

BASICS OF MUTUAL FUNDS

The article mentioned below, is for the investors who have not yet started investing in mutual funds, but willing to explore the opportunity and also for those who want to clear their basics for what is mutual fund and how best it can serve as an investment tool.

Getting Started

Before we move to explain what is mutual fund, it's very important to know the area in which mutual funds works, the basic understanding of stocks and bonds.

Stocks

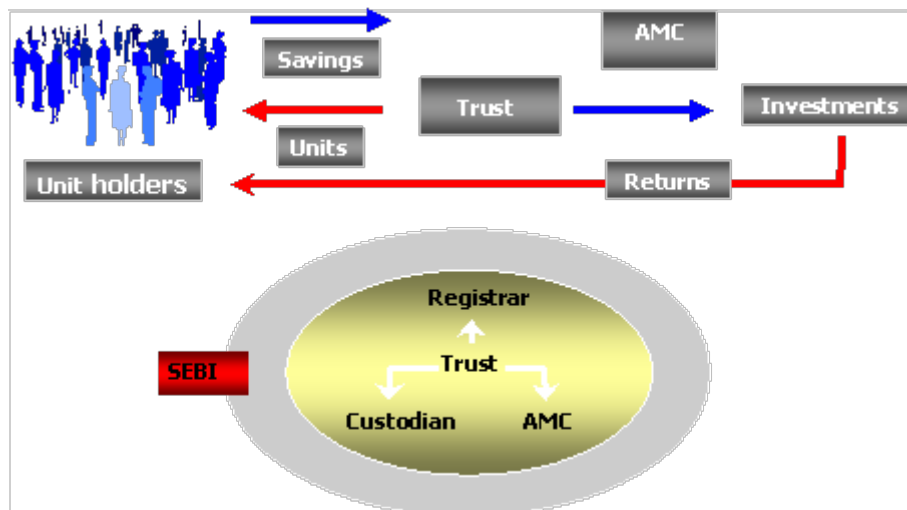
Stocks represent shares of ownership in a public company. Examples of public companies include Reliance, ONGC and Infosys. Stocks are considered to be the most common owned investment traded on the market.

Bonds

Bonds are basically the money which you lend to the government or a company, and in return you can receive interest on your invested amount, which is back over predetermined amounts of time. Bonds are considered to be the most common lending investment traded on the market.

There are many other types of investments other than stocks and bonds (including annuities, real estate, and precious metals), but the majority of mutual funds invest in stocks and/or bonds.

WORKING OF MUTUAL FUNDS



Regulatory Authorities :

To protect the interest of the investors, SEBI formulates policies and regulates the mutual funds. It notified regulations in 1993 (fully revised in 1996) and issues guidelines from time to time. MF either promoted by public or by private sector entities including

one promoted by foreign entities is governed by these Regulations.

SEBI approved Asset Management Company (AMC) manages the funds by making investments in various types of securities. Custodian, registered with SEBI, holds the securities of various schemes of the fund in its custody.

According to SEBI Regulations, two thirds of the directors of Trustee Company or board of trustees must be independent. The Association of Mutual Funds in India (AMFI) reassures the investors in units of mutual funds that the mutual funds function within the strict regulatory framework. Its objective is to increase public awareness of the mutual fund industry. AMFI also is engaged in upgrading professional standards and in promoting best industry practices in diverse areas such as valuation, disclosure, transparency etc.

What is a Mutual Fund?

A mutual fund is just the connecting bridge or a financial intermediary that allows a group of investors to pool their money together with a predetermined investment objective. The mutual fund will have a fund manager who is responsible for investing the gathered money into specific securities (stocks or bonds). When you invest in a mutual fund, you are buying units or portions of the mutual fund and thus on investing becomes a shareholder or unit holder of the fund.

Mutual funds are considered as one of the best available investments as compare to others they are very cost efficient and also easy to invest in, thus by pooling money together in a mutual fund, investors can purchase stocks or bonds with much lower trading costs than if they tried to do it on their own. But the biggest advantage to mutual funds is diversification, by minimizing risk & maximizing returns.

Diversification

Diversification is nothing but spreading out your money across available or different types of investments. By choosing to diversify respective investment holdings reduces risk tremendously up to certain extent.

The most basic level of diversification is to buy multiple stocks rather than just one stock. Mutual funds are set up to buy many stocks. Beyond that, you can diversify even more by purchasing different kinds of stocks, then adding bonds, then international, and so on. It could take you weeks to buy all these investments, but if you purchased a few mutual funds you could be done in a few hours because mutual funds automatically diversify in a predetermined category of investments (i.e. - growth companies, emerging or mid size companies, low-grade corporate bonds, etc).

Types of Mutual Funds Schemes in India

Wide variety of Mutual Fund Schemes exists to cater to the needs such as financial position, risk tolerance and return expectations etc. thus mutual funds has Variety of flavors, Being a collection of many stocks, an investors can go for picking a mutual fund might be easy. There are over hundreds of mutual funds scheme to choose from. It is

easier to think of mutual funds in categories, mentioned below

Overview of existing schemes existed in mutual fund category.

