



— A Financial Literacy Curriculum —



VITTSHALA -The Financial Literacy Cell, SRCC

FIRST EDITION 2021

VITTIPEDIA

— A Financial Literacy Curriculum —



Acknowledgement

Inaugurated by Late Shri. Arun Jaitley, Hon'ble Minister of Finance, Government of India on October 17, 2016, Vittshala - The Financial Literacy Cell, Shri Ram College of Commerce feels proud to launch the first ever Financial Literacy curriculum-Vittipedia. The journey of creating this curriculum proved to be a holistic learning experience and enable each member to grow personally and professionally. The society would like to extend its sincere gratitude to all the people who were associated with the development of the curriculum, directly or indirectly, for their continuous and unfaltering support and guidance. The Organizational Development Wing and the technical wing have put in a lot of efforts to make this curriculum a self-explanatory, educative source. The creation of this curriculum was a collective effort of several teams and individuals and the society would be always indebted to them. We would also like to thank our teacher convenor Dr. Anil Kumar and faculty advisor Mr. Ashwani Kumar and Mrs. Renu Bansal, for guiding and motivating us at every step, without whom this endeavour would not have been successful.

A circular graphic with a white border. Inside the circle, there is a pile of US dollar bills, including \$100 and \$20 bills. Overlaid on the bills is the text "THE LANGUAGE OF MONEY" in large, white, 3D block letters. The text is arranged in two lines: "THE LANGUAGE OF" on the top line and "MONEY" on the bottom line. The letters are thick and have a slight shadow, giving them a three-dimensional appearance. The background of the circle is dark, making the white text and the lighter-colored dollar bills stand out.



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BONDS

01

Have you ever wondered how government and multinational companies finance their various high budget projects? Well, the first answer to this question can be, by taking simple loans from banks! Just like we do! But, this is not the only way...



| Here comes the role of bonds.

Like a contract, bonds bind people- one person gets the money, one gives it. All bonds are eventually loans. Ironically, the bond issuer is the borrower and the bond purchaser is the investor. Bonds are issued by corporate entities- companies or the government, to the public in general. Like a loan agreement, a Bond Indenture binds the people.

BOND INDENTURE:

A bond indenture is a document which mentions the terms and conditions of the bond. It is prepared by the issuer of the bond.

BASIC CONCEPTS RELATED TO FINANCIAL INSTRUMENTS

Face Value

Face Value refers to the original cost of a Financial instrument as mentioned on the certificate received after the purchase of the Financial instrument.

Par Value

The word 'par value' is same as 'face value' however, 'par value' is used mostly with Bonds and 'face value' is used mostly with Shares

Maturity Date

It is the date on which the final payment of Loan is to be made.

Interest

Interest is the money that one receives/pays in addition to the amount lent/borrowed. Interest is the incentive for a person to lend his/her money to someone.

Maturity Value

It refers to the amount, paid/received at the expiry (end) of the loan period.

Let's take an Example

Ram borrows Rs.100 at 10% interest from Shyam for One Year on 1st January, 2020.

$10\% \text{ on Rs.100} = \text{Rs.10}$

Thus after an year Ram pays back to Shyam Rs.100 along with Rs.10

$\Rightarrow \text{Total} = \text{Rs.110}$

HERE, Rs.100 = Principal (Initial amount lent/borrowed)

Rs.10 = Interest

Rs.110 = Maturity Value

1 Jan, 2021 = Maturity Date



Let us now understand the concept of bonds with the help of a story!

Once upon a time, a king wanted to build a school for the children of his kingdom. He called his ministers and discussed his plan with them. The idea was welcomed by the ministers but there was a problem of inadequate funds, that is, the amount required for construction. The king was short of Rs.60,000. Therefore, the king asked his three best ministers to bring to him the safest method of raising funds. Minister 1 went to the king of Mewar and asked him to lend Rs.60,000 for the construction of school. The king of Mewar denied to help him because he could not trust the king for such a big sum of money.

The 2nd minister went to three different kings and brought Rs. 20000 from each in return of becoming the co-owners of the school. Since the king did not want anyone else to be the owner of the school, this idea was also rejected. The king was disappointed and was feeling helpless.



He was sitting on this chair with his head down when the 3rd minister came with 20 merchants. The king asked, "Who are these people?". The minister smiled and said that these are the people who will give them the required amount for the construction of school. The minister gave each of them a piece of paper which had a stamp of king and had some terms and conditions mentioned on it.

The conditions mentioned on the paper were:

- 1) Each merchant will give Rs. 3000 to the king and will get a fixed 10% return, that is, Rs. 300 after every six months up to a period of 5 years.
- 2) After completion of 5 years, the merchants will get the original sum, which was Rs. 3000 and will also get the additional amount of Rs. 300.

In this way, the merchants will be satisfied as they will get a fixed amount of money every six month. The king will also be satisfied because he will get the full amount required for construction of school without transferring the ownership to anyone else.



The basic differences between various types of securities available in the market:

Stocks Vs Bonds

Stocks are **equity instruments** which represent ownership in a corporation while bonds are **debt instruments** which are paid back at the time of maturity. Imagine yourself investing 10 pencils for 6 months @10% per month. Stocks: At the end of 6 months, you might end up with 20 pencils or sometimes even zero (there is **uncertainty and unpredictability**).



Whereas, Bonds: You will definitely have 16 pencils after 6 months as long as the company doesn't default (there is **negligible risk**).

Loans Vs Bonds

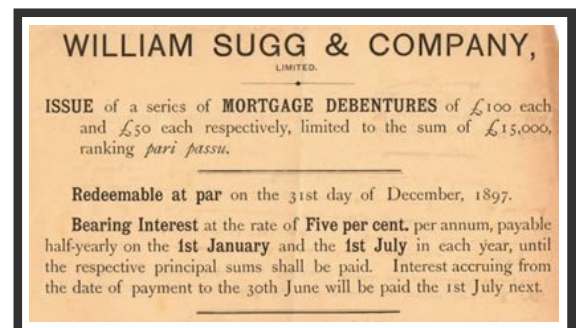


As far as a loan is concerned, you are talking about an economic relation between a **bank and yourself**. However, a bond defines a relation between you and any separate legal entity. Further, a **bond indenture** is all you need for **bond issuance** (less formalities) as opposed to the formalities involved in loans. Further, a **loan agreement** (that you have granted a loan to somebody) **cannot be sold to raise money**. However, a bond can be sold.

Debentures Vs Bonds

Bonds are generally issued during the inception of a **business** whereas Debentures are issued during the **course of the business**. Bonds are backed up by a **collateral** or security or a physical asset but Debenture are backed up by the **promise made by the issuer**.

The rate of interest is higher in Debenture compare to a bond.



TYPES OF BONDS

There are numerous types of bonds trading in the market. Some of them are:

Zero Coupon Bonds

Zero coupon bond is a bond in which the face value is **repaid at the time of maturity**. They assume a **positive time value** of money. Suppose, an entity makes an offer saying, "If I promise to give you ₹1,00,000 at the end of 6 months, how much are you willing to give me now?" Then, the entity is up for Zero Coupon bonds or Discount Bonds. Precisely, a scheme where you invest for 'n' years and receive the amount only upon the completion of the period (no coupons / interest).

High-yield Bonds

Bonds that have a higher risk of default or other adverse credit events, but offer higher yields than better quality bonds in order to make them attractive to investors are called high-yield bonds. Suppose, you have two options- Invest in Company A @10% per annum with 90% probability of amount recovery or Invest in Company B @10% per annum with 20% probability of amount recovery. Any rational person would go for Company A. Thus, in order to make its offer attractive, Company B has to offer a higher rate of return. The bonds of Company B would then be called High Yield bonds or Junk bonds.

Fixed Rate and Floating Rate Bonds

The rate of interest of a floating rate bond is linked to a benchmark rate and is reset at a regular interval. However, for fixed rate bonds, it remains the same always. Suppose, for a particular investment in a bond; you get ₹100 every month (@5% per month). However, for the other, you get variable amounts every month (@ (1+prevailing repo rate) per month. Then, the former is a Fixed rate bond while the latter is a floating rate bond.

Inflation-indexed Bonds

Inflation-linked bonds, or inflation-indexed bonds are securities designed to help protect investors from inflation. Such bonds are indexed to inflation so that the principal and interest payments rise and fall with the rate of inflation. For example- you have purchased a bond worth ₹1,000 in 2015 and upon maturity (in 2020) you are given ₹1,500. It might so happen that ₹1,000 in 2015 was worth, say, 100 paise. However, in 2020, ₹1,500 is worth, say, 75 paise. This happens due to inflation. Bonds that cover the loss that may arise due to inflation, are called Inflation-indexed Bonds.

Vanilla Bonds and Green Bonds

Plain Vanilla or straight bonds are the simplest form of bonds. For example- ₹10,000 for 6 months @4% per month. The rate is fixed, no floating rate options. Green bonds, as the name suggests, are the bonds issued to raise funds for environment associated projects. Thus, when purchasing a green bond, know that your proceeds will be used for a social impact and the entire details about the same must be made available to you.

Perpetual Bonds

This type of bonds do not have any maturity date and such bondholders receive interest until the company is wound up(shut). However, the principal amount is not repaid by the company.

Subordinated Bonds

These bonds are given less priority(importance) than Other type of bonds in case of liquidation(winding up/shutting) of a company. Such bonds are repaid after other bonds have been redeemed(repaid).

Bearer Bonds

Whenever a bond is bought, the buyer receives the bond certificate with his name on it along with other details. However, in case of bearer bonds, there is no name mentioned in the bond certificate. The possession of such bonds is enough to signify their ownership. Thus, even if they get stolen, the person who stole it can claim the bond amount to the issuing company

War Bonds

These bonds are issued by the government in order to raise funds in case of a war.

Climate Bonds

These are similar to war bonds but they are issued in case of adverse climatic conditions.



Why To Buy Bonds

Bonds provide income

Although many investment opportunities provide steady income, however, bonds have proved to be one of the most reliable source of income.

Bonds offer diversification

It is a verified fact that 'one must not put all their eggs in one basket', this is because, if the basket falls, all the eggs will get spoilt. However, if the eggs would have been put in different baskets, then, the fall of one basket would not have spoiled all the eggs.

The same thing goes for our money. If our money is invested in different places, then, the downfall of one investment would not lead to the downfall of all. Thus, bonds provide a source for the diversification in investment of different investors.

Bonds preserve principal

Bonds help preserve the principal amount with lower risk, as compared to other securities. Since bonds are repaid after a specific time period along with timely interest payments, principal amount is preserved.

Bonds possess tax advantages

Certain bonds, mainly those issued by government companies are tax free bonds. Interest earned on such bonds is completely tax free in the hands of the investor



BONDS MARKET

Just like a stock market, a bond market is a place where new bonds and participants can issue new bonds and can also buy and sell the existing securities (like bonds, bills notes etc.)

A bond market can be classified into two types, namely the Primary Market and the Secondary Market.



Let's consider an example of Mr. Steeve who wants to buy new bonds issues by DFG Ltd. But he was confused about the exact place to go to buy these bonds. So, one of his friends suggested that he should go to a market from where he can get brand new bonds directly from DFG company. This type of market is known as Primary Market.

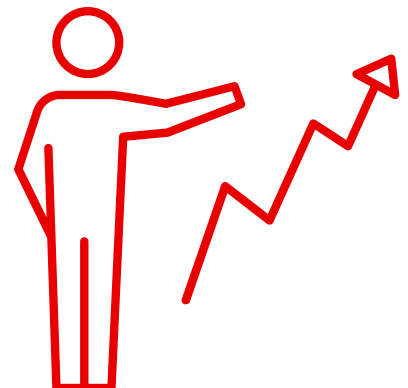
Now, after 6 months, Mr. Steeve wanted to sell his bonds. So, he went to a broker and asked another investor who can give him a higher price for the bond. This type of market is known as Secondary Market.

Primary Market

- Referred to as a new issue market.
- The transactions strictly occur between the bond issuers and the bond buyers.
- Deals in brand new bonds which have not previously been offered to the public.

Secondary Market

- Deals in securities which have already been traded in the primary market.
- Investors can purchase the already traded bonds from the broker who acts as an intermediary between the bond issuer and the bond buyer.



BOND PRICE AND INTEREST RATES

A bond price refers to the price at which a company issues the bonds to the investors and the rate at which those bonds are issued is known as interest rate or coupon rate.



Now, when the interest rates for the bond increases, its price goes down. It can be understood with an example of a swing in the park.

While riding a swing, when one person is on the top, the second one is at the bottom and vice versa.

EXAMPLE:

For example, Tolkien Ltd. Published in a newspaper that it has issued bonds worth Rs. 50000 each at a coupon rate of 10% paid annually for 2 years

Now, what we can infer from this statement is that a bond worth Rs. 50000 will pay an annual interest of Rs. 5000 each year up to the period of maturity of bond i.e. up till 2 years.



Let's understand this better with an Illustration:

Suppose, a Fincorp Ltd. issued bonds of Rs. 1000 each at a coupon rate of 10% for 2 years. An investor named John went to the primary market and purchased its bonds.

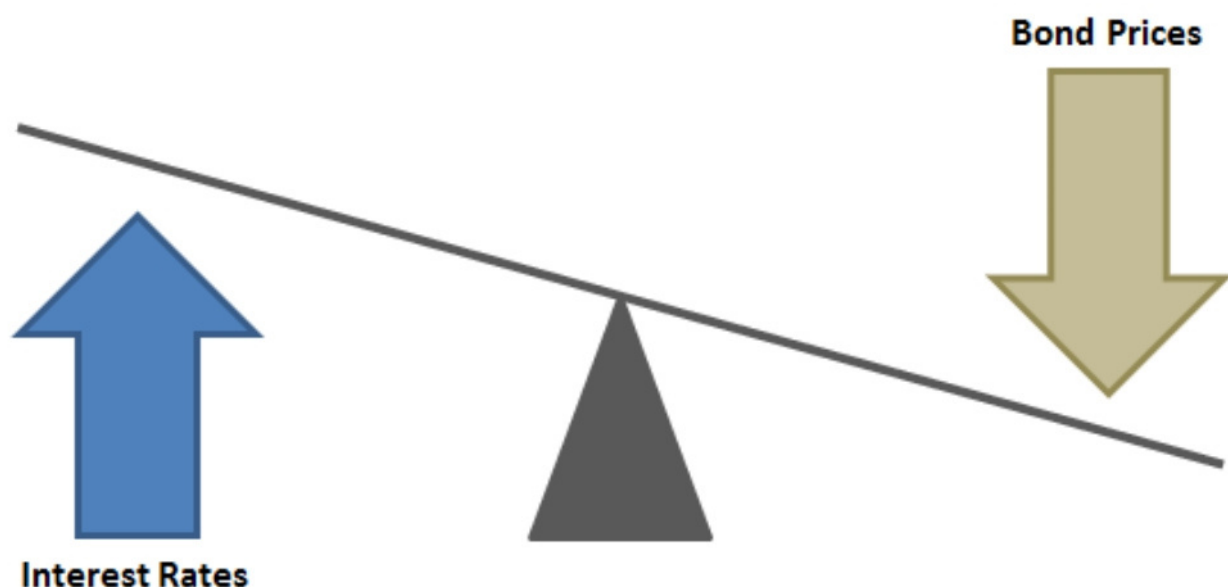
Now, John will get an annual interest of Rs. 100 for 2 years and after 2 years he will get $1000+100$, i.e. Rs. 1100.

But after a month, John was in need of money to pay for the college fees of his daughter. So, he could not wait for the bond to mature and went to the secondary market and asked a brother to sell his bonds. But what he noticed, was surprising! A similar bond was paying an interest rate of 15% in the market.

As a result, all the investors were attracted towards the high interest rate bond. Therefore, the demand for John's bond fell, resulting in the fall in price of his bond.

This is the relationship between bond price and interest rates. When the interest rates of a similar type of bond which is already trading in the market increases, the demand for existing price falls since all the investors will be interested in purchasing a bond which will give them higher interests. The fall in demand will result in the fall in price of the existing bonds.

INVERSE RELATIONSHIP BETWEEN BOND PRICE AND INTEREST RATES



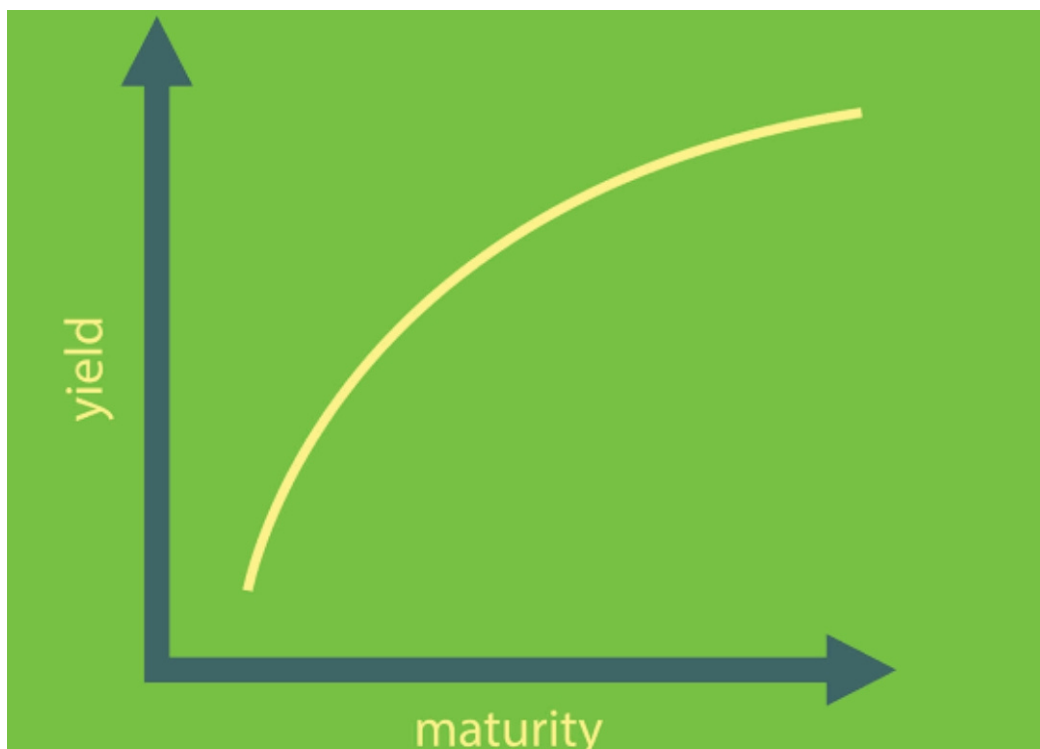
YIELD CURVES AND ECONOMIC PREDICTIONS

Yield means to produce or provide something. In bonds, yield refers to the total amount of money which an investor will get after the maturity period of the bond.

Just like all other curves used in economics, a yield curve helps in anticipating the return which an investor will get on his investment based on the economic conditions prevailing in the market.

There are four different types of yield curves which indicates different economic situations. These are:

Normal Yield Curve



A normal or up-sloped yield curve indicates yields on longer-term bonds may continue to rise, responding to periods of economic expansion. When investors expect longer-maturity bond yields to become even higher in the future, many would temporarily park their funds in shorter-term securities in hopes of purchasing longer-term bonds later for higher yields.

In a rising interest rate environment, it is risky to have investments tied up in longer-term bonds when their value has yet to decline as a result of higher yields over time. The increasing temporary demand for shorter-term securities pushes their yields even lower, setting in motion a steeper up-sloped normal yield curve.

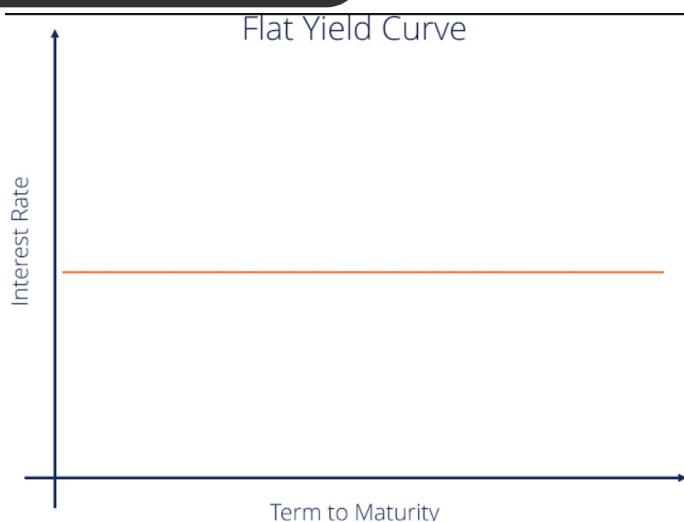
Inverted Yield Curve



An inverted or down-sloped yield curve suggests yields on longer-term bonds may continue to fall, corresponding to periods of economic recession. When investors expect longer-maturity bonds yields to become even lower in the future, many would purchase longer-maturity bonds to lock in yields before they decrease further.

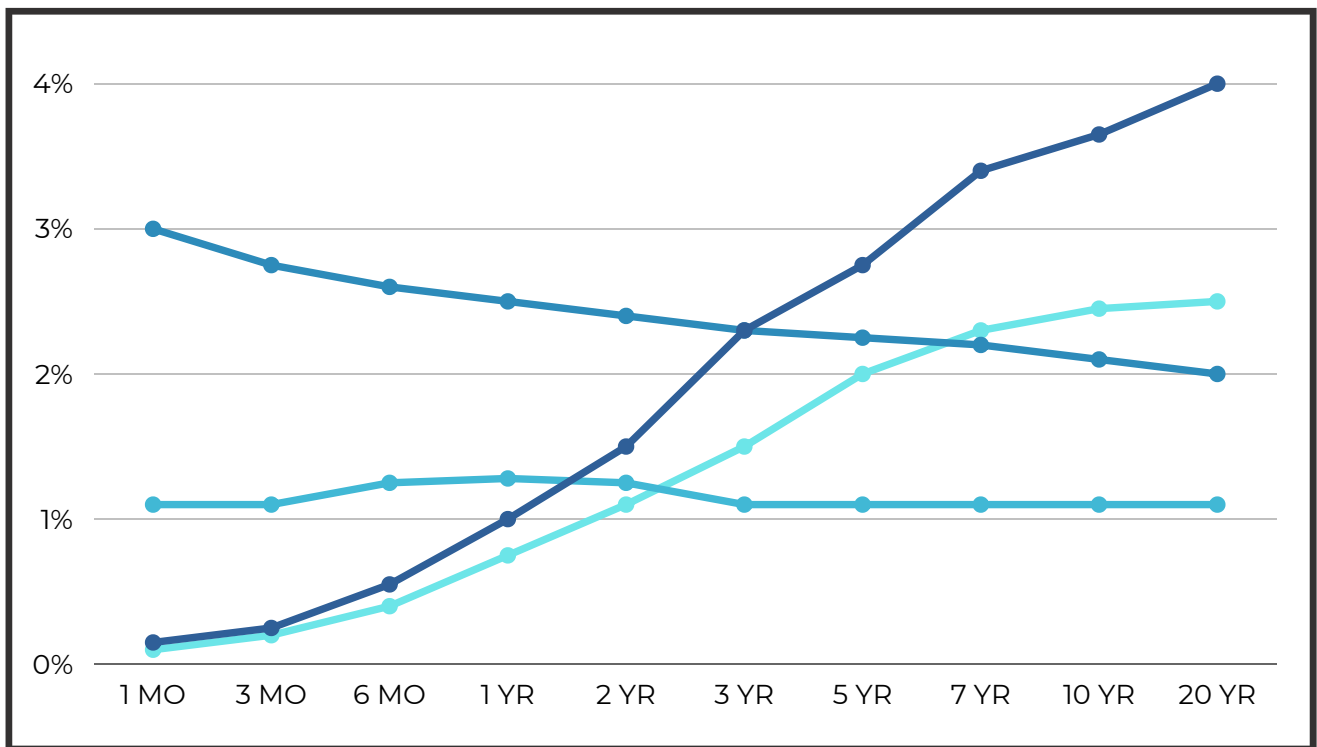
The increasing onset of demand for longer-maturity bonds and the lack of demand for shorter-term securities lead to higher prices but lower yields on longer-maturity bonds, and lower prices but higher yields on shorter-term securities, further inverting a down-sloped yield curve.

Flat yield curve



A flat yield curve may arise from the normal or inverted yield curve, depending on changing economic conditions. When the economy is transitioning from expansion to slower development and even recession, yields on longer-maturity bonds tend to fall and yields on shorter-term securities likely rise, inverting a normal yield curve into a flat yield curve.

When the economy is transitioning from recession to recovery and potential expansion, yields on longer-maturity bonds are set to rise and yields on shorter-term securities are sure to fall, tilting an inverted yield curve towards a flat yield curve.



Normal Yield Curve

A yield curve which continuously increases and becomes stable after a particular point of time. It indicates a stable economic condition therefore investors see this period as a good time for investing in bonds.

Steep Yield Curve

A curve which increases throughout the axes is known as a steep yield curve.

This is a period of positive upturn in the economy where returns continue to increase.

YIELD CURVES AND ECONOMIC PREDICTIONS

Flat/Humped Curve

A curve which is flat in shape with humps in between is known as a flat curve.

It indicates an uncertain economy because one is not sure what will happen next: A flat surface or a hump, just like a plateau.

Inverted Yield Curve

A curve which moves downwards along the axis is known as an inverted curve.

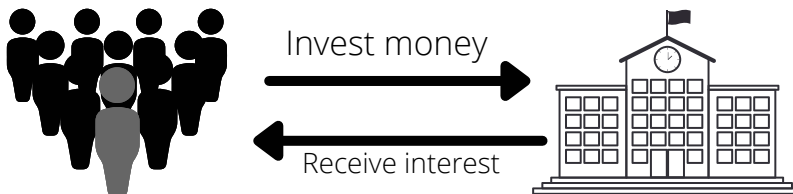
Since Returns are continuously falling, therefore investors don't invest when the curve is inverted.

It also gives a warning of recession.

BOND VALUATION

Now, we have learnt the basics of bonds and how its curve help its in predicting the economic situations, its time for us learn about how the value of bonds is calculated.

Bond valuation is the process of calculating the value of bond and coupons. It involves two terms: Present value and Future value.



If present invest in a company and earn interest by buying bonds, they are the lenders and the company is the borrower.

Future Value

Let assume that I invested Rs. 1000 in a bank at an interest rate of 5%. One year from now, I will receive the principal, that is Rs. 1000 plus the interest, which is 50. Suppose, I reinvest this sum (1050) for one more year. After one year, I will receive the principal, 1050 plus the interest (52.5). Therefore after two years I will have Rs. 1102.50.

