FIN401 ADVANCED FINANCIAL MANAGEMENT
NOTE: FIXED ASSETS

Introduction

Fixed Assets are long-term assets that are purchased for the generation of income. These assets are not consumed or converted into cash within a one-year period, and thus are accounted for as long-term assets instead of current assets. These assets are depreciated to account for their loss of value as they are used. Fixed assets may also be referred to as ***Property, Plant, and Equipment (PP&E)*** or ***Capital Assets***. Fixed assets may include buildings, land, equipment, vehicles, machinery, software, computers, and other similar items that are used over a period longer than one year.

Depreciation is the process of decreasing the value of a fixed asset over the useful life of the asset. In accounting, the ***matching principle*** is used to recognize expenses in the same period in which the related revenue is recognized. Since a fixed asset is used over more than one period, depreciation is used to match the use of the asset to the period in which the revenue is recognized. If an asset were not depreciated in that manner but rather "expensed" in the year of its purchase, the financial statements would incorrectly assign the full cost of the asset to only one year rather than the years in which the asset is utilized. There are several methods of calculating depreciation, including straight-line, declining balance, sum-of-the-years' digits, and units of production. The most common method to calculate depreciation is the straight-line method.

Fixed Asset Purchases

When a fixed asset is purchased, its value is entered onto the balance sheet at the purchase price in addition to any additional costs for transportation and installation. As a balance sheet is "cumulative", the amount is added to the existing balance of the assets on the balance sheet.

Depreciation

Depreciation Expense

Depreciation Expense is recognized on the income statement as an expense. However, it is important to note that it is considered a "non-cash" expense.

For purposes of this note, depreciation expense will be calculated using the straight-line depreciation method. To do this, the value of the fixed asset is divided by the useful life (in years) of the asset. If there is an assumed salvage value, that amount is first subtracted from the value. Salvage value is the amount, if any, for which the asset may be sold at the end of its useful life.

The formula for annual depreciation expense is as follows:

$$\frac{\text{Asset Value - Salvage Value}}{\text{Useful Life (in years)}}$$

For example, an asset with a value of \$110,000, with an assumed salvage value of \$10,000 and a useful life of 5 years would have an annual depreciation expense as follows:

$$\frac{\$110{,}000 - \$10{,}000}{5 \text{ years}} = \$20{,}000 \text{ Annual Depreciation Expense}$$

If the asset did not have an assumed salvage value, it would have an annual depreciation expense as follows:

$$\frac{\$110{,}000 - \$0}{5 \text{ years}} = \$22{,}000 \text{ Annual Depreciation Expense}$$

The amount of $22,000 annual depreciation expense would be entered each year as an expense on the income statement. Note that this amount would only be entered onto the income statement for 5 years, or until it is ***fully depreciated***. After 5 years, all of the value of the asset would have been fully expensed (5 years x $22,000 = $110,000). An asset can never have the cumulative amount of its depreciation expense exceed the value of the asset.

Accumulated Depreciation

In double entry accounting, there needs to be an offsetting entry to the depreciation expense. In this case, the offsetting entry is to an account called ***Accumulated Depreciation***. Accumulated depreciation is the cumulative amount of all of the depreciation of an asset over the years that the asset is utilized. Each year, the new depreciation expense is added to the previous balance of accumulated depreciation. As mentioned above, an asset can never have the cumulative amount of its depreciation exceed the value of the asset. As such, the accumulated depreciation can never exceed the value of the asset. Accumulated depreciation is an account on the balance sheet and is sometimes referred to as a ***contra asset***, as it reduces the value of the fixed asset.

From our example above, the accounting for the purchase and depreciation of the fixed asset would be as follows:

1. Purchase of the asset

Balance Sheet:	
Fixed Assets	$110,000

2. Depreciation Expense

	Year 1	Year 2	Year 3	Year 4	Year 5
Income Statement:					
Depreciation Expense	$22,000	$22,000	$22,000	$22,000	$22,000
Balance Sheet:					
Fixed Assets	$110,000	$110,000	$110,000	$110,000	$110,000
Accumulated Depreciation	($22,000)	($44,000)	($66,000)	($88,000)	($110,000)
Net Asset	$88,000	$66,000	$44,000	$22,000	$0

A few things to note from the preceding example:

- The annual depreciation expense on the income statement represents how much of the asset was used during the year.
- The amount of accumulated depreciation on the balance sheet represents the cumulative decrease in value of the asset over time until it has been fully depreciated, resulting in a net asset value of $0.
- Each year, the amount of accumulated depreciation is calculated by taking the previous year's accumulated depreciation and adding to it the current year's depreciation expense.
- At any given time, the net asset value represents what the asset is worth.

Additional Information

Some additional information on accounting for fixed assets, depreciation expense, and accumulated depreciation:

- In years subsequent to the life of the asset, no depreciation expense is expensed on the income statement; therefore, accumulated depreciation is not increased. This is because the asset has been fully depreciated.
- If the asset continues to be used past its useful life, it stays on the balance sheet, along with its accumulated depreciation, at the same amount for all subsequent years until it is no longer used in the business.
- All asset values and associated depreciation are calculated individually and then added together for inclusion on the income statement and balance sheet as the total amount of all of the assets and associated depreciation.
- When an asset is no longer used or is sold, it is taken off the balance sheet. Both the fixed asset value and the accumulated depreciation are taken off of the balance sheet at their value when that event takes place.