Accounting for long-lived assets

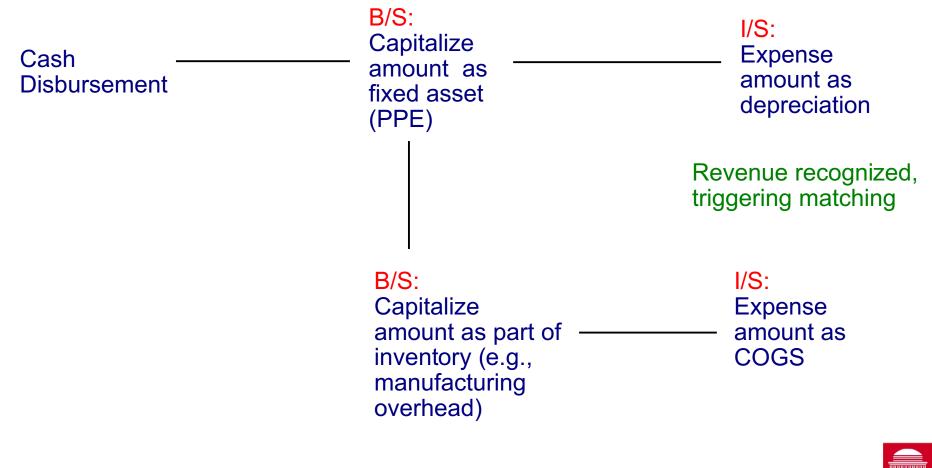
Objectives

- 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



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- 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?



- 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)

Session 7

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



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



• What financial statements are affected by depreciation?

• What accounts are affected?

• Does depreciation affect cash?



• 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



- 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



- 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

