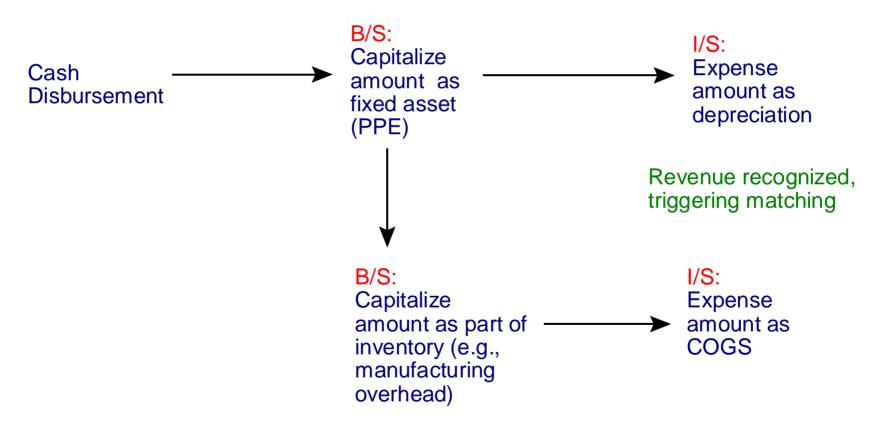
Accounting for Long-lived Assets

Objectives

- ► Understand more applications of the matching principle, specifically, the allocation of historical costs to future revenues
- ► Recognize the common aspects of the record keeping & reporting challenge that are shared by many balance sheet items related to these decisions.
- ► Continue to learn how to reverse engineer related accounting entries from financial statement information.
- ▶ Begin to understand and appreciate the Statement of Cash Flows.

Accounting for Long-lived Assets

Matching Principle



To account for a fixed asset one must answer the following four questions

- (1) What is the acquisition cost?
- (2) How much is the salvage value?
- (3) What is the expected useful service life?
- (4) What pattern of depreciation should be used to allocate expense over the useful life?

Determining Acquisition Costs

- ▶ What is given up to obtain the asset?
 - Purchased Assets: Purchase price plus cost to prepare the asset for use (installation, transport)
 - Case 1: Cash
 - Case 2: Financing (down payment plus loan/note)
 - Case 3: Other assets (Cash plus trade-in)
 - Self-Constructed Assets
 - Direct costs of construction
 - Financing costs (interest on funds borrowed to finance construction)



Managerial Discretion and Long-lived Assets

▶ Determining useful life: what factors affect this estimate?

► Determining salvage value (proceeds from eventual disposal)

Choosing a GAAP depreciation method



Economic vs. Accounting Depreciation

Blockbuster Video:

- ▶ What is the life of a video cassette?
- ► What is its salvage value?
- ► What allocation method best matches the expense to the use of the resource?

GAAP Depreciation Methods

- ► Production (Use) Method
 - Depreciation cost per machine hour depreciable basis/service life (in machine-hours)
 - Depreciation Expense = Actual hours used * hourly rate
- Straight-line Depreciation
 - Annual Depreciation Expense depreciable basis/service life (in years)
 - Used by overwhelming majority of US firms
- Accelerated Depreciation
 - Mostly confined to tax reporting



Accounting for Long-lived Assets: An Example

Example: Beginning of Year 1: Cost = \$100K, Salvage Value = 0, initial UL estimate of 5 years. After 2nd year, spend \$30K on improvement that extends UL by 3 years (i.e., to total of 8).

Cash + PPE - AccDep + OA = L + CC + RE

Yr 1:

Yr 2:

Yr 3:

Yr: 8



Gain or Loss on Disposal of Long-lived Assets

Example: At end of 7th year, when BV is \$15K, sell Asset from last example for scrap value of \$2K.

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Cash + PPE - AccDep + OA = L + E
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Depreciation Bookkeeping

▶ What financial statements are affected by depreciation?

▶ What accounts are affected?

▶ Does depreciation affect cash?

Changes in Depreciation Assumptions

► Caused by change in asset life or salvage value

► Apply the change prospectively, i.e., to future years (no restatement)

PP&E and the Indirect Statement of Cash Flows

- **▶**Cash From (Used by) Investing Activities:
 - Cash Used to Purchase PP&E
 - Cash Received (if any) from Disposing of PP&E
- **►** Cash From (Used by) Financing Activities:
 - What if PP&E is purchased using borrowed funds?
- **►** Cash From (Used by) Operating Activities:
 - Most firms use Indirect Method, i.e., start with reported Net Income and remove non-cash effects
 - What non-cash effects of PP&E bookkeeping are embedded in Net Income?



Tax and Timing Effects of Long-lived Assets

- ▶Tax Depreciation
 - More accelerated
 - No judgment
- ► Tax Reporting Financial Reporting ==> timing differences in the measurement of income
 - Why would a firm prefer accelerated depreciation for tax purposes?
 - Why does government allow this?
 - Why not use tax methods for financial reporting?
- ► This difference gives rise to Deferred Taxes more on this later



Summary

► Expenditures on fixed assets are capitalized: either as PPE or part of inventory; these expenditures are later "matched" to revenues produced by the fixed assets.

► Depreciation does not involve cash. Cash is involved only at acquisition and disposal.

► Discretion is applied on making estimates of useful life, salvage value, and choice of depreciation method