BY STRUCTURE

- **Close-ended Fund/ Scheme :**

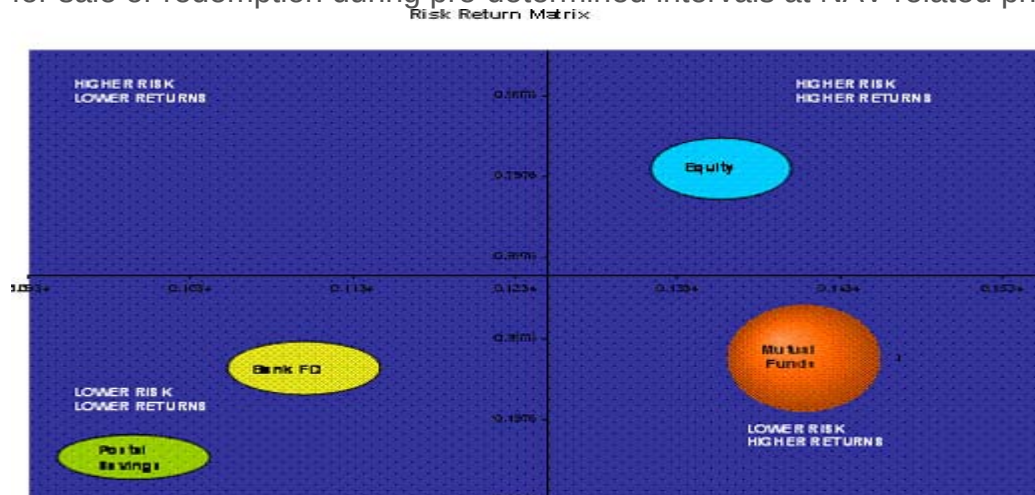
A close-ended fund or scheme has a stipulated maturity period e.g. 5-7 years. The fund is open for subscription only during a specified period at the time of launch of the scheme. Investors can invest in the scheme at the time of the initial public issue and thereafter they can buy or sell the units of the scheme on the stock exchanges where the units are listed. In order to provide an exit route to the investors, some close-ended funds give an option of selling back the units to the mutual fund through periodic repurchase at NAV related prices. SEBI Regulations stipulate that at least one of the two exit routes is provided to the investor i.e. either repurchase facility or through listing on stock exchanges. These mutual funds schemes disclose NAV generally on weekly basis.

- **Growth / Equity Oriented Scheme :**

The aim of growth funds is to provide capital appreciation over the medium to long-term. Such schemes normally invest a major part of their corpus in equities. Such funds have comparatively high risks. These schemes provide different options to the investors like dividend option, capital appreciation, etc. and the investors may choose an option depending on their preferences. The investors must indicate the option in the application form. The mutual funds also allow the investors to change the options at a later date. Growth schemes are good for investors having a long-term outlook seeking appreciation over a period of time.

- **Interval Schemes :**

Interval Schemes are that scheme, which combines the features of open-ended and close-ended schemes. The units may be traded on the stock exchange or may be open for sale or redemption during pre-determined intervals at NAV related prices



The risk return trade-off indicates that if investor is willing to take higher risk then correspondingly he can expect higher returns and vice versa if he pertains to lower risk instruments, which would be satisfied by lower returns. For example, if an investors opt for bank FD, which provide moderate return with minimal risk. But as he moves ahead to invest in capital protected funds and the profit-bonds that give out more return which is slightly higher as compared to the bank deposits but the risk involved also increases in the same proportion.

Thus investors choose mutual funds as their primary means of investing, as Mutual funds provide professional management, diversification, convenience and liquidity. That doesn't mean mutual fund investments risk free. This is because the money that is pooled in are not invested only in debts funds which are less riskier but are also invested in the stock markets which involves a higher risk but can expect higher returns. Hedge fund involves a very high risk since it is mostly traded in the derivatives market which is considered very volatile.

BY NATURE :

- **Equity fund :**

These funds invest a maximum part of their corpus into equities holdings. The structure of the fund may vary different for different schemes and the fund manager's outlook on different stocks. The Equity Funds are sub-classified depending upon their investment objective, as follows :

- o Diversified Equity Funds
- o Mid-Cap Funds
- o Sector Specific Funds
- o Tax Savings Funds (ELSS)

Equity investments are meant for a longer time horizon, thus Equity funds rank high on the risk-return matrix.

- **Debt funds :**

The objective of these Funds is to invest in debt papers. Government authorities, private companies, banks and financial institutions are some of the major issuers of debt papers. By investing in debt instruments, these funds ensure low risk and provide stable income to the investors. Debt funds are further classified as :

- o **Gilt Funds :**

Invest their corpus in securities issued by Government, popularly known as Government of India debt papers. These Funds carry zero Default risk but are associated with Interest Rate risk. These schemes are safer as they invest in papers backed by Government.

- o **Income Funds :**

Invest a major portion into various debt instruments such as bonds, corporate debentures and Government securities.

- o **MIPs :**

Invests maximum of their total corpus in debt instruments while they take minimum

exposure in equities. It gets benefit of both equity and debt market. These scheme ranks slightly high on the risk-return matrix when compared with other debt schemes.

- o **Short Term Plans (STPs):**

Meant for investment horizon for three to six months. These funds primarily invest in short term papers like Certificate of Deposits (CDs) and Commercial Papers (CPs). Some portion of the corpus is also invested in corporate debentures.

- o **Liquid Funds :**

Also known as Money Market Schemes, These funds provides easy liquidity and preservation of capital. These schemes invest in short-term instruments like Treasury Bills, inter-bank call money market, CPs and CDs. These funds are meant for short-term cash management of corporate houses and are meant for an investment horizon of 1day to 3 months. These schemes rank low on risk-return matrix and are considered to be the safest amongst all categories of mutual funds.

