

Glossary of terms for Financial Markets

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Absolute Return: The return that an asset achieves over a certain period of time. Investment techniques used include using short selling, futures, options, derivatives, arbitrage, leverage and unconventional assets.

Accommodative Monetary Policy: A central bank attempts to expand the overall money supply to boost the economy when growth is slowing, by encouraging more spending from consumers and businesses by making money less expensive to borrow by lowering the interest rates.

Accreting Principal Swap: A derivative where counterparties exchange financial instrument benefits, involving a growing notional principal amount. An accreting principal swap, is an interest rate or cross currency swap where the notional principal grows as it reaches maturity. This type of swap may be used in instances where the borrower anticipates the need to draw down funds over a certain period of time but wants to fix the cost of the funds over a certain period of time but wants to fix the cost of the funds in advance. Also called accreting swap, accumulation swap, construction loan swap, drawdown swap and step up swap.

Accrued Interest: A term used to describe an accrual accounting method when interest that is either payable or receivable has been recognized, but not received or paid. Accrued interest occurs as a result of the difference in timing of cash flows and the measurement of these cash flows. The interest that has accumulated on a bond since the last interest payment up to, but not including, the settlement date. Actual return: Actual gain or loss to an investor expressed by “Expected return(ex- ante) plus the effect of firm-specific and economy-wide news, i.e the discrepancy between actual and expected return is due to systematic and unsystematic risk”.

After the bell: A term used to describe news, earning reports and other activities that are released after the stock market has closed for the day.

Agency Bond: Issued by a government agency but not fully guaranteed similar to US Treasury and Municipal bonds.

Aggregate Exercise Price: The strike price of a put or call option multiplied by its contract size.

Algorithmic Trading: A trading system that utilizes very advanced mathematical models for making transaction decisions in financial markets. The strict rules built into the model attempt to determine the optimal time for an order to be placed that will cause the least amount of impact on a stock’s price. Large block of shares are usually purchased by dividing the large share block in to smaller lots and allowing the complex algorithms to decide when the smaller

blocks are to be purchased. It enables investor to obtain best possible price without increasing cost and significantly affecting the stock price.

Alpha: It is one of the five technical risk ratios. A measure of performance on a risk adjusted basis. It takes the volatility(price risk) of a mutual fund and compares its risk adjusted performance to a benchmark index. The excess return of the fund relative to the return of the benchmark index is a fund's alpha. A positive/negative alpha of 1.0 means the fund has outperformed/underperformed its benchmark index by 1%.

American Depositary receipt – ADR: A negotiable certificate issued by a US bank representing a specified number of shares(or one share) in a foreign stock that is traded on a US stock exchange, denominated in US dollars and held abroad to reduce administration and duty costs on each transaction.

American Option: An option that can be exercised any time during its life. American option allows option holders to exercise the option at any time prior to and including its maturity date, thus increasing the value of the option to the holder relative to European options, which can only be exercised at maturity. Most exchange traded options are American.

Amortization: The paying off of debt in regular installments over a period of time. The deduction of capital expenses over a specific period of time(usually over the asset's life). More specifically this method measures the consumption of the value of intangible assets, such as a patent or a copy right.

Amortizing Swap: An exchange of cash flows, one of which pays a fixed rate of interest and one which pays a floating rate of interest, and both of which are based on a notional principal amount that decreases. In an amortizing swap, the notional principal decreases periodically because it is tied to an underlying financial instrument with a declining (amortizing) principal balance, such as a mortgage.

Arbitrage Bond: A debt security with a lower interest rate issued by a municipality prior to the call date of the municipality's existing higher rate security. Proceeds from the issuance of the lower rate bonds are invested in treasuries until the call date of the higher interest rate bonds. Arbitrage bonds are used by municipalities to arbitrage the difference between the current lower interest rates and bonds that they have issued at higher coupon rates in past, to reduce net effective cost of their borrowings, effective when interest rates and bond yields are declining. It also has temporary tax exemption feature.

Arbitrage Pricing Theory – APT: An asset pricing model based on the idea that an asset's returns can be predicted using the relationship between the same asset and many common risk factors. Created in 1976 by Stephen Ross, this theory predicts a relationship between the

returns of a portfolio and the returns of a single asset through a linear combination of many independent macro-economic variables. The arbitrage pricing theory (APT) describes the price where a mispriced asset is expected to be. It is often viewed as an alternative to the capital asset pricing model (CAPM) since the APT has more flexible assumption requirements. Whereas the CAPM formula requires the market's expected return, APT uses the risky asset's expected return and the risk premium of a number of macro economic factors. Arbitrageurs use the APT model to profit by taking advantage of mispriced securities. A mispriced security will have a price that differs from the theoretical price predicted by the model. By going short an overpriced security, while concurrently going long the portfolio the APT calculations were based on, the arbitrageur is in a position to make a theoretically risk free profit.

Asian Option: An option whose pay off depends on the average price of the underlying asset over a certain period of time as opposed to at maturity. Also known as average option.

Asset Swap: An asset swap is similar in structure to plain vanilla swap, the key difference is the underlying of the swap contract. Rather than regular fixed and floating loan interest rates being swapped, fixed and floating investments are exchanged.

At the Money(ATM): It is one of the three terms used to describe the relationship between an option's strike price and the underlying security's price, or option "moneyness". A situation where an option's strike price is identical to the underlying security. An ATM option has no intrinsic value but still have time value. Option trading activity tends to be high when options are at the money.

"Autoregressive Conditional Heteroskedasticity – 'ARCH': An econometric term used to model observed financial time series with time varying volatility(during bull markets there is low volatility while during corrections there is high volatility) such as stocks. It assumes that the variance of the current error term is related to the size of the previous periods' error terms, giving rise to volatility clustering.

Balance of Payments: A statement that summarizes an economy's transactions with the rest of the world for a specified time period. The balance of payments also known as balance of international payments, encompasses all transactions between a country's residents and its non residents involving goods, services and income; financial claims on and liabilities to the rest of the world; and transfers such as gifts. The balance of payments classifies these transactions in two accounts – the current and capital account. The current account includes transactions in goods, services, investment income and current transfers, while the capital account mainly includes transactions in financial instruments. An economy's balance of payments transactions and international investment position(IIP) together constitute its set of international accounts.

Backwardation: A theory developed in respect to the price of a futures contract and the contract's time to expire. Backwardation says that as the contract approaches expiration, the futures contract will trade at a higher price compared to when the contract was further away from expiration. This is said to occur due to the convenience yield being higher than the prevailing risk free rate.

Bancassurance: An arrangement in which a bank and an insurance company form a partnership so that the insurance company can sell its products to the bank's client base. This partnership arrangement can be profitable for both companies. Banks can earn additional revenue by selling the insurance products, while insurance companies are able to expand their customer base without having to expand their sales forces or pay commissions to insurance agents or brokers.

Bank Rate: The interest rate at which a nation's central bank lends money to domestic banks. Often these loans are very short in duration. Managing the bank rate is a preferred method by which central banks can regulate the level of economic activity. Lower bank rates can help to expand the economy, when unemployment is high, by lowering the cost of funds for borrowers. Conversely, higher bank rates help to reign in the economy, when inflation is higher than desired.

Barrier Option: A type of option whose payoff depends on whether or not the underlying asset has reached or exceeded a predetermined price. A barrier option can be a knock-out, meaning it can expire worthless if the underlying exceeds a certain price, limiting profits for the holder but limiting losses for the writer. It can also be a knock-in, meaning it has no value until the underlying reaches a certain price.

Barbell strategy: An investment strategy primarily applicable to fixed-income investing, in which half the portfolio is made up of long-term bonds and the other half comprises very short term bonds. The barbell term is derived from the fact that this investing strategy looks like a barbell, heavily weighted at both ends and with nothing in between. The barbell strategy is also increasingly used with reference to stock portfolios and asset allocation, with half the portfolio anchored in defensive, low-beta sectors or assets. The barbell strategy in fixed income is the opposite of a "bullet" strategy in which the portfolio is concentrated in bonds of a particular maturity or duration.

Base currency: The first currency quoted in a currency pair on forex. It is also typically considered the domestic currency or accounting currency. For accounting purposes, a firm may use the base currency to represent all profits and losses.

Basel I: A set of international banking regulations put forth by the Basel Committee on Bank Supervision, which set out the minimum capital requirements of financial institutions with the

goal of minimizing credit risk. Banks that operate internationally are required to maintain a minimum amount (8%) of capital based on a percent of risk weighted assets. It mainly focused on credit risk.

Basel II: Basel II attempts to integrate Basel capital standards with national regulations, by setting the minimum capital requirements of financial institutions with the goal of ensuring institutional liquidity. It created standards and regulations on how much capital financial institutions have to set aside to reduce the risks associated with its investing and lending practices.

Basel III: An effort by Basel Committee on Banking Supervision to enhance the banking regulatory framework. It builds on Basel I and II documents and seeks to improve the banking sector's ability to deal with financial and economic stress, improve risk management and strengthen the bank's transparency. A focus of Basel III is to foster greater resilience at the individual bank level in order to reduce the risk of system wide shocks.

Basis rate swap: A type of swap in which two parties swap variable interest rates based on different money markets. This is usually done to limit interest rate risk that a company faces as a result of having differing lending and borrowing rates. e.g. Lending at LIBOR and borrowing at T Bill rate.

Basis risk: The risk that offsetting investments in a hedging strategy will not experience price changes in entirely opposite directions from each other. This imperfect correlation between the two investments creates the potential for excess gains or losses in a hedging strategy, thus adding risk to the position.

Basket Option: A type of financial derivative where the underlying asset is a group of commodities, securities or currencies. Like other options, a basket option gives the holder the right, but not the obligation, to buy or sell an underlying asset at a specific price, on or before a certain date (the holder has the option to buy or sell, or to let the option expire worthless). With a basket option, however, the holder has the right, but not the obligation, to buy or sell a group of underlying assets. A basket option is considered an exotic option.

Bear call spread: A type of options strategy used when a decline in the price of the underlying asset is expected. It is achieved by selling call options at a specific strike price while also buying the same number of calls but at a higher strike price. The maximum of profit to be gained using this strategy is equal to the difference between the price paid for the long option and the amount collected on the short option.

Bear Straddle: A speculative options trading strategy that consists of purchasing a short position in both a call and a put that have the same strike price and expiration date. A bear

straddle's profit potential is limited to the premiums the investor collects from the trade. This type of straddle is based on the slang term "bear," which is used to describe a pessimistic investor who attempts to profit from a price decline.

Beige Book: A commonly used name for the Fed report called the Summary of Commentary on Current Economic Conditions by federal reserve district. It is published just before the FOMC meeting on interest rates and is used to inform the members on changes in the economy since the last meeting.

Bermuda Option: A type of exotic option that can be exercised only on predetermined dates, typically every month. Bermuda options are a combination of American and European options. American options are exercisable anytime between the purchase date and the date of expiration. European options, conversely, are exercisable only at the date of expiration. Bermuda options are exercisable at the date of expiration, and on certain specified dates that occur between the purchase date and the date of expiration.

Bermuda Swaption: A derivative financial instrument that gives the holder the right, but not the obligation, to enter into an interest rate swap on any one of a number of predetermined dates. The holder may only exercise the option on one of these dates. By contrast, a plain vanilla swaption would give the holder the option to enter into an interest rate swap on the expiration date of the derivative.

Beta: A measure of the volatility, or systematic risk of a security or a portfolio in comparison to the market as a whole. Beta is used in the capital asset pricing model(CAPM) a model that calculates the expected return of an asset based on its beta and expected market returns. It is also known as Beta coefficient. It is calculated using regression analysis, a beta of 1 indicates that the security's price will move with the market, a beta of less than 1 means that the security will be less than the market and a beta of greater than 1 indicates that the security's price will be more volatile than the market.

Beta Risk: The probability that a false null hypothesis will be accepted by a statistical test. This is also known as Type II error. The primary determinant of the amount of beta risk is the sample size used for the test. The larger the sample tested, the lower the beta risk becomes.

Bid Ask spread: The amount by which the ask price exceeds the bid. This is essentially the difference in price between the highest price that a buyer is willing to pay for an asset and the lowest price for which a seller is willing to sell it.

Bid to cover ratio: A ratio that compares the number of bids received in a treasury security auction to the number of bids accepted. The bid to cover ratio is an indicator of the strength or

demand for a treasury offering relative to investor bids deemed suitable in the auction process. A higher ratio would be an indication of a strong or “bought” auction.

Binary Option: A type of option in which the payoff is structured to be either a fixed amount of compensation if the option expires in the money, or nothing at all if the option expires out of the money. Also called as “all or nothing options” or “digital options” and are not plain vanilla options.

Binomial distribution: A probability distribution that summarizes the likelihood that a value will take one of two independent values under a given set of parameters or assumptions. The underlying assumptions of the binomial distribution are that there is only one outcome for each trial, that each trial has the same probability of success and that each trial is mutually exclusive. E.g. flipping a coin would create a binomial distribution.

Binomial Option pricing model: An options valuation model uses an iterative procedure, allowing for the specification of nodes, or points in time, during the time span between the valuation date and the option’s expiration date. The model reduces possibilities of price changes, removes the possibility for arbitrage, assumes a perfectly efficient market, and shortens the duration of the option. Under these simplifications, it is able to provide a mathematical valuation of the option at each point in time specified. It assumes that underlying security prices can only either increase or decrease with time until the option expires worthless.