This amount can be computed as:

$$FV = \text{AMOUNT} * (1+R)^{at}$$

$$FV = 1000 * (1+0.05)^2 = 1102.50$$

Present value:

Suppose, we are going to get Rs. 1000 in three years for an annual interest rate of 5%. Now using the above formula, we get :

$$1000 = \text{amount} * (1+0.05)^3$$

$$\text{AMOUNT} = 864.30$$

Therefore, 1000 in three years will represent 864.30 today.

The formula which is used to calculate the value of bonds is :

$$PV = FV / (1+r)^T$$

Where :

PV = Present Value

FV = Future Value

r = interest rate or coupon rate

T = time period for which bond was purchased.

Let's take an Example:

Suppose, Mr. Modi had purchased some bonds 2 years ago and those bonds are now trading in the market at Rs. 1000. The bonds gave an annual interest of 10% for 2 years. Now, Mr. Modi wants to calculate the price at which he purchased the bonds. How can it be done??

We will use the same formula mentioned above.

Here,

$PV = ?$

$FV = \text{Rs. } 1000$

$r = 10\%$

$T = 2 \text{ years.}$

By putting these values in the formula we get,

$$PV = 1000 / (1 + 10/100)^2$$

Which gives,

$$PV = 1000 / (1 + 0.1)^2$$

$$PV = 1000 / (1.1)^2$$

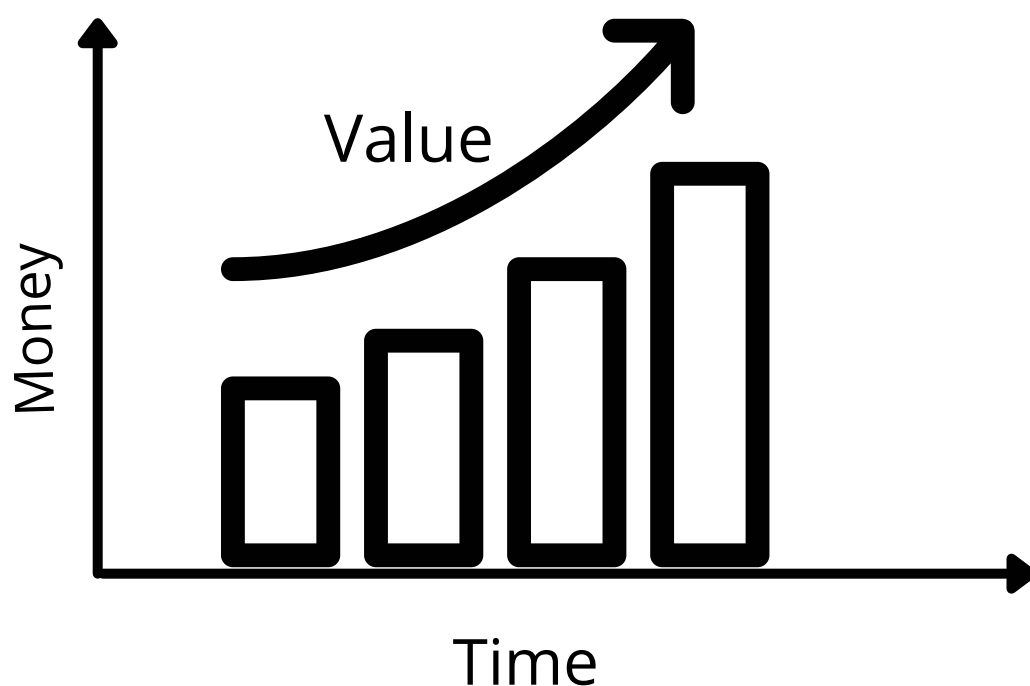
$$PV = 1000 / 1.21$$

Which finally gives, $PV = \text{Rs. } 826.44$

Therefore, a bond which Mr. Modi purchased at Rs. 826.44 yielded him Rs. 1000 after 2 years at 10% coupon rate (assuming that the coupon rate remained the same during 2 years).

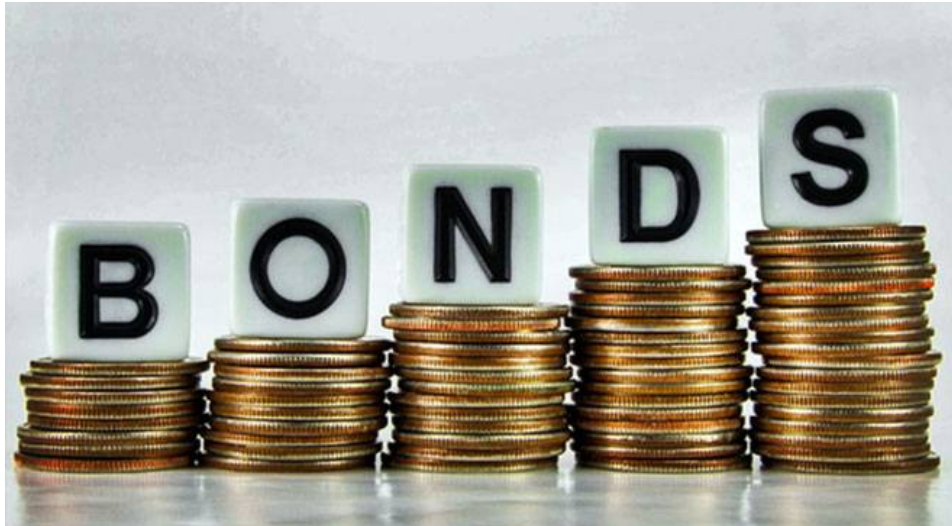


This is the concept of time value of money



Time Value Of Money

It refers to a concept in which the value of money increases over a period of time. Referring to the above mentioned example, the bond which was purchased at Rs. 826.44, two years ago is now available in the market at Rs. 1000 at the same coupon rate.
THIS IS ALL ABOUT THE TOPIC BONDS!



Test your knowledge :

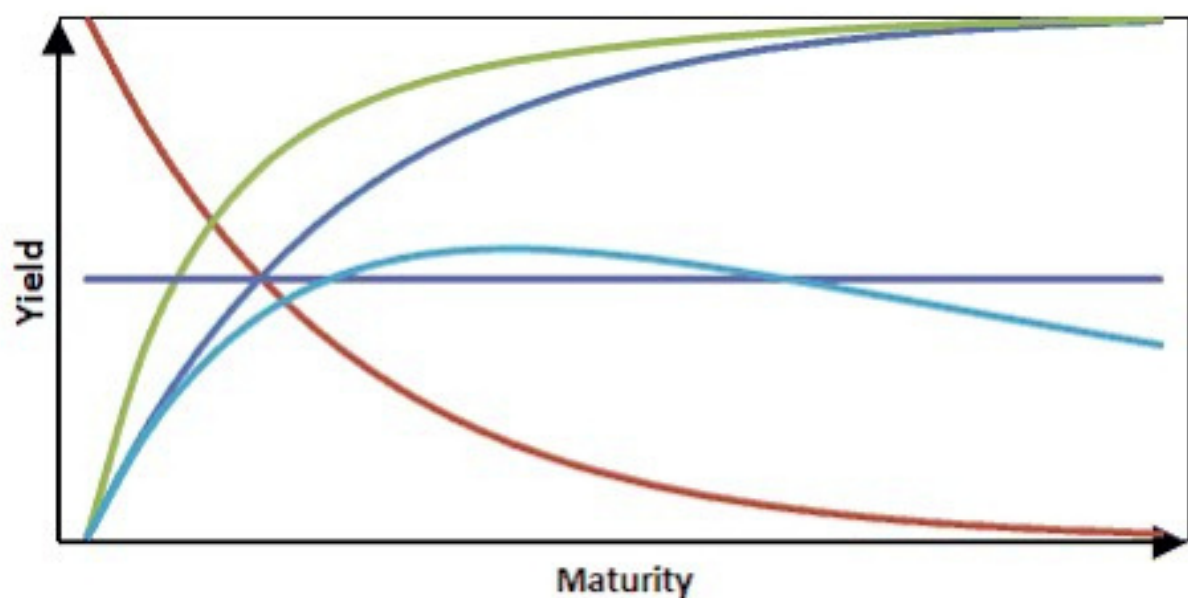
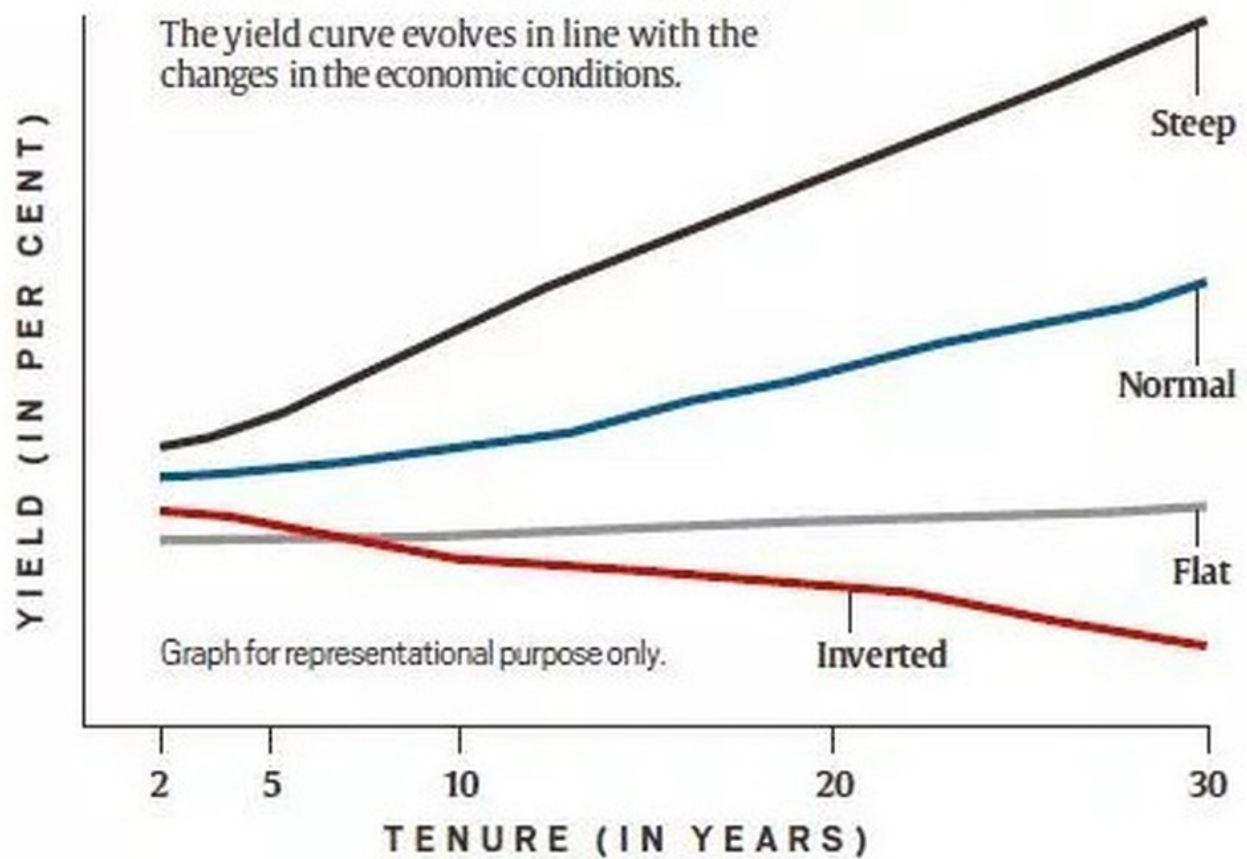
So, have you enjoyed the above story? Did you learn what a bond is? Let's check it by answering some interesting questions!!!

- 1) I am a document with Rs. 20000 mentioned on it. I give fixed amounts of money every 6 months. Who am I ?
- 2) A man purchased a bond from a company. The man will be known as:
a) investor b) borrower
- 3) The Lalu Ltd. Was in need of some money. It issued some bonds to investors. Do the investors also become the owner of the company?
a) yes b) no c) may be
- 4) ABC company issued bonds and after some time it started incurring losses. Will the investors get fixed some of the money?
- 5) Sameer said that he will give me 10% of Rs. 6000 every six months on the issue of bonds. What is this 10% known as?

Answers:

1) bond 2) investor 3) no 4) yes 5) coupon rate

DIFFERENT TYPES OF YIELD CURVES



— Normal — Inverted — Steep — Flat — Humped

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CORPORATE RESTRUCTURING

02

Restructuring refers to any kind of change which is pursuant to something. Anything which undergoes a change, has a reason behind it. Similarly, Corporate restructuring refers to any action taken by the corporate to modify its capital structure or its operations. In other words, reorganising the structure of an organisation to fetch more profits from its operations or to make changes which are best suited to present situation is termed as corporate restructuring.



| Example

For example, two telecom companies, idea and Vodafone merged on 31st August, 2020 to form a new entity named Vodafone idea limited. Kumar Mangalam Birla heads the merged company as the chairman. This merger is a form of corporate restructuring wherein two companies combined to counter the competition of Reliance Ltd.

Therefore, Corporate Restructuring involves following things:

- Expansion or contraction of a firm's operations.
- Changes in ownership structure.
- Changes in corporate control.

Characteristics of Corporate Restructuring

Corporate structuring might result in the following changes:

- Improvement of the Balance Sheet of the company (resulting by disposing the unprofitable division from its core business)
- Staff reduction
- Changes in corporate management
- Disposing of the underutilised assets, such as brands/patent rights.
- Outsourcing operations such as technical support and payroll management to an efficient third party.
- Shifting of operations such as moving of manufacturing operations to lower-cost locations.
- Reorganising functions such as marketing, sales, and distribution
- Renegotiating of labour contracts to reduce overhead
- Rescheduling of debt to minimise the interest payments

Reasons For Corporate Restructuring

Corporate restructuring is implemented in case of the following

Change in the Strategy

The management of the concerned entity attempts to improve its performance by letting go off its certain divisions and subsidiaries which do not fall in line with the core strategy of the company. The division or subsidiaries may not appear to go along strategically well with the company's long-term vision. Thus, the corporate entity may decide to focus on its core strategy and dispose of useless assets to the potential buyers. For instance: When Facebook announced its first restructuring, The reasons reasons included a desire to accommodate growth and streamline the company's product development process.

Lack of Profits

The distressed entity (the one not generating enough revenues) may not be earning enough profits to cover the cost of capital (minimum rate of return that a business must earn) of the company and may be incurring economic losses. The poor performance of the undertaking may be the outcome of a wrong decision taken by the corporate management like not responding in accordance with the change in customer needs or the increase in costs.

Reverse Synergy

This concept is in contrast to the concept of synergy, where the value of a merged unit is greater than the value of all the individual units collectively. According to the principle of reverse synergy, the value of an individual unit is more than the merged unit. This is the most common reason for disposing of the assets (non- remunerative) of the company. The concerned entity may decide that selling off a division to a third party would increase the value rather than owning it (because the division may be faulty or not fetching enough revenue).

Cash Flow Requirement

Disposing of an unproductive undertaking may lead to considerable cash inflow for the company. If the concerned corporate entity is facing some financial complexity, disposing of an asset to raise money and to reduce debt is a feasible choice.

TYPES OF CORPORATE RESTRUCTURING

There are 8 types of corporate restructuring.

- Merger
- Demerger
- Reverse merger
- Disinvestment/divestiture
- Takeover/acquisition
- Joint venture
- Strategic alliance
- Slump sale



MERGER

When two or more companies come together to either form a new company or when one company gets absorbed into another, such a process is known as merger. The merger of two or more companies is done by exchange of assets between the acquiring (the one which acquires the other company) and the target company (the company which is being acquired).

There are various types of mergers.



HORIZONTAL MERGER

When a company acquires its own competitor, it is known as horizontal merger.

Recent merger of Vodafone and Idea is a type of horizontal merger where both the telecom companies which were earlier in competition merged together to counter other stronger competitors in the market.

Reasons of horizontal merger:

- Increase market share and reduce competition in the industry.

- Further utilize economies of scale (thus reducing costs)

- Increase diversification.

- Reshape the company's competitive scope by reducing intense rivalry.

- Realize economies of scope.

- Share complementary skills and resources.

VERTICAL MERGER

A merger between the companies that are along the same supply chains is termed as vertical merger.

For example, let's consider a rubber manufacturing company which supplies rubber to JK Tyres. Now, if JK Tyres acquires the rubber manufacturing company to gain control over its supply chain, it is termed as backward vertical merger.

Similarly, if a company ABC, which acts as a distributor of JK Tyres, is acquired by it, then this type of merger is known as forward vertical merger.

Reasons of vertical merger:

- Reduce operating cost

- Realize higher profits.

- Ensure tighter quality control.

- Better flow and control of information along the supply chain.

- Synergies: operating synergy, financial synergy, managerial synergy, etc.

MARKET EXTENSION MERGER

A market extension merger is a type of merger in which two or more companies in the same industry sector combine in order to expand their market reach. These companies produce or sell the same type of products but to different markets.

For example, a food producer which is only active in one country merges with a maker of similar snacks in the neighbouring country. Now, instead of establishing a whole new company in each other's territory to expand their operations, both the companies merged together into a single group and increased their market reach.

PRODUCT EXTENSION MERGER

When two or more companies that target the same regional and demographic audience and sell related but not the same products are merged together, then such a merger is known as product extension merger.

For example, the merger between mobilink telecom Inc. and Broadcom is a product extension merger. The two companies operate in the electronics industry and their merger allowed the companies to combine their technologies. The merger enabled the combination of Mobilink's 2G and 2.5G technologies with broadcom's 802.11 bluetooth and DSP products. Therefore, the two companies are able to sell products that complement each other.



Reasons of product extension merger

INCREASED MARKET SHARE AND PROFIT:

The pre-requisite of the merger is the expectation of an increase in market and share and reduction of operating costs that leads to increased profits. Post-merger, both organizations cater to a broad audience. As a result, the market share of the combined entity increases, thereby giving the advantage of economies of scale and generating higher profits. This type of merger not only increases the market share but also boosts the profits.

COMPETITIVE ADVANTAGE

The synergy flowing from the merger gives a tough competition to rivals. The combined entity provides an augmented product/ service to the expanded customer base and thus earns a higher market share. Hence, it becomes easier to stand with competition.

BETTER UTILIZATION OF COMMON RESOURCES

Since merged originations operate in a common market, they often tend to interlink their production process, supply chain, or distribution channels. Thus, all these things collectively boost operational efficiency and also reduces costs.

CONGLOMERATE MERGER

A merger between companies which are working in different or unrelated business activities is termed a conglomerate merger.

For example, in 1995, Walt Disney Company purchased American Broadcasting Company. Disney purchased ABC gaining entry into ABC's national television realm. These two companies perform unrelated activities but when they merged, it did open an extensive new distribution and content options for Disney.

DEMERGER

MEANING:

Demerger is a form of corporate restructuring in which a corporation's business operations are segregated into two or more components. It is the opposite of mergers. The original company which is demerged is known as a demerged company and the new company formed after the demerger of the resultant company. In the case of demerger, the parent company still exists even after the demerger.



TYPES OF DEMERGERS

A split is a type of demerger in which a company splits up into two or more independent companies in which the parent company ceases to exist.

Shareholders of the parent company receive equivalent shares in the new company in order to compensate for the loss of equity in the original stocks; thus, at the moment of spin-off, the ownership of the original and spun-off companies are identical. However, shareholders may then buy and sell stocks from either company independently; this potentially makes investment in the companies more attractive, as potential share purchasers can invest in only the portion of the business, they think will have the most growth. Once the company is split into different entities, the shares held by the parent company are exchanged for the shares in the new company formed. These shares are distributed in the same proportion as they are held in by the original company, depending on the situation.

The best example of demerger is that of RELIANCE INDUSTRIES in August 2005.

Reliance industries demerged its operations into two segments: first segment is the one which focuses on exploration and production,

A spin out, also known as spin off or a starburst refers to a type of corporate action where a company splits off sections of itself as a separate business. In this, a division of an organisation becomes an independent business entity. For example, XYZ Ltd. Had three divisions named division A, division B and division C. The company realised that division C was earning huge profits and so the company XYZ decided to demerge the division C. Therefore, the division C demerged and became a new entity while the company XYZ existed with only two divisions namely division A and B.

Refining and retailing and petrochemicals which is under the chairmanship of Mukesh Ambani. Second is the one which focuses on Reliance communication ventures, reliance capital ventures, reliance energy ventures and reliance natural resources.

Earlier reliance was basically into industrial products but now with demerger, it has entered into segments like reliance telecommunications with a vision to bring mobile communication to post card cost. Now, other private companies are fighting back to break the image which reliance mobile has created among its customers.

EQUITY CARVE OUT

Meaning:

Equity Carve-Out is a partial spin-off in which an existing company creates its subsidiary. After the creation of such a subsidiary, it brings out its Initial Public Offer (IPO). The reason why we call it a partial spin-off is that it does not give away its control of the subsidiary. Only a part i.e., near about 20-30% of the equity stake, is issued to the new shareholders or investors. In other words, a company takes out one of the businesses and create a separate company to handle that part of the business. Moreover, the majority stake in that newly created company remains with the main company, thereby making the new entity a subsidiary of the primary concern. Therefore, thru equity carve-outs, a part of the existing business is divested. The concept of partial sell-off gives this reorganization a complex structure.

It has various synonyms that are alternatively used like "Partial Spin-Off", 'Subsidiary IPO,' 'IPO Carve-Out,' 'Split off IPO,' etc.



EQUITY CARVE OUT VS SPIN OFF

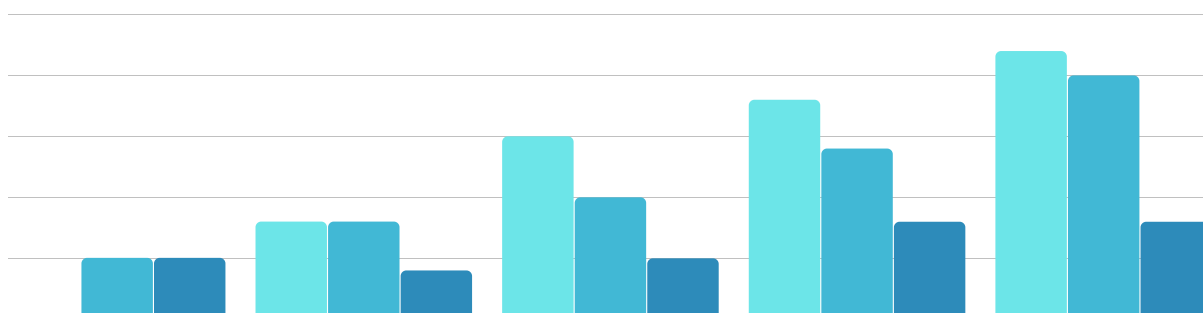
EQUITY CARVE OUT

EQUITY CARVE-OUT is a partial spin-off in which an existing company creates its subsidiary. After the creation of such a subsidiary, it brings out its Initial Public Offer (IPO). Majority stake in that newly created company remains with the main company, thereby making the new entity a subsidiary of the primary concern. Both companies (Holding and Subsidiary) have different management personnel

CARVEOUT	SPIN OFF
Parent company receives cash from its subsidiary.	Parent company does not receive any cash.
ADVANTAGES	DISADVANTAGES
- The control of subsidiary companies lies with parent company even after equity carve-out. - Carve-outs help existing companies to focus on their core activities & simultaneously assist newly formed companies in stabilizing in new markets. - Carve-out allows company to exploit & improve overall financial strength of parent company. - Save capital gains taxes compared to companies who go for a complete spin-off.	- It doesn't change the controlling power of the parent company. - Different management teams of both companies may create inconveniences due to a difference in management style and operations. - It is a tedious process and needs a coordinated and cohesive approach. - Involves some restructuring costs that may sometimes make this exercise a costly affair.

There's a slight difference between spin-off and carve-outs. In the spin-off, the parent company does not receive any cash as the shares are issued to the existing shareholders in dividends, which is also known as a stock dividend. While in carve-outs, the parent company receives cash from its subsidiary. As in this case, part of the equity stake is sold to new shareholders/investors or the public thru IPO. The carve-outs are strategies to introduce cash into the parent company. The companies carry out the equity carve-out strategy to use this cash to improve their existing main businesses.

However, it is not always possible that the equity carve-outs have only positive effects on business. In absence of correct planning or evaluation, it can be disastrous also.



REASONS OF DEMERGER

Unlocking value	The company management may feel that one of its divisions has achieved the required critical mass and if it is separated from the parent company and established into a separate company, it would be more profitable than if it were to remain a part of the parent company. In such a case, the division may be spun off into a wholly-owned subsidiary of the parent company. Such spin-off unlocks the hidden value of the demerged business and also enhances the shareholder value of both companies. In the US, PayPal was demerged from Ebay as PayPal had grown big enough to become viable on its own.
Focus on core business	The management of a company may wish to focus more on the company's main business by spinning off a part of the business into a separate entity or exiting it altogether. If the management creates a separate entity for the demerged business, it can focus more on the core business post the demerger. The new entity too can have a separate management team running the show independently. Such segregation can enhance the productivity and profitability of both the parent company as well as the new entity.
Change of business	If the parent company is changing its business to focus on new markets and/or products, one of its existing divisions may be hived off into a separate entity to meet the requirements of the clients of the existing business. Due to this, the parent company would be free to concentrate on the new business, while the demerged entity continues to focus on the existing business of the parent company.
Increase operational efficiency	The company management may wish to segregate an underperforming unit from other better performing ones by hiving off the underperforming unit from the parent company. Such segregation can help improve the operational efficiency and financial performance of the parent company, thereby enhancing the return on capital employed.

REVERSE SYNERGY

Reverse synergy means that the parts of a company are of more worth separately than they are within the parent company's corporate structure.

For example, News corp. announced that it would split into two companies. The company will spin off its troubled newspaper division, leaving its broadcast division as a standalone company. In a nod to the possibilities of reverse synergies, two investment banks noted that as the standalone businesses, the companies combined value could be between \$70 and \$77 billion at a time when the combined company is worth about \$53 billion.

REVERSE MERGER

When the acquiring company is weaker or smaller than the one being acquired, it is termed as a reverse merger. Typically, reverse mergers take place through a parent company merging with a subsidiary, or a profit-making firm merging with a loss-making one. When reverse mergers happen, the resulting entity may either take on the name of the smaller firm or the larger one.

