Prof. Aida R. Lozada Rivera, CPA, MBA, Ph.D.

aida.lozada@upr.edu

University of Puerto Rico
Río Piedras Campus
Business School

BALANCE SHEET

NON CURRENT ASSETS:

- Property Plant and Equipment
- Intangible Assets

This presentation contains information, in addition to the material prepared and provided by the professor, from:

1. Financial Accounting, David Spiceland, 6th Ed., McGraw-Hill
2. Intermediate Accounting, David Spiceland, 11th Ed., McGraw-Hill
3. Intermediate Accounting, Donald Kieso, 18th Ed., Wiley
4. Other: Official Websites

LONG-LIVED, REVENUE-PRODUCING ASSETS

Capitalization Rule: All expenditures necessary to get asset in condition ready to use.

PROPERTY, PLANT, AND EQUIPMENT

TANGIBLE

- Operating assets generate the value from their use in the operations.
- Have physical substance.
  - Property: land, land improvements
  - Plant: Building
  - Equipment: office equipment, computers, vehicle, furniture, and machinery
  - Natural Recourses: oil, gas, timber, mineral, etc

INTANGIBLE ASSETS

- Lack physical substance.
  - Patents
  - Copyrights
  - Trademarks
  - Franchises
  - Goodwill.

TANGIBLE ASSET	DESCRIPTION	COST
Land	Real property used using in the operations	Purchase price, attorney's fees, tittle fees, commissions, back taxes. Mortgage, clearing, filling and remove old structures. Less cash from the sale of building scrap.
Land for speculation	Investment or Other Assets	Same as Land.
Land Improvements	Enhancements to property (parking lots, driveways, roads, fences, landscaping, and sprinkles system)	Identify the cost for every improvement.
Buildings	Plant, Structures, warehouses	Purchase price, attorney's fees, commissions, reconditioning.
Equipment	Machinery, Computers, Vehicles, Furniture	Purchase price, transportation, insurance, freight in, insurance, testing, installation and training to employees.
Natural Resources	Consumed in operation process. Oil, gas, timber, etc.	Acquisition, exploration, development, and restoration.
INTANGIBLE ASSET		
Patent	Exclusive 20 years right to manufacture a product or use a process.	Purchase price, legal fees, filling fees.
Copyrights	Exclusive right to benefit from a creative work (song, book, etc)	Purchase price, legal fees, filling fees.
Trademaks (names)	Exclusive right to display a word, slogan, symbol, etc. that distinctively identifies a company.	Purchase price, legal fees, filling fees.
Franchises	Contractual arrangement under the owner (franchisor) grants to other party (franchisee) an exclusive right to use the franchisor product or service rights.	Purchase price and legal fees.
Goodwill	Value of the company (reputation, prestige and good characteristics.	Price paid in excess of market value of the net assets (assets less liabilities).

NON CURRENT ASSETS

ACQUISITION

- purchase
- exchange
- contract lease
- donation
- self-construction,
- business combination

LUMP-SUM PURCHASES

Example: ABC Company paid $3,000,000 for the following assets.

ASSETS	MARKET VALUE		MARKET %		TOTAL COST PAID	COST ASSIGNED TO EACH ASSET
Land	700,000	700000 / 3,200,000	21.88%	x	3,000,000	656,250
Building	750,000	750000 / 3,200,000	23.44%	x	3,000,000	703,125
Equipment	860,000	860000 / 3,200,000	26.88%	x	3,000,000	806,250
Patent	550,000	550000 / 3,200,000	17.19%	x	3,000,000	515,625
Inventory	340,000	340000 / 3,200,000	10.63%	x	3,000,000	318,750
	$3,200,000		100.00%			3,000,000

	Dr.	Cr.
Land	626,250	
Building	703,125	
Equipment	806,250	
Patent	515,625	
Inventory	318,750	
Cash		3,000,000

NON CURRENT ASSETS

DEPRECIATION: Tangible Assets (except Land) /AMORTIZATION: Intangible Assets (except Goodwill) / DEPLETION

The process of allocating an asset's cost over the periods it is used to produce revenues.

- Non-current assets are purchased with the expectation that they will provide future benefits (generate revenues)
- The costs should be allocated to expense over the periods benefited by their use (matching revenues and expenses)
- Cost Allocation through depreciation

NON CURRENT ASSETS

DEPRECIATION METHODS

Elements

- Historical Cost- cash (other value) paid at the time of acquisition.

  Allocation Method
  - Useful life- years that the asset is expected to benefit the company.
  - Activity- units, hours
- Residual Value- value of the asset to the company at the end of its useful life (not the market value).

Note: Land does not Depreciate.

NON CURRENT ASSETS

DEPRECIATION METHODS

Straight-line Method

An equal amount of the depreciable base is allocated to each year of the asset's service life.

