volatile markets
- However, the reduction in risk means a reduction in potential profits
- Hedging involves the use of derivatives such as options and futures

High Yield Bond (Junk Bond)

- A Bond is basically a debt (between the investor and the government or company)
- **High Yield Bond is a bond that pays a high yield**
 - **An example of a High Yield would be about 4% or more**
- Usually Junk Bonds have very low credit ratings (this means very high risk and very high rewards if it works)

Index

- ▶ Index is a measure of changes in security markets over certain period of time.
- ▶ It is used to track the performance of group of assets.
- ▶ Represent a group of stocks in a country or a geographic region.
- ▶ Eg: S&P500, DJI30, FTSE100...
- ▶ When the stock index is increasing it represents the overall performance of financial markets and country economy.
- ▶ Though the stock index is increasing, it doesn't guarantee that each individual stock in that index isn't increasing.
- ▶ Stock Index value is calculated by weighted average of all stock indexes.
- ▶ *Weight of each share = Share Price x Number of Shares / Market Capitalization of all shares*

Index

- ▶ Index trading is mostly beneficial rather than trading individual stocks when managing risk.
- ▶ These are very diversified, since we will trade on a basket of stocks rather than single stock.
- ▶ These help in risk management strategies.
- ▶ Index trading has a ability to trade at any time zone, since many countries have stock indexes.
- ▶ More useful in long term trading.
- ▶ Popular stock indexes to trade:

NYSE	SP500	CAC40	CSI30
DJI30	FTSE100	STOXX50	HSI50
NASDAQ	DAX30	Nikkei225	ASX200

Insights from Bollinger Bands®

- ▶ Periods of Low Volatility generally tend to be followed by High Volatility and vice versa.
- ▶ When the prices are above the upper band, the market is assumed to be overbought.
- ▶ When the prices are below the lower band, the market is assumed to be oversold.



Institutional Holdings

- ▶ Institutional Holdings are the amount of stocks of a company owned by an Institution.
- ▶ Institutions: Mutual Funds, Hedge Funds, Commercial Banks, Investment Firms, Wealthy Individuals, University Endowments, Insurance Companies and others who own a large amount of stocks in a company.
- ▶ The Institutional Holdings account for vast majority of trading volume in the market.
- ▶ Two types: Growth and Value.
- ▶ Some institutional holdings have significant investment in Growth stocks, to gain higher returns.
- ▶ Some institutional holdings have significant investment in Value stocks, to reduce the risk.

Institutional Holdings

- ▶ Institutions generally have Equity Analysts who constantly evaluate the companies performance and find better firms which are having lower risk and better returns.
- ▶ The Institutional Holdings were set to sell if they see a decline in earnings estimate in future.
- ▶ These buy stocks which indicate a rising earnings estimates in future.
- ▶ These influence the market volatility by highly affecting the stock value.

Institutional Holdings

Institutional Holdings of Tesla

1,438 Institutional Holders

97,364,835 Total Shares Held

OWNER NAME	DATE	SHARES HELD	CHANGE (SHARES)	CHANGE (%)	VALUE (IN 1,000S)
10-15 ASSOCIATES, INC.	06/30/2020	321	321	New	\$719
1776 WEALTH LLC	06/30/2020	1,095	-1,965	-64.216%	\$2,451
180 WEALTH ADVISORS, LLC	06/30/2020	265	265	New	\$593
1832 ASSET MANAGEMENT L.P.	06/30/2020	82	-22	-21.154%	\$184
20/20 CAPITAL MANAGEMENT, INC.	06/30/2020	216	216	New	\$484
ABBREA CAPITAL, LLC	06/30/2020	323	323	New	\$723
ABSHER WEALTH MANAGEMENT, LLC	06/30/2020	588	3	0.513%	\$1,316
ACADIAN ASSET MANAGEMENT LLC	06/30/2020	833	73	9.605%	\$1,865
ACCESS FINANCIAL SERVICES, INC.	06/30/2020	720	0	0%	\$1,612
ACCREDITED INVESTORS INC.	06/30/2020	1,303	270	26.137%	\$2,917
ACCURATE INVESTMENT SOLUTIONS, INC.	03/31/2020	0	-28	Sold Out	
ACCUVEST GLOBAL ADVISORS	06/30/2020	14	14	New	\$31
ACG WEALTH	12/31/2019	2,627	-615	-18.97%	\$5,881
ACHMEA INVESTMENT MANAGEMENT B.V.	06/30/2020	20,732	4,541	28.046%	\$46,414
ACORN FINANCIAL ADVISORY SERVICES INC/ADV	06/30/2020	412	9	2.233%	\$922

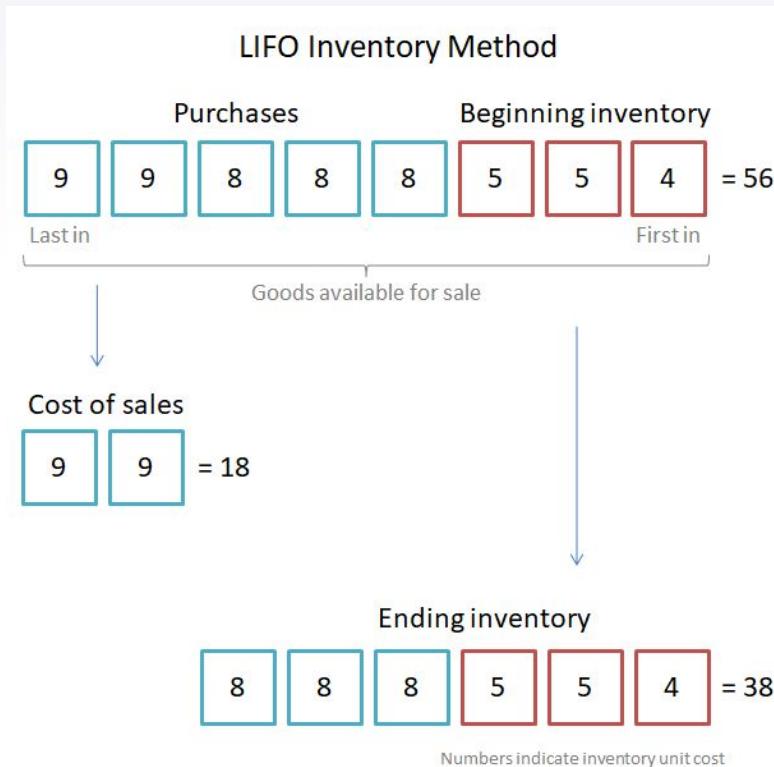
Leveraged Buyout (LBO)

The cost of acquisition is the total expense incurred by a business in acquiring a new client or purchasing an asset.

- ▶ LBO is the acquisition of another company using a significant amount of borrowed money to meet the **cost of acquisition**.
- ▶ The purpose of LBO is to allow companies to make large acquisitions without having to commit a lot of capital.
- ▶ In LBO, there is usually a ratio of 90% debt to 10% equity. Because of this high debt/equity ratio, the bonds issued in the buyout are usually not investment grade and are referred to as **junk bonds**.

Junk bonds are bonds that carry a higher risk of default than most bonds issued by corporations and governments.

LIFO - Last in First Out



- An accounting method to calculate the value of inventory.
- The cost of the most recent products purchased / produced are the first to be expensed as Cost of Goods Sold (COGS),
- Lower cost of older products will be reported as inventory
- Lowers net income but is tax advantageous when prices are rising
- Two alternatives: FIFO (First-in-First-Out) & Average Cost Method (use weighted average of all units to calculate COGS)
- LIFO is used only in the US, under GAAP

► Loss portfolio transfer (LPT)

- Loss portfolio transfer (LPT) refers to a reinsurance contract between an insurer and reinsurer in which an insurer hand over certain policies and loss reserves to a reinsurer
- Loss portfolio transfer allows insurers to strengthen their balance sheets and to transfer risk

► Loss portfolio transfer (LPT)

- In a loss portfolio transfer, an insurer sells its policies to the reinsurer
- A reinsurer takes an insurer's responsibilities and accepts future claim liabilities
- Insurers often utilize loss portfolio transfers to monetize any remaining loss reserves

Loss reserves

- A loss reserve is an estimate of an insurer liability arising from future insurance claims
- An insurance company takes into account the following when underwriting a new policy:
 - the amount of premium receivable from the policyholder
 - and future claim amounts payable by the insurer

Loss reserves

- The company sets up a loss reserve fund to reduce the chances of going bankrupt
- It is very important to estimate the correct loss reserve amount
- Overestimating the loss reserve can result in a reduction in the company's profits
- On the other hand, if an insurance company underestimates the loss reserve, this could result in a company going bankrupt

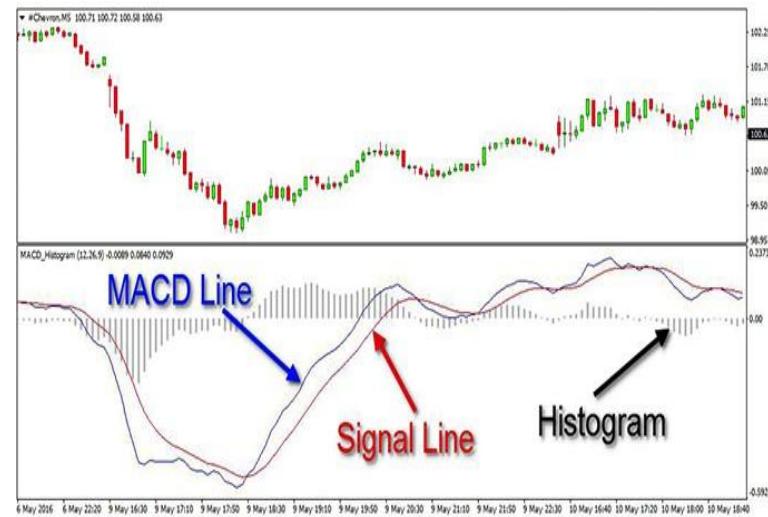
MACD Histogram

- ▶ MACD stands for **Moving Average Convergence and Divergence**.
- ▶ It is a trend following momentum indicator that show relationships between two moving averages of security price.
- ▶ There are usually two lines in MACD Histogram (.i.e) MACD line and the signal line.
- ▶ **MACD line** is calculated by subtracting 26 day EMA with 12 day EMA.
- ▶ EMA stands for Exponential Moving Average in which the weight is given to most recent values i.e)price.
- ▶ The 9 day EMA is called as **signal line**.

MACD Histogram

- ▶ MACD Histogram displays the value of MACD line **minus** value of signal line.
- ▶ It is also an oscillator that fluctuates above and below the zero line.
- ▶ It is used to find signal line cross overs in MACD.
- ▶ When MACD line crosses above signal line it indicates **buy** signal and histogram is found above.
- ▶ When MACD line crosses below signal line it indicates **sell** signal and histogram is found below.
- ▶ **False positive** divergence occurs when price moves sideways.
- ▶ It is less reliable and should be confirmed by other indicators.