Binomial Tree: A graphical representation of possible intrinsic values that an option may take at different nodes or time periods. The value of the option depends on the underlying stock or bond, and the value of the option at any node depends on the probability that the price of the underlying asset will either decrease or increase at any given node.

Bitcoin: A digital or virtual currency that uses peer-to-peer technology to facilitate instant payments. Bitcoin is a type of alternative currency known as a crypto currency, which uses cryptography for security making it difficult to counterfeit. Bitcoin issuance and transactions are carried out collectively by the network, with no central authority. The total number of Bitcoins that will be issued is capped at 21 million to ensure they are not devalued by limitless supply. They are divisible to 8 decimal places; Bitcoin fractions are called satoshis. Users store their Bitcoins in a digital wallet, while transactions are verified by a digital signature known as public encryption key.

Black Sholes Model: A model of price variation over time of financial instruments such as stocks that can, among other things, be used to determine the price of a European call option. The model assumes that the price of heavily traded assets follow a geometric Brownian motion with constant drift and volatility. When applied to a stock option, the model incorporates the

constant price variation of the stock, the time value of money, the option's strike price and the time to the option's expiry.

Black swan: An event or occurrence that deviates beyond what is normally expected of a situation and that would be extremely difficult to predict. Black swan events are typically random and unexpected. For example, the previously successful hedge fund Long Term Capital Management (LTCM) was driven into the ground as a result of the ripple effect caused by the Russian government's debt default. The Russian government's default represents a black swan event because none of LTCM's computer models could have predicted this event and its subsequent effects.

Bond Covenant: A legally binding term of an agreement between a bond issuer and a bond holder. Bond covenants are designed to protect the interests of both parties. Negative or restrictive covenants forbid the issuer from undertaking certain activities; positive or affirmative covenants require the issuer to meet specific requirements.

Bollinger Band: A band plotted two standard deviations away from a simple moving average, developed by famous technical trader John Bollinger. Because standard deviation is a measure of volatility, Bollinger bands adjust themselves to market conditions. When the markets become more volatile, the bands widen(move further away from the average) and during less volatile periods, the bands contract(move closer to the average). The tightening of the bands is often used by technical traders as an early indication that the volatility is about to increase sharply.

Bond ratio: A financial ratio that expresses the leverage of a bond issuer. The bond ratio formally expresses the ratio of the bond issued to the company's capitalization as a percentage. The ratio is equivalent to the total amount of bonds due after one year divided by that same amount plus all outstanding equity.

Bond ETF: A type of exchange traded fund(ETF) that exclusively invests in bonds. Bond ETFs are very much like bond mutual funds in that they hold a portfolio of bonds and can differ widely in strategies, ranging from US treasuries to high yields, from long term to short term. Bond ETFs trade like stocks and are progressively managed.

Bond Option: An option contract in which the underlying asset is a bond. Other than the different characteristics of the underlying assets, there is no significant difference between stock and bond options. Just as with other options, a bond option allows investors the ability to hedge the risk of their bond portfolios or speculate on the direction of bond prices with limited risk.

Bootstrapping: 1. A procedure used to calculate the zero-coupon yield curve from market figures. 2. A situation in which an entrepreneur starts a company with little capital. An individual is said to be bootstrapping when he or she attempts to found and build a company from personal finances or from the operating revenues of the new company.

Bull Spread: An option strategy in which maximum profit is attained if the underlying security rises in price. Either calls or puts can be used. The lower strike price is purchased and the higher strike price is sold. The options have the same expiration date.

Call Option: An agreement that gives an investor the right (but not the obligation) to buy a stock, bond, commodity, or other instrument at a specified price within a specific time period.

Call Swaption: A type of option between two parties that can be exercised on a swap where the buyer of the swap has the right, but not obligation to, receive an agreed upon fixed interest rate. The buyer pays a premium for the right to swap at this fixed rate. Short for a call swap option, a call swaption can be used as a hedging tool to avoid risk if a bond issuer believes interest rates might decrease.

Callable Swap: An exchange of cash flows in which one counter party makes payments based on a fixed interest rate, the other counter party makes payments based on a floating interest rate and the counterparty paying the fixed interest rate has the right to end the swap before it matures.

Call Ratio Backspread: A very bullish investment strategy that combines options to create a spread with limited loss potential and mixed profit potential. It is generally created by selling one call option and then using the collected premium to purchase a greater number of call options at a higher strike price. This strategy has potentially unlimited upside profit because the trader is holding more long call options than short ones.

Capital Adequacy Ratio: A measure of a bank's capital. It is expressed as a percentage of a bank's risk weighted credit exposures.

CAR = Tier one capital + Tier 2 capital / Risk weighted assets

Capital Asset Pricing Model: A model that describes the relationship between risk and expected return and that is used in the pricing of risky securities. The general idea behind CAPM is that investors need to be compensated in two ways: time value of money and risk. The time value of money is represented by the risk-free (rf) rate in the formula and compensates the investors for placing money in any investment over a period of time. The other half of the formula represents risk and calculates the amount of compensation the investor needs for taking on additional risk. This is calculated by taking a risk measure (beta)

that compares the returns of the asset to the market over a period of time and to the market premium($R_m - r_f$). If the expected return does not meet or beat the required return, then the investment should not be undertaken.

Capped Option: A security that features a maximum limit on the holder's profit potential. A capped option is automatically exercised if an / or when the underlying asset reaches a certain price. Obviously, a put option would be exercised if the price on the underlying asset falls below the option cap price, while a call option would be exercised if the underlying asset price rises above the option price, thereby locking in the maximum profit possible from the option exercise.

Cash Management Bill: A short term security sold by the US department of the treasury. The maturity on a MSB can range from a few days to six months. The money raised through these issues is used by the Treasury to meet any temporary shortfalls.

Cash and Carry Arbitrage: A combination of a long position in an asset such as a stock or commodity, and a short position in the underlying futures. This arbitrage strategy seeks to exploit pricing inefficiencies for the same asset in the cash(or spot) and futures markets, in order to make riskless profits. The arbitrageur would typically seek to "carry" the asset until the expiration date of the futures contract at which point it would be delivered against the futures contract. Therefore, this strategy is only viable if the cash inflow from the short futures position exceeds the acquisition cost and carrying costs on the long asset position.

Cheapest to Deliver – CTD: In a futures contract, the cheapest security that can be delivered to the long position to satisfy the contract specifications. The cheapest to deliver security is relevant only for contracts which provide that a variety of slightly different securities may be delivered. This is common in treasury bond futures contracts, which typically specify that any treasury bond can be delivered, so long as it is within a certain maturity range and has a certain coupon rate.

Chooser Option: An option contract that allows the holder to decide whether it is a call or put prior to the expiration date. Chooser options usually have the same exercise price and expiration date regardless of what decision the holder ultimately makes. Because they don't specify that the movement in the underlying asset be positive or negative, chooser options provide investors a great deal of flexibility when evaluating volatile issues.

Circular Trading: A fraudulent trading scheme where sell orders are entered by a broker who knows that offsetting buy orders, the same number of shares at the same time and at the same price, either have been or will be entered.

Collar: A protective options strategy that is implemented after a long position in a stock has experienced substantial gains. It is created by purchasing an out of the money put option while simultaneously writing an out of the money call option. It is also called as “hedge wrapper”. It is a general restriction on market activities.

Collateralized Bond Obligation – CBO: An investment grade bond backed by a pool of junk bonds. Junk bonds are typically not investment grade, but because they pool several types of credit quality bonds together, they offer enough diversification to be “investment grade”.

Collateralized Borrowing and Lending Obligation – CBLO: A money market instrument that represents an obligation between a borrower and a lender as to the terms and conditions of the loan. Collateralized borrowing and lending obligations are used by those who have been phased out of or heavily restricted in the interbank call money market.

Collateralized Debt Obligation – CDO: A structured financial product that pools together cash flow-generating assets and repackages this asset pool into discrete tranches that can be sold to investors. A collateralized debt obligation(CDO) is so-called because the pooled assets – such as mortgages, bonds and loans – are essentially debt obligations that serve as collateral for the CDO. The tranches in a CDO vary substantially in their risk profile. The senior tranches are relatively safer because they have first priority on the collateral in the event of default. As a result, the senior tranches of a CDO generally have a higher credit rating and offer lower coupon rates than the junior tranches, which offer higher coupon rates to compensate for their higher default risk.

Commercial Mortgage Backed Securities (CMBS): A type of mortgage backed security that is secured by the loan on a commercial property. A CMBS can provide liquidity to real estate investors and to commercial lenders. As with other types of MBS, the increased use of CMBS can be attributable to the rapid rise in real estate prices over the years.

Consumer Price Index: A measure that examines the weighted average of prices of a basket of consumer goods and services, such as transportation, food and medical care. The CPI is calculated by taking price changes for each item in the predetermined basket of goods and averaging them; the goods are weighted according to their importance. Changes in CPI are used to assess price changes associated with the cost of living. It is sometimes referred to as head line inflation.

Contagion: The likelihood that significant economic changes in one country will spread to other countries. Contagion can refer to the spread of either economic booms or economic crises throughout a geographic region.

Contango: A situation where the futures price of a commodity is above the expected future spot price. Contango refers to a situation where the future spot price is below the current price, and people are willing to pay more for a commodity at some point in the future than the actual expected price of the commodity. This may be due to people's desire to pay a premium to have the commodity in the future rather than paying the costs of storage and carry costs of buying the commodity today.

Convertible Arbitrage: An investing strategy that involves the long position on a convertible security and a short position in its converting common stock.

Convenience Yield: The benefit or premium associated with holding an underlying product or physical good, rather than the contract or derivative product.

Convertible Hedge: A trading strategy that consists of a long position in a company's convertible bond or debenture, and a simultaneous short position in the underlying common shares. The convertible hedge strategy is designed to be market neutral, while generating a higher yield than would be obtained by merely holding the convertible bond or debenture alone. A key requirement of this strategy is that the number of shares sold short should equal the number of shares that would be acquired by converting the bond or debenture.

Convexity: A measure of the curvature in the relationship between bond prices and bond yields that demonstrates how the duration of a bond changes as the interest rate changes. Convexity is used as a risk management tool, and helps to measure and manage the amount of risk to which a portfolio of bonds is exposed. For example, if Bond A has a higher convexity than Bond B, which means that all else being equal, Bond A will always have a higher price than Bond B as interest rates rise or fall. As convexity increases, the systemic risk to which the portfolio is exposed increases. As convexity decreases, the exposure to market interest rates decreases and the bond portfolio can be considered hedged. In general, the higher the coupon rate, the lower the convexity(or market risk) of a bond.

Corporate Debt Restructuring: The reorganization of a company's outstanding obligations, often achieved by reducing the burden of the debts on the company by decreasing the rates paid and increasing the time the company has to pay the obligation back. This allows a company to increase its ability to meet the obligations. Also, some of the debt may be forgiven by creditors in exchange for an equity position in the company.

Covariance: A measure of the degree to which returns on two risky assets move in tandem. A positive covariance means that asset returns move together. A negative covariance means returns move inversely. One method of calculating covariance is by looking at return surprises(deviations from expected return) in each scenario. Another method is to multiply the correlation between the two variables by the standard deviation of each variable.

Covered Interest arbitrage: A strategy in which an investor uses a forward contract to hedge against exchange rate risk. Covered interest rate arbitrage is the practice of using favorable interest rate differentials to invest in a high yielding currency and hedging the exchange risk through a forward currency contract. Covered interest arbitrage is only possible if the cost of hedging the exchange risk is less than the additional return generated by investing in a higher yielding currency. Such arbitrage opportunities are uncommon, since market participants will rush in to exploit an arbitrage opportunity if one exists, and the resultant demand will quickly redress the imbalance. An investor undertaking this strategy is making simultaneous spot and forward market transactions, with an overall goal of obtaining riskless profit through the combination of currency pairs. Covered interest arbitrage is not without its risks which include differing tax treatment in various jurisdictions, foreign exchange or capital controls, transaction costs and bid ask spreads.

Covered Straddle: An option strategy that involves writing the same number of puts and calls with the same expiration and strike price on a stock owned by the investor. A covered straddle is a bullish strategy.

Crack spread: The spread created in commodity markets by purchasing oil futures and offsetting the position by selling gasoline and heating oil futures. This investment alignment allows the investor to hedge against risk due to the offsetting nature of the securities.

Crawling Peg: A system of exchange rate adjustment in which a currency with a fixed exchange rate is allowed to fluctuate within a band of rates. The par value of the stated currency is also adjusted frequently due to market factors such as inflation. This gradual shift of the currency's par value is done as an alternative to a sudden and significant devaluation of the currency.

Credit Default Swap – CDS: A swap designed to transfer the credit exposure of fixed income products between parties. A CDS is also referred to as a credit derivative contract, where the purchaser of the swap makes payments up until the maturity date of a contract. Payments are made to the seller of the swap. In return, the seller agrees to pay off a third party debt if this party defaults on the loan. A CDS is considered as insurance against nonpayment. The buyer of a CDS be speculating on the possibility that the third party will indeed default.

Credit Derivative: Privately held negotiable bilateral contracts that allow users to manage their exposure to credit risk. Credit derivatives are financial assets like forward contracts, swaps and options for which the price is driven by the credit risk of the economic agents(private investors or governments).