The reasons for carrying out a reverse merger may include-

- 1) carrying forward tax losses of the smaller firm, which allows the combined entity to pay lower taxes,
- 2) in some cases, the smaller entity may have rights to trademark or assets making it imperative for it to survive,
- 3) backdoor listing on exchanges (This is an alternative strategy for going public, used by a company that fails to meet the minimum criteria for listing on a stock exchange. To get onto the exchange, the company that desires to go public instead acquires an already listed company.)

Further, the process for a conventional IPO can last for a year or more. When a company transitions from an entrepreneurial venture to a public company fit for outside ownership, time spent in meetings and drafting sessions related to an IPO can be detrimental to growth. In addition, during the many months it takes to put an IPO together, market conditions can deteriorate, making the conduction of an IPO unfavorable. However, a reverse takeover can be completed in as little as thirty days.

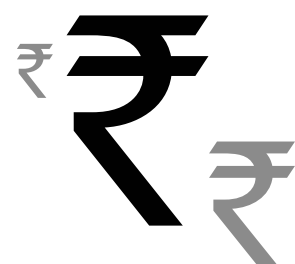


DISINVESTMENT or DIVESTITURE



Divestitures happen when a company disposes of all or some of its assets by selling, exchanging or closing them down, or through bankruptcy. As companies grow, they may decide that they are involved in too many business lines, so divestiture is the way to stay focused and remain profitable. Divestiture allows companies to cut costs, repay their debts, focus on their core businesses, and enhance shareholder value.

The biggest example of divestments has been Reliance Infra's sale of power business to Adani transmission for \$2.9 billion. The reason behind the divestiture was the debt load on the reliance infrastructure which was slashed by its sale to Adani.



TAKEOVER AND ACQUISITION

Though both the words, that is, takeover and acquisition seem synonymous, but they have different nuances on wall street.

ACQUISITIONS

Friendly acquisitions occur when the target firm agrees to be acquired; its board of directors (B of D, or board) approves of the acquisition. Generally, a financially strong company acquires a financially weak company by acquiring shares worth more than 50%. Acquisitions often work toward the mutual benefit of the acquiring and target companies. Both companies develop strategies to ensure that the acquiring company purchases the appropriate assets, and they review the financial statements and other valuations for any obligations that may come with the assets. Once both parties agree to the terms and meet any legal stipulations, the purchase proceeds.



For example, Amazon acquired Whole foods for a total of \$13.7 billion. It made the e-commerce giant into many physical stores.

REASONS OF ACQUISITION

- 1) Grow into new markets
- 2) Provide new services or products
- 3) Sell into new industries
- 4) Decrease business risk
- 5) Acquire new technologies or skill
- 6) Realize financial synergies
- 7) Realize economies of scale



TAKEOVER

Unfriendly acquisitions, commonly known as "hostile takeovers," occur when the target company does not consent to the acquisition. Hostile acquisitions don't have the same agreement from the target firm, and so the acquiring firm must actively purchase large stakes of the target company to gain a controlling interest. Even if a takeover is not exactly hostile, it implies that the firms are not equal in one or more significant ways.

One of the most famous hostile takeover attempts took place in 1983, when London based industrialist Swaraj Paul sought to control management of two Indian companies: namely, Escorts Limited and Delhi cloth mills by picking up their shares from the stock market. Though Paul ultimately retracted the bid, his hostile threat sent shockwaves through the otherwise complacent Indian Business world.

REASONS OF TAKEOVER

- 1) Increase market share.
- 2) Acquire new skills.
- 3) Access economies of scale.
- 4) Secure better distribution.
- 5) Acquire intangible assets (brands, patents, trademarks)
- 6) Spread risks by diversifying.
- 7) Overcome barriers to entry to target markets.
- 8) Defend itself against a takeover threat.



Hostile takeover is not illegal. However, every takeover should comply with the provisions of the Securities and Exchange Board of India, 1997.



**SECURITIES AND EXCHANGE
BOARD OF INDIA**

JOINT VENTURE

When two or more companies come together to accomplish a particular project or task by pooling their resources, it is known as a joint venture. In this, each of the companies is responsible for profits or losses and costs associated with it. It is an arrangement between two or more business entities, often for the purpose of starting a new business venture. Each entity contributes assets to the joint venture and agrees on how to divide income and expenses.

An example of a joint venture is that of Uber and Volvo. The goal of the joint venture between the taxi giant Uber and the heavy vehicle manufacturer Volvo was to produce driverless cars. The ratio of ownership is 50-50. The business worth was \$350 million as per agreement in the joint venture.



STRATEGIC ALLIANCE

Under this strategy, two or more entities enter into an agreement to collaborate with each other, in order to achieve certain objectives while still acting as independent organisations. Unlike joint ventures in which two combining companies pool resources to create a separate business entity, a strategic alliance is a process where two companies work as individual entities to accomplish a specific task.

An example of strategic alliance is of Google and Luxottica. Luxottica is a leading luxury and sports eyewear company, and Google is an international company which provides internet-based services and products. There is no way that one can think of two such different companies getting into a business alliance with each other.

But these two companies get into an alliance to set an example in the market. Both the companies formed an alliance with an objective of increasing their customer base and expanded their business by combining luxury and technology.

SLUMP SALE

Under this strategy, an entity transfers its one or more undertaking for lump sum consideration. Under Slump Sale, an undertaking is sold for a consideration without assigning values to the individual values of the assets or liabilities of the undertaking. The part of the business which is not profitable is sold off so that the business can focus more on its core activities.

Objectives of Slump Sale



No kind of court approval is required in the case of an asset sale. The transfer of asset or liabilities is dependent on the acquirer.

STOCKS

03

Stock or Equity represents a part of the ownership in a company. Shares are collectively called as Stock. It is a security for investment which pays dividend and capital gain on sale as a return. Stock can be sold/bought at par, premium or discount. Holders of shares are called shareholders.

Let us now understand the concept of Stocks with an example!



For instance, you own a dairy milk worth Rs.50 which can be divided into 10 small pieces. These 10 small pieces are called shares which can be sold to 10 different people or to 1 person collectively.

If you think to make a profit, then you may sell each piece at a premium price of Rs.10 and earn a cool Rs.100 on your chocolate.

But what if you want to retain a piece for yourself? In that case, you might save one piece and sell the rest. You can always sell it at a discount as well.

Say if your best friend is asking to buy from you, then in that case you could sell it at a discount price of Rs.3 each and earn Rs.30. In this case, you are incurring a loss of Rs.20.

Now, replace the Dairy Milk with a company and yourself as a Promoter or Founder of the Company.

Each piece as a share and buyers as shareholders:

Rs.10 each – Premium price

Rs.5 each – Par value/face value/intrinsic value

Rs.3 each – Discount price



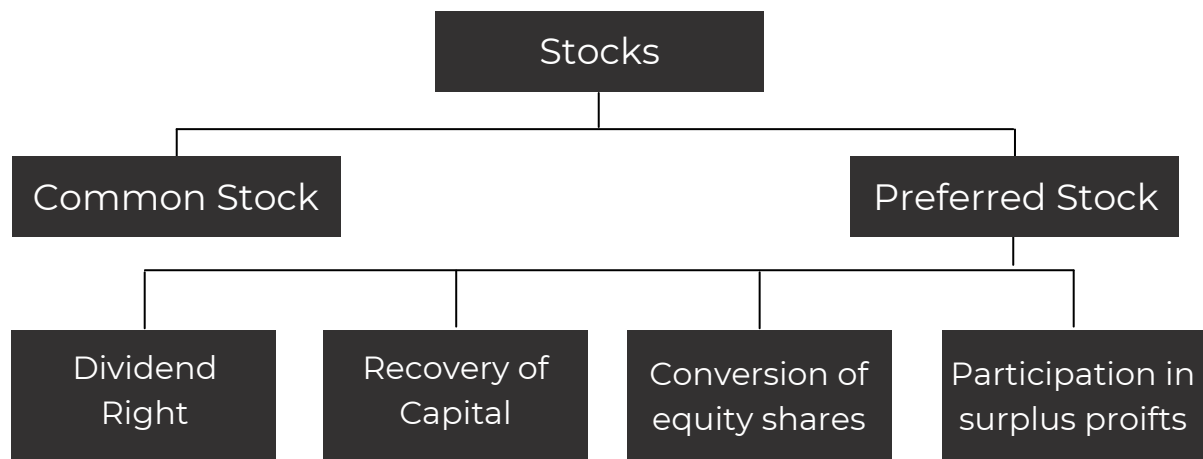
What is a Dividend?

A dividend is like a share of company's profits or reserves that shareholders will get. It is typically paid annually by the company and the sum of dividend is usually decided at the Annual General Meeting of the company conducted by the Board of Directors with the shareholders.

Types of Stock

Stocks can be classified based on various factors.

Classification Based on Ownership Rights



Company gets to decide which shares it wants to issue. Is it

1. Common Stock or
2. Preferred Stock

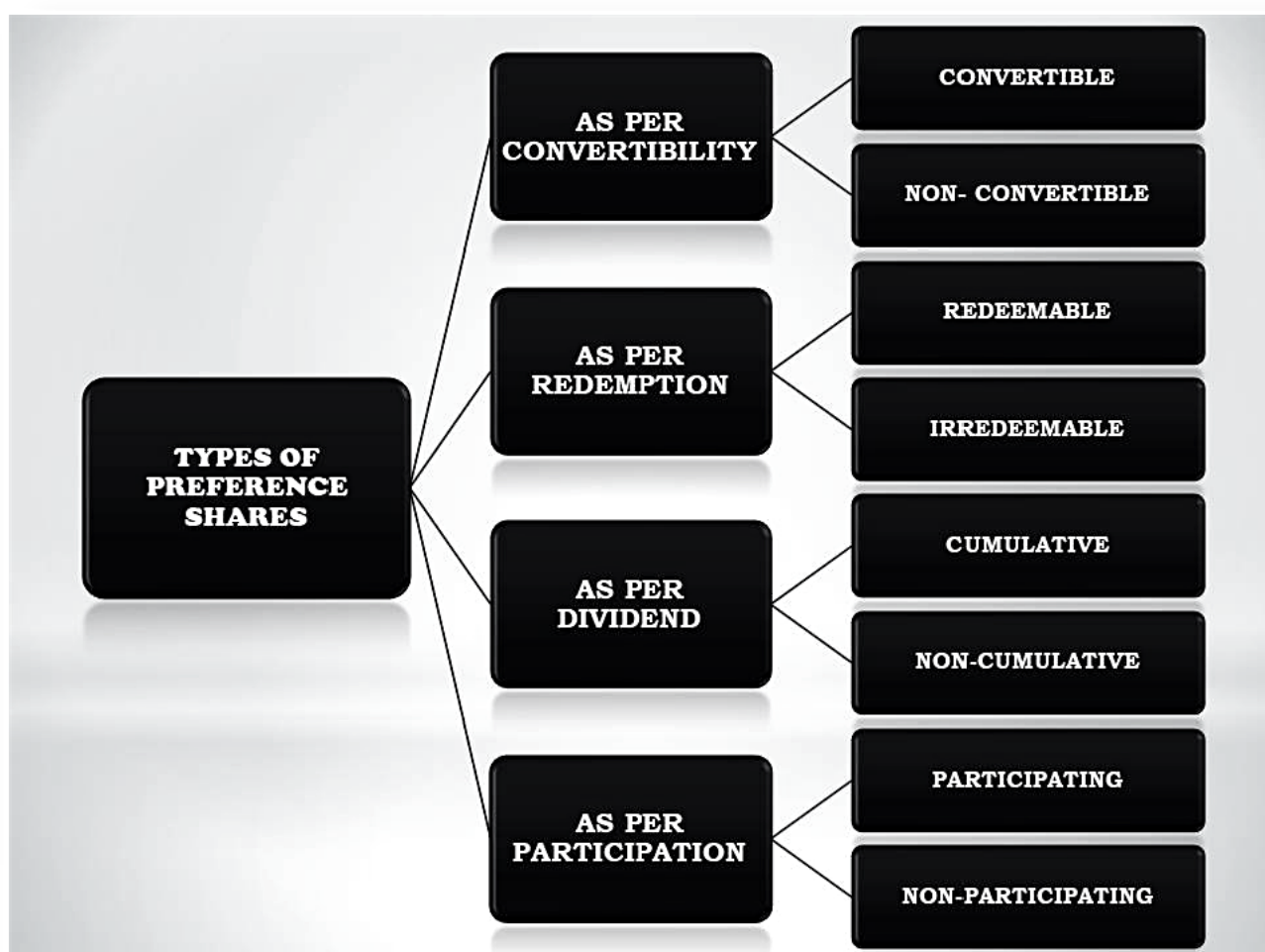
The difference between the two is subtle yet very significant. **Preference shareholders get a fixed amount of dividend at a predetermined time period.** Whereas equity shareholders may or may not get a consistent dividend although they enjoy voting rights over the preference shareholders. In case of liquidation of the company, then after settling the claims of creditors, bond/debenture holders, preference shareholders will be paid before equity shareholders.

Let us now understand the concept of with the help of an example!

Imagine you are in dire need of Rs. 1,00,000 cash for your start-up that delivers food through drones. And there are 2 persons who you can borrow from X & Y. Ms. X tells that she will give a sum of Rs.50,000 in cash on which she wants 10% fixed dividend every year until the company is dissolved. Mr. Y is also ready to give the Rs.50,000 but on one condition. He doesn't want any fixed dividend but he wants to be directly involved in future decision-making of the business as an equal partner. Here,
Ms.X – Preference shareholder
Mr.Y – Equity shareholder



Types of Preference Shares



On the basis of convertibility

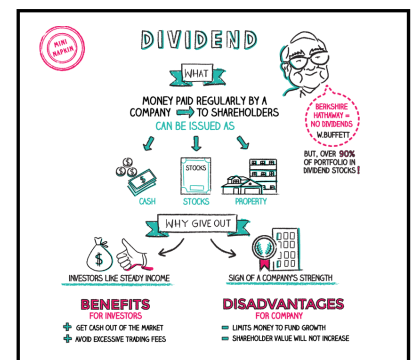
The preference shares that carry the right to get converted into Equity Shares at their option according to the terms of issue is called **CONVERTIBLE PREFERENCE SHARES** and when not given an option is **NON-CONVERTIBLE PREFERENCE SHARES**.

On the basis of dividend

The holders of **CUMULATIVE PREFERENCE SHARES** are entitled to recover the arrears of preference dividend, before any dividend is paid on equity shares. This means that if in any year, the profits of the company are insufficient to pay dividend on these shares, the dividend keeps on accumulating until it is fully paid.

Let us now understand the concept of with the help of an example!

Example: If dividend has not been paid for the years 2017 and 2018 on 8% cumulative preference shares and the company wants to distribute dividend on equity shares for the year 2019, a total of 24% dividend (8% of 2017+ 8% of 2018+ 8% of 2019) will have to be paid first on preference shares before the payments of any dividend to equity shares. The arrears of dividend on these shares are shown in the Balance Sheet as a commitment under 'Contingent Liabilities and Commitments'.



The holders of **NON-CUMULATIVE PREFERENCE SHARES** get a fixed amount of dividend out of the profits of each year. If no dividend is declared in any year due to any reasons, such shareholders get nothing, nor can they claim unpaid dividend of any year in any subsequent year.

On the basis of redemption

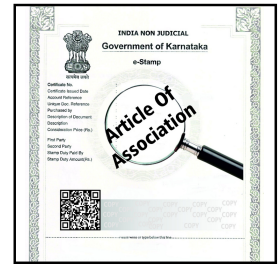
REDEEMABLE PREFERENCE SHARES are redeemed by the company at the time specified for the repayment or earlier. The repayment of amount is termed as Redemption. These shares are particularly issued by the Company Limited by Shares and redeemed as the provisions of Articles of Association (AoA is like a constitution for the company). The maximum time limit for repayment of preference shares must not exceed 20 years.

Whereas, the amount of **IRREDEEMABLE PREFERENCE SHARES** cannot be returned by the company to the holders of such shares when the company is wound up. The Companies Act, 2013 does not permit issue of Irredeemable Preference Shares.

On the basis of participation

The Articles of Association of a company may provide that after dividend has been paid to the Equity shareholders, the holders of Preference Shares will also have a right to participate in the remaining profits. The Preference Shares carrying this right are called **PARTICIPATING PREFERENCE SHARES**.

Contrary to the above type is **NON- PARTICIPATING PREFERENCE SHARES**

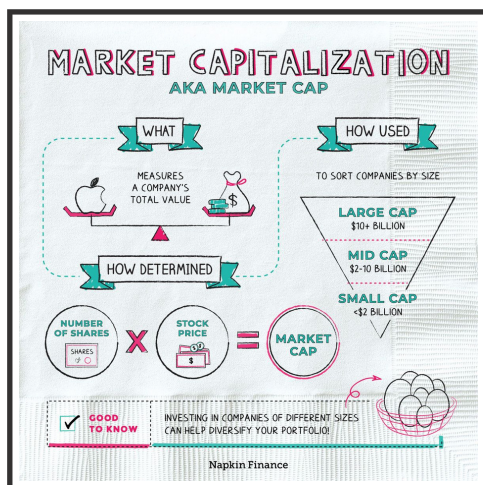


Classification Based on Market Capitalization

The second classification of stocks is based on Market Capitalization or the size of the company.

Market capitalization, literally means, the capitalization of the company in the stock market. It is calculated by multiplying the current market price of the company's share with the total outstanding shares of the company.

MARKET CAPITALISATION = CURRENT MARKET PRICE OF SHARE x TOTAL OUTSTANDING SHARES



Understanding concept with an example!

Consider ABC Limited's current market price of one share is Rs.100 and there are total 1000 shares outstanding or say trading at the stock market for simplicity. Then, $\text{Market Cap} = 100 \times 1000$ (i.e.) Rs.1,00,000 is the market value of the company listed on the stock exchange. According to our example, ABC Ltd. would be classified under Micro Cap as it is a listed company in the name of penny stocks with very small amount of shares circulating.



Micro Cap

- They are the penny stocks that are relatively young with limited information and less liquidity. These are high-risk securities with a price ranging between Rs.1-25 approx.
- Eg. MTNL, Unitech, ShriRam EPC, etc.

Small Cap

- Small Cap represent small-size companies that have a market capitalization in the range of up to Rs. 250 crores. High risk, high return companies.
- Eg. Equity Holdings, Hindustan Foods, etc.

Mid Cap

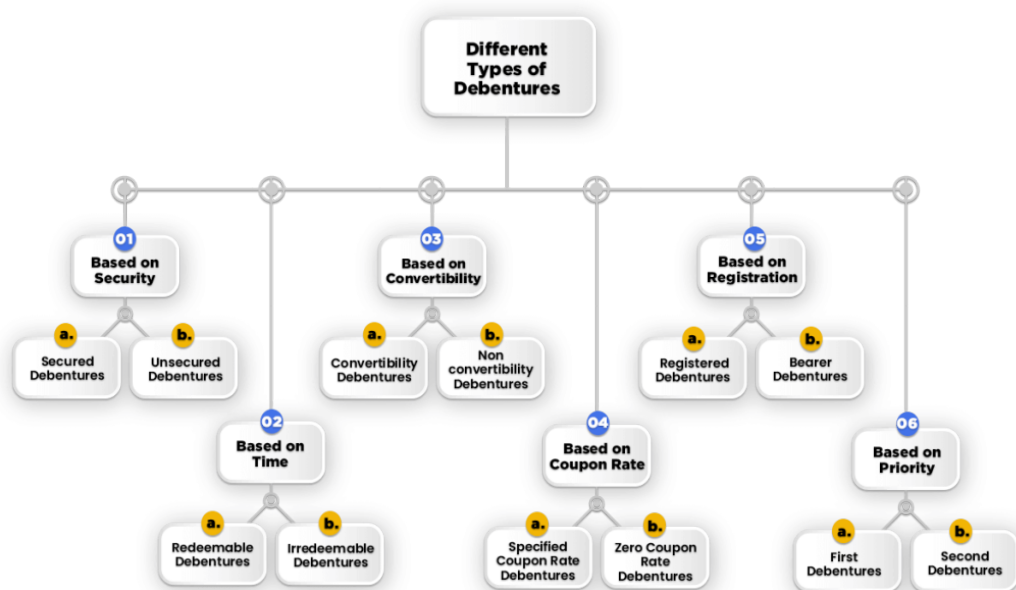
- Mid-cap stocks are stocks of medium-sized companies with market capitalization in the range of Rs. 250 crore and Rs. 4,000 crore.
- Eg. Crompton Greaves, Glenmark Pharma, BHEL, Godrej Industries, etc.

Large Cap

- Stocks of the largest companies in the market such as Tata, Reliance, ICICI are classified as large-cap stocks. They are often blue-chip firms and are Dividend paying mature companies.

How is a Stock different from a Debenture?

Debentures are loan given to a company in return for interest amount. Interest rate can be either fixed or floating. Unlike shareholders, debenture holders are not the owners of the company nor do they have any voting rights. During the process of liquidation or winding up the company, debenture holders are given preference over the shareholders. Debentures carry a common seal of the company and it can also be traded like stocks.



Based on Security

Secured Debentures are backed by the assets of the company whereas Unsecured Debentures do not have any charge on the assets of the company.

Based on Time

Redeemable debentures' principal amount is paid back in a fixed amount of time whereas non-redeemable debentures cannot be paid back in the lifetime of the company until liquidation.

Based on Convertibility

Convertible debentures are those that can be converted into shares according to pre-decided terms and conditions while Non-convertible debentures cannot be converted into shares.

Based on Coupon rate

Specific Coupon Rate Debentures are issued at a predetermined fixed or floating interest rate however Zero-Coupon Rate Debentures don't normally carry a particular rate of interest and are issued at a discount.

Based on Registration

Registered debenture is registered in the company's records and can be transferred by the issuance of a transfer deed while Bearer debentures have no record and can be transferred by mere delivery.

Based on Priority

First Debenture Holders are repaid first before the Second Debenture holders.



STOCK MARKET

Stock Market or Stock Exchange is a place where buyers and sellers meet to transact financial securities like shares, bonds, derivatives, mutual funds, etc. Investment in the stock market is most often done via stock brokers and electronic trading platforms.



Think of a stock market like a vegetable market. there are many seller selling some vegetables, take potato and there are many buyer willing to buy potato. every seller sells at different prices. there is a bargain between the buyer and seller. since they meet physically in a market but stock exchange function online and hence the entire process is automated.

the computer matches the buyer who is ready to buy the stock at a price which the seller also agrees to sell the stock.

**DID
YOU
KNOW?**



- Bid price – the price at which the buyer is willing to purchase.
- Ask price – The price at which the seller is willing to sell



The 2 most popular stock exchange are BSE and NSE in India.



National Stock Exchange



Bombay Stock Exchange

TYPE OF STOCK MARKET

Primary Market

- This is where a company gets registered to issue a certain amount of shares and raise money.
- IPO- Initial Public Offering is the first time of the issue of shares to the public to get listed on a stock exchange.
- FPO - Follow-on Public Offering is used when the company raises additional capital after getting listed on a stock exchange.
- OFS - Offer for sale is when promoters in public companies can sell their shares and reduce their holdings in a transparent manner through the bidding platform for the Exchange.

Secondary Market

- New securities sold in the primary market are traded in the secondary market. This is to offer a chance for investors to exit an investment and sell the shares.
- Secondary market transactions are referred to trades where one investor buys shares from another investor at the prevailing market price or at whatever price the two parties agree upon.
- Normally, investors conduct such transactions using an intermediary such as a broker, who facilitates the process. Different brokers offer different plans.

Third Market

- The third market involves exchange-listed securities that are being traded over-the-counter between broker-dealers and large institutional investors.
- With over-the-counter markets, securities that are not qualified for listing on traditional exchanges are bought and sold through a network of broker-dealers.
- Securities can often be purchased at lower prices in the third market because there are no broker fees.

Fourth Market

- The fourth market is an over-the-counter marketplace for the direct exchange of securities between private institutions.
- Fourth market trading differs from third market trading in that there is no intermediary or broker facilitating the trade. Institutions directly trade with each other without brokers.
- Institutions utilize the fourth market in order to keep trading activities private, reduce transaction costs, and to transact large volumes without moving markets.

How to Buy a Stock

STEP 1- Open a Demat Account

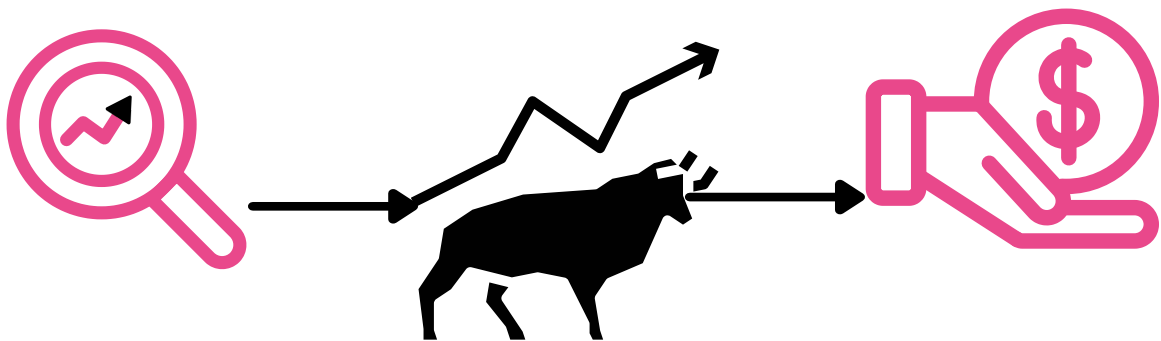
Stocks were traded in physical papers until mid-19th century which now can only be traded in Dematerialized form wherein the materialized stock certificates should be converted and stored in a Demat Account. Similar to a bank account that holds cash, Demat account holds dematerialized securities.

Demat accounts are maintained by Depositories in India. In India, banks, stockbrokers, and online investment platforms are Depository Participants.



A depository is a corporate entity which holds the shares in electronic form, against your name, in account. At present, there are only two depositories offering you DAMET account services.

1. National Securities Depository Limited - NSDL



Following documents would be required to open a demat a/c online or offline.

1. Proof of Identity (POI) (Eg.: Driving license, Aadhar Card)
2. Proof of Address (POA) (Eg.: Passport, Aadhar Card)
3. Proof of Income (For trading in derivatives such as F&O) (Eg.: Copy of ITR Acknowledgement)
4. Proof of Bank Account (Eg.: Cancelled cheque, Passbook)
5. PAN Card - Mandatory
6. 1 to 3 passport size photographs

One person can hold any number of demat accounts with different depository participants. Demat accounts can be opened in the name of a minor child only by the natural guardian or parents or the court appointed guardians. The Demat account of the minor can only be operate by the guardian, till the minor become major.