- **Balanced funds :**

As the name suggest they, are a mix of both equity and debt funds. They invest in both equities and fixed income securities, which are in line with pre-defined investment objective of the scheme. These schemes aim to provide investors with the best of both the worlds. Equity part provides growth and the debt part provides stability in returns.

Further the mutual funds can be broadly classified on the basis of investment parameter viz,

Each category of funds is backed by an investment philosophy, which is pre-defined in the objectives of the fund. The investor can align his own investment needs with the funds objective and invest accordingly.

BY INVESTMENT OBJECTIVE :

- **Growth Schemes** Growth Schemes are also known as equity schemes. The aim of these schemes is to provide capital appreciation over medium to long term. These schemes normally invest a major part of their fund in equities and are willing to bear short-term decline in value for possible future appreciation.

- **Income Schemes**
Income Schemes are also known as debt schemes. The aim of these schemes is to provide regular and steady income to investors. These schemes generally invest in fixed income securities such as bonds and corporate debentures. Capital appreciation in such schemes may be limited.

- **Balanced Schemes**
Balanced Schemes aim to provide both growth and income by periodically distributing a part of the income and capital gains they earn. These schemes invest in both shares

and fixed income securities, in the proportion indicated in their offer documents (normally 50:50).

- **Money Market Schemes**

Money Market Schemes aim to provide easy liquidity, preservation of capital and moderate income. These schemes generally invest in safer, short-term instruments, such as treasury bills, certificates of deposit, commercial paper and inter-bank call money.

OTHER SCHEMES

- **Tax Saving Schemes :**

Tax-saving schemes offer tax rebates to the investors under tax laws prescribed from time to time. Under Sec.88 of the Income Tax Act, contributions made to any Equity Linked Savings Scheme (ELSS) are eligible for rebate.

- **Index Schemes :**

Index schemes attempt to replicate the performance of a particular index such as the BSE Sensex or the NSE 50. The portfolio of these schemes will consist of only those stocks that constitute the index. The percentage of each stock to the total holding will be identical to the stocks index weightage. And hence, the returns from such schemes would be more or less equivalent to those of the Index.

- **Sector Specific Schemes :**

These are the funds/schemes which invest in the securities of only those sectors or industries as specified in the offer documents. e.g. Pharmaceuticals, Software, Fast Moving Consumer Goods (FMCG), Petroleum stocks, etc. The returns in these funds are dependent on the performance of the respective sectors/industries. While these funds may give higher returns, they are more risky compared to diversified funds. Investors need to keep a watch on the performance of those sectors/industries and must exit at an appropriate time.

TYPES OF RETURNS

There are three ways, where the total returns provided by mutual funds can be enjoyed by investors :

- Income is earned from dividends on stocks and interest on bonds. A fund pays out nearly all income it receives over the year to fund owners in the form of a distribution.
- If the fund sells securities that have increased in price, the fund has a capital gain. Most funds also pass on these gains to investors in a distribution.
- If fund holdings increase in price but are not sold by the fund manager, the fund's shares increase in price. You can then sell your mutual fund shares for a profit. Funds

will also usually give you a choice either to receive a check for distributions or to reinvest the earnings and get more shares.

PROS & CONS OF INVESTING IN MUTUAL FUNDS :

For investments in mutual fund, one must keep in mind about the Pros and cons of investments in mutual fund.

Advantages of Investing Mutual Funds :

- **Professional Management** - The basic advantage of funds is that, they are professional managed, by well qualified professional. Investors purchase funds because they do not have the time or the expertise to manage their own portfolio. A mutual fund is considered to be relatively less expensive way to make and monitor their investments.
- **Diversification** – purchasing units in a mutual fund instead of buying individual stocks or bonds, the investors risk is spread out and minimized up to certain extent. The idea behind diversification is to invest in a large number of assets so that a loss in any particular investment is minimized by gains in others.
- **Economies of Scale** - Mutual fund buy and sell large amounts of securities at a time, thus help to reducing transaction costs, and help to bring down the average cost of the unit for their investors.
- **Liquidity** - Just like an individual stock, mutual fund also allows investors to liquidate their holdings as and when they want.
- **Simplicity** – Investments in mutual fund is considered to be easy, compare to other available instruments in the market, and the minimum investment is small. Most AMC also have automatic purchase plans whereby as little as Rs. 2000, where SIP start with just Rs.50 per month basis.

Disadvantages of Investing Mutual Funds :

- **Professional Management** - Some funds doesn't perform in neither the market, as their management is not dynamic enough to explore the available opportunity in the market, thus many investors debate over whether or not the so-called professionals are any better than mutual fund or investor him self, for picking up stocks.
- **Costs** – The biggest source of AMC income, is generally from the entry & exit load which they charge from an investors, at the time of purchase. The mutual fund industries are thus charging extra cost under layers of jargon.
- **Dilution** - Because funds have small holdings across different companies, high returns from a few investments often don't make much difference on the overall return. Dilution is also the result of a successful fund getting too big. When money pours into funds that have had strong success, the manager often has trouble finding a good investment for all the new money.

2.1 Derivative

Derivatives are financial contracts whose value/price is dependent on the behavior of the price of one or more basic underlying asset (often simply known as underlying). These contracts are legally binding agreements, made on trading screen of stock exchange, to buy or sell an asset in future. The asset can be share, index, interest rate, bond ,rupee dollar exchange rate ,sugar , crude oil, soya been, coffee etc.

Everybody wants to know about them, everybody wants to talk about them. Derivatives however remain a type of financial instrument that few of us understand and fewer still fully appreciate, although many of us have invested indirectly in derivatives by purchasing mutual funds or participating in a pension plan whose underlying assets include derivative products

A simple example of derivative is curd, which is derivative of milk. The price of curd depends upon price of milk which in turn depends upon the demand and supply of milk.