Credit Linked Note – CLN: A security with an embedded credit default swap allowing the issuer to transfer a specific credit risk to credit investors. CLN are created through a Special Purpose Vehicle or trust which is collateralized with AAA rated securities. Investors buy securities from a

trust that pays a fixed or floating coupon during the life of the note. At maturity, the investors receive par unless the referenced credit defaults or declares bankruptcy, in which case they receive an amount equal to the recovery rate. The trust enters in to a default swap with a deal arranger. In case of default, the trust pays the dealer par minus the recovery rate in exchange for an annual fee which is passed on to the investors in the form of a higher yield on the notes.

Cross currency swap: An agreement between two parties to exchange interest payments and principal on loans denominated in two different currencies. In a cross currency swap, a loan's interest payments and principal in one currency would be exchanged for an equally valued loan and interest payments in a different currency.

Cross Margining: An offsetting position where the market participants are able to transfer excess margin from one account to another account whose margin is under the required maintenance margin. It is also called as spread margin.

Crush Spread: A trading strategy used in the soybean futures market. A soybean crush spread is often used by traders to manage risk by combining soybean, soybean oil and soybean meal futures positions, in to a single position. The spread position is used to hedge the margin between soybean futures, and soybean oil and meal futures.

Currency Arbitrage: A fore strategy in which a currency trader takes advantage of different spreads offered by brokers for a particular currency pair by making trades. Different spreads for a currency pair imply disparities between the bid and ask prices. Currency arbitrage involves buying and selling currency pairs from different brokers to take advantage of this disparity.

Currency Board: A monetary authority that makes decisions about the valuation of a nation's currency, specifically whether to peg the exchange rate of the local currency to a foreign currency, an equal amount of which is held in reserves. The currency board then allows for the unlimited exchange of the local, pegged currency for the foreign currency. A currency board can only earn the interest that is gained on the foreign reserves themselves, so those rates tend to mimic the prevailing rates in the foreign currency.

Currency Carry Trade: A strategy in which an investor sells a certain currency with a relatively low interest rate and uses the funds to purchase a different currency yielding a higher interest rate. A trader using this strategy attempts to capture the difference between the rates, which can often be substantial, depending on the amount of leverage used.

Currency Option: A contract that grants the holder the right, but not the obligation, to buy or sell currency at a specified exchange rate during a specified period of time. For this right, a premium is paid to the broker, which will vary depending on the number of contracts

purchased. Currency options are one of the best ways for corporations or individuals to hedge against adverse movements in exchange rates.

Current Account Deficit: A measurement of a country's trade in which the value of goods and services it imports exceeds the value of goods and services it exports. The current account also includes net income, such as interest and dividends, as well as transfers, such as foreign aid, though these components tend to make up a smaller percentage of the current account than exports and imports. The current account is a calculation of a country's foreign transactions, and along with the capital account is a component of a country's balance of payment.

Currency Peg: A country or governments exchange rate policy of pegging the central bank's rate of exchange to another country's currency. Currency has sometimes also been pegged to the price of gold. Also known as "fixed exchange rate" or "pegged exchange rate".

Currency Swap: A swap that involves the exchange of principal and interest in one currency for the same in another currency.

Current Yield: Annual income (interest or dividends) divided by the current price of the security. This measure looks at the current price of a bond instead of its face value and represents the return an investor would expect if he or she purchased the bond and held it for a year. This measure is not an accurate reflection of return that an investor will receive in all cases because bond and stock prices are constantly changing due to market factors.

Debt Fund: An investment pool, such as a mutual fund or exchange traded fund, in which core holdings are fixed income investments. A debt fund may invest in short term or long term bonds, securitized products, money market instruments or floating rate debt. The free ratios on debt funds are lower, on average, than equity funds because the overall management costs are lower.

Debt for bond swap: A debt swap involving the exchange of a new bond issue for similar outstanding debt or vice versa. Debt for bond swap transactions are usually executed to take advantage of an interest rate change and/or for tax write-off purposes.

Debt Service Coverage Ratio (DSCR): In corporate finance, it is the amount of cash flow available to meet annual interest and principal payments on debt, including sinking fund payments. In government finance, it is the amount of export earnings needed to meet annual interest and principal payments on a country's external debts. In personal finance, it is a ratio used by bank loan officers in determining income property loans. This ratio should ideally be over 1. That would mean the property is generating enough income to pay its debt obligations. Calculated by: $\text{Net Operating Income} / \text{Total Debt Service}$. A DSCR of 1 would mean a negative cash flow.

Debt to GDP Ratio: The ratio of country's national debt to its GDP. By comparing what a country owes it to what it produces, the debt to GDP ratio indicates the country's ability to pay back its debt. Often expressed as a percentage, the ratio can be interpreted as the number of years needed to pay back debt if GDP is dedicated entirely to debt repayment. Economists have not identified a specific debt to GDP ratio as being ideal and instead focus on the sustainability of certain debt levels. If a country can continue to pay interest on its debt without refinancing or harming economic growth, it is generally considered to be stable.

Debt /Earnings before Interest Tax Depreciation and Amortization (EBITDA): A measure of a company's ability to pay off its incurred debt. This ratio gives the investor the approximate amount of time that would be needed to pay off all debt, ignoring the factors of interest, taxes, depreciation and amortization.

Debt/Equity Ratio: A measure of a company's financial leverage calculated by dividing its total liabilities by stockholders' equity. It indicates what proportion of equity and debt the company is using to finance its assets. $\text{Debt/Equity Ratio} = \frac{\text{Total liabilities}}{\text{Shareholders equity}}$. *Sometimes only interest bearing long term debt is used instead of total liabilities in the calculation.

Deep Discount Bond: 1. A bond that sells at a significant discount from par value. 2. A bond that is selling at a discount from par value and has a coupon rate significantly less than the prevailing rates of fixed income securities with a similar risk profile.

Delta: The ratio comparing the change in the price of the underlying asset to the corresponding change in the price of a derivative. Sometimes referred to as the "hedge ratio". For example with the respect to call options, a delta of 0.7 means that for every \$1 the underlying stock increases, the call option will increase by \$0.70, but it would be negative in case of put option as the underlying security increases, value of the option will decrease.

Delta hedging: An options strategy that aims to reduce(hedge) the risk associated with price movements in the underlying asset by offsetting long and short positions. For example, a long call position may be delta hedged by shorting the underlying stock. This strategy is based on the change in premium(price of option) caused by a change in the underlying security. The change in premium for each basis-point change in price of the underlying is the delta and the relationship between the two movements is the hedge ratio. For ex. The price of a call option with a hedge ratio of 40 will rise 40% of the stock price move if the price of the underlying stock increases. Typically, options with high hedge ratios are usually more profitable to buy rather than write since the greater the percentage movement – relative to the underlying's price and the corresponding little time – value erosion – the greater the leverage. The opposite is true for options with a low hedge ratio.

Delta Neutral: A portfolio consisting of positions with offsetting positive and negative deltas so that the position of delta is zero. A delta neutral portfolio balances out the response to market movements for a certain range to bring the net change of the position to zero. Delta measures how much an option's price changes when the underlying security's price changes.

Delta Spread: An options trading strategy where the trader initially establishes a delta neutral position. The trader creates this delta neutral position by simultaneously buying and selling options in proportion to the neutral ratio. Using a delta spread, a trader usually expects to make a small profit if the underlying security does not change widely in price. However, larger gains or losses are possible if the underlying security's prices changes significantly in either direction.

Demonetization: Demonetization is the act of stripping a currency unit of its status as legal tender. Demonetization is necessary whenever there is a change of national currency. The old unit of currency must be retired and replaced with a new currency unit.

Derivative: A security whose price is dependent upon or derived from one or more underlying assets. The derivative itself is merely a contract between two or more parties. Its value is determined by fluctuations in the underlying asset. The most common underlying assets include stocks, bonds, commodities, currencies, interest rates and market indices. Most derivatives are characterized by high leverage. Futures contracts, forward contracts, options and swaps are the most common types of derivatives.

Diffusion Index: The diffusion index is one of the many different tools used by technical analysts to increase the probability of picking winning stocks. Also known as the advance/decline diffusion index. The diffusion index can help an economist or trader interpret any of the composite indexes of the Conference Board's Business Cycle Indicators (BCI) more accurately – the diffusion index breaks down the indexes and analyzes the components separately, exhibiting the degree to which they are moving in agreement with the dominant direction of the index.

Diagonal Spread: An options strategy established by simultaneously entering into a long and short position in two options of the same type (two call options or two put options) but with different strike prices and expiration dates.

Digital Option: An option whose payout is fixed after the underlying stock exceeds the predetermined threshold or strike price. Also referred to as "binary" or "all or nothing option".

Discount Bond: A bond that is issued for less than its par (or face) value, or a bond currently trading for less than its par value in the secondary market. Because a bond will always pay its full face value at maturity (assuming no credit events occur), discount bonds issued below par-

such as zero coupon bonds – will steadily rise in price as the maturity date approaches. These bonds will only make one payment to the holder (par value at maturity) as opposed to periodic interest payments.

Discount Yield: It is a measure of a bond's percentage return. Discount yield is most frequently used to calculate the yield on short term bonds and treasury bills sold at a discount. This yield calculation uses a 30 day month and 360 day year to simplify calculations. Discount yield is calculated by the following formula: $DY = ((\text{par value} - \text{purchase}) / \text{par value}) * (360 / \text{days to maturity})$.

Discounted Cash Flow (DCF): A valuation method used to estimate the attractiveness of an investment opportunity. DCF analysis uses future free cash flow projections and discounts them (most often using the weighted average cost of capital) to arrive at a present value, which is used to evaluate the potential for investment. If the value arrived at through DCF analysis is higher than the current cost of the investment, the opportunity may be a good one.

Dirty Float: A system of floating exchange rates in which the government or the country's central bank occasionally intervenes to change the direction of the value of the country's currency. In most instances, the intervention aspect of a dirty float system is meant to act as a buffer against an external economic shock before its effects become truly disruptive to the domestic economy. It is also called as "managed float".

Double Barrier Option: An option with two distinct triggers that define the allowable range for the price fluctuation of the underlying asset. In order for the investor to receive a payout, one of two situations must occur; the price must reach the range limits (for a knock in) or the price must avoid touching either limit (for a knock-out).

Duration: A measure of the sensitivity of the price (the value of principal) of a fixed income investment to a change in interest rates. Duration is expressed as a number of years. Rising interest rates mean falling bond prices, while declining interest rates mean rising bond prices.

Economic Derivative: A relatively new form of derivative contract (first ones were traded in 2002) that is based on the future value of some national economic indicator, such as non-farm payrolls, the purchasing manager's index, retail sales levels and the gross domestic product. Most of these economic derivatives are in the form of binary or "digital" options, whereby the only payout options are full payout (in the money) or nothing at all (out of the money). Other types of contracts currently traded include capped vanilla options and forwards.

Economic Value Added (EVA): A measure of a company's financial performance based on the residual wealth calculated by deducting cost of capital from its operating profit (adjusted for

taxes on a cash basis). $EVA = \text{Net Operating Profit After Taxes (NOPAT)} - (\text{Capital} * \text{Cost of capital})$

Economic Value of Equity: A cash flow calculation that takes the present value of all asset cash flows and subtracts the present value of all liability cash flows. This calculation is used by banks for asset/liability management.

Effective Yield: The yield of a bond, assuming that you reinvest the coupon(interest payments) once you have received payment. Effective yield is the total yield an investor receives in relation to the nominal yield or coupon of a bond. Effective yield takes in to account the power of compounding on investment returns, while nominal yield does not.

Efficiency Frontier: A set of optimal portfolios that offers the highest expected return for a defined level of risk or the lowest risk for a given level of expected return. Portfolios that lie below the efficient frontier are sub-optimal, because they do not provide enough return for the level of risk. Portfolios that cluster to the right of the efficient frontier are also sub-optimal, because they have a higher level of risk for the defined rate of return.

Efficient Market Hypothesis: An investment theory that states that it is impossible to “beat the market” because stock market efficiency causes existing share prices to always incorporate and reflect all relevant information. According to EMH, stock always trade at their fair value on stock exchanges, making it impossible for investors to either purchase undervalued stocks or sell stocks for inflated prices. As such, it should be impossible to outperform the overall market through expert stock selection or market timing, and that the only way an investor can possibly obtain higher returns is by purchasing riskier investments.

Embedded Option: A provision in a security that is an inseparable part of the other instrument. An embedded option is a special condition attached to a security and in particular, a bond that gives the holder or the issuer the right to perform a specified action at some point in the future. An embedded option is part of another security, and as such does not trade by itself. Nevertheless, it can affect the value of the security of which it is a component. A security is not limited to one embedded option, as there may be several embedded options in one security.

Energy derivatives: A derivative instrument in which the underlying asset is based on energy products including oil, natural gas and electricity, which trade either on an exchange or over the counter. Energy derivatives can be options, futures or swap agreements, among others. The value of a derivative will vary based on the changes of the price of the underlying energy product.

Eurodollar: US dollar denominated deposits at foreign banks or foreign branches of American Banks. By locating outside of the US, Eurodollars escape regulation by the Federal Reserve Board.

European Financial Stability Facility: An organization created by the EU to provide assistance to member states with unstable economies. The European Financial Stability Facility is a special purpose vehicle (SPV) managed by the European Investment Bank, a lending institution. The fund raises money by issuing debt, and distributes the funds to Eurozone countries whose lending institutions need to be recapitalized, who need help managing their sovereign debt or who need financial stabilization.