STEP 2 - Financial Literacy

Assuming that you have opened a Demat account with a broker called Zerodha, it is imperative to know how Brokers work.

Full-Service Brokers

- A full-service broker offers a broad range of stock and share trading services to the clients together with researching on different stocks and shares and presenting recommendation on potential profit-making stocks.
- Eg. IIFL Securities, Motilal Oswal, Kotak Securities, etc.

Discount Brokers

- As contrasting to the full-service broker, a discount broker focuses only in executing buying and selling orders for their clients and they do not offer recommendations by charging less brokerage.
- Eg: Zerodha, Upstox, 5paisa, etc.

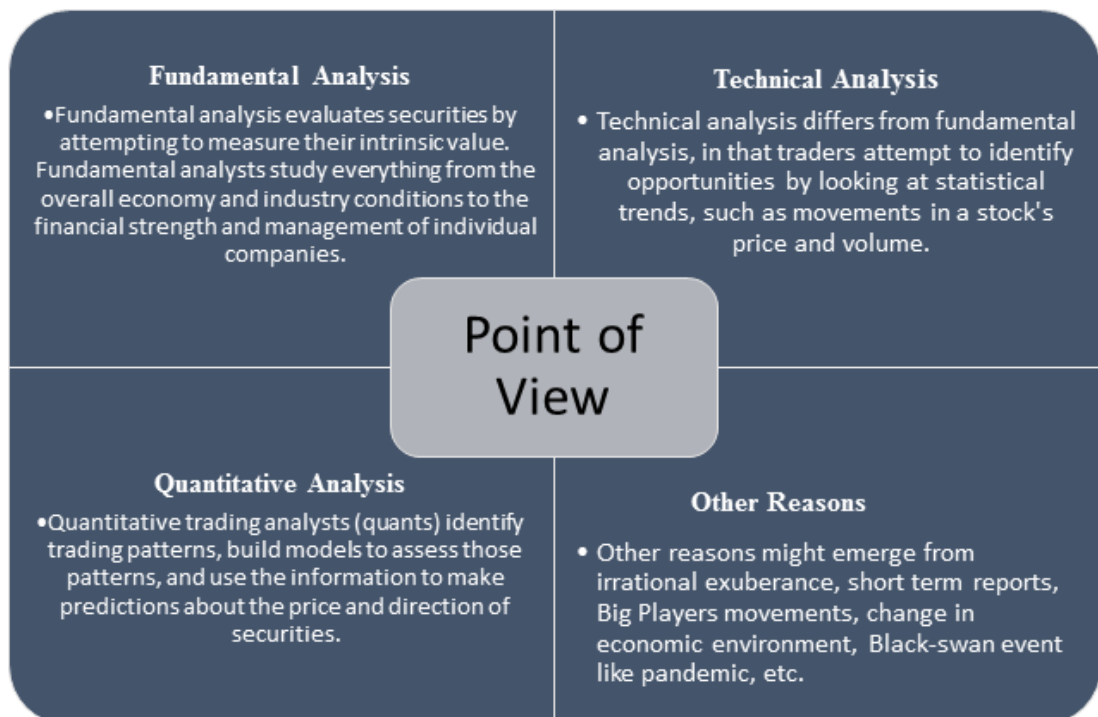
Be aware of the rates charged by Brokers including all the Taxes and other charges.

Now, you should know why the stock prices change?

This is multi-million dollar question but with various answers.

It is mainly because of how people think or due to the different point of views. These point of views can be derived from various reasons.

- **Fundamental Analysis**
- **Technical Analysis**
- **Quantitative Analysis**
- **Others Reasons**



STEP 3 - Placing an order

Now, after you analyzed everything from stock broker to which stock to invest and when to invest through all the fundamental analysis and technical analysis, you go to the trading terminal of Zerodha (in our case) and you place an order.

Eg: You are going to buy one share of ITC Limited.

NIFTY 50

10442.00

-0.02 %

SENSEX

33754.81

-0.07 %

Q

Search eg: gold mcx, infy bs

Market Depth (D)

ITC

B

S

BID	ORDERS	QTY.	OFFER	ORDERS	QTY.
262.15	16	5709	262.20	5	440
262.10	66	15890	262.25	4	135
262.05	31	6895	262.30	6	775
262.00	310	36656	262.35	14	3981
261.95	13	14979	262.40	12	5693
Total		8,33,523	Total		12,95,789
Open		265.90	High		265.90
Low		262.15	Close		263.30
Volume		27,31,135	Avg. price		263.39
LTQ		335			

This is how the trading screen will look like on Zerodha's Platform called Kite.

We will be able to see the various Bid Prices and Ask/Offer Prices along with the quantity of each. This picture is interpreted as there is a Bid Price/Buyer's price of Rs.262.15 willing to buy 5709 quantity of shares collectively of ITC. 16 Orders signifies that there are 16 persons who is ready to buy at that price. Offer Price/Ask Price of Rs.262.20 is what 5 sellers are willing to sell 440 shares collectively.

- The OHLC – Open, High, Low and Close gives us a sense of the range within which the stock is trading during the day
 - Volumes – Gives a sense of how many shares are being traded at a particular point of time
 - LTQ – Last Traded Quantity
- All this information is presented to make informed decisions as Market Depth.

Buy ITC × 1 Qty at ₹261
₹262.15 on NSE

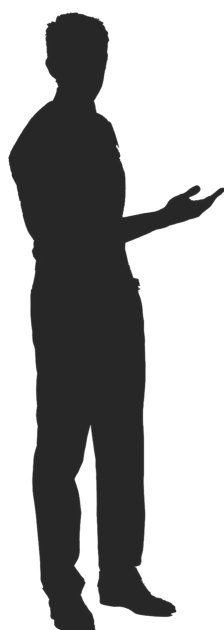
☐ MIS
☒ CNC
☐ MARKET
☒ LIMIT
☐ SL
☐ SL-M

Qty.	Price	Trigger price	Disclosed qty.
1	261	0	0

More options ▼

Buy
Cancel

Now we will place an order to buy one share of ITC Limited at Rs.261 as a Limit Order. There are various types of order that one can place apart from the following 3 types as well.



Market Order

You can also opt for a **market order** when you intend to buy at market available prices instead of a very specific price that you have in mind.

Limit Order

You can opt for a '**Limit**' order when you are very particular about the price you want to pay for a stock.

Stop-Loss Order

A **stop-loss order** protects you from an adverse movement in the market after initiating a position by specifying a price, which when hit will square off the position.

Once you click on the buy, your order goes to order book in your trading terminal



The order book and trade book are online registers within the trading terminal. The order keeps track of all the orders that you have sent to the exchange and the trade book tracks all the trades that you have transacted during the day.

After the trade is executed, you will receive the shares in your demat account on T+2 settlement basis. Happy Trading!





भारतीय प्रतिभूति और विनिमय बोर्ड Securities and Exchange Board of India

The Security and Exchange Board of India (SEBI) is mandated to oversee the secondary and primary markets in India since 1988 when the Government of India established it as the regulatory body of stock markets. Within a short period of time, SEBI became an autonomous body through the SEBI Act of 1992.

SEBI has the responsibility of both development and regulation of the market. It regularly comes out with comprehensive regulatory measures aimed at ensuring that end investors benefit from safe and transparent dealings in securities.

Its basic objectives are:

- Protecting the interests of investors in stocks
- Promoting the development of the stock market
- Regulating the stock market



This completes the entire structure of the Stock Market in India.

Now, that we know all the basics of stock market, let's take a look at the Bigger Picture.

If someone were to ask you, "How is the stock market doing today?" you will turn to the index of Sensex and Nifty to see what has changed from yesterday. And your answer would be either

- It's Bullish or
- It's Bearish or
- It's Sideways.

Ultimately, it's the crowd who drive the market forces of demand and supply! Let's find out what does these terms signify.

Similar to the move of a bull which throws its victim up in the air, prices of securities shoot up due to various reasons and optimism is seen throughout the market. This results in rising prices and pushes the index higher than the previous day. A bull market is a period of time in financial markets when the price of an asset or security rises continuously.





Pessimism is spread in most of the stock prices and the index has ended lower than the previous day's close. This attitude is similar to a Bear which presses its victim to the ground. A Bear market is a period of time in financial markets when the price of an asset or security falls continuously exactly opposite to the bull market.

A sideways market, or sideways drift, occurs where the price of a security trades within a fairly stable range without forming any distinct trends over some period

of time. Price action instead oscillates in a horizontal range or channel, with neither the bulls nor bears taking control of prices.

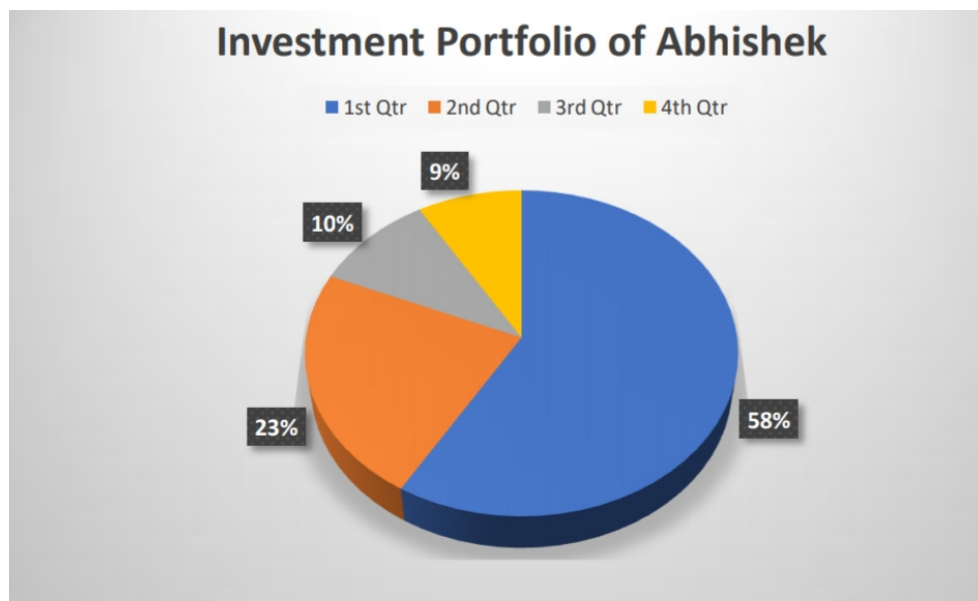
INVESTMENT PORTFOLIO MANAGEMENT

04

When it comes to investing, people generally invest their savings in bank accounts, FDs (Fixed Deposits) or in saving accounts, as they are not aware or not very confident to invest in other investment proposals like share market, gold, real estate, foreign currency, etc. Also, many have this perception that investing in shares or stock market is similar to gambling. However, to grow your money, it is very important to invest with proper knowledge in different investment securities. In simple words, it is important to develop an investment portfolio to earn maximum returns.

What is Investment Portfolio?

Stating simply, investment portfolio is a combination of different financial securities from diversified industries. It may include investment in shares, bonds, debentures, real estate, foreign currency, gold or any other commodity. For example - An investor named Abhishek may have an investment portfolio as follows:



In the above pie chart, 58% (blue) represents the proportion of shares in his portfolio while 23% (orange) represents gold, 10% (grey) represents fixed deposits and 9% (yellow) shows foreign currency. This is just an example of a random investment portfolio to give you a glimpse of how a portfolio may look like.

INVESTMENT PORTFOLIO MANAGEMENT:

Investment Portfolio Management is a process which involves analysing various securities, selecting them and also reviewing them from time to time to earn maximum returns. There are professionals who have specialised in investment portfolio management and are known as investment portfolio managers.

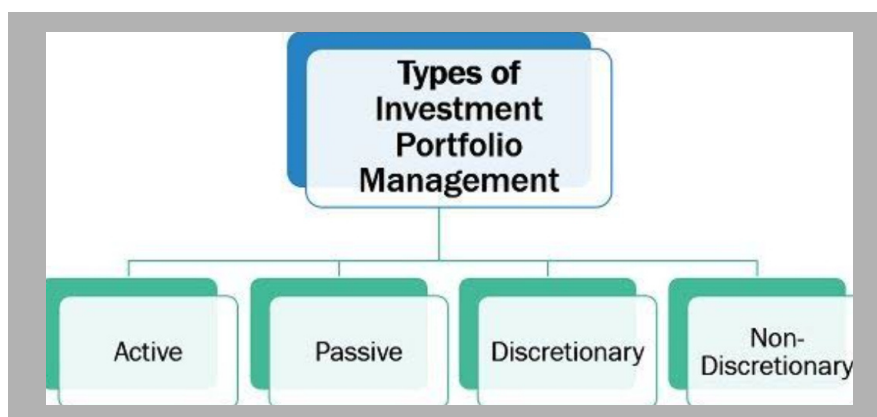
There are mainly four types of investment portfolio management which are explained as under:

1) Passive Management:

Under passive management, a portfolio is made after proper analysis of different available choices and once the portfolio is prepared, it is kept for a certain period of time. No regular buying and selling of securities takes place. It is suitable for those investors who want a stable income at minimum risk. Moreover, this strategy is proved to be more effective in the long-term. The investor simply focuses on the market returns and not on beating the market-returns. For instance, if a Portfolio is made and securities purchased, then the investor would carry this portfolio for a certain period of time, say for 5 years without buying or selling any security.

2) Active Management:

Under this strategy, the investor makes regular buying and selling in order to beat market returns. This type of management involves greater risk as the investors is trying to assume higher returns. Also, the probability of human errors is more under active management as regular buying and selling of securities based on various estimations is performed. The investors generally purchases when the prices of security goes down and sells it when the prices go up to receive maximum returns.





3) Discretionary Management:

Under this management, the investors give the entire control to the portfolio managers and the manager takes buying and selling decisions on behalf of his client. The manager has all the rights to select whichever strategy (active or passive) he wishes to pursue. This type of management helps the investor to maintain a high-quality portfolio as an expert is handling it.

4) Non-discretionary Management:

This management does not give the right to the portfolio manager to take the decision, but only to give advice regarding buying or selling a certain security. The final power to take decision is in the hands of the investor and the manager can only guide him regarding pros and cons of his decision. This is mainly suitable for those investors who wish to have control over their portfolio.



Investment Portfolio is generally made on the basis of the risk that investor is willing to take and return that it expects from the portfolio.

To ensure that an effective portfolio is made, it is very important to prepare a portfolio that is well diversified, assets properly allocated and is rebalanced from time to time. Let us understand the meaning of the terms below:

What is Diversification?

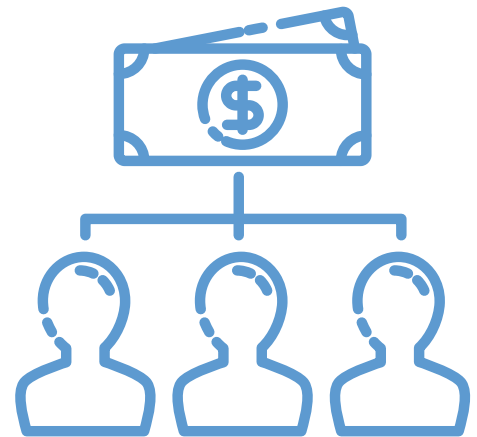
There is an old saying that never put all your eggs in one basket. It is important to diversify while preparing an investment portfolio. Diversification is selecting the combination of securities from various different industries. A portfolio is said to be well diversified when it has a proper mix of securities from diversified industries to ensure that the risk is minimal. You must be wondering how can diversification reduce risk? We will explain it in the next section.

What is Asset Allocation?

Stating simply, asset allocation is selecting the proportion of each security in portfolio. Generally, assets (securities) are either volatile or non-volatile. Volatile assets are those that responds very quickly to the market changes whereas non-volatile assets are those that do not respond much to the changes. Thus, it is very important to make an efficient blend of both volatile and non-volatile assets in the portfolio to gain maximum returns. For example, while preparing his portfolio, Sham fixed the proportion of equities in his portfolio as 30%, Gold as 20%, Fixed Deposits as 25%, Foreign Currency as 10% and Bonds as 15%. This is known as asset allocation as he selected a blend of various volatile and non volatile securities in his portfolio by allocating them different share of the portfolio.

What is Rebalancing?

Rebalancing is the process of evaluating the securities in the portfolio on regular intervals and restructuring the ratio in which different securities constitute the portfolio. This process is very important as we always develop a portfolio on assumptions of future conditions and since future is uncertain, it becomes important to evaluate the conditions on regular intervals. For example- Suppose Suraj's portfolio contains 30% gold, 20% equity, 40% Fixed Deposits and 10% foreign currency. After 6 months, government announced an increase in capital gain taxes on gold. Seeing it as a possibility of loss due to excessive selling of gold by people after the decision, Suraj decides to rebalance his portfolio by reducing the % of gold and increasing the % of equity. If Suraj had not rebalanced his portfolio, there were chances that he could have gained less returns as much would go as taxes to the government.



Risk and Return:

Return is profits that the investor expects from his investment. Every investment is made to receive maximum returns so as to increase the volume of money with investor. Selection of a proper portfolio can lead to generation of good returns over a period of time. Now, let us try to understand what is expected return. In simple terms, expected returns are the returns that investor expects from his investment after considering various trends of previous years. While formulating an investment portfolio, it becomes necessary to calculate expected return from the portfolio so as to know how much returns the portfolio will give. Though we try to find out the returns that portfolio will give in future, however, we have to estimate it on the basis of past records as no other alternative is available to know about future as it is uncertain. Before calculating the expected returns from the entire investment portfolio, it is important to find out the expected returns from each individual security.

So to find out expected return of a security, there are two approaches

1) Simple Average - This approach is generally followed when we are not aware about the probability or chances of previous records to replicate themselves. The formula for calculating expected return through simple average is give below:

Expected Returns = **Sum total of returns % from previous years**

Total number of years

Let us understand it with an example-

Following is the % return of say shares of Reliance Industries for the past 6 years

Year:	% Returns of the Year:
2013	10%
2014	12%
2015	15%
2016	9%
2017	16%
2018	12%
2019	10%

In the above table, % return of different years from share of Reliance Industries is given. Now to calculate the expected return of shares of Reliance Industries, we will follow the following steps:

Step 1:

Find out the sum of % Return of different year. In the above case it is as under-

Sum of Return % of various years=
 $10\%+12\%+15\%+9\%+16\%+12\%+10\%$
 $= 84\%$

Step 2:

Calculate total number of years. In the above case it is as under-
Total number of years= 7

Step 3:

Put the values in the formula
Expected Return= Sum total of returns % from previous years
Total number of years
Expected Return= $84/7\%$
 $=12\%$
Therefore, expected return of shares of Reliance Industries is 12%



Note

This is just an hypothetical example and does not represent the real trends.

2) Weighted Probability Approach- This approach is used when we are aware about the chances or probability of the occurrence of past records in the future. For example- Suppose that in 2014 due to elections there were uncertainty in the market due to elections, as a result the returns were less. Thus, there are chances that same would happen in 2019 due to elections. Thus, if like 2014, we are also confident about the replication of records of other years, we would follow weighted probability approach. Different probabilities are considered weights and the following formula is developed

Expected Returns= $\sum X_i.P(X_i)$ (Sum of Product of 'Return and Probability' of respective years.)

Where Σ means Sum

X_i is return % of security in different years

And $P(X_i)$ is probability of that return %

Lets understand it with the help of an example

Following is the given data of say shares of Tata Steel Ltd. For the past years

Year	Return %(X_i)	Probability $P(X_i)$
2014	10	0.2
2015	15	0.3
2016	17	0.1
2017	20	0.2
2018	15	0.2

Following step must be followed to calculate expected return on the basis of weighted probability approach.

Steps

Calculate $X_i.P(X_i)$

Year	Return % (Xi)	Probability P(Xi)	Xi.P(Xi)
2014	10	0.2	2
2015	15	0.3	4.5
2016	17	0.1	1.7
2017	20	0.2	4
2018	15	0.2	3
Total	77	1	15.2

Expected Return= 15.2%

Portfolio Expected Return

Portfolio expected return refers to the return that an investor expects from the entire portfolio over a specific period of time. It plays an important role in the selection of an appropriate portfolio as it gives the investor an idea about the return the portfolio would give him over a period of time. In order to find expected return of portfolio, firstly we need to find the expected return of different individual securities as above. After that, weights need to be given to each security's expected return based on the proportion of the security in the portfolio. Portfolio expected return can be calculated using the following formula

$$\text{Portfolio Expected Return} = \sum E R_i \cdot W$$

Where, $E R_i$

is expected return of individual security

And W is the proportion of that security in the portfolio

Let us try to understand it with the help of following example:

Following is the data regarding the expected returns of various securities that comprise Pulkit's portfolio and their respective proportion:

Security name	Expected Return (ER) (in %)	Proportion in portfolio (W)
Reliance Industries (Equity)	20	0.2
Tata Steels Ltd. (Equity)	15	0.3
Gold	10	0.2
Indian Oil (Bonds)	8	0.1
US Dollars (Foreign Currency)	12	0.2

Now to find out expected return of the portfolio, Proportion in portfolio must be taken as different weights of securities and expected return of the portfolio may be calculated as under:

Security Name	Expected Return (ER) (in %)	Proportion in portfolio (W)	ERi.W
Reliance Industries (Equity)	20	0.2	4
Tata Steels Ltd. (Equity)	15	0.3	4.5
Gold	10	0.2	2
Indian Oil (Bonds)	8	0.1	0.8
US Dollars (Foreign Currency)	12	0.2	2.4
TOTAL	65	1	13.7

Therefore, Expected return of Portfolio= $\sum E R_i \cdot W$
= 13.7 %

Risk

With every investment is associated some risk. Risk is the possible variation in the actual returns received from the expected returns. For example: Assume that expected return from an investment, say shares of X company is 16%, however, the actual returns that investor received is 10%. Thus, there is a variation in the actual return received and the expected return and this variation is known as risk. In order to evaluate various investment proposals, it becomes important to quantify the risk associated with it. The statistical measure of standard deviation is used to find out risk of an investment proposal.



There are mainly two types of risk namely systematic risk and unsystematic risk.

Systematic risk

Systematic risk also known as market risk is that risk which is not in control of any particular company and is concerned with the entire system. It generally occurs due to various political and economic changes. For example- recession in an economy creates a risk of receiving expected return for an investor. This recession will affect all the companies and thus uncontrollable on the part of companies. Thus, recession is a systematic risk.



Systematic risk can be further subdivided into following three risks:

Interest Rate Risk

Interest rate risk is more common for long-term debt securities and is caused due to the change in market interest rates. This risk is of relevance for those investors who purchases long-term debt securities like bonds, debentures, etc. with the motive of trading in them and not holding them till the maturity. For instance- Suppose Tom purchased bonds of XYZ company carrying coupon rate of 10% for rupees 1,00,000 with an intension of selling them before maturity to some other investor. He expects to sell them at say 1,20,000 after 6 months, thus expecting a return of 20,000. Now, suppose market interest rate rises to 15%, however, since the bonds held by Tom offer only 10% interest, there value in market falls to 90,000. Thus, change in market interest rate affected the price of bonds held by Tom in the market. It must be noted that market interest rate and the price of the fixed rate securities is negatively related. An increase in market interest rate leads to a fall in value of security as interest rate offered by it is less than market rate and vice-versa.

Interest rate risk is more prevalent in long term fixed income securities and not in short term securities and equity

Purchasing Power Risk

This risk is completely related with inflation (a continuous increase in the prices of goods and services) and thus, it is also known as inflationary risk. Coupon rate associated with any fixed-income security generally indicates the nominal return from that security.

Nominal return is the return which is not adjusted with inflation and other expenses like taxes, investment fees, etc. whereas real return is the actual return which the investor receives after taking inflation into consideration. When an investor invests in any particular investment, he assumes inflation to take place and selects an investment after being satisfied with the real return from investment. However, if inflation increases beyond the expectations in future, the real return that he expected would erode as his would still be receiving the fixed amount as before increase in inflation. For instance, a man purchased bonds having a coupon rate of 10% with the consideration that 3% inflation will take place in the economy, thus, the real return that he would receive would be 7% ($10\% - 3\%$). However, economy experiences 5% inflation which brings the real return to 5% ($10\% - 5\%$). Thus, this risk must also be considered before making any investment.

This risk is more prevalent in fixed-income securities as they would receive a fixed income irrespective of inflation rate in the economy. However, in equities, an increase in dividend payments off-set inflation.

Market Risk

Market revolves around the bearish and bullish period. Bearish period is that period in which stock market is down, i.e., there is fall in the prices of securities, whereas, bullish period is that period when stock market prospers and the prices of securities go up. No individual company has control over bullish or bearish period; however, these trends generally affect the prices of the shares of that company and consequently affects the returns for investors. Due to bearish period, the prices of shares of a company may be affected due to change in prices of other companies and vice-versa.



Unsystematic Risk

Unsystematic risk also known as idiosyncratic risk or specific risk brings variability in the expected return due to certain factors related to that particular company. It occurs due to various decisions of that company only and are restricted to that company only.

Unsystematic risk is the excess risk over systematic risk. It can be further subdivided into two categories.



Business Risk

This risk arises due to the poor business management of the company, change in technology, particular product becoming obsolete, etc. For example, Suppose a telecom company named Y provides 3G internet services and its business is flourishing. However, another company say Z launched 4G in the market and the customers shifted from Y company to Z. As a result, the profits of Y company reduced leading to a fall in prices of its shares and consequently returns to its shareholders. Thus, this business risk brought variability in the expected return of the investors.

Financial Risk

When the change in the capital structure brings about variability in the expected returns, it is known as financial risk. It is also known as leverage risk. When a company changes its capital structure by raising more debt (loan), it increases the risk for the shareholders as the financial liabilities of the company increases and the shareholders' risk of 'default by the company' increases. Also, due to increased interest payments, shareholders may not get the returns that they expected as more cash may be paid as interest.