Section 2(aa) of Securities Contract (Regulation) Act 1956 defines Derivative as:

"Derivative" includes -

- “a security derived from a debt instrument, share, loan whether secured or unsecured, risk instrument or contract for differences or any other form of security;
- a contract which derives its value from the prices, or index or prices, of underlying securities ”.

A working definition of derivative which will help to lay foundation.

“A derivative can be defined as a financial instrument whose value depends on (or derives from) the values of other, more basic underlying variables.”

---John C. Hull

Derivatives are compared to insurance. Just as you pay an insurance company a premium in order to obtain some protection against a specific event, there are derivative products that have a payoff contingent upon the occurrence of some event for which you must pay a premium in advance.

Example

Suppose you have a home of Rs. 50, 00,000. You insure this house for premium of Rs 15000 (It is a very risky house!) Now you think about policy (ignoring the house) as an investment.

- Suppose the house is fine after 1 year. You have lost the premium of Rs 15000.

- Suppose your house is fully damaged and broken in one year . You receive Rs 50,00,0000 on just paying premium of Rs 15,000.If you have bought insurance of any sort you have bought an option. Option is one type of a derivative.

Difference in share and Derivative

The difference is that while shares are assets, derivatives are usually contracts (the major exception to this are warrants and convertible bonds, which are similar to shares in that they are assets).

We can define financial assets (e.g. shares, bonds) as: claims on another person or corporation; they will usually be fairly standardised and governed by the property or securities laws in an appropriate country.

On the other hand, a contract is merely: an agreement between two parties, where the contract details may not be standardised.

Due to their great flexibility, many different types of investors use derivatives. A good toolbox of derivatives allows the modern investor the full range of investment strategy: speculation, hedging, arbitrage and all combinations thereof.

DERIVATIVE INSTRUMENTS

A) Forward Contract

There are no sure things in global markets. Deals that looked good six months ago can quickly turn sour if unforeseen economic and political developments trigger fluctuations in exchange rates or commodity prices

Over the years traders have developed tools to cope with these uncertainties. One of this tool is the forward agreements

“A contract that commits one party to buy and other to sell a given quantity of an asset for fixed price on specified future date”.

In Forward Contracts one of the parties assumes a long position and agrees to buy the underlying asset at a certain future date for a certain price. The specified price is called the delivery price. The contract terms like delivery price, quantity are mutually agreed upon by the parties to contract. No margins are generally payable by any of the parties to the other.

Features of Forward Contract

- It is negotiated contract between two parties i.e. Forward contract being a bilateral contracts, hence exposed to counterparty risk.
- Each Contract is custom designed and hence unique in terms of contract size, expiration date, asset quality, asset type etc.
- A contract has to be settled in delivery or cash on expiration date
- In case one of two parties wishes to reverse a contract, he has to compulsorily go to the other party. The counter party being in a monopoly situation can command at the price he wants.

Example

“A” Ltd requires \$500000 on May 2006 for repayment of loan installment and interest .As on December 2005 it appears

to the company that the dollar may become dearer as compared to the exchange rate, prevailing on that date say.

Accordingly A Ltd may enter into forward contract with banker for \$500000. The Forward rate may be higher or lower than spot rate prevailing on the date of the forward contract. Let us assume forward rate as on December 2005 was 1\$=Rs 44 as against spot rate of Rs 43.50. As on future i.e. May 2006 the banker will pay A Ltd \$500000 at Rs 44 irrespective of the spot rate as on that date.

B) FUTURES

A Future contract is an agreement between two parties to buy or sell an asset at a certain time in future at a certain price. Future contracts are special type of forward contracts in the sense that the former are standardized exchange-traded contracts.

In other words

A future contract is one in which one party agrees to buy from/ sell to the other party a specified asset at price agreed at the time of contract and payable on future date. The agreed price is known as strike price. The underlying asset can be commodity, currency debt, or equity. The Futures are usually performed by payment of difference between strike price and market price on fixed future date and not by the physical delivery and payment in full on that date.

Features Of Future Contract

- An organized exchange.
- Unlike the Forwards, the Future contracts are standardized contracts and are traded on stock exchange
- It is standardized contract with standard underlying instruments, a standard quantity and quality of the underlying instrument that can be delivered and standard time for such settlement transactions.
- Existence of a regulatory authority.
- Margin requirements and daily settlement to act as a safeguard.
- Leveraged positions--only margin required.
- Trading in either direction--short/long
- Index trading.
- Hedging/Arbitrage opportunity.

Example 1

When you are dealing in March 2006 Futures Infosys the minimum market lot i.e. minimum quantity that you can buy and sell is 1000 shares of Infosys The contract would expire on 28th March 2006 The price is quoted per share the tick size is 50 paise per share $1500 \times .05 = \text{Rs } 75$ per contract/per market lot. The contract would be settled in cash and closing price in cash market on the expiry date would be the settlement price.

Example2

On 1st September Mr. A enters into Futures contract to purchase 100 equity shares of X Ltd at an agreed price of Rs 100 in December. If on maturity date the price of equity stock rises to Rs120 Mr. A will receive Rs 20 per share and if the price of share falls to Rs 90 Mr. A will pay Rs 10 per share. As compared to forward contract the futures are settled only by the difference between the strike price and market price as on maturity date.