European Option: An option that can only be exercised at the end of its life, at its maturity. European options tend to sometimes trade at a discount to its comparable American option. This is because American options allow investors more opportunities to exercise the contract.

Exchange Rate Mechanism – ERM: An exchange rate mechanism is based on the concept of fixed currency exchange rate margins. However, there is variability of the currency exchange rates within the confines of the upper and lower end of the margins. This currency exchange rate mechanism is also commonly called a semi pegged currency system.

Exchange traded Fund – ETF: A security that tracks an index, a commodity or a basket of assets like an index fund, but trades like a stock on an exchange. ETFs experience price changes through the day as they are bought and sold.

Exchange Traded Option: An option traded on a regulated exchange where the terms of each option are standardized by the exchange. The contract is standardized so that underlying asset, quantity, expiration date and strike price are known in advance. Over the counter options are not traded on exchanges and allow for the customization of the terms of the option contract. They are also known as “listed options”.

Exotic Option: An option that differs from common American or European options in terms of the underlying asset or the calculation of how or when the investor receives a certain payoff. These options are more complex than options that trade on an exchange, and generally trade over the counter.

Exponential Moving Average: A type of moving average that is similar to a simple moving average, except that more weight is given to the latest data. This type of moving average reacts faster to recent price changes than a simple moving average. The 12- and 26-day EMAs are the most popular short term averages and they used to create indicators like the moving average convergence divergence (MACD) and the percentage price oscillator (PPO). In general the 50 and 200 day EMAs are used as signals of long term trends.

Extendable Swap: An exchange of cash flows between two counterparties, one of whom pays interest at a fixed rate and one of whom pays interest at a floating rate, in which the fixed-rate payer has the right to lengthen the term of the arrangement. The fixed-rate payer might want to exercise its right to extend the swap if interest rates were rising because it would profit from continuing to pay a fixed, below market rate of interest and receiving an increasing market rate of interest from the floating rate.

Federal Fund Rate: The interest rate at which a depository institution lends funds maintained at the Federal Reserve to another depository institution overnight. The federal funds rate is generally only applicable to the most creditworthy institutions when they borrow and lend overnight funds to each other. The federal funds rate is one of the most influential interest rates in the US economy, since it affects monetary and financial conditions, which in turn have a bearing on key aspects of the broad economy including employment, growth and inflation. The Federal Open Market Committee (FOMC) which is the Federal Reserve's primary monetary policy making body, telegraphs its desired target for the federal funds rate through open market operations. Also known as the "fed funds rate".

Federal Open Market Committee - FOMC: The branch of the Federal Reserve Board that determines the direction of monetary policy. The FOMC is composed of the board of governors, which has seven members, and five reserve bank presidents. The president of the Federal Reserve Bank of New York serves continuously, while the presidents of the other reserve banks rotate their service of one year terms.

Fiat Money: Currency that a government has declared to be legal tender, but is not backed by a physical commodity. The value of fiat money is derived from the relationship between supply and demand rather than the value of the material that the money is made of. Historically, most currencies were based on physical commodities such as gold or silver, but fiat money is based solely on faith. Fiat is the Latin word for "it shall be".

Fisher Effect: An economic theory proposed by economist Irving Fisher that describes the relationship between inflation and both real and nominal interest rates. The Fisher effect states that the real interest rate equals the nominal interest rate minus the expected inflation rate. Therefore, real interest rates fall as inflation increases, unless nominal rates increase at the same rate as inflation.

Five Cs of Credit: A method used by lenders to determine the credit worthiness of potential borrowers. The system weighs five characteristics of the borrower, attempting to gauge the chance of default. They are: Character; Capacity; Capital; Collateral; Conditions.

Floating Exchange Rate: A country's exchange regime where its currency is set by foreign exchange market through supply and demand for that particular currency relative to other

currencies. Thus, floating exchange rates change freely and are determined by trading in the fore market.

Forward Market: An OTC marketplace that sets the price of a financial instrument or asset for future delivery. Contracts entered into in the forward market are binding on the parties involved. Forward markets are used for trading a range of instruments including currencies and interest rates, as well as assets such as commodities and securities.

Forward Rate Agreement – FRA: An OTC contract between parties that determines the rate of interest, or the currency exchange rate, to be paid or received on an obligation beginning at a future start date. The contract will determine the rates to be used along with the termination date and notional value. On this type of agreement, it is only the differential that is paid on the notional amount of the contract.

Forward Start Option: The advance purchase of a put or call option with a strike price that will be determined at a later date, typically when the option becomes active. A forward start option becomes active at a specified date in the future; however the premium is paid in advance, and the time to expiration and the underlie are established at the time the forward start option is purchased.

Funds Transfer Pricing: A method used to individually measure how much each source of funding is contributing to overall profitability. The funds transfer pricing (FTP) process is most often used in the banking industry as a means of outlining the areas of strength and weakness within the funding of the institution. FTP can also be used to indicate the profitability of the different product lines and each staff member, as well as act as a great medium for comparison between employees, branches, etc.

Futures Market: An auction market in which participants buy and sell commodity/future contracts for delivery on a specified future date. Trading is carried on through open yelling and hand signals in a trading pit.

Gamma: The rate of change for delta with respect to the underlying asset's price. Gamma is an important measure of the convexity of a derivative's value, in relation to the underlying. In a delta-hedge strategy, gamma is sought to be reduced in order to maintain a hedge over a wider price range. A consequence of reducing gamma, however, is that alpha too will be reduced.

Gap Analysis: A method of asset liability management that can be used to assess interest rate risk or liquidity risk excluding credit risk. Gap analysis is a simple IRR measurement method that conveys the difference between rate sensitive assets and rate sensitive liabilities over a given period of time. This type of analysis works well if assets and liabilities are compromised of fixed

cash flows. Because of this there is a significant shortcoming of gap analysis is that it cannot handle options, as options have uncertain cash flows.

Generalized Auto Regressive Conditional Heteroskedasticity (GARCH): A statistical model used by financial institutions to estimate the volatility of stock returns. This information is used by banks to help determine what stocks will potentially provide higher returns, as well as to forecast the returns of current investments to help in the budgeting process.

Gross Domestic Product: The monetary value of all the finished goods and services produced within a country's borders in a specific time period, through GDP is usually calculated on an annual basis. It includes all of private and public consumption, government outlays, investments and exports less imports that occur within a defined territory.

$GDP = C + G + I + NX$ where

“C” is equal to all private consumption, or consumer spending, in a nation's economy

“G” is the sum of government spending

“I” is the sum of all the country's businesses spending on capital

“NX” is the nation's total net exports, calculated as total exports minus total imports (NX = Exports – Imports)

Haircut: The difference between prices at which a market maker can buy and sell a security. The percentage by which an asset's market value is reduced for the purpose of calculating capital requirement, margin and collateral values.

Head Accounting: A method of accounting where entries for the ownership of a security and the opposing hedge are treated as one. Hedge accounting attempts to reduce the volatility created by the repeated adjustment of a financial instrument's value known as marking to market. This reduced volatility is done by combining the instrument and the hedge as one entry, which offsets the opposing movements.

Hedge Ratio: A ratio comparing the value of a position protected via a hedge with the size of the entire position itself. It is a ratio comparing the value of futures contracts purchased or sold to the value of the cash commodity being hedged.

Held for Trading Security: Debt and equity investments that are purchased with the intent of selling them within a short period of time (usually less than one year). Accounting standards necessitate that companies classify any investments in debt or equity securities when they are purchased. The investments can be classified as : held to maturity, held for trading or available for sale. Held for trading securities(or simple trading securities) are considered short term

assets, and their accounting is handled as such. Gains and losses resulting from changes in the investment's value are recorded as gains and losses on an investment statement.

Hurdle rate: The minimum rate of return on a project or investment required by a manager or investor. In order to compensate for risk, the riskier the project, the higher the hurdle rate. In the hedge fund world, hurdle rate refers to the rate of return that the fund manager must beat before collecting incentive fees.

Hybrid security: A single financial security that combines two or more different financial instruments. Hybrid securities, often referred to as "hybrids", generally combine both debt and equity characteristics. The most common type of hybrid security is a convertible bond that has features of an ordinary bond but is heavily influenced by the price movements of the stock into which it is convertible.

Ifo Business Climate Survey: A key monthly survey that measures the business climate in Germany. It is widely followed as an early indicator of the state of the German economy. The Ifo Business Climate Survey is based on approximately 7,000 monthly survey responses from firms in manufacturing, construction, wholesale and retail. As the largest economy in the EU, Germany's business climate has implications for the rest of the EU.

In the Money: 1. For a call option, when the option's strike price is below the market price of the underlying asset. 2. For a put option, when the strike price is above the market price of the underlying asset.

Being in the money does not mean there will be profit, it just means the option is worth exercising. This is because the option costs money to buy.

Immunitization: A strategy that matches the duration of assets and liabilities thereby minimizing the impact of interest rates on the net worth. A perfect immunization strategy establishes a virtually zero-risk profile in which interest rate movements have no impact on the value of the firm.

Implied Repo Rate: The rate of return that can be earned by simultaneously selling a bond futures or forward contract and then buying an actual bond of equal amount in the cash market using borrowed money. The bond is held until it is delivered into the futures or forward contract and the loan is repaid.

Implied Volatility: The estimated volatility of a security's price. In general, implied volatility increases when the market is bearish and decreases when the market is bullish. This is due to the common belief that bearish markets are more risky than bullish markets.

In the Money: 1. For a call option, when the option's strike price is below the market price of the underlying asset. 2. For a put option, when the strike price is above the market price of the underlying asset.

Being in the money does not mean there will be profit, it just means the option is worth exercising. This is because the option costs money to buy.

Interest Rate Collar: An investment strategy that uses derivatives to hedge an investor's exposure to interest rate fluctuations. The investor purchases an interest rate ceiling for a premium, which is offset by selling an interest rate floor. This strategy protects the investor by capping the maximum interest rate paid at the collar's ceiling, but sacrifices the profitability of interest rate drops.

Inflation Swap: A derivative used to transfer inflation risk from one party to another through an exchange of cash flows. In an inflation swap, one party pays a fixed rate on a notional principal amount, while the other party pays a floating rate linked to an Inflation index, such as the Consumer Price Index(CPI). The party paying the floating rate pays the inflation adjusted rate multiplied by the notional principal amount. For example, one party may pay the fixed rate of 3% on a two year inflation swap, and in return receive the actual inflation.

Initial Margin: The percentage of the purchase price of securities (that can be purchased on margin) that the investor must pay for with his or her own cash or marginable securities. This is also called as initial margin requirement.

Interest Rate Differential: A differential measuring the gap in the interest rates between two similar interest bearing assets. Traders in the foreign exchange market use interest rate differentials(IRD) when pricing forward exchange rates. Based on the interest rate parity, a trader can create an expectation of the future exchange rate between two currencies and set the premium (or discount) on the current market exchange rate futures contracts.

Inter Commodity Spread: Going long on one futures market in a given delivery month and simultaneously going short on the same commodity and delivery month but a different futures market but with similar underlying asset.

Interest Rate Floor: An over the counter investment instrument that protects the floor buyer from losses resulting from a decrease in interest rates. The floor compensates the buyer with a payoff when the reference interest rate falls below the floor's strike rate.

Interest Rate Future: A futures contract with an underlying instrument that pays interest. An interest rate future is a contract between the buyer and seller agreeing to the future delivery of

any interest bearing asset. The interest rate future allows the buyer and seller to lock in the price of the interest bearing asset for a future date.

Interest Rate Gap: The difference between fixed rate liabilities and fixed rate assets. Interest rate gap is a measurement of exposure to interest rate risk. The interest rate gap is used to show the risk of exposure and is used by financial institutions and investors to develop hedge positions, often through the use of interest rate futures. Calculations are dependent on the maturity date of the securities used in calculations and the time period remaining before the securities reach maturity.

Interest Rate Options: An investment tool whose pay off depends on the future level of interest rates. Interest rate options are both exchange traded and over the counter instruments.

Interest Rate Parity: A theory in which the interest rate differential between two countries is equal to the differential between the forward exchange rate and the spot exchange rate. Interest rate parity plays an essential role in foreign exchange markets, connecting interest rates, spot exchange rates and foreign exchange rates.

Interest Rate Sensitivity: A measure of how much the price of a fixed income asset will fluctuate as a result of changes in the interest rate environment. Securities that are more sensitive will have greater price fluctuations than those with less sensitivity. This type of sensitivity must be taken into account when selecting a bond or other fixed income instrument that the investor may sell in the secondary market.

Insurance Derivative: A financial instrument that derives its value from an underlying insurance index or the characteristics of an event related to insurance. Insurance derivatives are useful for insurance companies that want to hedge their exposure to catastrophic losses due to exceptional events, such as earthquakes or hurricanes.

Inter-market Spread: The simultaneous purchase of a given delivery month of a futures contract on one exchange, and the simultaneous sale of the same delivery month of the same futures contract on another exchange in the hope the sale price is greater than the purchase price.

Interest Rate Swap: An agreement between two parties (known as counterparties) where one stream of future interest payments is exchanged for another based on a specified principal amount. Interest rate swaps often exchange a fixed payment for a floating payment that is linked to an interest rate (most often the LIBOR). A company will typically use interest rate swaps to limit or manage exposure to fluctuations in interest rates, or to obtain a marginally lower interest rate than it would have been able to get without the swap.