MACD Histogram



MAR Ratio

- ▶ It gets its name from **Managed Accounts Report** newsletter a financial publication publisher Leon Rose, who developed this metric.
- ▶ It is a measure of **performance returns** adjusted for risk.
- ▶ Performance of commodity trading investors ,trading strategies and hedge funds can all be compared by MAR ratio.
- ▶ Since it only looks at performance ,the major drawback is it does not take into considerations of different time frame funds and strategies.
- ▶ MAR ratio should be at least **0.5** and above **1** is impressive.

MAR Ratio

- ▶ The Compound Annual rate of Return is rate of an investment from start to finish with annual returns that are reinvested.
- ▶ A drawdown in fund or strategy is its worst performance during specified time period.

$$\text{Mar Ratio} = \frac{\text{Compound Annual Rate of Return}}{\text{Maximum Drawdown}}$$



Mark to Market (MTM)

Mark-To-Market Accounting

TRAKADER TAX CPA

- Largely adopted in the 20th century
- Included in Generally Accepted Accounting Principles (GAAP) in US in 1990
- An accounting method that aims to provide a realistic estimate of a financial situation based on current market conditions
- Record the value of an asset with respect to its current market price
- In contrast, historical cost accounting is based on the past transactions, and thus is simpler and more stable, but does not reflect current market value

Market Capitalization

- ▶ Market Capitalization (**market cap**) refers to total dollar market value of company's outstanding shares of stocks.
- ▶ It measures, what a company is worth on an open market as well as the market's perception of its future prospects.
- ▶ It helps investors to understand relative size of one's company.
- ▶ Market cap help how to diversify one's portfolio with companies of different sizes since risk associated with these companies are known.
- ▶ Based on Market cap, companies are classified as **Large cap, Mid cap, and Small cap** .
- ▶ We want to usually pick a Market Cap of at least **2 Billion!**
- ▶ A market Cap of at least 2 Billion tells us they have somewhat of a advantage in their industry.

Market Capitalization

- ▶ **Large cap** companies have market cap over **10 billion** dollar.
- ▶ They are well-established companies and has been around for long time.
- ▶ Though it does not provide huge return in short time ,in long run it provides consistent rewards
- ▶ **Mid cap** companies have market cap between **2 billion** dollars and **10 billion** dollars.
- ▶ These are established companies and are in the process of expanding.
- ▶ They have higher risk compared to large cap but are attracted for their growth potential.
- ▶ **Small cap** companies have market cap between **300 million** dollar and **2 billion** dollar.
- ▶ The risk associated is large but they provide significant growth for investors who can tolerate volatile stock price swings in short term.

Market Capitalization

$$\text{Market Capitalization} = \text{Market Price of share} \times \text{No. of Common Shares outstanding}$$

Market Capitalization		
LARGE CAP \$10 billion +	facebook FB	Facebook Inc
ExxonMobil XOM		ExxonMobil Corporation
MID CAP \$1 billion - \$10 billion	iRobot® IRBT	iRobot Corporation
planet fitness PLNT		Planet Fitness Inc
SMALL CAP Less than \$1 billion	GNC LIVE WELL GNC	GNC Holdings Inc
noodles & company NDLS		Noodles & Company

Market Capitalization

Market Capitalization		
Small Cap under \$1 billion	 RRGB Red Robin Gourmet Burgers inc. GOURMET BURGERS & BREWS	
Mid Cap \$1 billion to \$10 billion	 ZUMZ Zumiez inc.	
	 DNKN Dunkin' Brands Group, inc.	
Large Cap \$10 billion plus	 COLM Columbia Sportswear Company	
	 AMZN Amazon.com	
	 AAPL Apple inc.	

Market Edge

- ▶ A company that provides finished technical research daily on over 3400 stocks and ETFs to help you make better trades.
- ▶ The company offers a second opinion report about stocks and ETFs.

More Features

MarketEdge is full of features to help you pick the right stock at the right time.



Charts

MarketEdge includes a complete interactive charting package. You can overlay your own moving averages (both exponential and simple) and bollinger bands, add over 15 indicators, and compare how a stock is trading to its peers or a certain index.



Screening Tools

MarketEdge provides over 100 predefined technical screens but sometimes you need something custom. Screening Tools allows you to do just that by filtering for combinations of conditions. Use these filters to narrow the markets down to the two or three best stocks that fit your trading strategy. Create a screen to isolate the stocks that meet your favorite technical and fundamental criteria, and then export your screen to a new StockWatch list.



Advanced Tools

As your knowledge of the market expands, MarketEdge provides advanced tools that are used by Wall Street pros. Stocks breaking out of select P&F chart formations are often tomorrow's big winners. The Second Opinion report includes both bullish and bearish breakouts. Want some inside information? How about a daily report that lists stocks that are in the process of forming a significant P&F chart formation and the price at which a breakout will occur? You can "front-run" thousands of chartists by keeping tabs on the stocks in this section.



Diagrams show some services offered by Market Edge

Modern Portfolio Theory (MPT)



MPT: a theory on how risk-averse investors can construct efficient portfolios to maximize expected return for a given market risk level or to minimize risk for a given expected return.



MPT uses the mean variance of investment returns and assumes symmetrical risk whereas the post-modern portfolio theory (PMPT) uses the downside risk of returns and assumes asymmetrical risk.

Momentum Cross

- ▶ Momentum - Rate of the rise or fall in market price.
- ▶ Tendency of a rising asset price to rise further.
- ▶ Stocks with strong past performance can continue to outperform the stocks with poor past performance.
- ▶ Indicators: RSI, Stochastic Oscillator, Williams %R

Momentum Cross

- When the price crosses above or below 100 Line Cross, it signals either buy or sell.



Money Flow Index (MFI)

- ▶ MFI is a technical oscillator that uses price and volume data for identifying overbought or oversold signals in an asset.
- ▶ MFI is also used to identify divergences, signaling changes in the price trend.
- ▶ The oscillator moves between 0 and 100.
- ▶ Unlike RSI, MFI incorporates both price and volume data, as opposed to just price.
- ▶ MFI can produce false signals. It's advisable for traders to use other indicators for analysis.

*A divergence is when the oscillator is moving in the opposite direction of price. This is a signal of a potential reversal in the prevailing price trend.

Money Flow Index (MFI)



Money Flow Index (MFI)



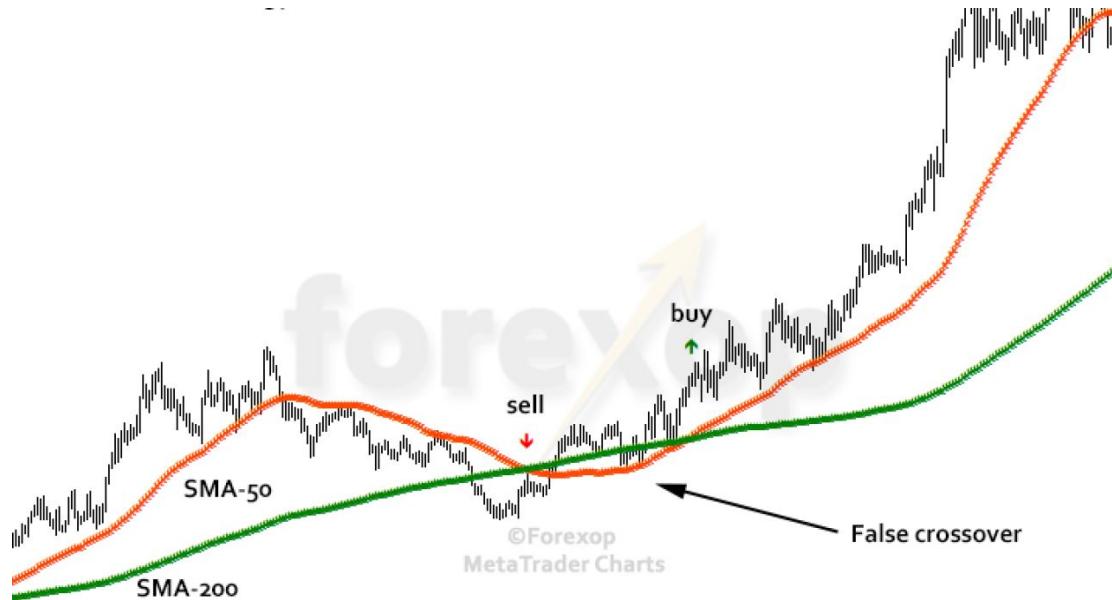
Moving Average Crossovers

- ▶ It is the **first** technical indicator traders will utilize when they set out attempting to trade.
- ▶ When plotted ,**two moving average** with different degrees of smoothing ,the traces of these moving average **cross** each other.
- ▶ Moving average is a technical indicator that smooths price trend by filtering out noise using constantly updated average price.
- ▶ Moving average crossover uses two moving averages by convention namely Short term moving average and long term moving average.
- ▶ **Long term moving average** are slow moving ,less sensitive to short -term price action.
- ▶ **Short term moving average** provide traders with actively indicating recent price actions but are prone to greater number of false signals.

Moving Average Crossovers

- ▶ **50 day and 200 day** SMA are conventionally used in determining crossovers.
- ▶ The occurrence of crossover produces trading signals.
- ▶ When fast or short(50 day) moving average crosses slow or long(200 day)moving average it indicates **buy** signal.
- ▶ It is also known as **Golden cross** as trend is upwards.
- ▶ When slow or long(200 day) moving average crosses fast or short(50 day)moving average it indicates **sell** signal.
- ▶ It is also referred as **death/dead cross**.
- ▶ Moving average crossover are effective but in consolidating market it gives false signals hence to weep out false signals it is used in conjunction with other technical indicators.

Moving Average Crossovers



Municipal Bond Insurance



A guarantee, from the issuer of the municipal bond (e.g. bank), that the principal and coupon on the bond will be paid at the appropriate times in the event of a default.



Municipal bond insurance gives a higher credit rating to the bond.

NAFTA / USMCA

- ▶ The North American Free Trade Agreement's purpose is to reduce trading costs, increase business investment, and help North America be more competitive in the global marketplace.
- ▶ NAFTA is the world's largest free trade agreement. It is so large that it took three Presidents to implement it.
- ▶ Created to help the United States, Mexico, and Canada compete with the European Union, it has tripled trade, but also been criticized for outsourcing American jobs.
- ▶ The North American Free Trade Agreement (NAFTA) entered into force on January 1, 1994. It has been replaced by the United States–Mexico–Canada Agreement (USMCA) on July 1, 2020.

NAFTA / USMCA

UNITED STATES-MEXICO-CANADA AGREEMENT (USMCA): WHAT'S NEW?

BEFORE

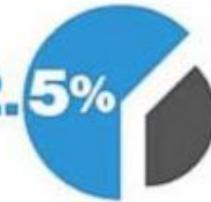


1 | Canada has a protected
Dairy Market



2 | 62.5% of cars and truck
parts must be made in the
U.S., Canada or Mexico
to be duty-free

62.5%



3 | The average car worker
in Mexico makes U.S.
\$2.00 to \$2.50 an hour

Source: AFL-CIO

NAFTA / USMCA



1



Canada opens its markets to U.S. Dairy: Especially Milk, Cheese, Powdered Milk, Baby Formula

2

Cars and trucks must have 75% of their parts made in Canada, Mexico or the U.S. to qualify for zero tariffs

75%



+12.5

3



40-45%



\$16/hr.

