Auditing Course Material

Part 21 of 61 (Chapters 2001-2100)

2. Approaches of Corporate Restructuring

A merger is a combination of two or more companies into a single company where one survives, and the others lose their corporate existence. Laws in India use the term 'amalgamation' for merger. Amalgamation is the merger of one or more companies with another or the merger of two or more companies to form a new company, in such a way that all assets and liabilities of the amalgamating companies become assets and liabilities of the amalgamated company.

- **Merger through Absorption:** An absorption is a combination of two or more companies into an 'existing company'. All companies except one lose their identity in such a merger. For example, absorption of Tata Fertilizers Ltd. (TFL) by Tata Chemicals Ltd. (TCL). In this merger Tata Fertilizers Ltd. (TFL) lost its identity and Tata Chemicals Ltd. retained its identity.
- **Merger through Consolidation:** A consolidation is a combination of two or more companies into a 'new company'. In this form of merger, all companies are legally dissolved, and a new entity is created. Thus, consolidation is mixing up of the two companies to make them into a new one in which both the existing companies lose their identity and cease to exist. Here, the acquired company transfers its assets, liabilities and shares to the acquiring company for cash or exchange of shares. For example, merger of Hindustan Computers Ltd., Hindustan Instruments Ltd., Indian Software Ltd. and Indian Reprographics Ltd. into an entirely new company called HCL Ltd and all the other companies lost their identity.

There is a technical difference between merger and amalgamation. In case of merger, one existing company takes over the business of another existing company or companies, while in the case of amalgamation; a new company takes over the business of two or more existing companies.

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2. Approaches of Corporate Restructuring

An acquisition may be defined as an act of acquiring effective control (majority stake) by one company over assets or management of another company which results in gain of control power of one company over another company. There is no combining of companies. Thus, in an acquisition two or more companies may remain independent, separate legal entities, but there may be a change in control of the companies. When an acquisition is *forced* or *unwilling*, it is called a **Takeover**. Takeovers are typically initiated by a larger company for a smaller one. For example, Flipkart- Walmart wherein Walmart acquired 77% Flipkart for $16 billion in 2018, Tata Steel-Corus: In 2007, Tata Steel took over European steel major Corus for the price of $12.02 billion.

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2. Approaches of Corporate Restructuring

Divestiture happens when an entity liquidates either the assets or a part of its business, usually, subsidiary, to concentrate on the core operations. It can either hive off loss-making units or cut down leverage of an entity, etc. It is also known as **disinvestment or Spin-off**. In case of divestiture, some division of business is sold to outsiders, while in case of spin-off a separate company is created from the parent company with the same shareholding pattern. For example, Reliance Infar's sold of power business to Adani Transmission for $2.9 billion, L&T's sale of electrical business to a clutch of PE investors for $2.8 billion, Jaiprakash Cement sold a part of its cement business to UltraTech Cement for $2.4 billion, government has made disinvestment in IRFC. Ltd in January 2021.

A divestiture may happen in the following ways:

- **Sell-off:** Sell-off may be either through a spin-off or divestiture. Spin-off creates a new entity with shares being distributed on a pro rata basis to existing shareholders of the parent company. Split-off is a variation of Sell-off. Divestiture involves sale of a portion of a firm/company to a third party.
- **Hive-off:** It refers to the sale of loss-making division or product or product line, by a company. Put it simple it is discontinuing manufacture of a product or closing a division. It helps in concentrating more on profitable segments or products and consolidating business which will benefit both buyers and sellers.
- **Slump Sale:** It is when a company sells or disposes the whole or substantially the whole of the undertaking for a predetermined lumpsum amount as sale consideration is called 'slump sale'.

Reasons for Divestiture may include the following:

- Huge divisional losses
- Continuous negative cash flows from a particular division
- Difficulty in integrating the business within the company
- Unable to meet the competition
- Better alternatives of investment
- Lack of technological up gradations due to non-affordability
- Lack of integration between the divisions
- Legal pressures
- Market share is too small

The **disinvestment** occurs when a company boycotts or liquidates stocks. The Disinvestment refers to a process, whereby government/company sells its shares, held in any PSUs, to private sector.

2. Approaches of Corporate Restructuring

Demerger is a form of corporate restructuring in which an entity's business operations are segregated into one or more components. Demerger can take 4 forms:

a. **Spin-off:** A company creates a subsidiary company. The shares of the new entity are distributed to the shareholders of the parent company on a pro-rata basis. However, the parent company also retains ownership in the spin-off entity. Spin-offs have two approaches. In the first approach, the company distributes all the shares of the new entity to its existing shareholders on a pro rata basis. This leads to the creation of two different companies holding the same proportions of equity as compared to the single company existing previously. In the second approach, the company transfers all the shares of a new entity to the parent company. The parent company later sells the assets of the spin off company to another company. For example, Reliance Industries in February 2021, announced that it has initiated the process to demerge its O2C (oil-to-chemical) business into a wholly owned subsidiary. It is an example of spin off demerger.
b. **Split-off:** It is like that of spin-off where a new entity is formed to take over the operations of the parent company's one business division/unit. However, in case of a split-off, the existing shareholders (of a parent company) are given stocks in new entity in exchange of shares held in the parent entity. This would result in reducing the equity base of the parent entity as the shareholders are ceased of their claims from parent entity. As in case of spin-off, split-off also does not result in any inflow of cash.
c. **Split-up:** This is an extended version of a spin-off where a parent company is broken down (or spun-off) into various business units and new entities are formed for those spun-off units. As the parent company is spun off in multiple units, the parent entity gets dissolved eventually forming new subsidiaries with new class of stocks. The shareholders of the parent entity have the option to exchange their shareholding to various spun-off units as according to their shareholding.
d. **Equity Carve:** It refers to the sale of its equity by parent company in a wholly owned subsidiary. The sale of equity may be to the general public or strategic investors. Equity carve out differs from spin off in two ways. First, in equity carveout the equity shares are sold to the new investor, whereas in the spin off the equity shares are sold to the existing shareholders. Secondly, equity carveout brings cash to the firm (since the shares are sold to the new investor), whereas in the spin off there is no cash infusion to the company because the shares value is broken into small and the same are distributed to the existing shareholders.

2. Approaches of Corporate Restructuring

Section 66 of the Companies Act, 2013 deals with Reduction of Capital. Reduction of Capital is a process by which a company is allowed to extinguish or reduce liability on any of its shares in respect of share capital not paid up or is allowed to cancel any paid-up share capital which is post or is allowed to pay-off any paid up capital which is in excess of its requirements.

2. Approaches of Corporate Restructuring

Joint Venture is an arrangement in which two or more companies (called joint venture partners) contribute to the equity capital of a new company (called joint venture) in pre-decided proportion. For example, Maruti Suzuki. The joint venture agreement clearly indicates how the cooperating members will share ownership, operational responsibilities, and financial risks and rewards. The entities forming joint venture will continue to work separately and will come together for the specific venture only. For example, Vistara is the brand name of Tata SIA Airlines Ltd. a JV between India's corporate giant Tata Sons and Singapore Airlines (SIA).

2. Approaches of Corporate Restructuring

Section 68 of the Companies Act, 2013 deals with buy-back of Securities. When a company is holding excess cash, which it does not require in the medium term (say three to five years); it is prudent for the company to return this excess cash to its shareholders. Buy-back of securities is one of the methods used to return the excess cash to its shareholders.

The following may be the objectives or advantages of Buy-Back of shares:

a. to increase earnings per share if there is no dilution in company's earnings as the buy-back of shares reduces the outstanding number of shares.
b. to increase promoters holding as the shares which are bought back are cancelled.
c. to discourage others to make hostile bid to take over the company as the buyback will increase the promoters holding.
d. to support the share price on the stock exchanges when the share price, in the opinion of company management, is less than its worth, especially in the depressed market.
e. to pay surplus cash to shareholders when the company does not need it for business.

Sources of Buy-back may include the following: -

The Companies Act, 2013 under Sec. 68(1) permits companies to buy back their own shares and other specified securities out of:

1. Its free reserves
2. The securities premium account
3. The proceeds of the issue of any shares or other specified securities.

However, Buy-back of any kind of shares or other specified securities cannot be made from the proceeds of the earlier issue of the same kind of shares or same kind of other specified securities.

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2. Approaches of Corporate Restructuring

A classic management buy-out (MBO) is a transaction where the owner of a Company sells some or all of the shares in that Company to a new Company which has been set up by the management team or paid for by the management team, private equity investors and a bank.

The advantage of an MBO is that the buyers of the Company are already very familiar with it. In many cases they are more familiar than a seller who has deliberately moved away from operations of the Company on a day-to-day basis as part of the succession planning process.

The downside of an MBO from a seller's perspective is that MBO teams are rarely self-financed and, even with bank and private equity backing, cannot afford to pay a premium price for the Company.

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2. Approaches of Corporate Restructuring

It refers to a technique in which an external management team acquires a company and replaces the existing management team. The target company is acquired by these outside investors when they feel that the company is underperforming, and the company's products can generate greater than current yields with the change in current business strategy and/or management. After the acquisition, the buyer can replace the current board of directors of the company with their representatives.

The difference between management buyin and management buyout is the position of the buyer. In case of a management buyout, the buyers are working for the target company and in management they are outsiders.

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2. Approaches of Corporate Restructuring

Leverage buyout means buying anything with debt or leverage. It is a financial transaction in which a company is purchased with a combination of equity and debt, such that the company's cash flow is the collateral used to secure and repay the borrowed money. The use of debt, which normally has a lower cost of capital than equity, serves to reduce the overall cost of financing the acquisition. The assets of the company being acquired are often used as collateral for the loans, along with the assets of the acquiring company. The purpose of leveraged buyouts is to allow companies to make large acquisitions without having to commit a lot of capital. This technique can also be used as a defense against acquisition or hostile takeover as company burdens itself with debt. For example, in 2007, Blackstone Group purchased Hilton Hotels for $26 billion in an LBO, financed through $5.5 billion in cash and $20.5 billion in debt.

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2. Approaches of Corporate Restructuring

Reverse merger is typically equivalent to that of a merger, but in case of a reverse merger a large entity or a parent entity merges with a small entity or a subsidiary entity. Through a reverse merger, a private company may aim to get listed on stock exchanges. It is a merger in which a private company becomes a public company by acquiring it. It saves a private company from the complicated process and expensive compliance of becoming a public company. Instead, it acquires a public company as an investment and converts itself into a public company.

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2. Approaches of Corporate Restructuring

An **alliance** is defined as an association to further the common interests of the members. Strategic alliance is an arrangement or agreement under which two or more firms cooperate in order to achieve certain commercial objectives. The motives behind strategic alliances is to reduce cost, technology sharing, product development, market access, availability of capital, risk sharing etc. For example, telecom company partnering with bank for offering online payment services (ICICI Bank and Vodafone). A strategic alliance is cooperative relationship like Joint Venture, but it does not create a separate legal entity. In other words, companies involved do not take an equity position in one another.

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2. Approaches of Corporate Restructuring

In case of an asset sale, a company liquidates all or part of its assets to another company in exchange for cash or securities. Usually, the intention of asset sale is to strengthen its cash position/balance sheet by way of liquidating long-term assets and generating cash or liquid assets. The asset can be anything, be it tangible or intangible. A company may sell its loss-making manufacturing plant or a legal brand or an existing patent it owns to generate cash.

2. Approaches of Corporate Restructuring

Ownership of a company can be changed through an exchange offer, share repurchase or going public. Therefore, going private is one of the ways of ownership restructuring. Generally public company stock is held with public. Going private means converting public company into private company. Privatization is done through buying shares from the public, which increases the stake of a small group of investors, who have substantial stake. The rationale behind Privatization is to the costs (cost of providing investors with periodical reports, communicating with financial analysts, holding shareholders meetings, fulfilling various statutory obligations, etc.,) associated with public limited company form of organisation and to bring long-term value into sharper focus. Castrol India and Philips India are the recent examples of going private.

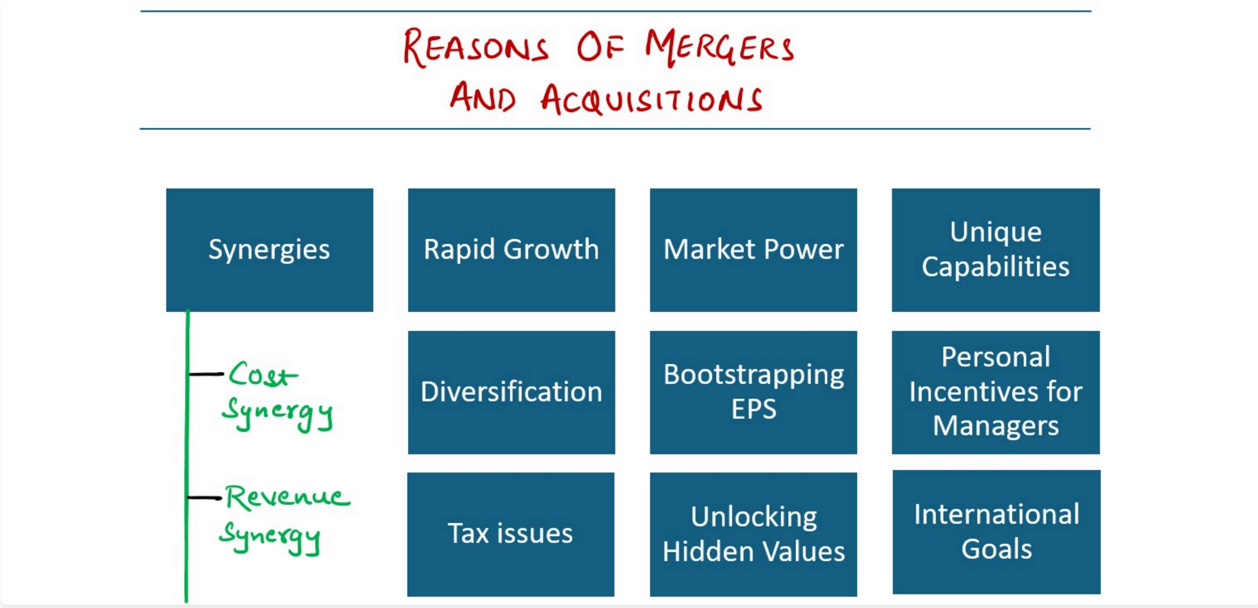
3. Mergers and Acquisitions

The reasons of mergers and acquisitions between/among forms are discussed next.

Basis	**Merger**	**Acquisition**
Definition	Merger is a process when two or more companies come together to expand their business operations.	An acquisition occurs when one company or corporation takes control of another company and rules all its business operations.
Terms	They are considered as amicable.	They are considered as hostile.
Stocks	New stocks are issued.	No new stocks are issued.
Companies	The companies of same size join hands together.	The larger companies acquire smaller companies.
Power	Both the companies are treated as equal.	The company that is stronger gets the power.
Challenges	The two companies of same size combine to increase their strength and financial gains along with breaking the trade barriers.	The two companies of different sizes come together to combat the challenges of downturn.
Agreement	A buyout agreement is known as a merger when both owners mutually decide to combine their business in the best interest of their firms.	A buyout agreement is known as an acquisition when the agreement is hostile, or when the target firm is unwilling to be bought.

3. Mergers and Acquisitions

Now, let us discuss the various reasons for mergers and acquisitions one by one.



Synergies

This is the most common reason for a merger. It is expected that when two companies merge to form a new bigger company, the value of the new entity will be more than the combined value of two separate companies. Generally, there are two types of synergies that are aimed for:

- **Cost Synergies:** Synergies that reduce costs through the economies of scale in various divisions of the company, viz. research and development, procurement, sales and marketing, manufacturing, distribution and general administration.
- **Revenue Synergies:** Synergies that increase the overall revenue through expanded markets, products cross-selling and an increase in prices.

Rapid Growth

Generally, any company has two options to grow, viz. organic growth and external growth. Organic growth is achieved by an increase in sales by making internal investments. External growth is achieved by an increase in sales by buying external resources through mergers and acquisitions. Often, companies prefer to grow externally, especially the ones in a mature industry as the industry offers limited opportunities for growth. It is less risky to have external growth.

Market Power

A horizontal merger in a small industry will help in increasing the market share. An increased market share will, in turn, give the power to influence prices. In fact, monopoly is an extreme example of a horizontal merger. A vertical merger can also increase the market power by reducing the dependence on external suppliers.

Unique Capabilities

Not every company can have all the resources or strengths required for a successful growth. There will come a time when the company wants to acquire the competencies and resources that it lacks. This can easily be done through mergers and acquisitions in a very cost-effective way as compared to developing the capabilities internally.

Diversification

It is an act of an existing entity branching out into a new business opportunity. This corporate strategy enables the entity to enter a new market segment which it does not already operate in. The decision to diversify can prove to be a challenging decision for the entity as it can lead to extraordinary rewards with risks.

Bootstrapping EPS

A merger deal might have a bootstrapping effect on the company's EPS. This occurs when the acquiring company's shares are trading at a higher P/E ratio than the P/E of the target company and the P/E does not decrease even after the merger. Such an effect increases the current EPS of the company at the expense of decreased future EPS and decreased growth prospects.

Personal Incentives for Managers

The executives of a company might want the merger to satisfy their personal goals rather than maximize the shareholder value. A post-merger bigger company translates into more prestige and greater power for them. Even the compensation increases in a bigger company. Thus, the managers will prefer the merger to increase the size of their company.

Tax Issues

A company with a large taxable income will look at merging with a company with large carry forwards tax losses. By doing so, the acquiring company can lower the tax liability. A merger purely for reducing tax liabilities will not be approved by regulators, however, companies can hide this reason under other strong motivations to merge.

Unlocking Hidden Value

A struggling company may be bought by an acquirer to unlock its hidden value and utilize its under-utilized resources. The acquiring company may believe that by making some improvements in management and organizational structure and adding more resources, it can make the company perform better. Of course, the acquirer will pay a lower price than the market price.

International Goals

International mergers and acquisitions have become more common and important in today's business world. Like with mergers in one's own country, these international deals are also motivated by the above-mentioned reasons.

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3. Mergers and Acquisitions

The key disadvantages of Mergers and Acquisitions are:

- It may lead to loss of experienced workers aside from workers in leadership positions.
- It may require exhaustive re-skilling of employees of the small merging firm.
- It may lead to difficulties due to frictions and internal competition that may occur among the staff of the united companies. There is conjointly risk of getting surplus employees in some departments.
- It may mean duplication and over capability within the company if two firms are merged that are doing similar activities.
- It may result in increase in costs if the right management for modification and the implementation of the merger and acquisition dealing are delayed.
- The uncertainty with respect to the approval of the merger by proper assurances.