Calculation of Risk of individual security

Calculation of risk is very important in order to decide whether to invest in a particular security/portfolio or not. Risk is nothing but standard deviation of the given records of a security. Standard deviation is the positive square root of variance (a statistical measure used to indicate the extent of variability of the actual return from mean value, i.e. expected return). The formula to find out variance is as under

$$\text{Variance}(\sigma^2) = \sum (X - \bar{x})^2$$

where X is the return%

and $\bar{x}$ is the expected return of that security

P is probability of receiving the return %

Standard Deviation (σ) = $\sqrt{\sum (X - \bar{x})^2 \cdot P}$



Year	% Returns for the year	Probability(P)
2013	10%	0.3
2014	12%	0.3
2015	15%	0.1
2016	9%	0.2
2017	16%	0.2

COVARIANCE

Covariance: When two securities are taken together, we need to calculate covariance, also known as interactive risk which indicates the relationship between the rate of return of two securities. Besides two securities, covariance can also be calculated for 'a security and a portfolio', 'a security and market index' and 'a portfolio and market index'. If covariance between two securities is positive, then the return of two securities is positively related, i.e., increase in return of one security means increase in return of other security and vice-versa. If covariance is negative, then the returns of two securities is negatively related, i.e., increase in return of one security leads to decrease in return of other security and vice-versa. For example: suppose two boys Ram and Sham are sitting on a sea-saw. When Ram goes down, Sham goes up and as Sham pushes himself down, Ram comes up. Here, Ram and Sham represent two different securities having negative covariance. As return of one goes up, other's come down and viceversa. Apart from it, if covariance comes out to be zero, then the returns of two securities are independent of each other. In order to calculate covariance of two securities A and B, formula is given below:

$$\text{Covariance (COVab)} = \text{Covariance (COVab)} = \sum P.(X-\bar{x}).(Y-\bar{y})$$

Where P is probability X is return % of A security $\bar{x}$ is the expected return of security A Y is return % of security B $\bar{y}$ is expected return of security B

Following example will help you in understanding the concept of covariance:

Given below is the return % of past 5 years of Shares of Tata Steel Company and Bajaj Pvt. Ltd.

Year	Probability	Return % of TSC (X)	Return % of BPL (Y)
2014	0.3	10	12
2015	0.1	12	15
2016	0.4	15	17
2017	0.1	14	20
2018	0.1	18	25

Following step be must be followed to calculate covariance:

Step- 1

calculate expected return of X and Y security

Year	Probability	Return % of TSC (X)	Return % of BSC (Y)	X.P	Y.P
2014	0.3	10	12	3	3.6
2015	0.1	12	15	1.2	15.5
2016	0.4	15	17	6	6.8
2017	0.1	14	20	1.4	2
2018	0.1	18	25	1.8	2.5
TOTAL	1	69	89	13.4	16.4

Expected Return of share of TCS = 13.4%

Expected Return of share of BPL = 16.4%

Step-2

Find out deviations of both securities.

Year	Probability	Return % of TSC (X)	Return % of BPL (Y)	X.P	Y.P	(X- $\bar{x}$)	(Y- $\bar{y}$)
2014	0.3	10	12	3	3.6	-3.4	-4.4
2015	0.1	12	15	1.2	1.5	-1.4	-1.4
2016	0.4	15	17	6	6.8	1.6	0.6
2017	0.1	14	20	1.4	2	0.6	3.6
2018	0.1	18	25	1.8	2.5	4.6	8.6

Now, Covariance (COVab) = $\sum P.(X-\bar{X}).(Y-\bar{Y})$

Therefore, COVab= (0.3)(-3.4)(-4.4)+(0.1)(-1.4)(-1.4) + (0.4)(1.6)(0.6) + (0.1)(0.6)(3.6) + (0.1)(4.6)(8.6)
=9.88

Now, since the covariance is positive thus the returns must be positively related and that is evident from the table as well.

Coefficient of Correlation

Coefficient of correlation is a statistical measure which helps to indicate the degree of relatedness of two securities. Its value varies from -1 to 1. If the value of coefficient of correlation is +1, two securities are said to be perfectly positively correlated (their returns perfectly relates to each other), whereas, if the value of coefficient is -1, two securities are said it be perfectly negatively correlated (their returns are negatively related to each other) .Additionally, if the value of coefficient is zero, it means that both the securities are independent of each other. Following is the formula to calculate coefficient of correlation of two securities x and y:

Coefficient of Correlation (rxy)= $\frac{COVxy}{\sigma_x \sigma_y}$

$\sigma_x \sigma_y$

where, COVxy is covariance of securities x and y

σ_x is standard deviation of security x

σ_y is standard deviation of security y

Portfolio Risk (In case of two securities)

Portfolio Risk (In case of two securities)

Till now we have learnt to find out risk through standard deviation of an individual security. Portfolio risk can be referred to as the variability in the actual return received from the expected return of the portfolio. Once expected return of a portfolio is known, it becomes important to know the extent of variability in the expected return so as to decide whether to invest in it or not. The acceptable range of variability(risk) may differ from person to person. For example- a young man may be willing to take more risk in comparison to a senior citizen who would wish to have less tensions and a stable income. Thus, any particular risk cannot be said to be a uniform acceptable range for all investors. However, in general every investor wishes to earn maximum return at a reasonable risk. In order to calculate risk of a portfolio having to securities, following is the formula:

$$\text{Portfolio risk } (\sigma) = \sqrt{W_x^2 * \sigma_x^2 + W_y^2 * \sigma_y^2 + 2W_xW_yCOVxy}$$

Where, W_x is the proportion of X security in the portfolio, $\sigma^2 x$ is the variance of security X, W_y is the proportion of security Y in the portfolio, $\sigma^2 y$ is the variance of security Y and COV_{xy} is the covariance of security X and Y. It is important to understand that covariance has a direct relationship with the portfolio risk. If the covariance is negative, i.e. the securities are negatively correlated, then the portfolio risk will be less as compared to the securities having positive covariance (positive correlated). This is because the concept of diversification is applicable only when there is either negative

correlation between securities in the portfolio or have correlation close to zero (if it is positive). Let us try to understand this with the help of an example: assume that a person named Tanmay has savings of rupees 1,00,000 which he wishes to invest in the stock market. He visits to an investment portfolio manager to get some consultancy. The manager asked him to invest in those securities which have a negative correlation, say in the shares of a company 'Stay Warm' which manufactures heaters and in the shares of another company 'Cooling Agents' which manufactures ACs. The manager prepared a portfolio in such a way that shares of Stay Warm had 5/7th portion of portfolio and shares of Cooling Agent had 2/7th portion of portfolio. The return % of both the shares was as follows:

Season	Probability	Return % of shares of stay warm	Return % of shares of Cooling agent
Summers	0.5	8	15
Winter	0.5	12	5



Now, finding out expected return and standard deviation of both the securities:

Season	P	Return % of Shares of Stay Warm (X)	Return % of Shares of Cooling Agent(Y)	X.P.	Y.p	(X- $\bar{x}$)	(Y- $\bar{y}$)	$X - \bar{x}$ 2 . P	$Y - \bar{y}$ 2 . P
Summer	0.5	8	15	4	7.5	-2	5	2	12.5
Winter	0.5	12	5	6	2.5	2	-5	2	12.5
Total	1	20	20	10	10	-	-	4	25

Now, the expected return of shares of Stay Warm comes out to be 10% and the expected return of shares of Cooling agents also comes out to be 10%. However, the risk , i.e. standard deviation of Stay Warm is '2'where as standard deviation of Cooling Agent is 5. Thus, if we look at expected returns for the companies, they are equal, i.e. 10%, however, the risk involved in Stay Warm is just 2% as compared to risk involved in Cooling Agent which is 5%. Therefore, a common man would always prefer Stay Warm company as it is giving same expected return at less risk. But if we invest all the money in company Stay Warm, there are chances that we might get 8% returns in summers. Thus if we go by the advice of the manager to invest in both the securities in the ratio 5:2, then lets see the expected return and risk of portfolio:

Security	Proportion of Security in Portfolio (W)	Expected Return of Security (X)	W.X
Stay warm	5/7	10	50/7
Cooling Agent	2/7	10	20/7
Total	1	20	10

Therefore, expected return of portfolio= 10%

And for portfolio risk, we first need to find out Covariance of Stay Warm and Cooling Agent

Thus, Covariance = $\sum P.(X-\bar{X}).(Y-\bar{Y})$

$$= (0.5)(2)(-5) + (0.5)(-2)(5)$$

$$= -2$$

Therefore, Portfolio Risk =

$$= 25.49 \times 4 + 4.49 \times 25 + 2 \times 5.7 \times 2.7 \times -2.12$$

$$= 0.9 \text{ (approx.)}$$

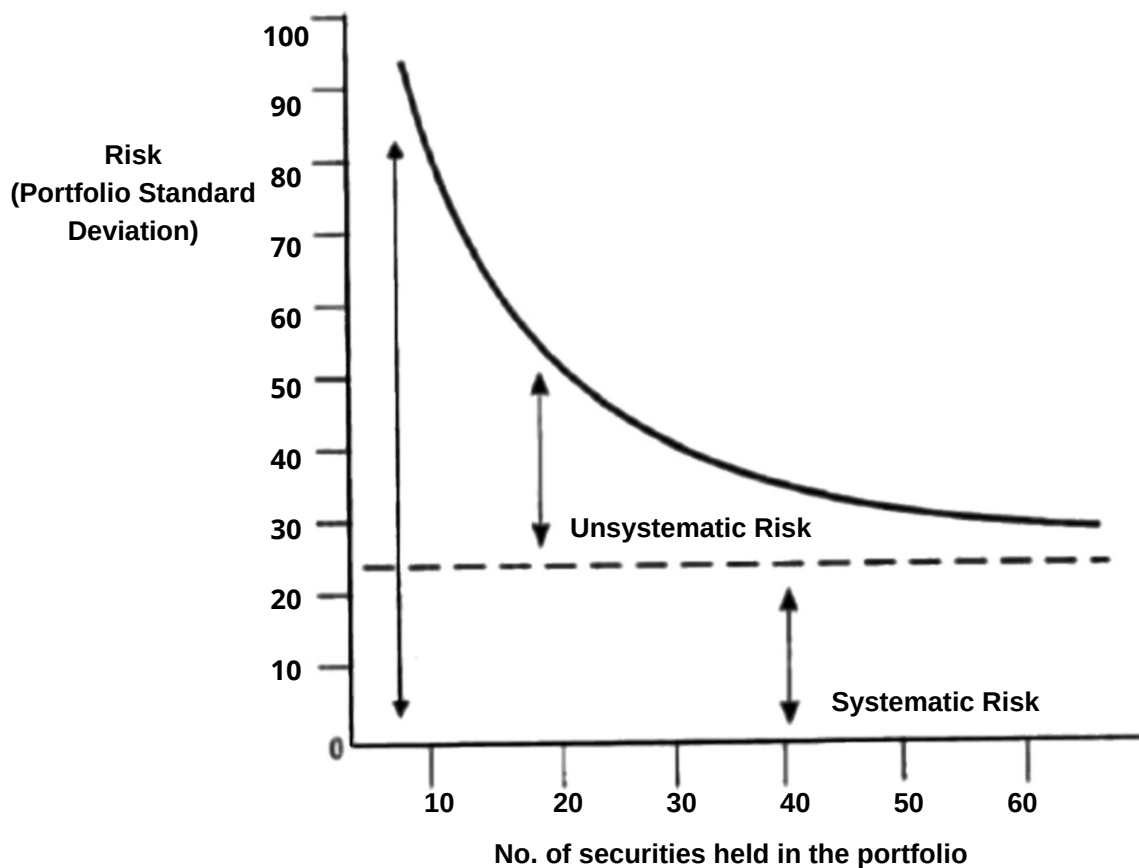
Thus, if we diversify our investments and invest as the manager suggested, then the expected return from portfolio remains same, i.e. 10%, however, the portfolio risk is only 0.9 which is less than both individual risk of securities (2 & 5). This is because when the Stay Warm is giving less than expected return, it is compensated by Cooling Agent company and when Cooling Agent offers less, it is compensated by Stay Warm. Thus, reduction in risk is possible only when the securities are either negatively correlated or even if positively correlated, the coefficient of correlation must be close to 0.

When can portfolio risk be 0?

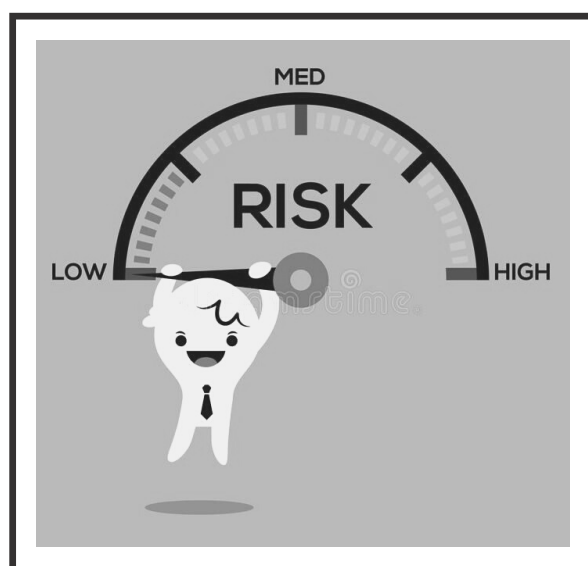
Portfolio risk can be zero if both the conditions are met:

- 1) Coefficient of correlation must be -1, i.e. perfectly negatively correlated
- 2) And, the proportion of X security in the portfolio must be equal to, $W_x = \frac{\sigma_y}{\sigma_x + \sigma_y}$

It must be noted that the risk calculated through standard deviation is total risk, i.e., sum of systematic risk and unsystematic risk. The unsystematic risk can be minimised or even made zero through diversification. To make risk zero, the above mentioned two conditions must be fulfilled. However, in real world, it sometimes becomes difficult for us to find securities which are perfectly negatively correlated or even negatively correlated. We mostly find securities which are positively correlated. Thus, as we increase the number of securities (diversify more and more), the unsystematic risk keep on reducing and after reaching a certain level, it is marginally left or even removed completely and only systematic risk is left which cannot be diminished through diversification. Thus, in real life scenario, portfolio risk can never be zero as some systematic risk is always associated with the portfolio. It can be explained with the help of following diagram:



The above diagram indicated that as we increase the number of securities in the portfolio, the unsystematic risk reduces and after reaching a certain level, which is 60 securities in the diagram, the unsystematic risk is almost removed and only systematic risk is left which cannot be reduced. Thus, no portfolio can have 0 risk as some systematic risk would be present. After reaching this point, if we still try to reduce risk through diversification, it is not possible as all the unsystematic risk is almost removed.



Beta

Unsystematic risk can be removed through diversification. Thus, it is necessary for an investor to be aware about the systematic risk associated with any security or portfolio. Beta is nothing but a statistical measure to calculate systematic risk associated with a security. It indicates the change in the return of security with respect to unit change in market return (indicated by market index). Just as grade is given to a student which indicates his intelligence and score in his exams, similarly Beta is a type of grade which indicates the volatility of a security with respect to the market changes. It must be noted that Beta of Market is always 1. Now for instance, suppose Beta of shares of say Reliance Industries is 1.5. It means that Reliance Industries will be 50% more volatile than the market. Thus, if market risk is increased by 10% due to some government policy introduced or any other economic reason, then market risk (systematic risk) of Reliance Industries shares would be 15%.

Returns of market index generally fluctuate due to market changes and thus, it plays an important role in finding out systematic risk of a security. Beta can be either positive, negative or zero. If Beta of a security is positive, it means the returns of security are positively related to returns of market, if Beta is zero, it means returns of security would not be affected by market returns and if Beta is negative, it means returns of security are negatively related to returns of market. In order to calculate Beta of a security, past records of returns of security and market index are required. Following is the formula to calculate Beta from Covariance Method:



$$\beta = \frac{\text{COV}_{xm}}{\sigma^2_m}$$

where, COV_{xm} is covariance of security X and market index, and σ^2_m is variance of market index. (To find out covariance of security X and market index, we need to find out their deviations from expected return as explained earlier. And for variance of market index, same process must be followed as in case of any individual security.) If the value of Beta is 1, security is considered to be average risky, if it is more than 1, security is considered to be above average risky, i.e. more volatile returns as compared to market returns and if the value of Beta is less than one, then security is considered to be below average risky, i.e. less volatile return as compared to market returns. With the help of Beta, systematic risk can be calculated using following formula:

$$\text{Systematic risk} = \text{Beta} \times \text{Market Risk}$$

Suppose, market risk is 5% and beta of security is 1.2, then systematic risk of that security is $1.2 \times 5\% = 6\%$. Thus, as the value of Beta increases the risk associated with security also increases as Beta is a measure of volatility of a security.

How to calculate Beta of a portfolio?

In order to calculate Beta of a portfolio, the first step is to calculate Beta of individual securities of the portfolio. Then, the following formula must be used to find the Beta of portfolio:

$$\beta \text{ of portfolio} = \sum W_x \cdot \beta_x$$

where, W_x is the proportion of security in the portfolio, and β_x is the Beta of that security.

Capital Asset Pricing Model (CAPM)

Investing in stock market always involves some extra risk. Since the investor is assuming excessive risk than investing in risk-free investments such as government bonds, deposits in bank, etc. , thus, investor would expect some additional return. Keeping this in mind, William Sharpe in 1960s developed Capital Asset Pricing Model to find out cost of equity. Cost of equity is nothing but the return that a shareholder expects from the company for assuming a certain amount of risk. He believed that since shareholders are assuming the risk of market, thus they must expect a return to counterpart the risk. Just as when you study more, you expect more marks, similarly when investors assume more risk, they must expect a higher return.

William Sharpe used Beta to find out the expected return (cost of equity) of a particular equity that an investor must get when a particular risk associated with the security is assumed by the investor. The cost of equity calculated from this model help investors to see that whether they should invest in a particular company or not. An investor must get the return which he would have got if he has invested his money in government security or have deposited his money in bank. Also, for assuming extra risk of stock market, he should get some additional return. Thus, keeping this in mind.

William Sharpe gave the following formula to calculate expected return(cost of equity) which investor must get when he assumes a certain amount of risk attached to the company concerned:

$$\text{Cost of Equity of Security X} = \text{Risk Free Return} + \beta(R_m - R_x)$$



Where, Risk free Returns means the return offered by banks/government bonds β is the Beta Coefficient of the Security X, R_m is the return that the market is giving (return that market index is providing), And R_x is the return offered by the Security X. It must be noted that $(R_m - R_x)$ represents the risk premium which the investor must receive for investing in the stock market.

Thus, if the risk of the company in which he is receiving is exactly similar to the market, then he should get Risk free return that he must be getting if he had kept his money in bank plus risk premium of investing in market. However, if Beta is not 1, then he must be getting risk premium according to the risk he is assuming attached to the particular company.

Thus, $\beta(R_m - R_x)$ represents that risk premium of the company that investor should get to invest in that particular company.

Suppose if Beta is 1.2, then he is assuming more risk than market, thus, he must be getting more risk premium and if Beta is 0.7, then is he assuming less risk than the market, thus, he must be getting less risk premium. It means that higher the value of Beta, higher risky the security and the investor thus get higher return and vice-versa.

This model is very useful in determining the return which an investor must get when he assumes a particular risk of investing in a particular market.

Why is there a need to find expected return from this model when we can find through weighted probability method?

This model only tell about the return which an investor must get if he invests in a particular security/company which contains certain amount of risk, whereas, expected return from weighted probability method tells the expected return that investor might get based on the past records of return that the company is providing.

Now suppose, that expected return (average return) from weighted probability method comes out to be 25% of a company X. The investor must only invest in company X if the cost of equity (the return which a shareholder expects) comes out to be less than 25%

The CAPM signifies the importance of Beta over Standard Deviation. Standard deviation tells about the volatility in the returns received based on the past records, whereas, Beta represents the volatility of a security in response to the market. Since the investor gets risk premium based on the Beta (as explained above) as the unsystematic risk can be nullified through diversification, thus, Beta is always more important for an investor as compared to standard deviation.

What is Valuation?

Valuation is the process of determining the present value of a company or an asset or a liability. It can be done using various techniques and methods. Valuation may also be used in determining a security's fair value, which depends on the amount that a buyer is ready to pay a seller, with the assumption that both parties will enter the transaction.

Let us now understand the concept with an example!



Is your family also obsessed with Gold like every other family in India? Do they also keep buying Gold on Diwali, Dhanteras & Akshaya Tritiya and leave no auspicious occasion?

Well, Gold is considered to be one of the most precious metals around the globe. People in India just add an emotion to the yellow metal. But we can't keep buying gold forever! We will sell it someday.

Gold recycling happens when people sell the shiny yellow metal for cash mainly due to 3 reasons:

- When Gold prices are high or
- To buy another asset or
- When they need money for any other purpose.

Now, you have decided to sell your Gold Jewelry that you bought 2 years ago for a wedding. You feel the need to encash it and invest in mutual funds as they give you better returns.

Let's analyze the cost part of it. You bought 8 grams of 22K gold @

- ₹ 24,240 – Gold rate
- Making charge – Rs.2000
- Tax – Rs.760

Total cost – Rs.27,000, You go to the nearby jeweler to sell it.

Today the same 8gms of 22K gold is Rs. ₹40,208. Now they will cut an amount of Rs.2000 as melting charges to assess the exact Gold.

So out of Rs.40,208, they will deduct Making charge (Rs.2000) and Tax (Rs.760) and Melting Charge (Rs.2000).

Hence, you will get Rs.35,448 today.

The entire process of Valuing the worth of the Gold to be sold is called Valuation. Here,

Rs.35,448 – Fair Value/Intrinsic Value

Rs.40,208 – Market Value

The above process can be applied to determine the real worth of:

- An asset like Gold, Plant & Machinery, Stocks, etc.
- A Liability like a Bond, Debenture, etc.
- A Company or Business.

Assesing the value of any Business is called Business Valuation.

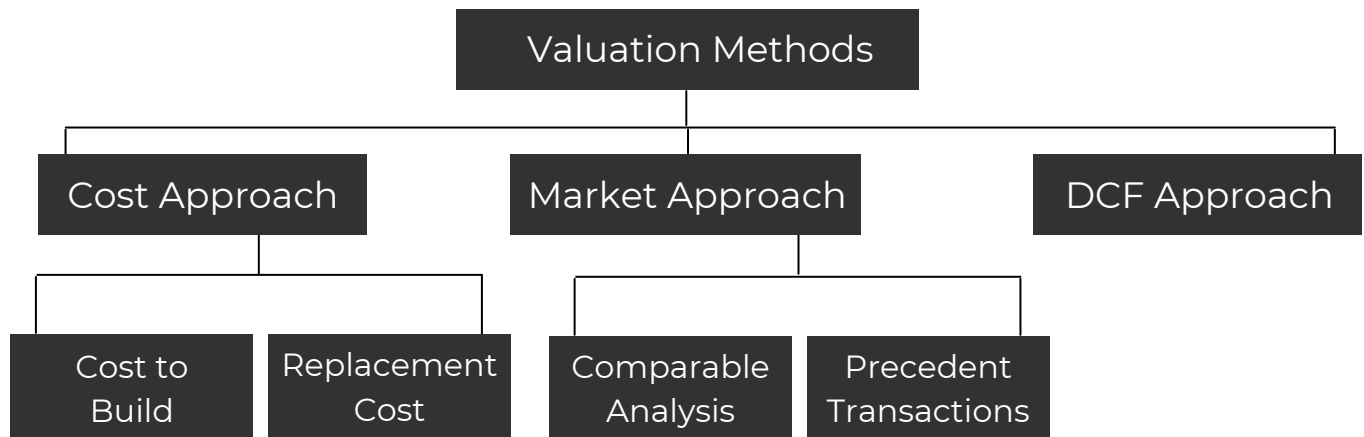
Why to perform a Valuation for a Business?

Business valuation to a company is an important exercise since it can help in improving the company. Here are some of the reasons to perform a business valuation:

- When you want to sell your business to a third party, the asking price should be attractive to prospective purchasers but at the same time, it should yield a profit. To calculate the right amount, both parties will need to ascertain the real value of the business. Same is the case when you want to acquire a business.
- Investment professionals or financial advisors perform business valuation to recommend their clients on investment decisions involving which stock to buy or sell or hold. They get to know if any stock's market price is overvalued or undervalued.
- Raising money is an essential process in any type of business. It can be through obtaining funds from banks or an IPO (Initial Public Offering). In either case, funds are provided after due diligence or careful scrutiny of the business by seeing the real value of the business.
- Strategic planning and Internal business decision making will be effective if the management is aware what the business is actually worth in the current situation. This lets them decide on how much debt to be taken, how much equity to be diluted, when to pay dividends, etc.
- During a court case where there is an issue with the value of the business, you may need to provide proof of your company's worth so that in case of any damages, they are based on the actual worth of your businesses and not inflated figures estimated by a lawyer. Valuations may be required in many situations, including business reorganizations, shareholder disputes, employee stock or share option plans, bankruptcy, mergers and acquisitions, and expropriations.



Valuation Techniques



Broadly there are 3 methods to value any business.

1. Cost Approach
2. Market Approach &
3. Discounted Cash Flow Approach

Cost Approach

Under this approach, we value on the basis of the cost involved in building the asset or business. Simply put, you pay the cost that was incurred to construct the asset. This method is mainly used for calculating the value of Real Estate Property, Insurance Policy, Specialised buildings like Schools, Churches, etc. as they do not generate income and are not marketed. The cost approach of evaluating real estate properties is based on the assumption that the cost of a property should be equal to the cost of building a similar property from scratch.

$$\text{Property Value} = \text{Cost} + \text{Land Value} - \text{Depreciation}$$

The Cost element in the above formula can be calculated in 2 ways:

1. **Replacement Cost** – The Cost that will take to replace or build a similar asset with the materials, labour and standards available currently.
2. **Reproduction Cost** – The Cost that will take to exactly duplicate the similar asset with the materials, labour and standards that were used to build it previously.

Let us now understand the concept with an example!



Let's take an example to understand the cost approach effectively.

We are going to buy a 10-year old Independent House in the outskirts of Bangalore. So we will have to ascertain the real value of the House in order to ensure that we don't pay in excess.

The current owner of the House gives us the following details about it.

Assuming the life of the house is 20 years.

Land Value – Rs. 60,00,000 (Rs. 2,000 per sq. ft. * 3,000 sq. ft.)

Original Cost of Constructing the House – Rs.75,00,000 (including improvements)

Accrued Depreciation for next 10 years – Rs.35,00,000 (According to Straight Line Method where 75,00,000 is spread over 20 years of its life – Rs.3,50,000 per year)

Since we are buying an already constructed house, the cost is assumed as Replacement Cost and not Reproduction Cost since we are not gonna re-construct the same House. The Owner gave us the cost of materials, labour and other expenses which he incurred while constructing as well improving the house and not the current market price as it might be higher than Rs.75,00,000.

Now, the value of the House = $75,00,000 + 60,00,000 - 35,00,000 = 1,00,00,000$

Hence, the valuation of the House according to Cost Approach comes to Rs. 1 Crore. Here, we add the Land worth to the Cost incurred by the owner and deduct depreciation as we will have to lose Rs.35,00,000 in the future from the original worth of Rs.1 Crore.