Distinction between forwards and futures:

The basic nature of a forward and future, in a strict legal sense, is the same, with the difference that futures are market-driven organized transactions. As they are exchange-traded, the counterparty in a futures transaction is the exchange. On the other hand, a forward is mostly an over-the-counter transaction and the counterparty is the contracting party. To maintain the stability of organized markets, market-based futures transactions are subject to margin

requirements, not applicable to OTC forwards. Futures markets are normally marked to market on a settlement day, which could even be daily, whereas forward contracts are settled only at the end of the contract. So the element of credit risk is far higher in case of forward contracts

C) Options

Option As the name implies, trading in options involves choice Someone who invest in option is purchasing right but not the obligation, to buy or sell a specified underlying item at an agreed upon price, known as exercise price or strike price.

In other words

Options are contracts that give the buyers the right (but not the obligation) to buy or sell a specified quantity of certain underlying assets at a specified price on or before a specified date. On the other hand, the seller is under obligation to perform the contract (buy or sell). The underlying asset can be a share, index, interest rate, bond, rupee-dollar exchange rate, sugar, crude oil, Soya bean, cotton, coffee etc.

An option contract is a unilateral agreement in which one party, the option writer, is obligated to perform under the contract if the option holder exercises his or her option. (The option holder pays a fee or "premium" to the writer for this option.) The option holder, however, is not under any obligation and will require performance only when the exercise price is favorable relative to current market prices. If, on the one hand, prices move unfavorably to the option holder, the holder loses only the premium. If, on the other hand, prices move favorably for the option holder, the holder has theoretically unlimited gain at the expense of the option writer. In an option contract the exercise price (strike price), delivery date (maturity date or expiry), and quantity and quality of the commodity are fixed.

There are two basic types of options-call and put.

A call option gives an investor right to buy underlying item during specified period of time at an agreed upon price while put option confers the right to sell it.

- **Call Option**
- **Put Option**

Call Option

The option that gives the buyer the right to buy is called a call option.

A call option grants the holders of the contract the right, but not the obligation, to purchase a good from the writer of the option in consideration for the payment of cash (the option premium).

Example: Suppose you have bought a call option of 2,000 shares of Hindustan Lever Ltd (HLL) at a strike price of Rs250 per share. This option gives you the right to buy 2,000 shares of HLL at Rs250 per share on or before March 28, 2006. The seller of this call option who has given you the right to buy from him is under the obligation to sell 2,000 shares of HLL at Rs250 per share on or before specified date say March 28, 2004 whenever asked.

Put Option

The option that gives the buyer the right to sell is called a put option.

A put option grants the holder the right, but not the obligation, to sell the underlying good to the option writer.

Suppose you bought a put option of 2,000 shares of HLL at a strike price of Rs250 per share. This option gives its buyer the right to sell 2,000 shares of HLL at Rs250 per share on or before specified date say March 28, 2006. The seller of this put option who has given you the right to sell to him is under obligation to buy 2,000 shares of HLL at Rs250 per share on or before March 28, 2006 whenever asked.

- **American options** can be exercised at any time between the date of purchase and the expiration date. Most exchange-traded options are of this type.
- **European options** are different from American options in that they can only be exercised at the end of their lives.

The options on the Nifty and Sensex are European style options--meaning that the buyer of these options can exercise his options only on the expiry day. He cannot exercise them before the expiry of the contracts as in case with options on stocks. As such the buyer of index options needs to square up his positions to get out of the market.

D) SWAP

A swap can be defined as barter or an exchange. A swap is contract whereby parties agree to exchange obligations that each of them have under their respective underlying contracts or we can say a swap is an agreement between two or more parties to exchange sequence of cash flows over a period in future . The parties that agree to swap are known as counterparties.

Swap is an agreement between two counterparties to exchange two streams of cash flows—the parties "swap" the cash flow streams. Those cash flow streams can be defined in almost any manner.

In other words: In a swap, two counterparties agree to a contractual arrangement wherein they agree to exchange cash flows at periodic intervals

Types of SWAP

- **Interest Rate Swap**
- **Currency Rate Swap**

Interest Rate Swap

In interest rate swap one party agrees to make fixed rate interest payment in return for floating – rate interest payments from counterparty, with interest rate payment based on a hypothetical amount of principal called notional amount. Notional amount typically do not change hands and is simply used to calculate payments.

Firm A is a AAA-rated Indian company. It needs Rs. 10,000,000 to finance an investment with a five-year economic life. Firm A is considering issuing 5-year fixed-rate bonds at 10% percent.

Alternatively, Firm A can raise the money by issuing 5-year floating-rate notes at Bank Rate +.3 percent. Firm A would prefer to borrow at a floating rate.

Firm B has lower rate and can borrow at 11% fixed rate while it has an alternative to borrow at Bank Rate+.5%. Firm B prefers to borrow at a fixed rate

	FIRM A	FIRM B
FIXED RATE	10%	11%
FLOATING RATE	Bank Rate +.3%	Bank Rate+.5%
Preference	Floating Rate	Fixed Rate

So they enter into a swap agreement .Firm A borrows at fixed rate 10% Firm B borrows at Bank Rate +.5%. The parties agree a rate for swapping their interest commitments. Firm B pays a fixed rate of 10.1% to Firm A.

- **For Firm A**

Borrows	10%
Receives from Firm B	10.1%
Pays To Firm B	Bank Rate
Net Interest Cost i.e. savings	Bank Rate - .1%

- **For Firm B**

Borrows	Bank Rate + .5%
Receives from Firm A	(Bank Rate)
Pays To Firm A	10.1%
Net Interest Cost i.e. savings	10.6%

Thus both the Firms benefits from Interest Rate Swap.