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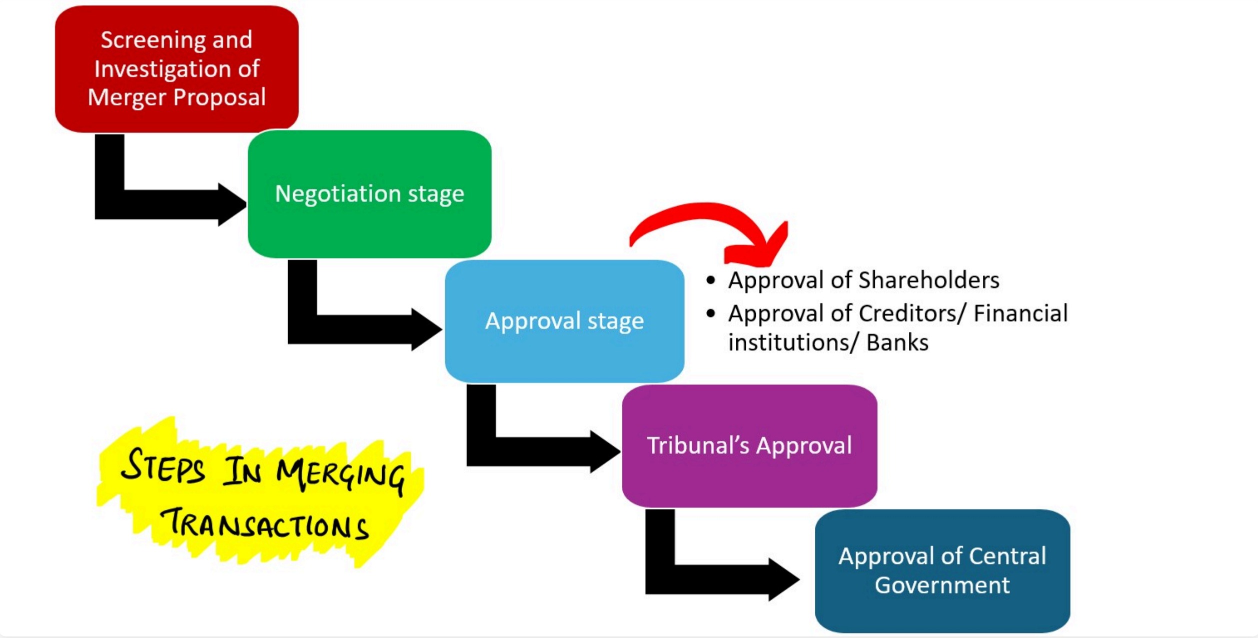
3. Mergers and Acquisitions

The steps of transactions in the case of mergers are discussed next.



i. **Screening and Investigation of Merger Proposal:** When there is an intention of acquisition or merger of other business unit, the primary step is that of screening of motives and needs to be judged against three strategic criteria i.e., business fit, management and financial strength.
ii. **Negotiation Stage:** The negotiation stage is an important stage, in which the bargain is made in order to secure the highest price by the seller and the acquirer is keen to limit the price of the bid. Before the negotiations start, the seller needs to decide the minimum price acceptable and the buyer needs to decide the maximum he is prepared to pay.
iii. **Approval stage:**

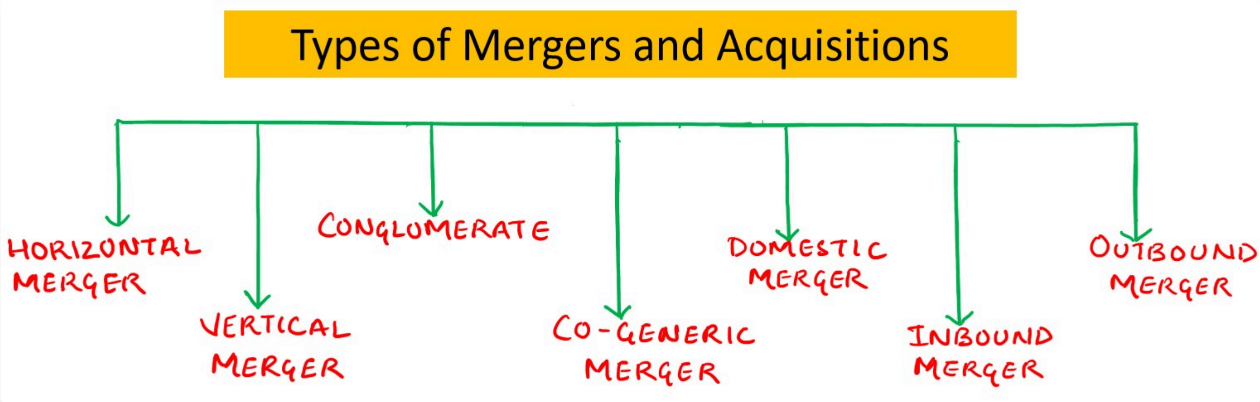
1. *Approval of Proposal by Board of Directors:* Deciding upon the consideration of the deal and terms of payment, then the proposal will be put for the board of director's approval.
2. *Approval of Shareholders:* As per the provisions of the Companies Act, 2013, the shareholders of both seller and acquirer companies hold meeting under the directions of the National Company Law Tribunal (hereinafter called 'Tribunal') and consider the scheme of amalgamation. A separate meeting for both preference and equity shareholders is convened for this purpose.
3. *Approval of Creditors/Financial Institutions/Banks:* Approvals from the lenders for the scheme of merger and acquisition are required to be sought for as per the respective agreement/arrangement with each of them and their interest is considered in drawing up the scheme of merger.

iv. **Tribunal's Approval:** Approval of the Tribunal, confirming the scheme of amalgamation is required. The Tribunal shall issue orders for winding up of the amalgamating company without dissolution on receipt of the reports from the Official Liquidator and the Regional Director that the affairs of the amalgamating company have not been conducted in a manner prejudicial to the interests of its members or to public interest.
v. **Approval of Central Government:** It is required to obtain declaration of the Central Government on the recommendation made by the prescribed authority under section 72A of the Income-tax Act, if applicable.

Richard Roll in 1986 gave **Hubris Hypothesis** for merger activity. Hubris means over-weaning self-confidence or arrogance or pride. Managers commit errors of over-optimism in evaluating merger opportunities due to excessive pride or faith in their own abilities. The suggestion is that some acquirers do not learn from their mistakes and may be convinced that they can see an undervalued firm when others cannot. They may also think that they have the talent, experience and entrepreneurial flair to generate improved profit performance.

3. Mergers and Acquisitions

Generally, the Mergers and Acquisitions are categorized into following types.



Horizontal Merger

It refers to a merger occurring between companies in the same industry. Horizontal merger is a business consolidation that occurs between firms who operate in the same space, often as competitors offering the same good or service. Horizontal mergers are common in industries with fewer firms, as competition tends to be higher and the synergies and potential gains in market share are much greater for merging firms in such an industry. It increases the concentration level in that industry.

Example: A merger between Coca-Cola and the Pepsi beverage division, would be horizontal in nature. The goal of a horizontal merger is to create a new, larger organization with more market share because the merging companies' business operations may be very similar, there may be opportunities to join certain operations, such as manufacturing, and reduce costs.

Vertical Merger

It refers to a merger between two companies producing different goods or services for one specific finished product. A vertical merger occurs when two or more firms, operating at different levels within an industry's supply chain, merge operations. Mostly the logic behind the merger is to increase synergies created by merging firms that would be more efficient operating as one. It is a type of merger in which a company merges with either the supplier of raw materials or the retailing/distribution network to save time and costs. Merger of a company with its raw material manufacturer/supplier is known as **Backward Integration**, whereas a merger with the distributor or retailer is termed as **Forward Integration**.

Example: A vertical merger joins two companies that may not compete but exist in the same supply chain. An automobile company joining with a parts supplier would be an example of a vertical merger. Such a deal would allow the automobile division to obtain better pricing on parts and have better control over the manufacturing process. The parts division, in turn, would be guaranteed a steady stream of business.

Conglomerate

It refers to a merger between firms that are involved in totally unrelated business activities. There are two types of conglomerate mergers: pure and mixed. Pure conglomerate mergers involve firms with nothing in common, while mixed conglomerate mergers involve firms that are looking for product extensions or market extensions.

Example: A leading manufacturer of athletic shoes merges with a soft drink firm. The resulting company is faced with the same competition in each of its two markets after the merger as the individual firms were before the merger.

Co-generic Merger

It is also known as **Concentric Merger**. In this type of merger, companies operating in a similar line of industries but offering different products, generally, complementary in nature, they tend to merge as a strategic measure to increase the profitability of both the companies. To put in other words, this type of merger take place between firms that serve the same customers in an industry, but they don’t offer the same products and services. Their products may complement, product which go together, but technically not the same products such as a DVD player and a DVD, they are not same products but bought together. For example a merger of Procter & Gamble and Gillette in 2005 is a co-generic merger.

Domestic Merger

These horizontal, vertical, or conglomerate mergers or acquisitions may take place on the domestic turf known as domestic merger. The acquisition of Air Sahara by Jet Airways in 2007 is the perfect example of a domestic merger.

Inbound Merger

An inbound merger can take place when companies of foreign origin merge or acquire the companies of domestic origin. Daiichi Sankyo Co. Ltd. acquiring the entire stake of Ranbaxy Laboratories Ltd. is an example of inbound merger.

Outbound Merger

An outbound merger can take place when a domestic company merges with companies of different origins, globally. For example, TATA Tea's acquisition of Tetley.

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4. Takeover

A takeover occurs when one company makes a bid to assume control of or acquire another, often by purchasing a majority stake in the target firm. In the takeover process, the company making the bid is the acquirer while the company it wishes to take control of is called the target.

Takeovers can take many different forms. A welcome or friendly takeover, such as an acquisition, generally goes smoothly because both companies consider it a positive situation. In these cases, the management of the target company approves the transaction.

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4. Takeover

A hostile bid is a specific type of takeover bid that bidders present directly to the target firm's shareholders because the management is not in favor of the deal. Bidders generally present their hostile bids through a *tender offer*.

In a tender offer, one company offers to purchase the outstanding stock of the other firm at a specific price. The acquiring company communicates the offer directly to the other company's shareholders, bypassing the management and board of directors. In this scenario, the acquiring company offers to purchase the common shares of the target at a substantial premium (known as *Bid premium*, i.e., the extra amount a bidder is prepared to pay over the market price before the bid is announced). One recent example of hostile bid is L&T and Mind Tree.

The acquirers may also employ the following hostile takeover techniques:

i. **Toe hold acquisition:** A toehold position is an acquisition or investment strategy where an investor targets a company but buys less than 5% of the company’s stock. This “toehold” position is enough to enable them to exert pressure on the company, whether aiming to ultimately acquire it or merely to raise its performance and improve returns. Essentially, the toehold position gets the investor’s foot (or toe) in the door of the company. It is often the first step made by an investor who is looking to acquire the company.
ii. **Proxy fight:** A proxy fight, also known as a proxy contest or proxy battle, refers to a situation in which a group of shareholders tries to persuade enough shareholders to oppose or vote out the current management or board of directors. In other words, a proxy fight is a battle between shareholders and senior management for control of the company.

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4. Takeover

Let us discuss some of key anti-takeover tacticsone by one.

Stock repurchase

Stock repurchase (self-tender offer) is a purchase by the target of its own-issued shares from its shareholders.

Poison pill

Under this strategy, the target company's shareholders are given the rights to purchase shares of the target company or the merging acquirer at a substantially reduced price. The acquisition of certain percentage of the target company's shareholding by an acquirer triggers the execution of such rights. If exercised, these rights can considerably dilute the acquirer's shareholding in the target company and thus can deter a takeover. The poison pill is one of the most powerful defenses against a hostile takeover. The pills can be flip-in, flip-over, dead hand, and slow/no hand.

1. **Flip-in poison pill** can be "chewable," which means that the shareholders may force a pill redemption by a vote within a certain timeframe if the tender offer is an all-cash offer for all the target's shares. The poison pill can also provide for a window of redemption. That is a period within which the management can redeem the pill. This window hence determines the moment when the management's right to redeem terminates.
2. **Dead hand pill** creates continuing directors. These are current target's directors who are the only ones that can redeem the pill once an acquirer threatens to acquire the target. While the earlier court decisions restricted use of dead hand and no hand pills, the more recent decisions uphold such pills.
3. **No hand** (*slow hand*) pill prohibits redemption of the pill within a certain period of time, for example six months.

Staggered board

It refers to a board in which only a certain number of directors, usually one third, are re-elected annually. It is a powerful antitakeover defense, which might be stronger than is commonly recognized as. This strategy because of being too strong and reducing returns to the target's shareholders, the target company happened to resist this type of defense. It is also known as a classified board, is comprised of directors placed into different classes. They play an important role in the modern corporate landscape by preventing takeover by a hostile bidder. It has been found that companies that have a staggered board remain independent of undue influence. They also help to guide the company towards profitability and prevent activist shareholders from overreaching. While it is inevitable and the company is eventually sold to the hostile bidder or another party, the board can still operate independently even with outside influence exerting pressure.

Shark repellants

Shark repellants are certain provisions in the target's charter or bylaws deterring an acquirer's desirability of a hostile takeover. This defense typically involves a supermajority vote requirement regarding a merger of the target with its majority shareholder. This defense also includes other takeover deterrent provisions in the target's certificate of incorporation or bylaws.

Golden parachutes

Golden parachutes are additional compensations to the target's top management in the case of termination of its employment following a successful hostile acquisition. Since these compensations decrease the target's assets, this defense reduces the amount the acquirer is willing to pay for the target's shares. This defense may thus harm shareholders.

Greenmail

Greenmail is a buyout by the target of its own shares from the hostile acquirer with a premium over the market price, which results in the acquirer's agreement not to pursue obtaining control of the target in the near future. The taxation of greenmail used to present a considerable obstacle for this defense. Plus, the statute may require a shareholder approval of repurchase of a certain number of shares at a premium.

Standstill agreement

Standstill agreement is an undertaking by the acquirer not to acquire any more shares of the target within certain period. A standstill agreement is an additional defense that usually accompanies the greenmail described above.

Leveraged recapitalization

Leveraged recapitalization (corporate restructuring) is a series of transactions designed to affect the equity and debt structure of a corporation. Recapitalization usually involves such transactions as (i) sale of assets, (ii) issuance of debt, and (iii) distribution of dividends.

Crown jewels

When a company is threatened with takeover, the crown jewel defense is a strategy in which the target company sells off its most attractive assets to a friendly third party or spin off the valuable assets in a separate entity.

Scorched earth

Under this strategy, essentially what happens is that a company targeted for takeover does everything it can reasonably do to make itself unattractive, hopefully discouraging the potential acquirer from continuing the takeover attempt.

Lockups

Lockups are defensive mechanisms in friendly mergers and acquisitions designed to deter hostile bids. The lockups include (i) no-shop covenant, (ii) termination/bust-up fee, (iii) option to buy a subsidiary etc.

White knight

A white knight is a company or an individual that acquires a target company that is close to being taken over by a black knight. A white knight takeover is the preferred option to a hostile takeover by the black knight as white knights make a friendly acquisition by generally preserving the current management team, offering better acquisition terms, and maintaining the core business operations.

White squire

Under this strategy the target company gives up/ sells a part of it to a friendly party, it means certain part of ownership is given to friendly partly in the target company. This defense strategy is effective against an acquisition by the hostile party of a complete control over the target company by **freezing out** of minority shareholders so that hostile takeover may be restrained.

Bear Hug

A Bear Hug is an offer made by one company to buy the shares of another for a much higher per-share price than what that company is worth in the market. It is an acquisition strategy that companies sometimes use when there's doubt that the target company's management or shareholders are willing to sell.

5. Amalgamation

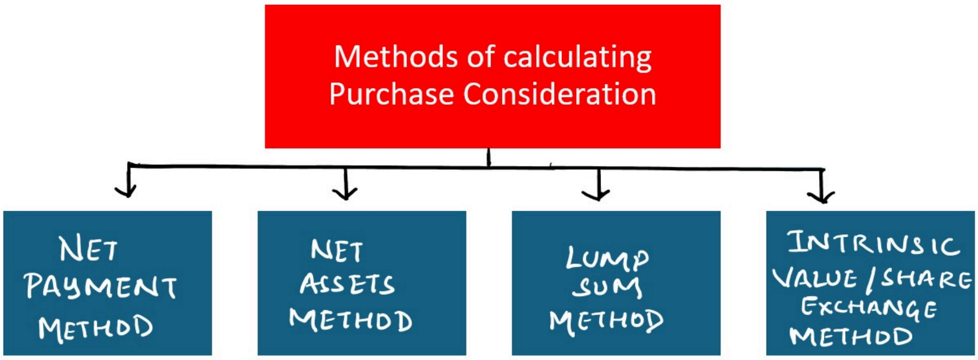
Amalgamation implies a process of unification of two or more companies, which are involved in similar business to form a new company. As per Accounting Standard-14, Amalgamation can take place in two ways, i.e. in the nature of merger and in the nature of the purchase. When amalgamation is in the nature of merger the method of accounting used is the **pooling of interest method** whereas if the amalgamation is in the nature of the purchase, **purchase method** of accounting is used.

In pooling of interest method, the assets and liabilities are recorded at their carrying amounts in the books of the transferee company, whereas in purchase method, the assets and liabilities of the acquired company are recorded in the books of acquiring company at their fair market value, as on the date of acquisition.

Basis for Comparison	**Pooling of Interest Method**	**Purchase Method**
Meaning	There is a genuine pooling not merely of the assets and liabilities of the amalgamating companies but also of the shareholders' interests.	The shareholders of the company which is acquired normally do not continue to have a proportionate share in the equity of the combined company, or the business of the company which is acquired is not intended to be continued.
Applicability	Merger	Acquisition
Assets and liabilities	Appear at book values.	Appear at fair market values.
Recording	All the assets and liabilities of the companies undergoing merger are aggregated.	Only those assets and liabilities are recorded in the books of transferee company, which are taken over by it.
Reserves	The identity of transferor company's reserves is kept intact.	The identity of the transferor company's reserves except statutory reserves is not kept intact.
Purchase Consideration	Difference in the amount of purchase consideration and share capital is adjusted with reserves.	Surplus or deficit of purchase consideration over the net asset acquired should be credited or debited, as capital reserves or goodwill.

5. Amalgamation

There are different methods of calculating purchase consideration. Let us discuss them one by one.



Net Asset Method

Under this method the purchase consideration is equal to the total net assets of transferor company.

Purchase consideration/ Value of Net assets = (Total agreed amount of asset – Total agreed amount of liabilities)

Net Payment Method

Under this method the payment is made to the shareholders of transferor company in form of cash, shares or debentures.

Lump Sum Method

Under this method a fixed amount paid by the transferee company to the transferor company. This method does not require any calculation as the amount is decided by mutual consent of both the companies.

Intrinsic Value/ Share Exchange Method

Under this method the transferee company takeover the business of transferor company based on the ratio in which the share of transferee company is to exchange for share of transferor company. The exchange ratio is generally based on intrinsic value of each of the company's share. The intrinsic value of share means the value of share based on net assets of the company.

$$\text{Intrinsic value} = \frac{\text{Net Assets}}{\text{No. of equity shares}}$$

The exchange ratio is calculated by dividing the intrinsic value of the share of transferor company by the intrinsic value of shares of the transferee company.

It is calculated by dividing the net asset value of transferor company by price of one share of transferee company. The resulted figure is then divided by number of existing shares of transferor company to find out the ratio.

5. Amalgamation

Difference between Amalgamation, Absorption and External Reconstruction are given in the table.

Basic	**Amalgamation**	**Absorption**	**External Reconstruction**
Meaning	In this case, two or more Companies are wound up and a new company is formed to take over their business.	In this case, an existing company takes over the business of one or more existing companies.	In this case, a newly formed company takes over the business of an existing company.
Minimum number of Companies Involved	At least three companies are involved.	At least two companies are involved.	Only two companies are involved.
Number of new resultants companies	Only one resultant company is formed. Two companies are wound up to form a single resultant company.	No new resultant company is formed.	Only one resultant company is formed. In this case, a newly formed company takes over the business of an existing company.
Objective	It is done to cut competition & reap the benefits of economies on a large scale.	It is done to cut competition & reap the economies on a Large scale.	It is done to reorganize the financial structure of the company.

6. Holding Company

It is an era of business growth. Many organizations are growing into large corporations by the process of acquisition, mergers, gaining control by one company over the other company, restructuring etc. Acquisition and mergers ultimately lead to either cost reduction or controlling the market or sharing the material supplies or product diversification or availing tax benefits or synergy. Whatever the motto behind these ventures is, the ultimate result is the large-scale corporation. Formation of holding company is the most popular device for achieving these objectives.

6. Holding Company

Many a times, company expands by keeping intact their separate corporate identity. In this situation, a company (holding company) gains control over the other company (subsidiary company). This control is exercised by one company over the other by:

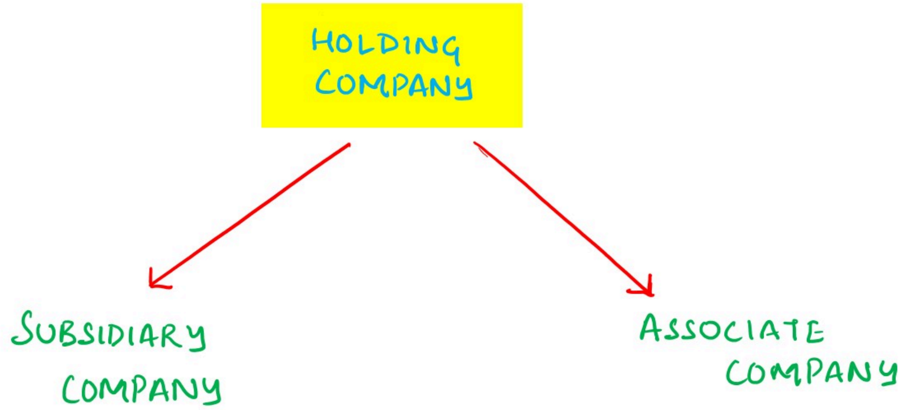
1. Purchasing specified number of shares i.e. ownership through voting power of that company or
2. Exercising control over the board of directors.