Under the same case, instead of buying, if we choose to reproduce or re-build the exact same house with the same structure, design & layouts and if we wanted to value the cost that will be incurred in that process, then we will estimate the value based on this house.



Assuming the life is same 20 years,

Land Value – Rs. 75,00,000 (as Land must have appreciated in the past 10 years – Rs.2500/sq. ft * 3000 sq. ft.)

Cost of Contruction – Rs.1,00,00,000 (as Cost of materials, labour and other expenses adjusted to inflation occurred in the 10 years)

Depreciation for 10 years – Rs. 50,00,000 (Rs. 1 crore spread across the next 20 years i.e. $1,00,00,000/20 = \text{Rs.}5,00,000$ per year)

The Total Cost of re-building the House and selling it after 10 years should be equal to:

Reproduction Cost = Rs.75,00,000

Less: Accreued Depreciation = Rs. 50,00,000

Depreciated Cost of the House = Rs. 25,00,000

Add: Estimated Value of Land = Rs. 1,00,00,000

Total Value of House = Rs.1,25,00,000



The Value of the House increases when the cost incurred is taken on the basis of current market price.

Limitations of Cost Approach

- This approach is not practical as the exact cost cannot be determined when including factors like labour cost & material cost due to the fluctuating nature of the same.
- An area can be fully developed, and local authorities can be restrictive on new developments, and so it will be impractical to estimate land values in that area.
- All the estimation problems will lead to subjective debates on the Total cost and availability of resources.



Market Approach

Market Approach is a form of relative valuation and frequently used in the industry. It includes

1. Comparable Analysis (comps) &
2. Precedent Transactions.



Comparable Analysis

Comparable company analysis or “trading multiples” or “peer group analysis” or “equity comps” or “public market multiples” is a relative valuation method in which you compare the current value of a business to other similar businesses by looking at trading multiples like P/E, EV/EBITDA, or other ratios.

Under this approach, we find whether the valuation of the business done is similar to the value of a similar business.

If we take the above purchase of a House example, then we will compare the value not with the incurred cost in the past but the value of similar houses in the same locality with similar features to know whether the price is underpriced or overpriced.

Let's analyse how to find if the value of the Business is overvalued or undervalued using the Comps Approach.

Step 1 – Finding the right companies to compare!

If we decide to value a beverage company named XYZ, then we will first find similar companies while considering the following factors,

1. **Industry classification** – Companies should be from the same beverage industry and have similar business model and product type.
2. **Geography** – Should be from the same country or State so that similar laws would be applicable.
3. **Size (revenue, assets, employees)** – Preferably size of the company should be same as comparing a Large Cap with a Small Cap would not make sense.
4. **Growth rate** – If the company is at a nascent stage, then it should be compared with either a company at growth stage or introductory stage rather than a mature company.

Step 2- Gather financial information

Gather quantitative data on metrics relevant to the chosen company. Like for Banking stocks, we will include Gross & Net NPA (Non-Performing Asset), CASA (Current Account & Savings Account), etc. while for Manufacturing companies, we look at Net revenue, Sales and EBITDA Figures.

So we are taking a Sales, EBIT, EBITDA and Earnings for our beverage company.

Step 3 – Setup the Comps Table

Along with the financial information, we will include general information like

1. Company Name
2. Market Cap
3. Share Price
4. Enterprise Value

All the above required data can be derived from online sources including Annual report, quarterly earnings report from the company's website. Since this is time taking, all these can be accessed from financial websites including Yahoo Finance, Money control or paid Financial databases like Bloomberg Terminal and Capital IQ

Company Name	Market Data			Financial Data			
	Price (\$/share)	Market Cap (\$M)	TEV (\$M)	Sales (\$M)	EBITDA (\$M)	EBIT (\$M)	Earnings (\$M)
The Coca-Cola Company	38.14	168,041	185,122	46,854	13,104	11,127	7,381
Pepsico, Inc.	81.37	123,883	143,824	66,415	12,344	9,878	5,618
Dr Pepper Snapple Group, Inc.	52.31	10,326	12,764	5,997	1,319	1,103	620
Monster Beverage Corporation	69.62	11,618	11,004	2,246	606	584	357
National Beverage Corp.	20.81	964	968	645	78	66	41

We have taken 5 Companies as seen in the above table. And the format of the table is important as it gives the readers clear and distinct financial information. We are dividing the Data into 2 columns initially namely,

1. Market Data which includes details regarding the Current Share Price, Market Capitalization and Total Enterprise Value.

2. Financial Data includes Sales Figures, EBITDA, EBIT and Earnings.

It is imperative to know the difference between Enterprise Value and Equity Value.



Equity Value/Market Capitalization = No. of Outstanding Shares X Current Share Price

Enterprise Value = Debt + Equity Value

Step 4 – Calculation of Ratios

Since this is a beverage company, we will calculate the following ratios from the Comps Table (Step 4)

- EV/Sales

- o Enterprise Value/Sales – It measures how much it would cost to purchase a company's value in terms of its sales.

- EV/EBITDA

- o Enterprise Value/Earnings Before Interest, Taxes, Depreciation & Amortization – This ratio tells that how many times the EBITDA has to be paid to acquire the business.

- EV/EBIT

- o Enterprise Value/Earnings before Interest, Taxes – The only difference between EV/EBITDA and EV/EBIT is that this includes depreciation and amortization.

- P/E

- o Share Price/ Earnings per share (EPS) or Market Cap/Earnings – Earnings multiple denotes the Price paid per unit of current earnings.

Company Name	Price (\$/share)	Market Cap (\$M)	TEV (\$M)	Sales (\$M)	EBITDA (\$M)	EBIT (\$M)	Earnings (\$M)	EV/Sales x	EV/EBITDA x	EV/EBIT x	P/E x
The Coca-Cola Company	38.14	168,041	185,122	46,854	13,104	11,127	7,381	4.0x	14.1x	16.6x	22.8x
Pepsico, Inc.	81.37	123,883	143,824	66,415	12,344	9,878	5,618	2.2x	11.7x	14.6x	22.1x
Dr Pepper Snapple Group, Inc.	52.31	10,326	12,764	5,997	1,319	1,103	620	2.1x	9.7x	11.6x	16.7x
Monster Beverage Corporation	69.62	11,618	11,004	2,246	606	584	357	4.9x	18.1x	18.9x	32.5x
National Beverage Corp.	20.81	964	968	645	78	66	41	1.5x	12.5x	14.6x	23.5x
Average								2.9x	13.2x	15.3x	23.5x

In our example, we calculate for the Coca-Cola Company accordingly, X factor signifies the multiplicity element.

• EV/Sales - $185,122/46,854 = 4.0X$

• EV/EBITDA - $185,122/13,104 = 14.1X$

• EV/EBIT - $185,122/11,127 = 16.6X$

• P/E - $168,041/7381 = 22.8X$



If the denominator is **before** interest expense,
it's an **enterprise value** ratio

EV/Revenue, EV/EBITDA, EV/EBIT



If the denominator is **after** interest expense,
it's an **equity value** ratio

P/E, P/B, P/CF

After calculating for other companies, we calculate the average and median for the respective ratios.

Average for EV/Sales = $4.0+2.2+2.1+4.9+1.5 = 2.9X$

Median for EV/Sales = 2.2 (middle number after arranging in the ascending/descending order)



Median for EV/Sales = 2.2 (middle number after arranging in the ascending/descending order)

Step 5 – Analyze our company XYZ with the help of comps table.

Generally we use Comps approach for Publicly Traded Companies as the information is available publicly. To analyze the equity value of XYZ, the analyst will multiply the earnings of the company they are trying to value by 23.5 times (average P/E ratio of the group of comparable companies).

Similarly we can compare the above ratio's average/median with the respective ratios of XYZ Company to analyze whether the company is overvalued or undervalued or how is it performing with respect to the industry standards.

By asking questions like Why is the Monster Beverage has a high P/E ratio? Is it overvalued? Or Is it a high growth company? Why is XYZ not performing in line with Monster Beverage? And so on...

Applications of comparable company analysis is mainly used in IPOs, FPOs, M&A Advisory, Restructuring, Share Buybacks, Fairness Opinions, etc.

Differences in Comps and Precedents

Basis of Differentiation	Comps	Precedents
Time Period	Takes Current information into account.	This takes past data while analyzing.
Takeover premium	Not included in the Enterprise Value	Takeover premium is included in the Enterprise Value
Availability of information	Readily available on financial databases and websites for publicly traded companies	Difficult to find as certain M&A transactions occur privately which is not disclosed to the public.

Discounted Cash Flow Method

Discounted Cash Flow (DCF) analysis is an intrinsic value approach where an analyst forecasts the business' unlevered free cash flow into the future and discounts it back to today at the firm's Weighted Average Cost of Capital (WACC).

This method is generally done using Financial Model in Excel. And since this is the most extensive and accurate valuation, it requires clear reasonable estimations and assumptions.

Now, all this is in bold because every term is important and this is most widely used approach for valuing any business all over the world when compared to the above 2 approaches. Let's understand what the definition means before we get to the formula part of DCF.

Intrinsic value Approach

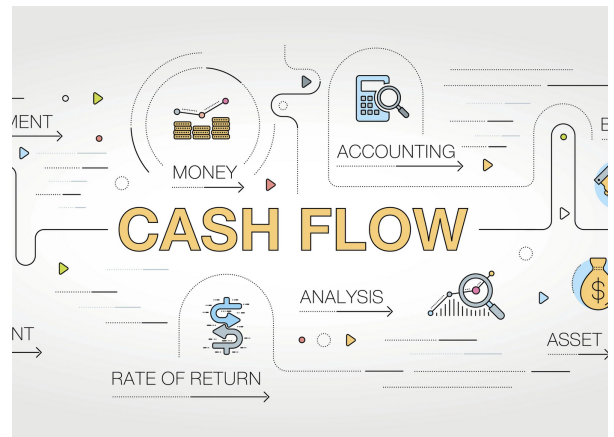
DCF is an approach which calculates the intrinsic/Face value of the business independent of other business in the same industry. Unlike Comps and Precedents under the market approach that considers relative valuation by comparing with other companies or previous M&A transactions, DCF is a standalone approach which does not take any past data in terms of Cost Approach but forecasts the future cash flows with the help of present data.



Free Cash Flow

Cash Flow (CF) is the increase or decrease in the amount of money a business, institution, or individual has. In finance, the term is used to describe the amount of cash (currency) that is generated or consumed in a given time period.

Free Cash Flow is the cash flow available to all equity holders and debt holders after all operating expenses, capital expenditures, and investments in working capital have been made.



Unlevered Free Cash Flow

UFCF =

- EBIT (Earnings Before Interest & Taxes)
- Taxes (recalculated without deducting interest expense)
- + Depreciation & Amortization
- Capital Expenditures
- Increase in Non-Cash Working Capital

Discounting

We are borrowing a sum of Rs.1000 today at 10% interest compounded for the next 3 years.

Year	Principal	Interest Rate @ 10%	Amount
1	1000	100	1100
2	1100	110	1210
3	1210	121	1331

This process is called Compounding. When this process is reversed, it is called Discounting. The question will be in order to Receive Rs.1331 at the end of 3rd year at a discount rate of 10%, then what should the amount invested today.

This can otherwise be called as Present Value (1000) and Future value(1331).

Weighted Average Cost of Capital (WACC)

In the above example of compounding and discounting, we saw that the cost of borrowing is 10%.

10 % - Compounding Rate, Cost of Capital and Discounting Rate

When a company decides to borrow, it may do so from many sources under 2 categories;

When a company decides to borrow, it may do so from many sources under categories;

And since company borrows from both sources, it is imperative to add the cost of capital from both sources. But it might so happen that the company borrows 75% from debt and 25% from equity. So it won't be fair to just add up both the costs as the ratio is 3:1. So we have to calculate the Weighted Average Cost of Capital (WACC).

1. Debt – Loans through issue of debentures, bonds, from Banks and others.

2. Equity – Issue of shares either privately or publicly

Cost of Borrowing from

1. Debt would be the fixed rate of dividend in case of debenture or Interest rate charged by Bank

2. Equity would be the expected rate of return from the investors.

$$\text{WACC} = \text{Cost of Equity} * \% \text{Equity} + \text{Cost of Debt} * \% \text{Debt} * (1 - \text{Tax Rate}) \\ + \text{Cost of Preferred Stock} * \% \text{Preferred Stock}$$

There are many methods used to calculate the Cost of Equity and Cost of Debt.

For simplicity purposes, we assume that there is no Preferred stock and the Company has given the following details;

1. Capital Structure

o Equity – 75%

o Debt – 25%

2. Cost of Equity – 15%

3. Cost of Debt – 12%

4. Tax Rate – 20%

(since interest on debentures is tax deductible)

$$\text{WACC} = (15\% * 75\%) + (12\% * 25\% * (1 - 20\%)) = 13.65\%$$

Now, let's take a look at the formula of DCF.

$$\text{DCF} = \frac{CF_1}{(1 + r)^1} + \frac{CF_2}{(1 + r)^2} + \dots + \frac{CF_n}{(1 + r)^n}$$

Where

DCF – Discounted Cash Flow

CF – Cash Flows (can be inflow as well as outflow)

r – Discount rate

n – No. of years

Considering an example, we are evaluating a company named MAMA Power as per the DCF Approach.

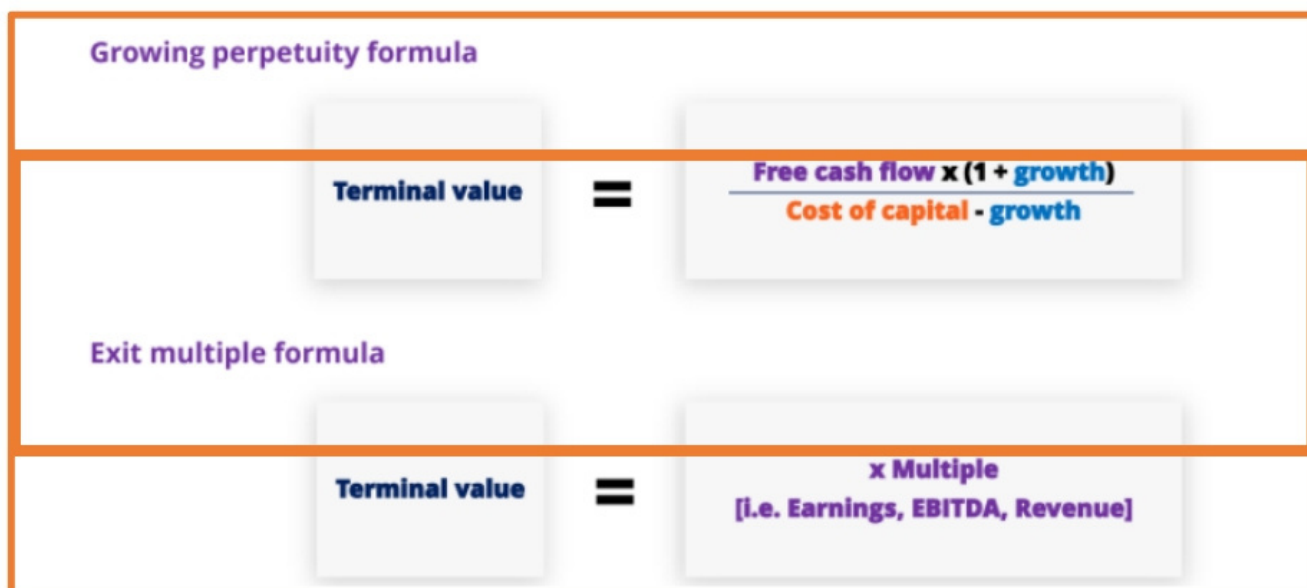
Step 1 – Set the assumptions right!

- 1) MAMA Power is a going concern and is not going to be dissolved anytime soon.
- 2) The Forecast Period is 5 years.
- 3) The Cash Flow calculated through the Financial Model by assessing Financial Statements is \$100 for the next 5 years.
- 4) Discount rate is 10% (WACC)

Step 2 – Calculate the Terminal Value

Terminal Value is the Value of the Cash Flows beyond the forecast Period (in our case it's 5 years). It can be calculated in 2 methods,

1. Exit Multiple – This assumes that the business will be shut after the forecast Period.



2. Growing Perpetuity Formula – This assumes the business to be a going concern.

We will calculate the Terminal Value using Growing Perpetuity Formula since we assumed MAMA Power to be a going concern.

Growth Rate – It is the rate which the company keeps growing every year. So it should be practical and can be taken as a Growth rate of GDP.

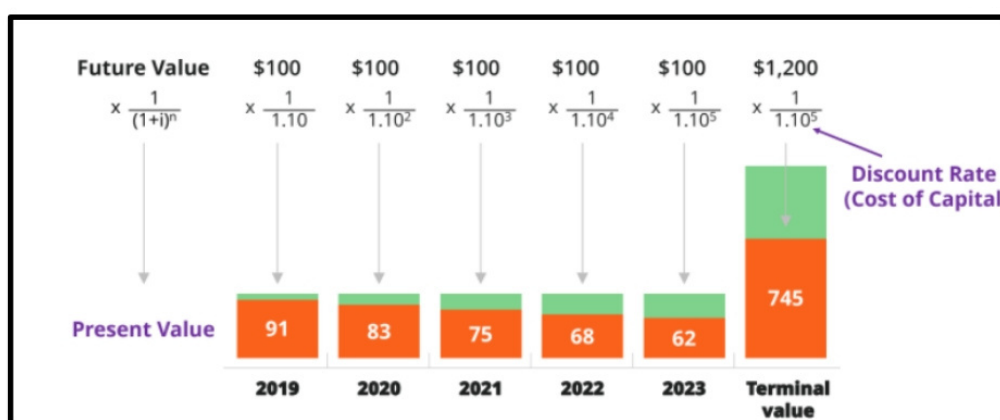
Here we take Growth Rate – 1.54%

$$\text{Terminal Value} = 100 * (1+1.54\%) / 10\% - 1.54\% = 1200$$

Step 3 – Calculate the Discounted Cash Flow Value

We will have to discount the cash flow for 5 years and the Terminal Value of 1200 to the Present day at the discount rate of 10%.

Present Value = Future Value



$$\left(\frac{1}{(1+i)^n} \right)$$

Now, as seen above, we will add all the present values of each year to arrive at DCF Value.

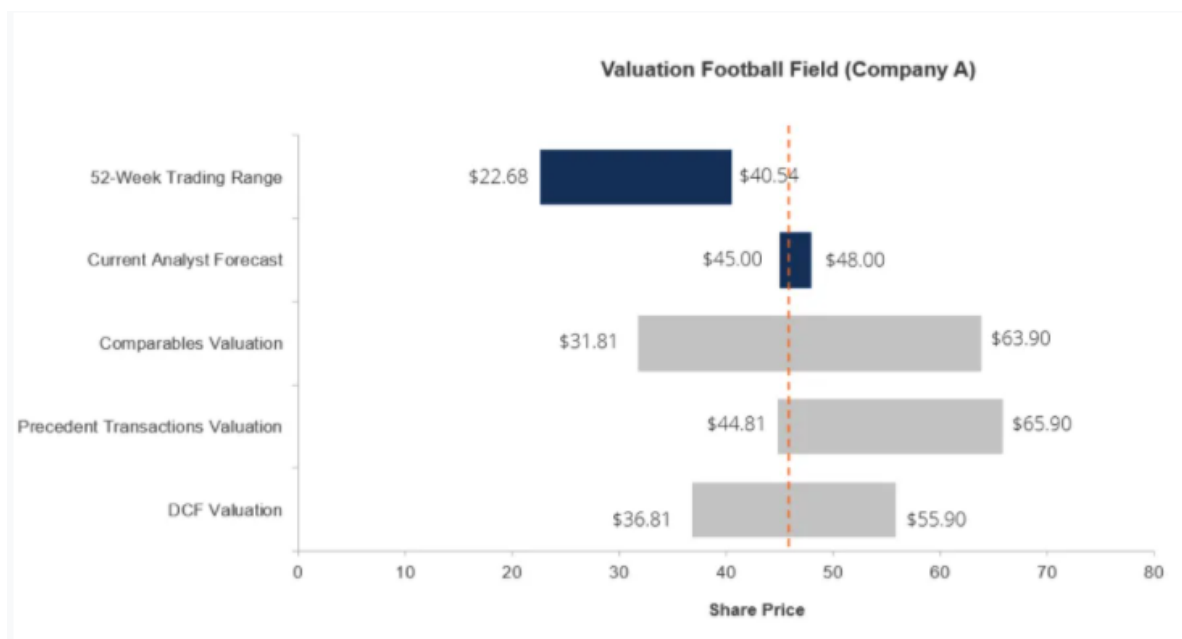
$$\text{DCF Value} = 91 + 83 + 75 + 68 + 62 + 745 = \$1124$$

DCF Value of MAMA Power is \$1124.

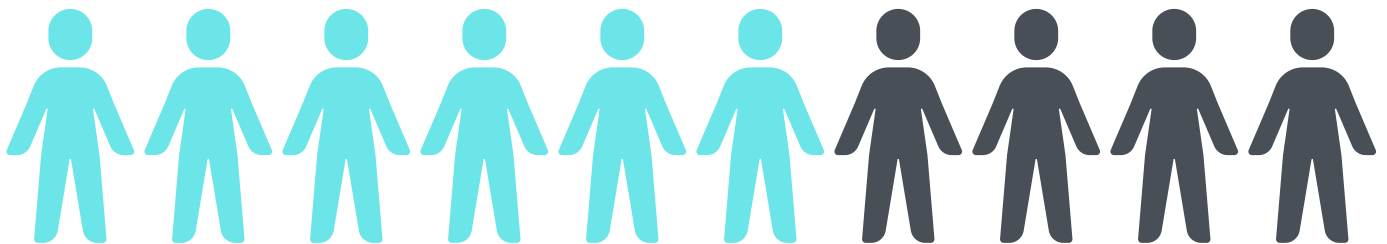
Football Field Chart:

A football field chart is used to summarize a range of values for a business, based on different valuation methods. The purpose of the chart is to show how much a buyer might be willing to pay for a business, whether acquiring all of it, part of it, or even a single share.

The bars look like yard lines on an actual football field, and hence the name. It's common to see these charts in an investment banking pitch book or equity research report, summarizing the various valuation methods that were used.



The graph summarizes the company's 52-week trading range (publicly traded stock), the range of prices analysts have for the stock, the range of values from comparable valuation modeling, the range from precedent transaction analysis, and finally the DCF valuation method. The orange dotted line in the middle represents the average valuation from all the methods.



What is Insurance?

In simple words, insurance is the financial protection which an insurance company gives to its costumers (policyholders) against the losses caused due to unavoidable and undesirable circumstances. The person who is getting insured, i.e. the policyholder is known as insured while the insurance company is known as insurer. You all must have heard someone saying that my car met with an accident but i did not have to pay money for its repair. It is because that person had his car insured.



How did the idea of insurance originate?

There were two merchants Albus and Snape who lived in Persia. They were wealthy and had booming businesses of carpets and silk. But they lived in a very unsafe neighbourhood. There were reports of thefts and kidnapping almost every-day. The thieves were armed and really dangerous. Scared about the same they did not know what to do. One day Albus and Snape thought of going and discussing this matter of grave concern with their good friend Tom who was the head of the government of their state. When they discussed this with Tom, Tom gave them proposal that he will provide them security from these thieves in return Albus and Snape had to gift him high quality carpets every-month along with other goods.

Similarly in ancient Persia the Monarchs would be presented with annual gifts from various ethnic groups under them which would officially bound The Monarch to provide them safety from harm. This functioned as the early forms of Political Insurance

This is one of the many ideas behind the origination of the idea insurance.

Need for Insurance

Need for Insurance

The need for insurance is to ensure that someone is there to help you financially when you meet with an undesirable situation. Suppose in a middle class family, father is the only breadwinner. Unfortunately he suffers from ill health and had to be admitted to hospital. However, thanks to the health insurance company who incurred all the expenses of his treatment. Had there been no insurance, the family would have suffered and he might not have got the required treatment. Thus, insurance is very important to provide financial support to the insured during uncontrollable and undesirable circumstances.



Now we all know that what is the importance of having an insurance policy, however, a very important thing is to understand what all must be kept in mind while selecting an insurance policy. While selecting an insurance policy, a customer must keep in mind the premium of the policy, the policy limit and deductibles. Let us understand these terms with some examples:

Insurance Premium-

Insurance premium could be referred to as the price of acquiring an insurance policy. Just as while purchasing a commodity, say shoes, its price is to be given to the seller, similarly to acquire an insurance policy, customers have to pay insurance premium. It may be paid monthly, quarterly, half yearly or yearly. Insurance premium is generally set by the insurance company keeping in mind the risk that the insured person is exposed to. For example- while purchasing a health insurance policy, a diabetic person has to pay more premium as compared to a non diabetic person as he is more prone to ill-health. Thus, there is a positive relation between insurance premium and the probability of the risk. Higher the probability, higher would be the risk.

Policy limit-

Policy limit is the maximum amount of claim that an insurance company accepts, i.e. agrees to pay for the loss occurred by policyholder. Policy limit varies from policy to policy. The policy limit for each individual policy is stated in the terms and conditions of the respected policy. While selecting a policy, a policyholder must pay a special attention to it. For example- if policy limit of a car insurance policy is rupees 1,00,000 , then the insurer would bear loss only upto rupees 1,00,000. Any expenses over and above rupees 1,00,000 would be borne by the insured



Deductibles-

Another very important thing which a person must check before selecting a suitable insurance policy is deductibles. Deductibles is the amount which the insured must pay out-of-pocket to kick-start the claim procedure. So, suppose in the above example of car insurance, deductibles is stated in the policy as rupees 4,000. Then the policyholder can only approach to the insurance company if the claim exceeds rupees 4,000. Any damage to the car below rupees 4,000 must be borne by the insured. Thus suppose if the car incurs a repair of rupees 1,50,000 and deductibles is rupees 4,000 while the policy limit is rupees 1,00,000 then the insurer would only pass the claim of rupees 1,00,000. The rest amount of rupees 50,000 would be a loss for the insured.