40 to 45 percent of autos must be made by workers making \$16/ hour.

Net Unrealized Appreciation (NUA)

- ▶ Some companies offered stocks as symbol of appreciation.
- ▶ **NUA** is the difference in value between the average cost basis of shares of employer stock and the current market value of the shares.
- ▶ NUA is important if you are distributing highly appreciated employer stock from your tax-deferred employer-sponsored retirement plan, such as a 401K.
- ▶ The IRS allows a more favorable capital gains tax rate on the NUA of employer stock upon distribution, after certain qualifying events.
- ▶ The disadvantage is that ordinary income tax must be paid on the cost basis of the employer stock immediately.

Net Unrealized Appreciation (NUA)

The difference between the current market value and original cost of employer stock shares.

While ordinary income tax must be paid immediately on the cost of the employer stock shares, a more favorable capital gains tax can be paid on the NUA of employer stock upon distribution (after qualifications are met).

New 52-week High/ Low



The 52-week high/ low is a technical indicator showing the highest/ lowest daily closing price at which a security has traded during a one-year time period



New high/ low distinguishes when the closing price of a stock exceeds its 52-week high/ low, suggesting an entry/ exit point for a stock while indicating price momentum upward (buy indicator) or downward (sell indicator).



On-Balance Volume (OBV)

- ▶ OBV: a technical indicator of trading momentum, using volume flow to predict stock price changes, showing crowd sentiment to predict a bullish/bearish outcome
- ▶ While the actual numeric value of OBV is arbitrary, this indicator becomes meaningful when observing the nature of OBV movements over time (the slope of the OBV line) and comparing relative action between price bars and OBV

$$\text{OBV} = \text{OBV}_{prev} + \begin{cases} \text{volume}, & \text{if } \text{close} > \text{close}_{prev} \\ 0, & \text{if } \text{close} = \text{close}_{prev} \\ -\text{volume}, & \text{if } \text{close} < \text{close}_{prev} \end{cases}$$

where:

OBV = Current on-balance volume level

OBV_{prev} = Previous on-balance volume level

volume = Latest trading volume amount

Opportunity cost

- Opportunity cost is the representation of potential benefit an investor misses out on when choosing one investment over another
- When evaluating opportunity costs, the benefits and costs of each investment are compared to each other
- Understanding opportunity costs allows investors to make better decisions and more profit
- The formula used to calculate an opportunity cost

Par Value

- Par Value is another word for face value.
 - Example: I sell you a Bond @ \$1000 (par value of \$1000) and the value of it at the time it is issued is considered the par value (original value)
 - The **par value** of a stock can be determined by dividing the total number of common / preferred stock at **par value** by the remaining number of outstanding shares.
 - A Note (or a Bond) Callable at a Par Value means when the original amount issued (example: \$1000) becomes valued at 120% or whatever number, the borrower has the option to pay back the loan (Bond) at par value (original price it was issued).

Parabolic SAR Crossover

- ▶ Parabolic SAR stands for **Parabolic Stop And Reverse** .
- ▶ It is created by J.Welles Wilder.
- ▶ It is used to determine trend direction as well as to draw attention when price is changing.
- ▶ Thus it helps one when to close out the trade and reverse the direction.
- ▶ It mainly works in **trending markets** and not in sideways market.
- ▶ The trader should first establish the **direction of trend** using parabolic SAR and using alternative indicators like ADX and moving average to determine the strength of the trend.

Parabolic SAR Crossover

- ▶ When plotted on chart Parabolic SAR is a series of dots , around price bars.
- ▶ When the trend is **upwards** the dot is placed **below** the price.
- ▶ When the trend is **downwards** the dot is placed **above** the price.
- ▶ The change in direction of dots produces trading signal.
- ▶ One should **buy** if price crosses above PSAR.
- ▶ One should **sell** if price crosses below PSAR.
- ▶ It is also used to set stop loss orders by moving stop loss to match level of PSAR.

Parabolic SAR Crossover



► Parabolic SAR Crossover



Payment-in-Kind (PIK)



- The use of a good or service as payment instead of cash.
- Cash alternatives for work or services are also accepted
- Internal Revenue Service: refers to PIK as bartering income; requires people who receive the income report it on their income tax returns
- PIK Securities: pay a relatively high rate of interest but are risky.
- PIK Notes: issuer can delay making dividend payments in cash, and in return for the delay, the issuer typically agrees to offer a higher rate of return on the note



PetroChina

- Chinese state-owned oil and gas company, currently Asia's largest oil and gas producer. Founded in 1999 in Beijing, China.
- Operates in: Exploration and Production; Refining and Chemicals; Marketing; Natural Gas and Pipeline
- Listed on NYSE (PTR), Hong Kong Exchanges (857) and Shanghai Stock Exchange (601857). Market Cap: \$65.9B
- PetroChina's annual revenue for 2019 was \$364.182B, a 2.41% increase from 2018.
- Due to the reduction in transportation needs from COVID-19, PetroChina's revenue for the quarter ending March 31, 2020 was \$72.954B, a 17.44% YoY decline.

POSCO

- ▶ POSCO is a **South Korean Steel** making company headquartered in Pohang, South Korea.
- ▶ It **2010** it was world's largest steel manufacturing company by market value.
- ▶ It was launched on April 1, 1968 with the mission for national industrializations .
- ▶ It has market cap of **14.64 Trillion.**
- ▶ In 2012 it was named as 146th largest global corporation by Fortune global 500.
- ▶ POSCO operates a joint venture with US steels **USS-POSCO** in Pittsburgh, California, USA.
- ▶ POSCO has more than **181** overseas company in more than **50 countries**

Price Change

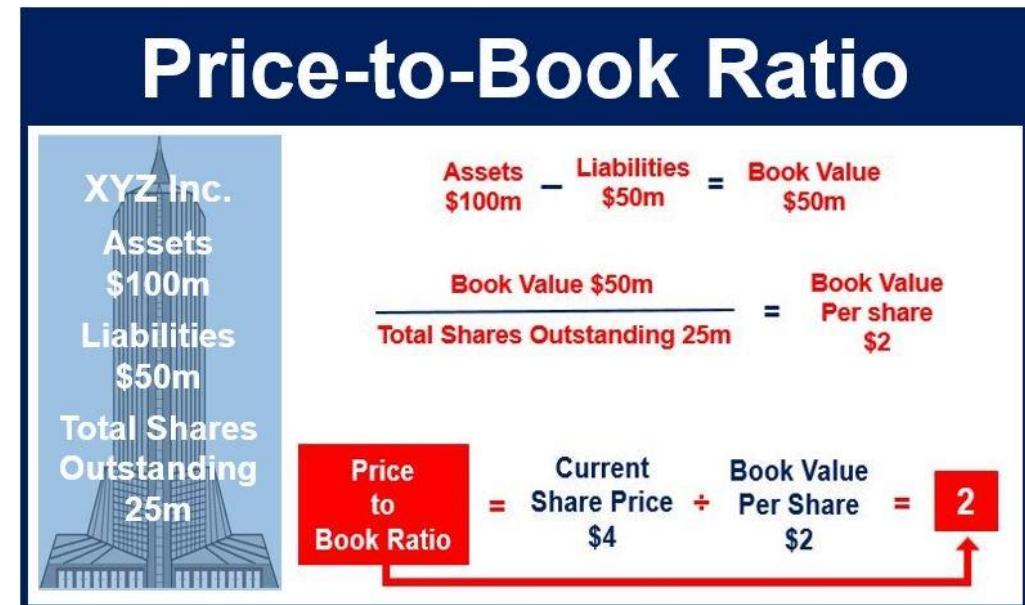
- ▶ Price Change in general, is the difference between a stock's closing price on the trading day and it's previous closing price.
- ▶ Price Change can be calculated on a day-to-day basis or month-to-month or year-to-year.
- ▶ It is the amount of shift in the value of a stock to either a higher or lower level.
- ▶ Percentage of Price Change refers the percent of change in price of an asset during a time period.
- ▶ Absolute Price Change refers to change in prices of an asset during a short interval of time. This is mostly used by intraday traders.
- ▶ Net Change refers to change in the closing price of an asset and it's previous closing price.

Price Change

- ▶ While trading the date frame is important i.e day or monthly or quarterly or yearly.
- ▶ General metrics like PE ratio, Rate of Change(ROC) can be used to calculate Price Change and define a trading strategy.
- ▶ Price Changes highly reflects investors perception towards the market whether it is growing or shrinking.
- ▶ ROC can be used to track the speed of trend of a price change.
- ▶ If $\text{ROC} > 0$ but falling, it indicates that the speed of up trend is slowing down.
- ▶ If $\text{ROC} > 0$ and rising above and crosses previous high, it indicates that the trend continues and the price increases rapidly.

Price To Book Ratio

- Price to Book Ratio (Compares the company Share price to the company value)
- The Book Value is relative to the value of the Assets worth to the market

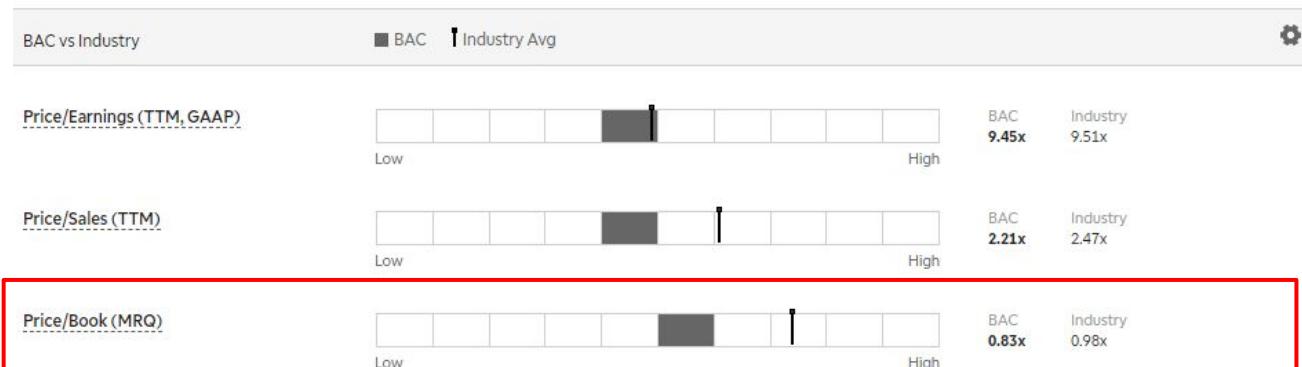


Price To Book Ratio

- Price to Book Ratio (Compares the company Share price to the company value)
- MRQ (Most Recent Quarter)
- TTM (Trailing 12 months aka Last 12 months)

Valuation Analysis

Because **BAC** is in the Banks industry and has positive earnings, the PEG, PE, and Price to Book ratios are the most appropriate valuation measures. The Price to Sales ratio is less instructive than the PEG or PE since the company has positive earnings. Therefore **BAC** seems highly valued with a PEG value of 3.65x, one of the highest in the Banks industry, however their PE is only 9.45x, inline with the industry median of 9.82x.



