# DEPRECIATION

# Topics

- - Depreciation under the Income Tax Act, 1961 as well as the Companies Act, 2013
- - Useful lives to compute depreciation as per Schedule II of the Companies Act, 2013
- - Factors to be considered for componentization of asset
- - Installed capacity of the plant and actual production; raw material availability and level of technology used such as current or obsolete, issues if any regards to these
- - Part, fraction and whole valuation
- - Relationship of earnings and assets
- - Difference between business specific economic viability and economic obsolescence
- - Efficiency of plant layout, imbalances in different production sections and their relevance in valuation

# What is it

- Reduction of value of an asset over usage / time.
- Calculated annually.

In Income Tax & Companies Law – the way to calculate this is different.

In Income Tax it is for Tax purposes.

In Companies law – it is for accounting and reporting purposes. The rules are of IndAS.

# Difference

- Companies Act
  - *Schedule 2.*
  - *It is specified for different type of P&M*
  - *Based on SLM, WDV or UOP – unit of production.*
  - *Different factors for number of hours per day working*
- Income Tax Act
  - *Block of assets*
  - *Written down method only.*

# Why

- Accounting Purposes
  - *Decrease in the value of asset*
  - *Allocation of the cost of asset to the useful life of the asset.*
- Taxation Purposes
  - *Reduction of taxes*

Instead of the full value of the machine shown as expense on the first year – that is shown over a number of years.

That is also termed as depreciation.

# Under Income Tax

- In Blocks of assets
- Similar depreciation rates in one block
- Individual asset – is less important than the block of assets
- There are 12 blocks for tangible assets
- This is 1 block for intangible asset.

Check these from www.incometaxindia.gov.in

Income Tax Department
Government of India

***Rates of depreciation***
***(for income-tax)***
**AS APPLICABLE FROM THE ASSESSMENT YEAR 2003-04 ONWARDS**

| *Block of assets* | *Depreciation allowance as percentage of written down value* | | |
|---|---|---|---|
| | *AYs 2003-04 to 2005-06* | *AY 2006-07 to AY 2017-18* | *AY 2018-19 onwards* |
| *1* | *2* | *3* | *4* |
| *PART A*<br>TANGIBLE ASSETS | | | |
| **I. BUILDING** [*See* Notes 1 to 4 below the Table] | | | |
| (*1*) Buildings which are used mainly for residential purposes except hotels and boarding houses | 5 | **5** | 5 |
| (*2*) Buildings other than those used mainly for residential purposes and not covered by sub-items (1) above and (3) below | 10 | **10** | 10 |
| (*3*) Buildings acquired on or after the 1st day of September, 2002 for installing machinery and plant forming part of water supply project or water treatment system and which is put to use for the purpose of business of providing infra- structure facilities under clause (*i*) of sub-section (4) of section 80-IA | 100 | **100** | 40 |
| (*4*) Purely temporary erections such as wooden structures | 100 | **100** | 40 |
| **II. FURNITURE AND FITTINGS** | | | |
| Furniture and fittings including electrical fittings [*See* Note 5 below the Table] | 15 | **10** | 10 |
| **III. MACHINERY AND PLANT** | | | |

# Calculations under Written Down Value

- Depends upon the Tax law of the said years.
- Done as below…

| Particulars | Rs |
|---|---|
| Opening WDV of the asset block | XXXX |
| Assets added in this block | YYYY |
| SUB TOTAL | XYXY |
| LESS  Sale value of assets sold in this block | AAAA |
| WDV for purpose of depreciation | XYAXYA |

- Put to use criterion
  - *If used more than 181 days – full year depreciation is allowed else half.*
- Additional depreciation on NEW P&M
  - *Only in the year of purchase.*
  - *20% if used for over 181 days, else 10%. ( against 10% & 5%)*

# Companies Act

- Useful Life
  - *Asset will be available for the use by the company.*
- Two methods
  - *Straight line method*
  - *Written Down Method*
- Useful life as per Schedule 2 of Companies Act.
  - *Can adapt a different useful – if sufficient justification is done.*

Government shall be applied in calculating the depreciation to be provided for such asset irrespective of the requirements of this Schedule.

