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 part of inventory (e.g., manufacturing overhead)

I/S:
Expense amount as COGS

Issues that relate to fixed assets

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

Determining acquisition cost

- 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)
  - Depr. 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

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)

Accounting for long-lived assets: An Illustration

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

PP&E and the Indirect SCF

- 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?*

Operating

PP&E disclosures for Intel - 2002

	Cash	PPE (Gross)	-Accum. Dep'n	Inventory	L	CC	RE (Dep'n Exp)
Beg. Bal.		34,356	16,235				
Additions							
Total Dep'n							
Disposals							
End. Bal.		36,912	19,065				

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