Reasons for Deductibles-

Now you must be wondering that what is the reason to have deductibles in the insurance policy. Don't worry we are here to clear all your doubts regarding it. The main reasons to have deductibles are listed below:

1) To Prevent Moral Hazard-

Moral hazard can be referred to as casual approach of a person towards maintenance of a particular thing. It is taking the risk without bearing the consequences of it. It is in the human nature to develop moral hazard when he knows that his actions would not affect his financial position but of other. Thus, when a person gets an insurance policy, it is quite obvious for him to develop moral hazards. For example- if a person gets an insurance of his mobile phone and he knows that all the loss would be borne by the insurer if his phone gets damaged, then he is very much likely to have a casual approach in handling it such as throwing the phone on bed, catching it, using it roughly, etc. Thus in order to bring skin in the game, i.e. to give the insured a sense that any loss to his phone would also imply some loss on his part too in the form of deductibles, having deductibles is very important in any insurance policy.

2) To ensure financial stability of insured company-

Deductibles are important to ensure financial stability of the insured company. Have there been no deductibles the company would have bulks of small claims to pay which would add to its cost like recruiting more employees due to very large number of claims. For example- if there are no deductibles in a car insurance policy, thus even a minor damage to car like a minor scratch would encourage the insured to file claim in the company for the expenses incurred to remove the scratch. This would lead to a large number of such claims which would adversely affect the financial stability of the insured company.

So it is very important for a person to choose an insurance policy wisely by keeping in mind the above mentioned things. Some additional things that must be kept in mind while selecting a health insurance policy are stated below:

Copay is the amount which the insured has to pay out-of-pocket to start any treatment like for doctor's visit, for prescribed medicine, etc. Copay might not be included in deductibles. Thus, insured must check if the deductibles cover copay or not.

Coinsurance

Coinsurance is the provision which the insurance company makes to pay the expenses after deductibles have been paid out. Generally, in coinsurance, the insurer states that in which ratio the expenses over and above deductibles and copay would be borne by the insurer and insured, say in the ratio 80%-20% or 90%-10%, etc. For example- in a health insurance policy deductibles is rupees 7,000 and copay is rupees 3,000. The company states that any expenses over and above maximum out-of-pocket money would be borne by insurer and insured in the ratio 90%-10%. Unfortunately, the insured experienced some pain in his heart and had to go to the doctor for consultation. The consultation fees of doctor was rupees 1,000. After checking the patient, doctor advised an immediate surgery which would cost rupees 1,00,000. Thus, the patient (insured) underwent surgery which was successful and by god's grace he got well. Now, the total amount that the insured had to pay was $1,000(\text{copay}) + 7,000(\text{deductibles}) + 9,200(\text{coinsurance}) = 17,200$ while the insurance company had to bear rupees 82,800 (90% of 92000 because deductibles and copay were

UNIQUE INSURANCES TAKEN BY VARIOUS CELEBRITIES AND ORGANIZATIONS

1. Wimbledon's Insurance Policy against global pandemic :

The All England Lawn Tennis Association, which organizes the Wimbledon tennis tournament are set to receive a huge amount of \$141 million due to its insurance against a global pandemic.

The association had the foresight to buy around an insurance policy of \$1.9 million every year against a global pandemic. Following the SARS outbreak in the 2003, the association had invested in total an amount of \$34 million in the last 17 years.

Wimbledon earns around \$160 million in media rights, \$151 million in sponsorship and around \$52 million in ticket sales annually. While it will save \$38.7 million on prize money and more on staff wages, this still is a significant loss of income, despite the large insurance pay-out

2) David Beckham's Whole Body

The internationally-renowned footballer took out the largest personal insurance policy in sports history, namely \$195 million, on his own body. It insured against injury, illness, and disfigurement.

3) Heidi Klum's Legs

When she started modeling her legs for Epilady, razor brand Braun reportedly took out a policy for \$1.6 million. One of her legs is insured for \$200,000 more than the other, because of a small scar on the left.



4) Troy Polamalu's Hair

Shampoo maker Proctor & Gamble insured his curly locks for \$1 million, after he signed an endorsement deal with Head and Shoulders. He hasn't cut his hair in over ten years.

5) Miley Cyrus's tongue:

This pop star has taken steps to protect herself in the event that she is not able to complete her signature look by taking an insurance policy for her tongue for \$1 million



Different Principles of Insurance

1) Utmost good faith:

This is the principle which includes that both the parties included in a policy, the insured (i.e. the consumer) and the insurer (i.e. the insurance company) should act in good faith towards each other.

It is the duty of the insured to voluntarily make full, accurate disclosure of all facts, material to the risk being proposed and the insurer to make clear all the terms and conditions in the insurance contract.

This is required because the insurance company also has to look out for frauds who were trying to find a way to scam them into free money.

Failure to make disclosure of material facts by the insured makes the contract of insurance voidable at the discretion of the insurer.

Let us understand this with an example:

Gunther went to an insurance company to get a health insurance policy. For this he was asked to make correct disclosures about his and his family's medical history. He didn't disclose the fact that he is suffering from a chronic heart disease. After 3 months Gunther suffered from a heart attack and has to go through an operation. He files for an insurance claim with his company, after researching and investigating the company found out that Gunther didn't disclose the fact about his chronic heart disease and therefore the company rejected his claim. If Gunther had disclosed this fact then the insurance premium would have been more but the claim would have been given.

2) Insurable Interest:

This principle means that the insured or the policyholder should have an interest in the insurance policy that he or she is getting. In layman terms it means that the subject matter of the insurance contract should provide the insurer financial gain through its existence and the insured will suffer a financial loss or other hardships when the item is lost or destroyed.

LET'S TAKE A CASE STUDY:

Monica owns a car. One day while driving she is involved in a car accident. She incurred a huge loss as she has to get her car repaired before she could use it again or she has to scrap her damaged car at a very cheap rate. Concluding that she will suffer a financial loss if her car is involved in an accident and therefore she has an interest in getting her car insured to mitigate the risk of financial loss. If an accident happens with a car not owned by her then she will suffer any financial loss and therefore she doesn't have an interest in getting that car insured.

3) Indemnity:

The principle of indemnity is the guarantee given by the insurance company to the insured to return him in the financial position as he or she was in before the loss happened due to an uncertain event on the item which was insured, the insurance company compensates the insured to the amount of loss or the amount which they both have agreed upon in the insurance policy depending upon whichever is less. It should be noted that the principle of indemnity is NOT applicable to life insurance as value of a life can't be calculated. Therefore in case of life insurance the insured gets the amount agreed upon in the policy. You will read about life insurance later in the curriculum.

4) Subrogation:

It refers to the right of the insurer to stand in the place of the insured, after settlement of a claim, as far as the right of insured in respect of recovery from an alternative source is involved. This is because the insured should not be allowed to make any profit, by selling the damaged property or in the case of lost property being recovered.

FOR BETTER UNDERSTANDING:

John and Sam were involved in a car accident. As a result, John's car was severely damaged, and he required \$3,000 for the repair of the vehicle. Luckily, John's car was insured, and he recovered the full cost of the repair (\$3,000) through an insurance claim.

Eventually, an investigation determined that Sam was responsible for the accident as he exceeded the speed limit. John's insurance company decides to recover the amount of the claim from Sam, as he caused the damages.

In such a case, John's insurance company can use the subrogation doctrine to recover its losses. The insurer can sue Sam to recover its losses while representing the interests of John in the court.

5) Contribution:

The principle of contribution is implemented when multiple insurance policies are covering the same property or loss; the total payment for actual loss is proportionally divided among all insurance companies.

In insurance, the principle of contribution was inborn from the principle of indemnity. It is used to maintain continued existence to preserve the principle of indemnity. Therefore, the principle of contribution only applies to those insurance contracts which are contracts of indemnity. There would have been possibilities of getting more than the actual loss had the principle of contribution not been established with legal force.

EXAMPLE OF THE SAME:

Joey has taken two insurance contracts for his car so that he is covered fully in any situation. He has a policy with Insurance company X that covers \$30,000 in property damage and a policy with Insurance company Y that cover \$50,000 in property damage. One day his car is involved in an accident and he incurred a loss of \$60,000 then Insurance Company X will give \$22,500 and Insurance Company Y will give \$37,500. In total he will receive \$50,000 for his claim.

6) Proximity Cause:

According to this principle, an insurance policy is designed to provide compensation only for such losses as are caused by the perils which are stated in the policy.

When two or more independent perils operate at the same time (i.e., concurrently) to produce a loss. Courts employ a set of proximate cause rules to resolve causation disputes when a property policy states that it covers or excludes losses "caused by" a peril and there is more than one peril at work in a fact pattern. Meaning that when the loss is the result of two or more causes, the proximate cause means the direct, the most dominant and most effective cause of which the loss is the natural consequence.

If the peril which is considered to be the proximate cause of a loss is covered by the policy is chosen then the insurance claim is valid and if the peril which is not covered by the policy is considered to be the proximate cause then the insurance claim is invalid.



There are no hard and fast rules to determine the proximate cause of a loss, since this is a question of fact concerning specific circumstances. The proximate cause should be determined according to common sense principles, as understood by the ordinary man in the street. A learned judge observed, "If you want to find out the proximate cause, do not ask a scientist or a lawyer, ask a man from the street. Probably his answer will be the correct one." This comment helps us to understand the principle of proximate cause easily instead of making it complicated.

Principle of proximate cause is subjective. Concluding that the peril considered as the proximate cause of a loss can vary from judge to judge. As a result most of the cases in the court related to insurance claims are because of the principle of proximate cause.



What are perils and different types of perils

Peril

A specific risk or cause of loss covered by an insurance policy.

Some different types of Perils are

1. **INSURED PERILS:** The perils which are mentioned and are covered in an insurance policy.
2. **EXPECTED OR EXCLUDED PERILS:** The perils which are not covered by an insurance policy but are also mentioned in a separate column in the policy.
3. **UNINSURED OR OTHER PERILS:** The perils which are not all mentioned in the insurance policy.

Let us now understand the concept with an example!

Mr. Thomas Shelby bought a fire insurance policy for the furniture of his house but did not buy any policy for covering electronic items. A fire erupted in his building, following which there were frequent electrical fluctuations and due to which his refrigerator broke down after a few days.

In such a situation, he was expecting his claim to be paid through the fire insurance policy, however, he was disappointed when it did not happen.

As the fire insurance policy did not include 'breakdown-related' perils, the proximate cause was decided as 'breakdown' and not the 'fire' directly



Let's take another example to understand better!



There was a fire in Ross's building. He has a fire insurance for the goods kept in his house. Luckily, the firemen were able to extract some of the undamaged goods from the burning house and kept them in the open away from the fire. Suddenly, the rain started pouring and the goods were subsequently damaged by rain water.

Here the proximate cause of the damage was the fire or the rain?

The answer is Rain water.

The reason behind it is:

If the rain had damaged the goods before the policyholder had an opportunity to protect it, then here the proximate cause of the damage would be fire, which was covered under the fire insurance policy. However, if stocks were left uncovered for a long period, the rain would be considered as a new and independent cause of damage.

Types of Insurance Companies

There are mainly two types of insurance company based on the types of ownership:

- Stock Insurance Company, and
- Mutual Insurance company.

Stock Insurance Company

When the owners of the company and the policyholders are different, then that insurance company is known as **stock insurance company**. In stock insurance company, the ownership is represented by the shareholders while the policyholders are the customers of the company. The various ways in which a stock insurance company raises funds includes public issue of shares, bonds, debentures, etc. The main motive of the existence of these companies is to earn profits. In stock insurance company, only the shareholders receive dividends and not the policyholders.

Mutual Insurance Company

When the owners and policyholders are same, i.e. the policyholders are also the owners of the company, then that company is known as **mutual insurance company**. In mutual insurance company, policyholders represents the ownership of the company and have a say in the management of the company. Also, the policyholders receive returns in the form of dividends from the company. The main motive of the existence of mutual insurance company is to provide a wide coverage of insurance to its policyholders. This type of company generally raises its funds by issuing debentures, bonds or through raising loans.

Now an important question arises that the consumer should purchase insurance policy of which company, i.e. of stock insurance company or mutual insurance company.

Thus, it is very important for a consumer to see that which company is offering him the best benefits at minimum cost.

Generally, for insurance policy which needs to be refreshed after a particular time interval say every year, then a person may opt for stock insurance company as this would provide him an opportunity to explore more and more companies.

However, for long term policies like life insurance policy or health insurance policy, a person may go for mutual insurance company as this would provide him better long term coverage as the basic reason for their existence is to provide best insurance facilities to their policyholders.

Mutual insurance companies generally face a problem of raising more capital. Thus, if such company needs to have an access to stock market and have better access to capital, it can do so by converting itself into a stock insurance company by the process of demutualisation. Demutualisation is the process under which a mutual company converts itself into a stock company. The existing policyholders(co-owners) are either compensated or are given shares of the newly framed company.



For example- suppose there is a mutual insurance company named 'We Are Here' which needs to raise more funds however since it do not have access to share market, it is not able to do so. So it decides to demutualise itself thus raising capital through public issue of shares. Now, all those members who were previously the policyholders would either be compensated by payments or would be given shares in their name. Moreover, they can also buy additional shares if they wish to do so.



How insurance companies make profits?

Seeing that insurance companies are there to bear the losses for its policyholders, there must be a question in the mind of all of you that why do they do so. Why insurance companies bear the losses that we face. The answer is simple- they charge us premium for that. You must have some questions regarding how insurance companies work and earn profits. So talking in simple terms, the insurance company creates a pool of risk, i.e. bringing all policyholders together to cover the risk of each other. For example- Suppose a health insurance company has 1,00,000 policyholders. Thus, the insurance company makes a risk pool of these 1,00,000 policy holders, that is bring them together. Now there are 1,00,000 people together to bear the loss for each other. It is very obvious that not all 1,00,000 people will face health problems.

Only a part of them will face health problems. However, premium would be paid by all the people. Thus the premium of those people who do not suffer would be used to pay for those who suffered the losses. In this way the risk pool helps to provide claims to those affected. The insurance company always assesses the potential risk which the company will face to provide claim to the insured persons and determines the insurance premium according to it. Suppose, an insurance company is offering a fire insurance policy. Now seeing the previous trends of building catching fire in a particular area, the company will determine potential risk, say, 20% of houses would catch fire. Accordingly, the company would set premium in such a way that total premium collected from all the policyholders must be atleast sufficient to cover the claim of 20% houses. Also, it must be noted that higher the probability of risk, higher would be the premium. For example- while acquiring an health insurance policy, a diabetic person have to pay more premium as compared to a non diabetic healthy person as he is more prone to ill health, i.e. the risk for insurance company is high.

Now suppose in the above example of fire insurance, premium collected (say rupees 1 crore) is more than the potential risk (say rupees 60 lakhs) of the company. Now the insurance company would take advantage of float here. Float is the time period between the insurance premium received and the claim being given. The company would make a reserve for the payments of potential claim (rupees 60 lakhs) and with the extra money (float) , i.e. rupees 40 lakhs, the company would make further safe investment in various financial instruments like shares, government bonds, debentures, etc. Now the company makes profit by receiving returns from the investments made. Unlike banks who have to pay interest to the depositors for keeping their money, insurance companies are infact receiving returns without paying anything for holding the money. This float concept helps the insurance companies make a lot of profit and thus expand their business.

Reinsurance

In order to save themselves from losses, insurance companies follow the path of reinsurance. If an insurance company sees that their potential risk has increased due to some anticipated event, it reinsures itself. Reinsurance refers to a process in which insurance companies insure themselves with some other insurance company by paying them some part of the premium received, thus, becoming risk free. For example, in the above fire insurance case, suppose insurance company predicts that there are chances of an earthquake taking place which increases the potential risk of fire to 50%, then the company would insure itself from the losses which it might have to occur due to earthquake by giving some part of premium to the reinsurer company. In this way, insurance company by taking full advantage of risk management saves itself from expected losses.

Now you must be wondering that why is reinsurance company taking the risk of the insurance company? It is because the insurance company is not sure about the earthquake taking place. Thus if the earthquake does not occur, the reinsurer will earn profits in the form of premium they received from the insured company. So they are assuming the principle of higher the risk, higher the returns.



SOME OF THE BIGGEST INSURANCE FRAUDS

HCA/MEDICARE

In 2000 and 2002, HCA (Hospital Corporation of America) pleaded guilty to 14 felonies, including fraudulently billing Medicare as well as other programs. HCA had inflated the seriousness of diagnoses, filed false cost reports, and paid kickbacks to doctors to refer patients. HCA had to pay the US government \$631 million plus interest, as well as \$17.5 million to state Medicaid agencies, on top of \$250 million already paid to Medicare for outstanding expense claims. It was the largest fraud settlement in US history, with law suits reaching \$2 billion in total.



The John Darwin disappearance case

This was an investigation into the faked death of the British former teacher and prison officer John Darwin. Darwin turned up alive in December 2007, five years after he was believed to have died in a canoeing accident.

Darwin was arrested and charged with fraud. His wife, Anne, was also arrested and charged for helping Darwin to collect his life insurance of £250,000. The fraudulent death also allowed the couple to pay off their £130,000 mortgage. In December 2007, after it was revealed the couple had been photographed together in Panama a year earlier



Anne confessed to knowing Darwin was alive and that he had been secretly living in their house and the house next door, which allowed him to get the insurance money illegally for his own personal gain. On 23 July 2008 John and Anne Darwin were each sentenced to over six years' imprisonment.

BBC created a TV drama about their story called Canoe Man.

Michael Jackson's prescriptions

Lloyds of London has recently filed suit to invalidate an insurance policy taken out by Michael Jackson covering his "This Is It" tour. They contend that the pop star lied on his policy application.

The amount of the policy is \$17.5 million insurance policy and was supposed to be paid out in the event the King of Pop's comeback tour didn't get off the ground.



The famous insurance company says that Jackson failed to disclose he was taking prescription drugs on his application, and stated he had not been under a doctor's care for anything other than cosmetic procedures since 2005 (and why wouldn't they believe that?). Since Jackson died from an overdose of the powerful anesthetic Propofol while under the care of Dr. Conrad Murray, just days before the tour was supposed to start, Lloyd's of London is claiming deception.

INVESTMENT BANKING

07

At some point, you must have heard about Investment banking. But do you actually know what investment banking is, what do investment banks do and how are they different from the commercial banks near our homes where we deposit our savings?

Let us now understand the concept with an example!

Suppose there is a company ABC who wants to buy another company XYZ.

ABC is not sure how much company XYZ is really worth and what will be the long term benefits in terms of revenues, costs etc.

In this scenario, ABC will approach another company (Investment Bank) who will help ABC to determine the value of the company and settle the deal with XYZ by preparing necessary documents.



Here the investment bank works on the buy side and some other investment banks may be working on the sell side to help XYZ.

Investment Bank is a financial institution or a company that provides financial consultancy services to the clients that may include government, individuals or corporations. They can also be understood as an intermediary between their clients and the financial markets. Investment banks grease the wheels of capitalism.

Functions and Role

Investment Banks offer a wide range of services that include underwriting, M&A, sales and trading, equity and research, asset management etc.

Two key areas where investment banks play a major role are M&A advisory and underwriting services:

1. Mergers and Acquisitions
2. Underwriting Services

Mergers and Acquisitions

All activities under mergers and acquisitions advisory are classified as either “sell” side or “buy” side.

The example that we discussed above is the most apt for understanding this role of investment banks. Their role is to establish a fair value for the companies involved in the transaction. Various financial models are prepared by the bankers for this purpose.

Underwriting Services

Underwriting is the process through which an individual or institution takes on financial risk for a fee. It means taking on risk by buying the shares outright from issuers and then selling them to the public or buyers. Investment Bankers often take the underwriting of deals for the clients.

DIVISION OF FUNCTIONS

FRONT OFFICE (REVENUE)	MIDDLE OFFICE (RISK)	BACK OFFICE (SUPPORT)
Front office is the division that makes the bank money. It serves clients, both individuals and corporates, directly. Drives revenue generation and includes divisions such as corporate financing, sales and trading and equity research.	Supports processes related to revenue generation such as risk management and treasury.	Roles that exist regardless of revenue generated such as compliance account, technology, human resource.



Other functions of investment banks include:

Arranging Finance

Suppose if a company wants to expand, it probably won't have the cash to do it. In such a scenario, an investment bank may be employed to assist the company to arrange the adequate finance for the expansion purposes.

Equity Financing

Most cost efficient way for companies to finance their growth and expansion is either by selling bonds or selling stock. Investment bankers play a role when it comes to arranging the sale of stock.

EXAMPLE:

Suppose a company decides to raise money for its expansion by launching an IPO. Investment Bankers may be hired in their case to lead throughout each step of the process.

Arranging Private Placements

Private Placement is the sale of shares or bonds to pre-selected investors and institutions rather than on the open market. Not all companies want to go public. Investment Bankers also help the companies to raise capital through private placements rather than stock or bond. Investment Banker is expected to have contacts and credibility to get sales done.

Types of Investment Banks

Bulge Bracket

Investment banks which perform most of the functions of the business come under this category.

EXAMPLE:

XYZ is an investment bank which has many divisions and performs all the functions that have been discussed in the previous section, then XYZ comes under this bulge bracket category.

Boutique

Small investment banks and traditional banks that choose to focus and perform only few of the functions of the business come under this category.

EXAMPLE:

ABC is a bank that wants to expand its business for which it starts providing underwriting services to its clients. Then ABC will come under this category.

Regional

Regional investment banks are the ones that focus on a particular part of the country.

Difference between Commercial Banks and Investment Banks

Investment bank is a corporation which another company or institution will approach to help manage their company through the various services provided by the investment banks such as underwriting, creating capital or helping with merger and acquisitions.

Commercial bank is an institution which primarily deals in deposits and loans for the individuals and companies.

Service

Investment banks serve investors, corporations and government.

What They Do

Investment banks perform various functions as already discussed above.
Commercial Banks deposit money and lend it to the public.

Earning

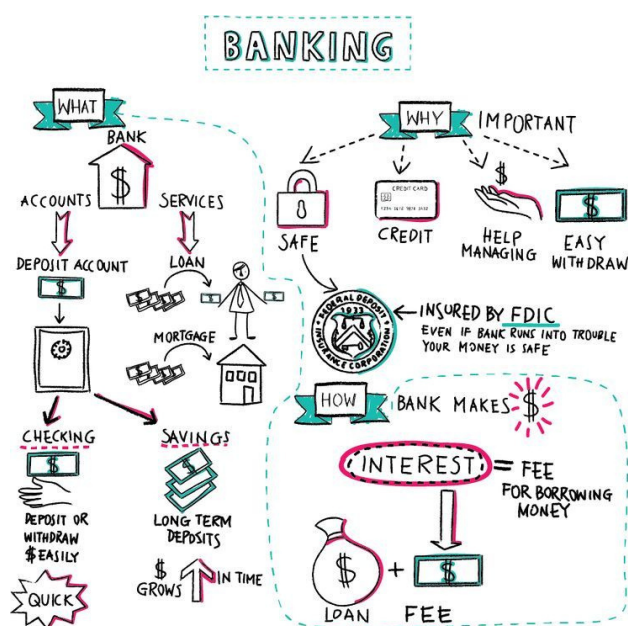
Investment banks charge fees and commission from their clients.

Risk

Commercial banks have relatively lower risks as compared to investment banks.

Examples

Commercial banks examples are SBI, HDFC, Axis bank. Some famous investment banks are Citi bank, Goldman Sachs etc.



FINANCIAL INSTRUMENTS INVESTMENT BANKS DEAL IN:

1. **EQUITY:** You must be aware of what a stock market is. There are shares of various companies available to be bought or sold. Example: Shares of Tata, shares of Reliance etc. Investment Banks help companies to raise money by selling ownership(stake/ equity) to outside investors.

2. **DEBT CAPITAL** Let's suppose Ram has no interest in owning a piece of the company through shares but is very much willing to lend some money Tata. That's where debt capital comes into play. Investment Banks help companies borrow money by using bonds or debentures.



3. **HYBRID SECURITIES**

Hybrid means a combination of two. If a security takes on the traits of both equity and debt capital; it may be classified as hybrid securities. Example: Preference Shares.

One important thing to notice here is that all the activities of an investment bank can be categorised under two sides:

- **BUY SIDE** Role of advising to its clients who are interested in buying financial instruments.
- **SELL SIDE** They sell securities. They find investors interested in buying financial instruments being sold which raises money for its clients.



SOURCES OF INCOME OF INVESTMENT BANKS

1.COMMISSIONS: Commissions are charged by the investment banks in exchange for conducting financial transactions for their clients. Example: JP Morgan charges commissions when they purchase stock for its customers.

2.UNDERWRITING FEES: Investment banks charge fees for selling securities in the primary market (trading new securities). When a company sells stock to the public for the first time, the Investment banker who handles the deal is called an underwriter. Underwriter charges fees for assisting companies in such tasks.

3.TRADING INCOME: There is a trading division in the investment banks. They try to generate profits for the firms through trading in the stock market.

4.ASSET MANAGEMENT FEES: Some investment banks provide financial assistance and advisory to make decisions as to where to invest their money. In return of this assistance, they charge fees.

5.ADVISORY FEES: You must have already gotten familiar with M&A deals that investment banks engage in. They charge fees for the advisory services provided to the companies.

CLIENTS OF AN INVESTMENT BANK

Investment banks generally deals with the following clients:

1.GOVERNMENT

Investment banks work with government bodies to raise money, help in trading securities and as a financial advisor.

2.CORPORATIONS

Investment banks serve many corporations and companies with the various functions like providing financial advisory, make acquisitions and many more as already discussed above.

3.INSTITUTIONS/INDIVIDUALS

These banks work with institutional investors to manage other people's money to help them trade securities and earn profit.



SKILLS REQUIRED TO BE AN INVESTMENT BANKER

- Financial Modelling
- Business Valuation
- Pitch Books and presentations
- Transaction Documents
- Sales and Business Development
- Negotiation

MAJOR INVESTMENT BANKS

- Bank of America Merrill Lynch
- Barclays Capital
- Citi
- Credit Suisse
- Deutsche Bank
- Goldman Sachs
- JP Morgan
- Morgan Stanley
- UBS

Cryptocurrency, Bitcoin and Blockchain

08

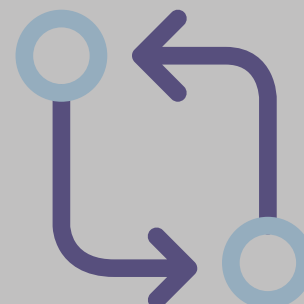
- Overview of Currency Evolution
- Rise of Cryptocurrency
- Features
- What makes Cryptocurrencies special?
- Decoding Crypto in Cryptocurrencies
- Major Cryptocurrencies:
 - Bitcoin
- The Future Mode vs Limitations
- Blockchain: Technique behind bitcoin
- The entire process
- Blockchain in Real life applications
- Future of Cryptocurrencies



Currency Evolution

Currency in one form or another has been important for our lives since years ago. It started out as bartering goods for desires and has evolved into the digital means of transactions we are dealing in today. So let's take a look at the evolution of currency:

Barter System: Ram and Shyam are friends. Ram is a farmer growing vegetables in his field while Shyam is a dairy farmer keeping cows for milk. Ram needs milk for consumption whereas Shyam otherwise needs vegetables. Thus they both contact each other and barter goods for satisfaction of their wants. But what if Ram needs vegetables and Shyam doesn't need milk? Here arises the main problem that further led to the creation of a flexible trade system.