Currency Swap

A currency swap is a form of swap. It is most easily understood by comparison with an interest rate swap. An interest rate swap is a contract to exchange cash flow streams that might be associated with some fixed income obligations—say swapping the cash flows of a fixed rate loan for those of a floating rate loan. A currency swap is exactly the same thing except, with an interest rate swap, the cash flow streams are in the same currency. With a currency swap, they are in different currencies. That difference has a practical consequence. With an interest rate swap, cash flows occurring on concurrent dates are netted. With a currency swap, the cash flows are in different currencies, so they can't be netted. Full principal and interest payments are exchanged without any form of netting.

Suppose you are receiving Cash Flow Stream A from counterparty. You would like to change the nature of that cash flow stream—perhaps making it less risky. Rather than attempt to renegotiate the obligation with the counterparty, you enter into a swap agreement with another party. Under that agreement, you swap Cash Flow Stream A for a Cash Flow Stream B, which better suits your needs

Variations of Basic Currency and Interest Rate Swaps.

- Currency Swaps
 - fixed for fixed
 - fixed for floating
 - floating for floating
 - amortizing
- Interest Rate Swaps
 - zero-for floating
 - floating for floating

How do options differ from swaps and forwards

In a forward or swap, the parties lock in a price (e.g., a forward price or a fixed swap rate) and are subject to symmetric and offsetting payment obligations. In an option, the buyer purchases protection from changes in a price or rate in one direction while retaining the ability to benefit from movement of the price or rate in the other direction. In other words, the option involves asymmetric cash flow obligations.

Both options and futures are tools to speculate on the market and hedge your portfolio. However, the rights and obligations of buyers and sellers—and so their risk profiles—are different in the two types of contracts.

How do options differ from futures

In futures, both the buyer and the seller are obligated to buy and sell, respectively, the underlying asset—the quid pro quo relationship. In case of options, however, the buyer has the right, but is not obliged to exercise it. Effectively, while buyers and sellers face a symmetric risk profile in futures, it's not so in the case of options. A buyer's upside potential is unlimited, while his losses are limited to the premium paid. For the option seller, on the other hand, his profits are limited to the premium received, while his loss potential is unlimited.

Strategies Using Derivatives Products

Cap ,Floor ,Collars

One category of option transactions are cap, floor and collar transactions. These are swap-related transactions which provide rate protection to the contracting parties. Essentially, under these agreements the buyer generally pays a periodic fixed amount and the seller pays periodic amounts of the same currency based on: for **cap** transactions, the excess, if any, of the variable rate over a specified cap rate; or for floor transactions, the excess, if any, of a specified floor rate over the variable rate. Under **collar** transactions, one party becomes the floating rate payer on the cap and the other party becomes the floating rate payer on the floor.

These instruments are like interest rate options whose exercise takes place several times during the contract if the buyer of the instruments finds doing so at his advantage.

Purchase of cap enables a borrower to fix in advance a maximal borrowing rate for specified amount and for a specified duration, while allowing him to avail benefit of fall in rates. Normally buyer of a cap pays premium to the seller.

Purchase of a floor enables a lender to fix in advance a minimal rate for placing a specified amount for a specified duration, while allowing him to avail benefit of rise in rates. The buyer of the floor pays a premium to its seller.

Importance of caps and floor- They offer a guarantee of maximal rate (for caps) and a minimal rate (for floors) while permitting to benefit from favorable movements

A)Cap: An option that pays an amount of interest on an agreed-upon amount of notional principal whenever the market index is above the cap contract's index rate.

B) Floor: An option that pays an amount of interest on an agreed-upon amount of notional principal whenever the market index is below the floor's predetermined base.

C) Collars: are a combination of caps and floors. The purchase of a collar enables its buyer to ensure a maximal borrowing rate (cap) while permitting to benefit from any fall in rates up to floor.

Examples of Cap, Floor and Collars

For example, if some one wants to transfer the risk of interest rates going up, one will enter into a cap on a notional amount of say, Rs. 100 million, with the interest rate of 5.5%. Now if the interest rate increases to 6%, the cap holder will be able to claim a settlement from the cap seller, for the differential rate of 0.5% on the notional amount. If

the interest does not go up, or rather declines, the option holder would have paid the premium, and there is no settlement.

On the other hand, if some one expects the interest rate to go down which spells a risk to him, he would enter into a floor, which would allow him to claim a settlement if the interest rate falls below a particular strike rate.

Interest rate collar is the fixation of both a cap and floor, so that the payment will be triggered if the rate goes above the collar and below the floor.

D) Vanilla :A term that refers to a relatively simple derivative financial instrument, usually a swap or other derivative that is issued with standard features. i.e Simplest form of a contract.

E) Exotic: People generally refer to an *exotic option* when the contract is not a plain vanilla put or call that are traded on an open exchange and is instead traded over-the-counter (OTC).

It is an options strategy that works by selling two calls and buying two calls on the same or different markets, with different maturity dates. One of the options has a higher exercise price and the other has a lower exercise price than the other two options. Spread is the price difference between two related markets or commodities.

F) Index Future contract

Futures contract based on an index i.e. the underlying asset is the index, are known as Index Futures Contracts. For example, futures contract on NIFTY Index and BSE-30 Index. These contracts derive their value from the value of the underlying index. Index futures are the future contracts for which underlying is the cash market index.