Price To Book Ratio

- We generally like to see a **Price/Book Ratio between 0 and 3**
 - This means we are getting a good value

Bank of America Corp  NYSE: BAC
Financials : Banks | Large Cap Value  [Company profile](#)

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Buy	Sell	Closing Price \$23.15	Day's Change ↓ -1.57 (-6.35%)	Bid --	Ask --	B/A Size --	Day's High 24.11	Day's Low 23.02	Volume (Heavy Day) 118,139,178								
						June 26, 2020 6:30pm ET											
Set alerts Add to watch list Options chain Historical quotes & splits Income Estimator																	
Summary News Charts Earnings Fundamentals Valuation Calendar Analyst Reports Peer Comparison SEC Filings																	
Overview Balance sheet Income statement Cash flow This page reports GAAP earnings.																	
Company Profile					Valuation Ratios												
Bank of America Corporation is a bank holding company and a financial holding company. The Company is a financial institution, serving individual consumers and others with a range of banking, investing, asset management and other financial and risk management products and services. The Company, through its banking and various non-bank subsidiaries, throughout the United States and in international markets, provides a range of banking and non-bank financial services and products through four business segments: Consumer Banking, which comprises Deposits and Consumer Lending; Global Wealth & Investment Management, which consists of two primary businesses: Merrill Lynch Global Wealth Management and U.S. Trust, Bank of America Private Wealth Management; Global Banking, which provides a range of lending-related products and services; Global Markets, which offers sales and trading services, and All Other, which consists of equity investments, residual expense allocations and other.					<table border="1"><tr><td>Price/Earnings (TTM)</td><td>9.45x</td></tr><tr><td>Price/Sales (TTM)</td><td>2.21x</td></tr><tr><td>Price/Book (MRQ)</td><td>0.83x</td></tr><tr><td>Price/Cash Flow (TTM)</td><td>8.23x</td></tr></table> <p>TTM = Trailing Twelve Months MRQ = Most Recent Quarter</p>					Price/Earnings (TTM)	9.45x	Price/Sales (TTM)	2.21x	Price/Book (MRQ)	0.83x	Price/Cash Flow (TTM)	8.23x
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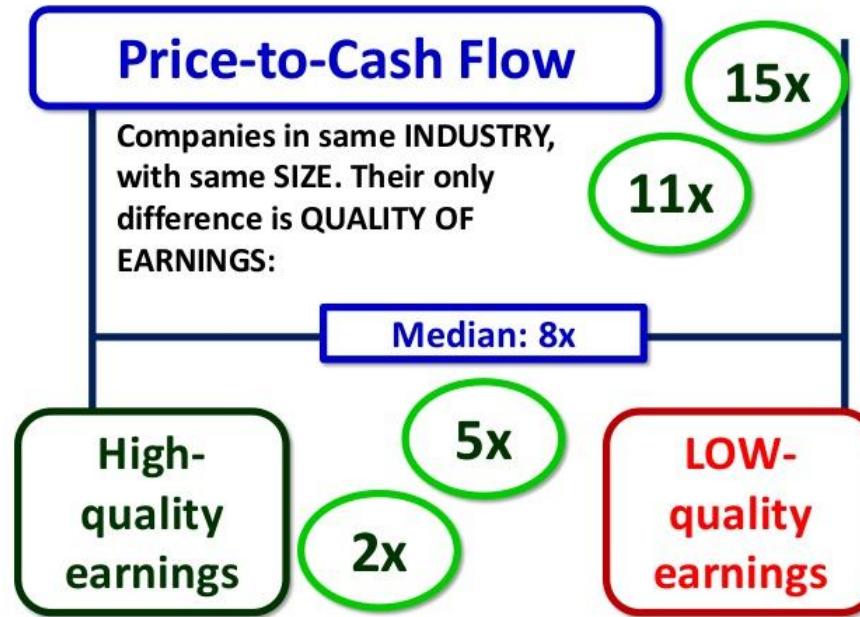
Price to Cashflow Ratio

- Price to Cashflow Ratio (Compares the company Share price to the company value)
- We see hear the P/E Ratio is high because the company is overvalued and reflects in P/C Ratio



Price to Cashflow Ratio

- Price to Cashflow Ratio (Compares the company Share price to the company value)
- We generally like to see a **Price/Cashflow Ratio under 10**



Price to Cashflow Ratio

- Price to Cashflow Ratio (Compares the company Share price to the company value)
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Bank of America Corp  NYSE: BAC
Financials : Banks | Large Cap Value  [Company profile](#)

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Set alerts Add to watch list Options chain Historical quotes & splits Income Estimator																	
Summary News Charts Earnings Fundamentals Valuation Calendar Analyst Reports Peer Comparison SEC Filings																	
Overview Balance sheet Income statement Cash flow This page reports GAAP earnings .																	
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<h3>Valuation Ratios</h3> <table><tbody><tr><td>Price/Earnings (TTM)</td><td>9.45x</td></tr><tr><td>Price/Sales (TTM)</td><td>2.21x</td></tr><tr><td>Price/Book (MRQ)</td><td>0.83x</td></tr><tr><td>Price/Cash Flow (TTM)</td><td>8.23x</td></tr></tbody></table> <p>TTM = Trailing Twelve Months MRQ = Most Recent Quarter</p>										Price/Earnings (TTM)	9.45x	Price/Sales (TTM)	2.21x	Price/Book (MRQ)	0.83x	Price/Cash Flow (TTM)	8.23x
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Price to Sales Ratio

- Price to Sales Ratio (The Price relative to Sales)
- A low number means that the price is fair compared to the sales per share
- We look for a **P/S Ratio of 4 or Less**

Price to Sales Ratio

$$P/S = \frac{\text{Market Capitalization}}{\text{Annual sales}}$$

Price to Sales Ratio

- We look for a **P/S Ratio of 4 or Less**

Bank of America Corp  NYSE: BAC
Financials : Banks | Large Cap Value  [Company profile](#)

BAC  [Symbol lookup](#)

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Buy	Sell	Closing Price \$23.15	Day's Change ↓ -1.57 (-6.35%)	Bid	Ask	B/A Size	Day's High 24.11	Day's Low 23.02	Volume (Heavy Day) 118,139,178
June 26, 2020 6:30pm ET									

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[Summary](#) [News](#) [Charts](#) [Earnings](#) [Fundamentals](#) [Valuation](#) [Calendar](#) [Analyst Reports](#) [Peer Comparison](#) [SEC Filings](#)

[Overview](#) [Balance sheet](#) [Income statement](#) [Cash flow](#) This page reports **GAAP earnings**.

Company Profile

Bank of America Corporation is a bank holding company and a financial holding company. The Company is a financial institution, serving individual consumers and others with a range of banking, investing, asset management and other financial and risk management products and services. The Company, through its banking and various non-bank subsidiaries, throughout the United States and in international markets, provides a range of banking and non-bank financial services and products through four business segments: Consumer Banking, which comprises Deposits and Consumer Lending; Global Wealth & Investment Management, which consists of two primary businesses: Merrill Lynch Global Wealth Management and U.S. Trust, Bank of America Private Wealth Management; Global Banking, which provides a range of lending-related products and services; Global Markets, which offers sales and trading services, and All Other, which consists of equity investments, residual expense allocations and other.

Valuation Ratios

Price/Earnings (TTM)	9.45x
Price/Sales (TTM)	2.21x
Price/Book (MRQ)	0.83x
Price/Cash Flow (TTM)	8.23x

TTM = Trailing Twelve Months
MRQ = Most Recent Quarter

P/E Ratio

- ▶ P/E Ratio is (Price to Earnings Ratio)
- ▶ This tells us the percent the stock is actually worth compared to its price
- ▶ A high P/E Ratio means that the stock price is high to its actual earnings
- ▶ One of the most important Data metrics when evaluating a stock
- ▶ We look for **P/E Ratio of 0 - 30**
- ▶ **The Closest to 0 the better** for the investor
- ▶ The higher P/E Ratio the better it is for early investors and Company Owners

Price to Earnings Growth

- ▶ Price to Earnings Growth ratio or PEG ratio is a valuation metric.
- ▶ PEG ratios tells whether a stock is undervalued or overvalued.
- ▶ $PEG = (P/E)/EGR$
- ▶ EGR: Earnings Growth Rate, the earnings per share in 12 months or 5 years.

Price to Earnings Growth

- ▶ If PEG ratio is 1, then the stock value is considered to be good.
- ▶ If PEG ratio of a stock is less than 1, then it is considered as undervalued.
- ▶ If PEG ratio of a stock is more than 1, then it is considered as overvalued.
- ▶ In general Earnings Per Growth is calculated over 12 months period of time or 5 years period.

Price to Earnings Growth



Profit Margin

- ▶ Profit - amount of money retained from sales and services.
- ▶ Profit Margin is the percentage of profit a business makes on a sale.
- ▶ Profit Margin = $[(Revenue - Costs\ Incurred)/Revenue] * 100$
- ▶ Helps effectively in understanding growth and development of any businesses.
- ▶ Used to optimize portfolios.

Profit Margin

- ▶ Example:

Company A: Investment - \$1000; Gains - \$1200

Company B: Investment - \$300; Gains - \$400

Profit Margin of Company A: $[(1200-1000)/1000] * 100 = 20\%$

Profit Margin of Company B: $[(400-300)/300] * 100 = 33.3\%$

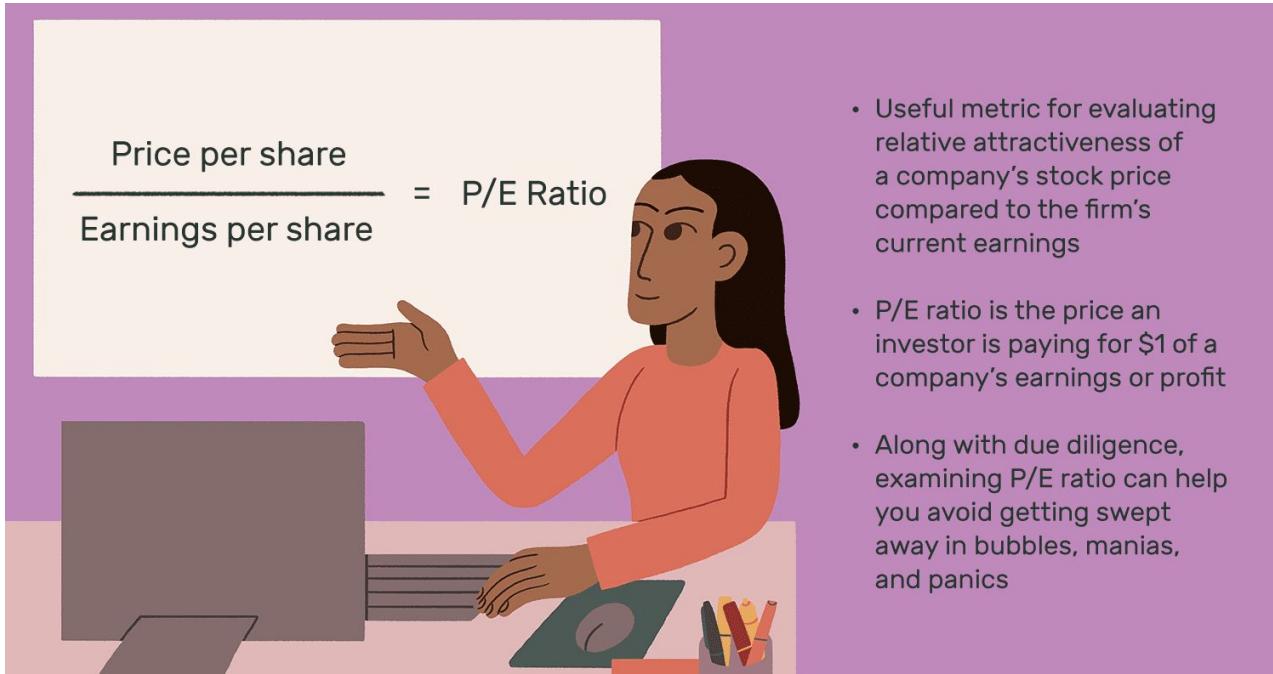
Profit Margin

- ▶ It affects the stock price of a market.
- ▶ **When there's a high Profit Margin, the Earnings per share tends to increase which in future.**
- ▶ This helps investors to choose high Profit Margin firms.
- ▶ Profit Margin suffers at the peak of bull markets.
- ▶ This is an effective indicator for Portfolio Optimization.

