

UNIT 4

Depreciation Accounting

(4 Hours) — Financial Accounting (CACS152)

1. Concept of Depreciation

1.1 Meaning of Depreciation

Depreciation is the gradual and permanent decrease in the value of a fixed (tangible) asset due to wear and tear, effluxion of time, obsolescence, or similar causes. It represents that portion of the cost of a fixed asset which has been consumed, or used up, during an accounting period in generating revenue for the business, and is treated as a business expense charged against the profit of that period.

Under the matching principle, since a fixed asset helps generate revenue over several accounting periods, its cost must similarly be spread over, and charged against, the revenue of each of those periods, rather than being charged entirely in the year of purchase.

1.2 Features of Depreciation

- Depreciation is a gradual and continuous process, occurring period after period over the useful life of the asset.
- It relates only to fixed (tangible) assets that are used in the business over more than one accounting period, such as machinery, furniture, buildings, and vehicles.
- It is a permanent and continuing decrease, not a temporary fluctuation such as a fall in the market price of an asset.
- It is a charge against profit, not a matter of choice — profit cannot be correctly ascertained without deducting depreciation.
- It does not involve any outflow of cash at the time it is recorded; the cash outflow occurred earlier, when the asset was purchased.

1.3 Causes of Depreciation

- Wear and tear — deterioration arising from the normal use of the asset in business operations.
- Effluxion of time — assets such as leasehold property or patents lose value simply with the passage of time, regardless of use.

- **Obsolescence** — an asset becomes out of date due to new inventions, improved technology, or changes in fashion and market demand, even though it may still be physically usable.
- **Depletion** — applicable to wasting assets such as mines and quarries, whose value diminishes as the natural resource is physically extracted.
- **Accidents** — an asset may be damaged or destroyed by fire, accident, or natural calamity, causing a sudden fall in value.

Note: Depreciation is different from fluctuation. Fluctuation refers to a temporary rise or fall in the market value of an asset (e.g., investments), which may reverse itself, whereas depreciation is a permanent, one-directional decline associated specifically with the use of fixed assets in the business.

2. Objectives for Providing Depreciation

- To ascertain the true profit or loss — since a fixed asset contributes to earning revenue over its useful life, its cost must be matched against the revenue of each period it helps generate, in keeping with the matching principle.
- To present the true and fair financial position — showing assets in the Balance Sheet at their original cost, without reducing them for the value already consumed, would overstate the assets and the resulting net worth of the business.
- To provide funds for replacement of the asset — by charging depreciation as an expense (thereby reducing the profit available for distribution), the business retains resources within the enterprise that can be used to replace the asset at the end of its useful life.
- To comply with legal requirements — company law and tax law in many jurisdictions require depreciation to be provided before profits are declared as dividend, and before taxable income is computed.
- To ascertain the correct cost of production — where depreciation on plant and machinery forms part of the cost of goods produced, omitting it would understate production costs and distort the pricing of products.
- To avoid overstatement of dividend — profit calculated without providing for depreciation would be overstated, potentially leading the business to distribute part of its capital as dividend, which erodes the capital base of the enterprise.

3. Methods for Providing Depreciation

Several methods exist for computing the periodic depreciation charge on a fixed asset. The choice of method should reflect the pattern in which the asset's economic benefits are expected to be consumed by the business.

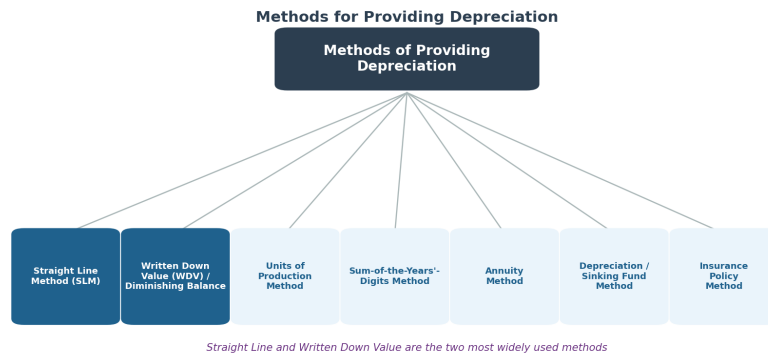


Fig 4.1 — Methods for providing depreciation; the Straight Line and Written Down Value methods are the most commonly used.