Interest Rate Derivative: A financial instrument based on an underlying financial security whose value is affected by changes in interest rates. Interest rate derivatives are hedges used by institutional investors such as banks to combat the changes in market interest rates. Individual investors are more likely to use interest rate derivatives as a speculative tool – they hope to profit from their guesses about which direction market interest rates will move.

Inverse Floater: A bond or other type of debt whose coupon rate has an inverse relationship to a benchmark rate. An inverse floater adjusts its coupon payment as the interest rate changes. When the interest rate goes up the coupon payment rate will go down because the interest rate is deducted from the coupon payment. A higher interest rate means more is deducted, thus less is paid to the holder. A ratio of the interest rate can also be used instead of one to one relationship. It is also called as an inverse floating rate note.

Interpolated Yield Curve: A yield curve derived by using on-the-run treasuries. Because on-the-run treasuries are limited to specific maturities, the yield of maturities that lies between the on-the-run treasuries must be interpolated. This can be accomplished by a number of methodologies, including bootstrapping and regressions.

Inverted Yield Curve: An interest rate environment in which long term debt instruments have a lower yield than short term debt instruments of the same credit quality. This type of yield curve is the rarest of the three main curve types and is considered to be a predictor of economic recession.

ISM Manufacturing Index: An index based on surveys of more than 300 manufacturing firms by the Institute of Supply Management. The ISM Manufacturing Index monitors employment, production inventories, new orders and supplier deliveries. A composite diffusion index is created that monitors conditions in national manufacturing based on the data from these surveys.

ISLM Model: A macroeconomic model that graphically represents two intersecting curves, called the IS and LM curves. The investment/saving (IS) curve is a variation of the income expenditure model incorporating market interest rates (demand for this model), while the liquidity preference/money supply equilibrium (LM) curve represents the amount of money available for investing (supply for this model).

Jackson Hole Economic Symposium: An annual symposium sponsored by Federal Reserve Bank of Kansas City since 1978, and held in Jackson Hole, Wyoming, since 1981. The symposium focuses on an important economic issue that faces US and world economies. Participants include prominent central bankers and finance ministers, as well as academic luminaries and leading financial market players from around the world. The symposium proceedings are

closely followed by market participants, as unexpected remarks emanating from the heavyweights at the Symposium have the potential to affect global stock and currency markets.

J Curve Effect: An example of the J Curve effect is seen in economics when a country's trade balance initially worsens following a devaluation or depreciation of its currency. The higher exchange rate will at first correspond to more costly imports and less valuable exports, leading to a bigger initial deficit or a smaller surplus. Due to the competitive, relatively low priced exports, however a country's exports will start to increase. Local consumers will also purchase less of the more expensive imports and focus on local goods. The trade balance eventually improves to better levels compared to before devaluation. In private equity funds, the J Curve effect occurs when funds experience negative returns for the first several years. This is a common experience as the early years of the fund include capital drawdowns and an investment portfolio that has yet to mature. If the fund is well managed, it will eventually recover from its initial losses and the returns will form a J curve; losses in the beginning dip down below the initial value, and later returns show profits above the initial level.

Knock In Option: A latent option contract that begins to function as a normal option ("knocks in") only once a certain price level is reached before expiration.

Knock Out Option: An option with a built in mechanism to expire worthless, should a specified price level be exceeded. A knock out option sets a cap to the level an option can reach, in favor of the holder. As knock out options limit the profit potential for the option buyer, they can be purchased for a smaller premium than an equivalent option without a knock out stipulation.

Kurtosis: A statistical measure used to describe the distribution of observed data around the mean. It is sometimes referred to as the "volatility of volatility. A high kurtosis portrays a chart with fat tails and a low, even distribution, whereas a low kurtosis portrays a chart with skinny tails and a distribution concentrated towards the mean.

Ladder Option: An option that locks in gains once the underlying reaches predetermined price levels or "rungs" guaranteeing some profit even if the underlying security falls back below these levels before the option expires.

Laissez Faire: An economic theory from the 18th century that is strongly opposed to any government intervention in business affairs. People who support a laissez faire system are against minimum wages, duties and any other trade restrictions.

Leptokurtic: A statistical distribution where the points along the X axis are clustered, resulting in a higher peak (higher kurtosis) than the curvature found in a normal distribution. This high peak and corresponding fat tails means the distribution is more clustered around the mean than in a mesokurtic or platykurtic distribution, and will have a relatively smaller standard

deviation. A distribution is leptokurtic when the kurtosis value is a large positive. The prefix “lepto” means “thin” like the shape of its peak.

M3: A measure of money supply that includes M2 as well as large time deposits, institutional money market funds, short term repurchase agreements and other larger liquid assets. The M3 measurement includes assets that are less liquid than other components of the money supply, and are more closely related to the finances of larger financial institutions and corporations than to those of businesses and individuals. These types of assets are referred to as “near, near money”.

Macaulay Duration: The weighted average term to maturity of the cash flows from a bond. The weight of each cash flow is determined by dividing the present value of the cash flow by the price, and is a measure of bond price volatility with respect to interest rates. The metric is named after its creator, Frederick Macaulay, is frequently used by portfolio managers who use as an immunization strategy. It is also used to measure how sensitive a bond or a bond portfolio’s price is to changes in interest rates.

Macroeconomic swap: A type of derivative designed to help companies whose revenues are closely correlated with business cycles to reduce their business cycle risk. In a macro economic swap, also called a macro swap, a variable stream of payments based on a macroeconomic indicator is exchanged for a fixed stream of payments. The exchange occurs between an end user and a macro swap dealer.

Margin account: A brokerage account in which the broker lends the customer cash to purchase securities. The loan in the account is collateralized by the securities and cash. If the value of the stock drops sufficiently, the account holder will be required to deposit more cash or sell a portion of the stock.

Marginal VAR: The additional amount of risk that a new investment position adds to a portfolio. Marginal VAR(Value at Risk) allows risk managers to study the effects of adding or subtracting positions from an investment portfolio. Since value at risk is affected by the correlation of investment positions, it is not enough to consider an individual investment’s VAR level in isolation. Rather, it must be compared with the total portfolio to determine what contribution it makes to the portfolio’s VAR Amount.

Mark to Market: 1. A measure of the fair value of accounts that can change over time, such as assets and liabilities. Mark to market aims to provide a realistic appraisal of an institution’s or company’s current financial situation. 2. The accounting act of recording the price or value of a security, portfolio or account to reflect its current market value rather than its book value. 3. When the net asset value (NAV) of a mutual fund is valued based on the most current market valuation.

Markowitz Efficient Frontier: A set of portfolios with returns that are maximized for a given level of risk based on mean-variance portfolio construction. The efficient solution set to a given set of mean variance parameters (a given riskless asset and a given risky basket of assets) can be graphed to be called Markowitz efficient frontier.

Market Segmentation Theory: A modern theory pertaining to interest rates stipulating that there is no necessary relationship between long and short term interest rates. Furthermore, short and long term markets fall into two different categories. Therefore, the yield curve is shaped according to the supply and demand of securities within each maturity length.

Markets in Financial Instruments Directive – MiFID: A directive that aims to integrate the European union's financial markets and to increase the amount of cross border investment orders. The MiFID plans to implement new measures, such as pre and post trade transparency requirements and capital requirements that firms must hold. The directive officially took effect on November 1st 2007.

Mean Return: In securities analysis, it is the expected value, or mean, of all the likely returns of investments comprising a portfolio. It is also known as "expected return". In capital budgeting, it is the mean value of the probability distribution of possible returns.

Mesokurtic: A term used in a statistical context where the kurtosis of a distribution is similar, or identical to the kurtosis of a normally distributed data set. Kurtosis is a measure of a distribution's peak, which means how much of the distribution is centered on the distribution mean. The kurtosis coefficient of a normal distribution is 3.

Micro Hedge: An investment technique used to eliminate the risk of a single asset. In most cases, this means taking an offsetting position in that single asset. Example Holding a stock and taking a short position in futures. If this asset is part of a larger portfolio, the hedge will eliminate the risk of the one asset but will have less of an effect on the risk associated with the portfolio.

Minimum Margin: The initial amount required to be deposited in a margin account before trading on margin or selling short. For example, the NYSE and the NASD require investors to deposit a minimum of \$2000 in cash or securities to open a margin account.

Modified Duration: A formula that expresses the measurable change in the value of a security in response to a change in interest rates. Calculated as:

$$\text{Modified Duration} = (\text{Macaulay Duration}) / (1 + (\text{YTM}/n))$$

n = no. of coupon periods per year

YTM = the bond's yield to maturity

MD follows the concept that interest rates and bond prices move in opposite directions. This formula is used to determine the effect that a 100 basis point (1%) change in interest rates will have on the price of a bond.

Modigliani-Miller Theorem – M & M: A financial theory stating that the market value of a firm is determined by its earning power and the risk of its underlying assets, and is independent of the way it chooses to finance its investments or distribute dividends. Remember, a firm can choose between three methods of financing: issuing shares, borrowing or spending profits (as opposed to dispersing them to shareholders in dividends). The theorem gets much more complicated, but the basic idea is that, under certain assumptions, it makes no difference whether a firm finances itself with debt or equity.

Mortgage Backed Security: A type of asset backed security that is secured by a mortgage or collection of mortgages. These securities must also be grouped in one of the top two ratings as determined by an accredited credit rating agency, and usually pay periodic payments that are similar to coupon payments. Furthermore, the mortgage must have originated from a regulated and authorized financial institution. Also known as a “mortgage related security” or a “mortgage pass through”.

Multiple Linear Regressions: A statistical technique that uses several explanatory variables to predict the outcome of a response variable. The goal of multiple linear regression (MLR) is to model the relationship between the explanatory and response variables. MLR takes a group of random variables and tries to find a mathematical relationship between them. The model creates a relationship in the form of a straight line (linear) that best approximates all the individual data points. MLR is often used to determine how many specific factors such as the price of a commodity, interest rates, and particular industries or sectors, influence the price movement of an asset. For example, the current price of oil, lending rates and the price of movement of oil futures, can all have an effect on the price of an oil company's stock price. MLR could be used to model the impact that each of these variables has on stock's price.

Multi Index Option: A type of investment in which the payoff depends on the difference in performance between two indexes or other financial assets. The payoff from the option is governed by the change in the spread between the change in the spread between the indexes or assets. These options are generally settled in cash.

Naked Option: A trading position where the seller of an option contract does not own any, or enough, of the underlying security to act as protection against adverse price movements. If the price of the underlying security moves against the trader, who does not already own the underlying security, he or she would be required to purchase the shares regardless of how high

the price is. The potential for losses, then, can be unlimited, and as a result, brokers typically have specific rules regarding naked trading. Inexperienced traders for example would not be allowed to place this type of order.

Narrow Money: A category of money supply that includes all physical money like coins and currency along with demand deposits and other liquid assets held by the central bank. In the US narrow money is classified as M1(M0 + demand accounts) while in the UK, M0 is referenced as narrow money.

Natural Hedge: A method of reducing financial risk by investing in two different financial instruments whose performance tends to cancel each other out. A natural hedge is unlike other types of hedges in that it does not require the use of sophisticated financial products such as forwards or derivatives. However, most hedges(natural or otherwise) are imperfect, and do not eliminate risk completely.

Negative Carry: A situation in which the cost of holding a security exceeds the yield earned. A negative carry situation is typically undesirable because it means the investor is losing money. An investor might, however achieve a positive after tax yield on a negative carry trade if the investment comes with tax advantages, as might be the case with a bond whose interest payments were non taxable.

Net Interest Income: The difference between the revenue that is generated from a bank's assets and the expenses associated with paying out its liabilities. A typical bank's assets consist of all forms of personal and commercial loans, mortgages and securities. The liabilities are of course the customer deposits. The excess revenue that is generated from the spread between interest paid out on deposits and interest earned on assets is the net interest income.

Net Interest Margin: A performance metric that examines how successful a firm's investment decisions are compared to its debt situations. A negative value denotes that the firm did not make an optimal decision, because interest expenses were greater than the amount of returns generated by investments.

Net Interest Margin = (Investment Returns – Interest Expenses)/Average earning assets

Negative Convexity: A bond's convexity is the rate of change of its duration, and is measured as the second derivative of price with respect to yield. Most mortgage bonds are negatively convex. Callable bonds are negatively convex at lower yields than the yield at which the bond is likely to be called. One property of a non callable bond is that as interest rates fall, its price will increase. However, with a callable bond, as interest rates fall, the incentive for the issuer to call the bond at par increases; therefore its price will not rise as quickly as the price of a non callable bond. The price of a callable bond might actually drop as the likelihood that the bond

will be called increases. This is why the shape of a callable bond's price curve with respect to yield is concave or negatively convex.

Neural Network: A series of algorithms that attempt to identify underlying relationships in a set of data by using a process that mimics the way the human brain operates. Neural networks have the ability to adapt to changing input so that the network produces the best possible result without the need to redesign the output criteria.

Nominal Effective Exchange Rate (NEER): The unadjusted weighted average value of a country's currency relative to all major currencies being traded within an index or pool of currencies. The weights are determined by the importance a home country places on all other currencies traded within the pool, as measured by the balance of trade.

Non Deliverable Forward – NDF: A cash settled, short term forward contract on a thinly traded or non convertible foreign currency, where the profit or loss at the time at the settlement date is calculated by taking the difference between the agreed upon exchange rate and the spot rate at the time of settlement, for an agreed upon notional amount of funds.