FORMULA: $\frac{\text{COST – RESIDUAL VALUE}}{\text{USEFUL LIFE}}$

DEPRECIATION EXPENSE: $\frac{\$100{,}000 - \$0}{5 \text{ years}} = \$20{,}000$ per year

DEPRECIATION EXPENSE			ACCUMULATED DEPRECIATION	
+	-		-	+
20,000				20,000

Dr. Depreciation Expense 20,000
Cr. Accumulated Depreciation (contra account) 20,000

PRESENTATION

DEPRECIATION EXPENSE: $100,000 – $0 = $20,000 per year
5 years

ABC COMPANY
SCHEDULE OF DEPRECIATION: STRAIGHT LINE METHOD

	12/31/2001	12/31/2002	12/31/2003	12/31/2004	12/31/2005
COST	$100,000	$100,000	$100,000	$100,000	$100,000
ACCUMULATED DEPRECIATION	($20,000)	($40,000)	($60,000)	($80,000)	($100,000)
BOOK VALUE	$80,000	$60,000	$40,000	$20,000	$0
	Dr. Depreciation Expense 20,000	Dr. Depreciation Expense 20,000	Dr. Depreciation Expense 20,000	Dr. Depreciation Expense 20,000	Dr. Depreciation Expense 20,000
	Cr. Accumulated Depreciation 20,000	Cr. Accumulated Depreciation 20,000	Cr. Accumulated Depreciation 20,000	Cr. Accumulated Depreciation 20,000	Cr. Accumulated Depreciation 20,000

Note: Accumulated Depreciation = Permanent Account

DEPRECIATION METHODS

Straight-line Method: Activity

Computes a depreciation rate per measure of activity and then multiplies this rate by actual activity to determine depreciation expense.

FORMULA: **COST – RESIDUAL VALUE**
ACTIVITY: hours, units

DEPRECIATION EXPENSE: **$110,000 –$10,000 = $.25 per unit**
400,000 total units*

Depreciation Expense per year

Year 1: 20,000 units produce x .25 = $5,000
Year 2: 25,000 units produced x .25 = $6,250
Year 3: 28,000 units produced x .25 = $7,000

*same for hours

ACCELARATED DEPRECIATION METHOD

- It allocates a greater amount of depreciation expense in the first years of use of the asset.
- The quantity decreases as time passes.
- Provide better matching of income and expenses.

DOUBLE DECLINING BALANCE

Multiply a constant rate to the declining book balance.

FORMULA:

$$\text{Depreciation Rate: } \frac{1}{5} \times {}^{*}2$$

*twice straight line

NON CURRENT ASSETS

Cost: $100,000 / Residual Value / $0 / Useful Life 5 years.

Depreciation Rate: $\frac{1}{5}$ = .20 x *2 = .40

*twice straight line

ABC COMPANY SCHEDULE OF DEPRECIATION: DOUBLE DECLINING BALANCE					
COST	**12/31/2001**	**12/31/2002**	**12/31/2003**	**12/31/2004**	**12/31/2005**
ACCUMULATED DEPRECIATION	$100,000	$100,000	$100,000	$100,000	$100,000
BOOK VALUE	($40,000)	($64,000)	($78,400)	($87,040)	($100,000)
	$60,000	$36,000	$21,600	$12,960	$0
	100,000 x .4 = $40,000	60,000 x .40 = 24,000	36,000 x .40 = 14,400	21,600 x .40 = 8,640	Diference
	Dr. Depreciation Expense 40,000	Dr. Depreciation Expense 24,000	Dr. Depreciation Expense 14,400	Dr. Depreciation Expense 8,640	Dr. Depreciation Expense 12,960
	Cr. Accumulated Depreciation 40,000	Cr. Accumulated Depreciation 24,000	Cr. Accumulated Depreciation 14,400	Cr. Accumulated Depreciation 8,640	Cr. Accumulated Depreciation 12,960

Do not consider Residual Value in the computations.