Put Warrant

- ▶ Put warrants are securities that gives the holder the right but not obligation to **sell** certain securities before certain time at certain price.
- ▶ If stock price is **up** put warrant price is **down** and when stock price falls put warrant price up.
- ▶ A put warrants ,exercise price is the price at which the holder can sell the warrant.
- ▶ **American warrants** can be exercised anytime on or before expiration dates .
- ▶ Investors can use put warrants to hedge against falling shares values of stock held in their portfolio.
- ▶ Expiration lasts up to **15** years.

P/E Ratio



The illustration shows a woman with dark hair, wearing an orange long-sleeved shirt, sitting at a desk and pointing her right hand towards a large whiteboard. On the whiteboard, there is a mathematical equation for calculating the P/E Ratio:

$$\frac{\text{Price per share}}{\text{Earnings per share}} = \text{P/E Ratio}$$

To the right of the whiteboard, there is a computer monitor and some office supplies like pens and a notepad. To the right of the illustration, there is a purple background with three bullet points explaining the P/E Ratio:

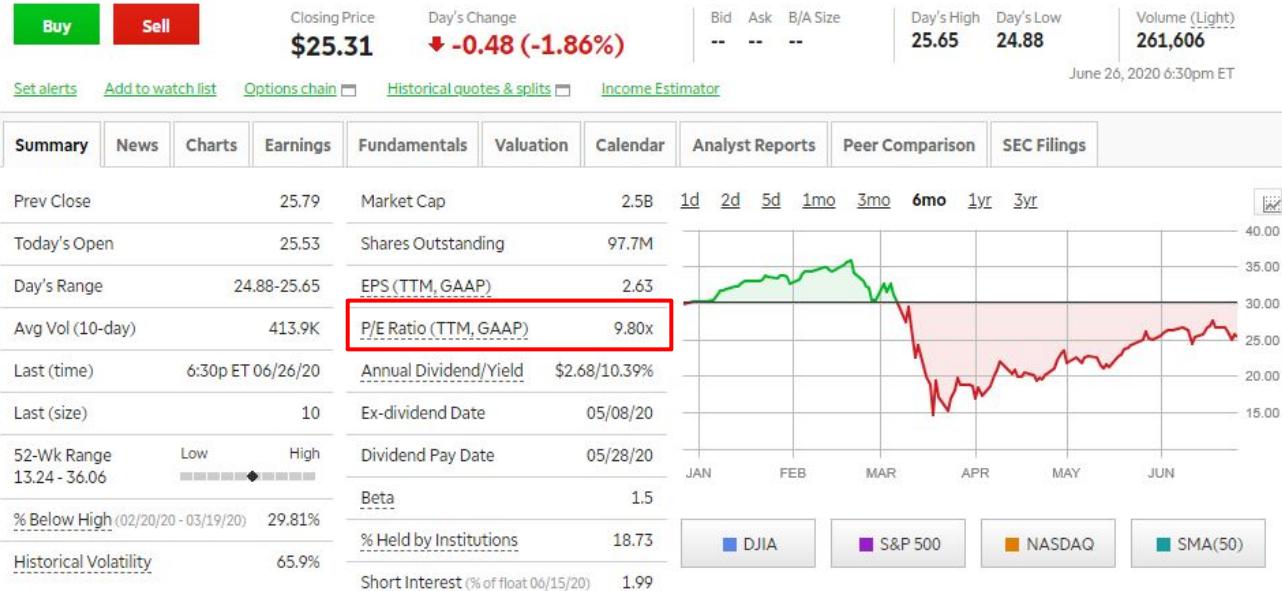
- Useful metric for evaluating relative attractiveness of a company's stock price compared to the firm's current earnings
- P/E ratio is the price an investor is paying for \$1 of a company's earnings or profit
- Along with due diligence, examining P/E ratio can help you avoid getting swept away in bubbles, manias, and panics

P/E Ratio

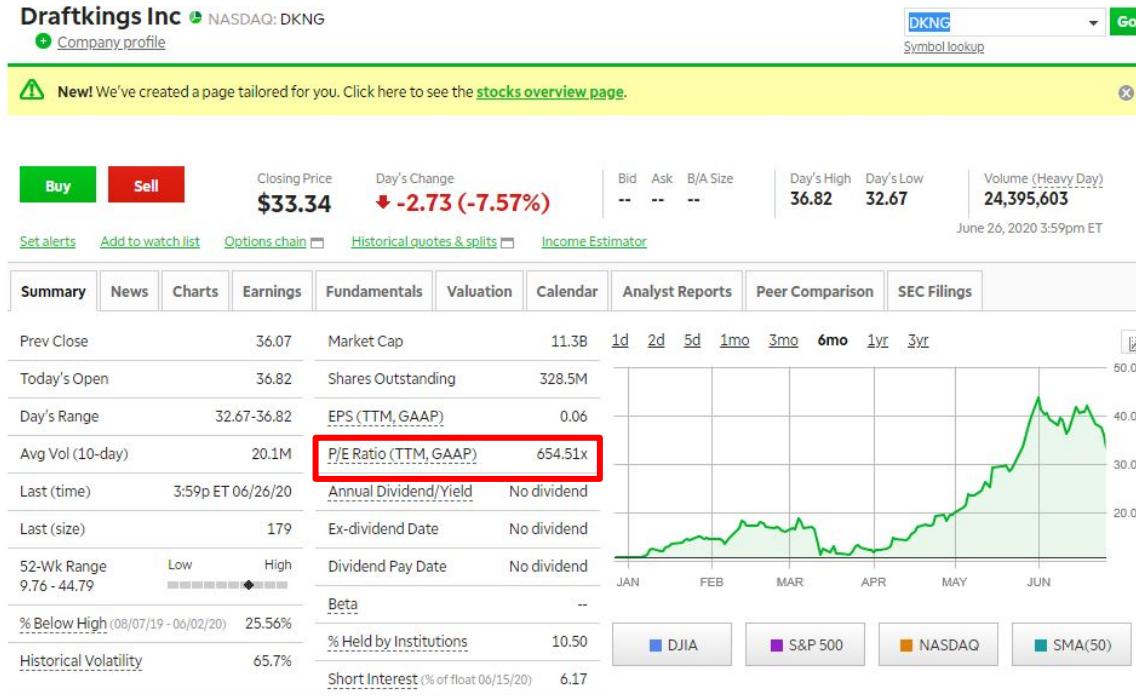
AllianceBernstein Holding LP  NYSE: AB
Financials : Capital Markets | Small Cap Value 

AB  Go
Symbol lookup

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P/E Ratio



Quick Ratio

- ▶ It indicates a company's **capacity to pay its liabilities** without needed to sell its inventory or get additional financing.
- ▶ It is a measure of dollar amount of liquid assets available against dollar amount of current liabilities of a company.
- ▶ **Liquid assets** are the assets that can be quickly converted into cash with minimal impact of price received in open market.
- ▶ **Current liabilities** are a company's debts or obligations that are due to be paid to creditors within one year.

Quick Ratio

- ▶ 1 is the normal Quick ratio which indicates that the company is equipped with exactly enough assets to be instantly liquidated to pay off its current liabilities.
- ▶ The ratio 1.5 indicates that the company has \$1.5 liquid assets for each \$1 liquid liabilities.
- ▶ Higher the ratio, **better** a company's liquidity and financial health .
- ▶ Lower the ratio ,the more likely company will struggle with paying debts.
- ▶ It is also known as **Acid test ratio.**

Quick Ratio

- Accounts payable is current liabilities.

A	B	C	D
© Corporate Finance Institute®. All rights reserved.			
Quick Ratio Example			
1	Cash	\$ 10,000,000	
2	Marketable Securities	\$ 20,000,000	
3	Accounts Receivable	\$ 25,000,000	
4	Accounts Payable	\$ 10,000,000	
5	Quick Ratio		5.50
6			
7			
8			
9			
10			
11			

Quick Ratio

$$\text{Acid Test / Quick Ratio} = \frac{\text{Cash + Receivables + Marketable Securities}}{\text{Current Liabilities}}$$

OR

$$\text{Acid Test / Quick Ratio} = \frac{\text{Current Assets - Inventories - Prepayments}}{\text{Current Liabilities}}$$

Rate of Change

- ▶ Rate of change simply shows the speed at which the prices are changing.
- ▶ A momentum indicator.
- ▶ $\text{Rate of Change} = [(\text{Current Closing Price}/\text{Closing Price of } 'n' \text{ periods}) - 1] \times 100$
- ▶ Asset with high momentum has positive ROC.
- ▶ Asset with low momentum has negative ROC.

Rate of Change



Recent Rating Changes

- A change in the rating of a stock's performance by a Brokerage Firm due to recent market trends
- E.g. A screenshot of ratings change from WSJ.com

Upgrades				Friday, August 28, 2020
COMPANY	TICKER	BROKERAGE FIRM	RATINGS CHANGE	PRICE TARGET
Builders Firstsource	BLDR	Barclays	Equal Weight>>Overweight	\$36
Builders Firstsource	BLDR	Deutsche Bank	Hold>>Buy	\$37
Dell	DELL	RBC Capital Mkts	Sector Perform>>Outperform	\$48>>\$80
Brinker	EAT	Morgan Stanley	Underweight>>Equal-Weight	\$39
Empire State Realty Trust	ESRT	BMO Capital Markets	Underperform>>Market Perform	\$9>>\$8
Gap	GPS	BofA Securities	Underperform>>Neutral	\$18
Malibu Boats	MBUU	B. Riley FBR	Neutral>>Buy	\$75
United Comm Banks	UCBI	Keefe Bruyette	Mkt Perform>>Outperform	\$23

► Redeemable shares

- Redeemable shares refer to shares that can be purchased back by the issuing company
- For example, shares given to an employee can be taken away/bought back if an employee decides to leave the company
- The redemption date is often fixed
- It can also be decided at the issuing company's discretion
- The redemption price is often similar to the issue price

REIT

- ▶ REIT stands for **Real Estate Investment Trust**.
- ▶ It is a company that owns, operates or finances income-producing properties.
- ▶ It generates a steady income for investors but offer little in way of capital appreciation.
- ▶ Most REITs are **publicly traded** which makes them highly liquid.
- ▶ The stockholder of REIT can earn a share of income produced through real estate investment without actually having to go out and buy, manage or finance properties.
- ▶ REIT have comparatively **low correlation** with assets makes them portfolio diversifier which reduces overall portfolio risk and increases returns.
- ▶ Opting for the company that have been in the field for several years and have experienced core team would be more beneficial.