3.1 Straight Line Method (SLM) / Fixed Installment Method

Under this method, a fixed and equal amount of depreciation is charged every year over the useful life of the asset, calculated as follows.

Formula — Straight Line Method

Annual Depreciation = (Cost of Asset – Estimated Scrap Value) ÷ Estimated Useful Life (in years)

- The book value of the asset declines by a constant amount each year and reduces to the estimated scrap value at the end of its useful life.
- Simple to understand and apply, and particularly suitable for assets that provide a fairly uniform benefit over their life, such as leasehold property or patents.
- A drawback is that, in later years, the burden on the Profit & Loss Account (repairs plus a constant depreciation charge) tends to rise as repair costs typically increase with the age of the asset.

3.2 Written Down Value (WDV) / Diminishing Balance Method

Under this method, depreciation is charged each year at a fixed percentage, not on the original cost, but on the reducing (written down) book value of the asset at the start of that year. As a result, the amount of depreciation charged is highest in the first year and progressively declines in subsequent years.

- The combined charge of depreciation and repairs tends to remain more even over the life of the asset, since a higher depreciation charge in the early years (when repair costs are low) is offset by a lower depreciation charge in later years (when repair costs rise).
- This method is widely accepted for income-tax purposes in many jurisdictions, including Nepal.

- A drawback is that the book value of the asset, mathematically, never reduces to exactly zero, since a fixed percentage of a continuously shrinking balance is charged each year.

Example 3.1 — Comparing SLM and WDV

A machine is purchased for Rs. 1,00,000. Its estimated scrap value after 5 years is Rs. 10,000. Compute the depreciation for each of the 5 years under (a) the Straight Line Method, and (b) the Written Down Value Method at a rate of 35% per annum, and compare the resulting book values.

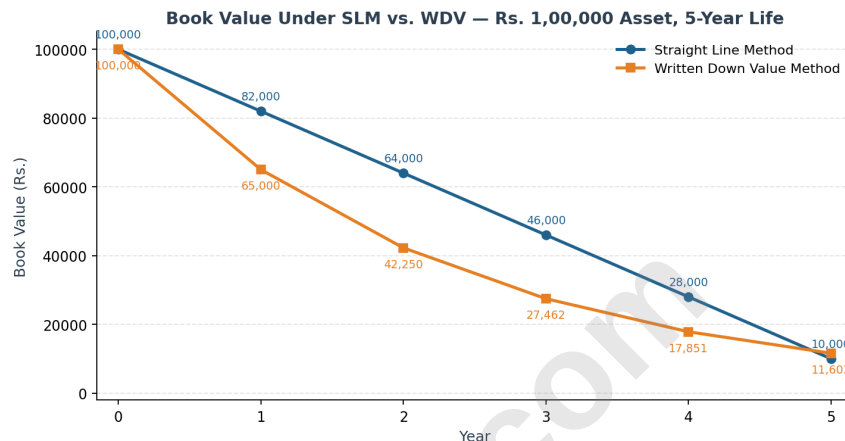


Fig 4.2 — Book value of the asset under SLM and WDV over its 5-year life (figures rounded to the nearest rupee).

Solution — Key Observations

Under SLM, depreciation is a constant Rs. 18,000 each year $[(1,00,000 - 10,000) \div 5]$, and the book value falls in a straight line to the scrap value of Rs. 10,000 at the end of Year 5.

Under WDV at 35%, depreciation is highest in Year 1 (Rs. 35,000) and falls each year thereafter, since it is charged on a steadily shrinking book value, ending at approximately Rs. 11,603 at the end of Year 5.

The chart shows the WDV curve falling more steeply in the early years and then flattening, while the SLM line falls at a constant rate throughout.

3.3 Other Methods (Brief Overview)

Method	Basis of Charging Depreciation
Units of Production Method	Depreciation is charged in proportion to the actual usage or output of the asset in a period, rather than the passage of time.
Sum-of-the-Years'-Digits Method	An accelerated method in which depreciation is charged using a fraction based on the sum of the digits of the useful life, giving higher charges in earlier years.