The companies connected in these ways are collectively called *a Group of Companies*.

6. Holding Company

As per Section 2(46) of the Companies Act, 2013, "Holding company", in relation to one or more other companies, means a company of which such companies are subsidiary companies.

It may be defined as one, which has one or more subsidiary companies and enjoys control over them. Legally a holding company and its subsidiaries are distinct and separate entities. However, in substance holding and subsidiary companies work as a group. Accordingly, users of holding company's accounts need financial information of subsidiaries also to understand the performance and financial position of the group (i.e. holding company and subsidiaries on a combined basis).



Subsidiary Company

Section 2(87) of the Companies Act, 2013 defines "subsidiary company" as a company in which the holding company -

i. Controls the composition of the Board of Directors; or
ii. Exercises or controls more than one-half of the total share capital either at its own or together with one or more of its subsidiary companies.

Further a company shall be deemed to be a subsidiary company of the holding company even if there is indirect control through the subsidiary company(ies). Indirect control refers to the control over the composition of a subsidiary company's Board of Directors means exercise of some power to appoint or remove all or a majority of the directors of the subsidiary company.

Section 19 of the Companies Act, 2013 prohibits a subsidiary company from holding shares in the holding company. According to this section, no company shall, either by itself or through its nominees, hold any shares in its holding company and no holding company shall allot or transfer its shares to any of its subsidiary companies and any such allotment or transfer of shares of a company to its subsidiary company shall be void.

However, a subsidiary may continue to be a member of its holding company when:

i. the subsidiary company holds such shares as the legal representative of a deceased member of the holding company; or
ii. the subsidiary company holds such shares as a trustee; or
iii. the subsidiary company is a shareholder of the holding company even before it became a subsidiary company of the holding company.

The subsidiary company shall have a right to vote at a meeting of the holding company only in respect of the shares held by it as a legal representative or as a trustee, as mentioned above in point (a) and (b).

Associate Company

An associate is an enterprise in which the investor has significant influence, and which is neither subsidiary nor a joint venture of the investor.

Significant influence does not extend to power to govern the financial and/or operating policies of an enterprise. Significant influence may be gained by share ownership, statute or agreement. As regards share ownership, if an investor holds, directly or indirectly through subsidiary(ies), 20% or more of the voting power of the investee, it is presumed that the investor has significant influence, unless it can be clearly demonstrated that this is not the case. Conversely, if the investor holds, directly or indirectly through subsidiary(ies), less than 20% of the voting power of the investee, it is presumed that the investor does not have significant influence, unless such influence can be clearly demonstrated.

6. Holding Company

The claim of outside shareholders in the subsidiary company must be assessed and shown as liability in the consolidated balance sheet. Minority interest in the net assets of the company is nothing but the proportionate share of aggregation of share capital, reserve and surplus, etc.

Thus, minority interest refers to the interest of the shareholders other than the holding company (outsiders) in the following:

i. Share in the share capital of the subsidiary.
ii. Share in reserves (Both pre-and post-acquisition of the subsidiary).
iii. Share in accumulated losses.
iv. Proportionate share in profit or loss arising on revaluation of assets.

Note: The company's profit and reserves or loss will include both pre-acquisition and post-acquisition profits and reserves or losses. But, if there are some preference shares of the subsidiary company held by outsiders, the minority interest in respect of the preference share will consist only of the face value of such shares and the dividend due on such shares if there are profits.

Illustration

A Ltd. acquired 70% of equity shares of B Ltd. on 7.4.2020 at cost of Rs.10,00,000 when B. Ltd. had an equity share capital of Rs. 10,00,000 and reserves and surplus of Rs. 80,000. Show the minority interests and cost of control at the time of acquisition.

Solution:

Calculation of Minority interest and Cost of control on 1.4.2010

Particulars	Total share capital	Share of Holding Co.	Minority Interest
In %	100%	70%	30%
Share Capital Reserve	10,00,000	7,00,000	3,00,000
Reserve and Surplus	80,000	56,000	24,000
		7,56,000	3,24,000
Less: Cost of investment		(10,00,000)	
Goodwill		2,44.000	

6. Holding Company

A holding company is required to present to its shareholders consolidated balance sheet of holding company and its subsidiaries. Consolidated balance sheet is nothing but addition of assets and liabilities or combining the balance sheet of holding and its subsidiary together. However, assets and liabilities are straight forward, i.e. added line to line and combination of share capital, reserves, and accumulated losses are not directly added in consolidated balance sheet.

The following points need special attention while preparing consolidated Balance Sheet.

i. The share of the holding company and the share of minority (outside shareholders).
ii. The date of preparation of balance sheet of holding company and that of various subsidiary companies must be same. If not, necessary adjustments must be made before consolidation.
iii. The date of acquisition of control in subsidiary companies.
iv. The Intercompany Owing.
v. Revaluation of fixed assets as on date of acquisition, depreciation, adjustment on revaluation amount etc.

Applicability of AS-21 (Consolidated Financial Statements)

It is clarified that AS 21 is mandatory if an enterprise presents consolidated financial statements. In other words, the accounting standard does not mandate an enterprise to present consolidated financial statements but, if the enterprise presents consolidated financial statements for complying with the requirements of any statute or otherwise, it should prepare and present consolidated financial statements in accordance with this standard. However, as per SEBI all listed companies should prepare consolidated financial statement thus it becomes mandatory for them to follow AS - 21.

Applicability of AS-23 (Accounting for Investments in Associates in Consolidated Financial Statements)

It is clarified that AS 23 is mandatory if an enterprise presents consolidated financial statements. In other words, if an enterprise presents consolidated financial statements, it should account for investments in associates in the consolidated financial statements in accordance with AS 23.

Applicability of Ind AS-110 (Consolidated Financial Statements)

a. requires an entity (the parent) that controls one or more other entities (subsidiaries) to present consolidated financial statements.
b. defines the principle of control, and establishes control as the basis for consolidation
c. sets out how to apply the principle of control to identify whether an investor controls an investee and therefore must consolidate the investee.
d. sets out the accounting requirements for the preparation of consolidated financial statements; and
e. defines an investment entity and sets out an exception to consolidating subsidiaries of an investment entity.

Note: This Ind AS does not deal with the accounting requirements for business combinations and their effect on consolidation, including goodwill arising on a business combination (Ind AS 103, Business Combinations).

6. Holding Company

In actual practice, it rarely happens that the cost of acquisition of shares in the subsidiary company agrees exactly with intrinsic value of the shares (i.e. the net assets of the subsidiary company) on the date of acquisition.

If the price paid by the holding company for the shares acquired in the subsidiary company is more than the intrinsic value of the shares acquired, the difference should be treated as Cost of Control or Goodwill.

If on the other hand, the price paid by the holding company for the shares acquired in the subsidiary company is less than the intrinsic value of the shares acquired, the difference should be treated as capital profits and credited to Capital Reserve.

It should be noted that while computing the intrinsic value of the shares as on the date of acquisition of control, all profits and losses up to that date, must be considered. While preparing the Consolidated Balance Sheet, such Goodwill or Capital Reserve, whatever may be the case, must be shown in the consolidated Balance sheet.

7. Preparation and Presentation of Financial Statements

There is no legal obligation for sole proprietorship and a partnership firm to prepare final accounts, but companies have statutory obligations to keep proper books of account and to prepare its final accounts every year in the manner as prescribed in the Companies Act. Chapter IX, Sections 128 to 138 of the Companies Act, 2013 deals with the legal provisions relating to the Accounts of Companies. These sections including Schedule II and III were brought into force from 1st April 2014. The relevant rules pertaining to these provisions have also been notified. All these relevant provisions/schedules and rules will be applicable for the financial years commencing on or after 1st April 2014. It is clarified that in respect of financial years that commenced earlier than 1st April 2014, shall be governed by the relevant provisions/schedules and rules of the Companies Act, 1956.

The relevant sections of Companies Act, 2013 are mentioned below.

i. **Sec. 128 (Books of Accounts):** Every company is required to keep all books of accounts including vouchers for a period not less than 8 financial years immediately preceding a current financial year.
ii. **Section 129 (Preparation and Presentation of Financial Statements):** It governs the preparation and presentation of financial statements of a company (excluding insurance, banking or any company engaged in the generation or supply of electricity since these companies are governed by separate laws as well). The financial statements shall give a true and fair view of the state of affairs of a company or companies, comply with the accounting standards notified under Section 133 and shall be in the form or forms as may be provided for different class or classes of companies in Schedule III. The items contained in such financial statements shall be in accordance with the accounting standards.
iii. **Section 133:** Until the Standards of Accounting or any addendum thereto are prescribed by the Central Government in consultation and recommendation of the National Financial Reporting Authority, the existing Accounting Standards notified under the Companies Act, 1956 shall continue to apply.
iv. **Sec. 132 (Constitution of National Financial Reporting Authority):** The Central Government may constitute a National Financial Reporting Authority (NFRA) to provide for matters relating to accounting and auditing standards under this Act.
v. **Sec. 134 (Financial Statements, Board Report):** The auditors' report shall be attached to every financial statement. The Board' Report to be laid before a company in its General Meeting should include number of meetings of the Board, Directors' Responsibility Statement, details of frauds reported by Auditors, Company's Policy on Directors' Appointment and Remuneration, explanation of Board on adverse remarks (qualified report) of Auditor etc.

Further, certain class of companies as notified by the Central Government from time to time, shall mandatorily file their financial statements in Extensible Business Reporting Language (XBRL) format. The term 'Extensible Business Reporting Language' means a standardized language for communication in electronic form to express, report or file financial information by specified companies.

7. Preparation and Presentation of Financial Statements

According to Section 129 of the Companies Act, 2013, all the companies registered under this Act will have to present its financial statements in accordance with Schedule III of the Act. The Schedule III of the Companies Act, 2013 has been formulated to keep pace with the changes in the economic philosophy leading to privatization and globalization and consequent desired changes/reforms in the corporate financial reporting practices.

The prescribed format for the preparation of Balance Sheet has been provided in Part I of the Schedule III and prescribed format for the preparation of Statement of Profit and Loss has been given in Part II of Schedule III. The Board of Directors shall present the Financial Statements before the shareholders for their approval, at every Annual General Meeting of the Company. The auditor's report and director's report must be attached to the Financial Statements of the company as well.

The Balance Sheet and Statement of Profit and Loss of a company must be prepared as per the format given in Schedule III. Schedule III does not follow the horizontal format.

7. Preparation and Presentation of Financial Statements

A Balance Sheet is a statement of the financial position of an enterprise as at a given date, which exhibits its assets, liabilities, capital, reserves and other account balances at their respective book values. The new vertical format is as follows:

PART I
Format of Balance Sheet

Name of the Company ....
Balance Sheet as at ....

Particulars	**Note No.**	**Figures as at the end of current reporting period**	**Figures as at the end of previous reporting period.**
I. EQUITY AND LAIBILITIES:			
(1) Shareholders' funds			
(a) Share capital			
(b) Reserves and Surplus			
(c) Money received against share warrants			
(d) Minority Interest			
(2) Share application money pending allotment			
(3) Non-current liabilities			
(a) Long-term borrowings			
(b) Deferred tax liabilities (Net)			
(c) Other long-term liabilities			
(d) Long-term provisions			
(4) Current liabilities			
(a) Short-term borrowings			
(b) Trade Payables			
(c) Other current liabilities			
(d) Short-term provisions			
TOTAL			
II. ASSETS:			
(1) Non-current assets			
(a) Fixed assets			
(i) Tangible assets			
(ii) Intangible assets			
(iii) Capital Work-in-progress			
(iv) Intangible assets under development			
(b) Non-current investments			
(c) Deferred tax assets (Net)			
(d) Long-term loans and advances			
(e) Other non-current assets			
(2) Current assets			
(a) Current investments			
(b) Inventories			
(c) Trade receivables			
(d) Cash and cash equivalents			
(e) Short-term loans and advances			
(f) Other current assets			

TOTAL			

PART II
Format of Statement of Profit and Loss

Name of the Company ....
Profit and Loss Statement for the year ended ....

Particulars	**Note No.**	**Figures as at the end of current reporting period**	**Figures as at the end of previous reporting period.**
I. Revenue from operations			
II. Other income			
III. Total Revenue (I + II)			
IV. Expenses: Cost of materials consumed Purchases of Stock-in-Trade Changes in inventories of finished goods work-in-progress and Stock-in-Trade Employee benefit expenses Finance costs Depreciation and amortization expense Other expenses			
Total expenses			
V. Profit before exceptional and extraordinary items and tax (III-IV)			
VI. Exceptional items			
VII. Profit before extraordinary items and tax (V - VI)			
VIII. Extraordinary Items			
IX. Profit before tax (VII- VIII)			
X. Tax expense: (1) Current tax (2) Deferred tax			
XI. Profit (Loss) for the period from continuing operations (IX-X)			
XII. Profit/(loss) from discontinuing operations			
XIII. Tax expense of discontinuing operations			
XIV. Profit/(loss) from Discontinuing operations (after tax) (XII-XIII)			
XV. Profit (Loss) for the period (XI + XIV)			
XVI. Earnings per equity share: (1) Basic (2) Diluted			

8. Other Important Terms

Let us look at some of the important terms one by one.

8. Other Important Terms

An **Over-capitalized** firm can be compared to a (fat) man who has got fat more than required and suffers from variety of diseases. Over-capitalization implies that the total capital of the company (owned capital plus borrowed capital) is in excess of the level of proper capitalisation. At this situation, the reconstruction is required.

Under-capitalization is reverse of the over-capitalization. A corporation may be under-capitalized when the rate of profits it is making on the total capital is exceptionally high, in relation to the return enjoyed by similar situated companies in the same industry, or, when it has insufficient capital to conduct its business.

8. Other Important Terms

Dilution occurs when a company issues additional shares of stock, and as a result the earnings per share and the book value per share decline. This happens because earnings per share and book value per share are calculated by dividing the total earnings or book value by the number of existing shares.

The larger the number of shares, the lower the value of each share. Lower earnings per share may trigger a selloff in the stock, lowering its price. That's one reason a company may choose to issue bonds rather than new stock to raise additional capital.

8. Other Important Terms

A Stock split is a corporate action in which a company divides its existing shares into multiple shares to boost the liquidity of the shares. A stock split or stock divide increases the number of shares in a company. The price is adjusted such that the before and after market capitalization of the company remains the same and dilution does not occur. Options and warrants are included.

8. Other Important Terms

Dividend yield or dividend-price ratio of a share is the dividend per share divided by the price per share. It is also a company's total annual dividend payments divided by its market capitalization, assuming the number of shares is constant. It is often expressed as a percentage.

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8. Other Important Terms

It is the situation where the merger of companies creates or enhances 25% (one- quarter of the goods or services) share of the market.

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1. Introduction

Bonus issue is defined as issue of shares to the current shareholders in a company at no cost, based upon the number of shares that the shareholder already holds. In other words, no new funds are raised with a bonus issue. Bonus issue means an issue of free additional shares to existing shareholders. Although the total number of issued shares increases, the ratio of number of shares held by each shareholder remains constant.

Rights issue is an issue of rights to a company's existing shareholders that entitles them to buy additional shares directly from the company in proportion to their existing holdings, within a fixed time period. In a rights offering, the subscription price at which each share may be purchased is generally at a discount compared to the current market price. Rights are often transferable, allowing the holder to sell them in the open market.

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2. Issue of Bonus Shares

Meaning of Capitalisation of Profits and Bonus Shares

Capitalisation of Profits refers to the process of converting profits or reserves into paid up capital. Issue of bonus shares decreases the Reserves and Surplus and increases the issued capital but does not bring any change in the cash flow and net worth of the company. Bonus issue is also known as **scrip issue** or **capitalisation issue**. A company may capitalise its profits or reserves:

i. by paying amounts unpaid on existing partly paid shares so as to make them fully paid up, or
ii. by issuing fully paid up bonus shares to the existing shareholders.

Provisions of Companies Act in relation to Issue of Bonus Shares

Section 63(2) of the Companies Act, 2013, deals with the issue of bonus shares. Accordingly, a company may issue fully paid-up bonus shares to its members, in any manner whatsoever, out of,

i. its free reserves;
ii. the securities premium account; or
iii. (the capital redemption reserve account.

Notes:

(a) Revaluation reserve*:* No issue of bonus shares shall be made by capitalising reserves created by the Revaluation of assets.

(b) Meaning of free reserves: As per Companies Act, 2013, "free reserves" means such reserves which, as per the latest audited balance sheet of a company, are available for distribution as dividend, but do not include:

i. any amount representing unrealised gains, notional gains or revaluation of assets, whether shown as a reserve or otherwise, or
ii. any change in carrying amount of an asset or of a liability recognised in equity, including surplus in profit and loss account on measurement of the asset or the liability at fair value.

The following conditions have to be satisfied, if a company wants to issue fully paid up bonus shares:

a. It is authorised by its articles;
b. It has, on the recommendation of the Board, been authorised in the general meeting of the company;
c. It has not defaulted in payment of interest or principal in respect of fixed deposits or debt securities issued by it;
d. It has not defaulted in respect of the payment of statutory dues of the employees, such as, contribution to provident fund, gratuity and bonus;
e. The partly paid-up shares, if any, outstanding on the date of allotment of bonus shares, are made fully paid-up.
f. Bonus shares cannot be issued in lieu of dividend.
g. A resolution must be passed by the members in the general meeting to approve the Board's resolution recommending the issue of bonus shares. Member's resolution must state an intention to capitalise the profits or reserves; and the amount of profits or reserves to be capitalised.
h. A company must comply with any other prescribed conditions.

Note:

a. Bonus shares cannot be issued unless partly paid-up shares are made fully paid-up.
b. Capital Redemption Reserve, Plant Revaluation Reserve and Securities Premium cannot be capitalized for converting partly paid-up shares into fully paid-up shares.

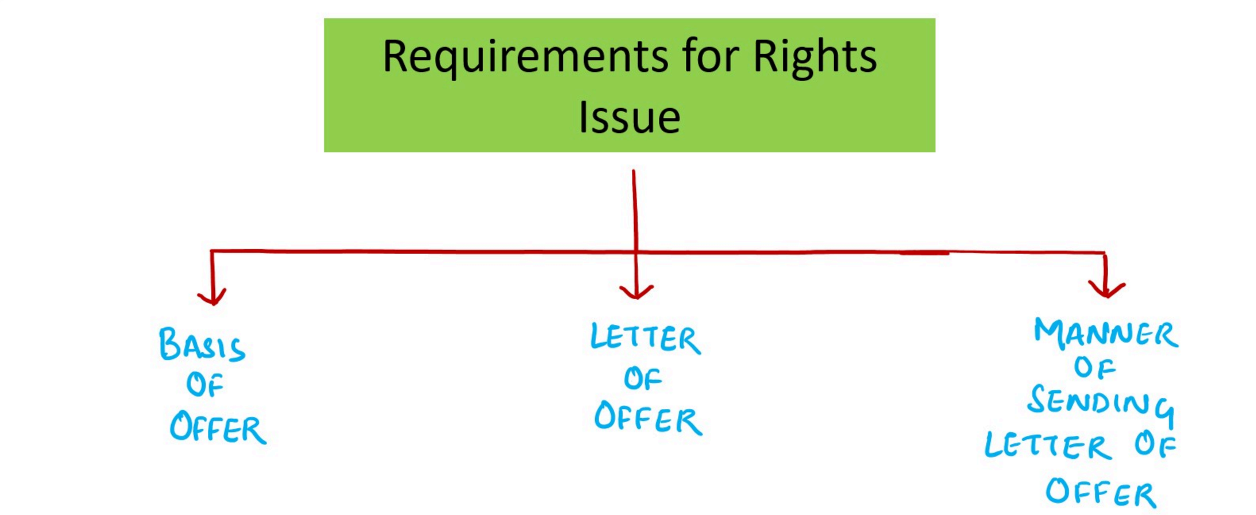
3. Rights Issue

Section 62(1) (a) of Companies Act, 2013, contains the provisions that a company, whether public or private must adhere to while raising subscribed share capital by the issue of further shares. Thus, Rights issue is governed by the provisions of the said section of the Companies Act.