Non Deliverable Swap: A currency swap between major and minor currencies that is restricted or not convertible. A non deliverable swap (NDS) is so called because there is no delivery of the two currencies involved in the swap, unlike a typical currency swap where there is physical exchange of currency flows. Periodic settlement of an NDS is done on a cash basis, generally in US dollars. The settlement value is based on the difference between the exchange rate specified in the swap contract and the spot rate, with one party paying the other the difference. A non deliverable swap can be viewed as a series of non- deliverable forwards bundled together.

Non Farm Pay Roll: A statistic researched, recorded and reported by the US Bureau of Labor Statistics intended to represent the total number of paid US workers of any business, excluding the following employees: - general government employees; private household employees; employees of nonprofit organizations that provide assistance to individuals ; farm employees. This monthly report also includes estimates on the average work week and the average weekly earnings of all non-farm employees.

Nostro Account: A bank account held in a foreign country by a domestic bank, denominated in the currency of that country. Nostro accounts are used to facilitate settlement of foreign exchange and trade transactions.

Novation: The act of replacing one participating member of a contract with another. The exchange of new debts or obligations for older existing ones.

Off the run Treasury yield curve: The US Treasury yield curve derived using off the run treasuries. Off the run treasuries refer to US government bonds of a given maturity that are not the most recently issued. While they are not as recent as on the run treasuries, off the run treasuries can be used to construct a yield curve if there is a problem or distortion with the yield curve as represented by on the run treasuries.

On the run treasury Yield curve: The US treasury yield curve derived using on the run treasuries. The on the run treasury curve is the primary benchmark used in pricing fixed income securities.

Oligopoly: A situation in which a particular market is controlled by a small group of firms.

Open Interest: The total number of options and or futures contracts that are not closed or delivered on a particular day. It is the number of buy market orders before the stock market opens.

Open market operations – OMO: The buying and selling of government securities in the open market in order to expand or contract the amount of money in the banking system. Purchases inject money in to the banking system and stimulate growth while sales of securities do the opposite.

Option: A financial derivative that represents a contract sold by one party (option writer) to another party (option holder). The contract offers the buyer the right, but not the obligation, to buy(Call) or sell(put) a security or other financial asset at an agreed upon price (the strike price) during a certain period of time or on a specific date (exercise date). Call options give the option to buy at certain price, so the buyer would want the stock to go up. Put options give the option to sell at a certain price so the buyer would want the stock to go down.

Option Premium: The income received by an investor who sells or “writes” an option contract to another party. The current price of any specific option contract that has yet to expire. For stock options, the premium is quoted as a dollar amount per share and most contracts represent the commitment of 100 shares.

Option Adjusted Spread: A measurement of the spread of a fixed income security rate and the risk free rate of return which is adjusted to take in to account an embedded option. Typically, an analyst would use the treasury securities yield for the risk free rate. The spread is added to the fixed income security price to make the risk free bond price the same as the bond.

Overnight Index Swap: An interest rate swaps involving the overnight rate being exchange for a fixed interest rate. An overnight index swap uses an overnight rate index, such as the Federal Funds Rate, as the underlying for its floating leg, while the fixed leg would be set an assumed

rate. Overnight index swaps are popular amongst financial institutions for the reason that the overnight index is considered to be a good indicator of the interbank credit markets, and less risky than other traditional interest rate spreads.

Par Yield Curve: A graph of the yields on hypothetical Treasury securities with prices at par. On the par yield curve, the coupon rate will equal to the yield to maturity of the security which is why the Treasury bond will trade at par.

Parity Bond: Two or more bond issues with equal rights to one another. In other words, a parity bond is an issued bond with equal rights to a claim as other bonds already issued. For example, unsecured bonds have equal rights in that coupons can be claimed without any one bond having priority over another. Therefore, unsecured bonds would be referred to as parity bonds. A parity bond is also referred to as *pari passu* bond.

Path Dependent Option: The right but not the obligation, to buy or sell an underlying asset at a predetermined price during a specified time period, where the price is based on the fluctuations in the underlying value during all or part of the contract term. A path dependent option's pay off is determined by the path of the underlying assets price. An American option or an Asian Option are path dependent.

Phillips Curve: An economic concept developed by A W Phillips stating that inflation and unemployment have a stable and inverse relationship. According to the Phillips curve, the lower an economy's rate of unemployment, the more rapidly wages paid to labor increase in the economy.

Perpetual Bond: A bond with no maturity date. Perpetual bonds are not redeemable but pay a steady stream of interest forever. Some of the only notable perpetual bonds in existence are those that were issued by the British Treasury to pay off smaller issues used to finance the Napoleonic wars(1814). Some in the US believe it would be more efficient for the government to issue perpetual bonds, which may help it avoid the refinancing costs associated with bond issues that have maturity dates.

Platykurtic: A statistical distribution where the points along the X axis are highly dispersed, resulting in a lower peak (lower kurtosis) than the curvature found in a normal distribution. This low peak, with corresponding thin tails, means the distribution is less clustered around the mean than in a mesokurtic or leptokurtic distribution. Platykurtic is derived from the prefix "platy" which means "broad" resembling its shape – flat, wide or broad. A distribution is platykurtic when the excess kurtosis value is negative. The platykurtic distribution's flat shape results from large variations within observations. Investors may consider the kurtosis of asset returns when evaluating a potential investment, since the distribution of values can provide an estimate of asset risk. A platykurtic distribution denotes a fairly uniform lay out of data, and

returns following this distribution will have fewer large fluctuations than assets displaying normal or leptokurtic distributions. This makes investment less risky. Equity returns are generally considered to be closer to leptokurtic distribution than to a normal or platykurtic distribution. If market returns were more platykurtic, events such as black swans would be less likely to occur, since that type of outlier is less likely to fall within a platykurtic distribution's short tails. Conservative investors will be more comfortable dealing with the investments with a platykurtic return distribution.

Positive Carry: Similar to arbitrage, positive carries generally occur in the currency market where interest paid to investors in one currency is more than they have to pay to borrow in another currency.

Positive Correlation: A relationship between two variables in which both variables move in tandem. A positive correlation exists when as one variable decreases, the other variable also decreases and vice versa. In statistics, a perfect positive correlation is represented by the value +1 while a 0 indicates no correlation and a -1 indicates a perfect negative correlation.

Prepayment Model: A model used to estimate the level of prepayments on a loan portfolio that will occur in a set period of time, given possible changes in interest rates. Prepayment models are based on mathematical equations and usually involve the analysis of historical prepayment trends. Prepayment models are based on mathematical equations and usually involve the analysis of historical prepayment trends. Prepayment models are generally used to value mortgage pools such as GNMA securities or other securitized debt products. As interest rates rise, prepayment models factor in fewer prepayments. If interest rates fall, the opposite effect is accounted for, as more people will refinance their loans.

Price Swap Derivative: A derivative transaction in which one party guarantees a fixed value for the total asset holdings of an entity over a certain period of time. Under a price swap derivative if the value of the guaranteed asset declines, the counterparty is obligated to deliver stock or other collateral in order to offset any losses.

Prime Rate: The interest rate that commercial banks charge their most credit worthy customers. Generally a bank's best customers consist of large corporations. The prime interest rate, or prime lending rate, is largely determined by the federal funds rate, which is the overnight rate which banks lend to one another. It also affects other lending rates of the bank.

Pump Priming: The action taken to stimulate an economy, usually during a recessionary period, through government spending, and interest rate and tax reductions. In this regard, government spending is assumed to stimulate private spending which in turn should lead to economic expansion.

Put Option: An option contract giving the owner the right, but not the obligation to sell a specified amount of an underlying security at a specified price within a specified time. This is the opposite of a call option, which gives the holder the right to buy shares.

Put Call Parity: A principle referring to the static price relationship, given a stock's price, between the prices of European put and call options of the same class (i.e same underlying, strike price and expiration date). This relationship is shown from the fact that combinations of options can create positions that are the same as holding the stock itself. These option and stock positions must all have the same return or an arbitrage opportunity would be available to traders. Any option pricing model that produces put and call prices that don't satisfy put-call parity should be rejected as unsound because arbitrage opportunities exist.

Put Ratio Backspread: An option trading strategy that combines short puts and long puts to create a position whose profit and loss potential depends on the ratio of these puts. A put ratio back spread is so called because it seeks to profit from the volatility of the underlying stock, and combines short and long puts in a certain ratio at the discretion of the option investor. It is constructed to have unlimited potential profit with limited loss, or limited potential profit with the prospect of unlimited loss, depending on how it is structured. The ratio of long to short puts is typically 2:1, 3:2, or 3:1.

Puttable Swap: An exchange of cash flows in which one counter party makes payments based on a fixed interest rate, the other counterparty makes payments based on a floating interest rate, and the counterparty paying the floating interest rate (and receiving the fix rate) has the right to end the swap before it matures. An investor might choose a puttable swap if interest rates are expected to change in a way that would adversely affect the floating rate payer.

Qualified Institutional Buyer (QIB): A corporate entity that falls within the "accredited investor" category, defined in SEC Rule 501 of Regulation D. A qualified Institutional Buyer(QIB) is one that owns and invests, on a discretionary basis, at least \$100 mio in securities; for a broker-dealer threshold is \$10 million. QIBs encompass a wide range of entities, including banks, savings and loans associations, insurance companies, investment companies, employee benefit plans or entities owned entirely by accredited investors. Banks and S & L associations must also have a net worth of at least \$ 25 million to satisfy the QIB criteria.

Quant Fund: An investment fund that selects securities based on quantitative analysis. In quant fund, the managers build computer based models to determine whether an investment is attractive. In a pure "quant shop" the final decision to buy or sell is made by the model; however there is middle ground where the fund manager will use human judgment in addition to a quantitative model.

Quanto Swap: A swap with varying combinations of interest rate, currency and equity swap features, where payments are based on the movement of two different countries interest rates.

Quantitative Easing: An unconventional monetary policy in which a central bank purchases government securities or other securities from the market in order to lower inter rates and increase the money supply. Quantitative easing increases the money supply by flooding financial institutions with capital in an effort to promote increased lending and liquidity. Quantitative easing is considered when short term interest rates are at or approaching zero, and does not involve the printing of new banknotes.

Quanto Swap: A swap with varying combinations of interest rate, currency and equity swap features, where payments are based on the movement of two different countries' interest rates.

Quanto Option: A cash settled, cross currency derivative in which the underlying asset is denominated in a currency other than the currency in which the option is settled. Quantos are settled at a fixed rate of exchange, providing investors with shelter from exchange rate risk. At the time of expiration, the option's value is calculated in the amount of foreign currency and then converted at a fixed rate into domestic currency.

Ratio Call Write: An option strategy in which an investor owns shares in the underlying stock and writes more at the money call options than the amount of underlying shares owned. The goal of a ratio call write is to capture the premiums received by the option sale. The call writer hopes that there is little volatility in the underlying stock over the same period.

R Squared: A statistical measure that represents the percentage of a fund or security's movements that can be explained by movements in a benchmark index. For fixed income securities the benchmark is the T Bill. For equities, the benchmark is the S & P 500. R Squared values range from 0 to 100. An R squared of 100 means that all movements of a security are completely explained by movements in the index. A high R squared (between 85 and 100) indicates the fund's performance patterns have been in line with the index. A fund with a low R squared (70 or less) doesn't act much like the index. A higher R squared value will indicate a more useful beta figure.

Range Forward Contract: A zero cost currency forward contract that uses a range of exchange rates rather than a single rate. A range forward contract is constructed so that it provides full protection against adverse exchange rate movements, while retaining some upside potential to capitalized on favorable currency fluctuations. It is generally used by companies and international traders for hedging currency exposure at little or no cost.

Rate Anticipation Swap: A type of swap in which bonds are exchanged according to their current duration and predicted interest rate movements. A rate anticipation swap is often made in order to take advantage of more profitable bond opportunities. Rate anticipation swaps are speculative in nature, since they depend on the outcome of the expected interest rate change. Various bond types respond differently to rising or falling interest rates and those who participate in rate anticipation swaps generally choose bonds based on performance. An example investors may swap short term bonds for long term bonds if interest rates are expected to decline. Conversely, investors may swap longer term bonds for short term bonds if interest rates are expected to rise.

Real Effective Exchange Rate- REER: The weighted average of a country's currency relative to an index or basket of other major currencies adjusted for the effects of inflation. The weights are determined by comparing the relative trade balances, in terms of one country's currency, with each other country within the index.

Real Estate Investment Trust – REIT: A security that sells like a stock on the major exchanges and invests in real estate directly, either through properties or mortgages. REITs receive special tax considerations and typically offer investors high yields as well as a highly liquid method of investing in real estate.

Equity REIT: Equity REITs invest in and own properties (thus responsible for the equity or value of their real estate assets). Their revenues come principally from their properties' rents.

Mortgage REITs: Mortgage REITs deal in investment and ownership of property mortgages. These REITs loan money for mortgages to owners of real estate, or purchase existing mortgages or mortgage backed securities. Their revenues are generated primarily by the interest that they earn on the mortgage loans.

Hybrid REITs: Hybrid REITs combine the investment strategies of equity REITs and mortgage REITs by investing in both properties and mortgages.

Real Time Gross Settlement - RTGS: The continuous settlement of payments on an individual order basis without netting debits with credits across the books of a central bank. This is a system for large value interbank funds transfers. This system lessens settlement risk because interbank settlement happens throughout the day, rather than just at the end of the day.