NON CURRENT ASSETS

	ABC COMPANY				
	SCHEDULE OF DEPRECIATION: STRAIGHT LINE METHOD				
	12/31/2001	12/31/2002	12/31/2003	12/31/2004	12/31/2005
COST	$100,000	$100,000	$100,000	$100,000	$100,000
ACCUMULATED DEPRECIATION	($20,000)	($40,000)	($60,000)	($80,000)	($100,000)
BOOK VALUE	$80,000	$60,000	$40,000	$20,000	$0
	Dr. Depreciation Expense 20,000	Dr. Depreciation Expense 20,000	Dr. Depreciation Expense 20,000	Dr. Depreciation Expense 20,000	Dr. Depreciation Expense 20,000
	Cr. Accumulated Depreciation 20,000	Cr. Accumulated Depreciation 20,000	Cr. Accumulated Depreciation 20,000	Cr. Accumulated Depreciation 20,000	Cr. Accumulated Depreciation 20,000
	ABC COMPANY				
	SCHEDULE OF DEPRECIATION: DOUBLE DECLINING BALANCE				
COST	12/31/2001	12/31/2002	12/31/2003	12/31/2004	12/31/2005
ACCUMULATED DEPRECIATION	$100,000	$100,000	$100,000	$100,000	$100,000
BOOK VALUE	($40,000)	($64,000)	($78,400)	($87,040)	($100,000)
	$60,000	$36,000	$21,600	$12,960	$0
	100,000 x .4 = $40,000	60,000 x .40 = 24,000	36,000 x .40 = 14,400	21,600 x .40 = 8,640	Diference
	Dr. Depreciation Expense 40,000	Dr. Depreciation Expense 24,000	Dr. Depreciation Expense 14,400	Dr. Depreciation Expense 8,640	Dr. Depreciation Expense 12,960
	Cr. Accumulated Depreciation 40,000	Cr. Accumulated Depreciation 24,000	Cr. Accumulated Depreciation 14,400	Cr. Accumulated Depreciation 8,640	Cr. Accumulated Depreciation 12,960

DISPOSITIONS OF ASSETS: SALE

Determine Gain or Loss

Consideration received	$ or Other Assets
Less: Book value of asset sold	($XXX)
Gain/Loss on sale of asset	$XXX

NON CURRENT ASSETS

DISPOSITIONS OF ASSETS: SALE

ABC COMPANY SCHEDULE OF DEPRECIATION: STRAIGHT LINE METHOD					
	12/31/2001	12/31/2002	12/31/2003	12/31/2004	12/31/2005
COST	$100,000	$100,000	$100,000	$100,000	$100,000
ACCUMULATED DEPRECIATION	($20,000)	($40,000)	($60,000)	($80,000)	($100,000)
BOOK VALUE	$80,000	$60,000	$40,000	$20,000	$0

Example: Sold the assets for $50,000 on 12/31/03

Consideration received	$50,000
Less: Book value of asset sold	($40,000)
Gain/Loss on sale of asset	$10,000

Dr. Cash	50,000	
Dr. Accumulated Depreciation	60,000	
Cr. Assets		100,000
Cr. Gain on sale asset		10,000

NON CURRENT ASSETS

DISPOSITIONS OF ASSETS: SALE

ABC COMPANY SCHEDULE OF DEPRECIATION: STRAIGHT LINE METHOD					
	12/31/2001	12/31/2002	12/31/2003	12/31/2004	12/31/2005
COST	$100,000	$100,000	$100,000	$100,000	$100,000
ACCUMULATED DEPRECIATION	($20,000)	($40,000)	($60,000)	($80,000)	($100,000)
BOOK VALUE	$80,000	$60,000	$40,000	$20,000	$0

Example: Sold the assets for $25,000 on 12/31/03

Consideration received	$25,000
Less: Book value of asset sold	($40,000)
Gain/Loss on sale of asset	$15,000

Dr. Cash	25,000	
Cr. Accumulated Depreciation	60,000	
Cr. Loss on sale asset	15,000	
Cr. Assets		100,000

INTANGIBLE ASSETS

Patent: Cost $750,000, Residual Value $0. Legal Life 20 years. Useful Life 15 years (use the lesser)

Amortization Expense

$750,000 - $0/ 5 years = $150,000

ABC COMPANY						
SCHEDULE OF AMORTIZATION: STRAIGHT LINE METHOD						
	12/1/2001	12/31/2001	12/31/2002	12/31/2003	12/31/2004	12/31/2005
PATENT (net)	$750,000	$600,000	$450,000	$300,000	$150,000	$0.00
		Dr. Amortizatio Expense 150,000	Dr. Amortizatio Expense 150,000	Dr. Amortizatio Expense 150,000	Dr. Amortizatio Expense 150,000	Dr. Amortizatio Expense 150,000
		Cr. Accumulated Depreciation 150,000	Cr. Accumulated Depreciation 150,000	Cr. Accumulated Depreciation 150,000	Cr. Accumulated Depreciation 150,000	Cr. Accumulated Depreciation 150,000

INTANGIBLE ASSETS

Finite Life: Amortize and Indefinite Life: Does not Amortize.

PATENT			
+		-	
Beginning Balance	750,000		
		$150,000	12/31/2001
		$150,000	12/31/2002
		$150,000	12/31/2003
		$150,000	12/31/2004
		$150,000	12/31/2005
Ending Balance	$0		

Note: Goodwill does not Amortize.

GOODWILL

Purchase price		$5,000,000
Less:		
Fair value of assets acquired	$10,000,000	
Less: Fair value of liabilities assumed	($6,000,000)	
Fair value of identifiable net assets		($4,000,000)
Goodwill		**$1,000,000**