Right refers to the entitlement of the existing shareholders to receive invitation of offer or subscription to the shares of a company, in case of further issue of capital by the company, before being offered to others. This is called as the **Right of Pre-emption**. In other words, the existing shareholders have a right to subscribe to any fresh issue of shares by the company in proportion to their existing holding of shares. The existing shareholders also have an implicit right to renounce this right in favour of anyone else, or even reject it completely.

Requirements for Rights Issue as per the provisions of Section 62(1)(a)

The following are the requirements for Rights Issue as per the provisions of Section 62(1) (a):



(a) Basis of Offer

Existing shareholders (i.e., shareholders as on the date of offer) shall be offered further shares in proportion to the Paid-up shares already held by them.

(b) Letter of Offer

Rights offer for subscription must be made by the company by way of a 'Letter of Offer', which, shall specify the number of shares offered; and the time within which the offer must be accepted. Minimum and Maximum time period in this regard is 15 days and 30 days, respectively, from the date of offer. The offer shall be deemed to have been declined, if it is not accepted within the specified time; and Shareholders have the right to renounce all or any of the shares offered to them in favour of any other person, unless AOA of the company provides otherwise.

However, in case of a Private Company, if 90% of the Members have given their consent in writing or e-mode, the time limit of 15-30 days for deemed rejection of Rights Offer, can be reduced.

(c) Manner of Sending Letter of Offer

Letter of Offer/Notice, shall be dispatched to Existing Shareholders at least 3 days before the opening of the issue through (a) Registered Post, or (b) Speed Post, or (c) electronic Mode. However, in case of a Private Company, if 90% of the Members have given their consent in writing or e-mode, the time limit of at least 3 days' Notice for opening of issue can be reduced.

In case of Non-Acceptance of rights, the Board of Directors can dispose-off the shares offered in a manner most beneficial to the company after the expiry of specified time, or, on receipt of earlier intimation from the shareholder declining the offer.

Section 62 also contains 4 instances as to when the shares can be offered by the company without being offered to their existing shareholders, provided that the company has passed a Special Resolution and Shares are offered:

1. to employees under a scheme of ESOP, subject to certain specified conditions.

2. to any person, either for cash or for a consideration other than cash, if the price of such shares is determined by the valuation report of a Registered Valuer, subject to certain specified conditions.
3. to convertible Debenture Holders/ Lenders of loans caused by the exercise of an option as a term attached to the debentures issued or loan raised by the company to convert such debentures or loans into shares in the company.
4. in lieu of loan which has been obtained from the Government, and Government in public interest directs the debentures and loans to be converted into equity shares.

3. Rights Issue

Value of Right can be calculated simply by using the following formula.

$$\text{Value of Right} = \frac{\text{No. of right shares}}{\text{Total shares (old + new holdings)}} \times \text{Market value} - \text{right issue price}$$

For example, A Ltd. has a share capital of 5,000 equity shares of Rs. 100 each having a market value of Rs. 150 per share. The company wants to raise additional funds of Rs. 1,20,000 and offers to the existing shareholders the right to apply for a new share at Rs. 120 for every five share held. The value of right would be calculated as follows:

$$\text{Value of Right} = \frac{\text{No. of right shares}}{\text{Total shares (old + new holdings)}} \times \text{Market value} - \text{right issue price}$$

$$= \frac{1}{6\text{(old + new holdings)}} \times (150 - 120)$$

$$= \frac{1}{6} \times 30$$

$$= \text{Rs } 5$$

4. Redemption of Preference Shares

Redemption is defined as the process of paying back or repaying an obligation, at pre-determined amounts and timings. In the case of preference shares, redemption is a contract giving the right to redeem preference shares during or at the end of a given time period, at an agreed price. These shares are issued on the terms that shareholders will be repaid the amount which they invested in the company, at a future date, along with a periodic payment of a specified amount, as return on their investment (termed as **preference dividend**). The redemption date, that is the maturity date, is generally printed on the preference share certificate. In India, the issue and redemption of preference shares is governed by Section 55 of the Companies Act, 2013.

4. Redemption of Preference Shares

The following provisions are provided in Section 55 of Companies Act, 2013 regarding the redemption of Preference shares.

Time Period for Redemption

A company that is limited by shares and authorised by its AOA, can issue preference shares which should be redeemed by the company in a period not exceeding 20 years from the date of their issue. No company can issue "Irredeemable Preference Shares". The maximum time limit for Redeemable Preference Shares is 20 years.

However, this time limit of 20 years is extended to 30 years in case, where preference shares are issued by a company engaged in the setting up and dealing of Infrastructural Projects, provided that, in case the time minimum 10% of such Preference Shares should be redeemed every year from the 21st year onwards or earlier, on proportionate basis, at the option of the Preference Shareholders.

Further, a company can redeem its preference shares only on the terms (i) on which they were issued, or, (ii) as varied after due approval of Preference Shareholders under Section 48 of Companies Act, 2013.

Only Fully Paid-up Preference Shares can be redeemed

Partly-paid Preference shares cannot be redeemed. Only Preference shares that are fully paid-up can be redeemed.

Sourcing Redemption

Preference Shares can be redeemed only out of:

i. Divisible Profits (i.e., profits which are legally available for distribution among the shareholders by way of dividend), or
ii. Proceeds of a fresh issue of shares made for the purpose of such redemption.

Creation of Capital Redemption Reserve Account

If the shares are redeemed out of divisible profits, a sum equal to the Nominal Amount of the shares redeemed should be transferred out of Divisible Profits to a reserve called **Capital Redemption Reserve Account**. This amount transferred to the Capital Redemption Reserve Account can be utilised to issue Fully Paid-up Bonus Shares. The transfer to Capital Redemption Reserve ensures that there is no reduction in shareholders' funds due to redemption and, thus, the interest of outsiders is not affected. The rationale behind these provisions is to protect the interest of outsiders to whom the amount is payable before redemption of preference share capital. The interest of outsiders is protected, if the nominal value of capital redeemed is substituted, thus, ensuring the same amount of shareholders' funds. The transfer of divisible profits to Capital Redemption Reserve makes them non-distributable profits and since Capital Redemption Reserve can be used only for issue of fully paid-up bonus shares, profits retained in the business ultimately get converted into share capital.

Sourcing Redemption Premium

If any Premium is to be payable on redemption of Preference Shares, it must be provided before the shares are redeemed, out of:

i. Profits of the company, or
ii. Securities Premium Account

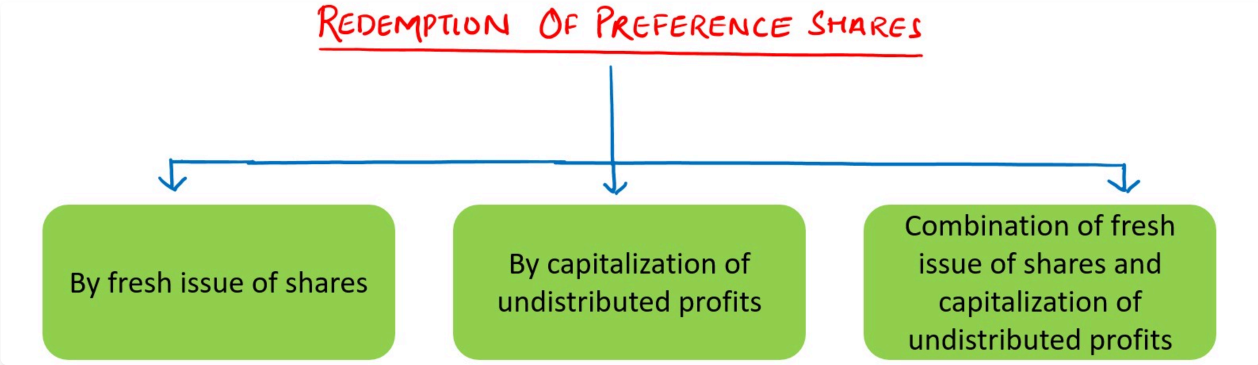
However, it is to be noted that in case of specified classes of Companies and whose Financial Statements comply with Accounting Standards under Section 133 of the Companies Act, 2013, Premium payable on Redemption of Preference Share Capital issued after 1st April 2014, shall be provided only out of the profits of the company, i.e., Securities Premium Account cannot be utilised in this case.

Notice to Registrar of Companies as per Section 64

The Company is required to give notice to the Registrar of Companies within 30 days of redemption along with amended copy of its Memorandum of Association. If the company defaults to comply with this provision, it will be punished in accordance with the provisions provided in Section 64 of Companies Act, 2013.

4. Redemption of Preference Shares

There are 3 methods which are allowed as per the interpretation of Section 55 of the Companies Act, 2013, which can be used for redemption of Fully Paid-up Preference Shares, namely,



1. Proceeds of a fresh issue of shares;
2. Capitalisation of undistributed profits; or
3. Combination of Proceeds of a fresh issue and Capitalisation of undistributed profits.

By Proceeds of fresh issue of shares

The first method for redemption of Fully Paid-up Preference Shares is to source such redemption from the proceeds of a fresh issue of shares. A company can issue new shares which can either be equity shares or preference shares, and the proceeds from such new shares can be used for redemption of preference shares.

It is important to note that the proceeds from issue of debentures cannot be utilised for the purpose.

If in case, the fresh issue of shares is made at a premium, such security premium on fresh issue cannot be utilised for the redemption of Preference Share Capital. This is because of the provisions contained in Section 52 of the Companies Act, 2013, which states the rules as to how the Securities Premium account can be applied by the company. Furthermore, it may be noted that certain class of Companies whose financial statements comply with the Accounting Standards as prescribed under Section 133 of the Companies Act, 2013, cannot apply the securities premium account for the purpose of writing off any preliminary expenses and to source any premium payable at the time of redemption of preference share capital.

A company may prefer issue of new equity shares because:

a. When the company has realised that the capital is needed permanently and it makes more sense to issue Equity Shares in place of Redeemable Preference Shares which carry a fixed rate of dividend;
b. When the company is not in a good position in terms of liquidity;
c. When the balance of profit available is insufficient.

By Capitalisation of Undistributed Profits

As per the Companies Act, 2013, second method for redemption of preference shares is to use the distributable profits instead of issuing new shares. When shares are redeemed by utilising distributable profit, an amount equal to the nominal / face value of shares redeemed is transferred to "Capital Redemption Reserve Account" by debiting the distributable profit and crediting the Capital Redemption Reserve Account. In other words, some of the distributable profits are kept aside to ensure that it can never be distributed to shareholders as dividend.

By Combination of Fresh Issue and Capitalisation of Undistributed Profits

The third method that can be used by a company to redeem the preference shares is a combination of the above 2 methods. Preference Shares can be redeemed partly from the proceeds from new issue and partly out of profits. In this case, an amount equal to the Nominal value of Preference Shares redeemed out of profits must be transferred to the Capital Redemption Reserve Account.

A simple method to calculate the amount to be transferred to Capital Redemption Reserve Account is to compare the Nominal value of Preference Share Capital to be redeemed with Nominal value of any Fresh issue of Share Capital.

Thus, Amount to be transferred to Capital Redemption Reserve Account = Nominal value of Preference Share Capital to be redeemed - Nominal value of any Fresh issue of Share Capital.

The Companies can also make use of its investments to provide for funds for Redemption of Preference Share Capital. The Companies may have sufficient investments which can be sold in the market to arrange funds for redemption of preference shares.

4. Redemption of Preference Shares

Only fully paid up preference shares can be redeemed by a company. If it is decided to redeem preference shares which are partly called up, then it is assumed that final call is called on these partly called-up Preference shares, before proceeding with redemption of these shares.

4. Redemption of Preference Shares

The problem of unpaid calls on fully called-up shares is examined under 2 categories which are given below.

a. **When calls-in-arrears is received by the company:** After receipt of calls in arrears, the shares become fully paid up and, then, company can proceed with redemption in the normal course.
b. **In case of forfeiture shares:** If the shareholders fail to pay the unpaid calls, the Board of Directors may decide to forfeit the shares and cancel these shares instead of reissuing the forfeited shares because redemption of these shares is due immediately or in near future. In this case, entry for forfeiture is passed as usual.

5. Issue and Redemption of Debentures

Besides raising capital by the issue of shares, a company may supplement its capital by borrowings. Such borrowings may take the form of both short-term and long-term borrowings. Short-term borrowings by way of promissory notes, bills of exchange, bank overdrafts, cash credits, public deposits, etc., are needed by a company to provide for its working capital. Long-term borrowings by way of loan on mortgage of property, term loans from financial institutions, public deposits for a long period, issue of debentures, etc., are needed by a company for financing expenditure of a capital nature.

Loan Capital of a company refers to the long-term borrowings of which issue of debentures is the most important and common method adopted by companies. Debentures are part of loan capital and the company is liable to pay interest thereon whether it earns profit or not.

Debenture is a written instrument acknowledging a debt under the common seal of the company. It contains a contract for repayment of principal after a specified period or at intervals or at the option of the company and for payment of interest at a fixed rate payable usually either half-yearly or yearly on fixed dates. According to Section 2(30) of the Companies Act, 2013, “Debenture” includes Debenture Stock, Bonds and any other securities of a company whether constituting a charge on the assets of the company or not.

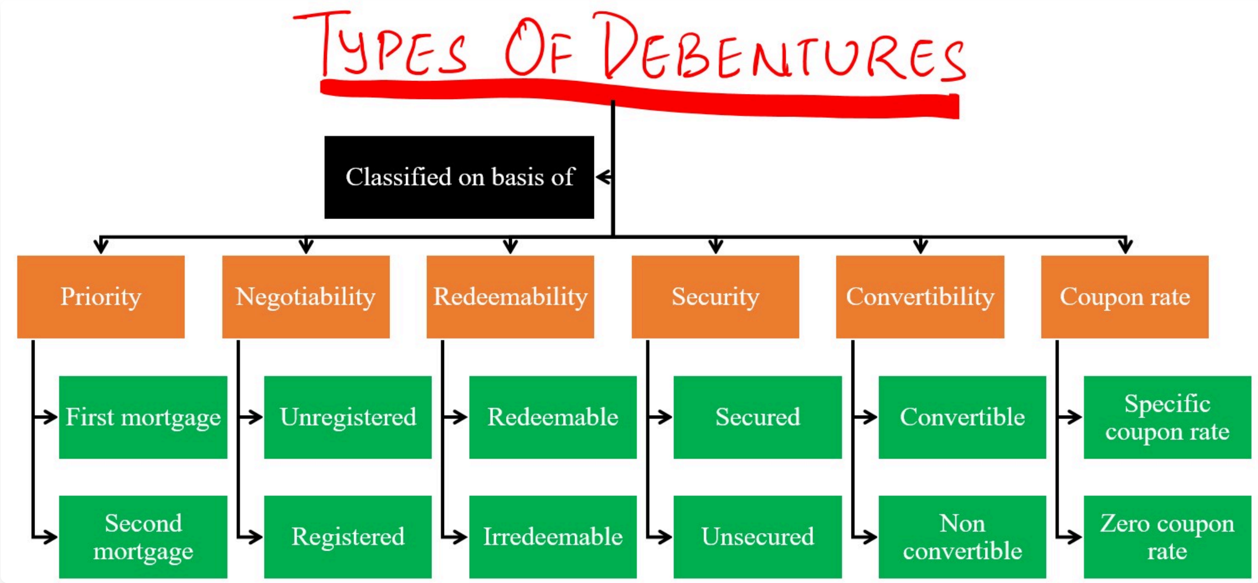
Debenture Stock is defined as a borrowed capital consolidated into one single mass. Debenture stock must be fully paid, while debentures may or may not be fully paid. Debenture Stock can be transferred in fractions.

Bond is also an instrument of acknowledgement of debt. Traditionally, the Government issued bonds, but these days, bonds are also being issued by semi-government and non-governmental organizations. The terms “Debentures” and “Bonds” are now being used inter-changeably.

A company can raise funds through the issue of debentures, which has a fixed rate of interest on it. The debenture issued by a company is an acknowledgment that the company has borrowed an amount of money from the public, which it promises to repay at a future date. Debenture holders are the creditors of the company. It is to be noted that no company shall issue any debentures carrying any voting rights.

5. Issue and Redemption of Debentures

Debentures can be classified into various types, based upon Priority, Negotiability, Redeemability, Security and Convertibility.



On the basis of Priority

Debentures can be classified into First Mortgage Debentures and Second Mortgage Debentures on the basis of Priority. These are explained below.

a. **First Mortgage Debentures:** These Debentures are ranked first and are to be paid first in priority to other Debentures which may be issued later or subsequently by the Company. These Debentures constitute first priority in repayment.
b. **Second Mortgage Debentures:** They are issued subsequent to First Debentures and rank next in matters of repayment, i.e., they can be repaid or redeemed only after first Debentures are repaid or redeemed. These Debentures constitute second priority in repayment.

On the basis of Negotiability

Debentures can be classified into Bearer or Unregistered Debentures and Registered Debentures on the basis of Negotiability. These are explained below.

a. **Bearer or Unregistered Debentures:** Bearer or Unregistered Debentures are debentures which can be transferred by way of delivery and the company does not keep any record of the debenture holders. Interest on debentures is paid to a person who produces the interest coupon attached to such debentures.
b. **Registered Debentures:** Registered Debentures are such Debentures within which all details comprising addresses, names and particulars of holding of the debenture holders are filed in a register kept by the enterprise. Such debentures can be moved only by performing a normal transfer deed.

On the basis of Redeemability

Debentures can be classified into Redeemable Debentures and Irredeemable or Perpetual Debentures on the basis of Redeemability. These are explained below.

a. **Redeemable Debentures:** Redeemable Debentures are those debentures that are due to be paid back by the company on the expiry of a certain specified time period. These debentures can be repaid either in a lump-sum payment or in installments during the lifetime of the enterprise. These Debentures can be redeemed either at a premium or at par.
b. **Irredeemable or Perpetual Debentures:** Irredeemable Debentures, also called as Perpetual Debentures contain no clause as to repayment of the amount borrowed by the company, or which contains a clause that such debentures are not to be repaid. These debentures are repayable in the event of winding up of the company or after a very long time period, or on happening of such other event as specified in the terms of the issue.

On the basis of Security

Debentures can be classified into Secured Debentures and Unsecured or Naked Debentures on the basis of Security. These are explained as below.

a. **Secured Debentures:** Secured debentures are those Debentures where a charge is being established on the properties or assets of the enterprise for the purpose of any payment. The charge can be either floating or fixed. The fixed charge is established against those assets which come under the enterprise's possession for the purpose to use in activities not meant for sale. Floating charge comprises of all assets excluding those accredited to the secured creditors. A fixed charge is established on a particular asset whereas a floating charge is on the general assets of the enterprise.
b. **Unsecured or Naked Debentures:** Unsecured or Naked Debentures do not have a particular charge on the assets of the enterprise. However, a floating charge may be established on these debentures by default. Usually, these types of debentures are not circulated.

On the basis of Convertibility

Debentures can be classified into Convertible Debentures and Non-Convertible Debentures on the basis of Convertibility. These are explained below.

a. **Convertible Debentures:** Convertible Debentures are those debentures, which give the debenture holders an option of converting their holdings into equity shares. The rate of conversion and the period after which the conversion will take effect are declared in the terms and conditions of the agreement of debentures at the time of issue. Convertible Debentures are further classified into two types, i.e., Fully and Partly Convertible. Fully convertible debentures are completely converted into equity, whereas the partly convertible debentures have two parts. The convertible part is converted into equity as per the agreed rate of exchange based on an agreement. The non-convertible part becomes redeemable debenture which is repaid after the expiry of the agreed period.
b. **Non-Convertible Debentures:** Non-convertible debentures are simple debentures with no such option of getting converted into equity. Their state will always remain of debt and will not become equity at any point in time. It is essential to prepare an agreement that clearly expresses all the terms and conditions.

