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

Cash Disbursement → B/S: Capitalize amount as fixed asset (PPE) → I/S: Expense amount as depreciation

Revenue recognized, triggering matching

B/S: Capitalize amount as fixed asset (PPE) ↓ B/S: Capitalize amount as part of inventory (e.g., manufacturing overhead) → I/S: Expense amount as COGS

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.

Cash	+	PPE	-	AccDep	+	OA	=	L	+	E

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