For example: BSE may launch a future contract on "BSE Sensitive Index" and NSE may launch a future contract on "S&P CNX NIFTY".

G) Index option Contract

Similarly, the options contracts, which are based on some index, are known as Index options contract. However, unlike Index Futures, the buyer of Index Option Contracts has only the right but not the obligation to buy / sell the underlying index on expiry. Index Option Contracts are generally European Style options i.e. they can be exercised / assigned only on the expiry date.

H) Swaptions Swaptions are options to buy or sell a swap that will become operative at the expiry of the options. Thus swaption is an option on forward swap. Rather than have calls and puts, the swaptions market has receiver swaptions and payer swaptions. A receiver swaption is an option to receive fixed and pay floating. A payer swaption is an option to pay fixed and receive floating.

The terms of the future swap transactions are set at the time when the swaption is entered into.

The party selling the swaption is paid a premium and is exposed to market fluctuations (note that the terms of the optioned swap transaction are normally set at the current market rates on the date upon which the option is sold). Swaptions can be either physically settled or cash settled. Physically settled swaptions allow the purchasing party to require the selling party to actually enter into the agreed-upon swap transaction. Cash settled swaptions are settled on the expiration date (maturity date) by a cash payment which is calculated based upon the mark-to-market (as explained further below) value of the underlying swap transaction at the expiration date.

Hedging

Hedging is defined as reducing exposure to risk of loss resulting from fluctuations in exchange rates, commodity prices, interest rates etc.

Hedgers participate in the derivatives market to lock the prices at which they will be able to do the transaction in the future. Thus they are trying to avoid the price risk.

Hedging is buying and selling futures contracts to offset the risks of changing underlying market prices.

Arbitrage

Arbitrage is possible when one of three conditions is met

- The same asset does not trade at same price on all markets
- Two assets with identical cash flows do not trade at the same price
- An asset with a known price in future does not trade today at its future price discounted at risk free interest rate

Arbitrators watch the spot and futures markets and whenever they spot a mismatch in the prices of the two markets they enter to get the extra profit in a risk-free transaction.

Speculation

Speculators participate in the futures market to take up the price risk, which is avoided by the hedgers.

Speculation is more commonly used by hedge funds or traders who aim to generate profits with only marginal investments, essentially placing a bet on the movement of an asset.

Leverage the use of various financial instruments or borrowed capital, such as margin, to increase the potential return of an investment.

Leverage can be created through options, futures, margin and other financial instruments. For example, say you have Rs. 5,000 to invest. This amount could be invested in 10 shares of ABC Limited, but to increase leverage, you could invest Rs 5,000 in five options contracts. You would then control 500 shares instead of just 10.

Before understanding how to trade in Future and options it is necessary to understand

	CALL OPTION	PUT OPTION
In-the-money	Strike price < Spot price of underlying asset	Strike price > Spot price of underlying asset
At-the-money	Strike price = Spot price of underlying asset	Strike price = Spot price of underlying asset
Out-of-the-money	Strike price > Spot price of underlying asset	Strike price = Spot price of underlying asset

Types of Markets: Primary & Secondary Markets.

The securities market has two interdependent and inseparable segments, namely the primary market and the secondary market.

The primary market is the channel for creation of new securities through financial instruments by public limited companies as well as government whereas secondary market deals in securities already issued.

The secondary market enables participants who hold securities to trade in securities adjust their holdings according to the changes in the assessment of risk and return. The secondary market has further two components, namely:

- The Over –the-Counter (OTC) market
- The exchange traded market.

The Over –the-Counter (OTC) and Exchange Traded Market

Tailor-made derivatives, not traded on a futures exchange, are traded on **over-the-counter markets**. OTC markets are informal markets where trades are negotiated.

Exchange-traded derivative market has the following features: an electronic exchange mechanism and emphasizes anonymous trading, full transparency, use of computers for order matching, centralization of order flow, price-time priority for order matching, large investor base, wide geographical access, lower costs of intermediation, settlement guarantee, better risk management, enhanced regulatory discipline, etc.

Trading and Settlement In Futures Contracts on index & individual securities

Settlement of Futures Contracts on index & individual securities

➤ Daily Mark-to-Market Settlement

The positions in the futures contracts for each client is marked-to-market to the daily settlement price (Closing price of the futures contracts on the trading day. The closing price is the last half hour weighted average price of the contract) of the futures contracts at the end of each trade day.

The profits/ losses are computed as the difference between the trade price or the previous day's settlement price, as the case may be, and the current day's settlement price.

➤ **Final Settlement**

On the expiry of the futures contracts, final settlement price (Closing price of the relevant underlying index / security in the Capital Market segment of NSE, on the last trading day of the futures contracts. (The closing price of the underlying index / security is its last half an hour weighted average value / price in the Capital Market segment of NSE). and the resulting profit / loss is settled in cash.

The final settlement of the futures contracts is similar to the daily settlement process except for the method of computation of final settlement price. The final settlement profit / loss is computed as the difference between trade price or the previous day's settlement price, as the case may be, and the final settlement price of the relevant futures contract.

Open positions in futures contracts cease to exist after their expiration day. Two types of margins need to be paid to take up and hold positions in the option segment. They are known as

- Initial margin and Mark and
- Market Margin.

While the initial margin has to be paid upfront as a percentage of the value of the underlying before the deal is struck, mark to market margin emerges daily when the contract is mark to market and the same has to be paid on next day basis. Failure to pay margins by clients will result into compulsory close out of one's position as insisted by SEBI.