On the basis of Coupon Rate

Debentures can be classified into Specific Coupon Rate Debentures and Zero-Coupon Rate Debentures on the basis of Coupon Rate. These are explained below.

a. **Specific Coupon Rate Debentures:** Debentures circulated with a mentioned rate of interest are called as Specific Coupon Rate Debentures. This mentioned rate of interest is also referred to as Specific Coupon Rate.
b. **Zero-Coupon Rate Debentures:** Zero-Coupon Debentures do not carry a particular rate of interest. These Debentures are circulated at a considerable discount and the difference between the nominal value and the circulated price is treated as the amount of interest associated with the duration of the debentures.

5. Issue and Redemption of Debentures

The procedure for the issue of debentures is the same as that for the issue of shares. The intending investors apply for debentures based on the prospectus issued by the company. The company may either ask for the entire amount to be paid on application or by means of installments on application, on allotment and on various calls. Debentures can be issued at par, at a premium or at a discount and these can also be issued for consideration other than cash or as a collateral security. The issue of redeemable debentures can be categorized into the following:

1. Debentures issued at par and redeemable at par or at discount;
2. Debentures issued at discount and redeemable at par or at discount;
3. Debentures issued at premium and redeemable at par or at discount;
4. Debentures issued at par and redeemable at premium;
5. Debentures issued at discount and redeemable at premium.
6. Debentures issued at premium and redeemable at premium.

Note: Redemption at discount may be a rare circumstance in practical life.

The Journal Entries for the above mentioned cases are provided below.

	Transaction/Event	Journal Entry
1.	**Debentures issued at par redeemable at par:** When debenture are issued at par, the issue price is equal to par value	
	(a) For receipt of application money	Bank Account ...Dr. To Debenture Application A/c
	(b) For transfer of application money to debentures account	Debenture Application Account ...Dr. To ...% Debenture Account
2.	**Debentures issued at Discount and Redeemable at par or at discount:** When debentures are issued at discount, issue price will be less than par value. The difference between the two is considered as loss on issue of debentures and is to be written off over the life of debentures.	
	(a) For receipt of application money	Bank Account ...Dr. To Debenture Application Account
	(b) At the time of making allotment	Debenture Application Account ...Dr. Discount on issue of debentures Account Dr. To ...% Debentures Account
3.	**Debentures Issued at Premium and Redeemable at par or at discount:** When debentures are issued at premium, the issue price is more than the par value. The premium is transferred to securities premium account. When debentures are issued at par or premium value but redeemed at discount, then it means that the company will gain by paying less. This gain will not be recognized in the books at the time of issue of debentures as per the conservatism concept.	
	(a) For receipt of application money (When Premium amount is received at the time of application)	Bank Account ...Dr. To Debenture Application Account
	(b) For transfer of application of money at the time of allotment	Debenture Application Account ...Dr. To Debentures Account To Securities Premium Account
4.	**Debentures issued at par and redeemable at a premium:** Where debentures are to be redeemed at premium, an extra entry is to be made at the time of issue and allotment of debentures. This extra entry is to be passed for providing premium payable on redemption. Debenture Redemption Premium Account is a personal account which represents a liability of the company in respect of premium payable on redemption. In this case, the issue price is same as par value but the redemption value is more than the par value, therefore redemption premium is recorded as a loss on issue of debentures at the time of allotment of debentures.	
	(a) For receipt of application money	Bank Account ...Dr. To Debenture Application Account
	(b) At the time of making allotment	
	(i) Transfer of application money to debenture account	Debenture Application Account ...Dr. To ...% Debenture Account

(ii) Call made consequent upon allotment	Debenture Allotment Account ...Dr. Loss on issue of Debenture Account ...Dr. [Equal to Debenture Redemption Premium] To ...% Debenture Account To Debenture Redemption Premium Account

5. **Debentures Issued at discount and redeemable at premium:**
In this situation, the issue price is less than par value and redemption value is more than par value. The difference between the redemption price and the issue price is treated as discount/loss on issue of debentures. For example, a 10% debentures of Rs. 1,000 is issued at a discount of Rs. 100 and redeemable at a premium of Rs. 5 per debenture, the amount of loss will be equal to Rs. 1,005 – Rs. 900 = Rs. 105. This is to be treated as loss on issue. It is to be noted that premium on redemption of debentures is also credited by Rs. 5.

(a) For the receipt of application money	Bank Account ...Dr. To Debenture Application Account
(b) At the time of making allotment	
(i) Transfer of application money to debenture account	Debenture Application Account ...Dr. To % Debentures Account
(ii) For Call made consequent upon allotment of debentures at discount and redeemable at premium	Debenture Allotment Account ...Dr. Discount/Loss on issue of Debenture Account ...Dr. [Amount equal to the discount on issue of debenture plus Premium on redemption] To ...% Debenture A/c
(c) For receipt of call made on allotment	Bank Account ...Dr. To Debenture Allotment Account

6. **Debentures Issued at premium and redeemable at premium:**
In this situation, the issue price is more than par value and also redemption value is more than par value. The premium received at the time of issue of debentures is credited to Securities premium account and premium paid at the time of redemption is a loss to be provided at the time of issue of debentures. For example, a 10% debenture of Rs. 1,000 is issued at a premium of Rs.100 and redeemable at a premium of Rs. 50 per debenture. In the given case, Rs.100 is to be credited to Securities premium account and Rs. 50 will be the loss to be provided at the time of issue of debentures. It is to be noted that premium on redemption of debentures is also credited by Rs. 50.

(a) For the receipt of application money	Bank Account ...Dr. To Debenture Application Account
(b) At the time of making allotment	
(i) Transfer of application money to Debenture account	Debenture Application Account ...Dr. To % Debentures Account
(ii) Call made consequent upon allotment of debenture at premium and Redeemable at premium	Debenture Allotment Account ...Dr. Loss on issue of debenture Account ...Dr. [Amount equal to the premium on redemption] To ...% Debenture Account To Securities Premium Account [Amount equal to premium on issue] To Premium on Redemption of Debentures Account [Amount equal to premium on redemption]

Note: In the above Journal Entries, it is assumed that the entire nominal value of debenture is collected at the time of application itself. However, just like shares, debentures can also be called up in installments, for example, Application, Allotment, First call, Second call and so on. Premium at the time of issue and Discount at the time of issue is adjusted at the time allotment.

5. Issue and Redemption of Debentures

Give Journal Entries for the issue of debentures under the following conditions.
(a) Issued 2000, 12% debentures of Rs. 100 each at par, redeemable also at par.
(b) Issued 2000, 12% debentures of Rs. 100 each at a discount of 2%, redeemable at par.
(c) Issued 2000, 12% debentures of Rs. 100 each at a premium of 5%, redeemable at par.
(d) Issued 2000, 12% debentures of Rs. 100 each at par, redeemable at 5% premium.
(e) Issued 2000, 12% debentures of Rs. 100 each at a discount of 2%, redeemable at a premium of 5%.
(f) Issued 2000, 12% debentures of Rs. 100 each at a premium of 5%, redeemable at a premium of 10%.

Solution:

JOURNAL

Date	Particulars	L.F.	Dr. (Rs.)	Cr. (Rs.)
(a)	Bank Account ...Dr. To 12% Debenture Application and Allotment Account (Being application money received)		2,00,000	2,00,000
	12% Debenture Application and Allotment Account ...Dr. To 12% Debentures Account (Transfer of application money to Debenture Account, issued at par, and redeemable at par)		2,00,000	2,00,000
(b)	Bank Account ...Dr. To 12% Debenture Application and Allotment Account (Being application money received)		1,96,000	1,96,000
	12% Debenture Application and Allotment Account ...Dr. Discount on issue of debenture Account ...Dr. To 12% Debentures Account (Transfer of application money to Debenture Account, issued at a discount of 2%, and redeemable at par)		1,96,000 4,000	2,00,000
(c)	Bank Account ...Dr. To 12% Debenture Application and Allotment Account (Being application money received)		2,10,000	2,10,000
	12% Debenture Application and Allotment Account ...Dr. To 12% Debentures Account To Securities Premium Account (Transfer of application money to Debenture Account, issued at a premium of 5%, and redeemable at par)		2,10,000	2,00,000 10,000
(d)	Bank Account ...Dr. To 12% Debenture Application and Allotment Account (Being application money received)		2,00,000	2,00,000
	12% Debenture Application and Allotment Account ...Dr. Loss on issue of debenture Account ...Dr. To 12% Debentures Account ...To Premium on Redemption Account (Transfer of application money to Debenture Account, issued at par and redeemable at a premium of 5%)		2,00,000 10,000	2,00,000 10,000
(e)	Bank Account ...Dr. To 12% Debenture Application and Allotment Account (Being application money received)		1,96,000	1,96,000
	12% Debenture Application and Allotment Account ...Dr. Loss on issue of debenture Account (Refer Note below) ...Dr.		1,96,000 14,000	

	To 12% Debentures Account ... To Premium on Redemption Account (Transfer of application money to Debenture Account, issued at a discount of 2% and redeemable at a premium of 5%)			2,00,000 10,000
(f)	Bank Account ...Dr. To 12% Debenture Application and Allotment Account (Being application money received)		2,10,000	2,10,000
	12% Debenture Application and Allotment Account ...Dr. Loss on issue of debenture Account ...Dr. To 12% Debentures Account To Securities Premium Reserve Account ...To Premium on Redemption Account (Transfer of application money to Debenture Account, issued at a premium of 5% and redeemable at a premium of 10%)		2,10,000 20,000	2,00,000 10,000 20,000

Note: Loss on issue of debenture account has been debited with Rs. 14,000 by grouping together the discount on issue of Rs. 4,000 and premium on redemption of Rs. 10,000.

5. Issue and Redemption of Debentures

Sometimes, a company purchase assets from vendors and instead of making payment in cash, issues debentures for consideration. Such issue of debentures is called **debentures issued for consideration other than cash**. In that case also, the debentures may be issued at par, at a premium or at a discount.

Journal entries for Issue of Debentures for Consideration other than Cash are provided below.

Transaction / Event	Journal Entry
1. On purchase of assets	Sundry Assets Account ...Dr. To Vendor's Account
2. On issue of debentures (Refer Note below)	
(a) At par	Vendors Account ...Dr. To Debentures Account
(b) At premium	Vendors Account ...Dr. To Debentures Account To Securities Premium Reserve Account
(c) At discount	Vendors Account ...Dr. Discount on Issue of Debentures Account ...Dr. To Debentures Account
3. For Purchase of business of the vendor (Refer Note below)	Sundry Assets Account ...Dr. To Sundry Liabilities Account To Vendors Account

Note: (a) In case where a company may purchase the assets and takeover liabilities of another business, the purchase consideration will be equal to the value of Net Assets (Assets - Liabilities) taken over and the whole amount of the consideration is paid by issue of debentures.

(b) In case of the whole business being taken over, if the amount of debentures issued is more than the amount of the Net Assets taken over, the difference (excess) will be treated as **value of goodwill** and the same shall also be debited while passing the journal entry for the purchase of vendor's business. But, if it is the other way round, i.e., the value of debentures is less than the value of the Net Assets taken over, then the difference will be credited to **Capital Reserve Account**.

(c) In this case, the number of debentures to be issued shall be calculated as follows:

$$\text{No. of Debentures issued} = \frac{\text{Purchase consideration}}{\text{Issue price of Debenture (After adjusting for premium \& discount)}}$$

5. Issue and Redemption of Debentures

Collateral security means secondary or supporting security for a loan, which can be realized by the lender, when the original loan is not paid on the due date. The Companies may issue their own debentures as collateral security for a loan or overdraft facility taken from a bank or any other lender.

If the company repays the loan on the due date, the Debentures will be released, along with the primary security. If the company is not able to repay the loan or the interest thereon, the lender will become the debenture holder of the company. However, such debenture holders will only receive interest only to the extent of amount of loan and not on the amount of debentures. In simple words, such debenture holder will be entitled to interest only on the amount of loan, but not on the value of debentures.

There are 2 methods of showing Debentures issued as Collateral Security, which are discussed next.

Situation	Method I	Method II
Journal for issue of debentures as collateral security	No entry under this method. This method is a Memorandum Method.	Debenture Suspense Account ...Dr. To ...% Debentures Account
Disclosure in the Balance Sheet till loan is settled	The issue of debentures and loan outstanding is shown as a "Note" under the "Secured Loans."	Debentures Suspense Account will appear on the Assets side of Balance Sheet. Debenture Account will appear on the Liabilities side under Secured Loans in Balance Sheet.
Treatment after settlement of loan	The "Note" disclosed as above will be discontinued.	The Journal Entry given above will be "reversed" in order to cancel out the effect of the Journal Entry made at the time of issue of debentures as collateral security.

5. Issue and Redemption of Debentures

Redemption of debentures refers to extinguishing or discharging the liability on account of debentures in accordance with the terms of issue. In other words, Redemption of debentures means repayment of the amount borrowed by the company by issuing debentures. The following factors should be taken into consideration by the company at the time of redemption of debentures:

(a) **Time of Redemption of debentures:** Generally, debentures are redeemed on due date but a company may redeem its debentures before maturity date, if its AOA provide for such redemption before maturity date.

(b) **Sources of Redemption of debentures:** A company may source its redemption of debentures either out of capital or out of profits, or partially out of profits and partially out of capital.

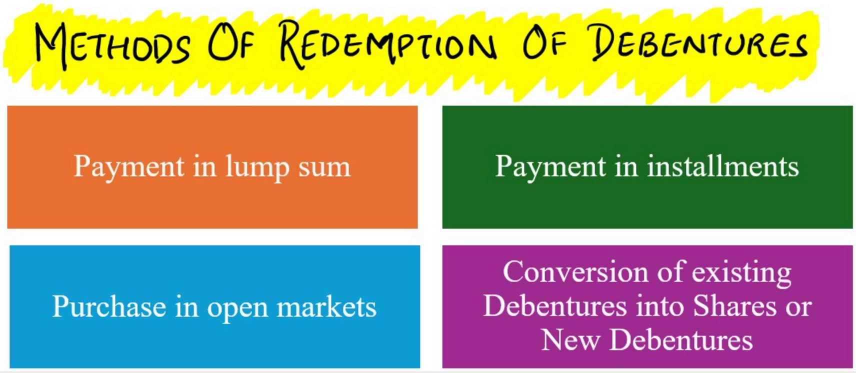
i. *Out of Capital:* Only those companies which are exempted from creating Debenture Redemption Reserve (DRR) may redeem debentures out of Capital.
ii. *Out of Profits:* When any company is planning to redeem its debentures purely out of profits, it should transfer 100 % of the face value of the Redeemable debentures to Debenture Redemption Reserve (DRR) out of the profits/surplus available for payment of dividend.
iii. *Out of Capital and Profits:* When any company is planning to redeem its debentures by using both the sources partially, it does not transfer 100% of face value of outstanding debentures of a particular class to Debenture Redemption Reserve (DRR) out of the surplus available for payment of dividend. Only 100 % of the face value of debentures to be redeemed out of the profits is to be transferred to the Debenture Redemption Reserve (DRR) Account.

As per the provisions of Companies Act, 2013, the company must set aside a portion of profits every year and transfer it to “Debenture Redemption Reserve” for redemption of debentures until the debentures are redeemed. The following points must be noted to pass the necessary Journal Entries (discussed later in this section) for transfer of profits to the Debenture Redemption Reserve Account:

i. Where a company has issued debentures, it shall create a “Debenture Redemption Reserve” for the redemption of such debentures, to which adequate amount shall be credited, from out of its profit every year until such debentures are redeemed.
ii. The amount credited to the Debenture Redemption Reserve shall not be utilised by the company except for the purpose of redemption of debentures.

5. Issue and Redemption of Debentures

There are 4 ways by which the debentures can be redeemed. These methods are listed and explained below.



Redemption by Payment in Lump Sum

Under this method, the company redeems the debentures by paying the amount in lump sum to the debenture holders at the maturity thereof as per the terms of issue.

Redemption by Payment in Installments

Under this method, Redemption of debentures is made in installments on the specified date during the tenure of the debentures. The total amount of debenture liability is divided by the number of years.

When, as per terms of the issue, the debentures are to be redeemed in installments beginning from a particular year, the actual debentures to be redeemed are selected usually by draw of lots (out of debentures outstanding for payment), and the redemption to be made either out of profits or out of capital.

Redemption by Purchase in Open Market

When a company purchases its own debentures in the open market for the purpose of immediate cancellation, the purchase and cancellation of such debentures are termed as Redemption by purchase in the open market. The advantage of such an option is that a company can redeem the debentures at its convenience, whenever it has surplus funds. Secondly, the company can purchase them when they are available in market at a discount.

Redemption by Conversion of Existing Debentures into Shares or New Debentures

A company can redeem its debentures by converting them into shares or new class of debentures. If debenture holders find that the offer is beneficial to them, they can exercise their right of converting their debentures into shares or new class of debentures. These new shares or debentures can be issued at par, at a discount or at a premium. It should be noted that only the actual proceeds of debentures are to be taken into account for ascertaining the number of shares to be issued in lieu of the debentures to be converted.

If debentures were originally issued at discount, the actual amount realized from them at the time of issue would be used as the basis for computing the actual number of shares to be issued. It may be noted that this method is applicable only to convertible debentures.

If it is decided to redeem the existing debentures by conversion into new debentures, the company has to follow the prescribed procedure for the purpose and give the necessary option to the debenture holders who will take their own decision. It cannot be made compulsory, unless the terms of the issue had provided for such conversion.

1. Human Resource Accounting

Human Resource Accounting may be defined as the measurement and reporting of the costs incurred in recruiting, hiring, training and developing employees and their present economic value to the organisation.

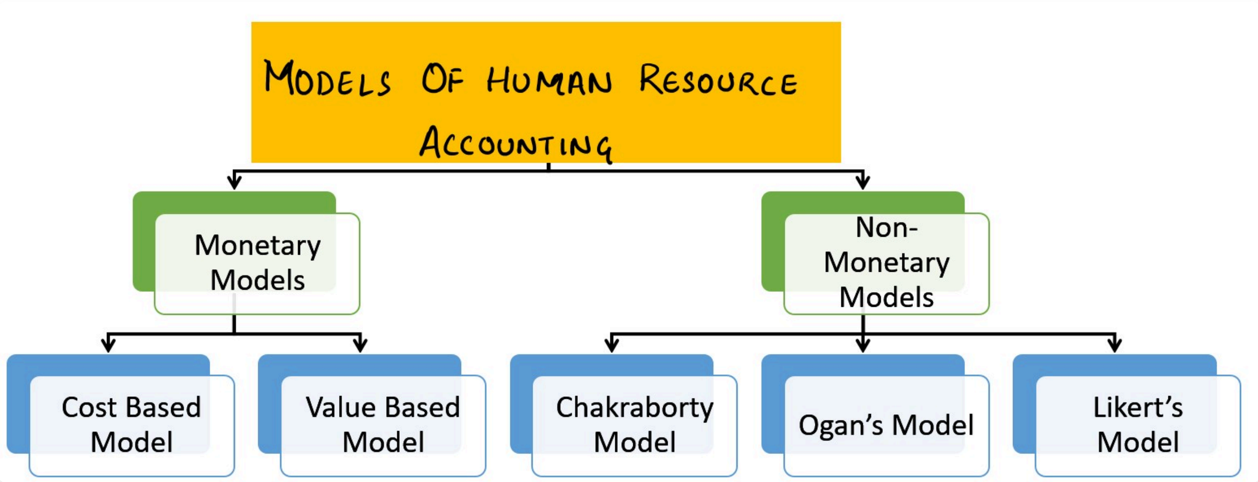
HR accounting (HRA) is similar in principle to the preparation of an accounting statement. Just as financial accounting reflects the costs and value of assets (land, buildings, machinery, etc.), HR accounting also tries to make assessment of the costs and value of the people as organisational resources. HR accounting is primarily a management tool that informs the management about the changes that arc taking place in the human resources of an organisation.

The basic purpose of HR accounting is to facilitate the effective and efficient management of human resources as it provides required information about acquiring, developing, evaluating and rewarding human resources. HR accounting related to Human Capital Accounting. Just like HR accounting, human capital accounting also attempts to make a financial assessment of the knowledge and skills of an organisation's employees or human capital.

If the value of human resources is not duly reported in profit and loss account and balance sheet, the important act of management on human assets cannot be perceived. Expenses on recruitment, training, etc. are treated as expenses and written off against revenue under conventional accounting. All expenses on human resources are to be treated as investments, since the benefits are accrued over a period of time.