REIT

- ▶ To **qualify** as REIT a company must :
- ▶ Invest 75% of its total assets in real estates.
- ▶ Derive at least 75% of its gross income from rents, interest on mortgages financing real properties or from sales of real estate.
- ▶ Pay a minimum of 90% of taxable income in form of shareholder dividend each year.
- ▶ Be an entity that is taxable at corporation.
- ▶ Be managed by board of managers or trustees.
- ▶ Have a minimum of 100 shareholders.
- ▶ Have no more than 50% of its shares held by five or fewer.

REIT

- ▶ There are **4 types** of REITs:
- ▶ **Equity REITs:** The majority REITs are publicly traded equity rights. Equity REITs own or operate income producing real estate.
- ▶ **mREITs or Mortgage REITs:** It provides financing for income producing real estates by purchasing or originating mortgages and mortgage backed securities and earning income from interest on these investments.
- ▶ **Public Non-Listed REITs:** They are registered with SEC but do not trade on national stock exchanges.
- ▶ **Private REITs:** They are exempt from SEC registrations and whose shares do not trade on national stock exchanges.

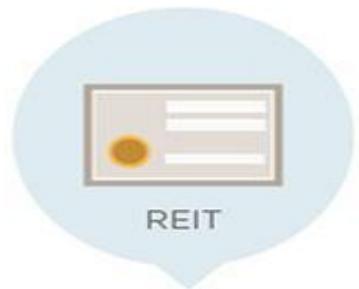
REIT

WHAT IS A REIT?

A real estate investment trust (REIT) is a company that owns a variety of real estate-related products (such as mortgages and different types of properties) that generate income for investors.



Mortgages



REIT



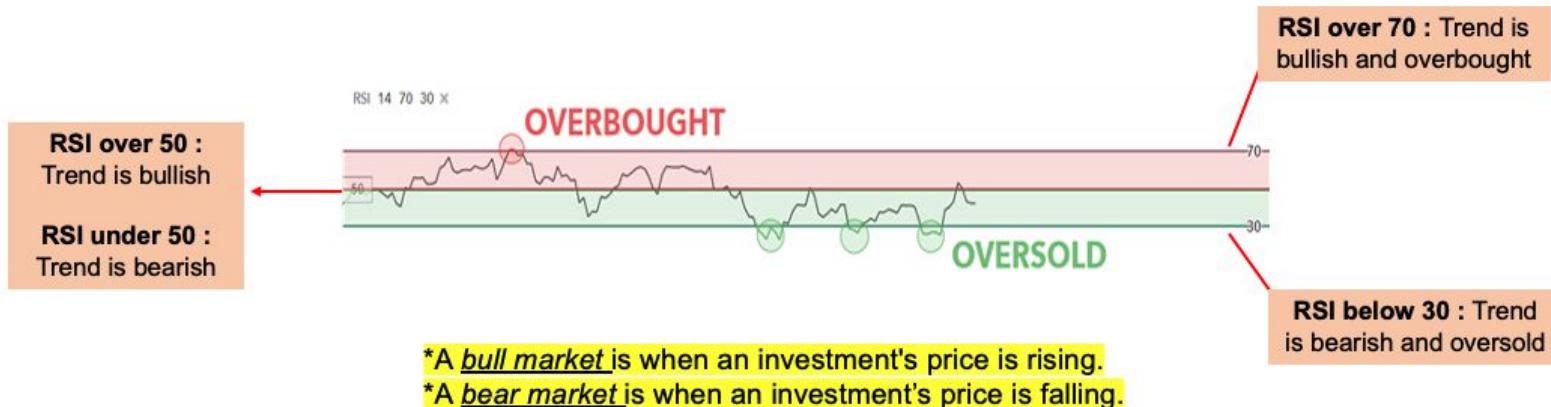
Properties



Traded on public exchanges

Relative Strength Index (RSI)

- ▶ RSI is a momentum indicator used in technical analysis that measures the magnitude of recent price changes to evaluate overbought or oversold conditions in the price of a stock or other asset.
- ▶ It is displayed as an oscillator (a line graph that moves between two extremes).
- ▶ The RSI reading is from 0 to 100, with a cut off value at 50.



► Relative Strength Index (RSI)

- ▶ Trader usually look to sell when the market or RSI is overbought and look to buy when the RSI is oversold.
- ▶ However, since the market is volatile, there can be many overbought and oversold signals overtime.
- ▶ Another method to use to check is "divergent" signal. These signals do not occur often and are reliable.

*A divergence is when the oscillator is moving in the opposite direction of price. This is a signal of a potential reversal in the prevailing price trend.

Relative Strength Index (RSI)

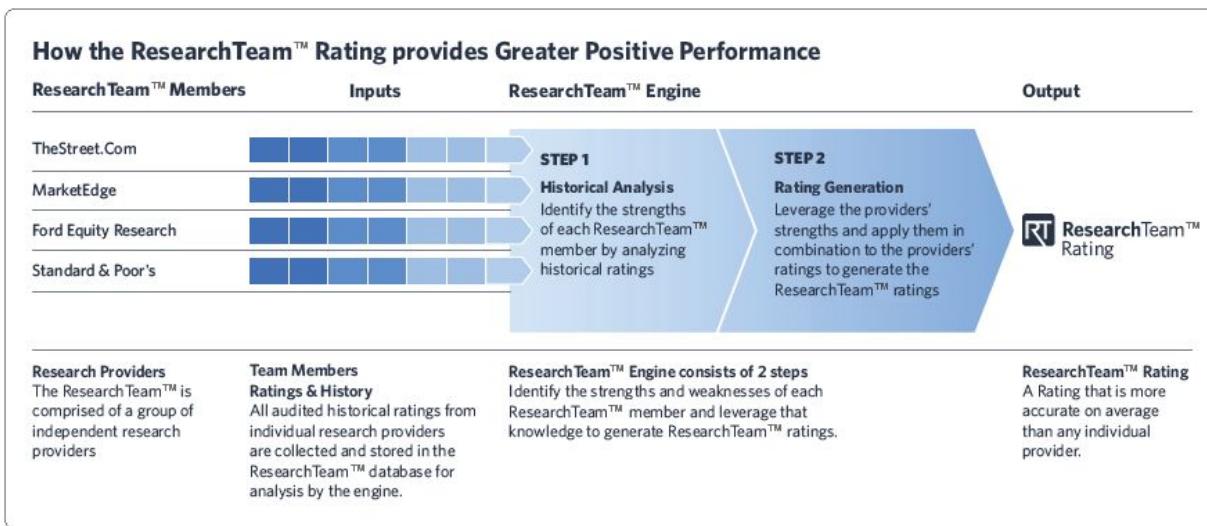
A **bearish divergence** occurs when the RSI creates an overbought reading followed by a lower high that matches corresponding higher highs on the price.

A **bullish divergence** occurs when the RSI creates an oversold reading followed by a higher low that matches correspondingly lower lows in the price.



ResearchTeam™ Company Reports

- Free reports offered by TD Ameritrade to its brokerage clients
- Use algorithmic theory to consolidate expert recommendations from 5 highly valued 3rd party research providers into a single consolidated ranking



Return on Equity

- Return on Equity is the percent of Net Income divided by Shareholder Equity
- A high equity percent is a good sign the company is profitable and not in tons of debt
- This means whenever you are evaluating a Stock you should look for **ROE of at least 15%**
- Return on Equity is the percent of Net Income divided by Shareholder Equity
- Shareholders' equity is the remaining amount of assets available to shareholders after the debts and other liabilities have been paid
- **ROE** indicates a **company's** ability to turn equity capital into net profit.
- This is a Key indicator that a company knows how to accurately reinvest their earnings.

Return on Equity



Return on Equity
(ROE)
Formula

$$= \frac{\text{Net Income}}{\text{Shareholder's Equity}}$$
An icon featuring a dark brown hand holding three dollar signs (\$), positioned above a small person icon, symbolizing shareholders or equity holders.

Return on Equity



\$10,000,000

Net income

\$20,000,000

Common
shareholders'
equity

0.5

50% ROE



\$1

shareholders'
equity

\$0.50

generated
profit

Revenue Growth/Loss

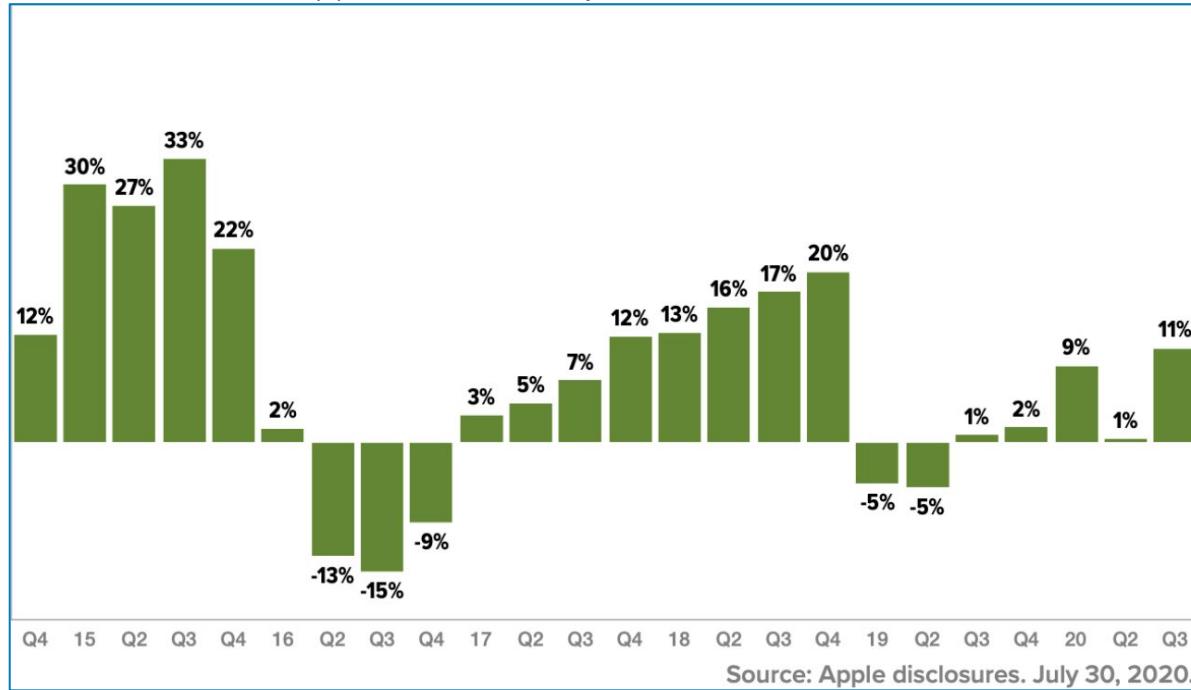
- ▶ Predicting future revenue growth helps in investment strategies.
- ▶ If there is a steady Revenue Growth rate of a firm, it indicates a better chance of investing.
- ▶ If there is a steady Revenue Loss rate of a firm, it indicates a lower chance of investing.
- ▶ Quarterly revenue growth/loss from certain long period of time(5 years) helps to estimate the future revenue of a firm and investing.

