Notes

Chapter 10

Accounting
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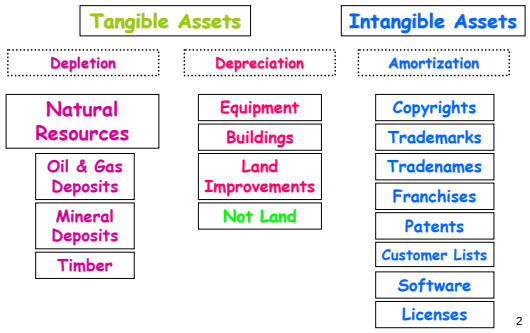
Spring 2011

California State University, Northridge

Operational Assets

Purchase price plus all costs to bring to condition and location.



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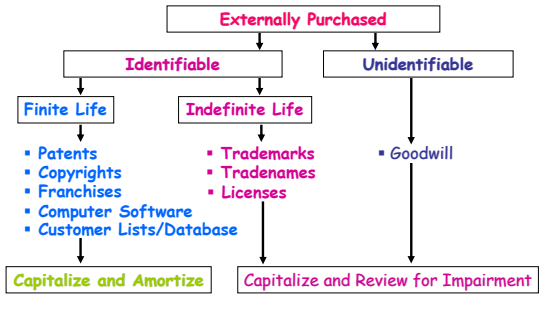
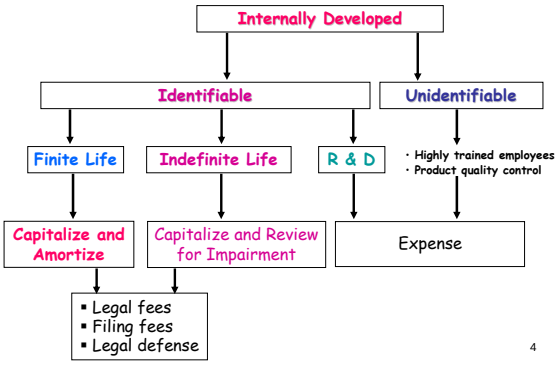
Intangible Assets – FAS 142; ASC 350-30-35

Contractual rights, government rights, or rights purchased, sold, or licensed.



Intangible Assets – FAS 142; ASC 350-30-35



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Research & Development (R&D)

Research – discovery of new knowledge useful in developing a new product, service, process, or significant improvement to what already exists.

Development – translation of this knowledge into a plan or design.

Expense all R&D costs except:

- Assets that have an alternative use – capitalize.
  (Expense depreciation and amortization from these assets as R&D.)
- Costs related to registering a patent – capitalize.
- Oil and Gas – successful efforts versus full cost.
- Software – after reaching "technological feasibility".
- Purchasing "in process" R&D – successful projects.

IAS 38

- Development costs are capitalized and amortized.

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Natural Resources

Acquisition Costs: Price paid to obtain the right to search for natural resources.

Exploration Costs: Costs to find the natural resource.

Development Costs: Costs incurred to extract the resource (drilling, tunnels, shafts, and wells).

Restoration Costs: Asset Retirement Obligation (ARO)

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Asset Retirement Obligation (ARO)

FAS 143; ASC 410-20-25

A legal obligation to restore property/environment to its original condition.

Example: Alpha purchases a mine for $500,000. After 5 years, Alpha must restore the property at a cost of $50,000. Assume an interest rate of 10%.

Mine	500,000	
Cash		500,000

n=5, i=10%, Table 2 $50,000 x .6209 = $31,045

Mine	31,045	
Asset Retirement Obligation		31,045

Depreciate the $531,045 and expense the ARO each year.

Each year

Accretion Expense ($31,045 x 10%)	3,105	
Asset Retirement Obligation		3,105

End of 5th year

Asset Retirement Obligation	50,000	
Cash		50,000

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Present Value of Future Cash Flows

Concepts Statement No. 7

(See Spiceland, pages 240-243 in Chapter 6)

Traditional Approach

- By contractual cash flows using a risk-adjusted interest rate.

Example: Future cash flows of $500 at the end of each year for 10 years with risk-adjusted interest rate of 10%.

$500 x 6.1446 = $3,072

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Expected Cash Flow Approach

- Range of possible outcomes using probabilities, a **risk-free** interest rate, and weighted average present value (able to use a risk-free interest rate because more than one outcome reflects the uncertainty [risk] of cash flows).

Example: Risk-free interest rate = 6%

1. 30% probability of $400 at the end of each year for 8 years.
2. 70% probability of $600 at the end of each year for 6 years.