2. Models of Human Resource Accounting

Various models of HR Accounting can be divided into two categories, (a) Monetary Models and (b) non-Monetary Models. The Monetary Models can be further divided into (i) Cost Based Models and (ii) Value Based Models.

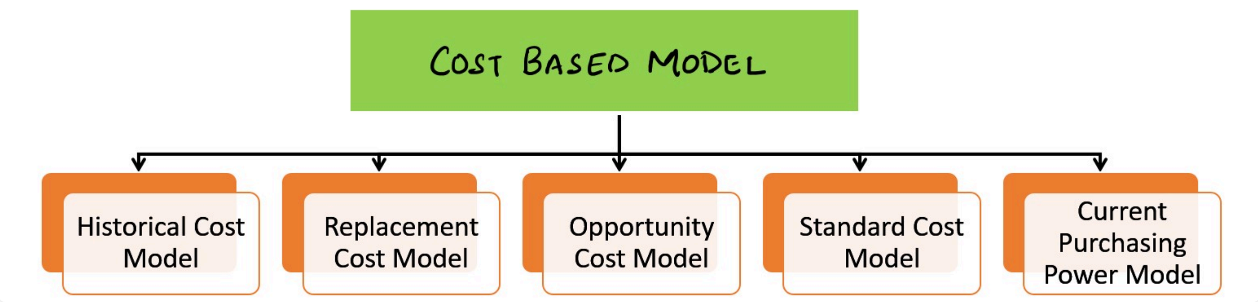


2. Models of Human Resource Accounting

The major task in HRA is that of handing over monetary value to diverse dimensions of HRA rates, investment and the value of personnel. The Monetary Models can be further divided into (i) Cost Based Models and (ii) Value Based Models.

Cost Based Monetary Models

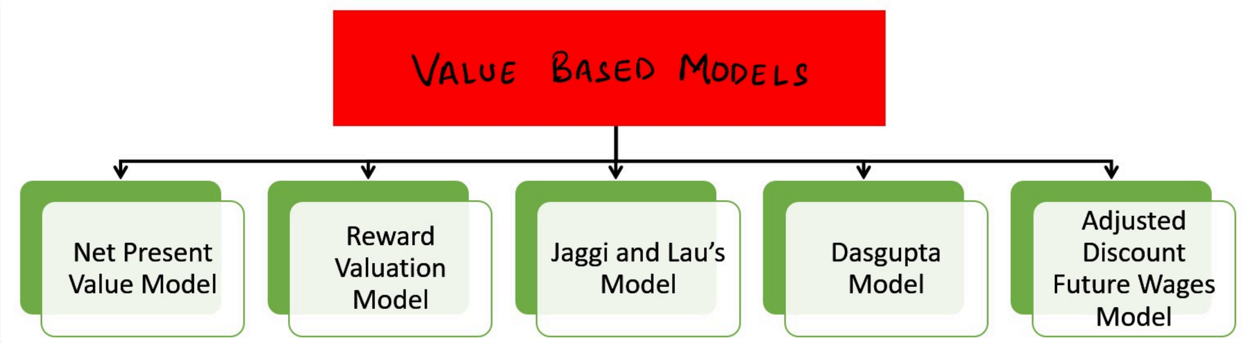
Let us discuss the various cost based monetary models one by one.



a. **Historical Cost Model:** Brumnet, Flamholtz and Pyle have developed this method. In this approach, actual cost incurred on recruiting, hiring, training and development of the human resources of the organization are capitalized and amortized over the expected useful life of the human resources. Thus, a proper recording of the expenditure made on hiring, selecting, training and developing the employees is maintained and a proportion of it is written off to the income of the next few years during which human resources will provide service.
b. **Replacement Cost Model:** Rensis Likert & Eric G.Flamholtz propounded it. This is a measure of cost to replace a firm's existing human resources. Human Resources are to be valued on the assumption that a new similar organization has to be created from scratch and the cost to the firm is calculated if the existing resources were required to be replaced with other persons of equivalent talents and experience. It takes into account all costs involved in recruiting, hiring, training and developing the replacement to the present level of efficiency. As against historical cost methods which take into account the actual cost incurred on employees, replacement cost takes into account the notional cost that may be required to acquire a new employee to replace the present one. Replacement cost is generally much higher than the historical cost.
c. **Opportunity Cost Model:** Heckiman and Jones first advocated this approach. This is also known as **Market Value Method**. This method of measuring the value of human resources is based on the economist's concept of *opportunity cost*. Opportunity cost is the value of an asset when there is an alternative opportunity of using it. In this method there is no opportunity cost for those employees who are not scarce. As such only scarce people should form part of the value of human resources. The employee is considered as scarce only when the employment in one division of an individual or group denies this kind of talent to another division. Thus the opportunity cost of an employee in one department is calculated on the basis of offer made by another department for the employees working in this department in the same organization.
d. **Standard Cost Model:** David Watson has suggested this approach. For using standard cost, employees of an organization are categorized into different groups based on their hierarchical positions. Standard cost is fixed for each category of employees and their value is calculated. According to this approach, standard costs of recruiting, hiring, training and developing per grade of employees are determined year after year. The standard cost so arrived at for all human beings employed in the organization are the value of human resources for accounting purposes. The approach is easy to explain and can work as a suitable basis for control purposes through the technique of variance analysis.
e. **Current Purchasing Power Method:** Under this method, instead of taking the replacement cost to capitalize, the capitalized historic cost of investment in human resources is converted is converted into current purchasing power of money with the help of index numbers. If there is an increase in the index number, it will result in a corresponding increase in the value of human resources. The standard cost method and the current purchasing power method also suffers from all drawbacks of the replacement cost except they are simpler calculation.

Value Based Monetary Models

Under this approach, value of human resources of an organization can be found out by discounting the future salaries and other capital costs by a certain rate of discount or by discounting the future earning of the organization at a certain date by suitable rate and allocating a part of the present value of earnings to human resources. The valuation models developed under this approach are as under.



a. **Net present value method:** This was given by Lev and Schwartz. The model of measurement of human capital suggested by Lev and Schwartz in 1971 is based on the economic concept of the human capital. Human capital is defined as the source of income over a period of time and its worth is the present value of future incomes discounted by a certain rate. According to them, the value of human capital is represented by a person of age is the present value of his remaining future earnings from his employment.
b. **Reward valuation method:** This was given by Flamholtz. Under this model the limitations of Lav and Schwarts are removed. This is an improvement on the present value method. It takes into consideration the possibility or probability of an employee's movement from one role to another in his career and also of his leaving the firm earlier than his death of retirement.
c. **Jaggi and Lau's Model:** This model fulfills the various limitations which belong to every employee which is related with the changes in the working path of employee in career. Thus, in this model, company calculates the value of *employees' groups*. These groups are homogeneous in nature.
d. **Adjusted Discount Future Wages Model:** This was given by Hermansons. Under this model the value of human resource calculated by four steps. *Firstly,* estimating the salary and wages of employees for the next five years, then in the *second step,* Company calculates the present value of these estimated wages and salaries for the five years, then after in next step company calculated the efficiency ratio and in final step company multiplies the present value of estimated wages of five years with efficiency ratio.
e. **Dasgupta model:** In this model popularly known as **Total cost concept**, Professor *M. Dasgupta* has taken somewhat different and broad canvas. According to him the total cost incurred by the individual up to that position in the organization should be taken as the value of person which is further adjusted by his intelligence level. The value thus calculated is revised to time based on- age, performance, experience and capabilities.

2. Models of Human Resource Accounting

The non-monetary method does not assess human resource based on money terms or dollars but rather on rating or indices and ranking. This method can be used as compliment to monetary method. Non-monetary method usually includes simple inventory of capabilities and skill of people in a firm. In assessing the benefit derived from use of human resource, behavioral measurements techniques may be used.

Let us discuss the three models that have been developed under this approach.

i. **Chakraborty model:** This is the model envisaged by the Indian author *Prof. S. K. Chakraborty* in 1976, on the human resources. He has valued the human resources in aggregate and not on an individual basis. He suggested that managerial and non managerial manpower can be evaluated separately. The value of human resource on a collective or group basis can be found and by multiplying the average tenure of employment of the employees in that group and shown as investment in the position statement. The average annual salary grade structure and promotion schemes of the enterprise. He has further stated that recruitment, including selection development and training costs of each employee could be records separately and these could be attributed as deferred revenue expenditure to be written off over the expected average tenure of the employee in the organization. The deferred portion should be shown in the position statement of the organization. If there is permanent exit on account of that year attributable to that person should be written off against the income in the year of exit itself.
ii. **Ogan's Model:** *Pekin Ogan* suggested this approach which is a further extension of net benefit model as developed by Morse. In this approach, the value of human resource is determined in future for the enterprise.
iii. **Likert's Model:** This model was developed by *Rensis Likert and David G. Bowers* and is centered on social variables. The model assumes that the organizational productivity can be explained in terms of the human organization. It is comprised of three classes of variables- casual, intervening and end result.

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3. Inflation Accounting

Inflation accounting is a special accounting technique that can be used during periods of high inflation whereby financial statements are adjusted according to price indexes, rather than relying solely on a cost accounting basis.

During inflationary periods, traditional accounting is inadequate, as reasoned below:

i. Depreciation provisions are not realistic, since they are based on the original cost of an asset, not its current inflated value.
ii. Profits appear larger than they actually are to the extent that stock profits arise from general price increases.
iii. Holding cash becomes a liability, as high interest rates are offset by the decline in value of the money held.
iv. No accounting credit is given for the appreciation derived from borrowed money when the liability has been effectively reduced by inflation.

Thus the *Inflation Accounting* is a technique of accounting which helps to understand the financial position of a company or country when the country is experiencing a high/low inflation.

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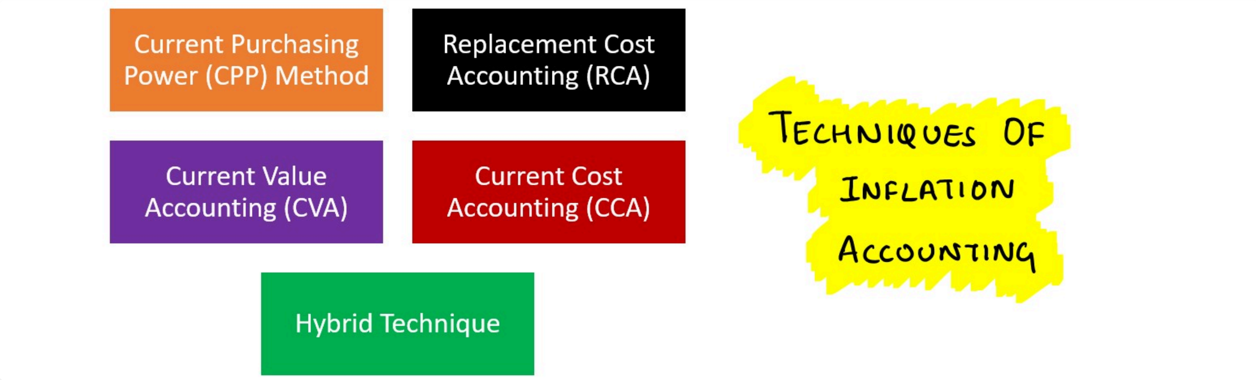
3. Inflation Accounting

To make the accounts more meaningful, all items should be expressed in values relating to a common year. This is attempted through inflation accounting. The following reasons are advanced in its favour:

a. It helps to correct the usually distorted picture of the financial operations and condition of a company presented by the conventional system of accounts.
b. It facilitates inter-company comparisons since inflation hits different firms in different degrees.
c. It also facilitates inter period comparisons of the performance of a firm.
d. Historical accounting tends to inflate profits because less depreciation based on historical cost of assets (which are usually lower) is charged. Inflated profit if distributed as dividend will lead to erosion of capital. Accounting adjusted to Inflate tends to correct this melody by charging depreciation on current values of assets.
e. Correct measurement of income is possible only with inflation accounting.

3. Inflation Accounting

The Techniques of Inflation Accounting are listed below:



Current Purchasing Power (CPP) Method

This technique of inflation accounting requires the companies to keep their records and present the financial statements on conventional historical cost basis but it further requires presentation of supplementary statements in items of current purchasing power of currency at the end of the accounting period.

In this method the various items of financial statements, i.e. balance sheet and profit and loss account are adjusted with the help of recognized general price index. The consumer price index or the wholesale price index prepared by the Reserve Bank of India can be taken for conversion of historical costs.

Replacement Cost Accounting (RCA)

This technique is an improvement over Current Purchasing Power Technique (CPP). One of the major weaknesses of Current Purchasing Power technique is that it does not take into account the individual price index related to the particular assets of a company.

In the Replacement Cost Accounting technique, the index used are those directly relevant to the company's particular assets and not the general price index. In this sense the replacement cost accounting technique is considered to be an improvement over current purchasing power technique.

Current Value Accounting (CVA)

In the Current Value Accounting Technique of price level accounting all assets and liabilities are shown in the balance sheet at their current values. The value of the net assets at the beginning and at the end of the accounting period is ascertained and the difference in the value in the beginning and the end is termed as profit or loss, as the case may be. In this method also, like replacement cost accounting technique, it is very difficult to determine relevant current values and there is an element of subjectivity in this technique.

Current Cost Accounting (CCA)

The crux of the current cost accounting technique is the preparation of financial statements (Balance Sheet and Profit and Loss Account) on the current values of individual items and not on the historical or original cost.

Hybrid Technique

Mix of both CPP method and CCA method.

4. Environmental Accounting

Environmental accounting is the practice of incorporating principles of environmental management and conservation into reporting practices and cost/benefit analyses. Environmental accounting allows a business to see the impact of ecologically sustainable practices in everything from their supply chain to facility expansion. It allows accountants to report on the economic impact of those decisions to stakeholders so as to allow for proactive decision making about processes that simultaneously meet environmental regulations while adding to the bottom line.

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4. Environmental Accounting

The scope of Environmental Accounting (hereinafter called as EA) is very wide. It includes corporate level, national & international level. Here, the emphasis is given on the corporate level accounting. Now, let us discuss the aspects which are included in EA.

From an **Internal point of view** investment made by the corporate sector for minimization of losses to environment. It includes investment made into the environment saving equipment devices. This type of accounting is easy as money measurement is possible.

From an **external point of view** all types of loss are caused indirectly due to business operation/activities. It mainly includes:

1. *Degradation and destruction like soil erosion,* loss of bio diversity, air pollution, water pollution, noice pollution, problem of solid waste, coastal & marine pollution.
2. *Depletion of nonrenewable natural resources*e. loss emerged due to over exploitation of nonrenewable natural resources like minerals, water, gas, etc.
3. *Deforestation and Land uses:* This type of accounting is not easy, as losses to environment cannot be measured exactly in monetary value. Further, it is very hard to decide that how much loss was occurred to the environment due to a particular industry. For this purpose, approx idea can be given or other measurement of loss like quantity of non-renewable natural resources used, how much Sq. meter area deforested and total area used for business purpose including residential quarters area for employees etc.

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4. Environmental Accounting

The *Social Accounting / Social responsibility accounting* aims to measure and inform the general public about the social welfare activities undertaken by an organization and its impact on the society. Social Accounting is defined as a process of measurement and reporting of information concerning the impact of an entity and its activities on society

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4. Environmental Accounting

Social Accounting concept is relatively new in India. Although it is very difficult to identify various social cost and benefit to the society and still more difficult to convert these costs to monetary equivalents. The United Nations Industrial Development Organization (UNIDO) has published the methodology for measuring social costs and benefits. Yet, in India, very few business corporations are following the social accounting concept. Tata Iron and Steel Corporation (TISCO) was the first concern of India which conducted social accounting with a sole aim to examine and report to what extent the company has been able to fulfil the social responsibility to shareholder, the society, and the local community.

1. Introduction

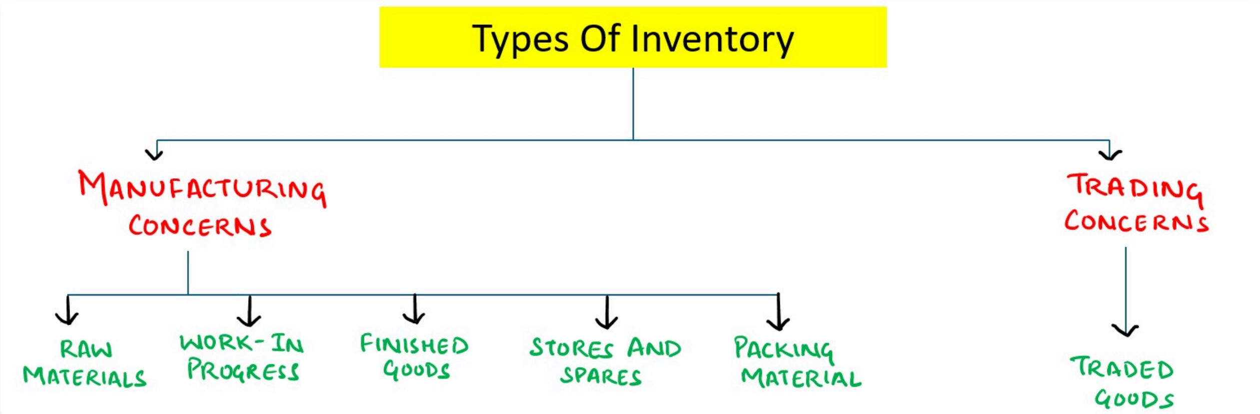
As per Ind AS 2, the **Inventory** is defined as assets:

1. held for sale in the ordinary course of business - *Finished Goods* including trading merchandise, software, land or other property held for resale
2. in the process of production for such sale - *Work in Progress* or
3. in the form of materials or supplies to be consumed in the production process or in the rendering of services - *Raw Materials* including Maintenance supplies, Consumables and Loose Tools used in production process.

Inventory does not include Machinery Spares:

1. which can be used only in connection with an item of Fixed Asset, and
2. whose use is expected to be irregular.

Such Machinery Spares are generally accounted for as Fixed Assets.



At the year-end, every business entity needs to ascertain the closing balance of Inventory; which comprise of inventory of raw material, work-in-progress, finished goods and other consumable items. Value of closing Inventory is put at the credit side of the Trading Account and asset side of the Balance Sheet.

2. Inventory Valuation

Inventory is usually the most significant component of the current assets held by a trading or manufacturing enterprise. Proper valuation of inventory has a very significant bearing on the authenticity of the financial statements. The valuation of inventory is necessary for determining the true income earned by a business entity during a particular period. To determine gross profit, cost of goods sold is matched with revenue of the accounting period. Cost of goods sold is affected by the value of closing inventory, which will ultimately affect gross profits.

Cost of goods sold is calculated as follows:

Cost of Goods sold = Opening Inventory + Purchases + Direct Expenses − Closing Inventory

If the inventory is not properly valued, it will have huge impact on the profit/loss of the concern, i.e., it will lead to either overstatement or understatement of profits. At the same time, it will also have an impact on valuation of current assets in the balance sheet.

Inventory valuation will have a major impact on the income determination, if merchandise cost is a large fraction of sales price. The effect of any over or under statement of inventory is explained below.

Situation	Effect on Profit	Effect on Balance Sheet	Effect on Liquidity
Closing Inventory is overstated	Overstated	Higher Current Assets	High
Closing Inventory is understated	Understated	Lower Current Assets	Low
Opening Inventory is overstated	Understated	No Effect	No Effect
Opening Inventory is understated	Overstated	No Effect	No Effect

2. Inventory Valuation

The Schedule III to the Companies Act, 2013 requires valuation of each class of goods i.e. raw material, work-in-progress and finished goods under broad head to be disclosed in the financial statements.

Inventory is included under the heading "Current Assets" as per the prescribed format for Balance Sheet under Schedule III of Companies Act, 2013. The detailed information regarding the items to be included for valuation of inventories is disclosed in notes to account, in the following format:

(i) Inventories shall be classified as a) Raw material b) work in progress c) Finsihed goods d) Stock in trade (in respect of goods acquired for trading) e) Stores and spares f) loose tools g) others(specific nature)	
(ii) Goods in transit shall be disclosed under the relevant sub head of inventories	
(iii) Mode of valuation shall be stated	

As per the requirements of the Accounting Standards, the financial statements should disclose:

1. the accounting policies adopted in measuring inventories, including the cost formula used, and
2. the total carrying amount of inventories and its classification appropriate to the enterprise.