Revenue Growth/Loss

- ▶ Revenue is the amount earned by a firm by selling its goods and services.
- ▶ Revenue growth measures the increase in amount of sales during a certain period of time.
- ▶ Revenue loss measures the decrease in amount of sales than expected during a certain period of time.
- ▶ The Revenue Growth/Loss is very important in making a sound investment decision.

Revenue Growth/Loss

Apple Inc. Quarterly Revenue from 2015



Risk-adjusted assets

- Risk-adjusted assets are utilized to find the minimum amount of capital that must be kept by financial institutions to prevent the chance of going bankrupt
- Credit ratings of certain types of bank assets are utilized to determine the risk coefficients
- Loans funded with collateral are considered to be less-risky
- Bankers need to balance the potential rate of return with the amount of capital they keep



SEC Form ADV

- Investment advisers use this uniform form to register with both the SEC and state securities authorities
- Part 1: information about the investment adviser's business, ownership, clients, employees, business practices, affiliations, and any disciplinary events of the adviser or its employees.
- Part 2: information about the types of advisory services offered, the adviser's fee schedule, disciplinary information, conflicts of interest, and the educational and business background of management and key advisory personnel of the adviser.
- Investment advisers are required to deliver annual updates of information on this form to their clients
- These information are available at Investment Adviser Public Disclosure (IAPD) website: www.adviserinfo.sec.gov.

Sector, Industry & Sub-Industry

- ▶ Sector is a larger segment of the economy. Industries are generally grouped or segmented in the economy as sectors.
- ▶ Industry relates to a specific group of companies or business.
- ▶ Sub-Industry relates to a more specific type of business in an industry.
- ▶ Sector is of 4 types:
- ▶ Primary Sector: Consists of industries which deal with Extraction and Harvesting of natural resources like Minerals and Agriculture.
- ▶ Secondary Sector: Consists of industries which deal with Construction, Manufacturing, Preprocessing, Production of finished goods from raw materials.

Sector, Industry & Sub-Industry

- ▶ Tertiary Sector: Consists of industries like Retailers, Entertainment and Financial companies. This sector focuses on providing services to consumers.
- ▶ Quaternary Sector: Consists of industries dealing with Intellectual and Knowledge activities, Research & Development, Business Consulting and Education.
- ▶ There are 24 industry groups like Automobile, Banks, Energy, Consumer Services, Insurance, Healthcare, Medical Equipment...
- ▶ These industries are sub-divided into their specific type of work.
- ▶ Financial Sector:
 - ▷ Banks, Insurance, Asset Management...
 - ▷ Insurance Industry: Home, Auto, Life...

Sector, Industry & Sub-Industry

- ▶ While investing, one should compare Industry to Industry group or a sub-industry to sub-industry group.
- ▶ Within an industry group an investor can have a knowledge on how the industry is varying over time.
- ▶ Sector to Sector comparison isn't much desirable when investing.
- ▶ Within a Sector there are several industry groups, when comparing sectors we can't get a clear view on how the sector is changing or varying while investing.
- ▶ Many investors, analysts use Global Industry Classification Standard to compare the industries to optimize the portfolio.

Securities Industry Essentials (SIE) Exam

- An introductory-level FINRA exam for prospective industry professionals, not necessarily ones that are already working in brokerage companies
- Assesses a candidate's basic knowledge of securities industry topics fundamental to working in the industry

Components of the Exam



The new SIE Exam serves as a precursor to the exams you already know.

► Self-Regulatory Organization (SRO)

- An organization that is formed to regulate certain professions or industries. Usually non-governmental organizations, established to create rules to promote order among businesses and organizations.
 - Helpful in an industry or profession where trust is low
 - Do not need a grant of authority from the government to enforce their regulations
 - Funded by the organizations that are under its wings
- The Securities and Exchange Commission (SEC) is a SRO.

Series 6

- Companies or Individuals must pass the SIE Exam and the Series 6 Exam to have the right to purchase and sell specific financial products on behalf of someone one.
- **To be eligible to take the exam a candidate must be associated and/or sponsored by a FINRA member firm or other credible self-regulatory organization (SRO) member firm.**
- A **\$40** Exam created by FINRA (Financial Industry Regulatory Authority)
- **A passed Series 6 Exam gives a company or individual the right to purchase and sell:**
 - Mutual funds (closed-end funds on the initial offering only)
 - Variable annuities
 - Variable life insurance
 - Unit investment trusts (UITs)
 - Municipal fund securities [e.g., 529 savings plans, local government investment pools (LGIPs)]

Series 7

- The Series 7 is considered the General Securities Representative Qualification Examination (GS)
- This certification gives the legal ability to be a general securities representative aka StockBroker.
- **To be eligible to take the exam a candidate must be associated and/or sponsored by a FINRA member firm or other credible self-regulatory organization (SRO) member firm.**
- **A passed Series 7 Exam gives a company or individual the right to purchase and sell:**
 - Common and Preferred Stocks
 - Put Options
 - Call Options
 - Fixed Income Investments
 - Not Futures, Real Estate, and Life Insurance

Series 63

- Series 63 Exam is considered the the Uniform Securities State Law Examination
- Passing the Exam allows a person or company to function as a Broker-Dealer representative also known as a Securities Agent.
- This **exam is \$135**
- A Broker-Dealer trades on behalf of clients or owns a Full-Service Brokerage Firm
 - TD Ameritrade
 - E-Trade and etc.
- Passing the Series 63 and 6 or 7 gives legal right to sell any type of security in a specific state.
- **Do not need a FINRA or SRO sponsor to take this exam.**
- Series 63 is not required in Colorado, District of Columbia, Florida, Louisiana, Maryland, New Jersey, Ohio, and Puerto Rico.

Series 65

- The Series 65 Exam is The Uniform Investment Adviser Law Examination.
- The Exam fee is \$175.
- **A passed Series 65 Exam gives a company or individual a license to become an Investment Advisor.**
- This gives the legal right to give Financial Advice for a Fee!
- **Do not need a FINRA or SRO sponsor to take this exam.**

Exam	License Type	Type of Compensation	Purpose
Series 7	Broker/Dealer (RR)	Commissions for transactions	General Securities
Series 6	Broker/Dealer (RR)	Commissions for transactions	Packaged Products
Series 63	Broker/Dealer (RR)	Commissions for transactions	State Law Reciprocity
Series 65	Investment Advisor Rep (IAR)	Fee for service	Investment Management
Series 66	Investment Advisor Rep (IAR)	Fee for service	Combines Series 63 and 65 exams

Sharpe Ratio

- ▶ It is developed by **William F.Sharpe**.
- ▶ It helps the investors to understand the return of investments compared to its risk.
- ▶ The ratio is average return earned in excess of risk free rate per unit of volatility or total risk.
- ▶ Generally,**greater** the value of sharpe ratio , the more attractive the risk adjusted returns.
- ▶ The sharpe ratio can be used to evaluate portfolio's past performance as actual returns are used in calculating sharpe ratio.
- ▶ However it assumes the returns are normally distributed but in real returns are skewed away from the average.

Sharpe Ratio

- ▶ Usually sharpe values **greater than 1** are taken to be considerably good by investors.
- ▶ A ratio higher than 2 is very good and 3 is excellent while ratio **below 1** is considered as sub-optimal.

$$\text{Sharpe ratio} = \frac{R_p - R_f}{\sigma_p}$$

R_p asset return

R_f risk-free rate

σ_p standard deviation (of asset return)

SIE Exam

- **The SIE Exam = Securities Industry Essentials Exam**
- A **\$60** Exam created by FINRA (Financial Industry Regulatory Authority)
- **The SIE is open and available to take without Sponsorship or Association to anyone aged 18 or older.**
- The SIE Exam is a great certification to have under your belt to get a position within Financial Services industry.

Sortino Ratio

- ▶ It was named after **Frank A.Sortino**.
- ▶ It is also used to measure risk-adjusted return of investment, portfolio, or strategy .
- ▶ It differs from the sharpe ratio as it only considers standard deviation of **downward risk** rather than of total (upward and downward)risk.
- ▶ Downward risks are the returns that fall **below** minimally acceptable return targets.
- ▶ Many investors argue that sortino ratio is a **better** measure of risk.
- ▶ Similar to sharpe ratio,higher the ratio ,the better.
- ▶ A sortino ratio **greater than 2** is considered to be good.

Sortino Ratio

GOOD NEWS, BAD NEWS

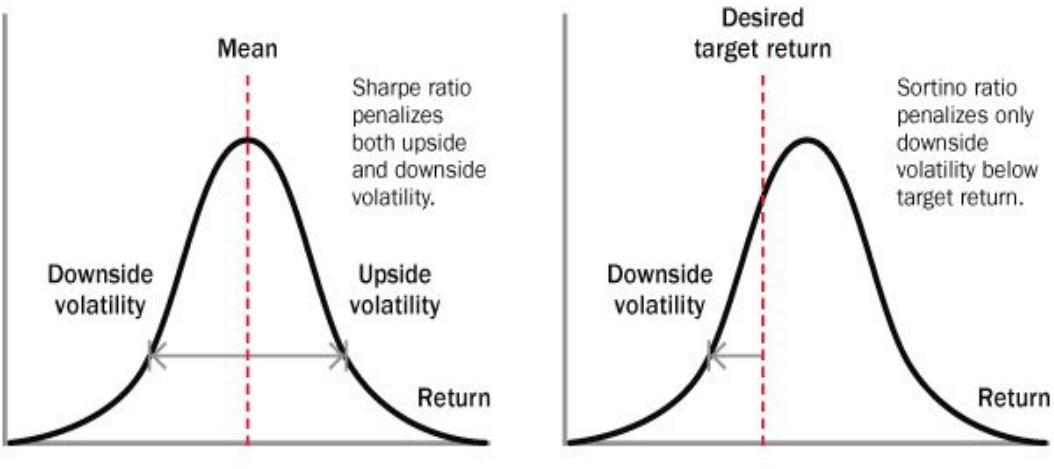
Large return swings are a sign of volatility and risk, but if a program consistently produces strong up moves with lower down moves, it should not be punished for those strong moves in its favor.

$$\text{Sortino Ratio} = \frac{R_p - R_f}{\sigma_p}$$

R_p = Expected Return

R_f = Risk Free rate of return

σ_p = Standard Deviation of Negative Asset Returns



► Stochastic

- ▶ Stochastic is a Greek word. It means "guess" or "random".
- ▶ The Stochastic Oscillator uses a scale to measure the degree of change between prices from one closing period to predict the continuation of the current direction trend.
- ▶ For an uptrend market, prices will remain equal to, or above the previous period closing price.
- ▶ For a downtrend market, prices will likely remain equal to, or below the previous closing price.