The then New Iterations:

Commodity Money:

Have you ever come across certain artifacts such as a specific bead, shell, jewel in a museum? Why are they in the museum and what were they used for? Digging back in the past these artefacts were described a value that were accepted by other groups as a means of exchange. Such a value was ascribed due to usefulness, scarcity, or aesthetic appeal and moreover; the rarer the object, the greater the value was to get away with ascribing.

Gold plated Florins:

The problems faced due to commodity money created the emergence of small coins ranging from copper, gold and silver. Gold fitted the need perfectly. Though it was hard to mine, it could be carried around and stored, and be melted into small coins where the weight of the coin represented its value. But here too the fear of theft soared higher and it became useless to continue with.

Modern Currency:

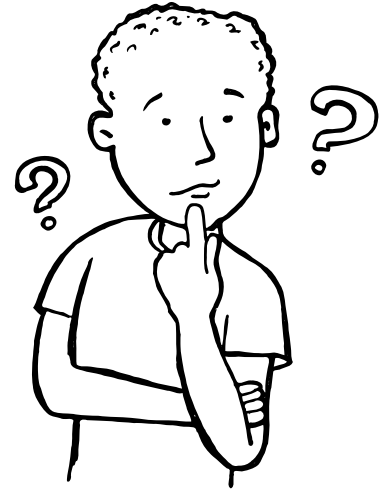
With the growth of global trade, paper currency evolved thus replacing the huge piles of coins. The transition to paper money marked a robust change and the introduction of digital wallets, cheques, debit and credit cards came into the scene thus constituting what is known as modern currency today. The modern currency is subject to regulation by a Centralized authority having the authority to monitor the operations.

CRYPTOCURRENCY COMING INTO PICTURE

Sita and Rani were best friends. Sita and Rani went for a lunch where Sita paid money and Rani promised to pay her bill soon. Rani used her digital wallet for the payment of money but her transaction went wrong. The transaction between Rani and Sita is to be regulated via a Bank but a technical issue at the bank restricted her from making payment. Thus the transaction failed. There could be other reasons too where the transaction can fail specifically i.e. the hacking of the user's account, transfer limits of the account exceeded and that's the reason why the future of currency lies with cryptocurrency. Thus it is the Digital, decentralised, flexible and secure currency marking the birth of programmable money. It curbs the chances of fraud and identity thefts, and hence is considered a safe mode of holding money. It allows buying of goods and services online, as well as transferring money. Imagine the same transaction taking place between Sita and Rani through cryptocurrency. A notification would pop on Rani's system as she proceeds to make payment to Sita, most probably in the form of bitcoins. Processing takes place, authenticating the identity of users and confirming whether Rani has the required balance to make payment. After it, the payment is transferred and is received by Sita, thus the transaction is completed in minutes and is such an easier process. It in a way has removed all the problems associated with Modern Banking.

WHY DID RANI GO FOR CRYPTOCURRENCY?

- Decentralized and Global Digital Currency.
- Ability to function without central failure.
- Wallet Security and limited issues.



Major Cryptocurrencies

Bitcoin, one of the cryptocurrency has been the talk of the town since it was launched and since then cryptocurrencies have been growing at a rapid pace. There was a time when cryptocurrencies could be counted but the crypto market has expanded to a large extent. More than 5000 cryptocurrencies are in existence as of January 2021. While bitcoin has been the leader in the cryptocurrency field, there are many that can be added to the list:

BITCOIN: It is the first decentralized digital currency. It is a global mode that facilitates transactions via blockchain technology electronically. Transaction occurs without the intervention of a third party from anywhere and anytime. From the beginning itself, it has been the most attractive choice of the investors, this is the oldest, the most reliable and has the media coverage now and then.

Ethereum: The main focus of Ethereum is on decentralized applications (apps) and not on the digital currency. In a way, ethereum can be compared to the Google Play store. It uses ether as the token or currency which is further used by users and developers. Ethereum could be used as a platform to create blockchain applications and new tokens.

Zcash: ZCash is in a way similar to bitcoin allowing transactions through distinguished security and privacy through blockchain only. A digital currency with privacy being the main focus allows the users to send and receive payments without the disclosure of the sender, receiver and the amount; thus the details are private.

Litecoin: Litecoin was introduced as an option to bitcoin in 2011 with the same practical applications. It has often been referred to as “silver to Bitcoin’s gold.” The motive behind the invention of Litecoin was to improve technology for reducing the transaction time, lower costs and more users. Litecoin can be inferred as an open-source global payment network that is not controlled by any central authority and is the sixth-largest cryptocurrency in the world.



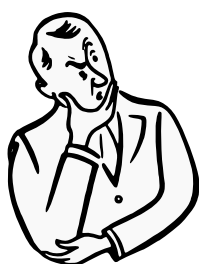
Considering the pace at which this market is growing, many more cryptocurrencies are likely to emerge in the coming days.

What exactly is Cryptocurrency?

Cryptocurrency is a form of payment that can be exchanged online for goods and services. So, basically it is a virtual and decentralized currency which is used as a medium of exchange using a decentralized network based platform for their operations. The network is distributed across a large number of computer systems using cryptography to conduct secured transactions. They make use of ledger entries through which data is entered there. Cryptocurrency is stored in a digital wallet, either online, on your computer, or on other hardware.

Features:

- There's a limit to the number of units existing.
The authentication during the transfer of funds is granted. Thus there is a verification of the transfer of funds.
Decentralized currencies operating without the regulation of a bank authority.
The addition of the new units could be done only after certain conditions are met. The system defines the creation of these units and the determination of ownership too is by the system only. For example, in Bitcoin, only when a block is added in the blockchain, a miner is awarded a bitcoin.
- Cryptocurrency transactions are processed quickly irrespective of the receiver's or sender's location. So there is an instant transaction.



What makes Cryptocurrencies special?

Little to no transaction costs:

The global transactions with cryptocurrencies are cost effective as money could be sent across borders with negligible or no transaction costs. For Example: During transactions via bank or a credit or debit card we lose some amount while transferring money from your digital wallet but in cryptocurrencies there won't be a buck lost. With cryptocurrency, the transaction fees paid by a user is reduced to a negligible or zero amount. It does so by eliminating the need for third parties to verify transaction. Thus NO EXTRA FEES.

Security and privacy

– Customers are very concerned about their privacy while entering into a virtual transaction. How would such a concern be compromised in cryptocurrency? So cryptocurrency uses a mechanism which is known as blockchain which is based on a complex mathematical equation or puzzle and only after decoding the puzzle, the transaction can take place. Thus, it is more secure than ordinary options which have a chance of getting hacked. Thus, a secured mode of transaction is ensured.

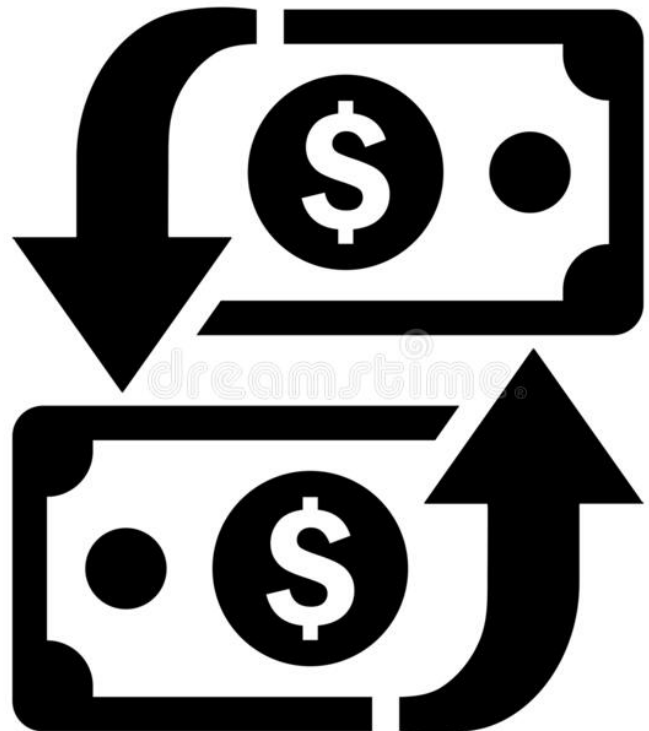


24/7 access to money with no limits on purchases and withdrawals

Cryptocurrencies don't place limits on the purchases and withdrawals of the transaction, thus there is no transaction limit imposed and moreover you have 24/7 access to the funds.

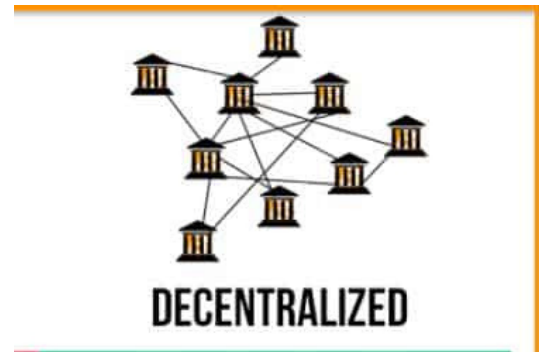
Faster way to Funds Transfer

It would not be an exaggeration to say that cryptocurrencies have a much faster pace for international or domestic transactions. The verification of the users is time efficient and there are less barriers to cross during authentication making cryptocurrencies a good option for fast transactions.



Decentralized Network

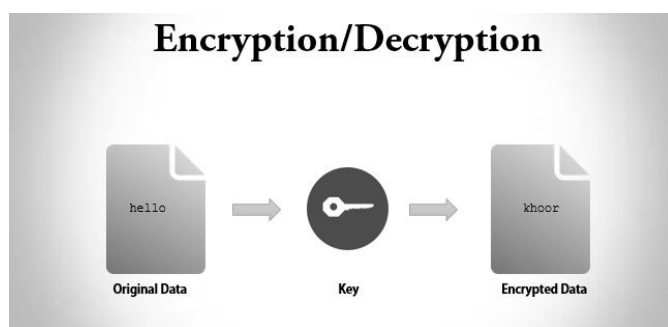
The decentralized network means no regulation by a third party thus no trust is required to be built for a transaction. Blockchain is the way to verify the transaction between users through the use of cryptocurrencies. Also, the government can't affect the flow of the currency and thus cryptocurrency is beyond a third party regulation.



DECODING 'CRYPTO' IN CRYPTOCURRENCIES

The word "crypto" stands for hidden, secret or concealed. Cryptography technology provides full privacy and anonymity. Cryptography technology is used for multiple purposes – for securing the various transactions occurring on the network, for controlling the generation of new currency units, and for verification of the transfer of digital assets and tokens.

"Crypto" refers to the various encryption techniques, public-private key pairs, and hashing functions for the purpose of maintaining secured transactions. Thus it can be concluded that it uses a series of encryption and decryption methods to protect communication/transactions in the presence of third parties with an ill intention. These third parties are referred to those who want to steal your data or want to get hold of any conversation to derive benefit from that.



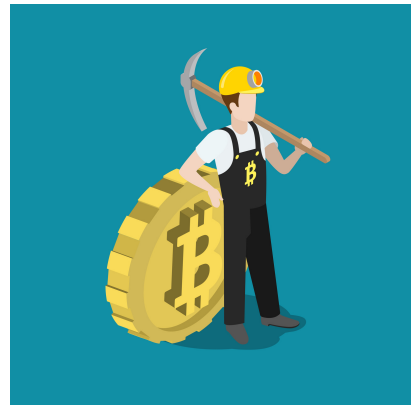
As discussed above it uses computational algorithms like SHA256 (hashing algorithm used by bitcoin), a public key; this public key is the digital identity of the user that the user shares with everyone and a private key which signifies the assent of the user as it can be compared with a digital signature which is hidden.

Let's take an example of how a normal bitcoin transaction takes place:
If Rahul wants to transfer bitcoins worth 10\$ to Sonu, first the details of the transaction would be available to him.

- The transaction then passes through a hashing algorithm (for bitcoin it is SHA256).
- It is then passed through a signature algorithm with the user's private key and once he clicks on transfer, the transfer method is sent to the network and passed around all the participants in the network which are known as nodes. This stage is referred to as the transaction pool.
- At this stage, the transaction is not confirmed. Now, here comes the role of the miner. Who is Miner? In simple words, Miner is the one who validates the transactions and records the same on the global ledger of the blockchain. The transaction is then verified through a sender's public key.
- If the transaction is verified, it is added to a blockchain where it cannot be changed again. The SHA256 algorithm is just like a complicated puzzle which is indeed extremely difficult to hack. Thus, the encryption cannot be decoded. Suppose there were 1200 blocks in the blockchain. Now the miners in order to facilitate the transaction need to add the 1201 block. To add the block, they need to solve a complex mathematical equation/problem and this is known as the proof of work. Now suppose two miners are able to solve the equation and thus they want to add their respective blocks, known as candidate blocks namely 1201 A and 1201 B. Now which of the blocks will form the part of the final valid block?



- It depends on the longest chain rule. Now, there are other miners who wish to create another valid block and based on the pace at which a block is created, other miners will keep on adding their blocks onto the earlier blocks. Here in this case a miner Shiv has a better processor and is able to create a new block faster than other miners and a new block was created on the top of block 1201 A. Thus the longest chain will be after 1201 A and will continue with 1202, 1203 and so on. Now what about block 1202.
- So, miners have to create more blocks by doing the proof of work with new transactions from the transaction pool. Each verification confirms to an added block.
- A confirmation of block will take around ten minutes or more applying the longest chain rule in the course of unconfirmed transactions becoming the confirmed transactions, thus adding to the global blockchain ledger.
- Once the blocks are added, miners receive the transaction fees and the Block fees which will be an incentive in approving the transactions.
- Block fees will be decreasing every year as new bitcoins cannot be created owing to the limit on the number of bitcoin generation.



BITCOIN

Bitcoin is one of the most valuable and popular cryptocurrencies used globally and has come up to become the world's largest cryptocurrency by market capitalization. This digital currency came into existence back in 2008 by pseudonymous Satoshi Nakamoto through a paper under the title Bitcoin: A Peer-to-Peer Electronic Cash System whose identity is still considered a mystery. Bitcoin is open source, thus giving access to the public enabling them to participate in any transactions. It doesn't have a physical existence but the balances are kept on a public ledger, thus making it accessible to all. Thus, it could be said that Bitcoins are created in order to reward Miners. Network nodes verify the transaction through cryptography and record the same in a public distributed ledger known as blockchain. Bitcoin is commonly abbreviated as "BTC."



FEATURES

- Decentralized Digital Currency which means it is out of purview of governments, banks and other intermediaries who cannot interrupt user transactions.
- Cannot be printed and the number of bitcoins that can be mined is limited-- only 21 million bitcoins can be created.
- Bitcoin transactions are done with nominal or sometimes zero transaction charges. .



- There is privacy since these transactions are anonymous with no names involved.
- Anyone can see the transactions entered into through the public key.
- There is a private key that is known to the person himself which works as a link between you and your bitcoins.

FUTURE OF CRYPTOCURRENCY

The whole world stands divided on Cryptocurrency. There lies uncertainty on its future.

Demat Account

09

Meaning

Demat a/c is the short form of dematerialisation account. It allows investors to hold their shares and securities including shares, ETFs, mutual funds, bonds, and government securities in an electronic form. In today's time when trade is done online you need a demat a/c no. to settle trades electronically. When you purchase shares it will be credited to your demat a/c similarly when you sell them it will be debited from your a/c. During online trading, shares are bought and held in a Demat account acting as a replacement for physical share securities thus facilitating easy trade for the users. Any shares you are holding in paper form can be dematerialized and stored electronically in a demat a/c.

It was introduced in 1996 by the National Stock Exchange, before this development shares were traded in the form of physical certificates.

Every demat a/c is assigned a 16 digit unique ID in which the first 8 digits represent the depository participant and the remaining 8 digits is unique to each investor.



Importance

In today's time, demat a/c is of utter importance. Gone are the days when people had to manage securities in the form of physical certificates which are bulky and difficult to handle. Demat a/c is one stop solution for all the problems.

1- It eliminates the possibility of theft, forgery, loss and damage of physical certificates.

2- With the help of a Demat account, you can transfer securities immediately. Unlike earlier times where a lot of time was occupied for clearing and settlement by the clearing houses that take care of debiting and crediting shares in the sellers and buyers account.

- 3- It provides a digitally secure and convenient way of holding securities. There is no risk of loss of securities in transportation or storage.
- 4- It Reduces the cost of transaction.
- 5- People can invest or disinvest in Indian stock market from anywhere in the world.
- 6- A single demat can be used for both equity and debt instruments.



Participants in demat a/c

There mainly 3 key players involved in a demat a/c

1- Bank

In order to have a demat a/c it is mandatory to link it with savings bank a/c because all the transactions of sale and purchase of security will be finally settled through your bank a/c.

2- Depository

Depository is an entity which helps investors to trade in securities such as stocks and bonds in a paperless manner. Securities in depository accounts are similar to funds in bank accounts. Currently there are two depositories that are operational in India namely

NSDL- National Securities Depository Ltd

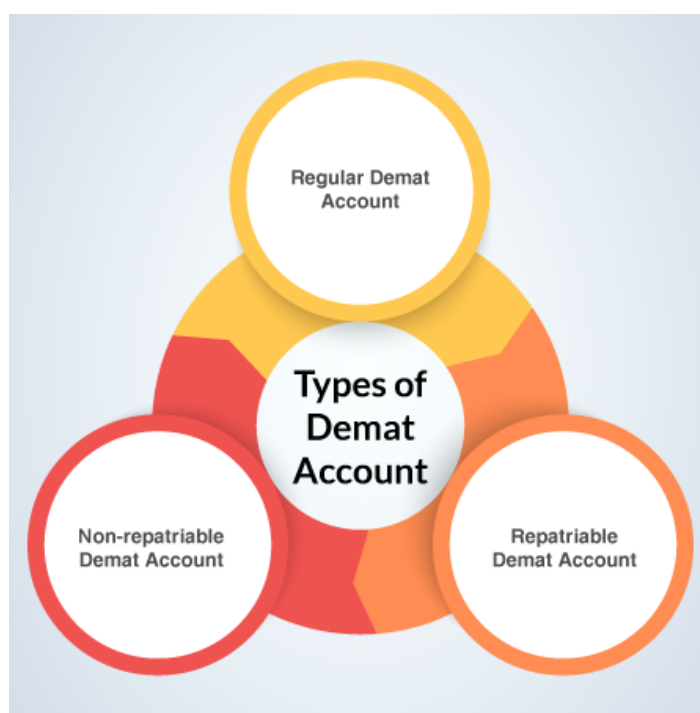
CDSL- Central Securities Depository Ltd

3- Depository Participant

Depository participants (DP) are the agents of a depository such as NSDL or CDSL. They act as a mediator between individuals and depository. They are given license by these depositories to operate under the Depositories Act, 1996. A depository participant can be anyone, a non-banking financial institution, a bank or even a broker who is authorized by the NSDL or CDSL to handle DEMAT accounts on their behalf. You are required to approach a depository Participant before opening a DEMAT account

Types of demat a/c

The purpose for demat a/c is the same for all investors but there are types that cater to different investors. Basically there are two types of investors- Indian residents or the NRI'S (Non Resident Indians). To fulfill their requirements we have 3 types of demat a/c



1- Regular demat a/c

This type of account is used by traders who are Indian citizens and reside in India. The charges for this account vary according to the volume of shares held, type subscribed and the terms and conditions laid down by the Depository and Depository Participant. Regular demat a/c holders can easily transfer their holdings from an existing demat a/c to another institution without any additional charges. Thus this account makes dealing in shares and securities easier and convenient.

2- Repatriable demat a/c-

This type of account is used by NRI'S through which they could easily invest in the Indian stock market from any part of the world. Repatriable demat a/c is beneficial for NRI'S as it enables them to transfer funds abroad. An NRI can transfer up to \$1million in a year and an associated NRE bank a/c is required for this purpose.

To open a repatriable demat a/c the following documents are required to be attested at the Indian embassy of the country in which the NRI resides and are to be produced at the time of opening an account.

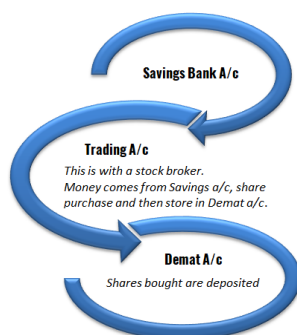
- Copy of passport
- Copy of PAN card
- Copy of Visa
- Overseas address proof like utility bills, or rental/lease agreement, or sale deed
- passport size photograph
- FEMA declaration
- Cancelled check leaf of NRE account

3- Non-Repatriable demat a/c-

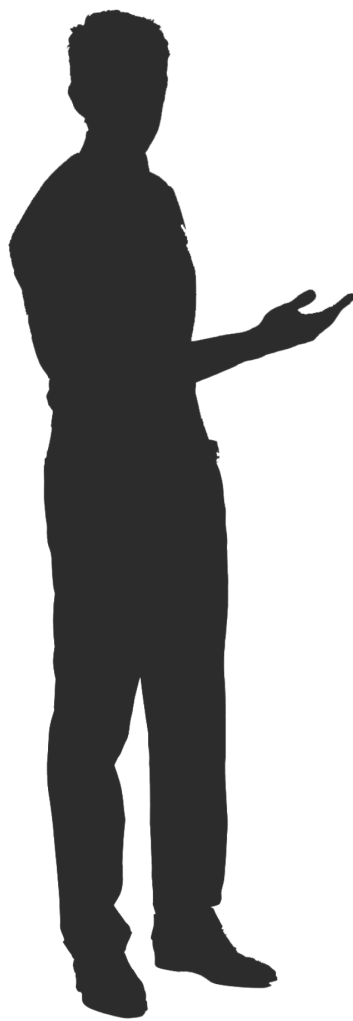
This account is similar to Repatriable demat account in the way that it is operated by NRI'S but in this account proceedings from sale or purchase of securities cannot be transferred abroad. An associated NRO bank a/c is required for this purpose. You must be wondering what an NRO bank a/c is? This account is a savings or current account held by NRI's to manage their incomes in India. It could be opened jointly with an Indian resident or by the NRI alone. This account allows its users to receive funds in Indian or foreign currency but there are certain restrictions with respect to remittance of funds, an NRI can transfer up to \$1million in a year inclusive of all the taxes. The interest can be repatriated freely but the principal amount can be regulated within the defined limits.

Trading, Saving and Demat a/c

All the three accounts sound similar in their functioning yet are different. All these accounts are interlinked and are required by an investor. Firstly you require a savings account to open a demat a/c. All the purchase of securities that are funded by the savings a/c is recorded in the demat a/c but if you want to sell and buy securities on a regular basis like a trader then you require a trading a/c for that purpose. Some brokers provide trading a/c along with a demat a/c (2 in 1 demat and trading a/c) or otherwise you could apply for a trading a/c separately



Procedure for opening Demat a/c



1- Choose Depository Participant

CDSL and NSDL provide a list of depository participants who are registered and with whom demat a/c can be opened. The investor is required to choose a DP which will act as an intermediary between the depository and the investor for all the future course of actions.

2- Submit the Form

The investor is required to fill an opening form and a KYC (Know Your Customer) form. Along with it a copy of pan card, identity and residential proof and a passport sized photograph is to be submitted. The original documents should be carried for verification purposes.

3- In Person Verification

This is a mandatory exercise conducted by the DP to ensure the authenticity of the documents and details. The person may be required to visit the service provider's office in person or this verification may be done online using a webcam or smartphone.

4- Signing agreement

You are then required to sign an agreement consisting of all the rules, regulations and rights associated with the demat a/c. On submission of this agreement to the designated dp it will be duly signed by the authorised person and a copy of the same will be given to you.

5- BO ID no.

On approval of your documents by the DP you will receive a unique BO ID (Beneficial Owner Identification) Number. You will require this ID to access your Demat a/c.

You can open multiple demat a/c with a single pan card but only a single a/c can be opened with a particular Depository Participant. Additionally this account does not requires you to have a minimum balance of shares and securities to be held in it.

Documents required for opening a Demat a/c

- 1- Identity proof- this includes pan card of the individual along with a passport size photograph
- 2- Residence proof- Any one of the documents such as Voter's identity card, Driving license, Passport, Aadhaar card, Landline telephone bill or Electricity bill will act as a residence proof.
- 3- Bank account proof- A copy of your passbook or bank statement (not older than 3 months) is to be presented for this process.
- 4- Income proof- A copy of the salary slip or income tax return is required as a proof of income. In case of the currency and derivatives segment it is compulsory to present the income tax return.

How Demat a/c works

Demat a/c benefits in numerous aspects still some of the investors are reluctant to operate this account because they believe it involves a lot of technicalities in its usage. In reality this account can be easily accessed by an individual possessing basic knowledge of computers.

Demat a/c is only required when you want to have possession of stocks and securities in an electronic form. In order to merely trade stock it's not compulsory to have a demat a/c you can trade in futures and options using only your trading a/c.

In order to trade securities firstly you have to transfer money from your bank a/c to your trading a/c to buy and sell.

In order to trade securities firstly you have to transfer money from your bank a/c to your trading a/c to buy and sell.

First of all, it is important to note that along with a Demat Account, you get a linked trading account as well, with a unique login ID and password. This is used to buy/sell shares. A Demat Account is then used to hold the bought shares.

So when you want to buy or sell a particular share, you need to login to your trading account, which is also linked to your bank account. When a 'buy' or 'sell' request is put in the trading account for a particular stock, with other details, your Depository participant (DP) then forwards this to the stock exchange immediately.

In case, the order is to 'buy', the stock exchange then finds a seller who wants to sell the same quantity of shares and sends an order to clearance houses to debit the particular number of shares from the seller's Demat Account and credit it to the buyer's Demat A/c. And this is how a single trade in the stock market takes place.

The buyer and seller can hold Demat Accounts with DPs belonging to different depositories.

If the securities in the demat a/c is of substantial value, a loan can be taken against it. Even when you pledge the securities as collateral security the individual is having ownership rights of these securities.



VITTSHALA

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