2. Inventory Valuation

The **Principle of Conservative Accounting** is used for Inventory Valuation. According to this principle, any expenses or losses from transactions entered or event occurred are to be recognized immediately, however, any gains or profits are recognized until it becomes due or are actually realized.

Therefore, following this principle, the golden rule for valuation of inventory is that Inventories should be valued at the **lower of cost or net realizable value**. The principle of *lower of cost or net realizable value* places emphasis on the fact that any loss due to decrease in sales price of the inventory below its cost is recognized immediately, as it is anticipated that the enterprise will make losses whenever it will sell such inventory.

Let us understand some important terms associated with inventory valuation.

Net Realizable Value

Net realizable value (NRV) is the value of an asset that can be realized upon the sale of the asset, less a reasonable estimate of the costs associated with the eventual sale or disposal of the asset. NRV is a valuation method used in both Generally Accepted Accounting Principles (GAAP) and International Financial Reporting Standards (IFRS).

Net Realizable Value = Estimated selling Price in the ordinary course of Business – Estimated costs necessary to make the sale

For example, Material Z can be re-sold in the market at Rs. 100 per unit. Currently, 500 units are in stock and Rs. 5000 will be incurred to put them to bring these units into saleable condition. The Net Realizable Value in this case will be calculated as:

Net Realizable value = 50,000 (Rs 100 per unit x 500 units) – Rs 5000
= 45000

Net Realizable Value for different stocks is calculated differently. The following table illustrates the Net Realizable Value for 3 types of stock.

Type of Stock	Net Realizable Value (NRV)
(a) In case of Raw Materials	Replacement cost is generally considered as NRV.
(b) In case of Work-In-Progress	NRV will be determined by reducing the expenses and overheads required to be incurred to convert work-in progress into finished goods and making it ready for sale from selling price.
(c) In case of Finished Goods and Traded Goods	NRV will generally mean selling price which is reduced by selling and distribution expenses.

Cost of Inventories

Cost of inventories comprises of Cost of Purchase, Cost of conversion of inventories and other costs.

Cost of inventories = Cost of Purchase + Cost of conversion + Other costs incurred

where:

Cost of Purchase includes	Purchase Price including duties and taxes (excluding tax refunds/credits) *Add:* Freight Inwards *Add:* Other Expenditure directly attributable to the purchase (these include cost of containers, transit insurance, buying commission where purchase of raw material is possible only through buying agents) *Less:* Trade Discounts, Rebates, Duty Drawbacks, and other similar items.

Costs of Conversion includes	Costs directly related to units of production (For e.g., Direct Labour, Direct Material) *Add:* Variable Production Overheads (For e.g., Indirect material, Indirect Labour) *Add:* Fixed Production Overheads (For e.g., Factory rent, salary, etc.)
Other costs incurred in bringing the inventories to their present location and condition includes	Costs of designing products for specific customers and Non-Production Overheads incurred for bringing inventories to their present location. However, other costs do not include Interests and other Borrowing Costs and Overheads incurred after inventories are brought to their present location and condition.

The following items are EXCLUDED while determining cost of inventories with few exceptions:

Abnormal Cost of wasted materials, labour or other production costs	*Explanation:* Inefficiency does not make a product more valuable by means of higher cost, hence it is excluded. Abnormal loss does not form a part of a product/finished goods cost.
Storage Costs	*Exception*: Storage costs are included to determine the cost of inventories only when such costs are necessary in the production process, before moving to a further stage in production.
Administrative Overheads	Administrative Overheads which do not contribute in bringing the inventories to their present location and condition are excluded. *Exception:* Administrative costs are included to determine cost of inventories only when such costs are incurred to bring the inventories to their present location and condition.
Selling and Distribution Costs	*Explanation:* Selling and distribution costs are not included to determine the cost of inventories because these costs are incurred after bringing the inventories to their present location and condition.

3. Inventory Record Systems

There are two systems of determining the physical quantities and monetary value of inventories sold and inventory in hand. One system is Periodic Inventory System; and the other is Perpetual Inventory System. Let us discuss these two systems.

3. Inventory Record Systems

Periodic inventory system is a method of ascertaining inventory by taking an actual physical count (or measure or weight) of all the inventory items on hand at a particular date on which inventory is valued. It is because of actual physical count that the system is also called physical inventory system. The closing inventory for the current year is physically counted which helps us to determine the cost of goods sold.

Cost of Goods Sold = Opening inventory (known) + Purchases (known) − Closing inventory (physically counted)

3. Inventory Record Systems

Perpetual inventory system is a system of recording inventory balances after each receipt and issue. In order to ensure accuracy of perpetual inventory records, physical inventory should be checked and compared with recorded balances. The basic feature of this system is the maintenance of inventory ledger to have records of goods on continuous basis. Under perpetual inventory system, closing inventory is calculated as:

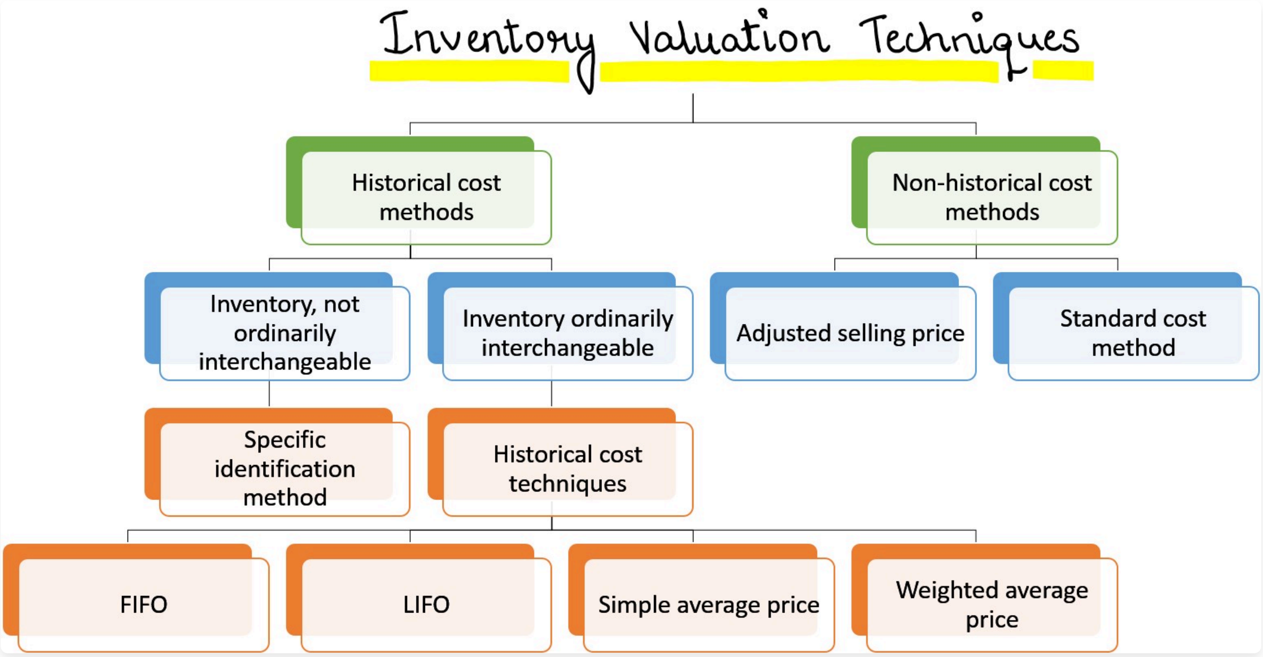
Opening Inventory (known) + Purchases during the Period (known) − Cost of Goods sold (known) = Closing Inventory (Balancing figure)

3. Inventory Record Systems

Periodic Inventory System and Perpetual Inventory System are not mutually exclusive, but complementary in nature. The following table highlights the important differences between Periodic Inventory System and Perpetual Inventory System.

Periodic Inventory System	**Perpetual Inventory System**
This system is based on physical verification.	It is based on book records.
This system provides information about inventory and cost of goods sold at a particular date.	It provides continuous information about inventory and cost of sales.
This system determines inventory and takes cost of goods sold as residual figure.	It directly determines cost of goods sold and computes inventory as balancing figure.
Cost of goods sold includes loss of goods as goods not in inventory are assumed to be sold.	Closing inventory includes loss of goods as all unsold goods are assumed to be in Inventory.
Under this method, inventory control is not possible.	Inventory control can be exercised under this system.
This system is simple and less expensive.	It is costlier method.
Periodic system requires closure of business for counting of inventory.	Inventory can be determined without affecting the operations of the business.

4. Methods to determine Cost of Inventory



There are 2 types of methods to determine the cost of inventory; Historical Cost Methods and Non-Historical Cost Methods.

Let us discuss them one by one.

5. Historical Cost Methods

There is no unique formula for determination of historical cost of inventories. Let us discuss the different techniques for valuation of inventory under Historical Cost Method one by one.

5. Historical Cost Methods

Specific identification method states that specific costs are attributed to specific or identified items of inventory. This is suitable for valuation where each item of inventories and its actual cost is identifiable. This method can be easily applied where the closing inventory items can be accurately identified and segregated and grouped under specific lots. When there are large number of inventories, which are ordinarily interchangeable, specific identification method should not be applied. Under this method, pricing is based on actual physical flow of goods. For example, ABC Ltd. is engaged in the construction of high rise buildings. The costs of lifts/elevators (one or two units in each building complex) is ascertained by using specific identification method. On the other hand, steel and cement regularly used (high quantity inventory items) can be measured using FIFO or Weighted average method.

5. Historical Cost Methods

FIFO method is a method of pricing the issues of materials, in the order in which they are purchased. So, the earliest prices at which materials were received are exhausted first and then subsequent prices are taken. Closing stock will be valued at the prices relating to the latest consignments. Under FIFO method, Cost of goods sold will consist of the oldest prices and the closing stock will be valued at most recent prices.

5. Historical Cost Methods

Following information is provided regarding a product by XYZ Ltd.

Stock as on 1st April 2019 – 100 units @ Rs. 5 per unit.

	Purchases		**Sales**
5th April 2019	300 units @ Rs. 6 per unit	6th April 2019	250 units
8th April 2019	500 units @ Rs. 7 per unit	10th April 2019	400 units
12th April 2019	600 units @ Rs. 8 per unit	14th April 2019	500 units

Calculate using FIFO method (a) Cost of Goods sold during the period and (b) Value of Stock of materials on 15th April 2019.

Solution:

Total stock available on 6th April = Opening stock + Purchases on 5th April 2019
= 100 units @ Rs. 5 p.u. + 300 units @ Rs. 6 p.u.

Sale on 6th April 2019 = 250 units
Sale of these 250 units will be, first 100 units will be sold out from opening stock and remaining 150 units will be sold from Purchases on 6th April 2019.
Thus, cost of goods sold till 6th April = 100 units @ Rs. 5 p.u. + 150 units @ Rs. 6 p.u.
= Rs. 1400
Total Stock Available on 6th April 2019 = 150 units @ Rs. 6 p.u.

Purchase on 8th April 2019 = 500 units @ Rs. 7 p.u.
Total Stock Available on 8th April 2019 = 150 units @ Rs. 6 p.u. + 500 units @ Rs. 7 p.u.

Sale on 10th April 2019 = 400 units
Sale of these 400 units will be, first 150 units will be sold from Rs. 6 p.u. lot and remaining 250 units will be sold from Purchases on 8th April 2019.
Thus, cost of goods sold till 10th April = 100 units @ Rs. 5 p.u. + 150 units @ Rs. 6 p.u. + 150 units @ Rs. 6 p.u. + 250 units @ Rs. 7 p.u. = Rs. 4050.
Total Stock Available on 10th April 2019 = 250 units @ Rs. 7 p.u.

Purchase on 12th April 2019 = 600 units @ Rs. 8 p.u.
Total Stock Available on 12th April 2019 = 250 units @ Rs. 7 p.u. + 600 units @ Rs. 8 p.u.

Sale on 14th April 2019 = 500 units
Sale of these 500 units will be, first 250 units will be sold from Rs. 7 p.u. and remaining 250 units will be sold from Purchases on 12th April 2019.
Thus, cost of goods sold till 14th April = 100 units @ Rs. 5 p.u. + 150 units @ Rs. 6 p.u. + 150 units @ Rs. 6 p.u. + 250 units @ Rs. 7 p.u. + 250 units @ Rs. 7 p.u. + 250 units @ Rs. 8 p.u. = Rs. 7800.

Total Stock Available on 15th April 2019 = 350 units @ Rs. 8 p.u. = Rs. 2800.
Thus, Cost of goods sold during the period = Rs. 7800

Value of stock materials of materials on 15th April 2019 = Rs. 2800.

5. Historical Cost Methods

LIFO Method is a method of pricing the issues of materials, in the reverse order in which they are purchased. The stock of material that is most recently purchased will be sold first, and after exhausting latest consignments, previous consignments will be used. Closing Stock will be generally valued at the earliest prices. The prices of the most recently received consignments, i.e. immediately last available consignment, are exhausted first before previous consignment prices are taken up. Cost of Goods Sold will consist of recent prices, while Closing Stock will be valued at older prices. During inflation, LIFO will tend to show the correct profit.

However, the flow of goods which is generally observed in business entities is contradictory to this assumption. If the business follows periodic method instead of perpetual method of inventory valuation, there will be differences between cost of goods sold and value of closing inventory. Thus, LIFO method is no longer adopted for valuing inventories. Accounting Standards also does not permit the usage of LIFO Method. Generally, FIFO and Weighted Average Price Method are popular among the business entities and both these methods are also permitted by Accounting Standards.

5. Historical Cost Methods

Following information is provided regarding a product by XYZ Ltd.

Stock as on 1st April 2019 – 100 units @ Rs. 5 per unit.			
Purchases		**Sales**	
5th April 2019	300 units @ Rs. 6 per unit	6th April 2019	250 units
8th April 2019	500 units @ Rs. 7 per unit	10th April 2019	400 units
12th April 2019	600 units @ Rs. 8 per unit	14th April 2019	500 units

Calculate using LIFO method (a) Cost of Goods sold during the period and (b) Value of Stock of materials on 15th April.

Solution:

Total stock available on 6th April = Opening stock + Purchases on 5th April 2019
 = 100 units @ Rs. 5 p.u. + 300 units @ Rs. 6 p.u.

Sale on 6th April 2019 = 250 units

Sale of these 250 units will be made from 300 units purchased on 5th April 2019.

Thus, cost of goods sold till 6th April = 250 units @ Rs. 6 p.u.
 = Rs. 1500

Total Stock Available on 6th April 2019 = 50 units @ Rs. 6 p.u. + 100 units @ Rs. 5 p.u.

Purchase on 8th April 2019 = 500 units @ Rs. 7 p.u.

Total Stock Available on 8th April 2019 = 50 units @ Rs. 6 p.u. + 100 units @ Rs. 5 p.u. + 500 units @ Rs. 7 p.u.

Sale on 10th April 2019 = 400 units

Sale of these 400 units will be made from 500 units purchased on 8th April 2019.

Thus, cost of goods sold till 10th April = 250 units @ Rs. 6 p.u. + 400 units @ Rs. 7 p.u.
 = Rs. 4300

Total Stock Available on 10th April 2019 = 50 units @ Rs. 6 p.u. + 100 units @ Rs. 5 p.u. + 100 units @ Rs. 7 p.u.

Purchase on 12th April 2019 = 600 units @ Rs. 8 p.u.

Total Stock Available on 12th April 2019 = 50 units @ Rs. 6 p.u. + 100 units @ Rs. 5 p.u. + 100 units @ Rs. 7 p.u. + 600 units @ Rs. 8 p.u.

Sale on 14th April 2019 = 500 units

Sale of these 500 units will be made from 600 units purchased on 12th April 2019.

Thus, cost of goods sold till 14th April = 250 units @ Rs. 6 p.u. + 400 units @ Rs. 7 p.u. + 500 units @ Rs. 8 p.u. = Rs. 8300

Total Stock Available on 15th April 2019 = 50 units @ Rs. 6 p.u. + 100 units @ Rs. 5 p.u. + 100 units @ Rs. 7 p.u. + 100 units @ Rs. 8 p.u. = Rs. 2300

Thus, Cost of goods sold during the period = Rs. 8300

Value of stock materials of materials on 15th April 2019 = Rs. 2300.

5. Historical Cost Methods

Under Simple Average Price Method, all the different prices of inventory are added together and then divided by the number of prices. The closing inventory is then valued according to the price ascertained. This method is generally followed by the entities using periodic inventory method, as it does not require efforts of identifying that closing inventory belongs to which consignments or lots.

$$\text{Simple Average Price} = \frac{\text{Sum of unit prices of each purchase}}{\text{Total number of purchases}}$$

5. Historical Cost Methods

A company has following record of purchases:

Date	**December 4**	**December 10**	**December 11**	**December 19**	**December 28**
Quantity (units)	900	400	300	200	800
Price p.u. in Rs.	50	55	55	60	47.5

Sales during the period were as follows:

Date	**December 5**	**December 12**	**December 29**
Quantity (units)	600	400	600

Compute the value of closing inventory using Simple Average Price Method.

Solution:

Computation of Closing Inventory as per Simple Average Price Method

Particulars	**Units/ Rs.**
(a) Total Quantity Purchased during the period (900 + 400 + 300 + 200 + 800)	2600 units
(b) Total Quantity Sold during the period (600 + 400 + 600)	1600 units
(c) Quantity of Closing Inventory at the end of the period [(a) – (b)]	1000 units
(d) Simple Average Price = $\frac{Sum \ of \ unit \ prices \ of \ each \ purchase}{total \ number \ of \ purchases} = \frac{50+55+55+60+47.5}{5}$	Rs. 53.5 p.u.
(e) Value of Closing inventory under Simple Average Price Method = [(c) × (d)]	Rs. 53,500

5. Historical Cost Methods

Weighted Average Price Method gives importance to quantities purchased and the purchase price to determine the issue price. This method involves calculation of a weighted average cost. Closing stock is valued at this weighted average cost. Under Weighted Average Price Method, cost of goods available for sale during the period is aggregated and then divided by number of units available for sale during the period to calculate weighted average price per unit. Thus,

$$\text{Weighted average price per unit} = \frac{\text{Total cost of goods available for sale}}{\text{Total no. of units available for sale}}$$

$$\text{Closing inventory} = \text{No. of units in inventory} \times \text{weighted average price per unit}$$

$$\text{Cost of goods sold} = \text{No. of units sold} \times \text{weighted average price per unit}$$

5. Historical Cost Methods

A company has following record of purchases:

Date	December 4	December 10	December 11	December 19	December 28
Quantity (units)	900	400	300	200	800
Price p.u. in Rs.	50	55	55	60	47.5

Sales during the period were as follows:

Date	December 5	December 12	December 29
Quantity (units)	600	400	600

Compute the value of closing inventory using Weighted Average Price Method.

Solution:

Computation of Closing Inventory as per Weighted Average Price Method

Particulars	Units/ Rs.
(a) Total Quantity Purchased during the period (900 + 400 + 300 + 200 + 800)	2600 units
(b) Total Quantity Sold during the period (600 + 400 + 600)	1600 units
(c) Quantity of Closing Inventory at the end of the period [(a) – (b)]	1000 units
(d) Weighted Average Price = \(\frac{Total \ cost \ of \ goods \ available \ for \ sale}{Total \ number \ of \ units \ available \ for \ sale} \) =\(\frac{[(900 \times50)+(400 \times55)+(300 \times 55)+(200 \times 60)+(800\times 47.5)]}{900+400+300+200+800} \) =\(\frac{1,33,500}{2600\ units} \)	Rs. 51.35 p.u.
(e) Value of Closing inventory under Weighted Average Price Method = [(c) × (d)]	Rs. 51,350

6. Non-Historical Cost Methods

Non-historical cost methods do not consider the historical cost incurred to acquire the goods. Non- historical cost methods include Adjusted Selling Price method and Standard Cost method.

Let us discuss these methods one by one.