Method	Basis of Charging Depreciation
Annuity Method	Treats the amount invested in the asset as earning a notional rate of interest, and depreciation is so calculated that both the cost of the asset and interest thereon are fully written off over its life.
Depreciation / Sinking Fund Method	A fixed amount is charged as depreciation each year and simultaneously invested in outside securities, so that the accumulated fund is sufficient to replace the asset at the end of its useful life.
Insurance Policy Method	A fixed annual premium is paid to an insurer instead of investing in securities directly; the policy matures with a sum sufficient to replace the asset.

4. Accounting for Depreciation

Depreciation may be recorded in the books of account under either of two commonly used approaches.

4.1 Charging Depreciation to the Asset Account (Direct Method)

Under this approach, depreciation is credited directly to the Asset Account itself, so that the asset appears in the Balance Sheet at its net book value (cost less accumulated depreciation to date).

Journal Entry — Direct (Asset Account) Method

Depreciation A/c ... Dr. [with the amount of depreciation]

To Asset A/c [with the amount of depreciation]

(Being depreciation charged on the asset for the year)

At year end: Profit & Loss A/c ... Dr. To Depreciation A/c (Being depreciation transferred to the Profit & Loss Account)

4.2 Provision for Depreciation Account Method

Under this approach, the Asset Account continues to be shown at its original cost, year after year, while accumulated depreciation is separately accumulated in a Provision for Depreciation Account (also called Accumulated Depreciation Account). The net book value is obtained, for reporting purposes, only by deducting the accumulated balance of this account from the original cost of the asset.

Journal Entries — Provision for Depreciation Account Method

- (i) Depreciation A/c ... Dr. To Provision for Depreciation A/c (Being depreciation for the year provided for)
- (ii) Profit & Loss A/c ... Dr. To Depreciation A/c (Being depreciation transferred to the Profit & Loss Account)

Note: This method is generally preferred in practice because it preserves a clear record of the original cost of the asset and the total depreciation accumulated against it separately, which is useful information for management, auditors, and for computing any profit or loss on the eventual sale or disposal of the asset.

4.3 Accounting for the Disposal of a Depreciable Asset

When an asset is sold or disposed of, its net book value (cost less accumulated depreciation to the date of sale) is compared with the sale proceeds received. If the sale proceeds exceed the net book value, the excess is recorded as a profit on sale of asset; if the sale proceeds are less than the net book value, the shortfall is recorded as a loss on sale of asset. Both are ultimately transferred to the Profit & Loss Account.

Example 4.1 — Profit/Loss on Sale of Asset

A machine with an original cost of Rs. 1,00,000 has accumulated depreciation of Rs. 72,000 to date, giving it a net book value of Rs. 28,000. It is sold for Rs. 32,000. Determine the profit or loss on sale.

Solution

Net book value of the machine = Rs. 1,00,000 – Rs. 72,000 = Rs. 28,000

Sale proceeds received = Rs. 32,000

Since the sale proceeds (Rs. 32,000) exceed the net book value (Rs. 28,000), there is a profit on sale of Rs. 4,000, which is credited to the Profit & Loss Account.

Key Takeaways

- ✓ Depreciation is the gradual, permanent decline in the value of a fixed asset due to wear and tear, effluxion of time, obsolescence, depletion, or accident, and is charged as a business expense.
- ✓ Depreciation is provided to ascertain true profit, present a fair financial position, retain funds for asset replacement, and meet legal and tax requirements.
- ✓ The Straight Line Method charges a constant amount each year, while the Written Down Value Method charges a fixed percentage on the reducing balance, giving higher charges in earlier years.
- ✓ Other methods — units of production, sum-of-the-years'-digits, annuity, sinking fund, and insurance policy — suit particular patterns of asset use or replacement planning.
- ✓ Depreciation can be recorded either by crediting the Asset Account directly, or by accumulating it separately in a Provision for Depreciation Account, with the latter preferred in practice.
- ✓ On disposal of an asset, any difference between the sale proceeds and its net book value is recognized as a profit or loss on sale.

— *End of Unit 4* —