**PART 'C'**

5. Subject to Parts A and B above, the following are the useful lives of various tangible assets:

| **Nature of assets** | **Useful Life** |
|---|---|
| **I. Buildings [NESD]** | |
| (*a*) Buildings (other than factory buildings) RCC Frame Structure | 60 Years |
| (*b*) Buildings (other than factory buildings) other than RCC Frame Structure | 30 Years |
| (*c*) Factory buildings | -do- |
| (*d*) Fences, wells, tube wells | 5 Years |
| (*e*) Others (including temporary structure, etc.) | 3 Years |
| **II. Bridges, culverts, bunders, etc. [NESD]** | 30 Years |
| **III. Roads [NESD]** | |
| (*a*) Carpeted roads | |
| (*i*) Carpeted Roads-RCC | 10 Years |
| (*ii*) Carpeted Roads-other than RCC | 5 Years |
| (*b*) Non-carpeted roads | 3 Years |
| **IV. Plant and Machinery** | |
| (*i*) **General rate applicable to plant and machinery not covered under special plant and machinery** | |
| (*a*) Plant and Machinery other than continuous process plant not covered under specific industries | 15 Years |
| (*b*) continuous process plant for which no special rate has been prescribed under (*ii*) below [NESD] | 8 Years |
| (*ii*) **Special Plant and Machinery** | |
| (*a*) Plant and Machinery related to production and exhibition of Motion Picture Films | |
| 1. Cinematograph films—Machinery used in the production and exhibition of cinematograph films, recording and reproducing equipments, developing machines, printing machines, editing machines, synchronizers and studio lights except bulbs | 13 Years |
| 2. Projecting equipment for exhibition of films | -do- |

| | |
|---|---|
| (*vi*) Coastal service ships of all categories | -do- |
| (*vii*) Offshore supply and support vessels | 20 Years |
| (*viii*) Catamarans and other high speed passenger for ships or boats | –do |
| (*ix*) Drill ships | 25 Years |
| (*x*) Hovercrafts | 15 Years |
| (*xi*) Fishing vessels with wooden hull | 10 Years |
| (*xii*) Dredgers, tugs, barges, survey launches and other similar ships used mainly for dredging purposes | 14 Years |
| 2. Vessels ordinarily operating on inland waters— | |
| (*i*) Speed boats | 13 Years |
| (*ii*) Other vessels | 28 Years |
| **VIII. Aircrafts or Helicopters [NESD]** | 20 Years |
| **IX. Railways sidings, locomotives, rolling stocks, tramways and railways used by concerns, excluding railway concerns [NESD]** | 15 Years |
| **X. Ropeway structures [NESD]** | 15 Years |
| **XI. Office equipment [NESD]** | 5 Years |
| **XII. Computers and data processing units [NESD]** | |
| (*i*) Servers and networks | 6 Years |
| (*ii*) End user devices, such as, desktops, laptops, etc. | 3 Years |
| **XIII. Laboratory equipment [NESD]** | |
| (*i*) General laboratory equipment | 10 Years |
| (*ii*) Laboratory equipments used in educational institutions | 5 Years |
| **XIV. Electrical Installations and Equipment [NESD]** | 10 years |
| **XV. Hydraulic works, pipelines and sluices [NESD]** | 15 Years |

**Notes.—**

1. "Factory buildings" does not include offices, godowns, staff quarters.

2. Where, during any financial year, any addition has been made to any asset, or where any asset has been sold, discarded, demolished or destroyed, the depreciation on such assets shall be calculated on a *pro rata* basis from the date of such addition or, as the case may be, up to the date on which such asset has been sold, discarded, demolished or destroyed.

3. The following information shall also be disclosed in the accounts, namely:—

(*i*) depreciation methods used; and

# ..... more

- Residual value cannot be more than 5% of the original cost.
- If working in extra shifts, life is reduced proportionally.
  - *NESD :: No extra Shift Depreciation – means no extra depreciation for longer hours of working.*
- Extra Shifts
  - *Single Shift – say X%*
  - *Double shift – 1.5 times X%*
  - *Triple Shift – 2 times X%.*
  - *One shift = 8 working hours.*

# Formulas

- Straight Line Method

Rate of depreciation = (((original cost – residual value)/Useful life)*100)/(Original cost)

Depreciation = Original Cost X rate of depreciation

- Written Down Method

Rate of Depreciation = (1-(scrap value/original value)^ (1/(useful life)) * 100.

Depreciation = WDV * Rate of depreciation under WDV.

Factors to be considered for components of the assets.