6. Non-Historical Cost Methods

Under this method, inventories are valued at an estimated cost. This estimated cost is determined by deducting an appropriate percentage of gross margins from the sales value of the inventory. The percentage used takes into consideration inventory which has been marked below its original selling price. An average percentage for each retail department is often used. This method is also called **retail inventory method**. It is used widely in retail business or in business where the inventory comprises of items, the individual costs of which are not readily ascertainable. This method is suitable for measuring inventories of large numbers of rapidly changing items that have similar margins and for which it is impracticable to use other costing methods.

To understand, the following example for Adjusted Selling price method, we need to first understand the conversion of profit percentage on cost price to selling price and vice-versa.

We know, Selling price = Cost price + Profit

Now, if it is given, that "Profit is 20% on cost price", it implies that on Cost price of Rs. 100, we earn a Profit of Rs. 20.

Now consider the formula mentioned above, i.e.,
Selling price = Cost price + Profit
Selling price = Rs. 100 + Rs. 20
Selling price = Rs. 120.
Therefore, in order to earn a profit of Rs. 20, when Cost price is Rs. 100, Selling price, must be Rs. 120.
OR, \(\frac{1}{5} \) on Cost = \(\frac{1}{6} \) on Selling Price

6. Non-Historical Cost Methods

Ram sells goods at 20% Gross Profit on Cost. The following data is provided by Ram.

Particulars	Amount in Rs.
Opening Inventory at Market Prices (Cost = ?)	1,20,000
Sales made during the period	38,40,000
Purchases during the period (at Cost)	34,00,000

Find out the value of Closing Inventory using Adjusted Selling Price Method.

Solution:

Since Gross Profit = 20% on Cost = $\frac{1}{5}$ on Cost = $\frac{1}{6}$ on Selling Price (as explained above)
Cost of Sales = Sales – Gross Profit [Gross profit = $\frac{1}{6}$ on sales]
= Rs. 38,40,000 –[$\frac{1}{6}$× Rs. 38,40,000]
= Rs. 32,00,000.

Similarly,
Cost of Opening Inventory = Opening Inventory at Market prices – Gross Profit on sales value of inventory
= Rs. 1,20,000 - [$\frac{1}{6}$× Rs. 1,20,000]
= Rs. 1,00,000

We know,

Cost of Sales = Opening Inventory + Purchases - Closing Inventory
From this, we get Closing Inventory = Opening Inventory + Purchases - Cost of Sales
Thus, Closing Inventory = 1,00,000 + 34,00,000 - 32,00,000 = Rs. 3,00,000.

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6. Non-Historical Cost Methods

Under this method, closing inventories are valued at pre-determined rate or standard price irrespective of the purchase cost of the materials. Standard Cost is usually determined considering factors like current prices, anticipated market trends, and discount available and Transport Charges. This method is found suitable where the manufacturing units are engaged in production on a large scale. But this method cannot reveal the true value of inventory when production is completed after passing through several processes or where manufactured products are of different varieties. At the same time, if there is a slight error in fixing the single standard rate, the same will affect the measure of all items of inventory. For example, crude oil.

1. Meaning of Depreciation

When a fixed asset (also referred to as Property, Plant and Equipment) is purchased, it is recorded in books of accounts, at its original or acquisition/purchase cost. However, fixed assets are used to earn revenues for a number of accounting periods in future with the same acquisition cost until the concerned fixed asset is sold or discarded. Therefore, it becomes necessary that a part of the acquisition cost of the fixed assets is allocated as an expense in each of the accounting period in which the asset is utilized. The amount or value of fixed assets allocated in such manner to respective accounting period is called *Depreciation*.

In other words, Depreciation is reduction in book value of fixed asset due to wear and tear or efflux of time or due to obsolescence or accident.

Value of such assets decreases with passage of time mainly because of:

a. Wear and tear due to its use in operations of business;
b. Efflux of time even when it is not being used;
c. Obsolescence due to technological or other changes;
d. Decrease in market value; and
e. Depletion (mainly in case of mines and other natural reserves).

As per Schedule II of the Companies Act, 2013, **Depreciation** is the systematic allocation of the depreciable amount of an asset over its useful life. The depreciable amount of an asset is the cost of an asset less its residual value. The useful life of an asset is the period over which an asset is expected to be available for use by an entity, or the number of production or similar units expected to be obtained from the asset by the entity. Hence, there are 3 vital factors for computing depreciation which are given below.

1. Estimated useful life of the asset;
2. Cost of the asset; and
3. Residual value of the asset at the end of its estimated useful life.

The loss in the value of assets used for carrying on a business is an essential element of business expenditure. Thus, it is necessary to calculate the amount of such loss and to make a *provision* (accumulated depreciation/provision for depreciation), and therefore, arrive at the amount of profit or loss made by the business.

Depreciation of an asset begins when it is **available for use**. Thus, it is not necessary that an asset **must be used** to be depreciated. There is decrease in the value of assets due to normal wear and tear even when these are not physically used.

It may be noted that Accounting Standards as well as the Companies Act, 2013 requires depreciation to be charged on a **component basis**. It means, sometimes, we need not apply same rate of depreciation on entire asset. We may apply different rates of depreciation on different components of same asset, provided the components can be distinctly identified and have significant costs. Let’s take the example of an aircraft to understand this more clearly. The airframe (i.e. the body of the aircraft), the engines and the interiors have different individual useful lives and thus, different depreciation rates are applicable.

Note that Depreciation is different from 'Amortization' and 'Depletion'.

Amortization

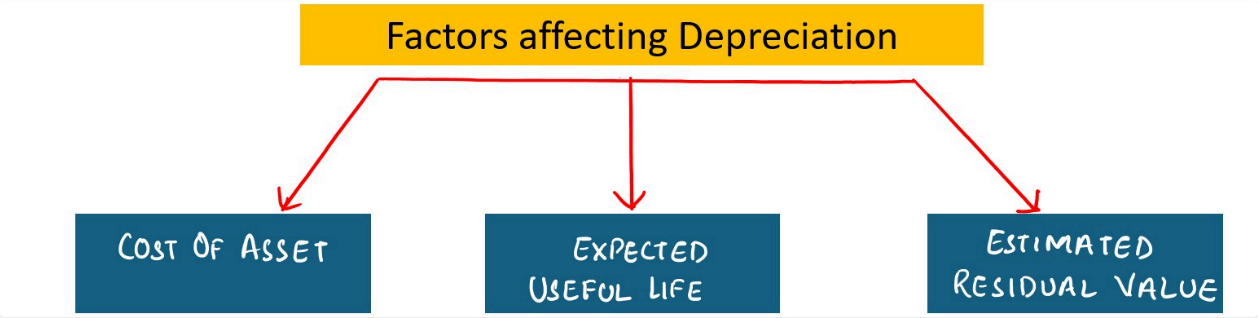
Amortization is a gradual and systematic writing-off of intangible asset over its estimated useful life. Patents, purchased goodwill, copyrights etc. are intangible assets. Its cost is amortized over its estimated useful life.

Depletion

Depletion is the value of wasting asset extracted from quarry, mine etc. Extraction reduces the available quantity of material. For example, extraction of coal from coal mine is depletion of coal stock.

2. Factors Affecting Depreciation

The factors affecting the amount of depreciation are discussed below.



Cost of asset

Cost of a depreciable asset represents its money outlay or its equivalent in connection with its acquisition, installation and commissioning as well as for additions to or improvement thereof for the purpose of increase in its efficiency.

Expected useful life

Useful Life is either:

a. the period over which a depreciable asset is expected to be used by the enterprise or
b. the number of production units expected to be obtained from the use of the asset by the enterprise.

Various factors like estimated working hours, production capacity, repairs and renewals, etc. are taken into consideration to calculate estimated useful life of the asset.

Estimated scrap value (if any)

The residual value (also called scrap value) is the value of the asset, at the end of its useful life.

2. Factors Affecting Depreciation

Pawan and Sons purchased a machine on 01.10.2023 for Rs. 5,00,000 against cheque and also paid Rs. 20,000 for loading/unloading and carriage expenses to bring the machine to factory. The firm further incurred Rs. 25,000 for installing the machine. Determine:

(a) How much amount will be debited to Machinery Account?

(b) Pass the Journal entries giving effect to the transaction.

Solution:

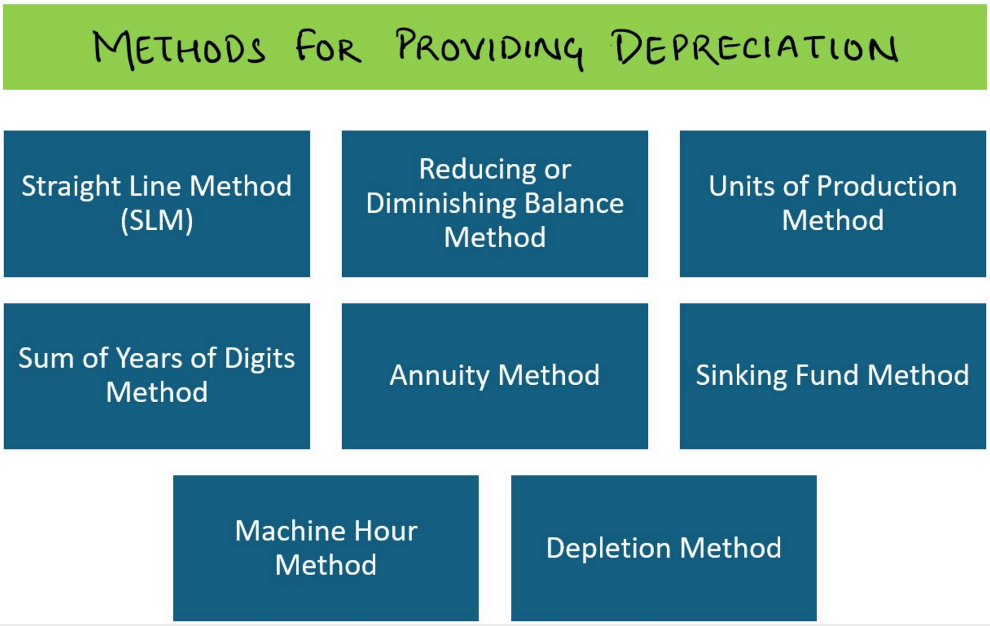
(a) Amount to be Debited to Machinery Account

	₹
Cost	5,00,000
Add: Loading/Unloading & Carriage Expenses	20,000
Installation Charges	25,000
	5,45,000

(b) JOURNAL

Date	Particulars	Dr. (₹)	Cr. (₹)
01-10-2023	Machinery A/c Dr.	5,00,000	
	To Vendor		5,00,000
	(Being Machinery Purchased)		
	Vendor Dr.	5,00,000	
	To Bank A/c		5,00,000
	(Being Cheque issued to vendor)		
	Machinery A/c Dr.	45,000	
	To Cash/Bank A/c		45,000
	(Loading/Unloading, Carriage & installation charges paid)		

3. Methods for Providing Depreciation



There are many methods of charging depreciation, out of which 3 are most important, i.e., Straight-Line method, Diminishing balance method and Units of production method. Here, we will be discussing 8 methods in total one by one.

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3. Methods for Providing Depreciation

According to this method, an equal amount is written off every year during the working life of an asset so as to reduce the cost of the asset to nil or its residual value at the end of its useful life. This method is simple to apply and gives accurate results especially in case of leases, and also in case of plant and machinery. This method is also known as **Fixed Instalment Method**. The formulas used under this method, to calculate the amount and rate of depreciation are as follows:

$$\text{Straight Line Depreciation} = \frac{\text{Cost of asset} - \text{scrap value}}{\text{Useful life}}$$

$$\text{Straight Line Depreciation Rate} = \frac{\text{straight line depreciation}}{\text{cost of asset}} \times 100$$

For example, Bhavesh Ltd. purchased a machinery costing Rs. 75,00,000, having a useful life of 7 years. Its estimated residual value is Rs. 5,00,000, the amount of depreciation using SLM and the depreciation rate shall be computed as follows.

$$\text{Straight Line Depreciation} = \frac{\text{Cost of asset} - \text{scrap value}}{\text{useful life}}$$

$$= \frac{\text{Rs } 75{,}00{,}000 - \text{Rs } 5{,}00{,}000}{7 \text{ years}}$$

$$= \text{Rs } 10{,}00{,}000 \text{ per annum}$$

$$\text{Straight Line Depreciation Rate} = \frac{\text{straight line depreciation}}{\text{cost of asset}} \times 100$$

$$= \frac{\text{Rs } 10{,}00{,}000}{\text{Rs } 75{,}00{,}000} \times 100 = \underline{13.33\%}$$

3. Methods for Providing Depreciation

Under Diminishing balance method, a fixed percentage of the diminishing value of the asset is written off each year so as to reduce the asset to its residual value at the end of its life. This method is also referred to as **Written Down Value Method (WDV method)**. Repairs and small renewals are charged to revenue. This method is commonly used for plant, fixtures, etc. The annual charge for depreciation decreases from year to year. Also, the value of asset can never be completely extinguished under this method, which happens in the earlier explained Straight Line Method. This method is based on the assumption that cost of repairs will increase as the asset get old, therefore, depreciation in earlier years should be high when the repair cost is expected to be low and depreciation in later years should be low when the repair cost is expected to be high. Therefore, this method will result in almost equal burden in all the years of use of the asset. This is because depreciation will reduce in every passing year which will be offset by increase in repair costs in every passing year. The rate of depreciation under this method may be determined by the following formula:

$$\text{Rate of Depreciation} = 1 - \sqrt[n]{\frac{\text{Residual value}}{\text{Cost of Asset}}} \times 100$$

where, n = useful life

For example, Suppose XYZ Ltd. purchased a machinery costing Rs. 5,00,000 and has ascertained its Written Down Value rate as 16% per annum. The depreciation amounts for the first 5 years will be calculated as under:

Particulars	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Cost or Opening WDV	Rs. 5,00,000	Rs. 4,20,000	Rs. 3,52,800	Rs. 2,96,352	Rs. 2,48,936
Less: Depreciation @ 16% p.a	Rs. 5,00,000 × 16% = Rs. 80,000	Rs. 4,20,000 × 16% = Rs. 67,200	Rs. 3,52,800 × 16% = Rs. 56,448	Rs. 2,96,352 × 16% = Rs. 47,416	Rs. 2,48,936 × 16% = Rs. 39,830
Closing WDV	**Rs. 4,20,000**	**Rs. 3,52,800**	**Rs. 2,96,352**	**Rs. 2,48,936**	**Rs. 2,09,106**

Note: The major difference between SLM and WDV is that the amount of depreciation charged annually under SLM remains same, whereas in WDV method, the amount of depreciation changes (decreases) from year to year because it is charged on decreasing Book Value of the Asset.

Journal Entries for Straight Line and Reducing Balance Methods

There are 2 alternative approaches for recording accounting entries for depreciation.

First Alternative

A provision for depreciation account is opened to accumulate the balance of depreciation and the assets are carried at historical cost.

1. To transfer the depreciation to the provision for depreciation account.	Depreciation Account ...Dr. To Provision for Depreciation Account
2. To charge the depreciation to the profit and loss account.	Profit and Loss Account ...Dr. To Depreciation Account

Second Alternative

The amount of Depreciation is credited to the Asset Account every year and the Asset Account is carried at historical cost less depreciation.

1. To charge depreciation to the asset account.	Depreciation Account ...Dr. To Asset Account
2. To record the depreciation charged in the profit and loss account.	Profit and Loss Account ...Dr. To Depreciation Account

3. Methods for Providing Depreciation

Under this method, depreciation of the asset is determined by comparing the annual production with the estimated total production.

$$\text{Depreciation amount per annum} = \text{Depreciable amount} \times \frac{\text{Production during the period}}{\text{Estimated total production}}$$

$$\text{Depreciable amount} = \text{Cost of Asset} - \text{Estimated Residual Value}$$

For example, Ramesh Ltd. purchased a machinery costing Rs. 25,00,000, having a scrap value of Rs. 5,00,000. The machine is expected to produce 10,00,000 units of outputs in the following manner:

Years 1 and 2: 1,15,000 units each;
Years 3 to 7: 1,00,000 units each; and
Years 8 to 10: 90,000 units each.
In this case, we will use Production Units method to compute depreciation.

Given, Cost of machinery = Rs. 25,00,000; Estimated Scrap Value = Rs. 5,00,000; Total Production capacity of the machine = 10,00,000 units

We know, Depreciable Amount = Cost of machine − Residual / scrap value

$$= 25,00,000 - 5,00,000$$
$$= 20,00,000$$

$$\text{Total Units} = \left[(2 \times 1,15,000) + (5 \times 1,00,000) + (3 \times 90,000)\right]$$
$$= 10,00,000 \text{ units}$$

Now we know

$$\text{Depreciation} = \text{Depreciable Amount} \times \frac{\text{Production during the period}}{\text{Estimated Total production}}$$

Depreciation Amount for each of the years will be:

Years 1-2	Years 3-7	Years 8-10
$\text{Rs } 20,00,000 \times \frac{1,15,000}{10,00,000}$ = Rs 2,30,000 p.a	$\text{Rs } 20,00,000 \times \frac{100,000}{10,00,000}$ = Rs 2,00,000 p.a	$\text{Rs } 20,00,000 \times \frac{90,000}{10,00,000}$ = Rs 1,80,000 p.a

3. Methods for Providing Depreciation

This method is a variation of the **Reducing or Diminishing Balance Method**. Under this method, the annual depreciation is calculated by multiplying the original cost of the asset less its estimated scrap value by the fraction represented by:

$$\frac{\text{The number of years (including the present year) of remaining life of the asset}}{\text{Total of all digits of life of the asset (in years)}}$$

Depreciable Amount = Cost of Asset − Residual Value

Depreciation per annum

$$= \text{Depreciable amount} \times \frac{\text{the number of years (including the present year) of remaining life of the asset}}{\text{Total of all digits of life of the asset (in years)}}$$

For example, the estimated life of an asset is 10 years; the total of all the digits from 1 to 10 is 55 i.e.,

$10+9+8+7+6+5+4+3+2+1$, or by the formula $\frac{n(n+1)}{2} = \frac{10\times 11}{2} = 55$

For example, Ashok Ltd. purchased a machinery costing Rs. 78,00,000, having a useful life of 5 years, and its estimated scrap value is Rs. 3,00,000. Depreciation amounts for the 5 years will be calculated as shown below.

Here, sum of the digits $= 1+2+3+4+5 = 15$

Sum of digits can also be calculated by using the formula $\frac{n(n+1)}{2} = \frac{5(5+1)}{2}$

$= 15$

Depreciation under sum of Years of Digits Method is calculated on Depreciable amount

Depreciable Amount = Cost of Asset − Residual Value

= Rs 78,00,000 − 3,00,000 = 75,00,000

Calculation of Depreciation for 5 years is shown in the table below:

Particulars	Year 1	Year 2	Year 3	Year 4	Year 5
Depreciation amount for the year	Rs 75,00,000 × 5/15 = Rs 25,00,000	Rs 75,00,000 × 4/15 = Rs 20,00,000	Rs 75,00,000 × 3/15 = Rs 15,00,000	Rs 75,00,000 × 2/15 = Rs 10,00,000	Rs 75,00,000 × 1/15 = Rs 5,00,000

3. Methods for Providing Depreciation

This method of depreciation takes into account the element of interest on capital outlay and seeks to write off the value of the asset as well as the interest lost over the life of the asset. It assumes that the amount laid out in acquiring asset, if invested elsewhere, would have earned interest which must be reckoned as part of the cost of asset. Though the amount written off annually is constant, the interest in the earlier years being greater, only small amount of the capital outlay is written off. This proportion is reversed as time passes. This method is suitable for writing off the amounts paid for long leases which involve a considerable capital outlay. This method is not suitable for writing off depreciation of plant and machinery on account of frequent changes in the value of such assets.

Journal entries under annuity method are as follows.

Transaction/Event	**Journal Entry**
1. For charging interest on asset account	Asset Account ...Dr. To Interest Account
2. For charging depreciation on asset	Depreciation Account ...Dr. To Asset or Provision for Depreciation Account
3. For transferring depreciation to Profit and Loss Account	Profit and Loss Account ...Dr. To Depreciation Account
4. For transferring interest to Profit and Loss Account	Interest Account ...Dr. To Profit and Loss Account