30% x ($400 x 6.2098) =	$ 745
70% x ($600 x 4.9173) =	2,065
	$2,810

Adjustment for uncertainty or risks concerning the amounts and timing of cash flows is applied to the cash flows, not interest rate.

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Implicit vs. Imputed Interest

APB Opinion No. 21; ASC 835-30-25

When a note is issued without stating an interest rate (or the stated interest rate is understated) and the assets being transferred do not have a determinable market value, an implicit or imputed interest rate must be used.

Imputed Interest Rate – Uses the market interest rate, taking into consideration the terms of the note, the credit standing of the issuer, the collateral, and other factors.

Example: Alpha purchased land for $70,000 by issuing a noninterest- bearing note that pays 5 annual equal payments. No market for the note or the land.

$70,000/5 = $14,000 x 3.7908 = $53, 071 $70,000 - $53,071 = $16,929

Implicit Interest Rate – Uses the rate that is implied in the contract.

Example: Alpha purchased land with a value of $75,131 by issuing a $100,000, 3-year, noninterest-bearing note.

$75,131/$100,000 = .75131 Using T2, n = 3, *i* = **10%**

Example: Alpha purchased land for $70,000 by issuing a noninterest- bearing note that pays $18,466 at the end of each year for 5 years.

$70,000/$18,466 = 3.7908 Using T4, n = 5, *i* = **10%**

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Basket Purchase

Allocate purchase price to specific assets (if known) and/or to assets on basis of fair value.

Example: Alpha purchases assets A, B, and C for $900.

	Fair Value		
A	$ 400	$400/$1,000 x $900 =	$ 360
B	$ 500	$500/$1,000 x $900 =	$ 450
C	$ 100	$100/$1,000 x $900 =	$ 90
	$1,000		$ 900

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Goodwill

- **The excess of the purchase price paid for a company over the fair value of the net assets purchased.**

  Differs from a **basket purchase** – not allocated in proportion to estimated fair value, but the fair value of each asset.

- **Only recorded when another company is acquired.**
- Not expensed except for **impairment**.

Negative Goodwill (bargain purchase) – Report the excess as a gain (not extraordinary). – FAS 141(R); ASC 805-30-25-2

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Example: Alpha purchased Beta for $500,000 when Beta had the following balance sheet:

Cash	$35,000	Liabilities	32,000
A/R	60,000	Capital Stock	225,000
Inventories	47,000	R/E	75,000
PP&E, net	190,000		
	$332,000		$332,000

FV of net assets (Due Diligence Process)

Cash	$35,000
A/R	60,000
Inventories	145,000
PP&E, net	250,000
Patent**	20,000
Liabilities	(32,000)
	$478,000

$500,000 – 478,000 = $22,000

**Internally developed (not on balance sheet).

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FV of net assets

Cash	$35,000
A/R	60,000
Inventories	145,000
PP&E, net	250,000
Patent	20,000
Liabilities	(32,000)
	$478,000

Journal Entry

Cash	35,000	
A/R	60,000	
Inventories	145,000	
PP&E, net	250,000	
Patent	20,000	
Goodwill	22,000	
Liabilities		32,000
Cash		500,000

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Deferred Payment

Assets purchased on long-term credit contracts.

Example: Alpha purchased land for $70,000 by issuing a note that pays each year $14,000 and interest of 10% on the unpaid balance at the end of the year for 5 years.

Land	70,000		
Notes Payable		70,000	
1st Payment			
Interest Expense	7,000		($70,000 x 10%)
Notes Payable	14,000		
Cash		21,000	
2nd Payment			
Interest Expense	5,600		($70,000 - $14,000) x 10%
Notes Payable	14,000		
Cash		19,600	

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Deferred Payment

Example: Alpha purchased land for $70,000 by issuing a non-interest bearing note that pays $18,466 at the end of each year for 5 years.

Implicit interest = $70,000/$18,466 = 3.7908 = 10%

Land	70,000		
Discount on N/P	22,330		($92,330 - $70,000)
Notes Payable		92,330	(5 x $18,466)
1st Payment			
Notes Payable	18,466		
Cash		18,466	
Interest Expense	7,000		($92,330 - $22,330) x 10%
Discount on N/P		7,000	[NPV = $70,000]
2nd Payment			
Notes Payable	18,466		
Cash		18,466	
Interest Expense	5,853		($73,864 - $15,330) x 10%
Discount on N/P		5,853	[NPV = $58,534]

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Deferred Payment

			Seller		
Land	70,000		Notes Receivable	92,330	
Discount on N/P	22,330		Discount on N/R		22,330
Notes Payable		92,330	Land		70,000
1st Payment					
Notes Payable	18,466		Cash	18,466	
Cash		18,466	Notes Receivable		18,466
Interest Expense	7,000		Discount on N/R	7,000	
Discount on N/P		7,000	Interest Revenue		7,000
2nd Payment					
Notes Payable	18,466				
Cash		18,466			
Interest Expense	5,853				
Discount on N/P		5,853			

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Self-Constructed Assets

FAS 34; ASC 835-20-30

Interest (avoidable) is capitalized for assets self-constructed for own use or intended for lease or sale if a discrete project (special purpose equipment not routinely produced and require significant construction time).