4.1 Trading and Settlement In Options

An investor has to register himself with a broker who is a member of the BSE/NSE Derivatives Segment. If he wants to buy an option, he can place the order for buying a Sensex Call or Put option with the broker. The Premium has to be paid up-front in cash. He can either hold on to the contract till its expiry or square up his position by entering into a reverse trade.

If he closes out his position, he will receive Premium in cash, the next day. If the investor holds the position till expiry day and decides to exercise the contract, he will receive the difference between Option Settlement price & the Strike price in cash.

If he does not exercise his option, it will expire worthless. If an investor wants to write/sell an option, he will place an order for selling Sensex Call/ Put option. Initial margin based on his position will have to be paid up-front (adjusted from the collateral deposited with his broker) and he will receive the premium in cash, the next day. Everyday his position will be marked to market & variance margin will have to be paid. He can close out his position by buying the option by paying requisite premium. The initial margin which he had paid on the first position will be refunded. If he waits till expiry, and the option is exercised, he will have to pay the difference in the Strike price & the options settlement price, in cash. If the option is not exercised, the investor will not have to pay anything.

Glossary

Bid

The bid is the highest price a buyer will pay for a security; the offer is the lowest price at which a security is offered by sellers.

Exercise Price (*see also* Strike Price)

The exercise price is the price at which a call's (put's) buyer can buy (or sell) the underlying instrument

Spot

The price in the cash market for delivery using the standard market convention

Strike Price

The price at which the holder of a derivative contract exercises his right if it is economic to do so at the appropriate point in time as delineated in the financial product's contract.

Primary Markets

The primary exchange on which a listed stock trades.

Derivative Security

A financial security whose value is determined in part from the value and characteristics of another security, the underlying security.

Equity Options

Options on shares of an individual common stock.

Exercise

To implement the right under which the holder of an option is entitled to buy (in the case of a call) or sell (in the case of a put) the underlying security.

Exercise Settlement Amount

The difference between the exercise price of the option and the exercise settlement value of the index on the day an exercise notice is tendered, multiplied by the index multiplier.

Expiration Date

The day in which an option contract becomes void. All holders of options must indicate their desire to exercise, if they wish to do so, by this date.

Hedge

A conservative strategy used to limit investment loss by effecting a transaction which offsets an existing position.

Holder

The purchaser of an option.

Derivatives Contract

A contract that derives its value from the prices of underlying securities.

Expiration Day

The day on which the final settlement obligation are determined in a Derivatives Contract.

Futures Contract

Means a firm contractual agreement to buy or sell the underlying security in the future.

Last Trading Day

Means the day up to and on which a Derivatives Contract is available for trading.

Long Position

Long Position in a Derivatives contract means outstanding purchase obligations in respect of a permitted derivatives contract at any point of time.

Open Position

Open position means the sum of long and short positions of the Member and his constituent in any or all of the Derivatives Contracts outstanding with the Clearing Corporation.

Open Interest

Open Interest means the total number of Derivatives Contracts of an underlying security that have not yet been offset and closed by an opposite Derivatives transaction nor fulfilled by delivery of the cash or underlying security or option exercise. For calculation of Open Interest only one side (either the long or the short) of the Derivatives Contract is counted.

Options Contract

Options Contract is a type of Derivatives Contract, which gives the buyer/holder of the contract the right (but not the obligation) to buy/sell the underlying security at a predetermined price within or at end of a specified period. The option contract that gives a right to buy is called a Call Option and the option contract that gives a right to sell is called a Put Option.

Option Holder

Option Holder means a Trading Member who is the buyer of the Options Contracts.

Option Writer

Option Writer means a Trading Member who is the seller of the Options Contracts.

Outstanding Obligation

Means the obligation which has neither been closed out nor been settled.

Permitted Derivatives Contract

Permitted Derivatives Contract is a derivative contract, which is permitted to be traded on the Futures & Options segment of the Exchange.

Regular lot / Market Lot

Means the number of units that can be bought or sold in a specified derivatives contract and it is also termed as Contract Multiplier.

Risk Disclosure Document

Refers to the document to be issued to all potential investors at the time of registration for disclosure of the risks inherent to derivatives.

Settlement Date

Means the date on which the settlements of outstanding obligations in a permitted Derivatives contract are required to be settled.

Sell Open

Means a sell transaction, which will have the effect of creating or increasing a short position.

Short Position

Short position in a derivatives contract means outstanding sell obligations in respect of a permitted derivatives contract at any point of time.

Trading cycle

Trading cycle means the period during which the derivatives contract will be available for trading.

Trading Member

Trading Member is a member of Derivative Exchange.

Trading cum Clearing Member Means Member of Derivatives Exchange as well as its Clearing Corporation.

Trade Type

Trade type is the type of trade as may be permitted by the F&O Segment of the Exchange from time to time for each Market Type.

Underlying Securities

Means a security with reference to which a derivatives contract is permitted to be traded on the Futures & Options segment of the Exchange from time to time

Contract Size - is the value of the contract at a specific level of Index. It is Index level * Multiplier.

Multiplier - It is a pre-determined value, used to arrive at the contract size. It is the price per index point.

Tick Size - It is the minimum price difference between two quotes of similar nature.

Contract Month - is the month in which the contract will expire.

Expiry Day - is the last day on which the contract is available for trading.

Open interest - it's the total outstanding long or short positions in the market at any specific point in time. As total long positions for market would be equal to total short positions, for calculation of open Interest, only one side of the contracts is counted.

Volume - Number of contracts traded during a specific period of time - During a day, during a week or during a month.