Reciprocal Currency Arrangement: Temporary arrangement between central banks to maintain a supply of a country's currency for trade with other central banks at a specified exchange rate. A reciprocal currency arrangement is only intended for overnight or short term lending in order to maintain reserve requirements, liquidity and to keep financial markets functioning smoothly.

Repurchase Agreement: A form of short term borrowing for dealers in government securities. The dealer sells the government securities to investors, usually on an overnight basis, and buys them back the following day. For the selling party selling the security (and agreeing to repurchase it in the future) it is a repo; for the party on the other end of the transaction, (buying the security and agreeing to sell in the future) it is a reverse repurchase agreement.

Retail Price Index: One of the two main measures of consumer inflation produced by the UK office for National Statistics. The Retail Price Index (RPI) was introduced in the UK in 1947, and was made official in 1956. Like the better known Consumer Prices Index (CPI), the RPI tracks changes in the cost of a fixed basket of goods over time, and is produced by combining about 180,000 price quotes for over 650 representative items. However since the introduction of the CPI in 1996, 12 month inflation in the UK has generally been about 0.9% points higher when measured by the RPI, as compared to the CPI.

Return on Risk Adjusted Capital – RORAC: A rate of return used in financial analysis whereby riskier projects and investments are evaluated based on the capital at risk. RORAC makes it easier to compare and contrast projects with different risk profiles.

RORAC = Net Income/Allocated Risk Capital: Allocated risk capital = the firm's capital, adjusted for a maximum potential loss based on the probability of future returns or volatility of earnings.

Reverse Cash and Carry Arbitrage: A combination of a short position in an asset such as a stock or commodity, and a long position in the futures for that asset. Reverse cash and carry arbitrage seeks to exploit pricing inefficiencies for the same asset in the cash (or spot) and futures markets in order to make riskless profits. The arbitrageur or trader accepts delivery of the asset against the futures contract, which is used to cover the short position. This strategy is only viable if the futures price is cheap in relation to the spot price of the asset. That is, the proceeds from the short sale should exceed the price of the futures contract and the costs associated with carrying the short position in the asset.

Reverse Floater: A floating rate note in which the coupon rises when the underlying reference rate falls. The floating rate resets with each coupon payment and may have a cap and /or floor. The underlying reference rate is often the London Interbank Offered Rate (LIBOR) the rate at which banks can borrow funds from other banks in the London interbank market, the most common benchmark for short term interest rates.

Riding the Yield Curve: A trading strategy that is based upon the yield curve and used for interest rate futures. Investors hope to achieve capital gains by employing this strategy. Traders riding the yield curve buy long term bonds with the hopes of making a profit as the yields fall with the declining maturity of the bonds.

Rho: The rate at which the price of a derivative changes relative to a change in the risk free rate of interest. Rho measures the sensitivity of an option or options portfolio to a change in interest rate.

Risk Adjusted Return on Capital – RAROC: An adjustment to the return on an investment that accounts for the element of risk. Risk adjusted return on capital (RAROC) gives decision makers the ability to compare the returns on several different projects with varying risk levels. RAROC was popularized by Bankers Trust in the 1980s as an adjustment to simple return on capital(ROC).

$$\text{RAROC} = \frac{\text{Revenue} - \text{Expenses} - \text{Expected loss} + \text{income from capital}}{\text{capital}}$$

$$\text{Income from capital} = (\text{Capital charges}) * (\text{risk free rate})$$

Expected loss = average anticipated loss over the measurement period.

Russian Option: An option that gives the holder the right, but not the obligation, to buy a call or sell a put at the best price the underlying asset traded at, during the life of the option. Unlike other options, Russian options have no expiration date, so the life of the option is whatever the holder chooses it to be.

Samurai Bond: A Yen denominated bond issued in Tokyo by a non Japanese company and subject to Japanese regulations. Other types of yen denominated bonds are Euro yens issued in countries other than Japan.

Scalping: A trading strategy that attempts to make many profits on small price changes. Traders who implement this strategy will place anywhere from 10 to a couple hundred trades in a single day in the belief that small moves in stock price are easier to catch than large ones.

Seagull Option: A three legged option strategy often used in fore trading that can provide a hedge against the undesired movement of an underlying asset. A seagull option is structured through the purchase of a call spread and the sale of a put option (or vice versa). The option contracts must be in equal amounts and are normally priced to produce a zero premium. This structure is appropriate when volatility is high but expected to fall, and the price is expected to trade with a lack of certainty on direction. An example is a hedger purchases a seagull option structured as the purchase of a call spread(two calls), financed by the sale of one out of the money put, ideally to create a zero premium structure. This is also known as a “long seagull”. The hedger benefits from a move up in the underlying asset’s price, which is limited by the short call’s strike price.

Securities Lending: The act of loaning a stock, derivative, other security to an investor or firm. Securities lending requires the borrower to put up collateral, whether cash, security or a letter

of credit. When a security is loaned, the title and the ownership are also transferred to the borrower.

Securitization: The process through which an issuer creates a financial instrument by combining other financial assets and then marketing different tiers of the repackaged instruments to investors. The process can encompass any type of financial asset and promotes liquidity in the market place. Mortgage backed securities are a perfect example of securitization.

Security Market Line – SML: A line that graphs the systematic or market risk, risk versus return of the whole market at a certain time and shows all risky marketable securities. The SML essentially graphs the results from the capital asset pricing model (CAPM) formula. The x axis represents the risk (beta), and the y axis represents the expected return. The market risk premium is determined from the slope of the SML.

Settlement Risk: The risk that one party will fail to deliver the terms of a contract with another party at the time of settlement. Settlement risk can be the risk associated with default at settlement and any timing differences in settlement between the two parties. This type of risk can lead to principal risk.

Shadow Banking System: The financial intermediaries involved in facilitating the creation of credit across the global financial system, but whose members are not subject to regulatory oversight. The shadow banking system also refers to unregulated activities by regulated institutions.

Sharpe Ratio: The Sharpe ratio is calculated by subtracting the risk free rate – such that of the 10 year US Treasury bond – from the rate of return for a portfolio and dividing the result by the standard deviation of the portfolio returns. The ratio tells us whether a portfolio's returns are due to smart investment decisions or a result of excess risk. This measurement is very useful because although one portfolio or fund can reap higher returns than its peers, it is only a good investment if those higher returns do not come with too much additional risk. The greater a portfolio's Sharpe ratio, the better its risk adjusted performance has been. A negative Sharpe ratio indicates that a risk less asset would perform better than the security being analyzed.

Short Sale Rule: A Securities and Exchange Commission (SEC) trading regulation that restricted short sales of stock from being placed on a down tick in the market price of the shares. Short sales could only be permitted on upticks (last trade higher than one before) or zero plus ticks (last trade is the same as previous, which was an uptick). The regulation was passed in 1938 to prevent selling shares short into a declining market; at the time market mechanisms and liquidity couldn't be guaranteed to prevent panic share declines or outright manipulation.

Shout Option: An exotic option that allows the holder to lock in a defined profit while maintaining the right to continue participating in gains without a loss of locked in monies.

SPAN Margin: Short for standardized portfolio analysis of risk (SPAN). This is a leading margin system, which has been adopted by most options and future exchanges around the world. SPAN is based on a sophisticated set of algorithms that determine margin according to a global (total portfolio) assessment of the one day risk for a trader's account.

Special Purpose Vehicle: Also referred to as a bankruptcy remote entity whose operations are limited to the acquisition and financing of specific assets. The SPV is usually a subsidiary company with an asset/liability structure and legal status that makes its obligations secure even if the parent company goes bankrupt. It is a subsidiary corporation designed to serve as counterparty for swaps and other credit sensitive derivative instruments.

Spread Option: A type of option that derives its value from the difference between prices of two or more assets. Spread options can be written on all types of financial products including equities, bonds and currencies. This type of position can be purchased on large exchanges, but is primarily traded in the over the counter market.

Standard Deviation: A measure of the dispersion of a set of data from its mean. The more spread apart the data, the higher the deviation. Standard deviation is calculated as the square root of variance. In finance, standard deviation is applied to the annual rate of return of an investment to measure the investment's volatility. Standard deviation is also known as historical volatility and is used by investors as a gauge for the amount of expected volatility.

Statutory Reserves: State regulated reserve requirements. Insurance companies must hold a portion of their assets as either cash or marketable investments. Statutory reserves are the amount of liquid assets that firms must hold in order to remain solvent and attain partial protection against a substantial investment loss. Holding reserves reduces the risk of insurance.

Sterilization: A form of monetary action in which a central bank or federal reserve attempts to insulate itself from the foreign exchange market to counteract the effects of a changing monetary base. The sterilization process is used to manipulate the value of one domestic currency relative to another and is initiated in the forex market.

Step up bond: A bond that pays an initial coupon rate for the first period, and then a higher coupon rate for the following periods. A step up bond is one in which subsequent future coupon payments are received at a higher, predetermined amount than previous or current periods. These bonds are often purchased by individuals or portfolio managers who wish to hold fixed income securities with similar features to TIPS, but with a higher coupon.

Stochastic Modeling: A method of financial modeling in which one or more variables within the model are random. Stochastic modeling is for the purpose of estimating the probability of outcomes within a forecast to predict what conditions might be like under different situations. The random variables are usually constrained by historical data, such as past market returns.

Straddle: An options strategy with which the investor holds a position in both a call and put with the same strike price and expiration date.

Strangle: An options strategy where the investor holds a position in both a call and put with different strike prices but with the same maturity and underlying asset. This option strategy is profitable only if there are large movements in the price of the underlying asset.

Straight Through Processing: An initiative used by companies in the financial world to optimize the speed at which transactions are processed. This is performed by allowing information that has been electronically entered to be transferred from one party to another in the settlement process without manually re-entering the same pieces of information repeatedly over the entire sequence of events.

Stress Testing: A simulation technique used on asset and liability portfolios to determine their reactions to different financial situations. Stress tests are also used to gauge how certain stressors will affect a company or industry. They are usually computer generated simulation models that test hypothetical scenarios.

Structured Note: A debt obligation that also contains an embedded derivative component with characteristics that adjust the security's risk/return profile. The return performance of a structured note will track that of the underlying debt obligation and the derivative embedded within it.

Subprime: A classification of borrowers with a tarnished or limited credit history. Lenders will use a credit scoring system to determine which loans a borrower may qualify for. Subprime loans carry more credit risk, and as such, will carry higher interest rates as well. Approximately 25% of mortgage originations are classified as sub prime.

Swap: Traditionally, the exchange of one security for another to change the maturity(bonds), quality of issues (stocks or bonds), or because investment objectives have changed. Recently, swaps have grown to include currency swaps and interest rate swaps.

Swaption: The option to enter in to an interest rate swap. In exchange for an option premium, the buyer gains the right but not the obligation to enter in to a specified swap agreement with the issuer on a specified future date.

Synthetic CDO: A form of collateralized debt obligation (CDO) that invests in credit default swaps (CDS) or other non-cash assets to gain exposure to a portfolio of fixed income assets. Synthetic CDOs are typically divided into credit tranches based on the level of credit risk assumed. Initial investments into the CDO are made by the lower tranches, while the senior tranches may not have to make an initial investment.

Synthetic futures contract: A position created by combining call and put options for the purpose of mimicking the payout schedule and characteristics of a futures contract. A synthetic long futures contract is created by combining long calls and short puts. A synthetic short futures contract is created by combining short calls and long puts. In order for both combinations to be identical to a futures position, the options must have the same expiry dates and strike prices.

Synthetic Put: A trading strategy that combines the short sale of a security with a long call position on the same security. Synthetic put combination is to effectively create a synthetic put position that has almost the same risk reward attributes as a straight forward put position, but with added advantages such as flexibility and liquidity. Synthetic puts are often used by institutional investors to disguise their trading bias on a specific security.

Systematic risk: The risk inherent to the entire market or entire market segment. Systematic risk also known as UN diversifiable risk, volatility or market risk affects the overall market, not just a particular stock or industry. This type of risk is both unpredictable and impossible to completely avoid. It cannot be mitigated through diversification, only through hedging or by using the right asset allocation strategy.

T distribution: A type of probability distribution that is theoretical and resembles a normal distribution. A T distribution differs from the normal distribution by its degrees of freedom. The higher the degrees of freedom, the closer that distribution will resemble a standard normal distribution with a mean of 0, and a standard deviation of 1.

Taylor's rule: A guideline for interest rate manipulation. Taylor's rule was introduced by Stanford economist John Taylor in order to set and adjust prudent rates that will stabilize the economy in the short term and still maintain long term growth. This rule is based on three factors:

- A) Actual versus targeted inflation levels
- B) Actual employment versus full employment levels
- c) The appropriate short term interest rate consistent with full employment.

Taylor's rule suggests that the FED increases interest rates in times of high inflation, or when employment is above the full employment levels, and decreases interest rates in the opposite

situations. This method of controlling interest rates has been fairly consistent with interest policy decisions, even though the FED does not explicitly subscribe to the rule.

Teaser Rate: An initial rate on an adjustable rate mortgage (ARM). This rate will typically be below the going market rate, and is used by lenders to entice borrowers to choose ARMs over traditional mortgages. The teaser rate will be in effect for only a few months, at which point the rate will gradually climb until it reaches the full indexed rate, which will be a static margin rate plus the floating rate index to which the mortgage is tied (usually the LIBOR index).