Avoidable Interest – Without this project, we (1) would not have made this construction loan or (2) could have paid off other debt or not needed to borrow for other needs.

Capitalize the lesser of avoidable interest and actual interest.

Criteria

- Expenditures are being made.
- Construction is in progress (actively working on it).
- Interest costs are being incurred for any purpose.

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Step 1: Compute average or weighted average accumulated expenditures.
Step 2: Compute weighted average interest rate.
Step 3: Compute avoidable interest.
Step 4: Compute actual interest.
Step 5: Capitalize lower of actual interest or avoidable interest.

Example: Alpha constructs a warehouse beginning January 1 of year one estimated to cost $1,500,000 with completion expected December 31. A 9% construction loan of $500,000 is obtained on January 1.

Step 1: Compute average or weighted average accumulated expenditures.

	Expenditures		Months	Weighted Average
Jan 31	$240,000	X	11/12 =	$220,000
June 1	420,000	X	7/12 =	245,000
Oct 31	360,000	X	2/12 =	60,000
	$1,020,000			$525,000

Why are these expenditures weighted? Because these costs are being financed for the period of the year the debt is outstanding.

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Step 2: Compute weighted average interest rate.

Construction Loan: $500,000 @ 9%

Other loans: $600,000 @ 7% and $900,000 @ 10%

$600,000	X	7% =	$ 42,000
900,000	X	10% =	90,000
$1,500,000			$132,000

$132,000 / $1,500,000 = 8.8% Weighted average interest rate

Step 3: Compute avoidable interest.

Weighted average	$525,000			
Construction loan	500,000	X	9% =	$ 45,000
Excess	$25,000	X	8.8% =	2,200
Avoidable Interest				$47,200

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Step 4: Compute actual interest.

Construction loan	$500,000	x	9% =	$ 45,000
Other loan	$600,000	x	7% =	$ 42,000
Other loan	900,000	x	10% =	90,000
	$2,000,000			$177,000

Step 5: Capitalize lower of actual interest or avoidable interest.

Actual Interest = $177,000
Avoidable Interest = $47,200

Jan 31	Construction in Progress	240,000		
	Cash		240,000	
June 1	Construction in Progress	420,000		
	Cash		420,000	
Oct 31	Construction in Progress	360,000		
	Cash		360,000	
XXXX	Interest Expense	177,000		
	Interest Payable (or Cash)		177,000	
Dec 31	Construction in Progress	47,200		
	Interest Expense		47,200	

Accumulated Expenditures = $1,067,200

Reduce the $177,000 for capitalized interest.

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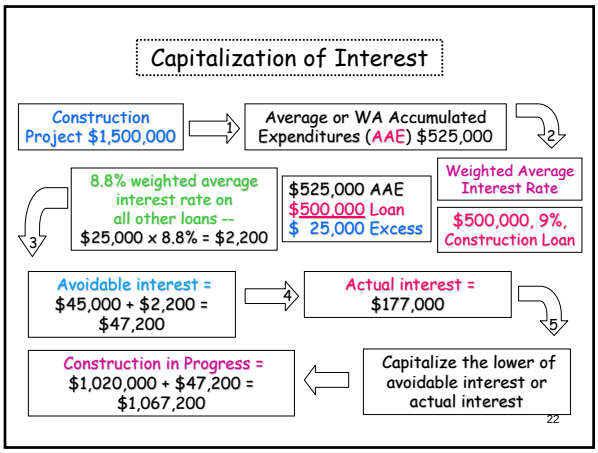
Capitalization of Interest
Construction Project $1,500,000
1
Average or WA Accumulated Expenditures (AAE) $525,000
2
3
8.8% weighted average interest rate on all other loans --
$25,000 x 8.8% = $2,200
$525,000 AAE
$500,000 Loan
$ 25,000 Excess
Weighted Average Interest Rate
$500,000, 9%, Construction Loan
Avoidable interest =
$45,000 + $2,200 = $47,200
4
Actual interest =
$177,000
5
Construction in Progress =
$1,020,000 + $47,200 = $1,067,200
Capitalize the lower of avoidable interest or actual interest
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