# Factors for Componentization

- Asset to be divided in different components
  - *Components may have different life*
  - *Components may have different depreciation rates.*
- To be used when a component has a significant value of the whole asset.
- Companies Act 2013, Schedule II – significant components of an asset to be depreciated separately.
- As per IndAS 16
  - *Each component of the asset that has a significant value is to be depreciated separately.*
  - *All components with same useful life may be grouped together for depreciation purpose.*
  - *Useful life of balance may be ascertained by approximate method.*
  - *If the component is NOT significant – then may be treated as part of the whole.*
- Valuation of Components is to ascertain the value of significant components – which can be depreciated separately.

- Factors to determine the cost of a component.
  - *Breakup of the cost of the components from the supplier.*
  - *Cost breakup by internal / external valuation report.*
  - *Current replacement cost of the main components & applying the same basis on the historic cost of the asset.*
  - *Only – major components needs to be identified.*
  - *Approx 10% or more – as a individual cost – is OK for components to be treated as separately.*
  - *If the component life is more than the total asset life, that may be treated separately.*
  - *Components is becoming important in large assets like power plants, refineries etc.*

# Capacities

- Installed Capacity
  - *Production capacity of the plant based on it's rated capacity, plate capacity.*
  - *Assuming 24 X 7 X 365 working time.*
- Actual Production
  - *The final GOOD production that is produced from a plant.*
- Level of technology used such as current or Obsolete.
  - *Technology is the sum total of know how, experience of doing things.*
  - *Drawings are information.*
  - *How to use the drawings is technology.*
  - *In today's time, technology is changing at a fast pace, and results in obsolescence.*

- Raw Material Availability
  - *Raw material is all the items, required to produce the final output.*
  - *Direct material is what goes in the product,*
  - *Consumables – that help in the production like grease, oils cotton tools etc.*
  - *This may be available in India or imported.*
  - *These may be regulated by licence or openly traded.*
  - *Prices may fluctuate – depending upon the main trading point. LME*

**Valuer has to judge the technology, of the asset, present technology and the change that is happening and take those in consideration during valuation.**

# Part, Fraction & Whole Valuation

- In a whole business – having plant, buildings etc
  - *Physical separated from the whole or independent from the whole – is* FRACTION
  - *If integrated with the whole, and dependent on the whole is –* PART.
- Land is valued as it may be vacant.
- Building & P&M are reported as a fraction.
- Sum of the total is then taken as value.

# Relationship of Earning & Assets

- Earning capacity is the possibility of an asset to earn.
- However – there is a relationship, but not a uniform one.
- Earning increases with assets, but it tends to taper off.
- At that point more assets does not give more earnings.

# Business specific economic viability v/s Economic obsolesce.

| Business Specific Economic Viability | Economic Obsolescence |
| --- | --- |
| A business in a specific product may not be viable. That may be due to location, raw material, cost, traditional management systems.<br>This can be “repaired” by finding out the issues and correcting them.<br>Lean systems, sales promotion, and different variety of the same product may help | The market has changed due to technology, people’s desirability, or law, then that cannot be reversed by any management efforts |

# Efficiency of Plant Layout

- Plant layout is important for
  - *Faster movement of goods.*
  - *Lower work in progress*
  - *More out put per sq mt.*
- These are measured by
  - *Total kg km of the material travelled per day.*
  - *Total output per sq mt.*
  - *How quickly that can be changed for a different product.*
- Usually – common items are clubbed together
  - *Generator & electrical items.*
  - *Compress gas , water treatment*
  - *One type of production in one area.*
  - *Stores incoming or dispatch in one area.*

# Imbalance of different production section & relevance in valuation

- There is a production process that has several sections.
- All sections do not have equal capacity.
- The final out put will be – of the slowest machine / process.

***This is IMBALANCE of production as a whole***

- Static Imbalance
  - *Long term differences in capacity over a period of several hours / days.*
  - *Results in major underutilization of asset & high costs.*
- Dynamic Imbalance
  - *Short time imbalances – but still there are losses*
  - *Capacity are not balanced finely, cost increases.*

# Remedial Measures

- Do a capacity study of each process.
- Do a time and motion study of each process.
- See, where are the capacity imbalances
- Do any of the following
  - *Add machines*
  - *Improve the process by better material handling, or better process parameters,*
  - *Change the imbalance process.*
- Imbalances lead to
  - *Poor quality*
  - *Larger work in progress*
  - *Material loss*
  - *Higher costs*

# Imbalance in valuation

- The capacity of the plant is taken
- Higher capacity assets are reduced for a lower capacity.
- This reduces the overall plant valuation

Thanks