Stochastic Crossover

- ▶ A crossover occurs when the fast stochastic (%K line) intersects the slow stochastic (%D line).
- ▶ Because the %K line reacts more quickly to market changes it oscillates at a faster rate than the %D line.
- ▶ Under certain conditions, it can catch up to, and cross over the %D line.

Stochastic Crossover

When the %K line crosses over and moves above the %D line, the market rate is gaining at a faster rate than the average represented by the %D line. The increase in price strength is considered a buy signal.



A sell signal is when %K line crosses under the %D line because the faster moving %K line is declining more rapidly than the overall downward trend.

Stochastic %K and %D

- The Stochastic Oscillator consists of two lines.

%D, a signal line uses the last 3 valuations of %K to create a moving average of the %K stochastic.

Referred to as "stochastic slow" since it reacts more slowly to market price changes than %K



%K also known as "stochastic fast" tracks the current market rate for the currency pair

$$\%K = \frac{100 \times (\text{Closing Price} - \text{Lowest Price of } N \text{ Periods})}{(\text{Highest Price of } N \text{ Periods} - \text{Lowest Price of } N \text{ Periods})}$$

$$\%D = 3 - \text{Period Moving Average of } \%K$$

N is period, usually set to 14

Stochastic Overbought & Oversold

Overbought - When the %K line of the stochastic scale climbs to more than 80.

Oversold - When the %K line falls below 20 on the stochastic scale.



Stock Repurchase / Buyback

- ▶ A stock buyback occurs when a company buys back its shares from the marketplace.
- ▶ The effect of a buyback is to reduce the number of outstanding shares on the market, which increases the ownership stake of the stakeholders.
- ▶ A buyback will always increase the stock's value and benefit the shareholders in the short term.

Example: Stock buybacks took place in United States in 2010 and 2011 when the economy was undergoing the Great Recession.



Tax Preferred Dividends

Most preferred stock dividends are treated as qualified dividends—taxed at 15%-20%, a lower rate than the marginal tax rate for ordinary income.

Preferred stock often pays regular, higher dividends than common shares, making them more like debt than traditional equity.

This income source is taxed as preferred dividends rather than interest (i.e. preferred dividends are taxed at the more favorable rate of long-term capital gains).

Tesco

- ▶ Tesco was founded in 1919 by **Jack Cohen**
- ▶ Tesco is one of the most recognizable **British retail** names -atleast when it comes to grocery shopping.
- ▶ The headquarters is at Welwyn Garden city,England,UK.
- ▶ Its first acquisition occurred in 1957 when it bought **70** williamson's stores.
- ▶ It has acquired around **30** different companies expanding its reach along Europe and Asia,
- ▶ Tesco trades on **London Stock Exchange** and a part of **FTSE 100 index**.
- ▶ It has a market capitalization around **\$28.4 billion**.
- ▶ Some of Tesco's acquisition seemed logical at the time they were made but resulted in losses.

TheStreet Ratings

TheStreet Ratings

- A fund rating by TheStreet.com, condensed from the available fund performance & risk data

Level	Evaluation	Meaning (Summarized)
A	Excellent (Buy)	Excellent track record of maximizing performance while minimizing risk. Has made the most of the recent economic environment to maximize risk-adjusted returns compared with other funds. Most likely to deliver superior performance relative to risk in the future.
B	Good (Buy)	Good track record of balancing performance with risk. Achieved above-average returns given the level of risk in its underlying investments. A good investment in the recent past.
C	Fair (Hold)	About average track record in the trade-off between performance and risk. The higher returns from some funds were achieved with higher than average risk. No particular advantage to investing in.
D	Weak (Sell)	Underperformed the universe of other funds given the level of risk in its underlying investments, resulting in a weak risk-adjusted performance. Thus, its investment strategy and/or management has not been attuned to capitalize on the recent economic environment. A bad investment over the recent past.
E	Very Weak (Sell)	Significantly underperformed most other funds given the level of risk in its underlying investments, resulting in a very weak risk-adjusted performance. Thus, its investment strategy and/or management has done just the opposite of what was needed to maximize returns in the recent economic environment. A very bad investment in the recent past.

Trade deficit

- A trade deficit happens when a country imports more than it exports during a given period.
- A trade deficit is also known as a negative balance of trade
- A trade deficit can be a result of a country's lack of ability to produce its own products
- Trade deficit often happens when a country attracts more foreign investment

Trade deficit

- Trade deficit allows countries to produce less and still be able to consume more
- A trade deficit can help countries that don't have efficient capacity to produce enough goods to still be able to provide such goods to its citizens

Trade deficit

- If a nation continues to run a trade deficit, foreign investors will continue to buy existing businesses, natural resources, and other assets.
- If this continues the country will end up being owned by foreign investors

Today's Volume vs. Average



Daily volume: how many stock shares are traded on a given day



Average daily volume: the average of the daily volumes across several days (usually 20 or 30 days)



Many traders/ investors prefer high volume over low volume, because it is easier to buy/ sell at a desired price.



An average dollar volume of at least

20 million provides good liquidity—adequate for most traders
80 million is extremely liquid—adequate for traders of a very large account

Treasury Bill (T-Bill)

T-Bill: a short-term debt obligation backed by the U.S. Treasury Department with a maturity of one year or less.

The longer the maturity, the higher the interest rate that the T-Bill will pay to the investor.

Treasury Bonds (T-bonds)

Treasury bonds are one of four essentially risk-free government-issued securities (along with Treasury bills, Treasury notes, and Treasury Inflation-Protected Securities (TIPS)).

T-bonds: fixed-rate U.S. government debt securities issued by the federal government that have maturities between 10 and 30 years.

T-bonds pay semiannual interest payments until maturity, at which point the face value of the bond is paid to the owner.

Treynor Ratio

- ▶ It is named after **Jack Treynor**.
- ▶ It is also known as reward to volatility ratio.
- ▶ It is a performance measure of how much excess return was generated for each unit of risk generated by portfolio.
- ▶ Excess return refer to the return earned above the return that could be earned in risk-free investment.
- ▶ Risk here refers to systematic risk as measured to portfolio's beta.
- ▶ Beta measures the tendency of change in portfolio return in response to changes in return of overall market.
- ▶ Higher the ratio,the portfolio is more suitable to investment.

Treynor Ratio

- When comparing two portfolio the ratio does not indicate the significance of difference between the two as they are ordinal. Eg: Treynor ratio of 0.5 is good than 0.25 but not necessarily twice as good.

$$\text{Treynor Ratio} = \frac{\text{Portfolio Return} - \text{Risk Free Rate}}{\text{Portfolio Beta}}$$

Unit Trust Investments

- Unit Trust Investments are made of pooled investors' funds that are managed by fund managers
- There are two main Unit Trust Investment income sources:
 - interest from investments
 - and dividends from shares
- Unit investment trusts are well regulated

Unit Trust Investments

- Unit investment trusts have low investment risk.
- They spread investors' funds across different investments to reduce the chance of making a loss.
- It is easy to track Unit Trust Investments performance (investment websites and fund managers often provide regular updates)
- You don't need a lot of money to start investing

Unrealized Gains

- Profit that has not been cashed in (theoretical profit)
 - Example: Your stock gains up \$500 (Unrealized Gains) but you do not cash it in and it drops \$400 and you cash it in at \$100 profit (Realized Gain).
 - Your Realized Gain is only \$100

<u>Gain (\$)*</u>	<u>Gain (%)*</u>
12.43	2.59%
112.59	16.61%
325.26	217.57%
42.77	9.21%

US Trade Policy

- ▶ Trade policy refers to the regulations and agreements that control imports and exports to foreign countries.
- ▶ In 2019, the total U.S. trade with foreign countries was \$5.6 trillion.
- ▶ That was \$2.5 trillion in exports and \$3.1 trillion in imports of both goods and services.



Variable Annuity

An annuity contract is a written agreement between an insurance company and a customer outlining each party's obligations in an annuity agreement.

- ▶ An **annuity** is a financial product that pays out a fixed stream of payments to an individual, and these financial products are primarily used as an income stream for retirees.
- ▶ A variable annuity is a type of **annuity contract**, the value of which can vary based on the performance of an underlying portfolio of mutual funds.
- ▶ Variable annuities differ from **fixed annuities**, which provide a specific and guaranteed return.

Variable Annuity

Variable Annuity Break Down



Variable Annuities have payout rates that vary.



The amount you receive depends on the portfolio's gain or loss.



This potentially leads to bigger gains or losses each payout.

- ▶ If you already have a healthy pension or another source of income sufficient to support your everyday needs in retirement, you may not need an annuity.
- ▶ If you don't have a guaranteed stream of retirement income, you should consider buying an annuity.
- ▶ An annuity is a good source of lifetime income.

Volume Range

- ▶ Volume Range indicates how much a financial asset is traded in a time period.
- ▶ Similar to Price Change, Volume Change represents the change in volume of an asset.
- ▶ Volume Change is generally implied on stocks and futures.
- ▶ The Volume Change can be used to spot future market moves.
- ▶ Volume Rate of Change is used to track the speed of volume change in a market.
- ▶ The volume changes represent the investors sentiment on the strength or conviction of a company.
- ▶ If there is a price decline and increase in volume, the trend is going to be downwards.
- ▶ If there is a price increase and increase in volume, the reversal may happen.

Volume Range

- ▶ Indicators that can be used to trade on Volume Change:
 - ▷ On-Balance Volume
 - ▷ Chaikin Money Flow
 - ▷ Klinger Oscillator
- ▶ This can be used during a short-term trade. The price trend accompanied with volume change increases the trade confidence.
- ▶ Can be used to spot fake market moves, if there's a high price change and low volume, then the price tends to fall to the original price value.
- ▶ Volume history shows the volatility in the market. A high volatility market would be beneficial for intraday trading.

Warrant

- ▶ Warrants are a very **easy investment** for a company to offer.
- ▶ It is a traded investment that gives the holder the right with no obligation to **buy or sell** a specific asset at set price by a set date.
- ▶ Warrants give the investor an opportunity for high returns but at high risk.
- ▶ However, maximum an investor can lose is original investment.
- ▶ It is easy to purchase warrants and they are also traded in equity market.
- ▶ They are very liquid, allowing the buyer to easily sell it.
- ▶ Warrants tend to have much **longer** period between issue and expiration typically in years.

World Trade Organization (WTO)

- ▶ WTO is the only global international organization dealing with the rules of trade between nations.
- ▶ WTO was established by 124 governments through the Marrakesh Agreement in April 1994, also known as the “Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations.”
- ▶ The United States still believes the WTO has the potential to play an instrumental role in helping make markets more efficient, pursuing balanced trade among the world’s economies, and creating greater wealth and prosperity for U.S.

Zero-coupon bond

- A zero-coupon bond is a financial instrument or security that provides a specified lump sum at a specified future date
- An issuer receives money at the point of investment and pays the investor a specified amount of money at the end of the contract
- The investor is also known as the lender, and the issuer is also known as the borrower.
- A zero-coupon bond is paid off by a single large payment instead of installment