Ted Spread: The price difference between three month futures contracts for US treasuries and three month contracts for Eurodollars having identical expiration months. The Ted spread can be used as an indicator of credit risk. This is because US T Bills are considered risk free while the rate associated with the Eurodollar futures is thought to reflect the credit ratings of corporate borrowers. As the Ted spread increases, default risk is considered to be increasing, and investors will have a preference for safe investments. As the spread decreases, the default risk is considered to be decreasing.

Term Auction facility: A monetary policy program used by the Federal Reserve to help increase liquidity in the US credit markets. TAF allows the Federal Reserve to auction set amounts of collateral backed short term loans to depository institutions that are judged to be in sound financial condition by their local reserve banks. Participants bid through the reserve banks, with a minimum bid set at an overnight indexed swap rate relating to the maturity of the loans. These auctions allow financial institutions to borrow funds at a rate that is below the discount rate.

Theta: A measure of the rate of decline in the value of an option due to the passage of time. Theta can also be referred to as the time decay on the value of an option. If everything is held constant, then the option will lose value as time moves closer to the maturity of the option.

Tick Size: The minimum price movement of a trading instrument. The price movements of different trading instruments vary. For example, if the minimum price movement of a stock is 0.01; the stock has a tick value of one cent (each tick is worth one cent for one stock). Futures markets typically have a tick size that is specific to the instrument. For example, the Russell 2000 e-mini futures contract (TF) has a tick size of .10; the value of each tick is \$10.00 (each contract is worth \$100 multiplied by the index).

Tier 1 Capital: A term used to describe the capital adequacy of a bank. Tier I capital is core capital; this includes equity capital and disclosed reserves.

Tier 2 Capital: One of two categories by which a bank's capital is divided. Tier 2 capitals is supplementary bank capital that includes items such as revaluation reserves, undisclosed

reserves, hybrid instruments and subordinated term debt. A bank's reserve requirements include its Tier 2 capital in its calculation, but it is considered less reliable than its Tier 1 capital. In the US, the capital requirement for banks is, in part, based on the weighted risk associated with the bank's assets.

Tier 3 Capital: Tertiary capital held by banks to meet part of their market risks, that includes a greater variety of debt than tier 1 and tier 2 capitals. Tier 3 capital debts may include a greater number of subordinated issues, undisclosed reserves and general loss reserves compared to tier 2 capital.

Time value of money: The idea that money available at the present time is worth more than the same amount in the future due to its potential earning capacity. This core principle of finance holds that, provided money can earn interest, any amount of money is worth more the sooner it is received. Also referred to as "present discounted value".

Tobin Tax: A means of taxing spot currency conversions that was originally suggested by American economist James Tobin (1918-2002). The Tobin tax was developed with the intention of penalizing short term currency speculation, and to place a tax on all spot conversions of currency. Rather than a consumption tax paid by consumers, the Tobin tax was meant to apply to financial sector participants as a means of controlling the stability of a given country's currency.

Trading book: The portfolio of financial instruments held by a brokerage or bank. Financial instruments in a trading book are purchased or sold to facilitate trading for the institution's customers, to profit from trading spreads between the bid and ask prices, or to hedge against various types of risk. Trading books can range in size from hundreds of thousands of dollars at the smallest institutions to tens of billions at the largest financial institutions. Most institutions employ sophisticated risk metrics to manage and mitigate risk in their trading books.

Transaction exposure: The risk faced by companies involved in international trade, that currency exchange rates will change after the companies have already entered in to financial obligations. Such exposure to fluctuating exchange rates can lead to major losses for the firms.

Translation exposure: The risk that a company's equities, assets, liabilities or income will change in value as a result of exchange rate changes. This occurs when a firm denominates a portion of its equities, assets, liabilities or income in a foreign currency. Also known as accounting exposure.

Treasury T Bill: A short term debt obligation backed by the US government with a maturity of less than one year. T Bills are sold in denominations of \$1000 up to a maximum purchase of \$5

million and commonly have maturities of one month(four weeks), three months(13 weeks) or six months(26 weeks).

T bills are issued through a competitive bidding process at a discount from par, which means that rather than paying fixed interest payments like conventional bonds, the appreciation of the bond provides the return to the holder.

T Bond: A marketable, fixed interest US government debt security with a maturity of more than 10 years. Treasury bonds make interest payments semi annually and the income that holders receive is only taxed at the federal level.

Treasury Inflation Protected Securities – TIPS: A treasury security that is indexed to inflation in order to protect investors from the negative effects of inflation. TIPS are considered an extremely low risk investment since they are backed by the US government and since their par value rises with inflation, as measured by the Consumer Price Index, while their interest rate remains fixed. Interest on TIPS is paid semiannually. TIPS can be purchased directly from the government through the Treasury Direct System in \$100 increments with a minimum investment of \$100 and are available with 5, 10 and 20 year maturities.

Treasury Note: A marketable US government debt security with a fixed interest rate and a maturity between one and 10 years. Treasury notes can be bought either directly from the US government or through a bank. When buying Treasury notes from the government, you can either put in a competitive or noncompetitive bid. With a competitive bid, you specify the yield you want; however this does not mean that your bid will be approved. With a noncompetitive bid, you accept whatever yield is determined at auction.

Treasury STRIPS: An acronym for ‘separate trading of registered interest and principal securities’. Treasury STRIPS are fixed income securities sold at a significant discount to face value and offer no interest payments because they mature at par.

Treasury Yield: The return on investment, expressed as a percentage, on the debt obligations of the US government. Treasuries are considered to be a low risk investment because they are backed by the full faith and credit of the US government, which includes the government’s authority to raise taxes to cover its obligations. Because of their low risk, treasuries have a low return compared to many other investments.

Treynor ratio: A ratio developed by Jack Treynor that measures returns earned in excess of that which could have been earned on a riskless investment per each unit of market risk. The Treynor ratio is calculated as: $(\text{Average return of the portfolio} - \text{Average return of the Risk free rate}) / \text{Beta of the portfolio}$.

Trinomial Option pricing model: An option pricing model incorporating three possible values that an underlying asset can have in one time period. The three possible values the underlying asset can have in a time period may be greater than, the same as, or less than the current value.

US Dollar index: A measure of the value of the US dollar relative to majority of its most significant trading partners. This index is similar to other trade weighted indexes, which also use the exchange rates from the same major currencies.

US Treasury: Created in 1798, the United States Department of the Treasury is the government(cabinet) department responsible for issuing all Treasury bonds, notes and bills. Some of the government branches operating under the US. Treasury umbrella include the IRS, US Mint, Bureau of the Public Debt, and the Alcohol and Tobacco Tax Bureau.

Uncovered Option: A type of options contract that is not backed by an offsetting position that would help mitigate risk. Trading naked, as it is called poses significant risks. However, an uncovered options contract can be profitable for the writer if the buyer cannot exercise the option because it is out of the money. Generally uncovered options are suitable only for experienced, knowledgeable investors who understand the risks and can afford substantial losses.

Undisclosed reserves: The unpublished or hidden reserves of a financial institution that may not appear on publicly available documents such as a balance sheet, but are nonetheless real assets, which are accepted as such by most banking institutions.

Unsterilized foreign exchange intervention: An attempt by a country's monetary authorities to influence exchange rates and its money supply by not buying or selling domestic or foreign currencies or assets. This is a passive approach to exchange rate fluctuations, and allows for fluctuations in the monetary base.

Value at Risk: A statistical technique used to measure and quantify the level of financial risk within a firm or investment portfolio over a specific time frame. Value at risk is used by risk managers in order to measure and control the level of risk which the firm undertakes. The risk manager's job is to ensure that risks are not taken beyond the level at which the firm can absorb the losses of a probable worst outcome.

Variance: A measurement of the spread between the numbers in a data set. The variance measures how far each number in the set is from the mean. Variance is calculated by taking the differences between each number in the set and the mean, squaring the differences (to make them positive) and dividing the sum of the squares by the number of values in the set.

Variation Margin: A variable margin payment that is made by clearing members to their respective clearing houses based upon adverse price movements of the futures contracts that these members hold.

Vega: The measurement of an option's sensitivity to changes in the volatility of the underlying asset. Vega represents the amount that an option contract's price changes in reaction to a 1% change in the volatility of the underlying asset. Volatility measures the amount and speed at which price moves up and down, and is often based on changes in recent, historical prices in a trading instrument. Vega changes when there are large price movements (increased volatility) in the underlying asset, and falls as the option approaches expiration. Vega is one of a group of Greeks used in option analysis, and is the only one not represented by a Greek letter.

Vasicek Interest Rate Model: A method of modeling interest rate movement that describes the movement of an interest rate as a factor of market risk, time and equilibrium value that the rate tends to revert towards. This stochastic model is often used in the valuation of interest rate futures.

VIX – CBOE Volatility Index: The ticker symbol for the Chicago Board Options Exchange (CBOE) Volatility Index, which shows the market's expectation of 30 day volatility. It is constructed using the implied volatilities of a wide range of S & P 500 index options. This volatility is meant to be forward looking and is calculated from both calls and puts. The VIX is widely used measure of market risk and is often referred to as the "investor fear gauge". There are three variations of volatility indexes: the VIX tracks the S & P 500, the VXN tracks the Nasdaq 100 and the VXD tracks the Dow Jones Industrial Average.

Weather Derivative: An instrument used by companies to hedge against the risk of weather related losses. The investor who sells a weather derivative agrees to bear this risk for a premium. If nothing happens, the investor makes a profit. However, if the weather turns bad, then the company who buys the derivative claims the agreed amount.

Wedge: In technical analysis, a security price pattern where trend lines drawn above and below a price chart converge into an arrow shape. Wedge shaped patterns are thought by technical analysts to be useful in analyzing a short to intermediate term reversal of what the analyst feels to be the major price trend.

Yankee Bond: A bond denominated in US dollars that is publicly issued in the US by foreign banks and corporations. According to the Securities Act of 1933, these bonds must first be registered with the Securities and Exchange Commission (SEC) before they can be sold. Yankee bonds are often issued in tranches and each offering can be as large as \$ 1 billion.

Yield: The income return on an investment. This refers to the interest or dividends received from a security and is usually expressed annually as a percentage based on the investment's cost, its current market value or its face value.

Yield Curve: A line that plots the interest rates, at a set point in time, of bonds having equal credit quality, but differing maturity dates. The most frequently reported yield curve compares the three month, two year, five year and 30 year US Treasury debt. This yield curve is used as a benchmark for other debt in the market, such as mortgage rates or bank lending rates. The curve is also used to predict changes in economic output and growth.

Yield Pickup: The additional interest rate an investor receives when selling a lower yielding bond in exchange for a higher yielding bond. The bond with the lower yield generally has a shorter maturity, while the bond with the higher yield will typically have a longer maturity. A certain amount of risk is involved since the bond with a higher yield is often for a lower credit quality. Additionally, the investor can be exposed to interest rate risk with the longer maturity bond.

Yield Spread: The difference between yields on differing debt instruments, calculated by deducting the yield of one instrument from another. The higher the yield spread, the greater the difference between the yields offered by each instrument. The spread can be measured between debt instruments of differing maturities, credit ratings and risk.

Yield to Maturity (YTM): The rate of return anticipated on a bond if held until the end of its lifetime. YTM is considered a long term bond yield expressed as an annual rate. The YTM calculation takes in to account the bond's current market price, par value, coupon interest rate and time to maturity. It is also assumed that all coupon payments are reinvested at the same rate as the bond's current yield. YTM is a complex but accurate calculation of a bond's return that helps investors compare bonds with different maturities and coupons.

Yield to Worst: The lowest potential yield that can be received on a bond without the issuer actually defaulting. The yield to worst is calculating by making worst –case scenario assumptions on the issue by calculating the returns that would be received if provisions, including prepayment, call or sinking fund, are used by the issuer. This metric is used to evaluate the worst case scenario for yield to help investors manage risks and ensure that specific income requirements will still be met even in the worst scenarios.

Yield based Option: A type of debt instrument based option that derives its value from the difference between the exercise price and the value of the yield of the underlying debt instrument. Yield based options are settled in cash. A yield based call buyer expects interest rates to go up, while a yield based put buyer expects interest rates to go down.

Z Score: A Z score is a statistical measurement of a score's relationship to the mean in a group of scores. A Z score of 0 means the score is the same as the mean. A Z score can also be positive or negative, indicating whether it is above or below the mean and by how many standard deviations.

Zero Based Budgeting – ZBB: A method of budgeting in which all expenses must be justified for each new period. Zero based budgeting starts from a “zero base” and every function within an organization is analyzed for its needs and costs. Budgets are then built around what is needed for the upcoming period, regardless of whether the budget is higher or lower than the previous one. ZBB allows top level strategic goals to be implemented in to the budgeting process by tying them to the specific functional areas of the organization, where costs can be first grouped, then measured against previous results and current expectations.

Zero Coupon Swap: An exchange of income streams in which the stream of floating interest rate payments is made periodically, as it would be in a plain vanilla swap, but the stream of fixed rate payments is made as one lump sum payment when the swap reaches maturity instead of periodically over the life of the swap. The amount of the fixed rate payment is based on the swap's zero coupon rate.

Zero coupon Bond: A debt security that doesn't pay interest(a coupon) but is traded at a deep discount, rendering profit at maturity when the bond is redeemed for its face value.

Zero volatility Spread – Z spread: The constant spread that will make the price of a security equal to the present value of its cash flows when added to the yield at each point on the spot rate treasury curve where a cash flow is received. In other words, each cash flow is discounted at the appropriate treasury spot rate plus the Z spread.